

Alibaba Cloud

Elastic Compute Service API Reference

Document Version: 20201013

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Document conventions

Style	Description	Example
 Danger	A danger notice indicates a situation that will cause major system changes, faults, physical injuries, and other adverse results.	 Danger: Resetting will result in the loss of user configuration data.
 Warning	A warning notice indicates a situation that may cause major system changes, faults, physical injuries, and other adverse results.	 Warning: Restarting will cause business interruption. About 10 minutes are required to restart an instance.
 Notice	A caution notice indicates warning information, supplementary instructions, and other content that the user must understand.	 Notice: If the weight is set to 0, the server no longer receives new requests.
 Note	A note indicates supplemental instructions, best practices, tips, and other content.	 Note: You can use Ctrl + A to select all files.
>	Closing angle brackets are used to indicate a multi-level menu cascade.	Click Settings> Network> Set network type .
Bold	Bold formatting is used for buttons, menus, page names, and other UI elements.	Click OK .
Courier font	Courier font is used for commands	Run the <code>cd /d C:/window</code> command to enter the Windows system folder.
<i>Italic</i>	Italic formatting is used for parameters and variables.	<code>bae log list --instanceid</code> <i>Instance_ID</i>
[] or [a b]	This format is used for an optional value, where only one item can be selected.	<code>ipconfig [-all -t]</code>
{ } or {a b}	This format is used for a required value, where only one item can be selected.	<code>switch {active stand}</code>

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1.Introduction

If you are familiar with network service protocols and one or more programming languages, we recommend that you use ECS API to manage your cloud resources and develop your applications.

Limits

Limits are applicable to your use of ECS resources such as instances, Block Storage devices, security groups, snapshots, and public bandwidth. These limits vary depending on your ECS usage. For more information, see [Limits](#).

Instructions

ECS API supports HTTP or HTTPS requests. You can use GET and POST methods to send and retrieve requests. You can use one of the following methods to call ECS API operations. For more examples, see [Quick start](#).

- [ECS SDKs](#)
- [Alibaba Cloud CLI](#)

 **Note** When you call an API operation by using Alibaba Cloud CLI or SDKs, remove the periods (.) from request parameters. For example, use `SystemDiskCategory` instead of `SystemDisk.Category` as a request parameter.

Terms

Term	Parameter	Description
<i>region</i>	RegionId	An Alibaba Cloud data center. After a resource is created, you cannot change its region.
<i>zone</i>	ZoneId	A physical location that has independent power grids and networks within a region. Each region includes multiple zones. Resources in zones that are in the same region can communicate with each other over the internal network with faults isolated. The network latency for ECS instances within the same zone is reduced.
<i>instance</i>	InstanceId	A virtual machine virtualized from a physical server. It is the basic computing unit of ECS. For more information, see Instance families .
<i>reserved instance</i>	ReservedInstanceId	A discount coupon that can be applied to the use of pay-as-you-go instances except for preemptible instances and provides resource reservation for pay-as-you-go instances.
<i>launch template</i>	LaunchTemplateId	A template that contains configurations that you can use to create instances. A template can include any configurations except for passwords. It can include key pairs, RAM roles, instance types, and network configurations.
<i>auto provisioning group</i>	AutoProvisioningGroupId	A group used by Auto Provisioning to schedule and maintain computing resources. Auto Provisioning is a service used to deploy an instance cluster composed of preemptible and pay-as-you-go instances. Auto Provisioning facilitates the deployment of instance clusters with specified billing methods, zones, and instance families.
<i>image</i>	ImageId	A software configuration template that is pre-installed with an operating system. System disks of new instances are copies of images that are used to create the instances. You can use an image to create an instance or change the system disk of an instance.
<i>Block Storage device</i>	DiskId	A storage device for Alibaba Cloud ECS. Block Storage devices are classified into cloud and local disks based on their performance and application scenarios.
<i>security group</i>	SecurityGroupId	A virtual firewall that implements access control for one or more ECS instances. An instance must belong to at least one security group.
<i>SSH key pair</i>	KeyPairName	A combination of a public key and a private key. SSH key pairs are used to connect to ECS instances over the SSH protocol and are applicable only to Linux instances.

Term	Parameter	Description
<i>elastic network interface</i>	NetworkInterfaceId	A logical networking component in a VPC that represents a virtual network card. Elastic network interfaces (ENIs) can be bound to or unbound from ECS instances. ENIs are applicable only to VPC-type ECS instances.
<i>snapshot</i>	SnapshotId	A stateful data file of a disk. Snapshots are taken for disks to restore disk data at a specific point in time. Snapshots can be used to restore disk data and create images.
<i>tag</i>	Tag.N.Key	A key-value pair. You can bind tags to ECS resources for fast filtering and classification.
<i>IP address</i>	NatIpAddress	The public or private IP address of an ECS instance.
<i>Cloud Assistant</i>	CommandId	A built-in tool for ECS that provides O&M and deployment services. Cloud Assistant can automatically run batch, PowerShell, or shell commands on multiple instances at a time. This allows you to perform multiple tasks without establishing individual connections to these instances.

2.Quick start

This topic uses CreateSnapshot as an example to demonstrate how to call ECS API operations through developer tools such as Alibaba Cloud CLI, OpenAPI Explorer, and Alibaba Cloud Java SDK.

calling method Alibaba Cloud ECS API quick start

Context

Before you call API operations, find the values of required request parameters in the API documentation. If an error is reported after a request is sent, you can obtain the description of the error code in the corresponding API documentation.

Calling methods

- **Example of calling ECS API operations by using Alibaba Cloud CLI:** Alibaba Cloud CLI is applicable to scenarios where command line tools are frequently used. To use this method, you must have Alibaba Cloud CLI installed. For information about how to install Alibaba Cloud CLI, see the *CLI document* [Alibaba Cloud CLI Installation Guide](#).
- **Example of calling ECS API operations by using the Java SDK:** Java SDKs are applicable to scenarios such as SDK encoding or DevOps. To use this method, you must have the ECS Java SDK installed. For information about how to install the ECS Java SDK, see [Install ECS SDK for Java](#).

Example of calling ECS API operations by using Alibaba Cloud CLI

1. Obtain the instance ID.

- If you have connected the ECS instance, you can obtain the instance ID from the instance metadata.

```
curl http://100.100.100.200/2016-01-01/meta-data/instance-id
```

- On a local computer, you can obtain the instance ID by calling the [DescribeInstances](#) operation.

```
aliyun ecs DescribeInstances --output cols=InstanceId,InstanceName rows=Instances.Instance[]
```

2. Obtain the disk ID by calling the [DescribeDisks](#) operation.

```
aliyun ecs DescribeDisks --RegionId cn-hangzhou --InstanceId i-bp1afnc98r8k69***** --output cols=DiskId rows=Disks.Disk[]
```

3. Create a snapshot based on the disk ID by calling the [CreateSnapshot](#) operation.

```
aliyun ecs CreateSnapshot --DiskId d-bp19pjyf12hebp*****
```

If the following message is returned, the snapshot creation task has been initiated.

```
{"RequestId":"16B856F6-EFFB-4397-8A8A-CB73FA*****","SnapshotId":"s-bp1afnc98r8kjh*****"}
```

4. Query the progress of snapshot creation by calling the [DescribeSnapshots](#) operation.

If both `"SnapshotId":"s-bp1afnc98r8kjh*****"` and `"Status":"accomplished"` are displayed, the snapshot is created.

```
aliyun ecs DescribeSnapshots --RegionId cn-hangzhou --InstanceId i-bp1afnc98r8k69*****
```

Example of calling ECS API operations by using the Java SDK

You must specify the values of the following parameters in the sample code:

- **<AccessKey>:** Enter your AccessKey ID. For information about how to obtain your AccessKey ID, see [Create an AccessKey pair](#).
- **<AccessSecret>:** Enter your AccessKey secret.
- **<RegionId>:** Enter the region ID of the ECS instance. For more information about the valid values of the parameter, see [Regions and zones](#) or [DescribeRegions](#).
- **<DiskId>:** Enter the disk ID. For more information about the valid values of the parameter, see [DescribeDisks](#).

```
import com.aliyuncs.DefaultAcsClient;  
import com.aliyuncs.IAcsClient;  
import com.aliyuncs.ecs.model.v20140526.CreateSnapshotRequest;  
import com.aliyuncs.ecs.model.v20140526.CreateSnapshotResponse;
```

```
import com.aliyuncs.exceptions.ClientException;
import com.aliyuncs.exceptions.ServerException;
import com.aliyuncs.profile.DefaultProfile;

/* pom.xml
<dependency>
    <groupId>com.aliyun</groupId>
    <artifactId>aliyun-java-sdk-core</artifactId>
    <version>3.0.9</version>
</dependency>
<dependency>
    <groupId>com.aliyun</groupId>
    <artifactId>aliyun-java-sdk-ecs</artifactId>
    <version>4.10.1</version>
</dependency>
*/

public class CreateSnapshotExample {

    private String accessKeyId = "<AccessKey>";
    private String accessSecret = "<AccessSecret>";

    /**
     * The region ID of the disk
     */
    private String regionId = "<RegionId>";

    /**
     * The ID of the disk for which you want to create a snapshot
     */
    private String diskId = "<DiskId>";

    public void createSnapshot() {
        DefaultProfile profile = DefaultProfile.getProfile(regionId, accessKeyId, accessSecret);
        IAcsClient client = new DefaultAcsClient(profile);

        CreateSnapshotRequest request = new CreateSnapshotRequest();
        request.setRegionId(regionId);
        request.setDiskId(diskId);
        try {
            CreateSnapshotResponse response = client.getAcsResponse(request);
            logInfo(response.getSnapshotId());
        } catch (ServerException e) {
            logInfo(String.format("Fail. Something with your connection with Aliyun go incorrect. ErrorCode: %s",
                e.getErrCode()));
        } catch (ClientException e) {
            logInfo(String.format("Fail. Business error. ErrorCode: %s, RequestId: %s",
                e.getErrCode(), e.getRequestId()));
        }
    }
}
```

```
private static void logInfo(String message) {  
    System.out.println(message);  
}  
  
public static void main(String[] args) {  
    new CreateSnapshotExample().createSnapshot();  
}  
}
```

3.HTTP Requests

3.1. How to make a request

This section is applicable to users who make a GET request over HTTP or HTTPS by sending a URL.

If you prefer using [SDK](#), [Alibaba Cloud CLI](#), or [OpenAPI Explorer](#), skip this section.

The request URL consists of different parameters and has a fixed syntax. For more information, see [Request structure](#). The URL contains common request parameters, your signature, and operation-specific parameters. For more information, see [Common parameters](#) and [Digital signature](#). URL request examples are available for each API operation. These URL examples are not encoded so that they are easy to read. You must encode the URL before making a request. A result is returned to you after the authentication process is complete based on your signature. For more information, see [Responses](#). Response parameters are returned if the call is successful, whereas an error message is returned if the call fails. You can troubleshoot issues based on the common error codes and operation-specific error codes.

 **Note** We recommend that you use SDK to call operations and manage resources, which avoids manual authentication.

3.2. Request syntax

You can call ECS API operations by sending HTTP or HTTPS GET requests based on URLs. Each URL must include request parameters. This topic describes the syntax of HTTP or HTTPS GET requests and provides the endpoints of ECS API.

Sample request

The following example show an unencoded URL request to call the [CreateSnapshot](#) operation:

```
https://ecs.aliyuncs.com/?Action=CreateSnapshot
&DiskId=d-28m5zbu****
&<Common request parameters>
```

- `https` specifies the protocol for transmitting the request.
- `ecs.aliyuncs.com` specifies the endpoint of ECS.
- `Action=CreateSnapshot` specifies the API operation to call. `DiskId=d-28m5zbu****` is a request parameter for [CreateSnapshot](#).
- `<Common request parameters>` are common parameters defined in the system.

Protocols

You can send requests over HTTP or HTTPS. For a higher level of security, we recommend that you send requests over HTTPS.

If the request contains sensitive data, such as the username, password, and Secure Shell (SSH) key pairs, we recommend that you use HTTPS. For example, you can specify the `Password` parameter when you call the [CreateInstance](#) operation.

Endpoints

The following table lists the endpoints of ECS API. To minimize network latency, we recommend that you specify the endpoint based on the region where you make API requests.

- The following table lists the best endpoints for making API requests from mainland China.

Region	Endpoint
Default	ecs.aliyuncs.com
China (Zhangjiakou-Beijing Winter Olympic)	ecs.cn-zhangjiakou.aliyuncs.com
China (Hohhot)	ecs.cn-huhehaote.aliyuncs.com

Region	Endpoint
China (Ulanqab)	ecs.cn-wulanchabu.aliyuncs.com
China (Heyuan)	ecs.cn-heyuan.aliyuncs.com
Japan (Tokyo)	ecs.ap-northeast-1.aliyuncs.com
Australia (Sydney)	ecs.ap-southeast-2.aliyuncs.com
Malaysia (Kuala Lumpur)	ecs.ap-southeast-3.aliyuncs.com
Indonesia (Jakarta)	ecs.ap-southeast-5.aliyuncs.com
India (Mumbai)	ecs.ap-south-1.aliyuncs.com
UAE (Dubai)	ecs.me-east-1.aliyuncs.com
Germany (Frankfurt)	ecs.eu-central-1.aliyuncs.com
UK (London)	ecs.eu-west-1.aliyuncs.com

- Global acceleration is enabled for `ecs.aliyuncs.com`. This can reduce network latency caused by traffic forwarding across borders or regions. You can use this endpoint when you want to make API requests from countries or regions outside mainland China.

 **Note** ECS provides public endpoints. If your ECS instance does not have a public bandwidth or a public IP address, you cannot use tools such as Alibaba Cloud CLI or SDKs to make API requests for the instance. For information about how to make call API operations on VPC-type ECS instances that cannot access the Internet, see [Call API operations over the internal network](#).

Request parameters

You must specify the `Action` parameter to specify the API operation that you want to call. For example, set `Action` to `StartInstance`. You must also specify other operation-specific request parameters and common request parameters. For more information, see [Common request parameters](#).

Encoding

All requests and responses are encoded in `UTF-8`.

3.3. Common parameters

Common parameters consist of common request parameters and common response parameters.

Common request parameters

The following table describes common request parameters that can be used when you call ECS API operations by sending GET requests over URLs.

Parameter	Type	Required	Description
Action	String	Yes	The operation that you want to perform. For more information about the parameter values, see API概览 .
AccessKeyId	String	Yes	The AccessKey ID provided to you by Alibaba Cloud. AccessKey pairs are used to call API operations. Usernames and passwords are used to log on to the ECS console .
Signature	String	Yes	The signature string of the current request. For more information about how signatures are calculated, see Digital signature .
SignatureMethod	String	Yes	The encryption method of the signature string. Set the value to HMAC-SHA1.

Parameter	Type	Required	Description
SignatureVersion	String	Yes	The version of the signature encryption algorithm. Set the value to 1.0.
SignatureNonce	String	Yes	A unique, random number used to prevent replay attacks. You must use different numbers for different requests.
Timestamp	String	Yes	The timestamp of the request. Specify the time in the ISO 8601 standard in the yyyy-MM-ddTHH:mm:ssZ format. The time must be in UTC. Example: 2018-01-01T12:00:00Z .
Version	String	Yes	The version number of the API. The value must be in the YYYY-MM-DD format. Set the value to 2014-05-26.
Format	String	No	The format in which to return the response. Valid values: - json - xml Default value: xml.

Sample requests

 **Note** The following content provides only sample values. Perform URL encoding in your actual operation. For more information, see [Digital signature](#).

```
https://ecs.aliyuncs.com/?Action=<API Name>
&Format=xml
&Version=2014-05-26
&Signature=Pc5WB8gokVn0xfeu%2FZV%2BiNM1dgl%3D
&SignatureMethod=HMAC-SHA1
&SignatureNonce=15215528852396
&SignatureVersion=1.0
&AccessKeyId=key-test
&Timestamp=2018-01-01T12:00:00Z
...
```

Common response parameters

Parameter	Type	Description
RequestId	String	The ID of the request. This parameter is returned regardless of whether the operation is successful.

3.4. Digital signature

We perform the sender authentication for each request. Therefore, a signature information must be included in the request, irrespective of the use of HTTP or HTTPS protocol. By using the AccessKeyId and AccessKeySecret, we perform symmetric encryption to authenticate the sender request.

The AccessKey is equivalent to a logon password. However, an AccessKey is used to call APIs, while the logon password is used to log on to the [ECS console](#). Where an AccessKeyId is the visitor identity, an AccessKeySecret is the secret key to encrypt the signature string and to verify the signature string sent to our server. You must keep your AccessKey confidential to prevent possible data breach event.

 **Note** We provide SDKs and third-party SDKs for multiple programming languages to help you skip the authentication process. For more information, see [SDK](#).

Step 1. Compose a standardized request URL

- Sort the request parameters in a lexicographical order. The request parameters include the API-specific parameters and **common parameters** except for the `Signature` parameter.

 **Note** For example, if you make a request by using the GET method, these parameters are in the section of the URL followed by a question mark `?` and connected by ampersands `&`.

- Encode the request parameters by using the UTF-8 character set and according to the **RFC3986** rules.
 - Do not encode the A~Z and a~z characters, numbers (0~9), hyphens `-`, underscores `_`, periods `.`, and tildes `~`.
 - Encode other characters in the `%XY` format, with `XY` representing the hexadecimal ASCII value of the characters. For example, the half-width double quotes (`"`) are encoded as `%22`.
 - Encode the extended UTF-8 characters in `%XY%ZA...` format.
 - Encode the whitespaces () to `%20` instead of the plus signs (`+`).

Alternatively, you can use libraries that support the `application/x-www-form-urlencoded` MIME-type URL encoding, for example the `java.net.URLEncoder` of Java language. If so, use the `percentEncode` Java method, in the encoded strings, replace the plus signs (`+`) with `%20`, the asterisks (`*`) with `%2A`, and `%7E` to the tildes (`~`). See the following example:

```
private static final String ENCODING = "UTF-8";
private static String percentEncode(String value) throws UnsupportedOperationException {
    return value != null ? URLEncoder.encode(value, ENCODING).replace("+", "%20").replace("*", "%2A").replace("%7E", "~") : null;
}
```

- Connect the encoded parameters and their values with the equal signs (`=`).
- Concatenate the encoded parameters with ampersands (`&`).

Now, you get a canonicalized query string, and its structure must be the same as described in **request structure**.

Step 2. Construct a signature string

- Create a variable `StringToSign` by using the canonicalized query string. You can use the aforementioned **percentEncode** to handle the standardization request string that was constructed by the previous steps, with the following rules:

```
StringToSign=
    HTTPMethod + "&" + //HTTPMethod: HTTP method used for making request, for example GET.
    percentEncode("/") + "&" + //percentEncode("/"): Encode backslash (/) to %2F.
    percentEncode(CanonicalizedQueryString) //Encode the canonicalized query string created in the Step 1.
```

- Create a variable `Signature` by calculating the HMAC-SHA1 value of the `StringToSign` according to the **RFC2104** rules. Here we use the Java Base64 encoding method.

```
Signature = Base64( HMAC-SHA1( AccessSecret, UTF-8-Encoding-Of(StringToSign) ) )
```

 **Note** **RFC2104** when calculating signatures `AccessKeySecret` followed by the ampersand (`&`), and the hexadecimal ASCII value of an ampersand is 38.

- Encode the value of `Signature` according to the **RFC3986** rules to the canonicalized query string URL.

Sample 1. Parameter Concatenation Method

Take calling `DescribeRegions` as an example. You have the `AccessKeyId=testid` and `AccessKeySecret=testsecret` created in the console.

1. Create a canonicalized query string.

```
http://ecs.aliyuncs.com/?Timestamp=2016-02-23T12%3A46%3A24Z&Format=XML&AccessKeyId=testid&Action=DescribeRegions&SignatureMethod=HMAC-SHA1&SignatureNonce=3ee8c1b8-83d3-44af-a94f-4e0ad82fd6cf&Version=2014-05-26&SignatureVersion=1.0
```

2. Create a variable `StringToSign` to be calculated by using the canonicalized query string.

```
GET&%2F&AccessKeyId%3Dtestid%26Action%3DDescribeRegions%26Format%3DXML%26SignatureMethod%3DHMAC-SHA1%26SignatureNonce%3D3ee8c1b8-83d3-44af-a94f-4e0ad82fd6cf%26SignatureVersion%3D1.0%26Timestamp%3D2016-02-23T12%253A46%253A24Z%26Version%3D2014-05-26
```

3. Calculate the HMAC-SHA1 value. Because you have the `AccessKeySecret=testsecret`, the Key used in the RFC2104 rules is `testsecret&`, and the HMAC-SHA1 value is `OLeaid51JvxuMvnyH0wuJ+uX5qY=`. Here we use the Java Base64 encoding method.

```
Signature = Base64( HMAC-SHA1( AccessSecret, UTF-8-Encoding-Of(StringToSign) ) )
```

4. Encode the value of Signature according to the `RFC3986` rules and add `Signature=OLeaid51JvxuMvnyH0wuJ%2BuX5qY%3D` to the URL in [Step 1](#).

```
http://ecs.aliyuncs.com/?SignatureVersion=1.0&Action=DescribeRegions&Format=XML&SignatureNonce=3ee8c1b8-83d3-44af-a94f-4e0ad82fd6cf&Version=2014-05-26&AccessKeyId=testid&Signature=OLeaid51JvxuMvnyH0wuJ%2BuX5qY%3D&SignatureMethod=HMAC-SHA1&Timestamp=2016-02-23T12%253A46%253A24Z
```

Now you can use a Web browser, curl, wget or other tools to send HTTP request for calling `DescribeRegions` and view the Alibaba Cloud region list.

Sample 2. Programming Language Method

Assume that you are calling the `DescribeRegions` to describe the Alibaba Cloud region list. You have the `AccessKeyId=testid` and `AccessKeySecret=testsecret` created in the console, and all request parameters are stored in a Java `Map<String, String>` object.

1. Predefined encoding methods.

```
private static final String ENCODING = "UTF-8";
private static String percentEncode(String value) throws UnsupportedOperationException {
    return value != null ? URLEncoder.encode(value, ENCODING).replace("+", "%20").replace("*", "%2A").replace("%7E", "~") : null;
}
```

2. Predefine the format of the parameter `Timestamp`. The parameter `Timestamp` must conform to the `ISO8601`, and use the offset from Coordinated Universal Time (UTC) for the date time.

```
private static final String ISO8601_DATE_FORMAT = "yyyy-MM-dd'T'HH:mm:ss'Z'";
private static String formatIso8601Date(Date date) {
    SimpleDateFormat df = new SimpleDateFormat(ISO8601_DATE_FORMAT);
    df.setTimeZone(new SimpleTimeZone(0, "GMT"));
    return df.format(date);
}
```

3. Construct a request string.

```

final String HTTP_METHOD = "GET";
Map parameters = new HashMap();
// Add request parameters
parameters.put("Action", "DescribeRegions");
parameters.put("Version", "2014-05-26");
parameters.put("AccessKeyId", "testid");
parameters.put("Timestamp", formatIso8601Date(new Date()));
parameters.put("SignatureMethod", "HMAC-SHA1");
parameters.put("SignatureVersion", "1.0");
parameters.put("SignatureNonce", UUID.randomUUID().toString());
parameters.put("Format", "XML");
// Sort the parameters
String[] sortedKeys = parameters.keySet().toArray(new String[]{});
Arrays.sort(sortedKeys);
final String SEPARATOR = "&";
// Create the variable stringToSign
StringBuilder stringToSign = new StringBuilder();
stringToSign.append(HTTP_METHOD).append(SEPARATOR);
stringToSign.append(percentEncode("/")).append(SEPARATOR);
StringBuilder canonicalizedQueryString = new StringBuilder();
for(String key : sortedKeys) {
    // Encode the key and its value
    canonicalizedQueryString.append("&")
        .append(percentEncode(key)).append("=")
        .append(percentEncode(parameters.get(key)));
}
// Encode the variable canonicalizedQueryString
stringToSign.append(percentEncode(
    canonicalizedQueryString.toString().substring(1)));

```

4. Sign and encode the signature. Because you have the `AccessKeySecret=testsecret`, the Key for computing HMAC is `testsecret&` and the value of signature after calculation is `OLeaidS1JvxuMvnyHOWuJ%2BuX5qY%3D`.

```

// A sample code for calculating the signature
final String ALGORITHM = "HmacSHA1";
final String ENCODING = "UTF-8";
key = "testsecret&";
Mac mac = Mac.getInstance(ALGORITHM);
mac.init(new SecretKeySpec(key.getBytes(ENCODING), ALGORITHM));
byte[] signData = mac.doFinal(stringToSign.getBytes(ENCODING));
String signature = new String(Base64.encodeBase64(signData));

```

After adding the Signature parameter, the request URL encoded according to [RFC3986](#) rules is ready to use.

```

http://ecs.aliyuncs.com/?SignatureVersion=1.0&Action=DescribeRegions&Format=XML&SignatureNonce=3ee8c1b8-83d3-44
af-a94f-4e0ad82fd6cf&Version=2014-05-26&AccessKeyId=testid&Signature=OLeaidS1JvxuMvnyHOWuJ%2BuX5qY%3D&Signat
ureMethod=HMAC-SHA1&Timestamp=2016-02-23T12%253A46%253A24Z

```

5. Use a Web browser, curl, wget or other tools to send HTTP Request.

```
<DescribeRegionsResponse>
  <Regions>
    <Region>
      <LocalName>Qingdao</LocalName>
      <RegionId>cn-qingdao</RegionId>
    </Region>
    <Region>
      <LocalName>Hangzhou</LocalName>
      <RegionId>cn-hangzhou</RegionId>
    </Region>
  </Regions>
  <RequestId>833C6B2C-E309-45D4-A5C3-03A7A7A48ACF</RequestId>
</DescribeRegionsResponse>
```

By parsing this XML schema output, you can obtain the region and region ID list of Alibaba Cloud. If you set the `Format=JSON`, the response results are in JSON format. For more information, see [response results](#).

3.5. Responses

Responses can be returned in either the JSON or XML format. The default response format is XML. You can specify the `Format` common parameter in the request to change the format of responses. For more information, see [Common parameters](#). Sample responses provided in API reference are formatted with line breaks and indentations for better readability and clarity. However, the actual responses are not formatted with line breaks or indentations.

Sample success responses

Each response returns response parameters such as the request ID when the call is successful. API responses use the HTTP response format where a 2xx status code indicates a successful call.

- XML format

```
<?xml version="1.0" encoding="UTF-8"?> <!--Result root node-->
<ActionResponse> <!--Returned request ID-->
  <RequestId>4C467B38-3910-447D-87BC-AC049166F216</RequestId> <!--Response data-->
</ActionResponse>
```

- JSON format

```
{
  "RequestId": "4C467B38-3910-447D-87BC-AC049166F216" /* Response data */
}
```

Sample error responses

If an error occurs when you call an operation, an error response that consists of the error code, error message, and request ID is returned. API responses use the HTTP response format where a 4xx or 5xx status code indicates a failed call.

You can troubleshoot issues based on the [Common error codes](#) section and operation-specific error codes. If the error persists, you can submit a ticket and provide the `HostId` and `RequestId` values to obtain technical support from Alibaba Cloud.

- XML format

```
<?xml version="1.0" encoding="UTF-8"?><!--Result root node-->
<Error>
  <RequestId>540CFF28-407A-40B5-B6A5-74Bxxxxxxxx</RequestId> <!--Request ID-->
  <HostId>ecs.aliyuncs.com</HostId> <!--Endpoint-->
  <Code>MissingParameter.CommandId</Code> <!--Error code-->
  <Message>The input parameter "CommandId" that is mandatory for processing this request is not supplied.</Message> <!--Error message-->
</Error>
```

- JSON format

```
{
  "RequestId": "540CFF28-407A-40B5-B6A5-74Bxxxxxxxx", /* Request ID */
  "HostId": "ecs.aliyuncs.com", /* Endpoint */
  "Code": "MissingParameter.CommandId", /* Error code */
  "Message": "The input parameter \"CommandId\" that is mandatory for processing this request is not supplied." /* Error message */
}
```

Common error codes

Error code	HTTP status code	Error message
IdempotentParameterMismatch	400	The request is retried with updated parameters.
IllegalTimestamp	400	The input parameter "Timestamp" that is mandatory for processing this request is not supplied.
IncompleteSignature	400	The request signature does not conform to Aliyun standards.
InsufficientBalance	400	Your account does not have enough balance.
InvalidAccessKeyId.NotFound	400	The specified Access Key ID does not exist.
InvalidOwner	400	OwnerId and OwnerAccount can't be used at one API access.
InvalidOwnerAccount	400	The specified OwnerAccount is not valid.
InvalidOwnerId	400	The specified OwnerId is not valid.
InvalidParamater	400	The specified parameter "SignatureMethod" is not valid.
InvalidParamater	400	The specified parameter "SignatureVersion" is not valid.
InvalidParameter	400	The specified parameter is not valid.
InvalidParameter	400	The specified parameter "Action or Version" is not valid.
InvalidParameter.IsNull	400	The required parameter must be not null.
MissingParameter	400	The input parameter "Action" that is mandatory for processing this request is not supplied.
MissingParameter	400	The input parameter "AccessKeyId" that is mandatory for processing this request is not supplied.
MissingParameter	400	The input parameter "Signature" that is mandatory for processing the request is not supplied.

Error code	HTTP status code	Error message
MissingParameter	400	The input parameter "TimeStamp" that is mandatory for processing this request is not supplied.
MissingParameter	400	The input parameter "Version" that is mandatory for processing this request is not supplied.
SignatureNonceUsed	400	The request signature nonce has been used.
Throttling	400	You have made too many requests within a short time; your request is denied due to request throttling.
UnsupportedParameter	400	The parameters is unsupported.
UnknownError	400	The request processing has failed due to some unknown error.
ChargeTypeViolation	403	The operation is not permitted due to charge type of the instance.
Forbidden.AccessKeyDisabled	403	The Access Key is disabled.
Forbidden.NotSupportRAM	403	This action does not support accessed by RAM mode.
Forbidden.RAM	403	User not authorized to operate on the specified resource, or this API doesn't support RAM.
Forbidden.RiskControl	403	This operation is forbidden by Aliyun RiskControl system.
Forbidden.SubUser	403	The specified action is not available for you.
Forbidden.Unauthorized	403	User not authorized to operate on the specified resource.
InvalidAccount.NotFound	403	The specified Account does not exist.
InvalidAction	403	Specified action is not valid.
InvalidIdempotenceParameter.Mismatch	403	The specified parameters are different from before.
InvalidParameter.OwnerAccount	403	OwnerAccount is Invalid.
InvalidParameter.ResourceOwnerAccount	403	ResourceOwnerAccount is Invalid.
LastTokenProcessing	403	The last token request is processing.
MissingParameter	403	The input parameter OwnerId,OwnerAccount that is mandatory for processing this request is not supplied.
RealNameAuthenticationError	403	Your account has not passed the real-name authentication yet.
UnsupportedHTTPMethod	403	This http method is not supported.
InvalidDiskId.NotFound	404	The specified DiskId does not exist.
InvalidImageId.NotFound	404	The specified ImageId does not exist.

Error code	HTTP status code	Error message
InvalidInstanceId.NotFound	404	The specified InstanceId does not exist.
InvalidRegionId.NotFound	404	The specified RegionId does not exist.
InvalidSecurityGroupId.NotFound	404	The specified SecurityGroupId does not exist.
InvalidSnapshotId.NotFound	404	The specified SnapshotId does not exist.
OperationConflict	409	Request was denied due to conflict with a previous request.
InternalError	500	The request processing has failed due to some unknown error, exception or failure.
ServiceUnavailable	503	The request has failed due to a temporary failure of the server.
ServiceUnavailable.RegionMaintaining	503	System maintenance is in progress on the selected region, please wait a few minutes before trying again.

4.Authentication rules

This topic lists the values of Action and Resource parameters that are used to implement RAM authentication. You can use the ECS console or call ECS API operations to authenticate team or department members, RAM users, and RAM roles, and implement authorization across cloud services. These parameters are suitable for scenarios where custom policies must be created to implement fine-grained access control.

Background information

 **Note** If the target resources can be accessed without authorization, skip this topic.

You can use your Alibaba Cloud account or RAM user account to perform operations on your ECS resources through the ECS console or API. Operation permissions are required in the following scenarios:

- A RAM user account created by you has no permissions to perform operations on the ECS resources that belong to your Alibaba Cloud account.
- You want to access ECS resources from other Alibaba Cloud services, or access other Alibaba Cloud services from ECS.
- You want to perform operations on ECS resources that require resource and API operation permissions granted by the resource owners.

When an account requests access to ECS resources that belong to your Alibaba Cloud account by calling ECS API operations, Alibaba Cloud ECS instructs RAM to perform a permission check to guarantee that the required permissions have been granted to the account that sends the request. ECS determines which resources require a permission check based on the requested resources and API operation syntax. For more information about authorization policies and access control, see [What is RAM?](#) and [List of operations by function](#) in the RAM documentation.

Custom policies

You can use the RAM console or call the [CreatePolicy](#) API operation of RAM to create a custom policy. If Script is selected as the policy configuration mode, you must specify the value of PolicyDocument based on the JSON template file. You must specify the values of Action and Resource parameters based on the authentication list in the following section. For more information, see [Implement access control by using RAM](#) and [Policy elements](#).

```
{
  "Version": "1",
  "Statement": [
    {
      "Action": [
        "ecs:[ECS RAM Action]",
        "ecs:DescribeInstances"
      ],
      "Resource": [
        "[ECS RAM Action Resource]",
        "acs:ecs:$regionid:15619224785****:instance/i-bp1bvz55uz27hf****"
      ],
      "Effect": "Allow"
    }
  ]
}
```

Authentication list

 **Note** For more information about the value format of the Resource parameter, see the following topic in *RAM documentation*: [Terms](#).

Action	Resource
AddTags	acs:ecs:\$regionid:\$accountid:\$resourceType/\$resourceId
AllocatePublicIpAddress	acs:ecs:\$regionid:\$accountid:instance/\$instanceId
ApplyAutoSnapshotPolicy	acs:ecs:*\$accountid:snapshot/*
AttachClassicLinkVpc	acs:ecs:\$regionid:\$accountid:instance/\$instanceId
AttachDisk	- acs:ecs:\$regionid:\$accountid:instance/\$instanceId - acs:ecs:\$regionid:\$accountid:instance/\$diskId
AttachKeyPair	- acs:ecs:\$regionid:\$accountid:instance/\$instanceId - acs:ecs:\$regionid:\$accountid:keypair/\$keypairName
AuthorizeSecurityGroup	acs:ecs:\$regionid:\$accountid:securitygroup/\$groupNo
AuthorizeSecurityGroupEgress	acs:ecs:\$regionid:\$accountid:securitygroup/\$groupNo
CancelAutoSnapshotPolicy	acs:ecs:*\$accountid:snapshot/*
CancelCopyImage	acs:ecs:\$regionid:\$accountid:image/\$imageNo
CopyImage	- acs:ecs:\$fromRegionid:\$accountid:image/\$imageNo - acs:ecs:\$toRegionid:\$accountid:image/*
ConvertNatPublicIpToEip	acs:ecs:\$regionid:\$accountid:instance/\$instanceId
CreateAutoSnapshotPolicy	acs:ecs:*\$accountid:snapshot/*
CreateDisk	- acs:ecs:\$regionid:\$accountid:disk/* - acs:ecs:\$regionid:\$accountid:snapshot/\$snapshotId
CreateImage	- acs:ecs:\$regionid:\$accountid:image/* - acs:ecs:\$regionid:\$accountid:snapshot/\$snapshotId - acs:ecs:\$regionid:\$accountid:instance/\$instanceId
CreateInstance	- acs:ecs:\$regionid:\$accountid:instance/* - acs:ecs:\$regionid:\$accountid:image/\$imageNo - acs:ecs:\$regionid:\$accountid:securitygroup/\$groupNo - acs:ecs:\$regionid:\$accountid:snapshot/\$snapshotId (Optional) acs:ecs:\$regionid:\$accountid:keypair/\$keyPairName - acs:vpc:\$regionid:\$accountid:vswitch/\$vswitchId - acs:vpc:\$regionid:\$accountid:vpc/\$vpcId
CreateKeyPair	acs:ecs:\$regionid:\$accountid:keypair/*
CreateSecurityGroup	acs:ecs:\$regionid:\$accountid:securitygroup/*
CreateSnapshot	- acs:ecs:\$regionid:\$accountid:snapshot/* - acs:ecs:\$regionid:\$accountid:disk/\$diskId - acs:ecs:\$regionid:\$accountid:volume/\$volumeId
DeleteAutoSnapshotPolicy	acs:ecs:*\$accountid:snapshot/*
DeleteDisk	acs:ecs:\$regionid:\$accountid:disk/\$diskId
DeleteImage	acs:ecs:\$regionid:\$accountid:image/\$imageNo

Action	Resource
DeleteInstance	acs:ecs:\$regionid:\$accountid:instance/\$instanceId
DeleteKeyPairs	acs:ecs:\$regionid:\$accountid:keypair/\$keyPairName
DeleteSecurityGroup	acs:ecs:\$regionid:\$accountid:securitygroup/\$groupNo
DeleteSnapshot	acs:ecs:\$regionid:\$accountid:snapshot/\$snapshotId
DescribeClassicLinkInstances	acs:ecs:\$regionid:\$accountid:instance/*
DescribeDiskMonitorData	acs:ecs:\$regionid:\$accountid:disk/\$diskId
DescribeDisks	- acs:ecs:\$regionid:\$accountid:disk/\$diskId - acs:ecs:\$regionid:\$accountid:disk/*
DescribeImages	- acs:ecs:\$regionid:\$accountid:image/\$imageNo - acs:ecs:\$regionid:\$accountid:image/*
DescribeInstanceMonitorData	acs:ecs:\$regionid:\$accountid:instance/\$instanceId
DescribeInstances	- acs:ecs:\$regionid:\$accountid:instance/\$instanceId - acs:ecs:\$regionid:\$accountid:instance/*
DescribeInstanceStatus	acs:ecs:\$regionid:\$accountid:instance/*
DescribeInstanceVncPasswd	acs:ecs:\$regionid:\$accountid:instance/\$instanceId
DescribeInstanceVncUrl	acs:ecs:\$regionid:\$accountid:instance/\$instanceId
DescribeKeyPairs	- acs:ecs:\$regionid:\$accountid:keypair/\$keyPairName - acs:ecs:\$regionid:\$accountid:keypair/*
DescribePrice	acs:ecs:*\$accountid:*
DescribeRenewalPrice	acs:ecs:\$regionid:\$accountid:instance/\$instanceId
DescribeSecurityGroupAttribute	acs:ecs:\$regionid:\$accountid:securitygroup/\$groupNo
DescribeSecurityGroups	- acs:ecs:\$regionid:\$accountid:securitygroup/\$groupNo - acs:ecs:\$regionid:\$accountid:securitygroup/*
DescribeSnapshotAttribute	acs:ecs:\$regionid:\$accountid:snapshot/\$snapshotId
DescribeSnapshotLinks	- acs:ecs:\$regionid:\$accountid:disk/\$diskId - acs:ecs:\$regionid:\$accountid:disk/*
DescribeSnapshotMonitorData	acs:ecs:*\$accountid:snapshot/*
DescribeSnapshots	- acs:ecs:\$regionid:\$accountid:snapshot/\$snapshotId - acs:ecs:\$regionid:\$accountid:snapshot/*
DescribeTags	acs:ecs:\$regionid:\$accountid:\$resourceType/\$resourceId
DetachClassicLinkVpc	acs:ecs:\$regionid:\$accountid:instance/\$instanceId
DetachDisk	- acs:ecs:\$regionid:\$accountid:instance/\$instanceId - acs:ecs:\$regionid:\$accountid:disk/\$diskId

Action	Resource
DetachKeyPair	- acs:ecs:\$regionid:\$accountid:instance/\$instanceId - acs:ecs:\$regionid:\$accountid:keypair/\$keypairName
ExportImage	acs:ecs:\$regionid:\$accountid:image/\$imageNo
ImportImage	acs:ecs:\$regionid:\$accountid:image/*
ImportKeyPair	acs:ecs:\$regionid:\$accountid:keypair/*
JoinSecurityGroup	- acs:ecs:\$regionid:\$accountid:instance/\$instanceId - acs:ecs:\$regionid:\$accountid:securitygroup/\$groupNo
LeaveSecurityGroup	- acs:ecs:\$regionid:\$accountid:instance/\$instanceId - acs:ecs:\$regionid:\$accountid:securitygroup/\$groupNo
ModifyAutoSnapshotPolicy	acs:ecs:*. \$accountid:snapshot/*
ModifyDiskAttribute	acs:ecs:\$regionid:\$accountid:disk/\$diskId
ModifyImageAttribute	acs:ecs:\$regionid:\$accountid:image/\$imageNo
ModifyInstanceAttribute	acs:ecs:\$regionid:\$accountid:instance/\$instanceId
ModifyInstanceAutoReleaseTime	acs:ecs:\$regionid:\$accountid:instance/\$instanceId
ModifyInstanceChargeType	acs:ecs:\$regionid:\$accountid:instance/\$instanceId
ModifyInstanceNetworkSpec	acs:ecs:\$regionid:\$accountid:instance/\$instanceId
ModifyInstanceVncPasswd	acs:ecs:\$regionid:\$accountid:instance/\$instanceId
ModifyInstanceVpcAttribute	- acs:ecs:\$regionid:\$accountid:instance/\$instanceId - acs:ecs:\$regionid:\$accountid:vswitch/\$vSwitchId
ModifySecurityGroupAttribute	acs:ecs:\$regionid:\$accountid:securitygroup/\$groupNo
ModifySecurityGroupEgressRule	acs:ecs:\$regionid:\$accountid:securitygroup/\$groupNo
ModifySecurityGroupRule	acs:ecs:\$regionid:\$accountid:securitygroup/\$groupNo
ModifyPrepayInstanceSpec	acs:ecs:\$regionid:\$accountid:
ModifySnapshotAttribute	acs:ecs:\$regionid:\$accountid:snapshot/\$snapshotId
RebootInstance	acs:ecs:\$regionid:\$accountid:instance/\$instanceId
ReInitDisk	acs:ecs:\$regionid:\$accountid:disk/\$diskId
ReleasePublicIpAddress	acs:ecs:\$regionid:\$accountid:instance/\$instanceId
RemoveTags	acs:ecs:\$regionid:\$accountid:\$resourceType/\$resourceId
RenewInstance	acs:ecs:\$regionid:\$accountid:instance/\$instanceId
ReplaceSystemDisk	- acs:ecs:\$regionid:\$accountid:instance/\$instanceId - acs:ecs:\$regionid:\$accountid:image/\$imageNo
ResetDisk	acs:ecs:\$regionid:\$accountid:disk/\$diskId
ResizeDisk	acs:ecs:\$regionid:\$accountid:disk/\$diskId

Action	Resource
RevokeSecurityGroup	acs:ecs:\$regionid:\$accountid:securitygroup/\$groupNo
RevokeSecurityGroupEgress	acs:ecs:\$regionid:\$accountid:securitygroup/\$groupNo
RunInstances	• acs:ecs:\$regionid:\$accountid:instance/* • acs:ecs:\$regionid:\$accountid:image/\$imageNo • acs:ecs:\$regionid:\$accountid:securitygroup/\$groupNo • acs:ecs:\$regionid:\$accountid:snapshot/\$snapshotId • acs:ecs:\$regionid:\$accountid:keypair/\$keyPairName
StartInstance	acs:ecs:\$regionid:\$accountid:instance/\$instanceId
StopInstance	acs:ecs:\$regionid:\$accountid:instance/\$instanceId

5. Instances

5.1. RunInstances

You can call this operation to create one or more pay-as-you-go or subscription ECS instances.

Description

- **Preparations:**
 - Cost estimation: You have learned about the billing methods of ECS. For more information, see [Billing overview](#).
 - Instance type selection: You have called the [DescribeInstanceTypes](#) operation to query the performance data of the instance types to which the instances to be created belong. For more information, see [Select instance types](#).
 - Available resource query: You have called the [DescribeAvailableResource](#) operation to query instance availability in the specified region or zone.
 - Network planning: You have created security groups. For more information, see [CreateSecurityGroup](#). Before you create a VPC-type instance, create a VPC in the region where you want to create the instance. For more information, see [Create a VPC](#).
- **Precautions:**
 - You can create a maximum of 100 instances at a time.
 - You can use the `AutoReleaseTime` parameter to set the time when the instances are automatically released.
 - After instances are created, the system returns the ID list of the created instances. You can call the [DescribeInstances](#) operation to check the status of the instances.
 - Instances automatically start after they are created. The instances are ready for use when they are in the `Running` state.
 - Different from the [CreateInstance](#) operation, the `RunInstances` operation enables the system to assign public IP addresses to the new instances if you set the `InternetMaxBandwidthOut` parameter to be greater than 0.
 - After you call this operation, an error is returned if a parameter is invalid or available resources are insufficient. For more information, see the "Error codes" section in this topic.
- **Best practices:**
 - The `RunInstances` operation allows you to create multiple instances at a time. To better manage and search for these instances, we recommend that you specify the same tag pair by using the `Tag.N.Key` and `Tag.N.Value` parameters for the instances. You can also append sequential suffixes specified by the `UniqueSuffix` parameter to the hostnames specified by the `HostName` parameter and instance names specified by the `InstanceName` parameter.
 - An instance launch template automatically specifies parameters that are required for creating an instance. You can call the [CreateLaunchTemplate](#) operation to create an instance launch template. Then, in your request to call the `RunInstances` operation, specify the `LaunchTemplateId` and `LaunchTemplateVersion` parameters to use the launch template.
 - In the [ECS console](#), you can view the best practices for calling the `RunInstances` operation when you create an ECS instance. On the Preview page, click View Open API in the Configurations Selected section. In the dialog box that appears, the left-side **API Workflow** section shows the operations and request parameters that are associated with the `RunInstances` operation. The right-side section shows the SDK examples in the **Java** or **Python** format.

Debugging

OpenAPI Explorer automatically calculates the signature value. For your convenience, we recommend that you call this operation in OpenAPI Explorer. OpenAPI Explorer dynamically generates the sample code of the operation for different SDKs.

Request parameters

Parameter	Type	Required	Example	Description

Parameter	Type	Required	Example	Description
Action	String	Yes	RunInstances	The operation that you want to perform. Set the value to RunInstances.
RegionId	String	Yes	cn-hangzhou	The region ID of the instance. You can call the DescribeRegions operation to query the most recent region list.
ImageId	String	No	aliyun_2_1903_x64_20G_alibase_20200324.vhd	The ID of the image used to create the instances. You can call the DescribeImages operation to query the available images. If you do not use the <code>LaunchTemplateId</code> or <code>LaunchTemplateName</code> parameter to specify the instance launch template, and not set the <code>ImageFamily</code> parameter to select the latest available custom images, you must specify the <code>ImageId</code> parameter.
ImageFamily	String	No	hangzhou-daily-update	The name of the image family. You can set this parameter to obtain the latest available custom images within the specified image family to create ECS instances. - If you have set the <code>ImageId</code> parameter, you cannot set the <code>ImageFamily</code> parameter. - If you have not set the <code>ImageId</code> parameter, but you set the <code>ImageId</code> parameter in the launch template specified by the <code>LaunchTemplateId</code> or <code>LaunchTemplateName</code> parameter, you cannot set the <code>ImageFamily</code> parameter. - If you have not set the <code>ImageId</code> parameter, and not set the <code>ImageId</code> parameter in the launch template specified by the <code>LaunchTemplateId</code> or <code>LaunchTemplateName</code> parameter, you can set the <code>ImageFamily</code> parameter. - If you have not set the <code>ImageId</code> parameter, and not set the <code>LaunchTemplateId</code> and <code>LaunchTemplateName</code> parameter, you can set the <code>ImageFamily</code> parameter.

Parameter	Type	Required	Example	Description
InstanceType	String	No	ecs.g6.large	The instance type. If you do not set <code>LaunchTemplateId</code> or <code>LaunchTemplateName</code> to specify a launch template, you must specify the <code>InstanceType</code> parameter. - Select instance types: See Instance families or call the DescribeInstanceTypes operation to query the performance data of the instance types to which the instances to be created belong, or see Select instance types to learn how to select instance types. - Query available ECS resources: You can call the DescribeAvailableResource operation to query instance availability in the specified region or zone.
SecurityGroupId	String	No	sg-bp15ed6xe1yxeycg7***	The ID of the security group to which the instance belongs. Instances in the same security group can communicate with each other. The number of instances that a security group can contain depends on the type of the security group. For more information, see the "Security group limits" section in Limits.  Note The SecurityGroupId parameter determines the network type of instances in the security group. For example, a security group of the VPC type can only contain VPC-type instances, and you must also specify the VSwitchId parameter for the instances. If you do not specify the <code>LaunchTemplateId</code> or <code>LaunchTemplateName</code> parameter to set the instance launch template, you must specify the <code>SecurityGroupId</code> parameter.
SecurityGroupIds.N	RepeatList	No	sg-bp15ed6xe1yxeycg7***	The IDs of security groups N to which the instance belongs. The valid values of N are based on the maximum number of security groups to which an instance can belong. For more information, see the "Security group limits" section in Limits.  Note You cannot specify both SecurityGroupId and SecurityGroupIds.N at the same time.
VSwitchId	String	No	vsw-bp1s5fnvk4gn2tws0**	The ID of the VSwitch to which to connect the instance. You must specify this parameter when you create a VPC-type instance. The VSwitch and security group must belong to the same VPC.

Parameter	Type	Required	Example	Description
InstanceName	String	No	k8s-node-[1,4]-alibabacloud	The name of the instance. The name must be 2 to 128 characters in length and can contain letters, digits, colons (:), underscores (_), periods (.), and hyphens (-). It must start with a letter and cannot start with http:// or https://. Default value: the <code>InstanceId</code> value.  Note When you create multiple ECS instances, you can use <code>UniqueSuffix</code> to specify different instance names for the instances. You can also use the <code>name_prefix[begin_number,bits]name_suffix</code> format to name sequential instance names. For example, if you set <code>InstanceName</code> to <code>k8s-node-[1,4]-alibabacloud</code>, the instance name of the first ECS instance is <code>k8s-node-0001-alibabacloud</code>. For more information, see API FAQ. If you do not append suffixes to the instance names or hostnames by using the <code>name_suffix</code> format, but only use the <code>name_prefix[begin_number,bits]</code> format, the <code>UniqueSuffix</code> parameter is ignored. For example, when you set <code>InstanceName</code> to <code>instance-[99,3]</code> and <code>UniqueSuffix</code> to <code>true</code>, the instance name is <code>instance099</code> instead of <code>instance099001</code>.
Description	String	No	Instance_Description	The description of the instance. The description must be 2 to 256 characters in length and cannot start with http:// or https://.
InternetMaxBandwidthIn	Integer	No	10	The maximum inbound public bandwidth. Unit: Mbit/s. Valid values: - If the purchased outbound public bandwidth is less than or equal to 10 Mbit/s, valid values of this parameter are 1 to 10. Default value: 10. - If the purchased outbound public bandwidth is greater than 10 Mbit/s, valid values of this parameter are 1 to the value of the <code>InternetMaxBandwidthOut</code> parameter. Default value: the value of the <code>InternetMaxBandwidthOut</code> parameter.
InternetMaxBandwidthOut	Integer	No	10	The maximum outbound public bandwidth. Unit: Mbit/s. Valid values: 0 to 100. Default value: 0.

Parameter	Type	Required	Example	Description
HostName	String	No	k8s-node-[1,4]-ecshost	The hostname of the instance. - The hostname cannot start or end with a period (.) or hyphen (-). It cannot contain consecutive periods (.) or hyphens (-). - For Windows instances, the hostname must be 2 to 15 characters in length and can contain letters, digits, and hyphens (-). The hostname cannot contain periods (.) or only contain digits. - For instances that run other operating systems such as Linux, the hostname must be 2 to 64 characters in length. You can use periods (.) to separate the hostname into multiple segments. Each segment can contain letters, digits, and hyphens (-).  Note When you create multiple ECS instances, you can use the <code>UniqueSuffix</code> parameter to set different hostnames for these instances. You can also use the <code>name_prefix[begin_number,bits]name_suffix</code> format to name sequential hostnames. For example, if you set <code>HostName</code> to <code>k8s-node-[1,4]-ecshost</code>, the hostname of the first ECS instance is <code>k8s-node-0001-ecshost</code>. For more information, see API FAQ. If you do not append suffixes to the instance names or hostnames by using the <code>name_suffix</code> format, but only use the <code>name_prefix[begin_number,bits]</code> format, the <code>UniqueSuffix</code> parameter is ignored. For example, when you set <code>InstanceName</code> to <code>instance-[99,3]</code> and <code>UniqueSuffix</code> to <code>true</code>, the instance name is <code>instance099</code> instead of <code>instance099001</code>.
UniqueSuffix	Boolean	No	true	Specifies whether to add sequential suffixes to the hostnames specified by the <code>HostName</code> parameter and instance names specified by the <code>InstanceName</code> parameter. The sequential suffixes range from 001 to 999. For example, the hostnames can be <code>LocalHost001</code> and <code>LocalHost002</code>. The instance names can be <code>MyInstance001</code> and <code>MyInstance002</code>. Valid values: - true - false Default value: false.

Parameter	Type	Required	Example	Description
Password	String	No	EcsV587!	The password of the instance. The password must be 8 to 30 characters in length. It must include at least three of the following character types: uppercase letters, lowercase letters, digits, and special characters. Special characters include <pre>() ` ~ ! @ # \$ % ^ & * - _ + = { } [] ; ' < > , . ? /</pre> Passwords of Windows instances cannot start with a forward slash (/). Note If the Password parameter is specified, we recommend that you send requests over HTTPS to secure your password.
PasswordInherit	Boolean	No	false	Specifies whether to use the password predefined in the image. Valid values: - true - false Note To use the PasswordInherit parameter, the Password parameter must be empty and you must make sure that the selected image has a password configured.
ZoneId	String	No	cn-hangzhou-g	The zone ID of the instance. You can call the DescribeZones operation to query the zone list. If you do not specify a zone ID, the system randomly selects a zone.
InternetChargeType	String	No	PayByTraffic	The billing method for network usage. Default value: PayByTraffic. Valid values: - PayByBandwidth: pay-by-bandwidth. - PayByTraffic: pay-by-traffic.
SystemDisk.Size	String	No	40	The size of the system disk. Unit: GiB. Valid values: 20 to 500. The value of this parameter must be at least 20 and greater than or equal to the size of the image. Default value: 40 or the size of the image, depending on whichever is greater.

Parameter	Type	Required	Example	Description
SystemDisk.Category	String	No	cloud_ssd	The category of the system disk. Valid values: - cloud_efficiency: ultra disk - cloud_ssd: standard SSD - cloud_essd: enhanced SSD (ESSD) - cloud: basic disk For non-I/O optimized instances of retired instance types, the default value is cloud. For other instances, the default value is cloud_efficiency.
SystemDisk.DiskName	String	No	cloud_ssdSystem	The name of the system disk. The name must be 2 to 128 characters in length and can contain letters, digits, periods (.), colons (:), underscores (_), and hyphens (-). It must start with a letter and cannot start with http:// or https://. This parameter is empty by default.
SystemDisk.Description	String	No	SystemDisk_Description	The description of the system disk. The description must be 2 to 256 characters in length and cannot start with http:// or https://.
SystemDisk.PerformanceLevel	String	No	PL1	The performance level of the ESSD used as the system disk. Default value: PL1. Valid values: - PL1: A single ESSD can deliver up to 50,000 random read/write IOPS. - PL2: A single ESSD can deliver up to 100,000 random read/write IOPS. - PL3: A single ESSD can deliver up to 1,000,000 random read/write IOPS. For more information about ESSD performance levels, see Enhanced SSD (ESSD).
SystemDisk.AutoSnapshotPolicyId	String	No	sp-bp67acfmazb4p****	The ID of the automatic snapshot policy to be applied to the system disk.
DataDisk.N.Size	Integer	No	2000	The size of data disk N. Valid values of N: 1 to 16. Unit: GiB. Valid values: - If the data disk is an ultra disk, the valid values are 20 to 32768. - If the data disk is a standard SSD, the valid values are 20 to 32768. - If the data disk is an ESSD, the valid values are 20 to 32768. - If the data disk is a local SSD, the valid values are 5 to 800. - If the data disk is a basic disk, the valid values are 5 to 2000. The value of this parameter must be greater than or equal to the size of the snapshot specified by the <code>SnapshotId</code> parameter.

Parameter	Type	Required	Example	Description
DataDisk.N.SnapshotId	String	No	s-bp17441ohwka0yuh**	The ID of the snapshot used to create data disk N. Valid values of N: 1 to 16. When the <code>DataDisk.N.SnapshotId</code> parameter is specified, the <code>DataDisk.N.Size</code> parameter is ignored. The data disk will be created with the size of the specified snapshot. Use snapshots created after July 15, 2013. Otherwise, an error message will be returned and your request will be rejected.
DataDisk.N.Category	String	No	cloud_ssd	The category of data disk N. Valid values: - cloud_efficiency: ultra disk - cloud_ssd: standard SSD - ephemeral_ssd: local SSD - cloud_essd: ESSD - cloud: basic disk For I/O optimized instances, the default value is cloud_efficiency. For non-I/O optimized instances, the default value is cloud.
DataDisk.N.Encrypted	String	No	false	Specifies whether data disk N is encrypted. Valid values: - true: The disk is encrypted. - false: The disk is not encrypted. Default value: false.
DataDisk.N.KMSKeyId	String	No	0e478b7a-4262-4802-b8cb-00d3fb40****	The KMS key ID for data disk N.
DataDisk.N.DiskName	String	No	cloud_ssdData	The name of data disk N. The name must be 2 to 128 characters in length and can contain letters, digits, periods (.), colons (:), underscores (_), and hyphens (-). It must start with a letter and cannot start with http:// or https://. This parameter is empty by default.
DataDisk.N.Description	String	No	DataDisk_Description	The description of data disk N. The description must be 2 to 256 characters in length and cannot start with http:// or https://.
DataDisk.N.Device	String	No	null	The mount point of data disk N.  Note This parameter will be removed in the future. We recommend that you use other parameters to ensure future compatibility.

Parameter	Type	Required	Example	Description
DataDisk.N.DeleteWithInstance	Boolean	No	true	Specifies whether to release data disk N together with the instance. Valid values: - true: Data disk N is released together with the instance. - false: Data disk N is not released together with the instance. Default value: true.
DataDisk.N.PerformanceLevel	String	No	PL2	The performance level of the ESSD used as data disk N. The N value must be the same as that in DataDisk.N.Category when DataDisk.N.Category is set to cloud_essd. Default value: PL1. Valid values: - PL1: A single ESSD can deliver up to 50,000 random read/write IOPS. - PL2: A single ESSD can deliver up to 100,000 random read/write IOPS. - PL3: A single ESSD can deliver up to 1,000,000 random read/write IOPS. For more information about ESSD performance levels, see Enhanced SSD (ESSD).
DataDisk.N.AutoSnapshotPolicyId	String	No	sp-bp67acfmazb4p****	The ID of the automatic snapshot policy to be applied to data disk N.
IoOptimized	String	No	optimized	Specifies whether the instance is I/O optimized. For instances of retired instance types, the default value is none. For other instances, the default value is optimized. For more information, see Retired instance types. Valid values: - none: The instance is not I/O optimized. - optimized: The instance is I/O optimized.
NetworkInterface.N.PrimaryIpAddress	String	No	172.16.236.***	The primary IP address of the secondary Elastic Network Interface (ENI) N. Set the value of N to 1.  Note You can attach only one secondary ENI when you are creating an ECS instance. After the instance is created, you can call the CreateNetworkInterface and AttachNetworkInterface operations to attach more secondary ENIs. The default value is an IP address that is randomly selected from the VSwitch to which the ENI belongs.
NetworkInterface.N.VSwitchId	String	No	vsw-bp67acfmazb4p****	The ID of the VSwitch to be connected to secondary ENI N. Set the value of N to 1. The default value is the VSwitch to which the ECS instance belongs.

Parameter	Type	Required	Example	Description
NetworkInterface.N.SecurityGroupId	String	No	sg-bp67acfmazb4p****	The ID of the security group to which to assign the secondary ENI. Set the value of N to 1. Default value: the ID of the security group to which the instance will belong.
NetworkInterface.N.SecurityGroupIds.N	RepeatList	No	sg-bp15ed6xe1yxe1cg7****	The IDs of security groups to which the secondary ENI N belongs. The valid values of N in <code>SecurityGroupIds.N</code> are based on the maximum number of security groups to which the instance equipped with the ENI can belong. For more information, see Limits . ? Note You cannot specify both <code>NetworkInterface.N.SecurityGroupId</code> and <code>NetworkInterface.N.SecurityGroupIds.N</code> at the same time.
NetworkInterface.N.NetworkInterfaceName	String	No	Network_Name	The name of secondary ENI N. Set the value of N to 1.
NetworkInterface.N.Description	String	No	Network_Description	The description of secondary ENI N. Set the value of N to 1. The description must be 2 to 256 characters in length and cannot start with <code>http://</code> or <code>https://</code> .
NetworkInterface.N.QueueNumber	Integer	No	8	The queue number of secondary ENI N. Set the value of N to 1. - The value of this parameter cannot exceed the maximum queue number for one ENI allowed for the instance type. - The total number of queues for all ENIs on the instance cannot exceed the service queue quota allowed for the instance type. To learn the maximum queue number for one ENI and queue quota allowed for an instance type, you can call the DescribeInstanceTypes operation to query the <code>MaximumQueueNumberPerEni</code> and <code>TotalEniQueueQuantity</code> fields.
UserData	String	No	ZWNobyBoZWxsbyBlY3Mh	The user data of the instance. User data must be encoded in Base64. The maximum size of raw data is 16 KB.
KeyPairName	String	No	KeyPair_Name	The name of the key pair to be bound to the instance. - For Windows instances, this parameter is ignored and it is empty by default. The <code>Password</code> parameter takes effect even if the <code>KeyPairName</code> parameter is specified. - For Linux instances, the username and password logon method is disabled by default.

Parameter	Type	Required	Example	Description
RamRoleName	String	No	RAM_Name	The name of the RAM role to be attached. You can call the ListRoles operation provided by RAM to query the RAM roles that you have created.
Amount	Integer	No	3	The number of instances you want to create. Valid values: 1 to 100. Default: 1.
MinAmount	Integer	No	2	The minimum number of the specified instances to purchase. Valid values: 1 to 100. - If the number of ECS instances that available resources are sufficient to create is less than the MinAmount value, the instance creation operation fails. - If the number of ECS instances that available resources are sufficient to create is greater than or equal to the MinAmount value, the instance creation operation succeeds. Instances are created based on the number of available resources.
AutoReleaseTime	String	No	2018-01-01T12:05:00Z	The automatic release time of the pay-as-you-go instance. Specify the time in the ISO 8601 standard in the yyyy-MM-ddTHH:mm:ssZ format. The time must be in UTC. - If the value of seconds (ss) is not 00 , it is automatically set to the start time of the current minute (mm). - The release time must be at least 30 minutes later than the current time. - The release time must be at most three years from the current time.
SpotStrategy	String	No	NoSpot	The preemption policy for a preemptible or pay-as-you-go instance. This parameter takes effect only when the <code>InstanceChargeType</code> parameter is set to <code>PostPaid</code> . Default value: NoSpot. Valid values: - NoSpot: applies to regular pay-as-you-go instances. - SpotWithPriceLimit: applies to preemptible instances that have maximum hourly prices. - SpotAsPriceGo: applies to pay-as-you-go instances priced at the market price at the time of purchase.
SpotDuration	Integer	No	1	The retention period of the preemptible instance. Unit: hours. Valid values: 1, 2, 3, 4, 5, and 6. Default: 1

Parameter	Type	Required	Example	Description
SpotPriceLimit	Float	No	0.97	The maximum hourly price of the instance. This parameter takes effect only when <code>SpotStrategy</code> is set to <code>SpotWithPriceLimit</code> . A maximum of three decimal places are allowed.
SpotInterruptionBehavior	String	No	Terminate	The interruption mode of the preemptible instance. Set the value to Terminate, which specifies that the instance is released.
SecurityEnhancementStrategy	String	No	Active	Specifies whether to enable security enhancement. Valid values: - Active: enables security enhancement. This value is applicable only to public images. - Deactive: disables security enhancement. This value is applicable to all image types.
ClientToken	String	No	123e4567-e89b-12d3-a456-426655440000	The client token that is used to ensure the idempotence of the request. You can use the client to generate the value, but you must ensure that it is unique among different requests. The ClientToken value can only contain ASCII characters and cannot exceed 64 characters in length. For more information, see How to ensure idempotence .
Tag.N.Key	String	No	TestKey	The key of tag N to be bound to the instance, disks, and primary ENI. Valid values of N: 1 to 20. The tag key cannot be an empty string. It can be up to 128 characters in length and cannot start with acs: or aliyun. It cannot contain http:// or https://.
Tag.N.Value	String	No	TestValue	The value of tag N to be bound to the instance, disks, and the primary ENI. Valid values of N: 1 to 20. The tag value can be an empty string. It can be up to 128 characters in length and cannot start with acs: or contain http:// or https://.
HpcClusterId	String	No	hpc-bp67acfmazb4p****	The ID of the E-HPC cluster to which to assign the instance.

Parameter	Type	Required	Example	Description
DryRun	Boolean	No	false	Specifies whether to check the validity of the request without actually making the request. Default value: false. Valid values: • true: The validity of the request is checked but the request is not made. Check items include the required parameters, request format, service limits, and available ECS resources. If the check fails, the corresponding error code is returned. If the check succeeds, the <code>DryRunOperation</code> error code is returned. • false: The validity of the request is checked. If the check succeeds, the request is made.
DedicatedHostId	String	No	dh-bp67acfmazb4p****	The ID of the dedicated host for the ECS instance. If the <code>DedicatedHostId</code> parameter is specified, the <code>SpotStrategy</code> and <code>SpotPriceLimit</code> parameters are ignored. This is because preemptible instances cannot be created on dedicated hosts.
LaunchTemplateId	String	No	lt-bp1apo0bbbkuy0rj***	The ID of the launch template. For more information, see DescribeLaunchTemplates. To use a launch template to create an instance, you must specify the launch template by using the <code>LaunchTemplateId</code> or <code>LaunchTemplateName</code> parameter.
LaunchTemplateName	String	No	LaunchTemplate_Name	The name of the launch template. To use a launch template to create an instance, you must specify the launch template by using the <code>LaunchTemplateId</code> or <code>LaunchTemplateName</code> parameter.
LaunchTemplateVersion	Long	No	3	The version of the launch template. If you specify <code>LaunchTemplateId</code> or <code>LaunchTemplateName</code> but do not specify the version number of the launch template, the default template version is used.
ResourceGroupId	String	No	rg-bp67acfmazb4p****	The ID of the resource group to which the instance belongs.

Parameter	Type	Required	Example	Description
Period	Integer	No	1	The subscription period of the instance. The unit is specified by the <code>PeriodUnit</code> parameter. This parameter is valid and is required only when the <code>InstanceChargeType</code> parameter is set to <code>PrePaid</code>. If the <code>DedicatedHostId</code> parameter is specified, the specified period cannot exceed the subscription period of the dedicated host of the instance. Valid values: If the <code>PeriodUnit</code> parameter is set to <code>Month</code>, valid values are 1, 2, 3, 4, 5, 6, 7, 8, 9, 12, 24, 36, 48, and 60.
PeriodUnit	String	No	Month	The unit of the subscription period. Default value: <code>Month</code>. Valid values: <code>Month</code>
AutoRenew	Boolean	No	true	Specifies whether to enable auto-renewal for the instance. This parameter is valid only when <code>InstanceChargeType</code> is set to <code>PrePaid</code>. Default value: <code>false</code>. Valid values: <code>true</code>: Auto-renewal is enabled for the instance. <code>false</code>: Auto-renewal is disabled for the instance.
AutoRenewPeriod	Integer	No	1	The auto-renewal period of the instance. Valid values: If the <code>PeriodUnit</code> parameter is set to <code>Month</code>, valid values are 1, 2, 3, 6, 12, 24, 36, 48, and 60. Default: 1
InstanceChargeType	String	No	PrePaid	The billing method of the instance. Default value: <code>PostPaid</code>. Default value: <code>PostPaid</code>. Valid values: <code>PrePaid</code>: subscription <code>PostPaid</code>: pay-as-you-go
DeploymentSetId	String	No	ds-bp1brhwhoqinyjd6***	The ID of the deployment set.

Parameter	Type	Required	Example	Description
PrivateIpAddress	String	No	10.1.2.1	The private IP address of the instance. To allocate a private IP address to a VPC-type ECS instance, ensure that the IP address is an idle IP address within the CIDR block of the VSwitch specified by the <code>VSwitchId</code> parameter.  Note When you specify <code>PrivateIpAddress</code>, the value of the <code>Amount</code> parameter must be set to 1.
CreditSpecification	String	No	Standard	The performance mode of the burstable instance. Valid values: - Standard: the standard mode. For more information, see the "Standard mode" section in Burstable instances. - Unlimited: the unlimited mode. For more information, see the "Unlimited mode" section in Burstable instances. This parameter is empty by default.
Ipv6Address.N	RepeatList	No	Ipv6Address.1=2001:db8:1234:1a00::***	IPv6 address N to be assigned to the primary ENI. Set the value of N to 1. Example: <code>Ipv6Address.1=2001:db8:1234:1a00::***</code>.  Note When the <code>Ipv6Address.N</code> parameter is specified, the value of the <code>Amount</code> parameter must be set to 1 and the <code>Ipv6AddressCount</code> parameter must not be specified.
Ipv6AddressCount	Integer	No	1	The number of IPv6 addresses to be randomly generated for the primary ENI.  Note You cannot specify both the <code>Ipv6Addresses.N</code> and <code>Ipv6AddressCount</code> parameters at the same time.

Parameter	Type	Required	Example	Description
NetworkInterfaceQueueNumber	Integer	No	8	The queue number of the primary ENI. - The value of this parameter cannot exceed the maximum queue number for one ENI allowed for the instance type. - The total number of queues for all ENIs on the instance cannot exceed the service queue quota allowed for the instance type. To learn the maximum queue number for one ENI and queue quota allowed for an instance type, you can call the DescribeInstanceTypes operation to query the <code>MaximumQueueNumberPerEni</code> and <code>TotalEniQueueQuantity</code> fields.
DeletionProtection	Boolean	No	false	The release protection property of the instance. It specifies whether you can use the ECS console or call the DeleteInstance operation to manually release the instance. Default value: false. Valid values: - true: Release protection is enabled for the instance. - false: Release protection is disabled for the instance.  Note This parameter is applicable only to pay-as-you-go instances. It can protect instances only against manual releases, not against system releases.
Affinity	String	No	default	Specifies whether the instance on a dedicated host is associated with the dedicated host. Valid values: - default: The instance is not associated with the dedicated host. With the No Fees for Stopped Instances (VPC-Connected) feature enabled, when the instance is restarted after being stopped, it is automatically deployed to another dedicated host in the automatic deployment resource pool if the resources of original dedicated host are insufficient. - host: The instance is associated with the dedicated host. With the No Fees for Stopped Instances (VPC-Connected) feature enabled, when the instance is restarted after being stopped, it still resides on the original dedicated host. If the resources of the original dedicated host are insufficient, the instance will fail to be restarted. Default value: default

Parameter	Type	Required	Example	Description
Tenancy	String	No	default	Specifies whether to create the instance on a dedicated host. Valid values: - default: creates the instance on a non-dedicated host. - host: creates the instance on a dedicated host. If you do not specify the <code>DedicatedHostId</code> parameter, Alibaba Cloud automatically selects a dedicated host for the instance. Default value: default
StorageSetId	String	No	ss-bp67acfmazb4p****	The ID of the storage set.
StorageSetPartitionNumber	Integer	No	2	The maximum number of partitions in a storage set. Valid values: greater than or equal to 2.
CpuOptions.Core	Integer	No	2	The number of CPU cores. This parameter cannot be specified but only uses its default value.
CpuOptions.ThreadsPerCore	Integer	No	2	The number of threads per core. The following formula is used to calculate the number of vCPUs of the ECS instance: <code>CpuOptions.Core</code> value × <code>CpuOptions.ThreadPerCore</code> value. - If the value of <code>CpuOptions.ThreadPerCore</code> is set to 1, CPU hyper-threads are disabled. - This parameter is applicable only to some instance types.
CpuOptions.Numa	String	No	1	The number of CPU Numa nodes.
HttpEndpoint	String	No	enabled	Specifies whether to enable the metadata endpoint on the instance. Valid values: - enabled - disabled Default value: enabled.  Note For more information about instance metadata, see Overview of instance metadata.

Parameter	Type	Required	Example	Description
HttpTokens	String	No	optional	Specifies whether to forcibly use the security enhancement mode (IMDSv2) to access instance metadata. Valid values: - optional: The security enhancement mode (IMDSv2) is not forcibly used. - required: The security enhancement mode (IMDSv2) is forcibly used. After you set this parameter to required, you cannot access the instance metadata in normal mode. Default value: optional.  Note For more information about modes of accessing instance metadata, see Modes of accessing instance metadata.

Response parameters

Parameter	Type	Example	Description
InstanceIdSets	List	["i-bp67acfmazb4pd2****", "i-bp1i43l28m7u48p1****", "i-bp12yqg7jdyxl11f****"]	The list of instance IDs (<code>InstanceIdSet</code>).
RequestId	String	473469C7-AA6F-4DC5-B3DB-A3DC0DE3C83E	The ID of the request.
TradePrice	Float	0.165	The transaction price.

Examples

Sample requests

```
https://ecs.aliyuncs.com/?Action=RunInstances
&RegionId=cn-hangzhou
&ImageId=aliyun_2_1903_x64_20G_alibase_20200324.vhd
&InstanceType=ecs.g6.large
&SecurityGroupId=sg-bp67acfmazb4p****
&VSwitchId=vsw-bp1s5fnvk4gn2tws0****
&SystemDisk.AutoSnapshotPolicyId=sp-bp67acfmazb4p****
&Amount=3
&<Common request parameters>
```

Sample success responses

XML format

```
<RunInstancesResponse>
  <InstanceIdSets>
    <InstanceIdSet>i-bp67acfmazb4pd2****</InstanceIdSet>
    <InstanceIdSet>i-bp1i43l28m7u48p1****</InstanceIdSet>
    <InstanceIdSet>i-bp12yqg7jdyxl11f****</InstanceIdSet>
  </InstanceIdSets>
  <RequestId>04F0F334-1335-436C-A1D7-6C044FE73368</RequestId>
</RunInstancesResponse>
```

JSON format

```
{
  "InstanceIdSets": {
    "InstanceIdSet": [
      "i-bp67acfmazb4pd2****",
      "i-bp1i43l28m7u48p1****",
      "i-bp12yqg7jdyxl11f****"
    ]
  },
  "RequestId": "04F0F334-1335-436C-A1D7-6C044FE73368"
}
```

Error codes

HTTP status code	Error code	Error message	Description
400	InvalidInstanceType.ValueUnauthorized	The specified InstanceType is not authorized.	The error message returned because you are not authorized to use the specified instance type.
404	InvalidSecurityGroupId	The specified SecurityGroupId is invalid or does not exist.	The error message returned because the specified security group ID is invalid or does not exist.
400	InvalidInstanceType.ValueNotSupported	The specified InstanceType beyond the permitted range.	The error message returned because the specified InstanceType parameter is invalid.
404	InvalidSecurityGroupId.NotFound	The SecurityGroupId provided does not exist in our records.	The error message returned because the specified security group does not exist in this account. Check whether the security group ID is correct.
400	InvalidDescription.Malformed	The specified parameter "Description" is not valid.	The error message returned because the specified Description parameter is invalid. The description must be 2 to 256 characters in length and cannot start with http:// or https://.
400	InvalidInternetChargeType.ValueNotSupported	The specified InternetChargeType is not valid.	The error message returned because the specified InternetChargeType parameter is invalid.
400	InvalidParameter	The specified parameter "InternetMaxBandwidthOut" is not valid.	The error message returned because the specified InternetMaxBandwidthOut parameter is invalid.

HTTP status code	Error code	Error message	Description
400	InvalidHostName.Malformed	The specified parameter "HostName" is not valid.	The error message returned because the specified HostName parameter is invalid.
403	InvalidParams.InstanceNameExceed	The uniqueSuffix takes three naming places, please shorten your InstanceName.	The error message returned because the UniqueSuffix parameter occupies three namespaces. Shorten the instance name.
403	InvalidParams.HostnameExceed	The uniqueSuffix takes three naming places, please shorten your Hostname.	The error message returned because the UniqueSuffix parameter occupies three namespaces. Shorten the hostname.
400	InvalidPassword.Malformed	The specified parameter "Password" is not valid.	The error message returned because the specified Password parameter is invalid.
400	InvalidPasswordParam.Mismatch	The input password should be null when passwdInherit is true.	The error message returned because the Password parameter is specified when PasswdInherit is set to true.
400	InvalidSystemDiskCategory.ValueNotSupported	The specified parameter "SystemDisk.Category" is not valid.	The error message returned because the specified SystemDisk.Category parameter is invalid.
400	InvalidDiskName.Malformed	The specified parameter "SystemDisk.DiskName" or "DataDisk.n.DiskName" is not valid.	The error message returned because the specified SystemDisk.DiskName or DataDisk.N.DiskName parameter is invalid. The name must be 2 to 128 characters in length and can contain letters, digits, periods (.), underscores (_), and hyphens (-). It must start with a letter and cannot start with http:// or https://.
400	InvalidDiskDescription.Malformed	The specified parameter "SystemDisk.DiskDescription" or "DataDisk.n.Description" is not valid.	The error message returned because the specified SystemDisk.Description or DataDisk.N.Description parameter is invalid.
400	InvalidDataDiskSize.ValueNotSupported	The specified DataDisk.n.Size beyond the permitted range, or the capacity of snapshot exceeds the size limit of the specified disk category.	The error message returned because the specified DataDisk.N.Size parameter is invalid or the snapshot size exceeds the maximum capacity that is allowed for the specified disk category.
400	InvalidDataDiskCategory.ValueNotSupported	The specified parameter "DataDisk.n.Category" is not valid.	The error message returned because the specified DataDisk.N.Category parameter is invalid.
404	InvalidDataDiskSnapshotId.NotFound	The specified parameter "DataDisk.n.SnapshotId" is not valid.	The error message returned because the specified DataDisk.N.SnapshotId parameter is invalid.
400	InvalidDataDevice.Malformed	The specified parameter "DataDisk.n.Device" is not valid.	The error message returned because the specified DataDisk.N.Device parameter is invalid.
400	InvalidNodeControllerId.Malformed	The specified parameter "NodeControllerId" is not valid.	The error message returned because the specified NodeControllerId parameter is invalid.

HTTP status code	Error code	Error message	Description
400	InvalidInnerIpAddress.Malformed	The specified parameter "InnerIpAddress" is not valid.	The error message returned because the specified InnerIpAddress parameter is invalid.
400	InvalidInnerIpAddress.Unusable	The specified InnerIpAddress is already used or not found in usable ip range.	The error message returned because the specified internal IP address is unavailable.
400	InvalidParameter.Conflict	The specified image does not support the specified instance type.	The error message returned because the specified image does not support the specified instance type.
400	ImageNotSupportCloudInit	The specified image does not support cloud-init.	The error message returned because cloud-init is not supported by the specified image.
400	InvalidSnapshotId.BasedSnapshotTooOld	The specified snapshot is created before 2013-07-15.	The error message returned because the specified snapshot was created before July 15, 2013.
400	QuotaExceed.AfterpayInstance	Living afterpay instances quota exceeded.	The error message returned because the maximum number of active pay-as-you-go instances has been reached.
403	ImageNotSubscribed	The specified image has not been subscribed.	The error message returned because you have not subscribed to the specified Alibaba Cloud Marketplace image.
403	InvalidSystemDiskCategory.ValueUnauthorized	The disk category is not authorized.	The error message returned because you are not authorized to use the specified disk category.
403	InvalidSnapshotId.NotReady	The specified snapshot has not completed yet.	The error message returned because the specified snapshot has not been created.
403	InstanceDiskCategoryLimitExceed	The total size of specified disk category in an instance exceeds.	The error message returned because the total size of the specified disks exceeds the maximum capacity that is allowed for the instance type.
403	InvalidDevice.InUse	The specified device has been occupied.	The error message returned because the specified device already has an attached disk.
403	ImageRemovedInMarket	The specified market image is not available. Or the specified user defined image includes product code because it is based on an image subscribed from marketplace, and that image in marketplace including exact the same product code has been removed.	The error message returned because the specified Alibaba Cloud Marketplace image is unavailable, or the specified custom image contains the product code of the Alibaba Cloud Marketplace image from which the custom image is derived and the Alibaba Cloud Marketplace image has been removed from Alibaba Cloud Marketplace.
404	InvalidClusterId.NotFound	The ClusterId provided does not exist in our records.	The error message returned because the specified ClusterId parameter does not exist.
403	CategoryNotSupported	The specified zone does not offer the specified disk category.	The error message returned because the specified disk category is unavailable in the specified zone.

HTTP status code	Error code	Error message	Description
400	InvalidInstanceName.Malformed	The specified parameter "InstanceName" is not valid.	The error message returned because the specified InstanceName parameter is invalid. The name must be 2 to 128 characters in length and can contain letters, digits, periods (.), underscores (_), and hyphens (-). It must start with a letter and cannot start with http:// or https://.
400	InvalidDiskDescription.Malformed	The specified parameter "SystemDisk.DiskDescription or DataDisk.n.Description" is not valid.	The error message returned because the specified SystemDisk.Description or DataDisk.N.Description parameter is invalid.
403	QuotaExceed.PortableCloudDisk	The quota of portable cloud disk exceeds.	The error message returned because the maximum number of removable disks has been reached.
500	InternalError	The request processing has failed due to some unknown error.	The error message returned because an internal error has occurred. Try again later. If the problem persists, submit a ticket.
400	InvalidParameter.Conflict	The specified region and cluster do not match.	The error message returned because the specified region and the specified cluster do not correspond to each other.
403	SecurityGroupInstanceLimitExceed	Exceeding the allowed amount of instances of a security group.	The error message returned because the maximum number of instances in the security group has been reached.
403	NodeControllerUnavailable	The Node Controller is temporarily unavailable.	The error message returned because the node controller is unavailable.
403	RegionUnauthorized	There is no authority to create instance in the specified region.	The error message returned because you are not authorized to create instances in the specified region.
403	CategoryNotSupported	The specified Zone or cluster does not offer the specified disk category.	The error message returned because the specified disk category is unavailable in the specified zone or cluster.
403	InvalidSnapshotId.NotDataDiskSnapshot	The specified snapshot is system disk snapshot.	The error message returned because the specified snapshot is a system disk snapshot.
403	CategoryNotSupported	The specified cluster does not offer the specified disk category.	The error message returned because the specified disk category is unavailable in the specified cluster.
404	InvalidVSwitchId.NotFound	Specified virtual switch does not exist.	The error message returned because the specified VSwitchId parameter does not exist.
404	InvalidVSwitchId.NotFound	%s	The error message returned because the specified VSwitchId parameter does not exist.
400	InvalidParameter.Mismatch	Specified security group and virtual switch are not in the same VPC.	The error message returned because the specified security group and VSwitch do not belong to the same VPC.

HTTP status code	Error code	Error message	Description
400	InvalidNetworkType.Mismatch	Specified parameter "InternetMaxBandwidthIn" or "InternetMaxBandwidthOut" conflict with instance network type.	The error message returned because the specified InternetMaxBandwidthIn or InternetMaxBandwidthOut parameter conflicts with the instance network type.
400	InvalidNetworkType.Mismatch	Specified parameter "InternetChargeType" conflict with instance network type.	The error message returned because the network type of the instance does not support the specified billing method for network usage.
400	InvalidPrivateIpAddress	Specified private IP address is not in the CIDR block of virtual switch.	The error message returned because the specified private IP address is not within the CIDR block of the VSwitch.
400	InvalidPrivateIpAddress.Malformed	Specified private IP address is malformed.	The error message returned because the specified private IP address is invalid.
400	InvalidPrivateIpAddress.Duplicated	Specified private IP address is duplicated.	The error message returned because the specified private IP address has been used. Change the IP address and try again.
400	QuotaExceeded.PrivateIpAddress	Don't have enough private IPs in this switch	The error message returned because all the private IP addresses in the CIDR block of the specified VSwitch are already in use. Try another VSwitch.
400	QuotaExceeded	Living instances quota exceeded in this VPC.	The error message returned because the maximum number of active instances has been reached.
400	IncorrectVSwitchStatus	The current status of virtual switch does not support this operation.	The error message returned because the specified VSwitch is in the Pending state and cannot be deleted.
400	InvalidParameter.Mismatch	Specified virtual switch is not in the specified zone.	The error message returned because the specified VSwitch does not exist in the specified zone.
400	ResourceNotAvailable	Resource you requested is not available in this region or zone.	The error message returned because VPCs are not supported by the specified region or zone.
400	MissingParameter	The input parameter "VSwitchId" that is mandatory for processing this request is not supplied.	The error message returned because the required VSwitchId parameter is not specified.
400	InvalidDiskCategory.Mismatch	The specified disk categories' combination is not supported.	The error message returned because the specified combination of disk categories is not supported.
403	Forbidden	User not authorized to operate on the specified resource.	The error message returned because you are not authorized to perform operations on the specified resource.
403	DeleteWithInstance.Conflict	The specified disk is not a portable disk and cannot be set to DeleteWithInstance attribute.	The error message returned because the specified disk is not removable and cannot be released along with the instance.

HTTP status code	Error code	Error message	Description
404	InvalidImageId.NotFound	The specified ImageId does not exist.	The error message returned because the specified image does not exist in this account. Check whether the image ID is correct.
403	InstanceDiskNumLimitExceed	The number of specified disk in an instance exceeds.	The error message returned because the maximum number of disks that can be attached to the instance has been reached.
403	IoOptimized.NotSupported	The specified image is not support IoOptimized Instance.	The error message returned because the specified image does not support I/O optimized instances.
404	IoOptimized.NotSupported	The specified instancetype is not support IoOptimized instance	The error message returned because the specified instance type does not support I/O optimization.
403	InvalidDiskSize.TooSmall	Specified disk size is less than the size of snapshot	The error message returned because the size of the specified disk is smaller than that of the snapshot.
404	InvalidInstanceChargeType.NotFound	The InstanceChargeType does not exist in our records	The error message returned because the specified InstanceChargeType parameter does not exist.
400	MissingParamter	The specified parameter "Period" is not null.	The error message returned because the Period parameter is not specified.
400	InvalidPeriod	The specified period is not valid.	The error message returned because the specified Period parameter is invalid.
403	InvalidDiskCategory.Mismatch	The specified disk categories combination is not supported.	The error message returned because the specified combination of disk categories is not supported.
403	IoOptimized.NotSupported	Vpc is not support IoOptimized instance.	The error message returned because I/O optimized instances are not supported in the VPC.
400	InvalidDataDiskCategory.ValueNotSupported	The specified parameter "DataDisk.n.Category" is not valid.	The error message returned because the specified DataDisk.N.Category parameter is invalid.
400	InvalidSystemDiskCategory.ValueNotSupported	The specified parameter "SystemDisk.Category" is not valid.	The error message returned because the specified SystemDisk.Category parameter is invalid.
403	InvalidDiskCategory.NotSupported	The specified disk category is not support the specified instance type.	The error message returned because the specified disk category does not support the instance type.
400	InstanceDiskCategoryLimitExceed	The specified DataDisk.n.Size beyond the permitted range, or the capacity of snapshot exceeds the size limit of the specified disk category.	The error message returned because the specified DataDisk.N.Size parameter is invalid or the snapshot size exceeds the maximum capacity that is allowed for the specified disk category.
403	QuotaExceed.BuyImage	The specified image is from the image market? You have not bought it or your quota has been exceeded.	The error message returned because the specified image has not been purchased from Alibaba Cloud Marketplace or the maximum number of images has been reached.

HTTP status code	Error code	Error message	Description
404	DependencyViolation.IoOptimized	The specified instancetype must be ioOptimized instance.	The error message returned because the specified instance type is not I/O optimized.
404	PaymentMethodNotFound	No payment method has been registered on the account.	The error message returned because you have not registered a payment method for your account.
400	InvalidInstanceType.ValueNotSupported	InternetMaxBandwidthOut should be set.	The error message returned because the InternetMaxBandwidthOut parameter is not specified.
400	InvalidInstanceType.ValueNotSupported	instancetype is not valid.	The error message returned because the specified InstanceType parameter is invalid.
400	InvalidClientToken.ValueNotSupported	clienttoken is not valid.	The error message returned because the specified ClientToken parameter is invalid.
400	InvalidIoOptimize.ValueNotSupported	The specified IoOptimize is not valid.	The error message returned because the specified IoOptimized parameter is invalid.
400	InvalidHostName.Malformed	The specified parameter HostName is not valid.	The error message returned because the specified HostName parameter is invalid.
404	HOSTNAME_ILLEGAL	hostname is not valid.	The error message returned because the specified HostName parameter is invalid.
400	InvalidInternetMaxBandwidthOut.Malformed	The specified parameter internetMaxBandwidthOut is not valid.	The error message returned because the specified InternetMaxBandwidthOut parameter is invalid.
400	InvalidInternetMaxBandwidthIn.Malformed	The specified parameter internetMaxBandwidthIn is not valid.	The error message returned because the specified InternetMaxBandwidthIn parameter is invalid.
400	InvalidSnapshotId.NotFound	The specified parameter SnapshotId is not exist.	The error message returned because the specified SnapshotId parameter does not exist. Check whether the snapshot ID is correct.
400	InvalidTagKey.Malformed	The specified Tag.n.Key is not valid.	The error message returned because the specified Tag.N.Key parameter is invalid.
400	InvalidTagValue.Malformed	The specified Tag.n.Value is not valid.	The error message returned because the specified Tag.N.Value parameter is invalid.
403	InvalidResourceId.NotSupported	The specified ResourceId does not support tagging.	The error message returned because the specified resource does not support tagging.
400	InvalidTag.Mismatch	The specified Tag.n.Key and Tag.n.Value are not match.	The error message returned because the specified Tag.N.Key and Tag.N.Value parameters do not match.
400	InvalidTagCount	The specified tags are beyond the permitted range.	The error message returned because the maximum number of tags has been reached.

HTTP status code	Error code	Error message	Description
400	InvalidMinAmount.Malformed	The specified parameter MinAmount is not valid.	The error message returned because the specified MinAmount parameter is invalid.
400	InvalidMaxAmount.Malformed	The specified parameter MaxAmount is not valid.	The error message returned because the specified MaxAmount parameter is invalid.
400	InvalidAutoReleaseTime.Malformed	The specified parameter AutoReleaseTime is not valid.	The error message returned because the specified AutoReleaseTime parameter is invalid. Specify the time in the ISO 8601 standard in the yyyy-MM-ddTHH:mm:ssZ format. The time must be in UTC.
400	InvalidPrivateIpAddress.Malformed	The specified parameter PrivateIpAddress is not valid.	The error message returned because the specified PrivateIpAddress parameter is invalid.
400	InvalidInnerIpAddress.Malformed	The specified parameter InnerIpAddress is not valid.	The error message returned because the specified InnerIpAddress parameter is invalid.
404	InvalidSystemDiskSize.LessThanImageSize	The specified parameter SystemDisk.Size is less than the image size.	The error message returned because the specified system disk size is less than the image size.
404	InvalidSystemDiskSize.LessThanMinSize	The specified parameter SystemDisk.Size is less than the min size.	The error message returned because the specified system disk size is smaller than the allowed minimum size.
403	OperationDenied	The specified RegionId does not support the creation of the network type ECS instance.	The error message returned because instances of the specified network type cannot be created in the specified region. Check whether instance resources of this network type are available in the region.
400	OperationDenied.NoVlan	The specified parameter "VlanId" is not valid or vlan has not enough IP address.	The error message returned because the specified VLAN ID is invalid or no more IP addresses are available in this VLAN.
403	OperationDenied.ImageNotValid	The specified Image is disabled or is deleted.	The error message returned because the specified image does not exist.
403	OperationDenied.SnapshotNotValid	The specified snapshot is not allowed to create disk.	The error message returned because the snapshot is invalid and you cannot create disks with the specified snapshot.
403	OperationDenied.SnapshotNotAllowed	The specified snapshot is not allowed to create disk.	The error message returned because the snapshot is invalid and you cannot create disks with the specified snapshot.
403	OperationDenied.ZoneNotAllowed	The creation of Instance to the specified Zone is not allowed.	The error message returned because instances cannot be created in the specified zone.

HTTP status code	Error code	Error message	Description
403	OperationDenied.ZoneSystemCategoryNotMatch	The specified Zone or cluster does not offer the specified disk category or the specified zone and cluster do not match.	The error message returned because the specified disk category is unavailable in the specified zone or cluster, or because the specified zone and cluster do not correspond to each other.
403	OperationDenied.ResourceControl	The specified region is in resource control, please try later.	The error message returned because the specified region is under resource control. Try again later.
403	OperationDenied.NoStock	The resource is out of usage.	The error message returned because the instance is not in the Running state. Start the instance or check whether the specified operation is valid.
403	OperationDenied.SnapshotParamsNotValid	The capacity of snapshot exceeds the size limit of the specified disk category or the specified category is not authorized.	The error message returned because the maximum snapshot size has been reached or you are not authorized to use the specified disk category.
404	OperationDenied.CreatingConflict	Another Instance has been creating	The error message returned because no new instances can be created while another instance is being created.
403	OperationDenied.DiskTypeNotSupport	The type of the disk does not support the operation	The error message returned because the specified operation is invalid.
400	OperationDenied.QuotaExceed	The quota of tags on resource is beyond permitted range.	The error message returned because the maximum number of tags that can be bound to the resource has been reached.
400	Account.Arrearage	Your account has been in arrears.	The error message returned because your account balance is insufficient. Add funds to your account and try again.
403	InvalidUserData.Forbidden	User not authorized to input the parameter "UserData", please apply for permission "UserData"	The error message returned because you are not authorized to manage user data. Apply for the permission first.
400	InvalidUserData.SizeExceeded	The specified parameter "UserData" exceeds the size.	The error message returned because the size of user data specified by the UserData parameter exceeds the limit.
400	InvalidUserData.NotSupported	The specified parameter "UserData" only support the vpc and IoOptimized Instance.	The error message returned because the specified value of the UserData parameter is not supported. UserData is supported only in VPC-type instances and I/O optimized instances.
404	InvalidZoneId.NotFound	The specified zoneId does not exist.	The error message returned because the specified ZoneId parameter does not exist.
403	Zone.NotOpen	The specified zone is not granted to you to buy resources yet.	The error message returned because you are not authorized to purchase resources in the specified zone.

HTTP status code	Error code	Error message	Description
403	Zone.NotOnSale	The resource in the specified zone is no longer available for sale. Please try other regions and zones.	The error message returned because the specified resource is unavailable in the specified zone. Try other resource types, or select other regions or zones.
403	InvalidClusterId.NotFound	The specified clusterId does not exist.	The error message returned because the specified value of the ClusterId parameter does not exist.
403	OperationDenied.NoStock	The resource is out of stock in the specified zone. Please try other types, or choose other regions and zones.	The error message returned because the specified resource is unavailable in the specified zone. Try other resource types, or select other regions or zones.
403	InvalidInstanceType.ZoneNotSupported	The specified zone does not support this instancetype.	The error message returned because the specified instance type is not supported in the specified zone.
400	InstanceDiskNumber.LimitExceed	The total number of specified disk in an instance exceeds.	The error message returned because the maximum number of disks that can be attached to the instance has been reached.
400	InvalidSpotStrategy	The specified SpotStrategy is not valid.	The error message returned because the specified SpotStrategy parameter is invalid.
400	InvalidSpotPriceLimit	The specified SpotPriceLimit is not valid.	The error message returned because the specified SpotPriceLimit parameter is invalid.
400	InvalidSpotDuration	The specified SpotDuration is not valid.	The error message returned because the specified SpotDuration parameter is invalid.
400	InvalidSpotAuthorized	The specified Spot param is unauthorized.	The error message returned because you are not authorized to create preemptible instances based on the specified preemption policy.
400	InvalidSpotPrepaid	The specified Spot type is not support PrePay Instance.	The error message returned because the specified preemption policy does not support the subscription billing method.
400	InvalidSpotAliUid	The specified UID is not authorized to use SPOT instance.	The error message returned because the user with the specified user identifier (UID) does not have the permissions to use preemptible instances.
400	InvalidParameter.Bandwidth	%s	The error message returned because the specified bandwidth is invalid.
400	InvalidDataDiskCategory.ValueNotSupported	%s	The error message returned because the specified DiskCategory parameter is invalid.
400	InvalidSystemDiskCategory.ValueNotSupported	%s	The error message returned because the operation is not applicable to the specified system disk category.

HTTP status code	Error code	Error message	Description
400	InvalidParameter.Conflict	%s	The error message returned because a specified parameter is invalid. Check whether parameter conflicts exist.
400	InvalidInternetChargeType.ValueNotSupported	%s	The error message returned because the specified InternetChargeType parameter is not supported. Check whether the parameter is correct.
400	InvalidInstanceType.ValueNotSupported	%s	The error message returned because the operation is not supported by the specified instance type.
403	InstanceType.Offline	%s	The error message returned because the instance type is retired or instances of this instance type are insufficient.
400	RegionUnauthorized	%s	The error message returned because you are not authorized to perform the operation in the specified region.
400	Zone.NotOnSale	%s	The error message returned because the sales of the specified resources in the specified zone are suspended.
400	InvalidSystemDiskSize.ValueNotSupported	%s	The error message returned because the specified system disk size is not supported.
400	InvalidDataDiskSize.ValueNotSupported	%s	The error message returned because the specified data disk capacity is invalid.
403	DependencyViolation.WindowsInstance	The instance creating is window, cannot use ssh key pair to login.	The error message returned because the specified instance is a Windows instance and does not support logons with SSH key pairs.
400	InvalidInstanceType.ValueNotSupported	The specified parameter "KeyPairName" only support IoOptimized Instance.	The error message returned because non-I/O optimized instances do not support SSH key pairs.
404	InvalidResourceGroup.NotFound	The ResourceGroup provided does not exist in our records.	The error message returned because the specified resource group does not exist.
403	InvalidUser.PassRoleForbidden	The RAM user does not have the privilege to pass a RAM role.	The error message returned because the RAM user is not authorized to pass a RAM role.
404	InvalidRamRole.NotFound	The specified parameter "RAMRoleName" does not exist.	The error message returned because the specified RAMRoleName parameter does not exist.
404	InvalidLaunchTemplate.NotFound	%s	The error message returned because the specified launch template does not exist. Check whether the specified LaunchTemplateId or LaunchTemplateName parameter is correct.

HTTP status code	Error code	Error message	Description
404	InvalidLaunchTemplateVersion.NotFound	%s	The error message returned because the specified LaunchTemplateVersion parameter does not exist. Check whether the launch template version is correct.
400	InvalidInstanceType.ElasticNetworkInterfaceNotSupported	The specified instance type does not support Elastic Network Interface, you can not attach Elastic Network Interface to generation I instances.	The error message returned because ENIs are not supported by the specified instance type.
400	InvalidParameter.EncryptedIllegal	%s	The error message returned because the specified parameter is invalid. Check whether the encryption is valid.
400	InvalidParameter.EncryptedNotSupported	%s	The error message returned because the specified parameter is invalid and your encryption operation is not supported.
500	InternalServerError	The request processing has failed due to some unknown error, exception or failure.	The error message returned because an internal error has occurred. Try again later. If the problem persists, submit a ticket.
403	Forbidden.RiskControl	This operation is forbidden by Aliyun RiskControl system.	The error message returned because the operation is forbidden by the risk control system.
403	InvalidInstance.UnPaidOrder	The specified Instance has unpaid order.	The error message returned because you have outstanding bills for the specified instance. Complete the payment and try again.
403	RealNameAuthenticationError	Your account has not passed the real-name authentication yet.	The error message returned because you have not completed real-name verification. Complete real-name verification and try again.
403	InvalidInstanceType.NotSupported	The specified InstanceType is not Supported.	The error message returned because the specified InstanceType parameter is invalid.
403	InvalidPayMethod	The specified pay method is not valid.	The error message returned because the specified payment method is invalid.
403	InvalidAccountStatus.NoEnoughBalance	Your account does not have enough balance.	The error message returned because your account balance is insufficient. Add funds to your account before you proceed.
400	InvalidSpotPriceLimit.LowerThanPublicPrice	The specified parameter "spotPriceLimit" can't be lower than current public price.	The error message returned because the specified SpotPriceLimit parameter is less than the current market price.
400	InvalidRelationResource.NotFound	The relation resource has been deleted.	The error message returned because the associated resource has been deleted and is invalid.
400	IncorrectRecycleBinStatus	The operation is not permitted due to resource status.	The error message returned because the operation is not supported while the resource is in the current state.

HTTP status code	Error code	Error message	Description
400	InvalidHpcClusterId.Unnecessary	The specified HpcClusterId is unnecessary	The error message returned because the HpcClusterId parameter is specified.
400	InvalidVSwitchId.Necessary	The VSwitchId is necessary	The error message returned because the VSwitchId parameter is not specified.
400	InvalidHpcClusterId.Necessary	The HpcClusterId is necessary	The error message returned because the HpcClusterId parameter is not specified.
400	InvalidHpcClusterId.NotFound	The specified HpcClusterId is not found	The error message returned because the specified HpcClusterId parameter does not exist.
404	InvalidVSwitchId.NotExist	%s	The error message returned because the specified VSwitchId parameter does not exist.
403	ImageNotSupportInstanceType	The specified image does not support the specified InstanceType.	The error message returned because the specified image cannot be used for instances of the specified instance type.
400	InvalidSecurityGroup.NotInDefaultVpc	%s	The error message returned because the specified security group is not in the default VPC. Check whether the specified SecurityGroupId parameters is correct.
400	VpcNotFound	Vpc is not found according to the specified VSwitch or the vpc does not belong to you.	The error message returned because the specified VSwitch does not belong to any VPC, or the corresponding VPC does not belong to your account.
400	InvalidSystemDiskSize.ImageNotSupportResize	The specified image does not support resize.	The error message returned because the specified image does not support resizing.
403	OperationDenied.InvalidNetworkType	%s	The error message returned because the operation is not supported by the specified network type.
400	InvalidSpotInterruptionBehavior	%s	The error message returned because the specified SpotInterruptionBehavior parameter is invalid.
403	InvalidSpotInterruptionBehavior.ClassicNetworkNotSupport	The specified SpotInterruptionBehavior does not support Classic network Instance.	The error message returned because the operation is not supported by instances in the classic network.
403	InvalidSpotInterruptionBehavior.LocalDiskNotSupport	The specified SpotInterruptionBehavior does not support local disk instance.	The error message returned because the operation is not supported by instances that have local disks attached.
400	InvalidDeploymentOnHost	%s	The error message returned because the instance cannot be deployed in the specified deployment set.
400	InvalidInstanceChargeType.NotSupport	The Dedicated host not support the specified Instance charge type.	The error message returned because the dedicated host does not support instances that use the specified billing method.

HTTP status code	Error code	Error message	Description
400	InvalidNetworkType.NotSupported	The classic networkType not support create ECS on dedicatedHost	The error message returned because the dedicated host does not support instances in the classic network.
400	InvalidDedicatedHostId.NotFound	The specified DedicatedHostId does not exist.	The error message returned because the specified DedicatedHostId parameter does not exist.
400	InvalidDedicatedHostStatus.NotSupport	Operation denied due to dedicated host status.	The error message returned because the operation is not supported while the dedicated host is in the current state.
400	IncorrectDedicatedHostStatus	The current status of the resource does not support this operation.	The error message returned because this operation is not supported while the dedicated host is in the current state.
400	ChargeTypeViolation.PostPaidDedicatedHost	Prepaid instance onto postpaid dedicated host is not allowed	The error message returned because subscription instances cannot be deployed to pay-as-you-go dedicated hosts.
400	InvalidPeriod.ExceededDedicatedHost	Instance expired date can't exceed dedicated host expired date.	The error message returned because the expiration date of the instance is later than that of the dedicated host.
400	InvalidInstanceType.ValueUnauthorized	The specified InstanceType is not authorize.	The error message returned because you are not authorized to use the specified instance type.
400	DedicatedHostType.Unmatched	The specified DedicatedHostType doesn't match the instance type.	The error message returned because the specified dedicated host type does not correspond to the specified instance type.
400	MissingParameter	The input parameter ImageId that is mandatory for processing this request is not supplied.	The error message returned because the ImageId parameter is not specified.
400	MissingParameter	The input parameter InstanceType that is mandatory for processing this request is not supplied.	The error message returned because the InstanceType parameter is not specified.
400	ChargeTypeViolation.PostPaidDedicatedHost	Prepaid instance onto postpaid dedicated host is not allowed.	The error message returned because subscription instances cannot be deployed to pay-as-you-go dedicated hosts.
400	InvalidParam.NetworkInterface	%s	The error message returned because a specified parameter is invalid. Check whether the parameter corresponds to the interface.
403	OperationDenied.ImageNotValid	%s	The error message returned because the image does not support the operation.
403	QuotaExceed.PostPaidDisk	Living postPaid disks quota exceeded.	The error message returned because the maximum number of pay-as-you-go disks has been reached.

HTTP status code	Error code	Error message	Description
401	InvalidRamRole.NotEcsRole	The specified ram role is not authorized for ecs, please check your role policy.	The error message returned because the specified RAM role is not authorized to use ECS. Check your role policy.
403	InvalidParameter.NotMatch	%s	The error message returned because a specified parameter is invalid. Check whether parameter conflicts exist.
400	InvalidParameter.CreditSpecification	The specified CreditSpecification is not supported in this region.	The error message returned because the specified credit policy is not supported in the region.
404	InvalidMarketImage.NotFound	The specified marketplace image does not exist, please change the imageId and try again.	The error message returned because the specified Alibaba Cloud Marketplace image does not exist. Modify the ImageId parameter and try again later.
400	IncorrectVpcStatus	Current VPC status does not support this operation.	The error message returned because the operation is not supported while the VPC is in the current state.
400	InvalidInstanceType.NotSupported	The specified instanceType is not supported by the deployment set.	The error message returned because the specified instance type is not supported by the current deployment set. Try another instance type.
400	InvalidVpcZone.NotSupported	The specified operation is not allowed in the zone to which your VPC belongs, please try in other zones.	The error message returned because the specified region does not support the specified operation. Try another region.
400	IncorrectDefaultVpcStatus	The status of the default VPC is invalid.	The error message returned because the status of the default VPC is invalid.
404	DeploymentSet.NotFound	The specified deployment set does not exist.	The error message returned because the specified deployment set does not exist.
400	InvalidAutoRenewPeriod.ValueNotSupported	The specified autoRenewPeriod is invalid.	The error message returned because the specified AutoRenewPeriod parameter is invalid.
403	OperationDenied.LocalDiskUnsupported	The configuration change is not allowed when the specified instance has local disks mounted.	The error message returned because the instance type of instances with local disks attached cannot be changed.
403	OperationDenied.InconsistentNetwork	The specified security group and vswitch are not in the same vpc.	The error message returned because the specified security group and VSwitch do not belong to the same VPC.
403	OperationDenied	If the network segment of the vswitch is the same as that of its VPC. Therefore, the VPC cannot create other vswitchs across the region.	The error message returned because the VPC and VSwitch have the same CIDR block and no more VSwitches can be created for other zones of this VPC.
403	DefaultVswitch.Existed	The default vswitch for VPC already exists.	The error message returned because a default VSwitch already exists in the current VPC.

HTTP status code	Error code	Error message	Description
400	InvalidMarketImageChargeType.NotSupport	The specified chargeType of marketImage is unsupported.	The error message returned because the billing method of the Alibaba Cloud Marketplace image is not supported.
403	OperationDenied.NoStock	The requested resource is sold out in the specified zone; try other types of resources or other regions and zones.	The error message returned because the requested resources are insufficient in the specified zone. Try other types of resources or other regions and zones.
403	IncorrectInstanceStatus	The current status of the resource does not support this operation.	The error message returned because the operation is not supported while the instance is in the current state.
403	CategoryViolation	The specified instance does not support this operation because of its disk category.	The error message returned because configurations cannot be changed for instances with local disks attached.
400	InvalidPeriodType.ValueNotSupported	The specified parameter PeriodType is invalid.	The error message returned because the specified PeriodType parameter is invalid.
403	ResourcesNotInSameZone	The specified instance and dedicated host are not in the same zone.	The error message returned because the specified instance and the dedicated host are not in the same region.
403	InvalidDisk.SystemDiskSize	The specified SystemDiskSize beyond the permitted range.	The error message returned because the maximum size of the specified system disk is reached.
400	InvalidClientToken.ValueNotSupported	The ClientToken provided is invalid.	The error message returned because the specified ClientToken parameter is invalid.
400	OperationDenied	The current user does not support this operation.	The error message returned because your account does not support this operation.
403	InsufficientBalance	Your account does not have enough balance.	The error message returned because your account balance is insufficient. Add funds to your account and try again.
400	InvalidInstanceType.ValueNotSupported	The specified InstanceType does not exist or beyond the permitted range.	The error message returned because the specified instance type does not exist or you are not authorized to manage instances of the instance type.
400	InvalidParam.Tenancy	The specified Tenancy is invalid.	The error message returned because the specified Tenancy parameter is invalid.
403	MaxEniIpv6IpsCountExceeded	%s	The error message returned because the maximum number of IPv6 addresses that can be assigned to the ENI has been reached.
403	InvalidIp.IpRepeated	%s	The error message returned because the specified IP address already exists.

HTTP status code	Error code	Error message	Description
403	InvalidIp.IpAssigned	%s	The error message returned because the specified IP address is already assigned.
403	InvalidIp.Address	%s	The error message returned because the specified IPv6 address is invalid.
403	InvalidOperation.Ipv4CountExceeded	%s	The error message returned because the maximum number of IPv4 addresses has been reached.
403	InvalidOperation.Ipv6CountExceeded	%s	The error message returned because the maximum number of IPv6 addresses has been reached.
403	InvalidOperation.Ipv6NotSupport	%s	The error message returned because IPv6 does not support the current operation.
403	InvalidVSwitch.Ipv6NotTurnOn	%s	The error message returned because IPv6 is not enabled on your VSwitch. Enable this feature and try again.
403	InvalidParam.Amount	%s	The error message returned because the specified Amount parameter is invalid.
403	InvalidVSwitchId.IpInvalid	%s	The error message returned because the specified private IP address is invalid.
403	Forbidden.RegionId	%s	The error message returned because the service is unavailable in the current region.
400	IncorrectVpcStatus	The current status of vpc does not support this operation.	The error message returned because the operation is not supported while the VPC is in the current state.
403	QuotaExceed.DeploymentSetInstanceQuotaFull	instance quota in one deployment set exceeded.	The error message returned because the maximum number of instances in the current deployment set has been reached.
403	InvalidRegion.NotSupport	The specified region does not support byok.	The error message returned because the bring your own key (BYOK) feature is not supported in this region.
403	UserNotInTheWhiteList	The user is not in byok white list.	The error message returned because you are not in the BYOK whitelist. Try again when you are in the whitelist.
400	InvalidParameter.EncryptedIllegal	The specified parameter Encrypted must be true when kmsKeyId is not empty.	The error message returned because the encryption feature is not enabled after the KMSKeyId parameter is specified.
400	IoOptimized.NotSupported	The specified instance must be ioOptimized instance when kmsKeyId is not empty.	The error message returned because I/O optimized instances must be used after the KMSKeyId parameter is specified.
404	InvalidParameter.KMSKeyId.NotFound	The specified KMSKeyId does not exist.	The error message returned because the specified KMSKeyId parameter does not exist.

HTTP status code	Error code	Error message	Description
403	InvalidParameter.KMSKeyId.KMSUnauthorized	ECS service have no right to access your KMS.	The error message returned because ECS is not authorized to access your KMS resources.
403	SecurityRisk.3DVerification	We have detected a security risk with your default credit or debit card. Please proceed with verification via the link in your email.	The error message returned because risks are detected in your default credit card or debit card. Use the link in the email for verification.
400	Duplicate.TagKey	The Tag.N.Key contain duplicate key.	The error message returned because the specified tag key already exists. Tag keys must be unique.
404	InvalidSecurityGroupId.NotFound	%s	The error message returned because the specified SecurityGroupId parameter does not exist.
404	InvalidDiskIds.NotPortable	The specified DiskId is not portable.	The error message returned because the specified disk is not removable.
403	QuotaExceed.Tags	%s	The error message returned because the maximum number of tags has been reached.
400	InvalidHttpEndpoint.NotSupported	The specified HttpEndpoint not supported, you can use enabled(default) or disabled.	The error message returned because the specified HttpEndpoint parameter is invalid. Set the value to enabled or disabled. The default value is enabled.
400	InvalidHttpTokens.NotSupported	The specified HttpTokens not supported, you can use optional(default) or required.	The error message returned because the specified HttpTokens parameter is invalid. Set the value to optional or required. The default value is optional.
400	InvalidHttpPutResponseHopLimit.NotSupported	The specified HttpPutResponseHopLimit not supported, more than 1 and less than 64 is reasonable.	The error message returned because the specified HttpPutResponseHopLimit parameter is invalid. The value must be in the range of 1 to 64.

5.2. CreateInstance

You can call this operation to create a subscription or pay-as-you-go ECS instance.

Description

 **Note** You can call the [DescribeAvailableResource](#) operation to query available resources in a specified region or zone. If you want to create multiple instances at a time that automatically enter the Running state, we recommend that you call the [RunInstances](#) operation.

When you create an ECS instance, take note of the following items:

- **Billing method:**
 - You must fully understand the ECS billing methods before you create an instance, because you may be charged for resources used by the instance. For more information, see [Billing overview](#).
 - If you create a subscription instance (`PrePaid`), available coupons in your account are used by default.
- **Instance type:**
 - You can use the `IoOptimized` parameter to specify whether to create an I/O optimized instance.
 - Select an appropriate instance type. For the performance data about instance types, see [Instance families](#) or call the [DescribeInstanceTypes](#) operation. You can also see [Select instance types](#) to learn how to select instance types.

- Query available resources. You can call the [DescribeAvailableResource](#) operation to query available resources in a specific region or zone.
- **Image:**
 - The image determines the system disk configurations of the new instance. The system disk of the new instance is a clone of the specified image.
 - If the instance memory size is 512 MiB, you cannot use Windows Server images except for Windows Server Semi-Annual Channel images.
 - If the instance memory size is 4 GiB or larger, you cannot use 32-bit OS images.
- **Network type:**
 - Each VPC-type instance must and can be connected to only one VSwitch.
 - If `VSwitchId` is specified, the security group specified by `SecurityGroupId` and the VSwitch specified by `VSwitchId` must belong to the same VPC.
 - `PrivateIpAddress` depends on `VSwitchId` and cannot be specified separately. If you specify both `VSwitchId` and `PrivateIpAddress`, the IP address specified in the `PrivateIpAddress` value must be available in the CIDR block of the specified VSwitch.
- **Public bandwidth:**
 - If you call the `CreateInstance` operation to create an instance, no public IP address is assigned to the instance. You can call the [AllocatePublicIpAddress](#) operation to allocate public IP addresses manually.
 - Bandwidth fees are determined based on the settings of `InternetChargeType` and `InternetMaxBandwidthOut`.
 - The `InternetMaxBandwidthIn` value is irrelevant to billing because inbound data traffic is free of charge.
 - If `InternetChargeType` is set to `PayByBandwidth`, `InternetMaxBandwidthOut` specifies a bandwidth value.
 - If `InternetChargeType` is set to `PayByTraffic`, `InternetMaxBandwidthOut` specifies a peak bandwidth value. Actual fees are calculated based on the network traffic.
- **Security group:**
 - If no security group is available in the region where you want to create an instance, you must call the [CreateSecurityGroup](#) operation to create a security group in that region first.
 - The maximum number of instances that a security group can contain depends on the security group type. For more information, see the "Security group limits" section in [Limits](#).
 - Instances in the same security group can communicate with each other over the internal network. By default, instances in different security groups cannot communicate with each other. However, you can allow communication between instances by authorizing mutual access between their security groups. For more information, see [AuthorizeSecurityGroup](#) and [AuthorizeSecurityGroupEgress](#).
- **Storage:**
 - The instance is assigned a system disk whose capacity is based on the image you specified. The capacity of the system disk must be at least 20 GiB and greater than or equal to the size of the image. For more information about categories of system disks, see the description of the `SystemDisk.Category` parameter.
 - When the system disk of an instance is a basic disk (`cloud`), an ultra disk (`cloud_efficiency`), or an SSD disk (`cloud_essd`), the data disks of the instance cannot be local SSDs (`ephemeral_essd`).
 - The system disks of I/O optimized instances can only be ultra disks (`cloud_efficiency`) or SSD disks (`cloud_essd`).
 - The maximum capacity of data disks varies with their categories. For more information, see the description of the `DataDisk.N.Size` parameter.
 - A maximum of 16 data disks can be attached to each instance. The mount points of data disks are allocated by the system in the default order, from `/dev/xvdb` to `/dev/xvdz`.
 - When data disks of an instance are local SSDs (`ephemeral_essd`), the system disk of the instance must also be a local SSD. Excluding the system disk, the total capacity of local SSDs attached to an instance cannot exceed 1 TiB.
 - Local SSDs (`ephemeral_essd`) must be specified when you create instances and cannot be added after the instances are created.
- **User data:** If the instance type supports [user data](#), you can use the `UserData` parameter to pass in user data. User data is encoded in Base64. We recommend that you do not pass in confidential information such as passwords and

private keys in plaintext. This is because the system does not encrypt `UserData` values when API requests are transferred. If you must pass in confidential information, we recommend that you encrypt and encode the user data in Base64, and then decode and decrypt it in the same way within the instance.

- **Others:** When you call API operations by using Alibaba Cloud Command Line Interface (CLI) and SDKs, you must delete the periods (.) from request parameters before you use them. For example, use `SystemDiskCategory` instead of `SystemDisk.Category` as a request parameter.

Debugging

OpenAPI Explorer automatically calculates the signature value. For your convenience, we recommend that you call this operation in OpenAPI Explorer. OpenAPI Explorer dynamically generates the sample code of the operation for different SDKs.

Request parameters

Parameter	Type	Required	Example	Description
Action	String	Yes	CreateInstance	The operation that you want to perform. Set the value to CreateInstance.
InstanceType	String	Yes	ecs.g6.large	The instance type of the instance. • Select an appropriate instance type. For the performance data about instance types, see Instance families or call the DescribeInstanceTypes operation. You can also see Select instance types to learn how to select instance types. • Query available resources. You can call the DescribeAvailableResource operation to query available resources in a specific region or zone.
RegionId	String	Yes	cn-hangzhou	The ID of the region in which to create the instance. You can call the DescribeRegions operation to query the most recent region list.
ImageId	String	No	ubuntu_18_04_64_20G_alibase_20190624.vhd	The ID of the image used to create the instance. If you want to use Alibaba Cloud Marketplace images, you can view <code>image IDs</code> on the product pages of Alibaba Cloud Marketplace images. If you do not select a latest available custom image by specifying <code>ImageFamily</code> , you must specify ImageId.
ImageFamily	String	No	hangzhou-daily-update	The name of the image family. You can set this parameter to select the latest available custom image from the specified image family to create instances. • ImageFamily must be empty if <code>ImageId</code> is set. • ImageFamily can be specified if <code>ImageId</code> is not set.
SecurityGroupId	String	No	sg-bp1sed6xe1yxeycg***	The ID of the security group to which to assign the instance. Instances in the same security group can communicate with each other.

Parameter	Type	Required	Example	Description
InstanceName	String	No	2018-12-06T103200Z	The name of the instance. The name must be 2 to 128 characters in length, and can contain letters, digits, colons (:), underscores (_), and hyphens (-). It must start with a letter and cannot start with http:// or https://. If this parameter is not specified, the instance ID is used by default.
InternetChargeType	String	No	PayByTraffic	The billing method for network usage. Default value: PayByTraffic. Valid values: - PayByBandwidth - PayByTraffic
AutoRenew	Boolean	No	true	Specifies whether to enable auto-renewal for the instance. This parameter is valid only when InstanceChargeType is set to PrePaid . Default value: false. Valid values: - true: enables auto-renewal for the instance. - false: disables auto-renewal for the instance.
AutoRenewPeriod	Integer	No	2	The auto-renewal period of the instance. This parameter is required when AutoRenew is set to true. Valid values: The valid values of AutoRenewPeriod are 1, 2, 3, 6, and 12 when PeriodUnit is set to Month.
InternetMaxBandwidthIn	Integer	No	50	The maximum inbound bandwidth. Unit: Mbit/s. Valid values: - When the maximum outbound bandwidth is less than or equal to 10 Mbit/s, the valid values of InternetMaxBandwidthIn are 1 to 10, and the default value of InternetMaxBandwidthIn is 10. - When the maximum outbound bandwidth is greater than 10 Mbit/s, the valid values of InternetMaxBandwidthIn are 1 to the value of InternetMaxBandwidthOut , and the default value of InternetMaxBandwidthIn is the value of InternetMaxBandwidthOut .
InternetMaxBandwidthOut	Integer	No	5	The maximum outbound bandwidth. Unit: Mbit/s. Valid values: 0 to 100. Default value: 0.

Parameter	Type	Required	Example	Description
HostName	String	No	LocalHostName	The hostname of the instance. - The hostname cannot start or end with a period (.) or a hyphen (-). It cannot contain consecutive periods (.) or hyphens (-). - For Windows instances, the hostname must be 2 to 15 characters in length and can contain letters, digits, and hyphens (-). The hostname cannot contain periods (.) or only contain digits. - For instances that run other operating systems such as Linux, the hostname must be 2 to 64 characters in length. You can use periods (.) to separate the hostname into multiple segments. Each segment can contain letters, digits, and hyphens (-).
Password	String	No	TestEcs123!	The password of the instance. The password must be 8 to 30 characters in length. It must include at least three of the following character types: uppercase letters, lowercase letters, digits, and special characters. Special characters include: <pre>()`~!@#\$%^&*-_+= {}[]:;<>.,/? /</pre> For Windows instances, the password cannot start with a forward slash (/).  Note For security reasons, we recommend that you use HTTPS to send requests if the <code>Password</code> parameter is specified.
PasswordInherit	Boolean	No	false	Specifies whether to use the password preset in the image. If PasswordInherit is set to true, leave Password empty and make sure that the selected image has a password preset.
DeploymentSetId	String	No	ds-bp1brhwhoqinyjd6***	The ID of the deployment set to which to deploy the instance.
ZoneId	String	No	cn-hangzhou-g	The ID of the zone in which to create the instance. You can call the DescribeZones operation to query the most recent zone list. This parameter is empty by default. If you do not specify a zone, the system randomly selects a zone.

Parameter	Type	Required	Example	Description
ClusterId	String	No	c-bp67acfmazb4p****	The ID of the cluster in which to create the instance.  Note This parameter will be removed in the future. We recommend that you use other parameters to ensure future compatibility.
ClientToken	String	No	123e4567-e89b-12d3-a456-426655440000	The client token that is used to ensure the idempotence of the request. You can use the client to generate the value, but you must make sure that it is unique among different requests. The ClientToken value must contain only ASCII characters and cannot exceed 64 characters in length. For more information, see How to ensure idempotence.
VlanId	String	No	10	The ID of the virtual local area network (VLAN).
InnerIpAddress	String	No	192.168.**. **	The internal IP address to be assigned to the instance.
SystemDisk.Size	Integer	No	40	The size of the system disk. Unit: GiB. Valid values: 20 to 500. The value of this parameter must be at least 20 and greater than or equal to the size of the image. Default value: 40 or the size of the image, whichever is greater.
SystemDisk.Category	String	No	cloud_ssd	The category of the system disk. Valid values: - cloud_efficiency: ultra disk - cloud_ssd: standard SSD - cloud: basic disk - ephemeral_ssd: local SSD For non-I/O optimized instances of retired instance types, the default value is cloud. For other instances, the default value is cloud_efficiency.
SystemDisk.DiskName	String	No	SystemDiskName	The name of the system disk. The name must be 2 to 128 characters in length, and can contain letters, digits, colons (:), underscores (_), and hyphens (-). It must start with a letter and cannot start with http:// or https://. This parameter is empty by default.

Parameter	Type	Required	Example	Description
SystemDisk.Description	String	No	TestDescription	The description of the system disk. The description must be 2 to 256 characters in length and cannot start with http:// or https://. This parameter is empty by default.
SystemDisk.PerformanceLevel	String	No	PL1	The performance level of the enhanced SSD (ESSD) used as the system disk. Default value: PL1. Valid values: - PL1: A single ESSD can deliver up to 50,000 random read/write IOPS. - PL2: A single ESSD can deliver up to 100,000 random read/write IOPS. - PL3: a single ESSD delivers up to 1,000,000 random read/write IOPS. For more information, see Enhanced SSDs.
DataDisk.N.Size	Integer	No	2000	The size of data disk N. Valid values of N: 1 to 16. Unit: GiB. Valid values: - If the data disk is an ultra disk, the valid values are 20 to 32768. - Valid values for a standard SSD: 20 to 32768 - If the data disk is an ESSD, the valid values are 20 to 32768. - If the data disk is a local SSD, the valid values are 5 to 800. - If the data disk is a basic disk, the valid values are 5 to 2000. The value of this parameter must be greater than or equal to the size of the snapshot specified by the <code>SnapshotId</code> parameter.
DataDisk.N.SnapshotId	String	No	s-bp17441ohwka0yuh**	The ID of the snapshot used to create data disk N. Valid values of N: 1 to 16. - When the <code>DataDisk.N.SnapshotId</code> parameter is specified, the <code>DataDisk.N.Size</code> parameter is ignored. The data disk will be created with the size of the specified snapshot. - Use snapshots created after July 15, 2013. Otherwise, an error message will be returned and your request will be rejected.
DataDisk.N.Category	String	No	cloud_ssd	The category of data disk N. Valid values: - cloud_efficiency: ultra disk - cloud_ssd: standard SSD - ephemeral_ssd: local SSD - cloud_essd: ESSD - cloud: basic disk For I/O optimized instances, the default value is cloud_efficiency. For non-I/O optimized instances, the default value is cloud.

Parameter	Type	Required	Example	Description
DataDisk.N.DiskName	String	No	DataDiskName	The name of data disk N. The name must be 2 to 128 characters in length and can contain letters, digits, colons (:), underscores (_), and hyphens (-). It must start with a letter and cannot start with http:// or https://. This parameter is empty by default.
DataDisk.N.Description	String	No	TestDescription	The description of data disk N. The description must be 2 to 256 characters in length and cannot start with http:// or https://. This parameter is empty by default.
DataDisk.N.Device	String	No	null	The mount point of data disk N.  Note This parameter will be removed in the future. We recommend that you use other parameters to ensure future compatibility.
DataDisk.N.DeleteWithInstance	Boolean	No	true	Specifies whether to release data disk N when the instance is released. Default value: true.
DataDisk.N.Encrypted	Boolean	No	false	Specifies whether to encrypt data disk N. Default value: false.
DataDisk.N.KMSKeyId	String	No	0e478b7a-4262-4802-b8cb-00d****	The ID of the KMS key used by data disk N.
DataDisk.N.PerformanceLevel	String	No	PL2	The performance level of the ESSD used as data disk N. The N value must be the same as that in DataDisk.N.Category when DataDisk.N.Category is set to cloud_essd. Default value: PL1. Valid values: - PL1: A single ESSD can deliver up to 50,000 random read/write IOPS. - PL2: A single ESSD can deliver up to 100,000 random read/write IOPS. - PL3: a single ESSD delivers up to 1,000,000 random read/write IOPS. For more information, see Enhanced SSDs .
NodeControllerId	String	No	null	The ID of the node controller.
Description	String	No	InstanceTest	The description of the instance. The description must be 2 to 256 characters in length and cannot start with http:// or https://. This parameter is empty by default.

Parameter	Type	Required	Example	Description
VSwitchId	String	No	vsw-bp1s5fnvk4gn2tws0**	The ID of the VSwitch. This parameter is required when you create a VPC-type instance.
PrivateIpAddress	String	No	172.16.236.*	The private IP address to be assigned to the instance. The private IP address must be an available IP address in the CIDR block of the VSwitch.
IoOptimized	String	No	optimized	Specifies whether the instance is I/O optimized. Valid values: - none: The instance is not I/O optimized. - optimized: The instance is I/O optimized. For retired instance types, the default value is none. For more information, see Phased-out instance types. For other instance types, the default value is optimized.
UseAdditionalService	Boolean	No	true	Specifies whether to use the virtual machine system configurations provided by Alibaba Cloud (Windows: NTP and KMS. Linux: NTP and YUM).
InstanceChargeType	String	No	PrePaid	The billing method of the instance. Default value: PostPaid. Valid values: - PrePaid: subscription. If you set this parameter to PrePaid, make sure that you have sufficient balance in your account. Otherwise, an <code>InvalidPayMethod</code> error is returned. - PostPaid: pay-as-you-go.
Period	Integer	No	1	The subscription period of the instance. Unit: months. Valid values: The valid values of Period are 1, 2, 3, 4, 5, 6, 7, 8, 9, 12, 24, 36, 48, and 60 when PeriodUnit is set to Month. - This parameter takes effect and is required only when <code>InstanceChargeType</code> is set to <code>PrePaid</code>. - If the <code>DedicatedHostId</code> parameter is specified, the subscription period of the instance must not be longer than that of the dedicated host.
PeriodUnit	String	No	Month	The unit of the subscription period. Default value: Month. Valid values: Month.

Parameter	Type	Required	Example	Description
Tag.N.value	String	No	null	The value of tag N.  Note This parameter will be removed in the future. We recommend that you use the Tag.N.Value parameter to ensure future compatibility.
Tag.N.key	String	No	null	The key of tag N.  Note This parameter will be removed in the future. We recommend that you use the Tag.N.Key parameter to ensure future compatibility.
Tag.N.Key	String	No	TestKey	The key of tag N to be bound to the instance, disks, and primary ENI. Valid values of N: 1 to 20. The tag key cannot be an empty string. It can be up to 128 characters in length and cannot start with acs: or aliyun. It cannot contain http:// or https://.
Tag.N.Value	String	No	TestValue	The value of tag N to be bound to the instance, disks, and the primary ENI. Valid values of N: 1 to 20. The tag value can be an empty string. It can be up to 128 characters in length. It cannot start with acs: or contain http:// or https://.
UserData	String	No	ZWNobyBoZWxsbyBlY3Mh	The user data of the instance. User data must be encoded in Base64. The maximum size of raw data is 16 KB.
SpotStrategy	String	No	NoSpot	The preemption policy for a preemptible or pay-as-you-go instance. This parameter takes effect only when <code>InstanceChargeType</code> is set to <code>PostPaid</code>. Default value: NoSpot. Valid values: - NoSpot: the regular pay-as-you-go instance. - SpotWithPriceLimit: the preemptible instance with a user-defined maximum hourly price. - SpotAsPriceGo: the preemptible instance priced at the market price at the time of purchase.

Parameter	Type	Required	Example	Description
KeyPairName	String	No	KeyPairTestName	The name of the key pair to be bound to the instance. - For Windows instances, this parameter is ignored and is empty by default. The <code>Password</code> parameter takes effect even if the <code>KeyPairName</code> parameter is specified. - For Linux instances, the username and password logon method is disabled by default. To improve instance security, we recommend that you use key pairs for logons.
SpotPriceLimit	Float	No	0.98	The maximum hourly price of the instance. This parameter takes effect only when <code>SpotStrategy</code> is set to <code>SpotWithPriceLimit</code>. A maximum of three decimal places are allowed.
SpotDuration	Integer	No	1	The retention period of a preemptible instance. Unit: hours. Valid values: 1, 2, 3, 4, 5, and 6. Default: 1.
SpotInterruptionBehavior	String	No	Terminate	The interruption mode of the preemptible instance. Only the Terminate mode is supported, in which the instance is released. Default value: Terminate.
RamRoleName	String	No	RAMTestName	The name of the instance RAM role to be attached to the instance. You can call the ListRoles operation provided by RAM to query the instance RAM roles that you have created.
SecurityEnhancementStrategy	String	No	Active	Specifies whether to enable security hardening. Valid values: - Active: enables security hardening. This value takes effect only on public images. - Deactive: disables security hardening. The value takes effect on all images.
ResourceGroupId	String	No	rg-bp67acfmazb4p****	The ID of the resource group to which to assign the instance.
HpcClusterId	String	No	hpc-bp67acfmazb4p****	The ID of the HPC cluster to which to assign the instance.

Parameter	Type	Required	Example	Description
DryRun	Boolean	No	false	Specifies whether to check the validity of the request without actually making the request. Valid values: • true: The validity of the request is checked but the request is not made. Check items include the request format, service limits, available ECS resources, and whether the required parameters are specified. If the check fails, the corresponding error code is returned. If the check succeeds, the <code>DryRunOperation</code> error code is returned. • false: The validity of the request is checked. If the check succeeds, the request is made.
DedicatedHostId	String	No	dh-bp67acfmazb4p****	The ID of the dedicated host on which to create the instance. If the <code>DedicatedHostId</code> parameter is specified, the <code>SpotStrategy</code> and <code>SpotPriceLimit</code> parameters are ignored. This is because preemptible instances cannot be created on dedicated hosts.
CreditSpecification	String	No	Standard	The performance mode of the burstable instance. Valid values: • Standard: the standard mode. For more information, see the "Standard mode" section in Burstable instances. • Unlimited: the unlimited mode. For more information, see the "Unlimited mode" section in Burstable instances. This parameter is empty by default.
DeletionProtection	Boolean	No	false	The release protection attribute of the instance. It specifies whether you can use the ECS console or call the <code>DeleteInstance</code> operation to manually release the instance. Default value: false. Valid values: • true: enables release protection. • false: disables release protection.  Note This parameter takes effect only on pay-as-you-go instances. It can protect instances only against manual releases, not against automatic releases.

Parameter	Type	Required	Example	Description
Affinity	String	No	default	Specifies whether to associate the instance on a dedicated host with the dedicated host. Valid values: - default: The instance is not associated with the dedicated host. With the No Fees for Stopped Instances (VPC-Connected) feature enabled, when the instance is restarted after being stopped, it is automatically deployed to another dedicated host in the automatic deployment resource pool if the resources of original dedicated host are insufficient. - host: The instance is associated with the dedicated host. With the No Fees for Stopped Instances (VPC-Connected) feature enabled, when the instance is restarted after it is stopped, it still resides on the original dedicated host. If the available resources of the original dedicated host are insufficient, the instance will fail to restart. Default value: default.
Tenancy	String	No	default	Specifies whether to create the instance on a dedicated host. Valid values: - default: creates the instance on a non-dedicated host. - host: creates the instance on a dedicated host. If you do not specify <code>DedicatedHostId</code>, the system automatically selects a dedicated host to deploy the instance. Default value: default.
StorageSetId	String	No	ss-bp1j4i2jdf3owlhe****	The ID of the storage set.
StorageSetPartitionNumber	Integer	No	2	The maximum number of partitions in the storage set. Valid values: greater than or equal to 2.
HttpEndpoint	String	No	enabled	Specifies whether to enable the access channel for the instance metadata. Valid values: - enabled - disabled Default value: enabled.  Note For more information about instance metadata, see Overview of instance metadata.

Parameter	Type	Required	Example	Description
HttpTokens	String	No	optional	Specifies whether to forcibly use the security-enhanced mode (IMDSv2) to access instance metadata. Valid values: - optional: The security-enhanced mode (IMDSv2) is not forcibly used. - required: The security-enhanced mode (IMDSv2) is forcibly used. After you set this parameter to required, you cannot access the instance metadata in normal mode. Default value: optional.  Note For more information about the modes of accessing instance metadata, see Modes of accessing instance metadata.

Response parameters

Parameter	Type	Example	Description
InstanceId	String	i-bp67acfmazb4p****	The ID of the instance.
RequestId	String	473469C7-AA6F-4DC5-B3DB-A3DC0DE3C83E	The ID of the request.
TradePrice	Float	0.165	The transaction price.

Examples

Sample requests

```
https://ecs.aliyuncs.com/?Action=CreateInstance
&RegionId=cn-hangzhou
&ImageId=ubuntu_18_04_64_20G_alibase_20190624.vhd
&SecurityGroupId=sg-bp15ed6xe1yxeycg****
&HostName=LocalHostName
&InstanceType=ecs.g6.large
&<Common request parameters>
```

Sample success responses

XML format

```
<CreateInstanceResponse>
  <RequestId>04F0F334-1335-436C-A1D7-6C044FE73368</RequestId>
  <InstanceId>i-bp67acfmazb4p****</InstanceId>
</CreateInstanceResponse>
```

JSON format

```
{
  "RequestId": "04F0F334-1335-436C-A1D7-6C044FE73368",
  "InstanceId": "i-bp67acfmxb4p****"
}
```

Error codes

HTTP status code	Error code	Error message	Description
400	InvalidInstanceType.ValueUnauthorized	The specified InstanceType is not authorized.	The error message returned because you are not authorized to use the specified instance type.
400	InvalidInternetChargeType.ValueNotSupported	The specified InternetChargeType is not valid.	The error message returned because the specified InternetChargeType parameter is invalid.
400	InvalidParameter	The specified parameter "InternetMaxBandwidthOut" is not valid.	The error message returned because the specified InternetMaxBandwidthOut parameter is invalid.
400	InvalidSystemDiskCategory.ValueNotSupported	The specified parameter "SystemDisk.Category" is not valid.	The error message returned because the specified SystemDisk.Category parameter is invalid.
404	IoOptimized.NotSupported	The specified instancetype is not support IoOptimized instance	The error message returned because the specified instance type does not support I/O optimization.
400	InvalidDataDiskSize.ValueNotSupported	The specified DataDisk.n.Size beyond the permitted range, or the capacity of snapshot exceeds the size limit of the specified disk category.	The error message returned because the specified DataDisk.N.Size is invalid or the snapshot size exceeds the maximum capacity that is allowed for the specified disk category.
403	InvalidDiskCategory.NotSupported	The specified disk category is not support the specified instance type.	The error message returned because the specified specified instance type does not support the specified disk category.
400	InvalidInstanceType.ValueNotSupported	The specified InstanceType does not exist or beyond the permitted range.	The error message returned because the specified InstanceType parameter does not exist or you are not authorized to manage instances of the specified instance type.
404	InvalidSecurityGroupId.NotFound	The specified SecurityGroupId does not exist.	The error message returned because the specified security group does not exist in this account. Check whether the security group ID is correct.
400	InvalidDescription.Malformed	The specified parameter "Description" is not valid.	The error message returned because the specified Description parameter is invalid. The description must be 2 to 256 characters in length and cannot start with http:// or https://.
400	InvalidHostName.Malformed	The specified parameter "HostName" is not valid.	The error message returned because the specified HostName parameter is invalid.
400	InvalidPassword.Malformed	The specified parameter "Password" is not valid.	The error message returned because the specified Password parameter is invalid.

HTTP status code	Error code	Error message	Description
400	InvalidPasswordParam.Mismatch	The input password should be null when passwdInherit is true.	The error message returned because the Password parameter is specified while PasswdInherit is set to true.
400	InvalidSystemDiskCategory.ValueNotSupported	The specified parameter "SystemDisk.Category" is not valid.	The error message returned because the specified SystemDisk.Category parameter is invalid.
400	InvalidDiskName.Malformed	The specified parameter "SystemDisk.DiskName or DataDisk.n.DiskName" is not valid.	The error message returned because the specified SystemDisk.DiskName or DataDisk.N.DiskName parameter is invalid.
400	InvalidDiskDescription.Malformed	The specified parameter "SystemDisk.DiskDescription" or "DataDisk.n.Description" is not valid.	The error message returned because the specified SystemDisk.Description or DataDisk.N.Description parameter is invalid.
400	InvalidDataDiskCategory.ValueNotSupported	The specified parameter "DataDisk.n.Category" is not valid.	The error message returned because the specified DataDisk.N.Category parameter is invalid.
404	InvalidDataDiskSnapshotId.NotFound	The specified parameter "DataDisk.n.SnapshotId" is not valid.	The error message returned because the specified DataDisk.N.SnapshotId parameter is invalid.
400	InvalidDataDevice.Malformed	The specified parameter "DataDisk.n.Device" is not valid.	The error message returned because the specified DataDisk.N.Device parameter is invalid.
400	InvalidNodeControllerId.Malformed	The specified parameter "NodeControllerId" is not valid.	The error message returned because the specified NodeControllerId parameter is invalid.
400	InvalidInnerIpAddress.Malformed	The specified parameter "InnerIpAddress" is not valid.	The error message returned because the specified InnerIpAddress parameter is invalid.
400	InvalidInnerIpAddress.Unusable	The specified InnerIpAddress is already used or not found in usable ip range.	The error message returned because the specified internal IP address is unavailable.
400	OperationDenied	The specified parameter "VlanId" is not valid or vlan has not enough IP address.	The error message returned when the specified VlanId parameter is invalid or no more IP addresses are available in the specified VLAN.
400	InvalidParameter.Conflict	The specified image does not support the specified instance type.	The error message returned because the specified image does not support the specified instance type.
400	ImageNotSupportCloudInit	The specified image does not support cloud-init.	The error message returned because the specified image does not support cloud-init.
400	InvalidSnapshotId.BasedSnapshotTooOld	The specified snapshot is created before 2013-07-15.	The error message returned because the specified snapshot was created before July 15, 2013.
400	QuotaExceed.AfterpayInstance	The maximum number of Pay-As-You-Go instances is exceeded: %s	The error message returned because the pay-as-you-go resources of the specified instance type are insufficient. Reduce the number of instances to be created.

HTTP status code	Error code	Error message	Description
403	ImageNotSubscribed	The specified image has not be subscribed.	The error message returned because you have not subscribed to the specified Alibaba Cloud Marketplace image.
400	InvalidMarketImageChargeType.NotSupport	The specified chargeType of marketImage is unsupported.	The error message returned because the billing method of the Alibaba Cloud Marketplace image is not supported.
403	OperationDenied	The specified Image is disabled or is deleted.	The error message returned because the specified image is disabled or deleted.
403	InvalidSystemDiskCategory.ValueUnauthorized	The disk category is not authorized.	The error message returned because you are not authorized to use the specified disk category.
403	InvalidSnapshotId.NotReady	The specified snapshot has not completed yet.	The error message returned because the specified snapshot is being created.
403	OperationDenied	The specified snapshot is not allowed to create disk.	The error message returned because the specified snapshot cannot be used to create disks.
403	InstanceDiskCategoryLimitExceed	The total size of specified disk category in an instance exceeds.	The error message returned because the total size of disks of the specified category exceeds the maximum capacity allowed for an instance.
403	InvalidDevice.InUse	The specified device has been occupied.	The error message returned because the specified device already has a disk attached.
403	ImageRemovedInMarket	The specified market image is not available, Or the specified user defined image includes product code because it is based on an image subscribed from marketplace, and that image in marketplace including exact the same product code has been removed.	The error message returned because the specified Alibaba Cloud Marketplace image is unavailable, or the specified custom image contains the product code of the Alibaba Cloud Marketplace image from which the custom image is derived and the Alibaba Cloud Marketplace image has been removed from Alibaba Cloud Marketplace.
404	InvalidClusterId.NotFound	The ClusterId provided does not exist in our records.	The error message returned because the specified ClusterId parameter does not exist.
403	OperationDenied	The creation of Instance to the specified Zone is not allowed.	The error message returned because instances cannot be created in the specified zone.
403	CategoryNotSupported	The specified zone does not offer the specified disk category.	The error message returned because the specified disk category is unavailable in the specified zone.
403	OperationDenied	The specified Zone or cluster does not offer the specified disk category or the specified zone and cluster do not match.	The error message returned because the specified disk category is unavailable in the specified zone or cluster, or because the specified zone and cluster do not correspond to each other.

HTTP status code	Error code	Error message	Description
403	OperationDenied.NoStock	The requested resource is sold out in the specified zone; try other types of resources or other regions and zones.	The error message returned because the requested resources are insufficient in the specified zone.
400	InvalidInstanceName.Malformed	The specified parameter "InstanceName" is not valid.	The error message returned because the specified InstanceName parameter is invalid. The name must be 2 to 128 characters in length and can contain letters, digits, periods (.), underscores (_), and hyphens (-). It must start with a letter and cannot start with http:// or https://.
400	InvalidDiskDescription.Malformed	The specified parameter "SystemDisk.DiskDescription or DataDisk.n.Description" is not valid.	The error message returned because the specified SystemDisk.Description or DataDisk.N.Description parameter is invalid.
403	QuotaExceed.PortableCloudDisk	The quota of portable cloud disk exceeds.	The error message returned because the maximum number of removable disks has been reached.
500	InternalServerError	The request processing has failed due to some unknown error.	The error message returned because an internal error has occurred. Try again later. If the problem persists, submit a ticket.
403	OperationDenied	Sales of this resource are temporarily suspended in the specified region; please try again later.	The error message returned because this resource is unavailable in the specified region. Try again later.
400	InvalidParameter.Conflict	The specified region and cluster do not match.	The error message returned because the specified region and the specified cluster do not correspond to each other.
403	SecurityGroupInstanceLimitExceed	The maximum number of instances in a security group is exceeded.	The error message returned because the maximum number of instances in the specified security group has been reached.
403	NodeControllerUnavailable	The Node Controller is temporarily unavailable.	The error message returned because the node controller is unavailable.
403	RegionUnauthorized	There is no authority to create instance in the specified region.	The error message returned because you are not authorized to create instances in the specified region.
403	CategoryNotSupported	The specified Zone or cluster does not offer the specified disk category.	The error message returned because the specified disk category is unavailable in the specified zone or cluster.
403	InvalidSnapshotId.NotDataDiskSnapshot	The specified snapshot is system disk snapshot.	The error message returned because the specified snapshot is a system disk snapshot.
403	CategoryNotSupported	The specified cluster does not offer the specified disk category.	The error message returned because the specified disk category is unavailable in the specified cluster.
404	InvalidVSwitchId.NotFound	Specified virtual switch does not exist.	The error message returned because the specified VSwitchId parameter does not exist.

HTTP status code	Error code	Error message	Description
400	InvalidParameter.Mismatch	Specified security group and virtual switch are not in the same VPC.	The error message returned because the specified security group and VSwitch do not belong to the same VPC.
400	InvalidNetworkType.Mismatch	Specified parameter "InternetChargeType" conflict with instance network type.	The error message returned because the network type of the instance does not support the specified billing method for network usage.
400	InvalidPrivateIpAddress	Specified private IP address is not in the CIDR block of virtual switch.	The error message returned because the specified private IP address is not within the CIDR block of the specified VSwitch.
400	InvalidPrivateIpAddress.Duplicated	Specified private IP address is duplicated.	The error message returned because the specified private IP address is already in use. Try another IP address.
400	QuotaExceeded.PrivateIpAddress	Don't have enough private IPs in this switch	The error message returned because all the private IP addresses in the CIDR block of the specified VSwitch are already in use. Try another VSwitch.
400	QuotaExceeded	Living instances quota exceeded in this VPC.	The error message returned because the maximum number of active instances has been reached.
400	IncorrectVSwitchStatus	The current status of virtual switch does not support this operation.	The error message returned because the specified VSwitch is in the Pending state and cannot be deleted.
400	InvalidParameter.Mismatch	Specified virtual switch is not in the specified zone.	The error message returned because the specified VSwitch does not exist in the specified zone.
400	ResourceNotAvailable	Resource you requested is not available in this region or zone.	The error message returned because VPCs are not supported by the specified region or zone.
400	MissingParameter	The input parameter "VSwitchId" that is mandatory for processing this request is not supplied.	The error message returned because the required VSwitchId parameter is not specified.
400	InvalidDiskCategory.Mismatch	The specified disk categories' combination is not supported.	The error message returned because the combination of specified disk categories is not supported.
403	DeleteWithInstance.Conflict	The specified disk is not a portable disk and cannot be set to DeleteWithInstance attribute.	The error message returned because the specified disk is not removable and cannot be released along with the instance.
404	InvalidImageId.NotFound	The specified ImageId does not exist.	The error message returned because the specified image does not exist in this account. Check whether the image ID is correct.
403	InstanceDiskNumLimitExceed	The number of specified disk in an instance exceeds.	The error message returned because the number of specified disks exceeds the upper limit.
403	IoOptimized.NotSupported	The specified image is not support IoOptimized Instance.	The error message returned because the specified image does not support I/O optimized instances.

HTTP status code	Error code	Error message	Description
403	ImageNotSupportInstanceType	The specified image don't support the InstanceType instance.	The error message returned because the specified image does not support this instance type.
400	InvalidIoOptimizedValue.ValueNotSupported	IoOptimized value not supported.	The error message returned because the specified IoOptimized parameter is invalid.
404	OperationDenied	Another Instance has been creating	The error message returned because no other instances can be created while an instance is being created.
403	InvalidDiskSize.TooSmall	Specified disk size is less than the size of snapshot	The error message returned because the specified disk size is less than the snapshot size.
403	OperationDenied	The type of the disk does not support the operation	The error message returned because the operation is not supported by the specified disk category.
404	InvalidInstanceChargeType.NotFound	The InstanceChargeType does not exist in our records	The error message returned because the specified InstanceChargeType parameter does not exist.
400	MissingParamter	The specified parameter "Period" is not null.	The error message returned because the Period parameter is not specified.
400	InvalidPeriod	The specified period is not valid.	The error message returned because the specified Period parameter is invalid.
403	InvalidDiskCategory.Mismatch	The specified disk categories combination is not supported.	The error message returned because the combination of specified disk categories is not supported.
403	IoOptimized.NotSupported	Vpc is not support IoOptimized instance.	The error message returned because I/O optimized instances are not supported in the VPC.
400	InvalidDataDiskCategory.ValueNotSupported	The specified parameter "DataDisk.n.Category" is not valid.	The error message returned because the specified DataDisk.N.Category parameter is invalid.
400	InstanceDiskCategoryLimitExceed	The specified DataDisk.n.Size beyond the permitted range, or the capacity of snapshot exceeds the size limit of the specified disk category.	The error message returned because the specified DataDisk.N.Size is invalid or the snapshot size exceeds the maximum capacity that is allowed for the specified disk category.
403	OperationDenied	The resource is out of usage.	The error message returned because the instance is not in the Running state. Start the instance or check whether the specified operation is valid.
403	QuotaExceed.BuyImage	The specified image is from the image market, You have not bought it or your quota has been exceeded.	The error message returned because because you have not purchased the specified Alibaba Cloud Marketplace image or your image quota has been used up.
404	DependencyViolation.IoOptimized	The specified instancetype must be IoOptimized instance.	The error message returned because the specified instance type is not I/O optimized.

HTTP status code	Error code	Error message	Description
404	PaymentMethodNotFound	No payment method has been registered on the account.	The error message returned because you have not configured a payment method for your account.
404	HOSTNAME_ILLEGAL	hostname is not valid.	The error message returned because the specified hostname is invalid.
404	InvalidSystemDiskSize.LessThanImageSize	The specified parameter SystemDisk.Size is less than the image size.	The error message returned because the specified system disk size is less than the size of the image.
404	InvalidSystemDiskSize.LessThanMinSize	The specified parameter SystemDisk.Size is less than the min size.	The error message returned because the specified system disk size is smaller than the allowed minimum size.
404	InvalidSystemDiskSize.MoreThanMaxSize	The specified SystemDisk.Size parameter exceeds the maximum size.	The error message returned because the specified system disk size exceeds the allowed maximum size.
404	InvalidDataDiskSnapshotId.NotFound	The specified parameter DataDisk.n.SnapshotId is not valid.	The error message returned because the specified DataDisk.N.SnapshotId parameter is invalid.
403	InvalidVSwitchId.NotFound	The VSwitchId provided does not exist in our records.	The error message returned because the specified VSwitchId parameter does not exist.
400	InvalidParameter	The specified vm bandwidth is not valid.	The error message returned because the specified bandwidth is invalid.
400	InvalidSystemDiskCategory.ValueNotSupported	The specified parameter SystemDisk.Category is not valid.	The error message returned because the specified SystemDisk.Category parameter is invalid.
403	InvalidParameter.ResourceOwnerAccount	ResourceOwnerAccount is Invalid.	The error message returned because the specified ResourceOwnerAccount parameter is invalid.
404	InvalidSystemDiskSize	The specified parameter SystemDisk.Size is invalid.	The error message returned because the specified SystemDisk.Size parameter is invalid.
400	InvalidParameter.Bandwidth	The specified parameter Bandwidth is not valid.	The error message returned because the specified bandwidth is invalid.
400	InvalidIPAddress.AlreadyUsed	The specified IPAddress is already used by other resource.	The error message returned because the specified IP address is in use.
403	InvalidUserData.Forbidden	User not authorized to input the parameter "UserData", please apply for permission "UserData"	The error message returned because you are not authorized to manage user data. Apply for the permission first.
400	InvalidUserData.SizeExceeded	The specified parameter "UserData" exceeds the size.	The error message returned because the size of user data specified in the UserData value exceeds the limit.
400	InvalidUserData.NotSupported	The specified parameter "UserData" only support the vpc and IoOptimized Instance.	The error message returned because the specified UserData parameter is not supported. UserData is supported only on VPC-type instances and I/O optimized instances.

HTTP status code	Error code	Error message	Description
403	Zone.NotOpen	The specified zone is not granted to you to buy resources yet.	The error message returned because you are not authorized to purchase resources in the specified zone.
403	Zone.NotOnSale	The specified zone is not available for purchase.	The error message returned because the requested resources are unavailable in the specified zone. Change the resource type or select a different zone.
403	InvalidClusterId.NotFound	The specified clusterId does not exist.	The error message returned because the specified ClusterId parameter does not exist.
403	InvalidInstanceType.ZoneNotSupported	The specified zone does not support this instancetype.	The error message returned because the specified instance type is not supported in the specified zone.
400	InstanceDiskNumber.LimitExceed	The total number of specified disk in an instance exceeds.	The error message returned because the number of specified disks exceeds the upper limit.
400	Account.Arrearage	Your account has an outstanding payment.	The error message returned because you have overdue payments in your account.
400	InvalidDiskCategory.ValueNotSupported	The specified parameter "DiskCategory" is not valid.	The error message returned because the specified disk category is invalid.
400	InvalidAutoRenewPeriod.ValueNotSupported	The specified autoRenewPeriod is not valid.	The error message returned because the specified AutoRenewPeriod parameter is invalid.
400	QuotaExceed.AfterpayInstance	The maximum number of Pay-As-You-Go instances is exceeded.	The error message returned because the pay-as-you-go resources of the specified instance type are insufficient. Reduce the number of instances to be created.
400	InvalidSpotStrategy	The specified SpotStrategy is not valid.	The error message returned because the specified SpotStrategy parameter is invalid.
400	InvalidSpotParam.EmptyZoneId	The specified ZoneId is empty when SpotStrategy is set.	The error message returned because the ZoneId parameter is not specified while the SpotStrategy parameter is specified.
400	InvalidSpotPriceLimit	The specified SpotPriceLimit is not valid.	The error message returned because the specified SpotPriceLimit parameter is invalid.
400	InvalidSpotDuration	The specified SpotDuration is not valid.	The error message returned because the specified SpotDuration parameter is invalid.
400	InvalidSpotAuthorized	The specified Spot param is unauthorized.	The error message returned because you are not authorized to create a preemptible instance based on the specified preemption policy.
400	InvalidSpotPrepaid	The specified Spot type is not support PrePay Instance.	The error message returned because the specified preemption policy does not support the subscription billing method.

HTTP status code	Error code	Error message	Description
400	InvalidSpotAliUid	The specified UID is not authorized to use SPOT instance.	The error message returned because the user with the specified user identifier (UID) does not have the permissions to use preemptible instances.
403	InvalidPayMethod	The specified pay method is not valid.	The error message returned because the specified payment method is invalid.
403	OperationDenied.ImageNotValid	The specified Image is disabled or is deleted.	The error message returned because the specified image does not exist.
400	InvalidTagKey.Malformed	The specified Tag.n.Key is not valid.	The error message returned because the specified Tag.N.Key parameter is invalid.
400	InvalidParameter.Bandwidth	%s	The error message returned because the specified bandwidth is invalid.
400	InvalidDataDiskCategory.ValueNotSupported	%s	The error message returned because the specified disk category is invalid.
400	InvalidSystemDiskCategory.ValueNotSupported	%s	The error message returned because the operation is not supported by the specified system disk category.
400	InvalidParameter.Conflict	%s	The error message returned because a specified parameter is invalid. Check whether parameter conflicts exist.
400	InvalidInternetChargeType.ValueNotSupported	%s	The error message returned because the specified instance billing method is not supported.
400	InvalidInstanceType.ValueNotSupported	%s	The error message returned because the operation is not supported by the specified instance type.
403	InstanceType.Offline	%s	The error message returned because the instance type is retired or insufficient resources are available for the instance type.
400	RegionUnauthorized	%s	The error message returned because you are not authorized to perform the operation in the specified region.
500	InternalError	%s	The error message returned because an internal error has occurred.
400	Zone.NotOnSale	%s	The error message returned because the requested resources are unavailable in the specified zone.
400	InvalidSystemDiskSize.ValueNotSupported	%s	The error message returned because the specified system disk size is invalid.
400	InvalidDataDiskSize.ValueNotSupported	%s	The error message returned because the specified disk size is invalid.

HTTP status code	Error code	Error message	Description
403	DependencyViolation.WindowsInstance	The instance creating is window, cannot use ssh key pair to login.	The error message returned because the specified instance is a Windows instance and does not support logons based on SSH key pairs.
400	InvalidInstanceType.ValueNotSupported	The specified parameter "KeyPairName" only support IoOptimized Instance.	The error message returned because non-I/O optimized instances do not support SSH key pairs.
403	RealNameAuthenticationError	Your account has not passed the real-name authentication yet.	The error message returned because you have not completed real-name verification. Complete real-name verification and try again.
403	InvalidNetworkType.MismatchRamRole	Ram role cannot be applied to instances of Classic network type.	The error message returned because an instance RAM role can be used only for instances in VPCs, not for instances in the classic network.
403	InvalidUser.PassRoleForbidden	The RAM user does not have the privilege to pass a RAM role.	The error message returned because the RAM user is not authorized to pass the RAM role.
404	InvalidRamRole.NotFound	The specified RAMRoleName does not exist.	The error message returned because the specified RamRoleName parameter does not exist.
400	OperationDenied	The specified InstanceType or Zone is not available or not authorized.	The error message returned because the specified instance type or zone is unavailable or unauthorized.
403	InvalidAccountStatus.NotEnoughBalance	Your account does not have enough balance.	The error message returned because your account balance is insufficient. Add funds to your account and try again.
500	InternalError	The request processing has failed due to some unknown error, exception or failure.	The error message returned because an internal error has occurred. Try again later. If the problem persists, submit a ticket.
404	InvalidResourceGroup.NotFound	The ResourceGroup provided does not exist in our records.	The error message returned because the specified ResourceGroupId parameter does not exist.
403	IncorrectVpcStatus	Current VPC status does not support this operation.	The error message returned because the operation is not supported while the VPC is in the current state.
400	InvalidParameter.EncryptedIllegal	%s	The error message returned because the specified parameter is invalid. Check whether your encryption operation is valid.
400	InvalidParameter.EncryptedNotSupported	%s	The error message returned because the specified parameter is invalid and your encryption operation is not supported.
400	EncryptedOption.Conflict	%s	The error message returned because the parameter used to encrypt disks is not supported.
400	InvalidParameter.Encrypted.KmsNotEnabled	The encrypted disk need enable KMS	The error message returned because KMS has not been activated.

HTTP status code	Error code	Error message	Description
400	InvalidSpotPriceLimit.LowerThanPublicPrice	The specified parameter "spotPriceLimit" can't be lower than current public price.	The error message returned because the specified SpotPriceLimit parameter is lower than the market price applicable when the instance is created.
400	InvalidHpcClusterId.Unnecessary	The specified HpcClusterId is unnecessary.	The error message returned because the HpcClusterId parameter is specified.
400	InvalidVSwitchId.Necessary	The VSwitchId is necessary.	The error message returned because the VSwitchId parameter is not specified.
400	InvalidHpcClusterId.Necessary	The HpcClusterId is necessary.	The error message returned because the HpcClusterId is not specified.
400	InvalidHpcClusterId.NotFound	The specified HpcClusterId is not found.	The error message returned because the specified HpcClusterId parameter does not exist.
400	InvalidHpcClusterId.Creating	The specified HpcClusterId is creating.	The error message returned because the specified HPC cluster is being created.
400	QuotaExceeded.PrivateIpAddress	Don't have enough private IPs in this switch.	The error message returned because no private IP address is available in the CIDR block of the VSwitch. Try another VSwitch.
400	InvalidPeriodUnit.ValueNotSupported	The specified parameter PeriodUnit is not valid.	The error message returned because the specified PeriodUnit parameter is invalid.
400	IncorrectImageStatus	Encrypted snapshots do not support this operation.	The error message returned because the operation is not supported by encrypted snapshots.
400	InvalidTagValue.Malformed	The specified Tag.N.Value is not valid.	The error message returned because the specified Tag.N.Value parameter is invalid.
400	InvalidSecurityGroup.NotInDefaultVpc	%s	The error message returned because the specified security group is not in the default VPC.
400	VpcNotFound	Vpc is not found according to the specified VSwitch or the vpc does not belong to you.	The error message returned because the specified VSwitch does not belong to any VPC, or the corresponding VPC does not belong to you.
403	InvalidParameter.NotMatch	%s	The error message returned because a specified parameter is invalid. Check whether parameter conflicts exist.
403	OperationDenied.InvalidNetworkType	%s	The error message returned because the operation is not supported by the specified network type.
400	InvalidSpotInterruptionBehavior	%s	The error message returned because the specified SpotInterruptionBehavior parameter is not supported.

HTTP status code	Error code	Error message	Description
403	InvalidSpotInterruptionBehavior.ClassicNetworkNotSupport	The specified SpotInterruptionBehavior does not support Classic network Instance.	The error message returned because the operation is not applicable to instances in the classic network.
403	InvalidSpotInterruptionBehavior.LocalDiskNotSupport	The specified SpotInterruptionBehavior does not support local disk instance.	The error message returned because the operation is not supported by instances that have local disks attached.
400	OperationDenied.IllegalPaymentPolicy	The current payment policy is illegal, please connect your service provider to authenticate relative agreement.	The error message returned because the current payment policy is invalid. Contact your service provider for authentication.
400	InvalidDeploymentOnHost	%s	The error message returned because the instance cannot be deployed in the specified deployment set.
400	InvalidInstanceChargeType.NotSupport	The Dedicated host not support the specified Instance charge type.	The error message returned because the dedicated host does not support instances that use the specified billing method.
400	InvalidNetworkType.NotSupported	The classic networkType not support create ECS on dedicatedHost	The error message returned because the dedicated host does not support instances in the classic network.
400	InvalidDedicatedHostId.NotFound	The specified DedicatedHostId does not exist.	The error message returned because the specified DedicatedHostId parameter does not exist.
400	InvalidDedicatedHostStatus.NotSupport	Operation denied due to dedicated host status.	The error message returned because the operation is not supported while the dedicated host is in the current state.
400	IncorrectDedicatedHostStatus	The current status of the resource does not support this operation.	The error message returned because the operation is not supported while the resource is in the current state.
400	ChargeTypeViolation.PostPaidDedicatedHost	Prepaid instance onto postpaid dedicated host is not allowed	The error message returned because subscription instances cannot be deployed on pay-as-you-go dedicated hosts.
400	InvalidPeriod.ExceededDedicatedHost	Instance expired date can't exceed dedicated host expired date.	The error message returned because the expiration date of the instance is later than that of the dedicated host.
400	InvalidInstanceType.ValueUnauthorized	The specified InstanceType is not authorize.	The error message returned because you are not authorized to use the specified instance type.
400	DedicatedHostType.Unmatched	The specified DedicatedHostType doesn't match the instance type.	The error message returned because the specified dedicated host type does not correspond to the specified instance type.
400	ChargeTypeViolation.PostPaidDedicatedHost	Prepaid instance onto postpaid dedicated host is not allowed.	The error message returned because subscription instances cannot be deployed on pay-as-you-go dedicated hosts.

HTTP status code	Error code	Error message	Description
400	InvalidParam.Tenancy	The specified Tenancy is invalid.	The error message returned because the specified Tenancy parameter is invalid.
403	OperationDenied.Image NotValid	%s	The error message returned because the operation is not supported by the current image.
403	QuotaExceed.PostPaidDisk	Living postPaid disks quota exceeded.	The error message returned because the number of pay-as-you-go disks exceeds the upper limit.
403	QuotaExceed.DeploymentSetInstanceQuotaFull	instance quota in one deployment set exceeded.	The error message returned because the maximum number of instances in the current deployment set has been reached.
403	InvalidDiskCategory.NotSupported	The specified disk category is not supported.	The error message returned because the operation is not supported by the specified disk category.
400	InvalidParameter.CreditSpecification	The specified CreditSpecification is not supported in this region.	The error message returned because the specified credit policy is not supported in the region.
403	OperationDenied.Image NotValid	the specified image is not published in the region.	The error message returned because the specified image is unavailable in the current region.
403	OperationDenied.Image NotValid	the specified image is not found in marketplace.	The error message returned because the specified image does not exist in Alibaba Cloud Marketplace.
404	InvalidMarketImage.NotFound	The specified marketplace image does not exist, please change the imageId and try again.	The error message returned because the specified Alibaba Cloud Marketplace image does not exist. Modify the parameter and try again later.
400	InvalidInstanceType.NotSupported	The specified instanceType is not supported by the deployment set.	The error message returned because the specified instance type is not supported by the current deployment set. Try another instance type.
400	InvalidVpcZone.NotSupported	Zone of the specified VSwitch is not available for creating, please try in other zones.	The error message returned because the default VSwitch cannot be created in the specified zone. Try another zone.
400	IncorrectDefaultVpcStatus	The status of the default VPC is invalid.	The error message returned because the status of the default VPC is invalid.
404	DeploymentSet.NotFound	The specified deployment set does not exist.	The error message returned because the specified deployment set does not exist.
403	OperationDenied.LocalDiskUnsupported	The configuration change is not allowed when the specified instance has local disks mounted.	The error message returned because the instance types of instances that have local disks attached cannot be changed.
403	OperationDenied.InconsistentNetwork	The specified security group and vswitch are not in the same vpc.	The error message returned because the specified security group and VSwitch do not belong to the same VPC.

HTTP status code	Error code	Error message	Description
403	OperationDenied	If the network segment of the vswitch is the same as that of its VPC. Therefore, the VPC cannot create other vswitchs across the region.	The error message returned because the VPC and VSwitch have the same CIDR block and no more VSwitches can be created for other zones of this VPC.
403	DefaultVswitch.Existed	The default vswitch for VPC already exists.	The error message returned because a default VSwitch already exists in the current VPC.
403	IncorrectInstanceStatus	The current status of the resource does not support this operation.	The error message returned because the operation is not supported while the resource is in the current state.
403	CategoryViolation	The specified instance does not support this operation because of its disk category.	The error message returned because the configurations of instances that have local disks attached cannot be upgraded or downgraded.
403	ResourcesNotInSameZone	The specified instance and dedicated host are not in the same zone.	The error message returned because the specified instance and the dedicated host are not in the same region.
403	InvalidRegion.NotSupport	The specified region does not support byok.	The error message returned because the bring your own key (BYOK) feature is not supported in this region.
403	UserNotInTheWhiteList	The user is not in byok white list.	The error message returned because you are not in the BYOK whitelist. Try again when you are in the whitelist.
400	InvalidParameter.EncryptedIllegal	The specified parameter Encrypted must be true when kmsKeyId is not empty.	The error message returned because the encryption feature is not enabled after a KMS key ID is specified.
400	IoOptimized.NotSupported	The specified instance must be IoOptimized instance when kmsKeyId is not empty.	The error message returned because I/O optimized instances are not used after a KMS key ID is specified.
404	InvalidParameter.KMSKeyId.NotFound	The specified KMSKeyId does not exist.	The error message returned because the specified KMS key ID does not exist.
403	InvalidParameter.KMSKeyId.KMSUnauthorized	ECS service have no right to access your KMS.	The error message returned because ECS is not authorized to access your KMS resources.
403	SecurityRisk.3DVerification	We have detected a security risk with your default credit or debit card. Please proceed with verification via the link in your email.	The error message returned because risks are detected in your default credit card or debit card. Click the link in the email for verification.
403	InvalidDisk.SystemDiskSize	The specified SystemDiskSize beyond the permitted range.	The error message returned because the specified system disk size exceeds the upper limit.
400	InvalidClientToken.ValueNotSupported	The ClientToken provided is invalid.	The error message returned because the specified client token is invalid.
400	OperationDenied	The current user does not support this operation.	The error message returned because your account does not support this operation.

HTTP status code	Error code	Error message	Description
403	InsufficientBalance	Your account does not have enough balance.	The error message returned because your account balance is insufficient. Add funds to your account and try again.
400	Duplicate.TagKey	The Tag.N.Key contain duplicate key.	The error message returned because the specified tag key already exists. Tag keys must be unique.
404	InvalidSecurityGroupId.NotFound	%s	The error message returned because the specified security group ID does not exist.
403	InvalidVSwitchId.IpInvalid	%s	The error message returned because the specified private IP address is invalid.
404	InvalidDiskIds.NotPortable	The specified DiskId is not portable.	The error message returned because the specified disk is not removable.
403	QuotaExceed.Tags	%s	The error message returned because the number of specified tags exceeds the upper limit.
401	InvalidRamRole.NotEcsRole	The specified ram role is not authorized for ecs, please check your role policy.	The error message returned because the specified RAM role is not authorized to use ECS. Check your role policy.
400	InvalidHttpEndpoint.NotSupported	The specified HttpEndpoint not supported, you can use enabled(default) or disabled.	The error message returned because the specified HttpEndpoint parameter is invalid. Set the value to enabled or disabled. The default value is enabled.
400	InvalidHttpTokens.NotSupported	The specified HttpTokens not supported, you can use optional(default) or required.	The error message returned because the specified HttpTokens parameter is invalid. Set the value to optional or required. The default value is optional.
400	InvalidHttpPutResponseHopLimit.NotSupported	The specified HttpPutResponseHopLimit not supported, more than 1 and less than 64 is reasonable.	The error message returned because the specified HttpPutResponseHopLimit parameter is invalid. The value must be in the range of 1 to 64.
400	InvalidPrivateIpAddress.Malformed	Specified private IP address is malformed.	The error message returned because the specified private IP address is invalid.

5.3. DescribeInstances

You can call this operation to query details of one or more instances.

Description

- You can specify multiple request parameters. Specified parameters have logical AND relations. Only the parameters that are specified are included in the filtering conditions. However, if InstanceIds is set to an empty JSON array, it is regarded as an effective filtering condition and an empty result is returned.
- If you are using a RAM user or RAM role, an empty list is returned when the user or the role does not have the permission to call this operation. You can add the `DryRun` parameter in your request to determine whether the empty list is caused by the lack of permission.

When you call an API operation through Alibaba Cloud Command Line Interface (CLI), specify request parameter values of different data types in required formats. For more information, see [CLI parameter format](#).

Debugging

OpenAPI Explorer automatically calculates the signature value. For your convenience, we recommend that you call this operation in OpenAPI Explorer. OpenAPI Explorer dynamically generates the sample code of the operation for different SDKs.

Request parameters

Parameter	Type	Required	Example	Description
Action	String	Yes	DescribeInstances	The operation that you want to perform. Set the value to DescribeInstances.
RegionId	String	Yes	cn-hangzhou	The region ID of the instance. You can call the DescribeRegions operation to query the most recent region list.
VpcId	String	No	v-bp67acfmazb4p****	The ID of the VPC to which the instance belongs.
VSwitchId	String	No	vsw-bp67acfmazb4p****	The ID of the VSwitch.
ZoneId	String	No	cn-hangzhou-g	The zone ID of the instance.
InstanceNetworkType	String	No	vpc	The network type of the instance. Valid values: - classic: classic network - vpc: VPC
SecurityGroupId	String	No	sg-bp67acfmazb4p****	The ID of the security group to which the instance belongs.
InstanceIds	String	No	["i-bp67acfmazb4p****", "i-bp67acfmazb4p****", ... "i-bp67acfmazb4p****"]	The IDs of the instances. It can be a JSON array that consists of multiple instance IDs. Separate multiple instance IDs with commas (.). A maximum of 100 instance IDs can be entered.
PageNumber	Integer	No	1	The number of the page to return. Pages start from page 1. Default value: 1.
PageSize	Integer	No	10	The number of entries to return on each page. Valid values: 1 to 100. Default value: 10.
InnerIpAddresses	String	No	["10.1.1.1", "10.1.2.1", ... "10.1.10.1"]	The internal IP addresses of classic network-type instances. This parameter takes effect when the InstanceNetworkType parameter is set to classic. The value can be a JSON array that consists of multiple IP addresses. Separate multiple IP addresses with commas (.). A maximum of 100 IP addresses can be entered.

Parameter	Type	Required	Example	Description
PrivateIpAddresses	String	No	["172.16.1.1", "172.16.2.1", ... "172.16.10.1"]	The private IP addresses of VPC-type instances. This parameter takes effect when the InstanceNetworkType parameter is set to vpc. The value can be a JSON array that consists of multiple IP addresses. Separate multiple IP addresses with commas (,). A maximum of 100 IP addresses can be entered.
PublicIpAddresses	String	No	["42.1.1. **", "42.1.2. **", ... "42.1.10. **"]	The public IP addresses of the instances. It can be a JSON array that consists of multiple instance IP addresses. Separate multiple instance IP addresses with commas (,). A maximum of 100 instance IP addresses can be entered.
EipAddresses	String	No	["42.1.1. **", "42.1.2. **", ... "42.1.10. **"]	The Elastic IP addresses (EIPs) of the instances. This parameter takes effect when the InstanceNetworkType parameter is set to vpc. The value can be a JSON array that consists of multiple IP addresses. Separate multiple IP addresses with commas (,). A maximum of 100 IP addresses can be entered.
InstanceChargeType	String	No	PostPaid	The billing method of the instance. Valid values: - PostPaid: pay-as-you-go - PrePaid: subscription
InternetChargeType	String	No	PayByTraffic	The billing method for public network usage. Valid values: - PayByBandwidth: pay-by bandwidth - PayByTraffic: pay-by-data-transfer
InstanceName	String	No	Test	The name of the instance. Fuzzy search with the asterisk (*) wildcard is supported.
ImageId	String	No	m-bp67acfmazb4p****	The ID of the image.
Status	String	No	Running	The status of the instance. Valid values: - Running - Starting - Stopping - Stopped
LockReason	String	No	security	The reason why the instance is locked.
IoOptimized	Boolean	No	true	Specifies whether the instance is I/O optimized.

Parameter	Type	Required	Example	Description
Tag.N.value	String	No	valueTest	The value of tag N.  Note This parameter will be removed in the future. We recommend that you use the Tag.N.Value parameter to ensure future compatibility.
Tag.N.key	String	No	keyTest	The key of tag N.  Note This parameter will be removed in the future. We recommend that you use the Tag.N.Key parameter to ensure future compatibility.
Tag.N.Key	String	No	KeyTest	The key of tag N of the instance. Valid values of N: 1 to 20.
Tag.N.Value	String	No	ValueTest	The value of tag N of the instance. Valid values of N: 1 to 20.
InstanceType	String	No	ecs.g5.large	The type of the instance.
InstanceTypeFamily	String	No	ecs.g5	The instance family of the instance.
KeyPairName	String	No	KeyPairNameTest	The name of the SSH key pair for the instance.
ResourceGroupId	String	No	rg-bp67acfmazb4p****	The ID of the enterprise resource group to which the instance belongs.
HpcClusterId	String	No	hpc-bp67acfmazb4p****	The ID of the HPC cluster to which the instance belongs.
RdmalAddresses	String	No	10.10.10.102	The RDMA IP addresses of HPC instances.
DryRun	Boolean	No	false	Specifies whether to check the request only. Default value: false. Valid values: • true: The request is checked but instances are not queried. The system checks whether your AccessKey pair is valid, whether RAM users are authorized, and whether required parameters are specified. If the check fails, the corresponding error message is returned. If the check succeeds, the DryRunOperation error code is returned. • false: The request is checked. If the check succeeds, a 2XX HTTP status code is returned and available resources are queried.

Parameter	Type	Required	Example	Description
AdditionalAttributes.N	RepeatList	No	META_OPTIONS	The value of attribute N. Valid values of N: 1 to 20.
HttpEndpoint	String	No	enabled	Specifies whether to enable the access channel for instance metadata. Valid values: - enabled - disabled Default value: enabled.  Note For information about instance metadata, see Overview of instance metadata.
HttpTokens	String	No	optional	Specifies whether to forcibly use the security hardening mode (IMDSv2) to access instance metadata. Valid values: - optional: The security hardening mode (IMDSv2) is not forcibly used. - required: The security hardening mode (IMDSv2) is forcibly used. After you set the parameter to required, you cannot access the instance metadata in the normal mode. Default value: optional.  Note For information about modes of accessing instance metadata, see Modes of accessing instance metadata.

Response parameters

Parameter	Type	Example	Description
Instances	Array		The array of the returned information of instances.
Instance			
AutoReleaseTime	String	2017-12-10T04:04Z	The automatic release time of the pay-as-you-go instance.
ClusterId	String	c-bp67acfmazb4p****	The ID of the cluster to which the instance belongs.  Note This parameter will be removed in the future. We recommend that you use other parameters to ensure future compatibility.
Cpu	Integer	8	The number of vCPUs.
CpuOptions	Struct		The configuration details of CPU.

Parameter	Type	Example	Description
CoreCount	Integer	2	The number of CPU cores.
Numa	String	2	The number of threads allocated. Set the value to 2.
ThreadsPerCore	Integer	4	The number of threads per core.
CreationTime	String	2017-12-10T04:04Z	The time when the instance was created.
CreditSpecification	String	Standard	The running mode of a burstable instance. Valid values: - Standard: the standard mode. For more information, see the standard mode section of Burstable instances. - Unlimited: the unlimited mode. For more information, see the unlimited mode section of Burstable instances.
DedicatedHostAttribute	Struct		The host attribute array that consists of the DedicatedHostId and DedicatedHostName values.
DedicatedHostId	String	dh-bp67acfmxazb4p****	The ID of the dedicated host.
DedicatedHostName	String	FinanceDept	The name of the dedicated host.
DedicatedInstanceAttribute	Struct		The attribute of the instance on a dedicated host.
Affinity	String	default	Indicates whether the instance on a dedicated host is associated with the dedicated host. Valid values: - default: The instance is not associated with the dedicated host. With the No Fees for Stopped Instances (VPC-connected) feature enabled, when the instance is restarted after being stopped, it may be deployed to another dedicated host in the automatic deployment resource pool. - host: The instance is associated with the dedicated host. With the No Fees for Stopped Instances (VPC-Connected) feature enabled, when the instance is restarted after being stopped, it still resides on the original dedicated host.
Tenancy	String	default	Indicates whether the instance is hosted on a dedicated host. Valid values: - default: The instance is not hosted on a dedicated host. - host: The instance is hosted on a dedicated host.

Parameter	Type	Example	Description
DeletionProtection	Boolean	false	The release protection attribute of instances. It indicates whether the instances can be released from the ECS console or through the DeleteInstance operation. - true: enables release protection. - false: disables release protection.  Note This parameter is applicable only to pay-as-you-go instances. It can protect only against manual releases, not against automatic releases.
DeploymentSetId	String	ds-bp67acfmazb4p****	The ID of the deployment set.
Description	String	description	The description of the instance.
DeviceAvailable	Boolean	true	Indicates whether data disks can be attached to the instance.
EcsCapacityReservationAttr	Struct		The capacity reservation attribute of the ECS instance.
CapacityReservationId	String	cr-bp67acfmazb4p****	The ID of the capacity reservation.
CapacityReservationPreference	String	cr-bp67acfmazb4p****	The preference of the capacity reservation.
EipAddress	Struct		The information of the EIP bound to the instance.
AllocationId	String	i-bp67acfmazb4p****	The ID of the instance to which the EIP is bound.
Bandwidth	Integer	5	The maximum public bandwidth of the EIP. Unit: Mbit/s.
InternetChargeType	String	PayByTraffic	The charge type of the EIP Address.
IpAddress	String	42.112.17.**	The EIP Address.
IsSupportUnassociate	Boolean	true	Indicates whether the EIP Address can be unbound.
ExpiredTime	String	2017-12-10T04:04Z	The expiration time of the instance. The time follows the ISO 8601 standard in the yyyy-MM-ddTHH:mm:ssZ format. The time is displayed in UTC.
GPUMount	Integer	4	The number of GPUs for the instance type.
GPUSpec	String	NVIDIA V100	The category of GPUs for the instance type.

Parameter	Type	Example	Description
HostName	String	Test	The hostname of the instance.
HpcClusterId	String	hpc-bp67acfmxazb4p****	The ID of the HPC cluster to which the instance belongs.
ImageId	String	m-bp67acfmxazb4p****	The ID of the image that the instance is running.
InnerIpAddress	List	10.170.**.***	The internal IP address of the instance.
InstanceChargeType	String	PostPaid	The billing method of the instance. Valid values: - PrePaid: subscription - PostPaid: pay-as-you-go
InstanceId	String	i-bp67acfmxazb4p****	The ID of the instance.
InstanceName	String	InstanceNameTest	The name of the instance.
InstanceNetworkType	String	vpc	The network type of the instance. Valid values: - classic - vpc
InstanceType	String	ecs.g5.large	The type of the ECS instance.
InstanceTypeFamily	String	ecs.g5	The instance family.
InternetChargeType	String	PayByTraffic	The billing method for network usage. Valid values: - PayByBandwidth: pay-by-bandwidth - PayByTraffic: pay-by-data-transfer
InternetMaxBandwidthIn	Integer	50	The maximum inbound public bandwidth. Unit: Mbit/s.
InternetMaxBandwidthOut	Integer	5	The maximum outbound public bandwidth. Unit: Mbit/s.
IoOptimized	Boolean	true	Indicates whether the instance is I/O optimized.
KeyPairName	String	KeyPairNameTest	The name of the key pair.
LocalStorageAmount	Integer	2	The number of local disks attached to the instance.
LocalStorageCapacity	Long	1000	The capacity of local disks attached to the instance.
Memory	Integer	1024	The memory size of the instance. Unit: MiB.

Parameter	Type	Example	Description
MetadataOptions	Struct		The collection of metadata options.
HttpEndpoint	String	enabled	Indicates whether the access channel for instance metadata was enabled. Valid values: - enabled - disabled
HttpPutResponseHopLimit	Integer	0	This parameter is not available yet.
HttpTokens	String	optional	Indicates whether the security hardening mode (IMDSv2) was forcibly used to access instance metadata. Valid values: - optional: The security hardening mode (IMDSv2) was not forcibly used. - required: The security hardening mode (IMDSv2) was forcibly used.
NetworkInterfaces	Array		The collection of ENIs of the instance.
NetworkInterface			
MacAddress	String	00:16:3e:32:b4:**	The MAC address of an ENI.
NetworkInterfaceId	String	eni-2zeh9atclduxvf1z****	The ID of an ENI.
PrimaryIpAddress	String	172.17.**.***	The private IP address of the primary ENI.
OSName	String	CentOS 7.4 64-bit	The name of the operating system for the instance.
OSNameEn	String	CentOS 7.4 64-bit	The English name of the operating system for the instance.
OSType	String	linux	The operating system type of the instance, including Windows Server and Linux. Valid values: - windows - linux
OperationLocks	Array		The reason why the instance was locked.
LockReason			
LockMsg	String	The specified instance is locked due to financial reason.	The description message returned when the instance is locked.

Parameter	Type	Example	Description
LockReason	String	Recycling	The type of the reason why the instance was locked. Valid values: - financial: The instance was locked due to overdue payments. - security: The instance was locked due to security reasons. - recycling: The preemptible instance was locked and is pending for release. - dedicatedhostfinancial: The ECS instance was locked due to overdue payments on the dedicated host. - refunded: The instance was locked because a refund was made for the instance.
PublicIpAddress	List	121.40.61.***	The public IP address of the instance.
RdmaIpAddress	List	10.10.10.102	The RDMA IP address of the HPC instance.
Recyclable	Boolean	false	Indicates whether the instance can be recycled.
RegionId	String	cn-hangzhou	The region ID of the instance.
ResourceGroupId	String	rg-bp67acfmazb4p****	The ID of the enterprise resource group to which the instance belongs.
SaleCycle	String	month	The billing cycle of the instance.
SecurityGroupIds	List	sg-bp67acfmazb4p****	The IDs of the security groups to which the instance belongs.
SerialNumber	String	51d1353b-22bf-4567-a176-8b3e12e4****	The serial number of the instance.
SpotPriceLimit	Float	0.98	The maximum hourly price for the instance. It can be accurate to three decimal places. This parameter takes effect when the SpotStrategy parameter is set to SpotWithPriceLimit.
SpotStrategy	String	NoSpot	The preemption policy for the preemptible instance. Valid values: - NoSpot: the regular pay-as-you-go instance. - SpotWithPriceLimit: the preemptible instance with a maximum hourly price. - SpotAsPriceGo: the preemptible instance priced at the market price at the time of purchase.
StartTime	String	2017-12-10T04:04Z	The start time of the bidding mode for a preemptible instance.
Status	String	Running	The status of the instance.

Parameter	Type	Example	Description
StoppedMode	String	KeepCharging	Indicates whether the instance continues to be billed after it is stopped. Valid values: - KeepCharging: The billing of the instance continues after it is stopped, and resources in stock are reserved for the instance. - StopCharging: The billing of the instance stops after it is stopped. After the instance is stopped, its resources such as vCPUs, memory, and public IP address are released. You may be unable to restart the instance if some types of resources are out of stock in the current region. - Not-applicable: Only KeepCharging is applicable to the instance.
Tags	Array		The tags of the instances.
Tag			
TagKey	String	KeyTest	The tag key of the instance.
TagValue	String	ValueTest	The tag value of the instance.
VlanId	String	10	The VLAN ID of the instance.  Note This parameter will be removed in the future. We recommend that you use other parameters to ensure future compatibility.
VpcAttributes	Struct		The VPC attributes of the instance.
NatIpAddress	String	172.17.**.***	The IP address of the instance. It is used by ECS instances in different VPCs for communication.
PrivateIpAddress	List	172.17.**.***	The private IP address of the instance.
VSwitchId	String	vsw-2zeh0r1pabwtg6wcs****	The ID of the VSwitch.
VpcId	String	vpc-2zeuphj08tt7q3brd****	The ID of the VPC to which the instance belongs.
ZoneId	String	cn-hangzhou-g	The zone ID of the instance.
PageNumber	Integer	1	The page number of the returned page.
PageSize	Integer	1	The number of entries returned per page.
RequestId	String	473469C7-AA6F-4DC5-B3DB-A3DC0DE3C83E	The ID of the request.
TotalCount	Integer	58	The total number of instances queried.

Examples

Sample requests

```
https://ecs.aliyuncs.com/?Action=DescribeInstances
&RegionId=cn-hangzhou
&PageSize=1
PageNumber=1
&<Common request parameters>
```

Sample success responses

XML format

```
<DescribeInstancesResponse>
  <PageNumber>1</PageNumber>
  <TotalCount>6</TotalCount>
  <PageSize>10</PageSize>
  <RequestId>8EF01A45-FFFA-497B-B5C3-1DE1B74DB32D</RequestId>
  <Instances>
    <Instance>
      <InnerIpAddress></InnerIpAddress>
      <ImageId>ubuntu_16_0402_64_20G_alibase_20170818.vhd</ImageId>
      <InstanceTypeFamily>ecs.g5</InstanceTypeFamily>
      <VlanId></VlanId>
      <NetworkInterfaces>
        <NetworkInterface>
          <MacAddress>00:16:3e:32:b4:**</MacAddress>
          <PrimaryIpAddress>172.17.XX.XXX</PrimaryIpAddress>
          <NetworkInterfaceId>eni-2zeh9atclduxvf1z****</NetworkInterfaceId>
        </NetworkInterface>
      </NetworkInterfaces>
      <InstanceId>XXXXXXXXXX</InstanceId>
      <EipAddress>
        <IpAddress></IpAddress>
        <AllocationId></AllocationId>
        <InternetChargeType></InternetChargeType>
      </EipAddress>
      <InternetMaxBandwidthIn>50</InternetMaxBandwidthIn>
      <ZoneId>cn-beijing-e</ZoneId>
      <InternetChargeType>PayByBandwidth</InternetChargeType>
      <SpotStrategy>NoSpot</SpotStrategy>
      <StoppedMode>Not-applicable</StoppedMode>
      <SerialNumber>d9bd1cdc-624d-4736-9da5-2ba2f741****</SerialNumber>
      <IoOptimized>true</IoOptimized>
      <Memory>8192</Memory>
      <Cpu>2</Cpu>
      <VpcAttributes>
        <NatIpAddress></NatIpAddress>
        <PrivateIpAddress>
          <IpAddress>172.17.XX.XXX</IpAddress>
        </PrivateIpAddress>
      </VpcAttributes>
    </Instance>
  </Instances>
</DescribeInstancesResponse>
```

```

    <VSwitchId>vsw-2zenur1padwtg0wcs*****</VSwitchId>
    <VpcId>vpc-2zeuphj08tt7q3brd****</VpcId>
  </VpcAttributes>
  <InternetMaxBandwidthOut>1</InternetMaxBandwidthOut>
  <SecurityGroupIds>
    <SecurityGroupId>sg-2ze21r9qb638hvtr****</SecurityGroupId>
  </SecurityGroupIds>
  <SpotPriceLimit>0.0</SpotPriceLimit>
  <SaleCycle>Week</SaleCycle>
  <AutoReleaseTime></AutoReleaseTime>
  <InstanceName>ECS-BUY-2017-57-10</InstanceName>
  <Description></Description>
  <ResourceGroupId></ResourceGroupId>
  <OSType>linux</OSType>
  <OSName>Ubuntu 16.04 64</OSName>
  <InstanceNetworkType>vpc</InstanceNetworkType>
  <PublicIpAddress>
    <IpAddress>47.94.XX.XX</IpAddress>
  </PublicIpAddress>
  <HostName>iZ2zeh9atclduxvf1zx****</HostName>
  <InstanceType>ecs.g5.large</InstanceType>
  <CreationTime>2017-12-10T04:04Z</CreationTime>
  <Tags>
    <Tag>
      <TagValue>fqwfew</TagValue>
      <TagKey>fefqe</TagKey>
    </Tag>
    <Tag>
      <TagValue>weqfwq</TagValue>
      <TagKey>fqewfwqewf</TagKey>
    </Tag>
    <Tag>
      <TagValue>ewqffeqw</TagValue>
      <TagKey>fqfwewfqw</TagKey>
    </Tag>
  </Tags>
  <Status>Running</Status>
  <MetadataOptions>
    <HttpTokens></HttpTokens>
    <HttpEndpoint></HttpEndpoint>
  </MetadataOptions>
  <ClusterId></ClusterId>
  <Recyclable>false</Recyclable>
  <RegionId>cn-beijing</RegionId>
  <GPUSpec></GPUSpec>
  <OperationLocks></OperationLocks>
  <GPUPAmount>0</GPUPAmount>
  <InstanceChargeType>PrePaid</InstanceChargeType>
  <ExpiredTime>2017-12-17T16:00Z</ExpiredTime>
</Instance>
</Instances>

```

```
</DescribeInstancesResponse>
```

JSON format

```
{
  "PageNumber": 1,
  "TotalCount": 58,
  "PageSize": 1,
  "RequestId": "97935DF1-0289-4AA2-9DD1-72377838B16B",
  "Instances": {
    "Instance": [
      {
        "ImageId": "centos_7_06_64_20G_alibase_20190711.vhd",
        "VlanId": "",
        "EipAddress": {
          "IpAddress": "",
          "AllocationId": "",
          "InternetChargeType": ""
        },
        "ZoneId": "cn-hangzhou-f",
        "IoOptimized": true,
        "SerialNumber": "51d1353b-22bf-4567-a176-8b3e12e43***",
        "Cpu": 2,
        "Memory": 8192,
        "DeviceAvailable": true,
        "SecurityGroupIds": {
          "SecurityGroupId": [
            "sg-bp17zljqpohu6j2i****"
          ]
        },
        "SaleCycle": "",
        "AutoReleaseTime": "",
        "ResourceGroupId": "",
        "OSType": "linux",
        "OSName": "CentOS 7.6 64-bit",
        "InstanceNetworkType": "classic",
        "HostName": "iZbp1j4i2jdf3owlheb****",
        "CreationTime": "2019-11-11T08:35Z",
        "Tags": {
          "Tag": [
            {
              "TagValue": "asg-bp1d8uuut40f4qc4****",
              "TagKey": "acs:autoscaling:scalingGroupId"
            },
            {
              "TagValue": "ESS",
              "TagKey": "ESS"
            }
          ]
        }
      }
    ]
  },
}
```



```

"EcsCapacityReservationAttr": {
  "CapacityReservationPreference": "none",
  "CapacityReservationId": ""
},
"RegionId": "cn-hangzhou",
"DeletionProtection": false,
"OperationLocks": {
  "LockReason": []
},
"ExpiredTime": "2099-12-31T15:59Z",
"CpuOptions": {
  "Numa": "",
  "ThreadsPerCore": 2,
  "CoreCount": 1
},
"InnerIpAddress": {
  "IpAddress": [
    "10.80.61.42"
  ]
},
"InstanceTypeFamily": "ecs.mn4",
"InstanceId": "i-bp1j4i2jdf3owlhe****",
"InternetMaxBandwidthIn": 50,
"CreditSpecification": "",
"InternetChargeType": "PayByTraffic",
"SpotStrategy": "NoSpot",
"StoppedMode": "Not-applicable",
"InternetMaxBandwidthOut": 1,
"VpcAttributes": {
  "NatIpAddress": "",
  "PrivateIpAddress": {
    "IpAddress": []
  },
  "VSwitchId": "",
  "VpcId": ""
},
"SpotPriceLimit": 0,
"StartTime": "2019-11-11T08:35Z",
"InstanceName": "ECS-asg-MyFirstScalingGroup",
"Description": "ECS",
"OSNameEn": "CentOS 7.6 64 bit",
"PublicIpAddress": {
  "IpAddress": [
    "121.40.77.XXX"
  ]
},
"InstanceType": "ecs.mn4.large",
"Status": "Running",
"MetadataOptions": {
  "HttpTokens": "",

```

```

        "HttpEndpoint": "",
    },
    "Recyclable": false,
    "ClusterId": "",
    "GPUSpec": "",
    "InstanceChargeType": "PostPaid",
    "GPUAmount": 0,
    "DedicatedHostAttribute": {
        "DedicatedHostId": "",
        "DedicatedHostName": ""
    },
    "DedicatedInstanceAttribute": {
        "Affinity": "",
        "Tenancy": ""
    },
    "DeploymentSetId": ""
    }
}
}
}

```

Error codes

HTTP status code	Error code	Error message	Description
404	InvalidInstanceChargeType.NotFound	The InstanceChargeType does not exist in our records	The error message returned because the specified InstanceChargeType parameter does not exist.
404	InvalidInternetChargeType.ValueNotSupported	The specified InternetChargeType is not valid	The error message returned because the specified billing method for network usage is invalid.
404	InvalidLockReason.NotFound	The specified LockReason is not found	The error message returned because the specified type of the reason why the instance was locked does not exist.
404	InvalidFilterKey.NotFound		The error message returned because the specified start time or end time is invalid.
404	InvalidNetworkType.NotFound	The specified InstanceNetworkType is not found	The error message returned because the specified network type of the instance does not exist.
404	InvalidStatus.NotFound	The specified Status is not found	The error message returned because the specified resource status does not exist.
400	InvalidTag.Mismatch	The specified Tag.n.Key and Tag.n.Value are not match.	The error message returned because the specified Tag.N.Key and Tag.N.Value parameters do not match.
400	InvalidTagCount	The specified tags are beyond the permitted range.	The error message returned because the number of specified tags exceeds the upper limit.

HTTP status code	Error code	Error message	Description
400	InvalidHpcClusterId.NotFound	The specified HpcClusterId is not found.	The error message returned because the specified HPC cluster ID does not exist.
400	InvalidHpcClusterId.Creating	The specified HpcClusterId is creating.	The error message returned because the specified HPC cluster to which the instance belongs is being created.

5.4. DeleteInstances

You can call this operation to release one or more pay-as-you-go instances or expired subscription instances.

Description

- After an instance is released, all the physical resources used by the instance are recycled. Relevant data is erased and cannot be recovered.
- Disks attached to the instance:
 - The disks for which `DeleteWithInstance` is set to false are retained as pay-as-you-go disks.
 - The disks for which `DeleteWithInstance` is set to true are released along with the instance.
 - For disks for which `DeleteAutoSnapshot` is set to false, the automatic snapshots are retained.
 - For disks for which `DeleteAutoSnapshot` is set to true, the automatic snapshots are released.
 - Manual snapshots are retained.
 - If `OperationLocks` in the `DescribeInstances` response contains `"LockReason": "security"` for an instance, the instance is locked for security reasons. Even if `DeleteWithInstance` is set to false for the data disks that are attached to the instance, this parameter is ignored and the data disks are released along with the instance. For more information, see [API behavior when an instance is locked for security reasons](#).

Debugging

OpenAPI Explorer automatically calculates the signature value. For your convenience, we recommend that you call this operation in OpenAPI Explorer. OpenAPI Explorer dynamically generates the sample code of the operation for different SDKs.

Request parameters

Parameter	Type	Required	Example	Description
Action	String	Yes	DeleteInstances	The operation that you want to perform. Set the value to DeleteInstances.
InstanceId.N	RepeatList	Yes	i-bp1g6zv0ce8oghu7*** *	The ID of instance N that you want to release. Valid values of N: 1 to 100.
RegionId	String	Yes	cn-hangzhou	The region ID of the instance. You can call the DescribeRegions operation to query the most recent region list.

Parameter	Type	Required	Example	Description
DryRun	Boolean	No	false	Specifies whether to check the validity of the request without actually making the request. Default value: false. Valid values: • true: The validity of the request is checked but the request is not made. Check items include whether your AccessKey pair is valid, whether RAM users are authorized, and whether the required parameters are set. If the check fails, the corresponding error message is returned. If the check succeeds, DRYRUN.SUCCESS is returned. • false: The validity of the request is checked. If the check succeeds, a 2XX HTTP status code is returned and the request is made.
Force	Boolean	No	false	Specifies whether to forcibly release the instance in the Running (Running) state. Default value: false. Valid values: • true: forcibly releases the instance in the Running (Running) state. This operation is equivalent to the power-off operation. Temporary data in the memory and storage of the instance is erased and cannot be recovered. • false: normally releases the instance. This value is valid only for an instance in the Stopped (Stopped) state.
TerminateSubscription	Boolean	No	false	Specifies whether to release an expired subscription instance. Default value: false.
ClientToken	String	No	123e4567-e89b-12d3-a456-426655440000	The client token that is used to ensure the idempotence of the request. You can use the client to generate the value, but you must make sure that it is unique among different requests. The ClientToken value must contain only ASCII characters and cannot exceed 64 characters in length. For more information, see How to ensure idempotence.

Response parameters

Parameter	Type	Example	Description
RequestId	String	7B7813C6-57BF-41XX-B12B-F172F65A6046	The ID of the request.

Examples

Sample requests

```
https://ecs.aliyuncs.com/?Action=DeleteInstances
&InstanceId=i-bp1g6zv0ce8oghu7****
&Force=false
&<Common request parameters>
```

Sample success responses

XML format

```
<DeleteInstancesResponse>
  <RequestId>7B7813C6-57BF-41XX-B12B-F172F65A6046</RequestId>
</DeleteInstancesResponse>
```

JSON format

```
{
  "RequestId": "7B7813C6-57BF-41XX-B12B-F172F65A6046"
}
```

Error codes

HTTP status code	Error code	Error message	Description
403	InvalidOperation.DeleteInstanceProtection	%s	The error message returned because the operation is invalid. Disable release protection for the instance first.
403	InvalidOperation.EniLinked	%s	The error message returned because the operation is not supported while the instance is bound with elastic network interfaces (ENIs).
403	IncorrectInstanceState	%s	The error message returned because the operation is not supported while the instance is in the current state.
500	InternalServerError	The request processing has failed due to some unknown error.	The error message returned because an internal error has occurred. Try again later. If the problem persists, submit a ticket.
500	InternalServerError	%s	The error message returned because an internal error has occurred.
403	InstanceLockedForSecurity	The specified operation is denied as your instance is locked for security reasons.	The error message returned because the operation is not supported while the instance is locked for security reasons.
400	DependencyViolation.SLBConfiguring	Specified operation is denied as your instance is using by another product.	The error message returned because the instance is referenced by an SLB instance that is being configured.
400	DependencyViolation.RouteEntry	Specified instance is used by route entry.	The error message returned because custom routing entries that include the IP address of the specified instance exist in the current VPC.

5.5. StartInstance

You can call this operation to start an ECS instance. After the operation is called, the instance enters the Starting state.

Description

When you call this operation, take note of the following items:

- The ECS instance to be started must be in the **Stopped** (`Stopped`) state.
- If `OperationLocks` in the `DescribeInstances` response contains `"LockReason": "security"` for an instance, the instance is locked for security reasons and cannot be started through calls to this operation. For more information, see [API behavior when an instance is locked for security reasons](#).

Debugging

OpenAPI Explorer automatically calculates the signature value. For your convenience, we recommend that you call this operation in OpenAPI Explorer. OpenAPI Explorer dynamically generates the sample code of the operation for different SDKs.

Request parameters

Parameter	Type	Required	Example	Description
Action	String	Yes	StartInstance	The operation that you want to perform. Set the value to StartInstance.
InstanceId	String	Yes	i-bp67acfxazb4p****	The ID of the instance that you want to start.
InitLocalDisk	Boolean	No	true	Specifies whether to restore the instance to its initial health status. This parameter is applicable to instances of the instance families such as d1, i1, and i2 that are equipped with local disks. If a local disk of a d1, i1, or i2 instance fails, you can use this parameter to specify whether to restore the instance to its initial health status at startup. Default value: false. Valid values: • true: restores the instance to its initial health status at startup. After the instance is restored to its initial health status, data in the original local disks of the instance is lost. • false: does not perform any operations and keeps the instance in the current state.
DryRun	Boolean	No	true	Specifies whether to check the validity of the request without actually making the request. Default value: false. Valid values: • true: The validity of the request is checked but the request is not made. Check items include whether your AccessKey pair is valid, whether RAM users are authorized, and whether the required parameters are specified. If the check fails, the corresponding error is returned. If the check succeeds, the DryRunOperation error code is returned. • false: The validity of the request is checked. If the check succeeds, a 2XX HTTP status code is returned and the request is made.

Response parameters

Parameter	Type	Example	Description
RequestId	String	473469C7-AA6F-4DC5-B3DB-A3DC0DE3C83E	The ID of the request.

Examples

Sample requests

```
https://ecs.aliyuncs.com/?Action=StartInstance
&InstanceId=i-bp67acfmxb4p****
&InitLocalDisk=true
&<Common request parameters>
```

Sample success responses

XML format

```
<StartInstanceResponse>
  <RequestId>473469C7-AA6F-4DC5-B3DB-A3DC0DE3C83E</RequestId>
</StartInstanceResponse>
```

JSON format

```
{
  "RequestId": "473469C7-AA6F-4DC5-B3DB-A3DC0DE3C83E"
}
```

Error codes

HTTP status code	Error code	Error message	Description
404	InvalidInstanceId.NotFound	The specified InstanceId does not exist.	The error message returned because the specified InstanceId parameter does not exist.
403	IncorrectInstanceState	The current status of the resource does not support this operation.	The error message returned because the operation is not supported while the resource is in the current state.
403	InstanceLockedForSecurity	The specified operation is denied as your instance is locked for security reasons.	The error message returned because the operation is not supported while the instance is locked for security reasons.
403	InsufficientBalance	Your account does not have enough balance.	The error message returned because your account balance is insufficient. Add funds to your account and try again.
500	InstanceNotReady	The specified instance is not ready for use	The error message returned because the specified instance cannot be connected for the moment. Try again later.
500	InternalServerError	The request processing has failed due to some unknown error.	The error message returned because an internal error has occurred. Try again later. If the problem persists, submit a ticket.

HTTP status code	Error code	Error message	Description
403	DiskError	IncorrectDiskStatus.	The error message returned because the status of the specified disk is invalid.
403	InstanceExpired	The postPaid instance has been expired.Please ensure your account have enough balance.	The error message returned because the pay-as-you-go instance has expired. Make sure that your account balance is sufficient.
403	InstanceExpired	The prePaid instance has been expired.	The error message returned because the subscription instance has expired.
403	InstanceNotReady	The specified instance is not ready for use.	The error message returned because the operation is not supported while the resource is in the current state. Try again later.
403	DiskInArrears	The specified operation is denied as your disk has expired.	The error message returned because the disk has expired due to overdue payments.
403	OperationDenied.NoStock	The requested resource is sold out in the specified zone; try other types of resources or other regions and zones.	The error message returned because the requested resources are insufficient in the specified zone. Try other resource types, regions, or zones.
403	OperationDenied.SpotPriceLowerThanPublicPrice	The spot instance price is lower than public price.	The error message returned because the user-defined maximum hourly price of a preemptible instance is lower than the spot price.
403	IncorrectInstanceStatus	%s	The error message returned because the operation is not supported while the instance is in the current state.
403	InvalidParameter.KMSKeyId.KMSUnauthorized	ECS service have no right to access your KMS.	The error message returned because ECS is not authorized to access your KMS resources.
500	InternalError	The request processing has failed due to some unknown error, exception or failure.	The error message returned because an internal error has occurred. Try again later. If the problem persists, submit a ticket.

5.6. RebootInstance

You can call this operation to restart an instance that is in the Running state.

Description

- Only instances that are in the **Running** (`Running`) state can be restarted.
- After this operation is called, the status of the instance changes to **Starting** (`Starting`).
- An instance can be forcibly restarted. A forced restart (`ForceStop`) is equivalent to powering off traditional servers to restart them. This operation can cause data loss if data in the instance is not written to disks.
- If `OperationLocks` in the `DescribeInstances` response contains `"LockReason": "security"` for an instance, the instance is locked for security reasons and cannot be restarted through calls to this operation. For more information, see [API behavior when an instance is locked for security reasons](#).

Debugging

OpenAPI Explorer automatically calculates the signature value. For your convenience, we recommend that you call this operation in OpenAPI Explorer. OpenAPI Explorer dynamically generates the sample code of the operation for different SDKs.

Request parameters

Parameter	Position	Type	Required	Example	Description
Action	Query	String	Yes	RebootInstance	The operation that you want to perform. Set the value to RebootInstance.
InstanceId	Query	String	Yes	i-bp67acfmxazb4ph***	The ID of the instance that you want to restart.
ForceStop	Query	Boolean	No	false	Specifies whether to forcibly stop the instance to restart it. Default value: false. Valid values: - true: forcibly stops the instance. This operation is equivalent to the typical power-off operation. Cache data that is not written to storage in the instance will be lost. - false: normally stops the instance.
DryRun	Query	Boolean	No	false	Specifies whether to check the validity of the request without actually making the request. Default value: false. Valid values: - true: The validity of the request is checked but the request is not made. Check items include the request format, service limits, available ECS resources, and whether the required parameters are specified. If the check fails, the corresponding error code is returned. If the check succeeds, the <code>DryRunOperation</code> error code is returned. - false: The validity of the request is checked, and the request is made if the check succeeds.

Response parameters

Parameter	Type	Example	Description
RequestId	String	473469C7-AA6F-4DC5-B3DB-A3DC0DE3C83E	The ID of the request.

Examples

Sample requests

```
https://ecs.aliyuncs.com/?Action=RebootInstance
&InstanceId=i-bp67acfmxazb4ph****
&ForceStop=false
&<Common request parameters>
```

Sample success responses

XML format

```
<RebootInstanceResponse>
  <RequestId>F2E2C40D-AB09-45A1-B5C5-EB9F5C4E4EA</RequestId>
</RebootInstanceResponse>
```

JSON format

```
{
  "RequestId": "F2E2C40D-AB09-45A1-B5C5-EB9F5C4E4EA"
}
```

Error codes

HTTP status code	Error code	Error message	Description
404	InvalidInstanceId.NotFound	The specified InstanceId does not exist.	The error message returned because the specified InstanceId parameter does not exist.
403	IncorrectInstanceState	The current status of the resource does not support this operation.	The error message returned because the operation is not supported while the resource is in the current state.
403	InstanceLockedForSecurity	The specified operation is denied as your instance is locked for security reasons.	The error message returned because the operation is not supported while the instance is locked for security reasons.
403	DiskError	IncorrectDiskStatus.	The error message returned because the status of the specified disk is invalid.
500	InternalServerError	The request processing has failed due to some unknown error.	The error message returned because an internal error has occurred. Try again later. If the problem persists, submit a ticket.
403	InstanceExpiredOrInArrears	The specified operation is denied as your prepaid instance is expired (prepay mode) or in arrears (afterpay mode).	The error message returned because the subscription instance has expired. Renew the instance first.
403	IncorrectInstanceState	%s	The error message returned because the operation is not supported while the instance is in the current state.
403	InvalidParameter.KMSKeyId.KMSUnauthorized	ECS service have no right to access your KMS.	The error message returned because ECS is not authorized to access your KMS resources.
500	InternalServerError	The request processing has failed due to some unknown error, exception or failure.	The error message returned because an internal error has occurred. Try again later. If the problem persists, submit a ticket.

5.7. StopInstance

You can call this operation to stop an ECS instance that is in the Running state. After the operation is called, the status of the instance changes to Stopping and then to Stopped.

Description

- If `OperationLocks` in the `DescribeInstances` response contains `"LockReason": "security"` for an instance, the instance is locked for security reasons and cannot be stopped through calls to this operation. For more information, see [API behavior when an instance is locked for security reasons](#).
- To stop an instance of an instance family that is equipped with local SSDs, take note of the following items:
 - `ConfirmStop` is a required parameter when you call this operation to stop an `i1` instance that is attached with `local disks`. Set `ConfirmStop` to `true`. Otherwise, the call will fail.
 - After the instance is stopped, data in its local disks is cleared. We recommend that you implement data redundancy at the application layer to ensure data availability.
 - ECS automatically ignores the `ConfirmStop` parameter in the requests to stop instances of other instance families.
- If the No Fees for Stopped Instances (VPC-Connected) feature is enabled, you can set `StoppedMode` to `KeepCharging`. Then the instance will continue to be billed after it is stopped. The instance type resources and public IP address are reserved for the instance.

Debugging

OpenAPI Explorer automatically calculates the signature value. For your convenience, we recommend that you call this operation in OpenAPI Explorer. OpenAPI Explorer dynamically generates the sample code of the operation for different SDKs.

Request parameters

Parameter	Position	Type	Required	Example	Description
Action	Query	String	Yes	StopInstance	The operation that you want to perform. Set the value to <code>StopInstance</code> .
InstanceId	Query	String	Yes	i-bp67acfmxb4ph***	The ID of the instance that you want to stop.
StoppedMode	Query	String	No	KeepCharging	Specifies whether billing for the instance continues after the instance is stopped. Valid values: • <code>StopCharging</code>: Billing stops after the instance is stopped. For information about how <code>StopCharging</code> takes effect, see the "Prerequisites" section in No fees for stopped VPC instances. • <code>KeepCharging</code>: Billing continues after the instance is stopped. Default value: If the prerequisites required for enabling the No Fees for Stopped Instances (VPC-Connected) feature are met and you have enabled this feature in the ECS console, the default value is <code>StopCharging</code>. For more information about how to enable the No Fees for Stopped Instances (VPC-Connected) feature, see No Fees for Stopped Instances (VPC-Connected). Otherwise, the default value is <code>KeepCharging</code>.
ConfirmStop	Query	Boolean	No	true	Specifies whether to confirm the stop operation. This parameter is required and takes effect only for instances of the <code>i1</code> instance family. Default value: false

Parameter	Position	Type	Required	Example	Description
ForceStop	Query	Boolean	No	false	Specifies whether to forcibly stop the instance. Default value: false. Valid values: - true: forcibly stops the instance. - false: normally stops the instance.
DryRun	Query	Boolean	No	true	Specifies whether to check the validity of the request without actually making the request. Default value: false. Valid values: - true: The validity of the request is checked but the request is not made. Check items include the request format, service limits, available ECS resources, and whether the required parameters are specified. If the check fails, the corresponding error code is returned. If the check succeeds, the <code>DryRunOperation</code> error code is returned. - false: The validity of the request is checked, and the request is made if the check succeeds.

Response parameters

Parameter	Type	Example	Description
RequestId	String	1C488B66-B819-4D14-8711-C4EAAA13AC01	The ID of the request.

Examples

Sample requests

```
https://ecs.aliyuncs.com/?Action=StopInstance
&InstanceId=i-bp67acfmazb4ph****
&ConfirmStop=true
&ForceStop=false
&StoppedMode=KeepCharging
&<Common request parameters>
```

Sample success responses

XML format

```
<StopInstanceResponse>
  <RequestId>1C488B66-B819-4D14-8711-C4EAAA13AC01</RequestId>
</StopInstanceResponse>
```

JSON format

```
{
  "RequestId": "1C488B66-B819-4D14-8711-C4EAAA13AC01"
}
```

Error codes

HTTP status code	Error code	Error message	Description
404	InvalidInstanceId.NotFound	The specified InstanceId does not exist.	The error message returned because the specified InstanceId parameter does not exist.
403	IncorrectInstanceState	The current status of the resource does not support this operation.	The error message returned because the operation is not supported while the resource is in the current state.
403	InstanceLockedForSecurity	The specified operation is denied as your instance is locked for security reasons.	The error message returned because the operation is not supported while the instance is locked for security reasons.
403	DiskError	IncorrectDiskStatus	The error message returned because the status of the specified disk is invalid.
500	InternalError	The request processing has failed due to some unknown error.	The error message returned because an internal error has occurred. Try again later. If the problem persists, submit a ticket.
403	InstanceType.ParameterMismatch	The input parameter ConfirmStop must be true when an instance have localstorage.	The error message returned because the ConfirmStop parameter is set to false for an instance that uses local storage.
403	InstanceExpiredOrInArrears	The specified operation is denied as your prepay instance is expired (prepay mode) or in arrears (afterpay mode).	The error message returned because the subscription instance has expired. Renew the instance first.
403	InvalidInstanceId.NotSupport	Classic network Instance does not support this operation.	The error message returned because the operation is not supported by instances in the classic network.
403	InvalidInstanceId.NotSupport	Pre pay instance does not support this operation.	The error message returned because the operation is not supported by subscription instances.
403	InvalidInstanceId.NotSupport	Local disk instance does not support this operation.	The error message returned because the operation is not supported by instances that use local disks.
403	InvalidInstanceId.NotSupport	Spot instance does not support this operation.	The error message returned because the operation is not supported by preemptible instances.
403	IncorrectInstanceState	%s	The error message returned because the operation is not supported while the instance is in the current state.
403	InvalidParameter.KMSKeyId.KMSUnauthorized	ECS service have no right to access your KMS.	The error message returned because ECS is not authorized to access your KMS resources.
500	InternalError	The request processing has failed due to some unknown error, exception or failure.	The error message returned because an internal error has occurred. Try again later. If the problem persists, submit a ticket.

5.8. StartInstances

You can call this operation to start one or more ECS instances that are in the Stopped state. After the operation is called, the instances enter the Starting state.

Description

When you call this operation, take note of the following items:

- The ECS instances to be started must be in the **Stopped** (`Stopped`) state.
- If the response contains `{"OperationLocks": {"LockReason": "security"}}` when you query information of an instance, the instance is locked for security reasons and all operations are prohibited on the instance.
- Batch operations are supported. You can use the `BatchOptimization` parameter to specify the batch operation mode.

Debugging

OpenAPI Explorer automatically calculates the signature value. For your convenience, we recommend that you call this operation in OpenAPI Explorer. OpenAPI Explorer dynamically generates the sample code of the operation for different SDKs.

Request parameters

Parameter	Position	Type	Required	Example	Description
Action	Query	String	Yes	StartInstances	The operation that you want to perform. Set the value to <code>StartInstances</code> .
InstanceId.N	Query	RepeatList	Yes	i-bp67acfmxyzb4p**	The ID of instance N that you want to start. Valid values of N: 1 to 100.
RegionId	Query	String	Yes	cn-hangzhou	The region ID of the instance. You can call the DescribeRegions operation to query the most recent region list.
DryRun	Query	Boolean	No	false	Specifies whether to check the validity of the request without actually making the request. Valid values: • true: The validity of the request is checked but the request is not made. Check items include the request format, instance status, and whether the required parameters are specified. If the check fails, the corresponding error is returned. If the check succeeds, <code>DRYRUN.SUCCESS</code> is returned.  Note If you set <code>BatchOptimization</code> to <code>SuccessFirst</code> and <code>DryRun</code> to <code>true</code>, only <code>DRYRUN.SUCCESS</code> is returned regardless of whether the check succeeds. • false: The validity of the request is checked, and the request is made if the check succeeds. Default value: <code>false</code>.

Parameter	Position	Type	Required	Example	Description
BatchOptimization	Query	String	No	AllTogether	The batch operation mode. Valid values: • AllTogether: In this mode, if all instances are started, a success message is returned. If an instance fails the verification, all instances fail to start and an error message is returned. • SuccessFirst: In this mode, each instance is started separately. The response contains the operation results for each instance. Default value: AllTogether.

Response parameters

Parameter	Type	Example	Description
InstanceResponses	Array of InstanceResponse		Details about the instance responses, which contain the status of each instance before and after the operation is called and the result of the operation.
InstanceResponse			
Code	String	200	The error code of the operation result. The return value 200 indicates success. For more information, see the "Error codes" section in this topic.
CurrentStatus	String	Starting	The current status of the instance.
InstanceId	String	i-bp67acfmxazb4p****	The ID of the instance.
Message	String	success	The error message for an instance operation. The return value Success indicates operation success. For more information, see the "Error codes" section in this topic.
PreviousStatus	String	Stopped	The status of the instance before the operation is called.
RequestId	String	473469C7-AA6F-4DC5-B3DB-A3DC0DE3C83E	The ID of the request.

Examples

Sample requests

```
https://ecs.aliyuncs.com/?Action=StartInstances
&InstanceId.1=i-bp67acfmxazb4p****
&InstanceId.2=i-bp67acfmxazb4p****
&RegionId=cn-hangzhou
$BatchOptimization=SuccessFirst
&<Common request parameters>
```

Sample success responses

XML format

```
<StartInstancesResponse>
  <RequestId>FF53E96D-3F1A-42F0-8373-1C2B39D72D44</RequestId>
  <InstanceResponses>
    <InstanceResponse>
      <Message>success</Message>
      <InstanceId>i-bp67acfmazb4p****</InstanceId>
      <PreviousStatus>Stopped</PreviousStatus>
      <CurrentStatus>Starting</CurrentStatus>
      <Code>200</Code>
    </InstanceResponse>
    <InstanceResponse>
      <Message>success</Message>
      <InstanceId>i-bp67acfmazb4p****</InstanceId>
      <PreviousStatus>Stopped</PreviousStatus>
      <CurrentStatus>Starting</CurrentStatus>
      <Code>200</Code>
    </InstanceResponse>
    <InstanceResponse>
      <Message>The specified InstanceId does not exist. </Message>
      <InstanceId>i-TestID</InstanceId>
      <PreviousStatus></PreviousStatus>
      <CurrentStatus></CurrentStatus>
      <Code>InvalidInstanceId.NotFound</Code>
    </InstanceResponse>
  </InstanceResponses>
</StartInstancesResponse>
```

JSON format


```
{
  "RequestId": "FF53E96D-3F1A-42F0-8373-1C2B39D72D44",
  "InstanceResponses": {
    "InstanceResponse": [
      {
        "Message": "success",
        "InstanceId": "i-bp67acfmxazb4p****",
        "PreviousStatus": "Stopped",
        "CurrentStatus": "Starting",
        "Code": "200"
      },
      {
        "Message": "success",
        "InstanceId": "i-bp67acfmxazb4p****",
        "PreviousStatus": "Stopped",
        "CurrentStatus": "Starting",
        "Code": "200"
      },
      {
        "Message": "The specified InstanceId does not exist.",
        "InstanceId": "i-TestID",
        "PreviousStatus": "",
        "CurrentStatus": "",
        "Code": "InvalidInstanceId.NotFound"
      }
    ]
  }
}
```

Error codes

HTTP status code	Error code	Error message	Description
404	InvalidInstanceId.NotFound	%s	The error message returned because the specified instance ID does not exist.
403	IncorrectInstanceStatus	%s	The error message returned because the operation is not supported while the instance is in the current state.
403	OperationDenied.NoStock	The requested resource is sold out in the specified zone; try other types of resources or other regions and zones.	The error message returned because the requested resources are insufficient in the specified zone. Try other resource types, regions, or zones.
403	OperationDenied.SpotPriceLowerThanPublicPrice	The spot instance price is lower than public price.	The error message returned because the user-defined maximum hourly price of a preemptible instance is lower than the spot price.

HTTP status code	Error code	Error message	Description
500	InternalServerError	The request processing has failed due to some unknown error.	The error message returned because an internal error has occurred. Try again later. If the problem persists, submit a ticket.
404	InvalidInstanceid.NotFound	The specified Instanceid does not exist.	The error message returned because the specified instance ID does not exist.
403	InsufficientBalance	Your account does not have enough balance.	The error message returned because your account balance is insufficient. Add funds to your account and try again.
403	InstanceNotReady	The specified instance is not ready for use.	The error message returned because the operation is not supported while the resource is in the current state. Try again later.

5.9. RebootInstances

You can call this operation to restart one or more ECS instances that are in the Running state. After this operation is called, the ECS instances enter the Stopping state and then the Running state.

Description

- The ECS instances to be restarted must be in the **Running** (`Running`) state.
- Batch operations are supported. You can use the `BatchOptimization` parameter to specify the batch operation mode.
- Instances can be forcibly restarted. A forced restart (`ForceStop`) is equivalent to powering off traditional servers to restart them. This operation can cause data loss if data in the instance is not written to Elastic Block Storage devices.
- If the response contains `{"OperationLocks": {"LockReason": "security"}}` when you query information of an instance, the instance is locked for security reasons and all operations are prohibited on the instance.

Debugging

OpenAPI Explorer automatically calculates the signature value. For your convenience, we recommend that you call this operation in OpenAPI Explorer. OpenAPI Explorer dynamically generates the sample code of the operation for different SDKs.

Request parameters

Parameter	Type	Required	Example	Description
Action	String	Yes	RebootInstances	The operation that you want to perform. Set the value to RebootInstances.
Instanceid.N	RepeatList	Yes	i-bp67acfmxazb4p****	The ID of instance N that you want to restart. Valid values of N: 1 to 100.
RegionId	String	Yes	cn-hangzhou	The region ID of the instance. You can call the DescribeRegions operation to query the most recent region list.

Parameter	Type	Required	Example	Description
DryRun	Boolean	No	false	Specifies whether to check the validity of the request without actually making the request. Valid values: • true: The validity of the request is checked but the request is not made. Check items include the request format, instance status, and whether the required parameters are specified. If the check fails, the corresponding error message is returned. If the check succeeds, <code>DRYRUN.SUCCESS</code> is returned.  Note If you set <code>BatchOptimization</code> to <code>SuccessFirst</code> and <code>DryRun</code> to true, only <code>DRYRUN.SUCCESS</code> is returned regardless of whether the check succeeds. • false: The validity of the request is checked, and the request is made if the check succeeds. Default value: false.
ForceReboot	Boolean	No	false	Specifies whether to forcibly restart the instance. Valid values: • true: forcibly restarts the instance. This operation is equivalent to the typical power-off operation. Cache data that is not written to storage in the instance will be lost. • false: normally restarts the instance. Default value: false.
BatchOptimization	String	No	AllTogether	The batch operation mode. Valid values: • AllTogether: In this mode, if all instances are restarted, a success message is returned. If an instance fails the verification, all instances fail to restart and an error message is returned. • SuccessFirst: In this mode, each instance is restarted separately. The response contains the operation results for each instance. Default value: AllTogether.

Response parameters

Parameter	Type	Example	Description
InstanceResponses	Array of InstanceResponse		Details about the instance responses, which contain the status of each instance before and after the operation is called and the result of the operation.
InstanceResponse			

Parameter	Type	Example	Description
Code	String	200	The error code of the operation result. The return value 200 indicates success. For more information, see the "Error codes" section in this topic.
CurrentStatus	String	Stopping	The current status of the instance.
InstanceId	String	i-bp1g6zv0ce8oghu7****	The ID of the instance.
Message	String	success	The error message for an instance operation. The return value Success indicates operation success. For more information, see the "Error codes" section in this topic.
PreviousStatus	String	Running	The status of the instance before the operation is called.
RequestId	String	473469C7-AA6F-4DC5-B3DB-A3DC0DE3C83E	The ID of the request.

Examples

Sample requests

```
https://ecs.aliyuncs.com/?Action=RebootInstances
&InstanceId.1=i-bp1g6zv0ce8oghu7****
&InstanceId.2=i-bp1g6zv0ce8oghu7****
&InstanceId.3=i-TestID
&RegionId=cn-hangzhou
&ForceReboot=false
$BatchOptimization=SuccessFirst
&<Common request parameters>
```

Sample success responses

XML format

```
<RebootInstancesResponse>
  <RequestId>FF53E96D-3F1A-42F0-8373-1C2B39D72D44</RequestId>
  <InstanceResponses>
    <InstanceResponse>
      <Message>success</Message>
      <InstanceId>i-bp1g6zv0ce8oghu7****</InstanceId>
      <PreviousStatus>Running</PreviousStatus>
      <CurrentStatus>Stopping</CurrentStatus>
      <Code>200</Code>
    </InstanceResponse>
    <InstanceResponse>
      <Message>success</Message>
      <InstanceId>i-bp1g6zv0ce8oghu7****</InstanceId>
      <PreviousStatus>Running</PreviousStatus>
      <CurrentStatus>Stopping</CurrentStatus>
      <Code>200</Code>
    </InstanceResponse>
    <InstanceResponse>
      <Message>The specified InstanceId does not exist. </Message>
      <InstanceId>i-TestID</InstanceId>
      <PreviousStatus></PreviousStatus>
      <CurrentStatus></CurrentStatus>
      <Code>InvalidInstanceId.NotFound</Code>
    </InstanceResponse>
  </InstanceResponses>
</RebootInstancesResponse>
```

JSON format

```
{
  "RequestId": "FF53E96D-3F1A-42F0-8373-1C2B39D72D44",
  "InstanceResponses": {
    "InstanceResponse": [
      {
        "Message": "success",
        "InstanceId": "i-bp1g6zv0ce8oghu7****",
        "PreviousStatus": "Running",
        "CurrentStatus": "Stopping",
        "Code": "200"
      },
      {
        "Message": "success",
        "InstanceId": "i-bp1g6zv0ce8oghu7****",
        "PreviousStatus": "Running",
        "CurrentStatus": "Stopping",
        "Code": "200"
      },
      {
        "Message": "The specified InstanceId does not exist.",
        "InstanceId": "i-TestID",
        "PreviousStatus": "",
        "CurrentStatus": "",
        "Code": "InvalidInstanceId.NotFound"
      }
    ]
  }
}
```

Error codes

HTTP status code	Error code	Error message	Description
404	InvalidInstanceId.NotFound	%s	The error message returned because the specified instance ID does not exist.
403	IncorrectInstanceState	%s	The error message returned because the operation is not supported while the instance is in the current state.
500	InternalError	The request processing has failed due to some unknown error.	The error message returned because an internal error has occurred. Try again later. If the problem persists, submit a ticket.
404	InvalidInstanceId.NotFound	The specified InstanceId does not exist.	The error message returned because the specified instance ID does not exist.
403	InsufficientBalance	Your account does not have enough balance.	The error message returned because your account balance is insufficient. Add funds to your account and try again.

HTTP status code	Error code	Error message	Description
403	InstanceNotReady	The specified instance is not ready for use.	The error message returned because the operation is not supported while the resource is in the current state. Try again later.

5.10. StopInstances

You can call this operation to stop one or more ECS instances that are in the Running state. After the operation is called, the ECS instances enter the Stopping state and then the Stopped state.

Description

- If the response contains `{"OperationLocks": {"LockReason": "security"}}` when you query information of an instance, the instance is locked for security reasons and all operations are prohibited on the instance.
- If you enable the No Fees for Stopped Instances (VPC-Connected) feature for pay-as-you-go instances, you can set `StoppedMode` to `KeepCharging`. Then, the specified pay-as-you-go instance will continue to be billed after it is stopped. The instance type resources and public IP address are reserved for the instance.
- Batch operations are supported. You can use the `BatchOptimization` parameter to specify the batch operation mode.

Debugging

OpenAPI Explorer automatically calculates the signature value. For your convenience, we recommend that you call this operation in OpenAPI Explorer. OpenAPI Explorer dynamically generates the sample code of the operation for different SDKs.

Request parameters

Parameter	Type	Required	Example	Description
Action	String	Yes	StopInstances	The operation that you want to perform. Set the value to StopInstances.
InstanceId.N	RepeatList	Yes	i-bp67acfmxazb4p****	The ID of instance N that you want to stop. Valid values of N: 1 to 100.
RegionId	String	Yes	cn-hangzhou	The region ID of the instance. You can call the DescribeRegions operation to query the most recent region list.

Parameter	Type	Required	Example	Description
DryRun	Boolean	No	false	Specifies whether to check the validity of the request without actually making the request. Valid values: • true: The validity of the request is checked but the request is not made. Check items include the request format, instance status, and whether the required parameters are specified. If the check fails, the corresponding error message is returned. If the check succeeds, <code>DRYRUN.SUCCESS</code> is returned.  Note If you set <code>BatchOptimization</code> to <code>SuccessFirst</code> and <code>DryRun</code> to <code>true</code>, only <code>DRYRUN.SUCCESS</code> is returned regardless of whether the check succeeds. • false: The validity of the request is checked, and the request is made if the check succeeds. Default value: false.
ForceStop	Boolean	No	false	Specifies whether to forcibly stop the instance. Valid values: • true: forcibly stops the instance. This operation is equivalent to the typical power-off operation. Cache data that is not written to storage in the instance will be lost. • false: normally stops the instance. Default value: false.

Parameter	Type	Required	Example	Description
StoppedMode	String	No	KeepCharging	Specifies whether billing for the instance continues after the instance is stopped. Valid values: - StopCharging: Billing stops after the instance is stopped. For information about how StopCharging takes effect, see the "Prerequisites" section in No fees for stopped VPC instances. - KeepCharging: Billing continues after the instance is stopped. Default value: If the prerequisites required for enabling the No Fees for Stopped Instances (VPC-Connected) feature are met and you have enabled this feature in the ECS console, the default value is StopCharging. For more information about how to enable the No Fees for Stopped Instances (VPC-Connected) feature, see No Fees for Stopped Instances (VPC-Connected). Otherwise, the default value is KeepCharging.
BatchOptimization	String	No	AllTogether	The batch operation mode. Valid values: - AllTogether: In this mode, if all instances are stopped, a success message is returned. If an instance fails the verification, all instances fail to stop and an error message is returned. - SuccessFirst: In this mode, each instance is stopped separately. The response contains the operation results for each instance. Default value: AllTogether.

Response parameters

Parameter	Type	Example	Description
InstanceResponses	Array of InstanceResponse		Details about the instance responses, which contain the status of each instance before and after the operation is called and the result of the operation.
InstanceResponse			
Code	String	200	The error code of the operation result. The return value 200 indicates success. For more information, see the "Error codes" section in this topic.
CurrentStatus	String	Stopping	The current status of the instance.
InstanceId	String	i-bp67acfmazb4p****	The ID of the instance.

Parameter	Type	Example	Description
Message	String	success	The error message for an instance operation. The return value Success indicates operation success. For more information, see the "Error codes" section in this topic.
PreviousStatus	String	Running	The status of the instance before the operation is called.
RequestId	String	1C488B66-B819-4D14-8711-C4EAAA13AC01	The ID of the request.

Examples

Sample requests

```
https://ecs.aliyuncs.com/?Action=StopInstances
&InstanceId.1=i-bp67acfmxb4p****
&InstanceId.2=i-bp67acfmxb4p****
&RegionId=cn-hangzhou
&ForceStop=false
&StoppedMode=KeepCharging
$BatchOptimization=SuccessFirst
&<Common request parameters>
```

Sample success responses

XML format

```
<StopInstancesResponse>
  <RequestId>FF53E96D-3F1A-42F0-8373-1C2B39D72D44</RequestId>
  <InstanceResponses>
    <InstanceResponse>
      <Message>success</Message>
      <InstanceId>i-bp67acfmxazb4p****</InstanceId>
      <PreviousStatus>Running</PreviousStatus>
      <CurrentStatus>Stopping</CurrentStatus>
      <Code>200</Code>
    </InstanceResponse>
    <InstanceResponse>
      <Message>success</Message>
      <InstanceId>i-bp67acfmxazb4p****</InstanceId>
      <PreviousStatus>Running</PreviousStatus>
      <CurrentStatus>Stopping</CurrentStatus>
      <Code>200</Code>
    </InstanceResponse>
    <InstanceResponse>
      <Message>The specified InstanceId does not exist. </Message>
      <InstanceId>i-TestID</InstanceId>
      <PreviousStatus></PreviousStatus>
      <CurrentStatus></CurrentStatus>
      <Code>InvalidInstanceId.NotFound</Code>
    </InstanceResponse>
  </InstanceResponses>
</StopInstancesResponse>
```

JSON format

```
{
  "RequestId": "FF53E96D-3F1A-42F0-8373-1C2B39D72D44",
  "InstanceResponses": {
    "InstanceResponse": [
      {
        "Message": "success",
        "InstanceId": "i-bp67acfmxb4p****",
        "PreviousStatus": "Running",
        "CurrentStatus": "Stopping",
        "Code": "200"
      },
      {
        "Message": "success",
        "InstanceId": "i-bp67acfmxb4p****",
        "PreviousStatus": "Running",
        "CurrentStatus": "Stopping",
        "Code": "200"
      },
      {
        "Message": "The specified InstanceId does not exist.",
        "InstanceId": "i-TestID",
        "PreviousStatus": "",
        "CurrentStatus": "",
        "Code": "InvalidInstanceId.NotFound"
      }
    ]
  }
}
```

Error codes

HTTP status code	Error code	Error message	Description
404	InvalidInstanceId.NotFound	%s	The error message returned because the specified instance ID does not exist.
403	IncorrectInstanceState	%s	The error message returned because the operation is not supported while the instance is in the current state.
500	InternalServerError	The request processing has failed due to some unknown error.	The error message returned because an internal error has occurred. Try again later. If the problem persists, submit a ticket.
404	InvalidInstanceId.NotFound	The specified InstanceId does not exist.	The error message returned because the specified instance ID does not exist.
403	InsufficientBalance	Your account does not have enough balance.	The error message returned because your account balance is insufficient. Add funds to your account and try again.

HTTP status code	Error code	Error message	Description
403	InstanceNotReady	The specified instance is not ready for use.	The error message returned because the operation is not supported while the resource is in the current state. Try again later.

5.11. DeleteInstance

You can call this operation to release a pay-as-you-go instance or an expired subscription instance.

Description

- After an instance is released, all the physical resources used by the instance are recycled. Relevant data is erased and cannot be recovered.
- Disks attached to the instance:
 - The disks for which `DeleteWithInstance` is set to false are retained as pay-as-you-go disks.
 - The disks for which `DeleteWithInstance` is set to true are released along with the instance.
 - For disks for which `DeleteAutoSnapshot` is set to false, the automatic snapshots are retained.
 - For disks for which `DeleteAutoSnapshot` is set to true, the automatic snapshots are released.
 - Manual snapshots are retained.
 - If `OperationLocks` in the `DescribeInstances` response contains `"LockReason": "security"` for an instance, the instance is locked for security reasons. Even if `DeleteWithInstance` is set to false for the data disks that are attached to the instance, this parameter is ignored and the data disks are released along with the instance. For more information, see [API behavior when an instance is locked for security reasons](#).

Debugging

OpenAPI Explorer automatically calculates the signature value. For your convenience, we recommend that you call this operation in OpenAPI Explorer. OpenAPI Explorer dynamically generates the sample code of the operation for different SDKs.

Request parameters

Parameter	Position	Type	Required	Example	Description
Action	Query	String	Yes	DeleteInstance	The operation that you want to perform. Set the value to DeleteInstance.
InstanceId	Query	String	Yes	i-bp1g6zv0ce8oghu7****	The ID of the instance that you want to release.
Force	Query	Boolean	No	false	Specifies whether to forcibly release the instance in the Running (<code>Running</code>) state. Default value: false. Valid values: - true: forcibly releases the instance in the Running (<code>Running</code>) state. This operation is equivalent to the power-off operation. Temporary data in the memory and storage of the instance is erased and cannot be recovered. - false: normally releases the instance. This value is valid only for an instance in the Stopped (<code>Stopped</code>) state.

Parameter	Position	Type	Required	Example	Description
TerminateSubscription	Query	Boolean	No	false	Specifies whether to release an expired subscription instance. Default value: false.

Response parameters

Parameter	Type	Example	Description
RequestId	String	473469C7-AA6F-4DC5-B3DB-A3DC0DE3C83E	The ID of the request.

Examples

Sample requests

```
https://ecs.aliyuncs.com/?Action=DeleteInstance
&InstanceId=i-bp1g6zv0ce8oghu7****
&Force=false
&TerminateSubscription=false
&<Common request parameters>
```

Sample success responses

XML format

```
<DeleteInstanceResponse>
  <RequestId>928E2273-5715-46B9-A730-238DC996A533</RequestId>
</DeleteInstanceResponse>
```

JSON format

```
{
  "RequestId": "928E2273-5715-46B9-A730-238DC996A533"
}
```

Error codes

HTTP status code	Error code	Error message	Description
403	IncorrectInstanceStatus	The current status of the resource does not support this operation.	The error message returned because the operation is not supported while the resource is in the current state.
403	InstanceLockedForSecurity	The specified operation is denied as your instance is locked for security reasons.	The error message returned because the operation is not supported while the instance is locked for security reasons.
403	ChargeTypeViolation	The operation is not permitted due to charge type of the instance.	The error message returned because the operation is not supported while the instance uses the current billing method.

HTTP status code	Error code	Error message	Description
500	InternalServerError	The request processing has failed due to some unknown error.	The error message returned because an internal error has occurred. Try again later. If the problem persists, submit a ticket.
400	DependencyViolation.SLBConfiguring	Specified operation is denied as your instance is using by another product.	The error message returned because the instance is referenced by an SLB instance that is being configured.
400	DependencyViolation.RouteEntry	Specified instance is used by route entry.	The error message returned because custom routing entries that include the IP address of the specified instance exist in the current VPC.
400	InvalidParameter	The input parameter InstanceId is invalid.	The error message returned because the specified InstanceId parameter is invalid.
404	InvalidInstanceId.NotFound	The specified InstanceId does not exist.	The error message returned because the specified InstanceId parameter does not exist.
403	IncorrectInstanceState.Initializing	The specified instance status does not support this operation.	The error message returned because the instance is being initialized and cannot be released. Try again later.
403	IncorrectInstanceState	The specified instance is still attached by volumes.	The error message returned because the specified instance still has data volumes.
403	InvalidOperation.DeleteProtection	%s	The error message returned because the operation is invalid. Disable release protection for the instance first.
403	InvalidOperation.EniLinked	%s	The error message returned because the operation is not supported while the instance is bound with elastic network interfaces (ENIs).

5.12. AttachInstanceRamRole

You can call this operation to attach an instance RAM role to one or more ECS instances. If an instance already has an instance RAM role, an error will be returned when you attach another instance RAM role to the instance.

Debugging

OpenAPI Explorer automatically calculates the signature value. For your convenience, we recommend that you call this operation in OpenAPI Explorer. OpenAPI Explorer dynamically generates the sample code of the operation for different SDKs.

Request parameters

Parameter	Type	Required	Example	Description
Action	String	Yes	AttachInstanceRamRole	The operation that you want to perform. Set the value to AttachInstanceRamRole.

Parameter	Type	Required	Example	Description
InstanceIds	String	Yes	["i-bp14ss25xca5ex1u***", "i-bp154z5o1qjalfse****", "i-bp10ws62o04ubhvi***"]	The IDs of instances to which you want to attach an instance RAM role. It can be a JSON array that consists of up to 100 instance IDs. Separate multiple instance IDs with commas (,).
RamRoleName	String	Yes	testRamRoleName	The name of the instance RAM role to be attached. You can call the ListRoles operation provided by RAM to query the instance RAM roles that you have created.
RegionId	String	Yes	cn-hangzhou	The ID of the region. You can call the DescribeRegions operation to query the most recent region list.

Response parameters

Parameter	Type	Example	Description
AttachInstanceRamRoleResults	Array of AttachInstanceRamRoleResult		Details about the results of attaching the instance RAM role.
AttachInstanceRamRoleResult			
Code	String	200	Indicates whether the instance RAM role was attached. If 200 is returned, the instance RAM role was attached. If any other value is returned, the instance RAM role failed to be attached. For more information, see Error codes.
InstanceId	String	i-bp10ws62o04ubhvi****	The ID of the instance.
Message	String	success	Indicates whether the instance RAM role was attached. If success is returned, the instance RAM role was attached. If any other value is returned, the instance RAM role failed to be attached. For more information, see Error codes.
Success	Boolean	true	Indicates whether the instance RAM role was attached.
FailCount	Integer	0	The number of instances to which the instance RAM roles failed to be attached.
RamRoleName	String	testRamRoleName	The name of the instance RAM role.
RequestId	String	D9553E4C-6C3A-4D66-AE79-9835AF705639	The ID of the request.

Parameter	Type	Example	Description
TotalCount	Integer	1	The total number of instances to which you attempted to attach the instance RAM role.

Examples

Sample requests

```
https://ecs.aliyuncs.com/?Action=AttachInstanceRamRole
&InstanceId=["i-bp10ws62o04ubhvi****"]
&RamRoleName=testRamRoleName
&RegionId=cn-hangzhou
&<Common request parameters>
```

Sample success responses

XML format

```
<AttachInstanceRamRoleResponse>
  <RequestId>E6352369-5C2B-41CD-AB50-471550C8F674</RequestId>
  <AttachInstanceRamRoleResults>
    <AttachInstanceRamRoleResult>
      <InstanceId>i-bp10ws62o04ubhvi****</InstanceId>
      <Code>200</Code>
      <Message>success</Message>
    </AttachInstanceRamRoleResult>
  </AttachInstanceRamRoleResults>
  <TotalCount>1</TotalCount>
  <FailCount>0</FailCount>
  <RamRoleName>testRamRoleName</RamRoleName>
</AttachInstanceRamRoleResponse>
```

JSON format

```
{
  "RequestId": "D9553E4C-6C3A-4D66-AE79-9835AF705639",
  "AttachInstanceRamRoleResults": {
    "AttachInstanceRamRoleResult": [
      {
        "Message": "success",
        "InstanceId": "i-bp10ws62o04ubhvi****",
        "Code": "200"
      }
    ]
  },
  "TotalCount": 1,
  "FailCount": 0,
  "RamRoleName": "testRamRoleName"
}
```

Error codes

HTTP status code	Error code	Error message	Description
400	InvalidInstanceIds.Malformed	The specified instanceids are not valid.	The error message returned because the specified InstanceIds parameter is invalid.
404	InvalidInstanceid.NotFound	The specified instanceid does not exist	The error message returned because the specified InstanceIds parameter does not exist.
403	InvalidNetworkType.MismatchRamRole	Ram role cannot be applied to instances of Classic network type.	The error message returned because instance RAM roles can be used only for instances in VPCs, not for instances in the classic network.
403	InvalidUser.PassRoleForbidden	The RAM user does not have the privilege to pass a RAM role.	The error message returned because the RAM user is not authorized to pass the RAM role.
404	InvalidRamRole.NotFound	The specified RAMRoleName does not exist.	The error message returned because the specified RamRoleName parameter does not exist.
404	InvalidRamRole.NotEcsRole	The specified ram role is not authorized for ecs, please check your role policy.	The error message returned because the specified RAM role is not authorized to use ECS. Check your role policy.

5.13. DetachInstanceRamRole

You can call this operation to detach an instance RAM role from one or more ECS instances.

Debugging

OpenAPI Explorer automatically calculates the signature value. For your convenience, we recommend that you call this operation in OpenAPI Explorer. OpenAPI Explorer dynamically generates the sample code of the operation for different SDKs.

Request parameters

Parameter	Type	Required	Example	Description
Action	String	Yes	DetachInstanceRamRole	The operation that you want to perform. Set the value to DetachInstanceRamRole.
InstanceIds	String	Yes	["i-bp67acfmxazb4p****", "i-bp67acfmxazb5p****", "i-bp67acfmxazb6p****" ...]	The IDs of instances from which you want to detach an instance RAM role. It can be a JSON array that consists of up to 100 instance IDs. Separate multiple instance IDs with commas (,).
RegionId	String	Yes	cn-hangzhou	The region ID of the instances. You can call the DescribeRegions operation to query the most recent region list.

Parameter	Type	Required	Example	Description
RamRoleName	String	No	RamRoleTest	The name of the instance RAM role to be detached. You can call the ListRoles operation provided by RAM to query the instance RAM roles that you have created.

Response parameters

Parameter	Type	Example	Description
DetachInstanceRamRoleResults	Array of DetachInstanceRamRoleResult		Details about the results of detaching the instance RAM role from the instances.
DetachInstanceRamRoleResult			
Code	String	200	The code that indicates whether the instance RAM role was detached. If 200 is returned, the instance RAM role was detached. If any other value is returned, the instance RAM role failed to be detached. For more information, see the "Error codes" section.
InstanceId	String	i-bp67acfmazb4p****	The ID of the instance from which you attempted to detach the instance RAM role.
InstanceRamRoleSets	Array of InstanceRamRoleSet		The details about the instance RAM roles of the instances.
InstanceRamRoleSet			
InstanceId	String	i-bp67acfmazb4p****	The ID of the instance from which the RAM role was detached.
RamRoleName	String	RamRoleTest	The name of the instance RAM role.
Message	String	success	The message that indicates whether the instance RAM role was detached. If success is returned, the instance RAM role was detached. If any other value is returned, the instance RAM role failed to be detached. For more information, see the "Error codes" section.
Success	Boolean	true	Indicates whether the RAM role was detached.
FailCount	Integer	0	The number of the instances from which the RAM role failed to be detached.
RamRoleName	String	RamRoleTest	The name of the instance RAM role.
RequestId	String	473469C7-AA6F-4DC5-B3DB-A3DC0DE3C83E	The ID of the request.

Parameter	Type	Example	Description
TotalCount	Integer	1	The total number of the instances from which you detached the RAM role.

Examples

Sample requests

```
https://ecs.aliyuncs.com/?Action=DetachInstanceRamRole
&InstanceIds=["i-bp67acfmazb4p****", "i-bp67acfmazb5p****", "i-bp67acfmazb6p****"...]
&RegionId=cn-hangzhou
&RamRoleName=RamRoleTest
&<Common request parameters>
```

Sample success responses

XML format

```
<DetachInstanceRamRoleResponse>
  <TotalCount>1</TotalCount>
  <DetachInstanceRamRoleResults>
    <DetachInstanceRamRoleResult>
      <Message>success</Message>
      <InstanceId>i-bp16qng6jnv6g7t****</InstanceId>
      <Code>200</Code>
      <InstanceRamRoleSets>
        <InstanceId>i-bp16qng6jnv6g7t****</InstanceId>
        <RamRoleName>RamRoleTest</RamRoleName>
      </InstanceRamRoleSets>
    </DetachInstanceRamRoleResult>
  </DetachInstanceRamRoleResults>
  <RequestId>14D5B163-CE6C-4489-B979-DBE5D0495A63</RequestId>
  <RamRoleName></RamRoleName>
  <FailCount>0</FailCount>
</DetachInstanceRamRoleResponse>
```

JSON format

```
{
  "TotalCount": 1,
  "DetachInstanceRamRoleResults": {
    "DetachInstanceRamRoleResult": [
      {
        "Message": "success",
        "InstanceId": "i-bp16qng6jnv6g7t****",
        "Code": "200",
        "InstanceRamRoleSets": {
          "InstanceId": "i-bp16qng6jnv6g7t****",
          "RamRoleName": "RamRoleTest"
        }
      }
    ]
  },
  "RequestId": "14D5B163-CE6C-4489-B979-DBE5D0495A63",
  "RamRoleName": "",
  "FailCount": 0
}
```

Error codes

HTTP status code	Error code	Error message	Description
400	InvalidInstanceIds.Malformed	The specified instanceids are not valid.	The error message returned because the specified InstanceIds parameter is invalid.
403	InvalidNetworkType.MismatchRamRole	Ram role cannot be applied to instances of Classic network type.	The error message returned because an instance RAM role can be used only for instances in VPCs, not for instances in the classic network.
403	InvalidUser.PassRoleForbidden	The RAM user does not have the privilege to pass a RAM role.	The error message returned because the RAM user is not authorized to pass a RAM role.

5.14. DescribeInstanceStatus

You can call this operation to query the status information of multiple instances.

Description

- For more information about the lifecycle of an ECS instance, see [Instance states](#).
- You can also call this operation to query the instance list.

Debugging

OpenAPI Explorer automatically calculates the signature value. For your convenience, we recommend that you call this operation in OpenAPI Explorer. OpenAPI Explorer dynamically generates the sample code of the operation for different SDKs.

Request parameters

Parameter	Type	Required	Example	Description

Parameter	Type	Required	Example	Description
Action	String	Yes	DescribeInstanceStatus	The operation that you want to perform. If you use a custom HTTP URL or HTTPS URL to make an API request, you must specify the Action parameter. Set the value to DescribeInstanceStatus.
RegionId	String	Yes	cn-hangzhou	The region ID of the instance. You can call the DescribeRegions operation to query the most recent region list.
InstanceId.N	RepeatList	No	i-bp1j4i2jdf3owlheb***	The ID of instance N. Valid values of N: 1 to 100. You can specify multiple values in the form of a repeated list.
ZoneId	String	No	cn-hangzhou-d	The zone ID of the instance.
ClusterId	String	No	cls-bp67acfmazb4ph***	The cluster ID of the instance.
PageNumber	Integer	No	1	The number of the page to return. Pages start from page 1. Default value: 1.
PageSize	Integer	No	10	The number of entries to return on each page. Valid values: 1 to 50. Default value: 10.

Response parameters

Parameter	Type	Example	Description
InstanceStatuses	Array		An array of InstanceStatus data.
InstanceStatus			
InstanceId	String	i-bp1j4i2jdf3owlheb***	The ID of the instance.
Status	String	Running	The status of the instance.
PageNumber	Integer	1	The page number of the returned page.
PageSize	Integer	1	The number of entries returned per page.
RequestId	String	473469C7-AA6F-4DC5-B3DB-A3DC0DE3C83E	The ID of the request.
TotalCount	Integer	58	The total number of instances.

Examples

Sample requests

```
https://ecs.aliyuncs.com/?Action=DescribeInstanceStatus
&RegionId=cn-hangzhou
&PageSize=1
&PageNumber=1
&InstanceId.1=i-bp1j4i2jdf3owlheb***
&<Common request parameters>
```

Sample success responses

XML format

```
<DescribeInstanceStatusResponse>
  <PageNumber>1</PageNumber>
  <InstanceStatuses>
    <InstanceStatus>
      <Status>Running</Status>
      <InstanceId>i-bp1j4i2jdf3owlheb***</InstanceId>
    </InstanceStatus>
  </InstanceStatuses>
  <TotalCount>58</TotalCount>
  <PageSize>1</PageSize>
  <RequestId>746C3444-9A24-4D7D-B8A8-DCBF7AC8BD66</RequestId>
</DescribeInstanceStatusResponse>
```

JSON format

```
{
  "PageNumber": 1,
  "InstanceStatuses": {
    "InstanceStatus": [
      {
        "Status": "Running",
        "InstanceId": "i-bp1j4i2jdf3owlheb***"
      }
    ]
  },
  "TotalCount": 58,
  "PageSize": 1,
  "RequestId": "746C3444-9A24-4D7D-B8A8-DCBF7AC8BD66"
}
```

5.15. RenewInstance

You can call this operation to renew a subscription ECS instance.

Description

When you call this operation, take note of the following points:

- This operation is applicable only to subscription ECS instances.
- The renewal operation will use available coupons in your account by default. This does not apply to discount services.
- Your account must support credit card payment.

Debugging

OpenAPI Explorer automatically calculates the signature value. For your convenience, we recommend that you call this operation in OpenAPI Explorer. OpenAPI Explorer dynamically generates the sample code of the operation for different SDKs.

Request parameters

Parameter	Type	Required	Example	Description
Action	String	Yes	RenewInstance	The operation that you want to perform. Set the value to RenewInstance .
InstanceId	String	Yes	i-bp67acfmazb4p****	The ID of the instance.
Period	Integer	Yes	1	The renewal duration of the subscription instance. If the DedicatedHostId parameter is specified, values of the Period parameter must be within the subscription period of the dedicated host. Valid values: If PeriodUnit is set to Month, valid values of Period are 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 24, 36, 48, and 60.
PeriodUnit	String	No	Month	The unit of the renewal period. Default value: Month. Default value: Month. Valid values: Month
ClientToken	String	No	0c593ea1-3bea-11e9-b96b-88e9fe637760	The client token that is used to ensure the idempotence of the request. You can use the client to generate the value, but you must ensure that it is unique among different requests. The ClientToken value can only contain ASCII characters and cannot exceed 64 characters in length. For more information, see How to ensure idempotence .

Response parameters

Parameter	Type	Example	Description
RequestId	String	473469C7-AA6F-4DC5-B3DB-A3DC0DE3C83E	The ID of the request.

Examples

Sample requests

```
https://ecs.aliyuncs.com/?Action=RenewInstance
&InstanceId=i-bp67acfmazb4p****
&Period=1
&PeriodUnit=Month
&ClientToken=0c593ea1-3bea-11e9-b96b-88e9fe637760
&<Common request parameters>
```

Sample success responses

XML format


```
<ModifyInstanceSpecResponse>
  <RequestId>473469C7-AA6F-4DC5-B3DB-A3DC0DE3C83E</RequestId>
</ModifyInstanceSpecResponse>
```

JSON format

```
{
  "RequestId": "473469C7-AA6F-4DC5-B3DB-A3DC0DE3C83E"
}
```

Error codes

HTTP status code	Error code	Error message	Description
400	InvalidInternetChargeType.ValueNotSupported	The specified InternetChargeType is not valid.	The error message returned because the specified InternetChargeType parameter is invalid.
400	InvalidInstanceType.NotSupported	The specified InstanceType is not Supported.	The error message returned because the specified InstanceType parameter is invalid.
400	InvalidParameter	The specified parameter "InternetMaxBandwidthOut" is not valid.	The error message returned because the specified InternetMaxBandwidthOut parameter is invalid.
400	InvalidInstanceChargeType.NotFound	The InstanceChargeType does not exist in our records.	The error message returned because the specified InstanceChargeType parameter does not exist.
400	InvalidRebootTime.ValueNotSupported	The specified RebootTime is out of the permitted range.	The error message returned because the specified restart time is out of the permitted range.
400	IdempotenceParamNotMatch	Request uses a client token in a previous request but is not identical to that request.	The error message returned because the parameter used in this request is different from the one in the previous request even though the ClientToken value in this request is identical to the one in the previous request.
400	InvalidClientToken.ValueNotSupported	The ClientToken provided is invalid.	The error message returned because the specified ClientToken parameter is invalid.
403	ChargeTypeViolation	The operation is not permitted due to charge type of the instance.	The error message returned because the billing method of the instance does not support this operation.
400	InvalidInstanceType.ValueNotSupported	The specified InstanceType does not exist or beyond the permitted range.	The error message returned because the specified instance type does not exist or you are not authorized to operate on instances of this instance type.
404	InvalidDiskId.NotFound	The specified disk does not exist.	The error message returned because the specified DiskId parameter does not exist. Check whether the disk ID is correct.

HTTP status code	Error code	Error message	Description
403	Diskcategory.Mismatch	The disk specified to convert to portable is not allowed due to the disk category does not support.	The error message returned because the specified disk cannot be converted to a removable disk due to disk category restrictions.
404	InvalidInstanceId.NotFound	The specified InstanceId does not exist.	The error message returned because the specified InstanceId parameter does not exist. Check whether the instance ID is correct.
403	IncorrectInstanceStatus	The current status of the resource does not support this operation.	The error message returned because the operation is not supported while the resource is in the current state.
400	InvalidInstanceType.codeUnauthorized	The specified InstanceType is not authorized.	The error message returned because the specified InstanceType parameter is invalid.
400	InvalidInternetChargeType.InstanceNotSupported	The specified instance which is in vpc is not support the parameter InternetChargeType.	The error message returned because the specified billing method is not supported by the specified VPC-type instance.
400	InvalidPeriod	The specified period is not valid.	The error message returned because the specified Period parameter is invalid.
403	InstanceSpecModification.NotEffective	The specified instance has been reserved for making a spec modification and not taken effective in the current contract period.	The error message returned because the instance is reserved due to specification changes. The changes cannot take effect during the current contract period.
400	Upgrade.NotSupported	Upgrade operation is not supported.	The error message returned because the upgrade operation is invalid.
403	LastTokenProcessing	The last token request is processing.	The error message returned because the last token request is being processed. Try again later.
403	Instance.UnPaidOrder	The specified instance has unpaid order.	The error message returned because you have unpaid orders under the specified instance.
400	OperationDenied	Specified instance is in VPC.	The error message returned because the specified instance is in a VPC.
400	InvalidInstanceType.ValueUnauthorized	The specified InstanceType is not authorized.	The error message returned because you are not authorized to use the specified instance type.
400	InvalidParameter	The specified parameter " InternetMaxBandwidthOut " is not valid.	The error message returned because the specified InternetMaxBandwidthOut parameter is invalid.
403	InstanceLockedForSecurity	The specified operation is denied as your instance is locked for security reasons.	The error message returned because the operation is not supported while the instance is locked for security reasons.
403	InvalidDisk.NotAllowed	The specified disk is not allowed to be converted to portable.	The error message returned because the specified disk cannot be converted to a removable disk.

HTTP status code	Error code	Error message	Description
400	DependencyViolation.InstanceType	Current instancetype cannot be changed to the specified one.	The error message returned because the current instance type cannot be changed to the specified one.
403	InstanceTypeNotSupported	The specified zone does not offer the specified instancetype.	The error message returned because instances of the specified instance type cannot be created in the specified zone.
400	InvalidPeriodUnit.ValueNotSupported	The specified parameter PeriodUnit is not valid.	The error message returned because the specified PeriodUnit parameter is invalid.
400	InvalidDedicatedHostId.NotFound	The specified DedicatedHostId does not exist.	The error message returned because the specified DedicatedHostId parameter does not exist.
400	InvalidDedicatedHostStatus.NotSupport	Operation denied due to dedicated host status.	The error message returned because the operation is not supported while the dedicated host is in the current state.
400	IncorrectDedicatedHostStatus	The current status of the resource does not support this operation.	The error message returned because the operation is not supported while the dedicated host is in the current state.
400	InvalidPeriod.ExceededDedicatedHost	Instance expired date can't exceed dedicated host expired date.	The error message returned because the expiration date of the instance is later than that of the dedicated host.
400	InvalidStatus.Upgradeing	The instance is upgrading; please try again later.	The error message returned because the specified instance is being upgraded. Try again later.
400	InvalidPeriod.ExceededMaximumExpirationDate	The specified renewal period cannot exceed the maximum expiration date. We recommend you try shortening the renewal period at next attempt.	The error message returned because the specified renewal period exceeds the maximum allowed renewal period. We recommend that you shorten the renewal period on your next attempt.
500	InternalServerError	The request processing has failed due to some unknown error.	The error message returned because an internal error has occurred. Try again later. If the problem persists, submit a ticket.
400	LastOrderProcessing	The previous order is still processing, please try again later.	The error message returned because the previous order is being processed. Try again later.
400	Idempotence.Processing	The previous request is still processing, please try again later.	The error message returned because the previous request is being processed. Try again later.
403	InvalidChargeType.NotSupported	The chargeType of the instance does not support this operation.	The error message returned because instances of the specified instance type do not support the operation.
403	OperationDenied.NoStock	The requested resource is sold out in the specified zone, try other types of resources or other regions and zones.	The error message returned because the requested resources are sold out in the specified zone. Change the instance type or zone and try again.

HTTP status code	Error code	Error message	Description
403	OperationDenied.NoStock	The resource is out of usage.	The error message returned because the instance is not in the Running state. Start the instance or check whether the operation is valid.
400	OperationDenied	The current user does not support this operation.	The error message returned because your account does not support this operation.
403	InvalidPeriod.StarterPackage	This instance was created by using a Starter Package plan and can only be renewed monthly, not yearly.	The error message returned because the instance was created by using a Starter Package plan and can only be automatically renewed on a monthly basis.

5.16. ReActivateInstances

You can call this operation to reactivate a pay-as-you-go instance that has expired or for which you have overdue payments.

Description

When you call this operation, take note of the following items:

- After the operation is called, the instance enters the **Starting** (**Starting**) state.
- You cannot call this operation on ECS instances that are locked for security reasons. An instance is locked for security reasons if the response contains `{"OperationLocks": {"LockReason": "security"}}` when you query information of the instance. For more information, see [API behavior when an instance is locked for security reasons](#).

Debugging

OpenAPI Explorer automatically calculates the signature value. For your convenience, we recommend that you call this operation in OpenAPI Explorer. OpenAPI Explorer dynamically generates the sample code of the operation for different SDKs.

Request parameters

Parameter	Type	Required	Example	Description
Action	String	Yes	ReActivateInstances	The operation that you want to perform. Set the value to ReActivateInstances.
InstanceId	String	Yes	i-bp67acfmxazb4p****	The ID of the instance that you want to reactivate.
RegionId	String	No	cn-hangzhou	The region ID of the instance. You can call the DescribeRegions operation to query the most recent region list.

Response parameters

Parameter	Type	Example	Description
RequestId	String	51AB7717-6E1A-4D1D-A44D-54CB123ABC	The ID of the request.

Examples

Sample requests

```
https://ecs.aliyuncs.com/?Action=ReActivateInstances
&RegionId=cn-hangzhou
&InstanceId=i-bp67acfmxb4p****
&<Common request parameters>
```

Sample success responses

XML format

```
<ReActivateInstancesResponse>
  <RequestId>51AB7717-6E1A-4D1D-A44D-54CB123ABC</RequestId>
</ReActivateInstancesResponse>
```

JSON format

```
{
  "RequestId": "51AB7717-6E1A-4D1D-A44D-54CB123ABC"
}
```

Error codes

HTTP status code	Error code	Error message	Description
404	InvalidInstanceId.NotFound	The specified InstanceId does not exist.	The error message returned because the specified InstanceId parameter does not exist.
404	InvalidPayType.NotSupport	The specified pre pay instance not support.	The error message returned because the operation is not supported for subscription instances.
403	IncorrectInstanceStatus	The current status of the resource does not support this operation.	The error message returned because the operation is not supported while the instance is in the current state.
403	InstanceLockedForSecurity	The specified operation is denied as your instance is locked for security reasons.	The error message returned because the operation is not supported while the instance is locked for security reasons.
403	InsufficientBalance	Your account does not have enough balance.	The error message returned because your account balance is insufficient. You must add funds to your account before you proceed.
500	InternalServerError	The request processing has failed due to some unknown error.	The error message returned because an internal error has occurred. Try again later. If the problem persists, submit a ticket.
400	ReopenInstance.InstanceStatusNotValid	Instance status is not Expired, ImageExpired or EcsAndImageExpired.	The error message returned because the instance fails to be started. A possible cause is that the instance or image has expired.

5.17. DescribeInstanceVncUrl

You can call this operation to query the VNC URL of an ECS instance.

Description

When you call this operation, take note of the following points:

- A VNC URL is only valid for 15 seconds. If a connection is not established within 15 seconds after a successful query, the URL expires and you must query it again.
- The **KeepAlive** time of a VNC connection is 60 seconds. If you do not interact with the VNC within 60 seconds, the VNC will be automatically disconnected.
- When the VNC is disconnected, you can only reconnect to the VNC a maximum of 30 times a minute.
- You must set `vncUrl` to `xxxx` , `instanceId` to `xxx` , `password` to `XXXXXX` , and `isWindows` to `True` or `isWindows` to `False` at the end of the `https://g.alicdn.com/aliyun/ecs-console-vnc2/0.0.8/index.html?` URL. Connect multiple parameters with ampersands (&) . where:
 - `vncUrl` : the `VncUrl` value that is returned after a successful query.
 - `instanceId` : the ID of your instance.
 - `isWindows` : specifies whether the operating system of the instance is Windows. If the parameter is set to `true` , the operating system is Windows. If the value is set to `false` , the operating system is not Windows.
 - `password` : Optional. The password for connecting to the instance. It must be six characters in length and can contain digits and letters. You can use this parameter to eliminate the need to enter your password when you connect to the VNC.

Examples:

```
https://g.alicdn.com/aliyun/ecs-console-vnc2/0.0.8/index.html?vncUrl=ws%3A%2F%xxx&instanceId=i-wz9hhwq5a6tmxx  
xxxxx&isWindows=true
```

or

```
https://g.alicdn.com/aliyun/ecs-console-vnc2/0.0.8/index.html?vncUrl=ws%3A%2F%xxx&instanceId=i-wz9hhwq5a6tmxx  
xxxxx&isWindows=true&password=111111
```

Debugging

OpenAPI Explorer automatically calculates the signature value. For your convenience, we recommend that you call this operation in OpenAPI Explorer. OpenAPI Explorer dynamically generates the sample code of the operation for different SDKs.

Request parameters

Parameter	Type	Required	Example	Description
Action	String	Yes	DescribeInstanceVncUrl	The operation that you want to perform. If you use a custom HTTP URL or HTTPS URL to make an API request, you must specify the <code>Action</code> parameter. Set the value to <code>DescribeInstanceVncUrl</code> .
InstanceId	String	Yes	i-bp1hzoinajzkh91h****	The ID of the instance.
RegionId	String	Yes	cn-hangzhou	The region ID of the instance. You can call the DescribeRegions operation to query the most recent region list.

Response parameters

Parameter	Type	Example	Description

Parameter	Type	Example	Description
RequestId	String	473469C7-AA6F-4DC5-B3DB-A3DC0DE3C83E	The ID of the request.
VncUrl	String	wss%3A%2F%2Fhz01-vncproxy.aliyun.com%2Fwebsocketify%2F%3Fs%3DDvh%252FIA%252BYc73gWO48cBx2gBxUDVzaAnSKr74pq30mzqUYgeUMcB%252FbkNixDxdEA996	The VNC URL.

Examples

Sample requests

```
https://ecs.aliyuncs.com/?Action=DescribeInstanceVncUrl
&InstanceId=i-bp1hzoinajzkh91h****
&RegionId=cn-hangzhou
&<Common request parameters>
```

Sample success responses

XML format

```
<DescribeInstanceVncUrlResponse>
  <RequestId>1450F2D7-5435-4420-BBC9-49C5xxxxxxx</RequestId>
  <VncUrl>wss%3A%2F%2Fhz01-vncproxy.aliyun.com%2Fwebsocketify%2F%3Fs%3DDvh%252FIA%252BYc73gWO48cBx2gBxUDVzaAnSKr74pq30mzqUYgeUMcB%252FbkNixDxdEA996</VncUrl>
</DescribeInstanceVncUrlResponse>
```

JSON format

```
{
  "RequestId": "1450F2D7-5435-4420-BBC9-49C5xxxxxxx",
  "VncUrl": "wss%3A%2F%2Fhz01-vncproxy.aliyun.com%2Fwebsocketify%2F%3Fs%3DDvh%252FIA%252BYc73gWO48cBx2gBxUDVzaAnSKr74pq30mzqUYgeUMcB%252FbkNixDxdEA996"
}
```

Error codes

HTTP status code	Error code	Error message	Description
404	InvalidRegionId.NotFound	The specified RegionId does not exist.	The error message returned because the specified RegionId parameter does not exist.
404	InvalidInstanceId.NotFound	The specified InstanceId does not exist.	The error message returned because the specified InstanceId parameter does not exist. Check whether the instance ID is correct.
403	IncorrectInstanceStatus	The current status of the resource does not support this operation.	The error message returned because the operation is not supported while the resource is in the current state.

HTTP status code	Error code	Error message	Description
500	InternalServerError	The request processing has failed due to some unknown error.	The error message returned because an internal error has occurred. Try again later. If the problem persists, submit a ticket.
403	InstanceNotReady	The specified instance is not ready for use	The error message returned because the specified instance cannot be connected for the moment. Try again later.
400	InvalidRegionInstance	The specified InstanceId does not exist in given region.	The error message returned because the instance does not exist in the specified region. Check whether the RegionId and InstanceId parameters are correct.

5.18. DescribeUserData

You can call this operation to query the user data of an ECS instance.

Description

- The returned user data is encoded in Base64.
- If the instance does not have any user data, a null value is returned.

Debugging

OpenAPI Explorer automatically calculates the signature value. For your convenience, we recommend that you call this operation in OpenAPI Explorer. OpenAPI Explorer dynamically generates the sample code of the operation for different SDKs.

Request parameters

Parameter	Type	Required	Example	Description
Action	String	Yes	DescribeUserData	The operation that you want to perform. For API requests using the HTTP and HTTPS methods, the <code>Action</code> parameter is required. Set the value to <code>DescribeUserData</code> .
InstanceId	String	Yes	i-instanceid1	The ID of the instance to be queried.
RegionId	String	Yes	cn-hangzhou	The region ID of the instance. You can call the DescribeRegions operation to query the most recent region list.

Response parameters

Parameter	Type	Example	Description
RequestId	String	473469C7-AA6F-4DC5-B3DB-A3DC0DE3C83E	The ID of the request.
RegionId	String	cn-hangzhou	The ID of the region.
InstanceId	String	i-instanceid1	The ID of the instance.

Parameter	Type	Example	Description
UserData	String	ZWNobyBoZWxsbyBLY3Mh	The user data of the instance.

Examples

Sample requests

```
https://ecs.aliyuncs.com/?Action=DescribeUserData
&RegionId=cn-shenzhen
&InstanceId=i-instance1
&<Common request parameters>
```

Sample success responses

XML format

```
<DescribeUserDataResponse>
  <RequestId>473469C7-AA6F-4DC5-B3DB-A3DC0DE3C83E</RequestId>
  <UserData>userdata1</UserData>
  <InstanceId>i-instance1</InstanceId>
  <RegionId>cn-shenzhen</RegionId>
</DescribeUserDataResponse>
```

JSON format

```
{
  "RequestId": "473469C7-AA6F-4DC5-B3DB-A3DC0DE3C83E",
  "UserData": "userdata1",
  "InstanceId": "i-instance1",
  "RegionId": "cn-shenzhen"
}
```

Error codes

HTTP status code	Error code	Error message	Description
404	InvalidInstanceId.NotFound	The specified InstanceId does not exist.	The error message returned because the specified InstanceId parameter does not exist.

5.19. DescribeInstanceAutoRenewAttribute

You can call this operation to query the auto-renewal status of one or more subscription ECS instances.

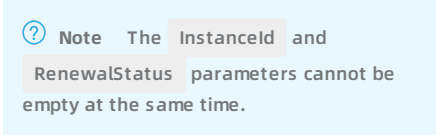
Description

- Before you configure auto-renewal or manual renewal for subscription instances, you can query the auto-renewal status of the instances.
- This operation is applicable to only subscription instances. An error is returned if you call this operation on pay-as-you-go instances.

Debugging

OpenAPI Explorer automatically calculates the signature value. For your convenience, we recommend that you call this operation in OpenAPI Explorer. OpenAPI Explorer dynamically generates the sample code of the operation for different SDKs.

Request parameters

Parameter	Type	Required	Example	Description
Action	String	Yes	DescribeInstanceAutoRenewAttribute	The operation that you want to perform. Set the value to DescribeInstanceAutoRenewAttribute.
RegionId	String	Yes	cn-hangzhou	The region ID of the instance. You can call the DescribeRegions operation to query the most recent region list.
InstanceId	String	No	i-bp18x3z4hc7bixhx**** ,i-bp1g6zv0ce8oghu7*** *	The ID of the instance. You can specify a maximum of 100 subscription instance IDs at a time. Separate multiple instance IDs with commas (.). 
RenewalStatus	String	No	AutoRenewal	The auto-renewal status of the instance. Valid values: - AutoRenewal: Auto-renewal is enabled for the instance. - Normal: Auto-renewal is disabled for the instance. - NotRenewal: The instance will not be renewed. The system sends no more expiration reminders, but sends only a non-renewal reminder three days before the expiration date. For an instance that will not be renewed, you can call the ModifyInstanceAutoRenewAttribute operation to change its auto-renewal status to Normal . Then you can manually renew the instance or enable auto-renewal for the instance.
PageSize	String	No	10	The number of entries to return on each page. Maximum value: 100. Default value: 10.
PageNumber	String	No	1	The number of the page to return. Pages start from page 1. Default value: 1.

Response parameters

Parameter	Type	Example	Description
InstanceRenewAttributes	Array		An array consisting of InstanceRenewAttribute data.
InstanceRenewAttribute			
AutoRenewEnabled	Boolean	false	Indicates whether auto-renewal was enabled.
Duration	Integer	1	The auto-renewal period.
InstanceId	String	i-bp18x3z4hc7bixhx****	The ID of the instance.
PeriodUnit	String	week	The unit of the auto-renewal period.
RenewalStatus	String	Normal	The auto-renewal status of the instance. Valid values: - AutoRenewal: Auto-renewal is enabled for the instance. - Normal: Auto-renewal is disabled for the instance. - NotRenewal: The instance will not be renewed. The system sends no more expiration reminders, but sends only a non-renewal reminder three days before the expiration date. For an instance that will not be renewed, you can call the ModifyInstanceAutoRenewAttribute operation to change its auto-renewal status to <code>Normal</code>. Then you can manually renew the instance or enable auto-renewal for the instance.
PageNumber	Integer	1	The page number of the returned page.
PageSize	Integer	10	The number of entries returned per page.
RequestId	String	473469C7-AA6F-4DC5-B3DB-A3DC0DE3C83E	The ID of the request.
TotalCount	Integer	6	The total number of instances.

Examples

Sample requests

```
https://ecs.aliyuncs.com/?Action=DescribeInstanceAutoRenewAttribute
&RegionId=cn-hangzhou
&PageNumber=1
&PageSize=1
&RenewalStatus=AutoRenewal
&<Common request parameters>
```

Sample success responses

`XML` format

```
<DescribeInstanceAutoRenewAttributeResponse>
  <PageNumber>1</PageNumber>
  <TotalCount>1</TotalCount>
  <InstanceRenewAttributes>
    <InstanceRenewAttribute>
      <RenewalStatus>AutoRenewal</RenewalStatus>
      <Duration>1</Duration>
      <InstanceId>i-bp18x3z4hc7bixhx****</InstanceId>
      <AutoRenewEnabled>true</AutoRenewEnabled>
      <PeriodUnit>Week</PeriodUnit>
    </InstanceRenewAttribute>
  </InstanceRenewAttributes>
  <PageSize>1</PageSize>
  <RequestId>DAE023B4-A78F-4B39-8860-96F17B54F772</RequestId>
</DescribeInstanceAutoRenewAttributeResponse>
```

JSON format

```
{
  "PageNumber": 1,
  "TotalCount": 1,
  "InstanceRenewAttributes": {
    "InstanceRenewAttribute": [
      {
        "RenewalStatus": "AutoRenewal",
        "Duration": 1,
        "InstanceId": "i-bp18x3z4hc7bixhx****",
        "AutoRenewEnabled": true,
        "PeriodUnit": "Week"
      }
    ]
  },
  "PageSize": 1,
  "RequestId": "DAE023B4-A78F-4B39-8860-96F17B54F772"
}
```

Error codes

HTTP status code	Error code	Error message	Description
403	MissingParameter.InstanceId	InstanceId should not be null.	The error message returned because the InstanceId parameter is not specified.
403	InvalidParameter.TotalCount	InstanceId should be less than 100.	The error message returned because the total number of instances has exceeded 100.
403	InvalidParameter.InvalidInstanceId	%s	The error message returned because the specified InstanceId parameter is invalid.

HTTP status code	Error code	Error message	Description
403	IncorrectInstanceStatus	The current status of the resource does not support this operation.	The error message returned because the operation is not supported while the resource is in the current state.
403	ChargeTypeViolation	Pay-As-You-Go instances do not support this operation.	The error message returned because this operation is applicable to only subscription instances.
403	InvalidParameter.RenewalStatus	The specified parameter RenewalStatus is not valid.	The error message returned because the specified RenewalStatus parameter is invalid.
403	InvalidParameter.RenewalStatusInstanceid	The parameter RenewalStatus and Instanceid can not be both empty.	The error message returned because neither of the RenewalStatus and Instanceid parameters is specified.

5.20. DescribeInstanceRamRole

You can call this operation to query the instance RAM roles that have been assigned to one or more ECS instances.

Description

When you call an API operation through Alibaba Cloud Command Line Interface (CLI), specify request parameter values of different data types in required formats. For more information, see [CLI parameter format](#).

Debugging

OpenAPI Explorer automatically calculates the signature value. For your convenience, we recommend that you call this operation in OpenAPI Explorer. OpenAPI Explorer dynamically generates the sample code of the operation for different SDKs.

Request parameters

Parameter	Type	Required	Example	Description
Action	String	Yes	DescribeInstanceRamRole	The operation that you want to perform. For API requests using the HTTP and HTTPS methods, the <code>Action</code> parameter is required. Set the value to DescribeInstanceRamRole.
RegionId	String	Yes	cn-hangzhou	The region ID of the RAM role. You can call the DescribeRegions operation to query the most recent region list.
PageNumber	Integer	No	1	The number of the page to return. Pages start from page 1. Default value: 1.
PageSize	Integer	No	10	The number of entries to return on each page. Valid values: 1 to 50. Default value: 10.

Parameter	Type	Required	Example	Description
InstanceIds	String	No	["i-bp67acfmxazb4ph****", "i-bp67acfmxazb4pj****", "bp67acfmxazb4pj****" ...]	The ID collection of instances that you want to query. A maximum of 100 instances can be entered at a time. You must specify at least one of the InstanceIds and RamRoleName parameters.
RamRoleName	String	No	EcsServiceRole-EcsDocGuideTest	The name of the instance RAM role. This parameter can be used to query all the ECS instances to which the instance RAM role is assigned. You can call the ListRoles operation to query the RAM roles that you have created. You must specify at least one of the InstanceIds and RamRoleName parameters.

Response parameters

Parameter	Type	Example	Description
RequestId	String	473469C7-AA6F-4DC5-B3DB-A3DC0DE3C83E	The ID of the request.
RegionId	String	cn-hangzhou	The region ID of the instance RAM role.
TotalCount	Integer	1	The total number of returned RAM roles.
InstanceRamRoleSets	Array		The returned RAM role information. It is an array that consists of InstanceRamRoleSet data.
InstanceId	String	i-bp67acfmxazb4ph***	The ID of the instance.
RamRoleName	String	EcsServiceRole-EcsDocGuideTest	The name of the instance RAM role.

Examples

Sample requests

```
https://ecs.aliyuncs.com/?Action=DescribeInstanceRamRole
&RegionId=cn-hangzhou
&InstanceIds=["i-bp67acfmxazb4ph****"]
&PageNumber=1
&PageSize=1
&<Common request parameters>
```

Sample success response

XML format

```
<DescribeInstanceRamRoleResponse>
  <RequestId>8F4CAE3F-7892-4662-83A5-2C2FFD639553</RequestId>
  <InstanceRamRoleSets>
    <InstanceRamRoleSet>
      <InstanceId>i-bp67acfmxazb4ph***</InstanceId>
      <RamRoleName>EcsServiceRole-EcsDocGuideTest</RamRoleName>
    </InstanceRamRoleSet>
  </InstanceRamRoleSets>
  <TotalCount>1</TotalCount>
  <PageNumber>1</PageNumber>
  <PageSize>1</PageSize>
</DescribeInstanceRamRoleResponse>
```

JSON format

```
{
  "RequestId": "8F4CAE3F-7892-4662-83A5-2C2FFD639553",
  "InstanceRamRoleSets": {
    "InstanceRamRoleSet": [
      {
        "InstanceId": "i-bp67acfmxazb4ph***",
        "RamRoleName": "EcsServiceRole-EcsDocGuideTest"
      }
    ]
  },
  "TotalCount": 1,
  "PageNumber": 1,
  "PageSize": 1
}
```

Error codes

HTTP status code	Error code	Error message	Description
400	InvalidInstanceIds.Malformed	The specified instanceids are not valid.	The error message returned because multiple specified values of the InstanceId parameter are invalid.
404	InvalidInstanceId.NotFound	The specified instanceid does not exist	The error message returned because the specified instance ID does not exist.
403	InvalidNetworkType.MismatchRamRole	Ram role cannot be applied to instances of Classic network type.	The error message returned because the specified instance is classic network-type instance. An instance RAM role can only be used for VPC-type instances.
403	InvalidParameter.AllEmpty	%s	The error message returned because you did not specify the required parameter.

HTTP status code	Error code	Error message	Description
500	InternalServerError	The request processing has failed due to some unknown error.	The error message returned because an internal error has occurred. Try again later. If the problem persists, submit a ticket.

5.21. DescribeSpotPriceHistory

You can call this operation to query the price history of a preemptible instance in the last 30 days.

Debugging

OpenAPI Explorer automatically calculates the signature value. For your convenience, we recommend that you call this operation in OpenAPI Explorer. OpenAPI Explorer dynamically generates the sample code of the operation for different SDKs.

Request parameters

Parameter	Type	Required	Example	Description
Action	String	Yes	DescribeSpotPriceHistory	The operation that you want to perform. For API requests using the HTTP and HTTPS methods, the <code>Action</code> parameter is required. Set the value to DescribeSpotPriceHistory.
InstanceType	String	Yes	ecs.t1.xsmall	The type of the instance.
NetworkType	String	Yes	vpc	The network type of the preemptible instance. Valid values: - classic - vpc
RegionId	String	Yes	cn-hangzhou	The region ID of the instance. You can call the DescribeRegions operation to query the most recent region list.
ZoneId	String	No	cn-hangzhou-g	The zone ID of the instance.
SpotDuration	Integer	No	1	The retention period of the preemptible instance. Unit: hours. Valid values: 1, 2, 3, 4, 5, and 6. Default value: 1.
IoOptimized	String	No	optimized	Specifies whether the instance is I/O optimized. Valid values: - optimized - none For generation I instance types, the default value is none. For other instance families, the default value is optimized.

Parameter	Type	Required	Example	Description
StartTime	String	No	2017-08-22T08:45:08Z	The start time of the query. The time follows the ISO 8601 standard in the yyyy-MM-ddTHH:mm:ssZ format. The time is displayed in UTC. Default value: null. If this parameter is empty, the start time is defined as three hours earlier than the specified EndTime. You can specify a StartTime value of up to 30 days earlier than the specified EndTime.
EndTime	String	No	2017-08-22T08:45:08Z	The end time of the query. The time follows the ISO 8601 standard in the yyyy-MM-ddTHH:mm:ssZ format. The time is displayed in UTC. Default value: null. If this parameter is empty, the current time is used.
OSType	String	No	linux	The type of the operating system platform. Valid values: - linux - windows
Offset	Integer	No	0	The start row of the query. Default value: 0.

Response parameters

Parameter	Type	Example	Description
RequestId	String	473469C7-AA6F-4DC5-B3DB-A3DC0DE3C83E	The ID of the request.
NextOffset	Integer	1,000	The start row of the next page. It is the value of the Offset parameter.
Currency	String	CNY	The currency unit of the price.
SpotPrices	Array		The details of the price.
ZoneId	String	cn-hangzhou-c	The zone ID of the preemptible instance.
InstanceType	String	ecs.g5.large	The instance type of the preemptible instance.
IoOptimized	String	optimized	Indicates whether the preemptible instance is I/O optimized.
Timestamp	String	2019-11-19T06:00:00Z	The time for the price. Format: yyyy-MM-ddTHH:MM:SS.
NetworkType	String	vpc	The network type of the preemptible instance.

Parameter	Type	Example	Description
SpotPrice	Float	0.036	The spot price of the preemptible instance.
OriginPrice	Float	0.354	The original price of the pay-as-you-go instance.

Examples

Sample requests

```
https://ecs.aliyuncs.com/?Action=DescribeSpotPriceHistory
&NetworkType=vpc
&RegionId=cn-hangzhou
&InstanceType=ecs.g5.large
&StartTime=2019-11-19T00:00:00Z
&<Common request parameters>
```

Sample success responses

XML format

```
<DescribeSpotPriceHistoryResponse>
  <RequestId>5E2D59BA-4EB0-45C4-A0D7-D98C1A4B320B</RequestId>
  <SpotPrices>
    <SpotPriceType>
      <loOptimized>optimized</loOptimized>
      <OriginPrice>0.354</OriginPrice>
      <NetworkType>vpc</NetworkType>
      <ZoneId>cn-hangzhou-g</ZoneId>
      <Timestamp>2019-11-19T06:00:00Z</Timestamp>
      <SpotPrice>0.036</SpotPrice>
      <InstanceType>ecs.g5.large</InstanceType>
    </SpotPriceType>
    <SpotPriceType>
      <loOptimized>optimized</loOptimized>
      <OriginPrice>0.354</OriginPrice>
      <NetworkType>vpc</NetworkType>
      <ZoneId>cn-hangzhou-g</ZoneId>
      <Timestamp>2019-11-19T07:00:00Z</Timestamp>
      <SpotPrice>0.036</SpotPrice>
      <InstanceType>ecs.g5.large</InstanceType>
    </SpotPriceType>
  </SpotPrices>
  <Currency>CNY</Currency>
</DescribeSpotPriceHistoryResponse>
```

JSON format

```
{
  "RequestId": "5E2D59BA-4EB0-45C4-A0D7-D98C1A4B320B",
  "SpotPrices": {
    "SpotPriceType": [
      {
        "IoOptimized": "optimized",
        "OriginPrice": 0.354,
        "NetworkType": "vpc",
        "ZoneId": "cn-hangzhou-g",
        "Timestamp": "2019-11-19T06:00:00Z",
        "SpotPrice": 0.036,
        "InstanceType": "ecs.g5.large"
      },
      {
        "IoOptimized": "optimized",
        "OriginPrice": 0.354,
        "NetworkType": "vpc",
        "ZoneId": "cn-hangzhou-g",
        "Timestamp": "2019-11-19T07:00:00Z",
        "SpotPrice": 0.036,
        "InstanceType": "ecs.g5.large"
      }
    ]
  },
  "Currency": "CNY"
}
```

Error codes

HTTP status code	Error code	Error message	Description
403	InvalidUserType.NotSupported	%s	The error message returned because the specified account does not support this operation.
403	Abs.InvalidAccount.NotFound	%s	The error message returned because your Alibaba Cloud account does not exist or your AccessKey pair has expired.
400	MissingParameter	%s	The error message returned because a required parameter is not specified.
403	Forbidden.NotSupportRAM	%s	The error message returned because RAM users are not allowed to perform this operation.
400	UnsupportedParameter	%s	The error message returned because the parameter is not supported.
403	Forbidden.SubUser	%s	The error message returned because you are not authorized to operate on this resource. Apply for permissions from the Alibaba Cloud account.

HTTP status code	Error code	Error message	Description
400	InvalidParameter	%s	The error message returned because the specified parameter is invalid.
400	InvalidInstanceId.Malformed	%s	The error message returned because the format of the InstanceId parameter is invalid.
400	InvalidParams.StartTime	%s	The error message returned because the specified StartTime parameter is invalid.
400	InvalidParams.EndTime	%s	The error message returned because the specified EndTime parameter is invalid.
400	Abs.Abs.InvalidSpotInstanceUID	%s	The error message returned because the format of the preemptible instance ID is invalid.
400	InvalidParams.NetworkType	%s	The error message returned because the specified NetworkType parameter is invalid.
400	InvalidParams.IoOptimized	%s	The error message returned because the specified IoOptimized parameter is invalid.
400	InvalidParams.OSType	%s	The error message returned because the specified OSType parameter is invalid.
400	Abs.IoOptimized.ValueNotSupported	%s	The error message returned because the I/O optimization attribute of the instance is invalid. Check whether the specified IoOptimized parameter is valid.
400	InvalidZoneId.NotFound	The specified zone does not exist.	The error message returned because the specified zone ID does not exist.
400	InvalidParams.ZoneId	%s	The error message returned because the specified ZoneId parameter is invalid.
400	InvalidParams.RegionId	%s	The error message returned because the specified RegionId parameter is invalid.
400	InvalidParams.InstanceType	%s	The error message returned because the specified InstanceType parameter is invalid.
400	InvalidParams.PageSize	%s	The error message returned because the specified PageSize parameter is invalid.
400	InvalidParams.Offset	%s	The error message returned because the specified Offset parameter is invalid.
400	InvalidInstanceType.ValueNotSupported	%s	The error message returned because this operation cannot be performed on instances of the specified instance type.

HTTP status code	Error code	Error message	Description
400	DependencyViolation.IoOptimized	The specified instancetype must be ioOptimized instance.	The error message returned because the specified instance type is not I/O optimized.
400	InvalidSpotDuration	The specified SpotDuration is not valid.	The error message returned because the specified SpotDuration parameter is invalid.

5.22. DescribeInstanceTypeFamilies

You can call this operation to query instance families provided by ECS.

Debugging

OpenAPI Explorer automatically calculates the signature value. For your convenience, we recommend that you call this operation in OpenAPI Explorer. OpenAPI Explorer dynamically generates the sample code of the operation for different SDKs.

Request parameters

Parameter	Type	Required	Example	Description
Action	String	Yes	DescribeInstanceTypeFamilies	The operation that you want to perform. If you use a custom HTTP URL or HTTPS URL to make an API request, you must specify the <code>Action</code> parameter. Set the value to <code>DescribeInstanceTypeFamilies</code> .
RegionId	String	Yes	cn-hangzhou	The ID of the region. You can call the DescribeRegions operation to query the most recent region list.
Generation	String	No	ecs-3	The generation of the instance family. For more information, see Instance families . Valid values: - ecs-1: Generation I, which consists of the earliest and cost-effective instance types. - ecs-2: Generation II, which features upgraded software and hardware and higher performance than Generation I. - ecs-3: Generation III, which consists of high-performance instance types and is suitable for different business scenarios. - ecs-4: Generation IV, which consists of the low-latency instance types that can meet a wide variety of business requirements. - ecs-5: Generation V, which consists of enterprise-level instance types (such as g6, c6, and r6), Bare Metal Instance types (such as ebmg6, ebmg6e, and ebmc6), and storage enhanced instance types (such as g6e), and delivers quick response and higher performance.

Response parameters

Parameter	Type	Example	Description
RequestId	String	473469C7-AA6F-4DC5-B3DB-A3DC0DE3C83E	The ID of the request.
InstanceTypeFamilies	Array		An array consisting of InstanceTypeFamily data.
InstanceTypeFamilyId	String	ecs.g6	The ID of the instance family.
Generation	String	ecs-5	The generation of the instance family.

Examples

Sample requests

```
https://ecs.aliyuncs.com/?Action=DescribeInstanceTypeFamilies
&RegionId=cn-hangzhou
&Generation=ecs-5
&<Common request parameters>
```

Sample success responses

XML format

```
<DescribeInstanceTypeFamiliesResponse>
  <InstanceTypeFamilies>
    <InstanceTypeFamily>
      <InstanceTypeFamilyId>ecs.g6</InstanceTypeFamilyId>
      <Generation>ecs-5</Generation>
    </InstanceTypeFamily>
    <InstanceTypeFamily>
      <InstanceTypeFamilyId>ecs.ebmg6</InstanceTypeFamilyId>
      <Generation>ecs-5</Generation>
    </InstanceTypeFamily>
    <InstanceTypeFamily>
      <InstanceTypeFamilyId>ecs.ebmg6e</InstanceTypeFamilyId>
      <Generation>ecs-5</Generation>
    </InstanceTypeFamily>
    <InstanceTypeFamily>
      <InstanceTypeFamilyId>ecs.g6e</InstanceTypeFamilyId>
      <Generation>ecs-5</Generation>
    </InstanceTypeFamily>
    <InstanceTypeFamily>
      <InstanceTypeFamilyId>ecs.c6</InstanceTypeFamilyId>
      <Generation>ecs-5</Generation>
    </InstanceTypeFamily>
    <InstanceTypeFamily>
      <InstanceTypeFamilyId>ecs.r6</InstanceTypeFamilyId>
      <Generation>ecs-5</Generation>
    </InstanceTypeFamily>
    <InstanceTypeFamily>
      <InstanceTypeFamilyId>ecs.t6</InstanceTypeFamilyId>
      <Generation>ecs-5</Generation>
```

```

</InstanceTypeFamily>
<InstanceTypeFamily>
  <InstanceTypeFamilyId>ecs.hfc6</InstanceTypeFamilyId>
  <Generation>ecs-5</Generation>
</InstanceTypeFamily>
<InstanceTypeFamily>
  <InstanceTypeFamilyId>ecs.hfg6</InstanceTypeFamilyId>
  <Generation>ecs-5</Generation>
</InstanceTypeFamily>
<InstanceTypeFamily>
  <InstanceTypeFamilyId>ecs.hfr6</InstanceTypeFamilyId>
  <Generation>ecs-5</Generation>
</InstanceTypeFamily>
<InstanceTypeFamily>
  <InstanceTypeFamilyId>ecs.ebmc6</InstanceTypeFamilyId>
  <Generation>ecs-5</Generation>
</InstanceTypeFamily>
<InstanceTypeFamily>
  <InstanceTypeFamilyId>ecs.ebmr6</InstanceTypeFamilyId>
  <Generation>ecs-5</Generation>
</InstanceTypeFamily>
</InstanceTypeFamilies>
<RequestId>A66D039A-EC35-4130-B0D1-E9873C0742D2</RequestId>
</DescribeInstanceTypeFamiliesResponse>

```

JSON format

```

{
  "InstanceTypeFamilies": {
    "InstanceTypeFamily": [
      {
        "InstanceTypeFamilyId": "ecs.g6",
        "Generation": "ecs-5"
      },
      {
        "InstanceTypeFamilyId": "ecs.ebmg6",
        "Generation": "ecs-5"
      },
      {
        "InstanceTypeFamilyId": "ecs.ebmg6e",
        "Generation": "ecs-5"
      },
      {
        "InstanceTypeFamilyId": "ecs.g6e",
        "Generation": "ecs-5"
      },
      {
        "InstanceTypeFamilyId": "ecs.c6",
        "Generation": "ecs-5"
      },
    ]
  }
}

```

```
{
  "InstanceTypeFamilyId": "ecs.r6",
  "Generation": "ecs-5"
},
{
  "InstanceTypeFamilyId": "ecs.t6",
  "Generation": "ecs-5"
},
{
  "InstanceTypeFamilyId": "ecs.hfc6",
  "Generation": "ecs-5"
},
{
  "InstanceTypeFamilyId": "ecs.hfg6",
  "Generation": "ecs-5"
},
{
  "InstanceTypeFamilyId": "ecs.hfr6",
  "Generation": "ecs-5"
},
{
  "InstanceTypeFamilyId": "ecs.ebmc6",
  "Generation": "ecs-5"
},
{
  "InstanceTypeFamilyId": "ecs.ebmr6",
  "Generation": "ecs-5"
}
]
},
"RequestId": "A66D039A-EC35-4130-B0D1-E9873C0742D2"
}
```

Error codes

5.23. DescribeInstanceTypes

You can call this operation to query the instance types provided by ECS.

Description

The DescribeInstanceTypes operation is only used to query the configurations and performance of instance types. To query instance types that are available in a region, call the [DescribeAvailableResource](#) operation.

Debugging

OpenAPI Explorer automatically calculates the signature value. For your convenience, we recommend that you call this operation in OpenAPI Explorer. OpenAPI Explorer dynamically generates the sample code of the operation for different SDKs.

Request parameters

Parameter	Type	Required	Example	Description

Parameter	Type	Required	Example	Description
Action	String	Yes	DescribeInstanceTypes	The operation that you want to perform. Set the value to DescribeInstanceTypes.
InstanceTypeFamily	String	No	ecs.g6	The instance family to which the instance type belongs. For more information about valid values, see DescribeInstanceTypeFamilies . For more information, see Instance families .

Response parameters

Parameter	Type	Example	Description
InstanceTypes	Array of InstanceType		The collection of details about instance types.
InstanceType			
BaselineCredit	Integer	4	The baseline vCPU computing performance (overall performance of all vCPUs) of the t5 or t6 burstable instance family.
CpuCoreCount	Integer	8	The number of vCPUs.
EniIpv6AddressQuantity	Integer	1	The maximum number of IPv6 addresses for a single Elastic Network Interface (ENI).
EniPrivateIpAddressQuantity	Integer	6	The maximum number of private IP addresses for a single ENI.
EniQuantity	Integer	2	The maximum number of ENIs that can be attached to an instance.
EniTotalQuantity	Integer	0	 Note This parameter is in invitational preview and not available.
EniTrunkSupported	Boolean	false	 Note This parameter is in invitational preview and not available.
GPUAmount	Integer	2	The number of GPUs.
GPUSpec	String	NVIDIA V100	The GPU type.
InitialCredit	Integer	120	The initial vCPU credit value of the t5 or t6 burstable instance family.
InstanceBandwidthRx	Integer	1024000	The maximum inbound bandwidth of the internal network for the instance. Unit: Kbit/s.

Parameter	Type	Example	Description
InstanceBandwidthTx	Integer	1024000	The maximum outbound bandwidth of the internal network for the instance. Unit: Kbit/s.
InstanceFamilyLevel	String	EnterpriseLevel	The level of the instance family. Valid values: - EntryLevel - EnterpriseLevel - CreditEntryLevel. For more information, see Burstable instance families.
InstancePpsRx	Long	300000	The inbound packet forwarding rate of the internal network. Unit: pps
InstancePpsTx	Long	300000	The outbound packet forwarding rate of the internal network. Unit: pps
InstanceTypeFamily	String	ecs.g5	The instance family.
InstanceTypeId	String	ecs.g5.large	The ID of the instance type.
LocalStorageAmount	Integer	1	The number of local disks attached to the instance.
LocalStorageCapacity	Long	5000	The capacity of the local disk attached to the instance. Unit: GiB.
LocalStorageCategory	String	local_ssd_pro	The category of the local disk. For more information, see Local disks . Valid values: - local_hdd_pro: local SATA HDDs attached to instances of the d1ne and d1 instance families. - local_ssd_pro: local NVMe SSDs attached to instances of the i2, i2g, i1, ga1, and gn5 instance families.
MaximumQueueNumberPerEni	Integer	8	The maximum queue number per ENI.
MemorySize	Float	8.0	The memory size. Unit: GiB.
PrimaryEniQueueNumber	Integer	4	The default queue number of the primary ENI.
SecondaryEniQueueNumber	Integer	4	The default queue number of the secondary ENI.
TotalEniQueueQuantity	Integer	128	The maximum ENI queue number that the instance type supports.
RequestId	String	00827261-20B7-4562-83F2-4DF39876A45A	The ID of the request.

Examples

Sample requests

```
https://ecs.aliyuncs.com/?Action=DescribeInstanceTypes  
&InstanceTypeFamily=ecs.g6  
&<Common request parameters>
```

Sample success responses

XML format

```

<DescribeInstanceTypesResponse>
  <RequestId>CEC8A6BA-6805-4807-AB93-EB2E4B59EAF3</RequestId>
  <InstanceTypes>
    <InstanceType>
      <MemorySize>256</MemorySize>
      <InstancePpsTx>4000000</InstancePpsTx>
      <EniIpv6AddressQuantity>1</EniIpv6AddressQuantity>
      <PrimaryEniQueueNumber>32</PrimaryEniQueueNumber>
      <CpuCoreCount>64</CpuCoreCount>
      <TotalEniQueueQuantity>256</TotalEniQueueQuantity>
      <EniTotalQuantity>60</EniTotalQuantity>
      <EniTrunkSupported>true</EniTrunkSupported>
      <InstanceTypeFamily>ecs.g6</InstanceTypeFamily>
      <InstancePpsRx>4000000</InstancePpsRx>
      <EniQuantity>8</EniQuantity>
      <InstanceBandwidthRx>20480000</InstanceBandwidthRx>
      <GPUPAmount>0</GPUPAmount>
      <InstanceBandwidthTx>20480000</InstanceBandwidthTx>
      <SecondaryEniQueueNumber>32</SecondaryEniQueueNumber>
      <LocalStorageCategory></LocalStorageCategory>
      <GPUSpec></GPUSpec>
      <InstanceFamilyLevel>EnterpriseLevel</InstanceFamilyLevel>
      <InstanceTypeId>ecs.g6.16xlarge</InstanceTypeId>
      <EniPrivateIpAddressQuantity>20</EniPrivateIpAddressQuantity>
    </InstanceType>
    <InstanceType>
      <MemorySize>128</MemorySize>
      <InstancePpsTx>2000000</InstancePpsTx>
      <EniIpv6AddressQuantity>1</EniIpv6AddressQuantity>
      <PrimaryEniQueueNumber>16</PrimaryEniQueueNumber>
      <CpuCoreCount>32</CpuCoreCount>
      <TotalEniQueueQuantity>128</TotalEniQueueQuantity>
      <EniTotalQuantity>8</EniTotalQuantity>
      <EniTrunkSupported>false</EniTrunkSupported>
      <InstanceTypeFamily>ecs.g6</InstanceTypeFamily>
      <InstancePpsRx>2000000</InstancePpsRx>
      <EniQuantity>8</EniQuantity>
      <InstanceBandwidthRx>10240000</InstanceBandwidthRx>
      <GPUPAmount>0</GPUPAmount>
      <InstanceBandwidthTx>10240000</InstanceBandwidthTx>
      <SecondaryEniQueueNumber>16</SecondaryEniQueueNumber>
      <LocalStorageCategory></LocalStorageCategory>
      <GPUSpec></GPUSpec>
      <InstanceFamilyLevel>EnterpriseLevel</InstanceFamilyLevel>
      <InstanceTypeId>ecs.g6nv.8xlarge</InstanceTypeId>
      <EniPrivateIpAddressQuantity>20</EniPrivateIpAddressQuantity>
    </InstanceType>
  </InstanceTypes>
</DescribeInstanceTypesResponse>

```

JSON format

```
{
  "RequestId": "CEC8A6BA-6805-4807-AB93-EB2E4B59EAF3",
  "InstanceTypes": {
    "InstanceType": [
      {
        "MemorySize": 256,
        "InstancePpsTx": 4000000,
        "EniIpv6AddressQuantity": 1,
        "PrimaryEniQueueNumber": 32,
        "CpuCoreCount": 64,
        "TotalEniQueueQuantity": 256,
        "EniTotalQuantity": 60,
        "EniTrunkSupported": true,
        "InstanceTypeFamily": "ecs.g6",
        "InstancePpsRx": 4000000,
        "EniQuantity": 8,
        "InstanceBandwidthRx": 20480000,
        "GPUPAmount": 0,
        "InstanceBandwidthTx": 20480000,
        "SecondaryEniQueueNumber": 32,
        "LocalStorageCategory": "",
        "GPUSpec": "",
        "InstanceFamilyLevel": "EnterpriseLevel",
        "InstanceTypeId": "ecs.g6.16xlarge",
        "EniPrivateIpAddressQuantity": 20
      },
      {
        "MemorySize": 128,
        "InstancePpsTx": 2000000,
        "EniIpv6AddressQuantity": 1,
        "PrimaryEniQueueNumber": 16,
        "CpuCoreCount": 32,
        "TotalEniQueueQuantity": 128,
        "EniTotalQuantity": 8,
        "EniTrunkSupported": false,
        "InstanceTypeFamily": "ecs.g6",
        "InstancePpsRx": 2000000,
        "EniQuantity": 8,
        "InstanceBandwidthRx": 10240000,
        "GPUPAmount": 0,
        "InstanceBandwidthTx": 10240000,
        "SecondaryEniQueueNumber": 16,
        "LocalStorageCategory": "",
        "GPUSpec": "",
        "InstanceFamilyLevel": "EnterpriseLevel",
        "InstanceTypeId": "ecs.g6nv.8xlarge",
        "EniPrivateIpAddressQuantity": 20
      }
    ]
  }
}
```

```

    }
  }
}

```

5.24. ModifyInstanceAttribute

You can call this operation to modify the information about an ECS instance, such as the password, name, description, hostname, security group, and user data. If the instance is a burstable instance, you can also change its performance mode.

Description

If the response contains `{"OperationLocks": {"LockReason": "security"}}` when you query information about an instance, the instance is locked for security reasons and all operations are prohibited on the instance.

When you call this operation, take note of the following points:

- Modify the hostname (`HostName`): You must restart the instance by using the ECS console or by calling the `RebootInstance` operation for the new hostname to take effect. For more information, see [Restart an instance](#) and [RebootInstance](#). The modification does not take effect if you restart the instance within the operating system.
- Reset the password (`Password`):
 - The instance cannot be in the `Starting` (`Starting`) state.
 - You must restart the instance by using the ECS console or by calling the `RebootInstance` operation for the new password to take effect. For more information, see [Restart an instance](#) and [RebootInstance](#). The modification does not take effect if you restart the instance within the operating system.
- Modify user data (`UserData`):
 - The ECS instance must be in the `Stopped` (`Stopped`) state.
 - The instance must meet the limits of user data. For more information, see [Prepare user data](#).
- Change the security group (`SecurityGroupIds.N`):
 - You can switch an ECS instance to a security group of a different type.
If you want to switch an ECS instance to a security group of a different type, you must understand the differences between the rule configurations of the two security group types to avoid impacts on the instance network.
 - The security groups of instances in the classic network cannot be changed.
For more information, see the description of the `SecurityGroupIds.N` parameter.
- Modify the queue number of the primary elastic network interface (ENI) (`NetworkInterfaceQueueNumber`):
 - The instance must be in the `Stopped` (`Stopped`) state.
 - The new queue number cannot exceed the maximum queue number of one ENI allowed for the instance type.
 - The total queue number of all ENIs on the instance cannot exceed the queue quota allowed for the instance type. To obtain the maximum queue number of one ENI and queue quota allowed for an instance type, you can call the [DescribeInstanceTypes](#) operation to query the `MaximumQueueNumberPerEni` and `TotalEniQueueQuantity` fields.
 - If you set this parameter to -1, the value is reset to the default queue number of the primary ENI allowed for the instance type. To obtain the default queue number of the primary ENI allowed for an instance type, you can call the [DescribeInstanceTypes](#) operation to query the `PrimaryEniQueueNumber` field.

Debugging

OpenAPI Explorer automatically calculates the signature value. For your convenience, we recommend that you call this operation in OpenAPI Explorer. OpenAPI Explorer dynamically generates the sample code of the operation for different SDKs.

Request parameters

Parameter	Type	Required	Example	Description

Parameter	Type	Required	Example	Description
Action	String	Yes	ModifyInstanceAttribute	The operation that you want to perform. Set the value to ModifyInstanceAttribute.
InstanceId	String	Yes	i-bp67acfmxazb4ph****	The ID of the instance.
Password	String	No	Test123456	The password of the instance. The password must be 8 to 30 characters in length and contain at least three of the following character types: uppercase letters, lowercase letters, digits, and special characters. Special characters include <pre>() ` ~ ! @ # \$ % ^ & * - _ + = { } [] ; ' < > , . ? /</pre> Passwords of Windows instances cannot start with a forward slash (/).  Note If the Password parameter is specified, we recommend that you send requests over HTTPS to protect your password.
HostName	String	No	testHostName	The hostname of the instance. After the hostname is modified, call the RebootInstance operation for the new hostname to take effect. - For Windows Server, the hostname must be 2 to 15 characters in length and can contain letters, digits, and hyphens (-). It cannot start or end with a hyphen (-), contain consecutive hyphens (-), or contain only digits. - For other operating systems such as Linux, the hostname must be 2 to 64 characters in length. You can use periods (.) to separate a hostname into multiple segments. Each segment can contain letters, digits, and hyphens (-). The hostname cannot contain consecutive periods (.) or hyphens (-). It cannot start or end with a period (.) or a hyphen (-).
InstanceName	String	No	testInstanceName	The name of the instance. The name must be 2 to 128 characters in length and can contain letters, digits, colons (:), underscores (_), and hyphens (-). It must start with a letter and cannot start with http:// or https://.
Description	String	No	testInstanceDescription	The description of the instance. The description must be 2 to 256 characters in length and cannot start with http:// or https://. This parameter is empty by default.

Parameter	Type	Required	Example	Description
UserData	String	No	ZWNobyBoZWxsbyBlY3Mh	The user data of the instance. User data is encoded in Base64. The size of the user data must be no greater than 16 KB before it is encoded in Base64. User data is imported in plaintext. We recommend that you do not include confidential information such as passwords and private keys in the user data. If confidential information is required, we recommend that you encrypt the confidential information and encode it in Base64 before you import the confidential information. You can then decrypt the information within your ECS instance in the same mode after the information is passed.
Recyclable	Boolean	No	false	Specifies whether the instance can be recycled.
CreditSpecification	String	No	Standard	The performance mode of the burstable instance. Valid values: - Standard: the standard mode. For more information, see the "Standard mode" section in Burstable instances. - Unlimited: the unlimited mode. For more information, see the "Unlimited mode" section in Burstable instances. This parameter is empty by default.
DeletionProtection	Boolean	No	false	The release protection property of the instance. It specifies whether you can use the ECS console or call the DeleteInstance operation to manually release the instance. This parameter is empty by default.  Note This parameter is applicable only to pay-as-you-go instances. It can protect instances against only manual releases, but not system releases.

Parameter	Type	Required	Example	Description
SecurityGroupIds.N	RepeatList	No	sg-bp15ed6xe1yxeycg7o****	The ID of replacement security group N. - All security group IDs must be unique. - The instance is moved from the current security groups to the replacement security groups. If you want the instance to remain in the current security groups, you must add the IDs of the current security groups to the list. - You can move the instance to security groups of a different type. However, the list cannot contain the IDs of both basic and advanced security groups at the same time. - The specified security group and instance must belong to the same VPC. - The valid values of N are based on the maximum number of security groups to which an instance can belong. For more information, see the "Security group limits" section of the Limits topic. - New security groups become valid for corresponding instances after a short latency.
NetworkInterfaceQueueNumber	Integer	No	8	The queue number of the primary ENI.

Response parameters

Parameter	Type	Example	Description
RequestId	String	473469C7-AA6F-4DC5-B3DB-A3DC0DE3C83E	The ID of the request.

Examples

Sample requests

```
https://ecs.aliyuncs.com/?Action=ModifyInstanceAttribute
&InstanceId=i-bp67acfmazb4ph****
&Action=ModifyInstanceAttribute
&CreditSpecification=Standard
&DeletionProtection=false
&Description=testInstanceDescription
&HostName=testHostName
&InstanceName=testInstanceName
&Password=Test123456
&SecurityGroupIds.1=sg-bp15ed6xe1yxeycg7o****
&SecurityGroupIds.2=sg-bp15ed6xe1yxeycg7p****
&SecurityGroupIds.3=sg-bp15ed6xe1yxeycg7q****
&<Common request parameters>
```

Sample success responses

XML format

```
<ModifyInstanceAttributeResponse>
  <RequestId>473469C7-AA6F-4DC5-B3DB-A3DC0DE3C83E</RequestId>
</ModifyInstanceAttributeResponse>
```

JSON format

```
{
  "RequestId": "473469C7-AA6F-4DC5-B3DB-A3DC0DE3C83E"
}
```

Error codes

HTTP status code	Error code	Error message	Description
400	InvalidInstanceName.Malformed	The specified parameter "InstanceName" is not valid.	The error message returned because the specified InstanceName parameter is invalid. The name must be 2 to 128 characters in length and can contain letters, digits, periods (.), underscores (_), and hyphens (-). It must start with a letter and cannot start with http:// or https://.
400	InvalidDescription.Malformed	The specified parameter "Description" is not valid.	The error message returned because the specified Description parameter is invalid. The description must be 2 to 256 characters in length and cannot start with http:// or https://.
400	InvalidHostPassword.Malformed	The specified parameter "Password" is not valid.	The error message returned because the specified Password parameter is invalid.
400	InvalidHostName.Malformed	The specified parameter "HostName" is not valid.	The error message returned because the specified HostName parameter is invalid.
403	IncorrectInstanceState	The current status of the resource does not support this operation.	The error message returned because the operation is not supported while the resource is in the current state.
403	InstanceLockedForSecurity	The specified operation is denied as your instance is locked for security reasons.	The error message returned because the operation is not supported while the instance is locked for security reasons.
404	InvalidInstanceId.NotFound	The specified InstanceId does not exist.	The error message returned because the specified InstanceId parameter does not exist. Check whether the instance ID is correct.
404	InvalidSecurityGroupId.NotFound	The specified SecurityGroupId does not exist.	The error message returned because the specified SecurityGroupId parameter does not exist in this account. Check whether the security group ID is correct.
403	OperationDenied	The instance amount in the specified SecurityGroup reach its limit.	The error message returned because the maximum number of instances that can be added to the specified security group has been reached.

HTTP status code	Error code	Error message	Description
403	OperationDenied	The current status of the resource does not support this operation.	The error message returned when the operation is not supported while the resource is in the current state.
400	InvalidPassword.Malformed	The specified parameter "Password" is not valid.	The error message returned because the specified Password parameter is invalid.
500	InternalError	The request processing has failed due to some unknown error.	The error message returned because an internal error has occurred. Try again later. If the problem persists, submit a ticket.
403	InvalidUserData.Forbidden	User not authorized to input the parameter "UserData" please apply for permission "UserData"	The error message returned because you are not authorized to configure the UserData parameter. Apply for the permissions first.
400	InvalidUserData.SizeExceeded	The specified parameter "UserData" exceeds the size.	The error message returned because the size of user data specified by the UserData parameter exceeds the limit.
400	InvalidUserData.NotSupported	The specified parameter "UserData" only support the vpc and IoOptimized Instance.	The error message returned because the specified UserData parameter is not supported. UserData is supported only in VPC-type and I/O optimized instances.
400	ImageNotSupportCloudInit	The specified image does not support cloud-init.	The error message returned because cloud-init is not supported by the specified image.
400	ChargeTypeViolation	Pay-As-You-Go instances do not support this operation.	The error message returned because the operation is not supported by pay-as-you-go instances. Check the billing method of your instance.
400	InvalidParameter.RecycleBin	You do not have permission to set recyclable properties.	The error message returned when you are not authorized to perform this operation.
400	InvalidParameter.CreditSpecification	The specified CreditSpecification is not supported in this region.	The error message returned because the specified credit policy is not supported in the region.
400	InvalidInstanceStatus.CreditSpecRestricted	The current status of the resource does not support this operation.	The error message returned because the operation is not supported while the resource is in the current state.
400	InvalidInstanceStatus.NotRunning	The current status of the resource is invalid, you can only do this operation when instance is running.	The error message returned because the operation is not supported while the instance is in the current state. Try again when the instance is in the Running state.
404	Credit.NotFound	The specified credit information does not exist.	The error message returned because the specified credit information does not exist.
500	InternalError	The request processing has failed due to some unknown error, exception or failure.	The error message returned because an internal error has occurred. Try again later. If the problem persists, submit a ticket.

HTTP status code	Error code	Error message	Description
403	InvalidUser.Unauthorized	The user is not authorized	The error message returned because you are not authorized to perform this operation.
403	SecurityGroupInstanceLimitExceed	%s	The error message returned because the maximum number of instances in the specified security group has been reached.
403	InstanceNotInSecurityGroup	The instance not in the group.	The error message returned because the specified instance does not belong to the security group.
403	InvalidOperation.InvalidRegion	%s	The error message returned because the specified RegionId parameter is invalid.
400	InvalidParameter	The specified parameter is not valid.	The error message returned because a specified parameter is invalid.
403	OperationDenied	The specified Image is disabled or is deleted.	The error message returned because the specified image is disabled or deleted.
400	InvalidOperation.InvalidEcsState	%s	The error message returned because the operation is not supported while the instance is in the current state.

5.25. ModifyInstanceVncPasswd

You can call this operation to modify the VNC password of an instance.

Description

- The password must be six characters in length and can contain only uppercase letters, lowercase letters, and digits.
- The new password takes effect based on the following situations:
 - For an I/O optimized instance, the new password takes effect immediately.
 - For a non-I/O optimized instance, you must restart the instance in the console or call the [RebootInstance](#) operation for the new password to take effect. For more information, see [Restart an instance](#).

Debugging

OpenAPI Explorer automatically calculates the signature value. For your convenience, we recommend that you call this operation in OpenAPI Explorer. OpenAPI Explorer dynamically generates the sample code of the operation for different SDKs.

Request parameters

Parameter	Type	Required	Example	Description
Action	String	Yes	ModifyInstanceVncPasswd	The operation that you want to perform. If you use a custom HTTP URL or HTTPS URL to make an API request, you must specify the <code>Action</code> parameter. Set the value to <code>ModifyInstanceVncPasswd</code> .
InstanceId	String	Yes	i-bp67acfmxazb4ph***	The ID of the instance.

Parameter	Type	Required	Example	Description
RegionId	String	Yes	cn-hangzhou	The region ID of the instance. You can call the DescribeRegions operation to query the most recent region list.
VncPassword	String	Yes	Dowe86	The new VNC password of the instance.

Response parameters

Parameter	Type	Example	Description
RequestId	String	473469C7-AA6F-4DC5-B3DB-A3DC0DE3C83E	The ID of the request.

Examples

Sample requests

```
https://ecs.aliyuncs.com/?Action=ModifyInstanceVncPasswd
&RegionId=cn-hangzhou
&InstanceId=i-bp67acfmazb4ph***
&VncPassword=Dowe86
&<Common request parameters>
```

Sample success responses

XML format

```
<ModifyInstanceVncPasswdResponse>
  <RequestId>FDB6C963-9CE8-4B7F-BCA3-845F6BD29AFC</RequestId>
</ModifyInstanceVncPasswdResponse>
```

JSON format

```
{
  "RequestId": "FDB6C963-9CE8-4B7F-BCA3-845F6BD29AFC"
}
```

Error codes

HTTP status code	Error code	Error message	Description
404	InvalidInstanceId.NotFound	The specified InstanceId does not exist.	The error message returned because the specified InstanceId parameter does not exist.
404	InvalidRegionId.NotFound	The specified RegionId does not exist.	The error message returned because the specified RegionId parameter does not exist.
403	IncorrectInstanceStatus	The current status of the resource does not support this operation.	The error message returned because the operation is not supported while the resource is in the current state.
400	IncorrectVncPassword.Malformed	The specified parameter VncPassword is not valid.	The error message returned because the specified VncPassword parameter is invalid.

HTTP status code	Error code	Error message	Description
404	NoSuchResource	The specified resource is not found.	The error message returned because the specified resource does not exist.

5.26. ModifyInstanceAutoReleaseTime

You can call this operation to set or cancel the auto-release time for a pay-as-you-go instance. Exercise caution when you set the auto-release time because the instance will be automatically released upon expiration.

Debugging

OpenAPI Explorer automatically calculates the signature value. For your convenience, we recommend that you call this operation in OpenAPI Explorer. OpenAPI Explorer dynamically generates the sample code of the operation for different SDKs.

Request parameters

Parameter	Type	Required	Example	Description
InstanceId	String	Yes	i-instanceid1	The ID of the instance to be automatically released.
Action	String	Yes	ModifyInstanceAutoReleaseTime	The operation that you want to perform. If you use a custom HTTP URL or HTTPS URL to make an API request, you must specify the <code>Action</code> parameter. Set the value to <code>ModifyInstanceAutoReleaseTime</code> .
AutoReleaseTime	String	No	2018-01-01T01:02:03Z	The time scheduled for the instance to be automatically released. Specify the time in the ISO 8601 standard in the yyyy-MM-ddTHH:mm:ssZ format. The time must be in UTC. - If the value of the field (<code>ss</code>) is not <code>00</code> ,the field is automatically set to the start time of the current minute (<code>mm</code>). - The minimum release time must be at least 30 minutes later than the current time. - The maximum release time must be at most three years from the current time. If <code>AutoReleaseTime</code> is not specified, the automatic release feature is disabled and the ECS instance will not be automatically released.
RegionId	String	No	cn-hangzhou	The region ID of the instance. You can call the DescribeRegions operation to query the most recent region list.

Response parameters

Parameter	Type	Example	Description
RequestId	String	473469C7-AA6F-4DC5-B3DB-A3DC0DE3C83E	The ID of the request.

Examples

Sample requests

```
https://ecs.aliyuncs.com/?Action=ModifyInstanceAutoReleaseTime
&InstanceId=i-instance1
&<Common request parameters>
```

Sample success responses

XML format

```
<ModifyInstanceAutoReleaseTimeResponse>
  <RequestId>04F0F334-1335-436C-A1D7-6C044FE73368</RequestId>
</ModifyInstanceAutoReleaseTimeResponse>
```

JSON format

```
{
  "RequestId": "C0003E8B-B930-4F59-ADC0-0E209A9012A8"
}
```

Error codes

HTTP status code	Error code	Error message	Description
400	MissingParameter	InstanceId should not be null.	The error message returned because the InstanceId parameter is not specified.
400	InvalidAutoReleaseTime.Malformed	The specified parameter autoReleaseTime is not valid.	The error message returned because the specified AutoReleaseTime parameter is invalid. Specify the time in the ISO 8601 standard in the yyyy-MM-ddTHH:mm:ssZ format. The time must be in UTC.
500	InternalError	The request processing has failed due to some unknown error, exception or failure.	The error message returned because an unknown error has occurred.
400	UnsupportedParameter	The parameters is unsupported.	The error message returned because the specified parameter is invalid.
403	ChargeTypeViolation	The operation is not permitted due to charge type of the instance.	The error message returned because the billing method of the instance does not support this operation.
404	NoSuchResource	The specified resource is not found.	The error message returned because the specified resource does not exist.

5.27. ModifyInstanceAutoRenewAttribute

You can call this operation to configure auto-renewal for one or more subscription instances. To reduce the maintenance workload when an instance expires, you can configure auto-renewal for subscription ECS instances.

Description

- The payment for auto-renewal is first made at 08:00:00 (UTC+8) nine days before the instance expires.
- If the payment fails for the first time, this process repeats itself each day until the payment is made or the instance is

locked after the nine-day period ends. You must confirm that your payment account has sufficient balance or credit.

Debugging

OpenAPI Explorer automatically calculates the signature value. For your convenience, we recommend that you call this operation in OpenAPI Explorer. OpenAPI Explorer dynamically generates the sample code of the operation for different SDKs.

Request parameters

Parameter	Type	Required	Example	Description
Action	String	Yes	ModifyInstanceAutoRenewAttribute	The operation that you want to perform. Set the value to ModifyInstanceAutoRenewAttribute .
InstanceId	String	Yes	i-bp67acfmazb4ph***, i-bp67acfmazb4pi***	The ID of the instance. A maximum of 100 instance IDs can be specified at a time. Separate multiple instance IDs with commas (,).
RegionId	String	Yes	cn-hangzhou	The region ID of the instance. You can call the DescribeRegions operation to query the most recent region list.
Duration	Integer	No	1	The auto-renewal period. - If PeriodUnit is set to year, valid values of Duration are 1, 2, and 3. - If PeriodUnit is set to month, valid values of Duration are 1, 2, 3, 6, and 12.
AutoRenew	Boolean	No	true	Specifies whether to enable auto-renewal. Default value: false.
RenewalStatus	String	No	AutoRenewal	The auto-renewal status of the instance. Valid values: AutoRenewal: Auto-renewal is enabled for the instance. Normal: Auto-renewal is disabled for the instance. NotRenewal: The instance will not be renewed upon expiration. The system no longer sends an expiration reminder, but sends only a non-renewal reminder three days before the expiration date. You can change the renewal status of an instance from NotRenewal to Normal (Normal), and then manually renew the instance or set the RenewalStatus parameter to AutoRenewal.  Note RenewalStatus takes precedence over AutoRenew. If you do not specify the RenewalStatus parameter, the AutoRenew parameter is used by default.

Parameter	Type	Required	Example	Description
PeriodUnit	String	No	month	The unit of the auto-renewal period. The parameter value is the unit of the <code>Duration</code> value. Default value: month. Valid values: - month - year

Response parameters

Parameter	Type	Example	Description
RequestId	String	473469C7-AA6F-4DC5-B3DB-A3DC0DE3C83E	The ID of the request.

Examples

Sample requests

```
https://ecs.aliyuncs.com/?Action=ModifyInstanceAutoRenewAttribute
&RegionId=cn-hangzhou
&InstanceId=i-bp67acfmazb4ph***,i-bp67acfmazb4pi***
&Duration=1
&PeriodUnit=month
&AutoRenew=True
&<Common request parameters>
```

Sample success responses

XML format

```
<ModifyInstanceAutoRenewAttributeResponse>
  <RequestId>04F0F334-1335-436C-A1D7-6C044FE73368</RequestId>
</ModifyInstanceAutoRenewAttributeResponse>
```

JSON format

```
{
  "RequestId": "04F0F334-1335-436C-A1D7-6C044FE73368"
}
```

Error codes

HTTP status code	Error code	Error message	Description
403	MissingParameter.InstanceId	InstanceId should not be null.	The error message returned because the InstanceId parameter is not specified.
403	InvalidParameter.TotalInstanceIds	InstanceId should be less than 100.	The error message returned because the total number of instances has exceeded 100.
403	InvalidParameter.InvalidInstanceId	%s	The error message returned because the specified InstanceId parameter is invalid.

HTTP status code	Error code	Error message	Description
403	IncorrectInstanceStatus	The current status of the resource does not support this operation.	The error message returned because the operation is not supported while the resource is in the current state.
403	ChargeTypeViolation	Pay-As-You-Go instances do not support this operation.	The error message returned because the pay-as-you-go billing method does not support this operation.
403	InvalidParameter.Duration	%s	The error message returned because the specified Duration parameter is invalid.
403	InvalidParameter.RenewalStatus	%s	The error message returned because the specified RenewalStatus parameter is invalid.
403	InvalidPeriodUnit.ValueNotSupported	The specified parameter PeriodUnit is not valid.	The error message returned because the specified PeriodUnit parameter is invalid.
500	InternalServerError	The request processing has failed due to some unknown error.	The error message returned because an internal error has occurred. Try again later. If the problem persists, submit a ticket.
403	InvalidPeriod.StarterPackage	This instance was created by using a Starter Package plan and can only be renewed monthly, not yearly.	The error message returned because the instance was created by using a Starter Package plan and can only be renewed on a monthly basis.

5.28. ModifyInstanceChargeType

You can call this operation to change the billing method of one or more ECS instances. You can change the billing methods of instances between pay-as-you-go and subscription, or change the billing method of all data disks attached to an instance from pay-as-you-go to subscription.

Description

Before you call this operation, make sure that you have fully understood the billing methods and pricing schedule of ECS.

When you call this operation, take note of the following items:

- The instance must be in the **Running** (`Running`) or **Stopped** (`Stopped`) state and has no overdue payments.
- **Change the billing method from subscription to pay-as-you-go:**
 - Whether you can change the billing method depends on your ECS usage.
 - After you change the billing method from subscription to pay-as-you-go, the new billing method will take effect for the entire lifecycle of the instance. The price difference is refunded to the payment account you used. Price differences of coupon purchases are not refunded.
 - **Refund rule:** You can apply for only a certain quota of refund within a month, and the refund quota that is not used within the current month will not be accumulated to the next month. After you have used up the refund quota for the current month, you can only change the billing method when the next month arrives. The refund amount incurred when you change the billing method is calculated based on the following formula: **Number of vCPUs × (Number of remaining days × 24 ± Number of remaining or elapsed hours).**
- **Change the billing method from pay-as-you-go to subscription:**
 - You can change all pay-as-you-go data disks attached to an instance to subscription ones.
 - This operation cannot be called if the automatic release time has been set for a pay-as-you-go instance.

Debugging

OpenAPI Explorer automatically calculates the signature value. For your convenience, we recommend that you call this operation in OpenAPI Explorer. OpenAPI Explorer dynamically generates the sample code of the operation for different SDKs.

Request parameters

Parameter	Type	Required	Example	Description
Action	String	Yes	ModifyInstanceChargeType	The operation that you want to perform. Set the value to ModifyInstanceChargeType.
InstanceIds	String	Yes	["i-bp67acfmxb4p****", "i-bp67acfmxb4d****"]	The IDs of the instances. The value can be a JSON array that consists of up to 20 instance IDs. Separate multiple instance IDs with commas (,).
RegionId	String	Yes	cn-hangzhou	The region ID of the instance. You can call the DescribeRegions operation to query the most recent region list.
Period	Integer	No	1	The renewal period of the subscription instance. If the ECS instance is hosted on a dedicated host, the renewal period of the ECS instance cannot exceed the subscription period of the dedicated host. Valid values: When the <code>PeriodUnit</code> parameter is set to <code>Month</code>, valid values of the <code>Period</code> parameter are 1, 2, 3, 4, 5, 6, 7, 8, 9, 12, 24, 36, 48, and 60.
PeriodUnit	String	No	Month	The unit of the renewal duration (<code>Period</code>). Default value: <code>Month</code> . Valid values: <code>Month</code>
IncludeDataDisks	Boolean	No	false	Specifies whether to change all pay-as-you-go data disks attached to the instance to subscription ones. Default value: <code>false</code> .
DryRun	Boolean	No	false	Specifies whether to check the validity of the request without actually making the request. Default value: <code>false</code> . Valid values: <code>true</code>: The validity of the request is checked but resources are not queried. The system checks whether your AccessKey pair is valid, whether RAM users are authorized, and whether required parameters are specified. If the check fails, the corresponding error code is returned. If the check succeeds, the <code>DryRunOperation</code> error code is returned. <code>false</code>: The validity of the request is checked. If the check succeeds, a 2XX HTTP status code is returned and the request is made.

Parameter	Type	Required	Example	Description
AutoPay	Boolean	No	false	Specifies whether to enable automatic payment. Default value: true. Valid values: - true: Automatic payment is enabled. Make sure that you have sufficient balance in your account. Otherwise, your order becomes invalid and must be canceled. - false: An order is generated but no payment is made.  Note If your account balance is insufficient, you can set the AutoPay parameter to false to prevent your order from becoming invalid. Then, you can log on to the ECS console to pay for the order.
InstanceChargeType	String	No	PrePaid	The new billing method. Default value: PrePaid. Valid values: - PrePaid: changes the billing method from pay-as-you-go to subscription. - PostPaid: changes the billing method from subscription to pay-as-you-go.
ClientToken	String	No	123e4567-e89b-12d3-a456-426655440000	The client token that is used to ensure the idempotence of the request. You can use the client to generate the value, but you must ensure that it is unique among different requests. The ClientToken value can only contain ASCII characters and cannot exceed 64 characters in length. For more information, see How to ensure idempotence.
IsDetailFee	Boolean	No	false	Specifies whether to return cost details of the order when the billing method is changed from subscription to pay-as-you-go. Default value: false.

Response parameters

Parameter	Type	Example	Description
FeeOfInstances	Array		An array consisting of FeeOfInstance data.
FeeOfInstance			
Currency	String	CNY	The unit of currency for the bill.
Fee	String	0	The cost value.
InstanceId	String	i-bp67acfmazb4p****	The ID of the instance.
OrderId	String	20413515388****	The ID of the generated order.

Parameter	Type	Example	Description
RequestId	String	B61C08E5-403A-46A2-96C1-F7B1216DB10C	The ID of the request.

Examples

Sample requests

```
https://ecs.aliyuncs.com/?Action=ModifyInstanceChargeType
&RegionId=cn-hangzhou
&InstanceIds=["i-bp67acfmazb4p****","i-bp67acfmazb4d****"]
&Period=1
&PeriodUnit=Month
&AutoPay=false
&IncludeDataDisks=false
&ClientToken=123e4567-e89b-12d3-a456-426655440000
&<Common request parameters>
```

Sample success responses

XML format

```
<ModifyInstanceChargeTypeResponse>
  <RequestId>B61C08E5-403A-46A2-96C1-F7B1216DB10C</RequestId>
  <OrderId>20413515388****</OrderId>
  <FeeOfInstances>
    <FeeOfInstance>
      <Fee>0</Fee>
      <InstanceId>i-bp67acfmazb4p****</InstanceId>
      <Currency>CNY</Currency>
    </FeeOfInstance>
    <FeeOfInstance>
      <Fee>0</Fee>
      <InstanceId>i-bp67acfmazb4d****</InstanceId>
      <Currency>CNY</Currency>
    </FeeOfInstance>
  </FeeOfInstances>
</ModifyInstanceChargeTypeResponse>
```

JSON format

```
{
  "RequestId": "B61C08E5-403A-46A2-96C1-F7B1216DB10C",
  "OrderId": "20413515388****",
  "FeeOfInstances": {
    "FeeOfInstance": [
      {
        "Fee": "0",
        "InstanceId": "i-bp67acfmxyzb4p****",
        "Currency": "CNY"
      },
      {
        "Fee": "0",
        "InstanceId": "i-bp67acfmxyzb4d****",
        "Currency": "CNY"
      }
    ]
  }
}
```

Error codes

HTTP status code	Error code	Error message	Description
400	InvalidParameter.InstanceIds	The specified InstanceIds are invalid.	The error message returned because the specified InstanceIds parameter is invalid.
400	InvalidParameter	%s	The error message returned because the specified parameter is invalid.
400	InvalidStatus.ValueNotSupported	%s	The error message returned because the operation is not supported while the resource is in the current state.
400	InvalidInstanceChargeType.ValueNotSupported	%s	The error message returned because the specified InstanceChargeType parameter is not supported. Check related information and try again.
400	ExpiredInstance	The specified instance has expired.	The error message returned because the specified instance has expired.
403	InvalidInstance.TempBandwidthUpgrade	Cannot switch to Pay-As-You-Go during the period of temporary bandwidth upgrade.	The error message returned because you cannot change the billing method to pay-as-you-go during temporary bandwidth upgrade.
400	InstancesIdQuotaExceed	The maximum number of Instances is exceeded.	The error message returned because the maximum number of instances has been reached.
400	InvalidClientToken.ValueNotSupported	The ClientToken provided is invalid.	The error message returned because the specified ClientToken parameter is invalid.

HTTP status code	Error code	Error message	Description
400	InvalidInternetChargeType.ValueNotSupported	%s	The error message returned because the specified InstanceChargeType parameter is not supported. Check whether the parameter is correct.
403	InvalidInstanceType.ValueNotSupported	The specified InstanceType does not exist or beyond the permitted range.	The error message returned because the specified instance type does not exist or you are not authorized to manage instances of this instance type.
403	InstanceType.Offline	%s	The error message returned because the instance type is retired or instances of this instance type are insufficient.
500	InternalError	The request processing has failed due to some unknown error, exception or failure.	The error message returned because an internal error has occurred. Try again later. If the problem persists, submit a ticket.
400	ReleaseTimeHaveBeenSet	The specified instance has been set released time.	The error message returned because the automatic release time has been set for the specified instance.
403	InvalidAccountStatus.NotEnoughBalance	Your account does not have enough balance.	The error message returned because your account balance is insufficient. Add funds to your account before you proceed.
403	Account.Arrearage	Your account has an outstanding payment.	The error message returned because you have overdue payments in your account.
400	Throttling	Request was denied due to request throttling, please try again after 5 minutes.	The error message returned because your request is throttled. Try again five minutes later.
403	InvalidParameter.NotMatch	%s	The error message returned because the specified parameter is invalid. Check whether the parameter conflicts with another parameter.
403	InvalidAction	%s	The error message returned because this operation is invalid.
400	Throttling	%s	The error message returned because the request is denied due to request throttling.
400	QuotaExceed.AfterpayInstance	The maximum number of Pay-As-You-Go instances is exceeded: %s	The error message returned because the pay-as-you-go instances of the specified instance type are insufficient. Reduce the number of instances to be created.
400	InvalidParameter.Bandwidth	%s	The error message returned because the specified bandwidth is invalid.
400	InvalidPeriod.UnitMismatch	The specified Period must be correlated with the PeriodUnit.	The error message returned because the specified Period parameter is not associated with PeriodUnit.

HTTP status code	Error code	Error message	Description
400	InvalidImageType.NotSupported	%s	The error message returned because the specified image type is invalid. Check whether this image type is supported in the region.
400	InvalidPeriod.ExceededDedicatedHost	Instance expired date can't exceed dedicated host expired date.	The error message returned because the expiration date of the instance is later than that of the dedicated host.
400	InvalidMarketImageChargeType.NotSupport	The specified chargeType of marketImage is unsupported.	The error message returned because the billing method of the Alibaba Cloud Marketplace image is not supported.
403	QuotaExceed.PostPaidDisk	Living postPaid disks quota exceeded.	The error message returned because the maximum number of pay-as-you-go disks has been reached.
403	ImageNotSupportInstanceType	The specified instanceType is not supported by instance with marketplace image.	The error message returned because the specified Alibaba Cloud Marketplace image does not support the instance type.
403	InvalidInstanceType.PhasedOut	This instanceType is no longer offered.	The error message returned because the specified instance type is no longer available.
400	InvalidSystemDiskCategory.ValueNotSupported	%s	The error message returned because the operation is not applicable to the specified system disk category.
500	InternalServerError	The request processing has failed due to some unknown error.	The error message returned because an internal error has occurred. Try again later. If the problem persists, submit a ticket.
403	RealNameAuthenticationError	Your account has not passed the real-name authentication yet.	The error message returned because you have not completed real-name verification. Complete real-name verification and try again.

5.29. ModifyInstanceSpec

You can call this operation to change the instance type and public bandwidth of a pay-as-you-go instance.

Description

For more information about the SDK for Python used to change resource configurations, see [Query available resources for configuration changes](#).

When you call this operation, take note of the following points:

- The account must have no overdue payments.
- You can change the public bandwidth only when the instance is in the **Running** (`Running`) or **Stopped** (`Stopped`) state.
- Before you change the instance type of the pay-as-you-go instance, you can call the [DescribeResourcesModification](#) operation to query the instance types to which you can change.
- You can change the instance type only when the instance is in the **Stopped** (`Stopped`) state.
- You can only change either the instance type or the public bandwidth each time.
- After a successful modification, you must wait five minutes before you can initiate another modification.

Debugging

OpenAPI Explorer automatically calculates the signature value. For your convenience, we recommend that you call this operation in OpenAPI Explorer. OpenAPI Explorer dynamically generates the sample code of the operation for different SDKs.

Request parameters

Parameter	Type	Required	Example	Description
Action	String	Yes	ModifyInstanceSpec	The operation that you want to perform. If you use a custom HTTP URL or HTTPS URL to make an API request, you must specify the <code>Action</code> parameter. Set the value to <code>ModifyInstanceSpec</code> .
InstanceId	String	Yes	i-bp67acfmazb4ph***	The ID of the specified instance.
InstanceType	String	No	ecs.g5.large	The target instance type. For more information, see Instance type families or call the <code>DescribeInstanceTypes</code> operation to query the most recent instance type list.
InternetMaxBandwidthOut	Integer	No	10	The maximum outbound public bandwidth. Unit: Mbit/s. Valid values: 0 to 100.
InternetMaxBandwidthIn	Integer	No	10	The maximum inbound public bandwidth. Unit: Mbit/s. Valid values: - When the purchased outbound bandwidth is less than 10 Mbit/s: 1 to 10. Default value: 10. - When the purchased outbound bandwidth is greater than 10 Mbit/s: 1 to the value of <code>InternetMaxBandwidthOut</code>. The <code>InternetMaxBandwidthOut</code> value is used by default.
Temporary.StartTime	String	No	2017-12-05T22:40:00Z	The start time of the temporary bandwidth upgrade. Specify the time in the ISO 8601 standard in the yyyy-MM-ddTHH:mm:ssZ format. The time must be in UTC.
Temporary.EndTime	String	No	2017-12-05T22:40:00Z	The end time of the temporary bandwidth upgrade. Specify the time in the ISO 8601 standard in the yyyy-MM-ddTHH:mm:ssZ format. The time must be in UTC.
Temporary.InternetMaxBandwidthOut	Integer	No	50	The maximum outbound public bandwidth after temporary bandwidth upgrade. Valid values: 1 to 100.  Note We recommend that you use other parameters to ensure future compatibility.
Async	Boolean	No	false	Specifies whether to submit an asynchronous request. Default value: false.

Parameter	Type	Required	Example	Description
AllowMigrateAcrossZone	Boolean	No	false	Specifies whether to enable cross-cluster instance type upgrade. Default value: false. When <code>AllowMigrateAcrossZone</code> is set to true and you have updated the ECS instance based on the responses, take note of the following points: Instances in the classic network: - For phased-out instance types, when a non-I/O optimized instance is upgraded to an I/O optimized instance, the private IP address, driver name, and software authorization code are modified. For Linux instances, basic disks (<code>cloud</code>) are identified as <code>xvda</code> or <code>xvdb</code>, and ultra disks (<code>cloud_efficiency</code>) and standard SSDs (<code>cloud_ssd</code>) are identified as <code>vda</code> or <code>vdb</code>. - For instance families available on the Alibaba Cloud market, the private IP address is modified after instance type upgrade. Instances in VPCs: For phased-out instance types, when a non-I/O optimized instance is upgraded to an I/O optimized instance, the driver name and software authorization code are modified. For Linux instances, basic disks (<code>cloud</code>) are identified as <code>xvda</code> or <code>xvdb</code>, and ultra disks (<code>cloud_efficiency</code>) and standard SSDs (<code>cloud_ssd</code>) are identified as <code>vda</code> or <code>vdb</code>.
SystemDisk.Category	String	No	cloud_ssd	The category of the system disk. This parameter is valid only when you upgrade one of the phased-out instance types to one of the instance families available on the Alibaba Cloud market and upgrade a non-I/O optimized instance to an I/O optimized instance. Valid values: <code>cloud_efficiency</code>: ultra disk <code>cloud_ssd</code>: standard SSD
ClientToken	String	No	0c593ea1-3bea-11e9-b96b-88e9fe637760	The client token that is used to ensure the idempotence of the request. You can use the client to generate the value, but you must ensure that it is unique among different requests. The ClientToken value can only contain ASCII characters and cannot exceed 64 characters in length. For more information, see How to ensure idempotence.

Response parameters

Parameter	Type	Example	Description
RequestId	String	473469C7-AA6F-4DC5-B3DB-A3DC0DE3C83E	The ID of the request.

Examples

Sample requests

```
https://ecs.aliyuncs.com/?Action=ModifyInstanceSpec
&InstanceId=i-bp67acfmazb4ph***
&InstanceType=ecs.s1.large
&InternetMaxBandwidthOut=10
&ClientToken=0c593ea1-3bea-11e9-b96b-88e9fe637760
&<Common request parameters>
```

Sample success responses

XML format

```
<ModifyInstanceSpecResponse>
  <RequestId>04F0F334-1335-436C-A1D7-6C044FE73368</RequestId>
</ModifyInstanceSpecResponse>
```

JSON format

```
{
  "RequestId": "04F0F334-1335-436C-A1D7-6C044FE73368"
}
```

Error codes

HTTP status code	Error code	Error message	Description
400	InvalidInternetChargeType.ValueNotSupported	The specified InternetChargeType is not valid.	The error message returned because the specified InternetChargeType parameter does not exist.
400	InvalidInstanceType.ValueUnauthorized	The specified InstanceType does not exist or beyond the permitted range.	The error message returned because the specified instance type does not exist or you are not authorized to manage instances of this instance type.
400	InvalidInstanceType.ValueUnauthorized	The specified InstanceType is not authorized.	The error message returned because you are not authorized to use the specified instance type.
404	InvalidInstanceId.NotFound	The specified InstanceId does not exist.	The error message returned because the specified InstanceId parameter does not exist. Check whether the instance ID is correct.
400	InvalidInstanceType.ValueNotSupported	The specified InstanceType does not exist or beyond the permitted range.	The error message returned because the specified instance type does not exist or you are not authorized to manage instances of this instance type.
400	InvalidParameter	The specified parameter "InternetMaxBandwidthOut" is not valid.	The error message returned because the specified InternetMaxBandwidthOut parameter is invalid.

HTTP status code	Error code	Error message	Description
400	InvalidParameter.Mismatch	Too many parameters in one request.	The error message returned because the request contains invalid parameters.
403	CategoryViolation	The specified instance does not support this operation because of its disk category.	The error message returned because the instance types of instances that are attached with local disks cannot be changed.
403	InvalidStatus.ValueNotSupported	The current status of the resource does not support this operation.	The error message returned because this operation is not supported while the resource is in the current state.
403	InstanceLockedForSecurity	The specified operation is denied as your instance is locked for security reasons.	The error message returned because the operation is not supported while the instance is locked for security reasons.
500	InternalServerError	The request processing has failed due to some unknown error, exception or failure.	The error message returned because an internal error has occurred. Try again later. If the problem persists, submit a ticket.
403	InvalidAccountStatus.NotEnoughBalance	Your account does not have enough balance.	The error message returned because your account balance is insufficient. You must top up your account before proceeding.
403	ChargeTypeViolation	The operation is not permitted due to charge type of the instance.	The error message returned because the billing method of the instance does not support this operation.
403	OperationDenied	The specified instance is out of usage.	The error message returned because the specified instance is out of stock.
400	BandwidthUpgradeDenied.EipBoundInstance	The specified VPC instance has bound EIP, temporary bandwidth upgrade is denied.	The error message returned because the instance is associated with an Elastic IP address (EIP) and the instance bandwidth cannot be temporarily upgraded.
404	MissingTemporary.StartTime	Temporary.StartTime is not specified.	The error message returned because the Temporary.StartTime parameter is not specified.
404	MissingTemporary.EndTime	Temporary.EndTime is not specified.	The error message returned because the Temporary.EndTime parameter is not specified.
400	InvalidTemporary.StartTime	The specified Temporary.StartTime is not valid.	The error message because the specified Temporary.StartTime parameter is invalid.
400	InvalidTemporary.EndTime	The specified Temporary.EndTime is not valid.	The error message returned because the specified Temporary.EndTime parameter is invalid.
403	LastTokenProcessing	The last token request is processing.	The error message returned because the last token request is being processed. Try again later.
400	Downgrade.NotSupported	Downgrade operation is not supported.	The error message returned because the downgrade operation is not supported.

HTTP status code	Error code	Error message	Description
403	InstanceSpecModification.NotEffective	The specified instance has been reserved for making a spec modification and not taken effective in the current contract period.	The error message returned because the instance is reserved due to specification changes. The changes cannot take effect during the current contract period.
400	DependencyViolation.InstanceType	The current InstanceType cannot be changed to the specified InstanceType.	The error message returned because the current instance cannot be changed to an instance of the specified instance type.
403	InvalidInstanceType.ValueNotSupported	The specified zone does not offer the specified instancetype.	The error message returned because instances of the specified instance type are unavailable in the specified region.
403	ImageNotSupportInstanceType	The specified image do not support the InstanceType instance.	The error message returned because the specified image does not support instances of the specified instance type.
400	Account.Arrearage	Your account has an outstanding payment.	The error message returned because your account has an overdue payment.
400	InvalidParameter.Bandwidth	The specified parameter Bandwidth is not valid.	The error message returned because the specified Bandwidth parameter is invalid.
400	InvalidParameter.Conflict	The specified image does not support the specified instance type.	The error message returned because the specified image cannot be used for instances of the specified instance type.
400	InvalidParameter.AllowMigrateAcrossZone	The specified parameter CanMigrateAcrossZone is not valid.	The error message returned because the specified AllowMigrateAcrossZone parameter is invalid.
400	InvalidParam.SystemDiskCategory	The specified param SystemDisk.Category is not valid.	The error message returned because the specified SystemDisk.Category parameter is invalid.
400	Throttling	Request was denied due to request throttling, please try again after 5 minutes.	The error message returned because your request is throttled. Try again five minutes later.
400	InvalidInstanceStatus.NotStopped	The specified Instance status is not stopped.	The error message returned because the specified instance is not in the Stopped state.
403	InstanceType.Offline	The specified InstanceType has been offline	The error message returned because the specified instance type is phased-out. Select instances of other instance types and try again.
400	InvalidAction	Specified action is not valid.	The error message returned because this operation is invalid.
400	IdempotenceParamNotMatch	There is a idempotence signature mismatch between this and last request.	The error message returned because the idempotence signature of this request does not correspond to that of the last request.
400	InvalidClientToken.ValueNotSupported	The ClientToken provided is invalid.	The error message returned because the specified ClientToken parameter is invalid.

HTTP status code	Error code	Error message	Description
400	Price.PricePlanResultNotFound	The internetMaxBandwidthIn or internetMaxBandwidthOut provided is invalid.	The error message returned because specified internetMaxBandwidthIn or internetMaxBandwidthOut parameter is invalid.
403	InvalidParameter.NotMatch	%s	The error message returned because the specified parameter is invalid. Check whether the parameter conflicts with another parameter.
403	InvalidInstance.EipNotSupport	The specified instance with eip is not supported, please unassociate eip first.	The error message returned because the operation is not supported while an EIP is associated to this instance. Disassociate the EIP first.
400	InvalidAction.NotSupport	The ecs on dedicatedHost not support modify instanceType.	The error message returned because you cannot change the instance type of instances on the dedicated host.
400	InvalidMarketImageStatus.NotSupported	The status of specified market image does not support this operation.	The error message returned because this operation is not supported while the specified Alibaba Cloud Marketplace image is in the current state.
403	OperationDenied.NoStock	The resource is out of usage.	The error message returned because the instance is not in the Running state. Start the instance or check whether the operation is valid.
500	InternalError	The request processing has failed due to some unknown error.	The error message returned because an internal error has occurred. Try again later. If the problem persists, submit a ticket.
403	OperationDenied	%s	The error message returned because the operation is denied.
403	InvalidOperation.Ipv4CountExceeded	%s	The error message returned because the maximum number of IPv4 addresses has been reached.
403	InvalidOperation.Ipv6CountExceeded	%s	The error message returned because the maximum number of IPv6 addresses has been reached.
403	InvalidOperation.Ipv6NotSupport	%s	The error message returned because the IPv6 address does not support the current operation.
403	InvalidOperation.InstanceWithEipNotSupport	The special instance with eip not support operate, please unassociate eip first.	The error message returned because the operation is not supported while an EIP is associated to this instance. Disassociate the EIP first.
403	SecurityRisk.3DVerification	We have detected a security risk with your default credit or debit card. Please proceed with verification via the link in your email.	The error message returned because risks are detected in your default credit card or debit card. Click the link in the email for verification.
404	InvalidInstanceChargeType.NotFound	The InstanceChargeType does not exist in our records	The error message returned because the specified InstanceChargeType parameter does not exist.

5.30. ModifyPrepayInstanceSpec

You can call this operation to upgrade or downgrade the instance type of a subscription ECS instance. The new instance type takes effect for the entire lifecycle of the instance.

Description

Before you change the instance type of a subscription instance, you can call the [DescribeResourcesModification](#) operation to query the instance types to which you can change. For more information, see the Python SDK example in [Query available resources for configuration changes](#).

When you call this operation, take note of the following items:

- You cannot modify the instance type of an expired instance. You can renew the instance and try again.
- When you downgrade the instance type of an instance, take note of the following items:
 - The instance must be in the **Stopped** (`Stopped`) state.
 - You must specify the operation type by setting `OperatorType` to downgrade.
 - You can downgrade an instance for a maximum of three times. That is, the refund for the price difference cannot exceed three times. Downgrade operations include instance type downgrades, bandwidth downgrades, and the change of the disk billing method from subscription to pay-as-you-go.
 - The price difference is refunded to the payment account you used. Price differences of coupon purchases are not refunded.
- This operation is asynchronous and you must wait for about five to ten seconds for the instance type change to complete. Then, you must call the `RebootInstance` operation or restart the instance in the console to allow the instance type change to take effect. If you restart only the operating system, the change does not take effect.
 - If the instance is in the **Stopped** state, you only need to start the instance. You do not need to restart the instance after it is in the **Running** state.
 - If `RebootWhenFinished` is set to true for the instance, you do not need to manually restart the instance.

Debugging

OpenAPI Explorer automatically calculates the signature value. For your convenience, we recommend that you call this operation in OpenAPI Explorer. OpenAPI Explorer dynamically generates the sample code of the operation for different SDKs.

Request parameters

Parameter	Type	Required	Example	Description
Action	String	Yes	ModifyPrepayInstanceSpec	The operation that you want to perform. Set the value to <code>ModifyPrepayInstanceSpec</code> .
InstanceId	String	Yes	i-bp67acfmazb4ph****	The ID of the instance.
InstanceType	String	Yes	ecs.g5.xlarge	The new instance type. For information about available instance types, see Instance families or call the DescribeInstanceTypes operation.
RegionId	String	Yes	cn-hangzhou	The region ID of the instance. You can call the DescribeRegions operation to query the most recent region list.

Parameter	Type	Required	Example	Description
OperatorType	String	No	upgrade	The operation type. Default value: upgrade. Valid values: • upgrade: upgrades the instance type. Make sure that the balance in your payment account is sufficient. • downgrade: downgrades the instance type. When the new instance type specified by the <code>InstanceType</code> parameter is of lower specifications than the current instance type, you must set <code>OperatorType</code> to downgrade.  Note For more information about the precautions on upgrading or downgrading instance types, see the preceding "Description" section in this topic.
ClientToken	String	No	123e4567-e89b-12d3-a456-426655440000	The client token that is used to ensure the idempotence of the request. You can use the client to generate the value, but you must ensure that it is unique among different requests. The <code>ClientToken</code> value can only contain ASCII characters and cannot exceed 64 characters in length. For more information, see How to ensure idempotence.
AutoPay	Boolean	No	true	Specifies whether to enable automatic payment when you upgrade the instance type. Default value: true. Valid values: • true: Automatic payment is enabled.  Note When your account balance is insufficient, your order will become invalid and you have to cancel this order. If your account balance is insufficient, you can set the <code>AutoPay</code> parameter to <code>false</code> to generate an unpaid order. Then, you can log on to the ECS console to complete the payment for the order. • false: An order is generated but no payment is made. When <code>OperatorType</code> is set to <code>downgrade</code>, <code>AutoPay</code> is ignored.

Parameter	Type	Required	Example	Description
MigrateAcrossZone	Boolean	No	false	Specifies whether to enable cross-cluster instance type upgrade. Default value: false. When the MigrateAcrossZone parameter is set to true and you upgrade the ECS instance based on the returned information, take note of the following items: Classic network-type instances: - For retired instance types, when a non-I/O optimized instance is upgraded to an I/O optimized instance, the following items are modified: private IP address, disk device name, and software authorization code. For more information, see Retired instance types. For Linux instances, basic disks (cloud) are identified as xvda or xvdb. Ultra disks (cloud_efficiency) and standard SSDs (cloud_ssd) are identified as vda or vdb. - For available instance families, private IP addresses are modified after the instance types are upgraded. For more information, see Instance families. VPC-type instances: For retired instance types, when a non-I/O optimized instance is upgraded to an I/O optimized instance, the following items are modified: disk device name and software authorization code. For Linux instances, basic disks (cloud) are identified as xvda or xvdb. Ultra disks (cloud_efficiency) and standard SSDs (cloud_ssd) are identified as vda or vdb.
SystemDisk.Category	String	No	cloud_efficiency	The category of the system disk. This parameter is valid only when you upgrade an instance of a retired instance type to an instance type of an available instance family and upgrade a non-I/O optimized instance to an I/O optimized instance. For more information, see Retired instance types and Instance families. Valid values: - cloud_efficiency: ultra disk - cloud_ssd: standard SSD
RebootTime	String	No	2018-01-01T12:05Z	The restart time of the instance. Specify the time in the ISO 8601 standard in the yyyy-MM-ddTHH:mm:ssZ format. The time must be in UTC.
EndTime	String	No	2018-01-01T12:05Z	The end time of the temporary change. Specify the time in the ISO 8601 standard in the yyyy-MM-ddTHH:mm:ssZ format. The time must be in UTC.

Parameter	Type	Required	Example	Description
RebootWhenFinished	Boolean	No	false	Specifies whether to restart the instance immediately after the change of instance type is completed. Valid values: Default value: false.  Note If the instance is in the Stopping state, even if you set <code>RebootWhenFinished</code> to true, the instance status remains unchanged and no operations are performed.

Response parameters

Parameter	Type	Example	Description
OrderId	String	1234567890	The ID of the generated order.
RequestId	String	473469C7-AA6F-4DC5-B3DB-A3DC0DE3C83E	The ID of the request.

Examples

Sample requests

```
https://ecs.aliyuncs.com/?Action=ModifyPrepayInstanceSpec
&RegionId=cn-hangzhou
&InstanceId=i-bp67acfmxazb4ph****
&InstanceType=ecs.g5.xlarge
&AutoPay=true
&OperatorType=upgrade
&ClientToken=123e4567-e89b-12d3-a456-426655440000
&<Common request parameters>
```

Sample success responses

XML format

```
<ModifyPrepayInstanceSpecResponse>
  <RequestId>04F0F334-1335-436C-A1D7-6C044FE73368</RequestId>
  <OrderId>1234567890</OrderId>
</ModifyPrepayInstanceSpecResponse>
```

JSON format

```
{
  "RequestId": "04F0F334-1335-436C-A1D7-6C044FE73368",
  "OrderId": "1234567890"
}
```

Error codes

HTTP status code	Error code	Error message	Description
404	InvalidRegionId.NotFound	The specified RegionId does not exist.	The error message returned because the specified RegionId parameter does not exist.
400	InvalidInstanceType.ValueUnauthorized	The specified InstanceType is not authorized.	The error message returned because you are not authorized to use the specified instance type.
400	InvalidInstanceType.ValueNotSupported	The specified InstanceType does not exist or beyond the permitted range.	The error message returned because the specified instance type does not exist or you are not authorized to manage instances of the instance type.
500	InternalServerError	The request processing has failed due to some unknown error, exception or failure.	The error message returned because an internal error has occurred. Try again later. If the problem persists, submit a ticket.
404	BillingMethodNotFound	The account has not chosen any billing method.	The error message returned because no billing method is selected for this account.
403	OperationDenied.NoStock	The specified instance is out of usage.	The error message returned because the specified instance is out of stock.
400	InvalidBillingMethod.ValueNotSupported	The operation is not permitted due to an invalid billing method of the instance.	The error message returned because the operation is not supported due to the invalid billing method of the instance.
404	InvalidInstanceId.NotFound	The specified InstanceId does not exist.	The error message returned because the specified InstanceId parameter does not exist. Check whether the instance ID is correct.
400	InvalidInstance.PurchaseNotFound	The specified instance has no purchase history.	The error message returned because the order record for this instance does not exist.
400	InvalidInstanceType.NotSupported	The specified InstanceType is not Supported.	The error message returned because the specified InstanceType parameter is invalid.
400	OrderCreationFailed	Order creation failed, please check your params and try it again later.	The error message returned because the order fails to be created. Check your parameters and try again later.
400	Throttling	You have made too many requests within a short time; your request is denied due to request throttling.	The error message returned because your request is denied due to request throttling. Try again later.
400	Account.Arrearage	Your account has an outstanding payment.	The error message returned because your account has overdue payments.
403	InvalidUser.PassRoleForbidden	The RAM user does not have privilege to pass a role.	The error message returned because the RAM user attempts to assign RAM roles. RAM users do not have the corresponding permissions.
400	InvalidRebootTime.Malformed	The specified rebootTime is not valid.	The error message returned because the specified RebootTime parameter is invalid.

HTTP status code	Error code	Error message	Description
400	InvalidRebootTime.ValueNotSupported	The specified RebootTime is not valid.	The error message returned because the specified RebootTime parameter is invalid.
403	ImageNotSupportInstanceType	The specified image does not support the specified InstanceType.	The error message returned because the specified image cannot be used for instances of the specified instance type.
403	InstanceType.Offline	%s	The error message returned because the instance type is retired or instances of this instance type are insufficient.
400	IdempotenceParamNotMatch	Request uses a client token in a previous request but is not identical to that request.	The error message returned because the specified ClientToken in this request is not identical to the one used in the previous request.
403	IncorrectInstanceState	The current status of the resource does not support this operation.	The error message returned because the operation is not supported while the resource is in the current state.
400	IdempotenceParamNotMatch	%s	The error message returned because the idempotence parameters do not match.
400	InvalidInstanceChargeType.ValueNotSupported	%s	The error message returned because the charge type is not supported. Check related information and try again.
400	InvalidStatus.NotStopped	Instance status must be stopped.	The error message returned because the instance is not in the Stopped state. The operation can be performed only when the instance is in the Stopped state.
400	InvalidAction	%s	The error message returned because this operation is invalid.
400	InstanceDowngrade.QuotaExceed	Quota of instance downgrade is exceed.	The error message returned because the maximum number of times that an instance can be downgraded has been reached.
400	InvalidInstanceType.ValueNotSupported	%s	The error message returned because this operation cannot be performed on instances of the specified instance type.
403	InvalidParameter.InstanceId	%s	The error message returned because the specified InstanceId parameter is invalid.
400	InvalidParameter	%s	The error message returned because the specified parameter is invalid.
403	OperationDenied	%s	The error message returned because the operation is denied.
403	ImageNotSupportInstanceType	The specified instanceType is not supported by instance with marketplace image.	The error message returned because the specified Alibaba Cloud Marketplace image does not support the instance type.

HTTP status code	Error code	Error message	Description
403	InvalidInstanceStatus	The current status of the instance does not support this operation.	The error message returned because this operation is not supported while the instance is in the current state.
403	InvalidInstance.PreInstanceExpired	Instance business status is not Expired	The error message returned because the current instance has expired.
403	InvalidInstance.EipNotSupport	The special instance with eip not support operate, please unassociate eip first.	The error message returned because the operation is not supported while an elastic IP address (EIP) is associated with this instance. Disassociate the EIP first.
400	OperationDenied	The current user does not support this operation.	The error message returned because the specified account does not support this operation.
403	OperationDenied.LocalDiskUnsupported	The configuration change is not allowed when the specified instance has local disks mounted.	The error message returned because the instance type of instances that have local disks attached cannot be changed.
403	OperationDenied.NoStock	The resource is out of stock in the specified zone. Please try other types, or choose other regions and zones.	The error message returned because the specified resource is unavailable in the specified zone. Try with other types, or choose other regions or zones.
400	LastOrderProcessing	The previous order is still processing, please try again later.	The error message returned because the order is being processed. Try again later.
403	InvalidOperation.Ipv4CountExceeded	%s	The error message returned because the maximum number of IPv4 addresses has been reached.
403	InvalidOperation.Ipv6CountExceeded	%s	The error message returned because the maximum number of IPv6 addresses has been reached.
403	InvalidOperation.Ipv6NotSupport	%s	The error message returned because IPv6 addresses do not support the current operation.
500	InternalError	The request processing has failed due to some unknown error.	The error message returned because an internal error has occurred. Try again later. If the problem persists, submit a ticket.

5.31. ModifyInstanceMetadataOptions

You can call this operation to modify the metadata of an instance.

Debugging

OpenAPI Explorer automatically calculates the signature value. For your convenience, we recommend that you call this operation in OpenAPI Explorer. OpenAPI Explorer dynamically generates the sample code of the operation for different SDKs.

Request Parameters

Parameter	Type	Required	Example	Description

Parameter	Type	Required	Example	Description
Action	String	Yes	ModifyInstanceMetadataOptions	The operation that you want to perform. Set the value to ModifyInstanceMetadataOptions.
HttpEndpoint	String	Yes	enabled	Specifies whether to enable the metadata HTTP endpoint on the instance. Valid values: - enabled - disabled Default value: enabled.  Note For information about instance metadata, see Overview of instance metadata.
RegionId	String	Yes	cn-hangzhou	The region ID of the instance. You can call the DescribeRegions operation to query the most recent region list.
InstanceId	String	No	i-bp67acfmaz****	The ID of the instance.
HttpTokens	String	No	optional	Specifies whether to forcibly use the security-enhanced mode (IMDSv2) to access instance metadata. Valid values: - optional: The security-enhanced mode (IMDSv2) is not forcibly used. - required: The security-enhanced mode (IMDSv2) is forcibly used. After you set the parameter to required, you cannot access the instance metadata in the normal mode. Default value: optional.  Note For more information, see Access mode of instance metadata.

Response parameters

Parameter	Type	Example	Description
RequestId	String	473469C7-AA6F-4DC5-B3DB-A3DC0DE3C83E	The ID of the request.

Examples

Sample requests

```

http(s)://ecs.aliyuncs.com/? Action=ModifyInstanceMetadataOptions
&RegionId=cn-hangzhou
&InstanceId=i-bp67acfmaz****
&HttpEndpoint=enabled
&HttpTokens=required
&<Common request parameters>

```

Sample success responses

XML format

```
<ModifyInstanceMetadataOptionsResponse>
  <RequestId>473469C7-AA6F-4DC5-B3DB-A3DC0DE3C83E</RequestId>
</ModifyInstanceMetadataOptionsResponse>
```

JSON format

```
{
  "RequestId":"473469C7-AA6F-4DC5-B3DB-A3DC0DE3C83E"
}
```

Error codes

HTTP status code	Error code	Error message	Description
400	InvalidHttpEndpoint.NotSupported	The specified HttpEndpoint not supported, you can use enabled(default) or disabled.	The error message returned because the specified value of the HttpEndpoint parameter is invalid. Use the default value enabled or the value disabled.
400	InvalidHttpTokens.NotSupported	The specified HttpTokens not supported, you can use optional(default) or required.	The error message returned because the specified value of the HttpTokens parameter is invalid. Use the default value optional or the value required.
400	InvalidHttpPutResponseHopLimit.NotSupported	The specified HttpPutResponseHopLimit not supported, more than 1 and less than 64 is reasonable.	The error message returned because the specified value of the HttpPutResponseHopLimit parameter is invalid. The value must be in the range of 1 to 64.

6.Dedicated hosts

6.1. AllocateDedicatedHosts

You can call this operation to create one or more pay-as-you-go or subscription dedicated hosts. A dedicated host is a physical server dedicated to a single tenant. You can create ECS instances on a dedicated host and view the attributes of the dedicated host.

Description

Before you create a dedicated host, you can call the [DescribeAvailableResource](#) operation to query the available resources in a specific region or zone.

We recommend that you understand the billing methods of resources before you create a dedicated host. You will be charged for resources used by the created dedicated host. For more information, see [Billing overview](#).

- You can create a maximum of 100 pay-as-you-go or subscription dedicated hosts at a time.
- After a dedicated host is created, you can use its ID that is returned by the system as the request parameter to call the [DescribeDedicatedHosts](#) operation to query the status of the dedicated host.
- After you submit a request to create a dedicated host, an error is returned if a specified parameter is invalid or the requested resources are insufficient. For more information about error reasons, see [Error codes](#).
- After a dedicated host is created, you can call the [ModifyInstanceDeployment](#) operation to migrate ECS instances from a shared host to the created dedicated host. You can also migrate ECS instances from another dedicated host to the created dedicated host.

Debugging

OpenAPI Explorer automatically calculates the signature value. For your convenience, we recommend that you call this operation in OpenAPI Explorer. OpenAPI Explorer dynamically generates a sample code of the operation for different SDKs.

Request parameters

Parameter	Type	Required	Example	Description
Action	String	Yes	AllocateDedicatedHosts	The operation that you want to perform. Set the value to AllocateDedicatedHosts.
DedicatedHostType	String	Yes	ddh.c5	The dedicated host type. You can call the DescribeDedicatedHostTypes operation to query the most recent list of dedicated host types.
RegionId	String	Yes	cn-hangzhou	The ID of the region in which to create dedicated hosts. You can call the DescribeRegions operation to query the most recent region list.
Tag.N.Key	String	No	Environment	The key of tag N to be bound to the dedicated host. Valid values of N: 1 to 20. The tag key cannot be an empty string. It can be up to 128 characters in length and cannot start with acs: or aliyun. It cannot contain http:// or https://.
Tag.N.Value	String	No	Production	The value of tag N to be bound to the dedicated host. Valid values of N: 1 to 20. The tag value can be an empty string. It can be up to 128 characters in length and cannot start with acs: or contain http:// or https://.

Parameter	Type	Required	Example	Description
ResourceGroupId	String	No	rg-bp67acfmazb4ph***	The ID of the resource group to which to assign the dedicated host.
ZoneId	String	No	cn-hangzhou-f	The ID of the zone in which to create the dedicated host. This parameter is empty by default. If you do not specify a zone, the system automatically selects a zone.
DedicatedHostName	String	No	myDDH	The name of the dedicated host. The name must be 2 to 128 characters in length, and can contain letters, digits, colons (:), underscores (_), and hyphens (-). It must start with a letter and cannot start with http:// or https://.
DedicatedHostClusterId	String	No	dc-bp12wlf6am0vz9v2***	The ID of the dedicated host cluster to which to assign the dedicated host.
ActionOnMaintenance	String	No	Migrate	The policy used to migrate the instances deployed on the dedicated host when the dedicated host fails or needs to be repaired online. Valid values: • Migrate: The instances are migrated to another physical server and restarted. If the dedicated host is attached with cloud disks, the default value is Migrate. • Stop: The instances are stopped. If the dedicated host cannot be repaired, the instances are migrated to another physical server and restarted. If the dedicated host is attached with local disks, the default value is Stop.
NetworkAttributes.SlbUdpTimeout	Integer	No	60	The timeout period for the UDP session to be established between the dedicated host and Server Load Balancer (SLB). Unit: seconds. Valid values: 15 to 310.
NetworkAttributes.UdpTimeout	Integer	No	60	The timeout period for the UDP session to be established between a user and an Alibaba Cloud service on the dedicated host. Unit: seconds. Valid values: 15 to 310.
Description	String	No	This-is-my-DDH	The description of the dedicated host. The description must be 2 to 256 characters in length and cannot start with http:// or https://.

Parameter	Type	Required	Example	Description
AutoPlacement	String	No	off	Specifies whether to add the dedicated host to the resource pool for automatic deployment. If you create an ECS instance on a dedicated host without specifying the <code>DedicatedHostId</code> parameter, Alibaba Cloud automatically selects a dedicated host from the resource pool to host the instance. For more information, see Automatic deployment. Valid values: - on: adds the dedicated host to the resource pool for automatic deployment. - off: does not add the dedicated host to the resource pool for automatic deployment. Default value: on.  Note If you do not want to add the dedicated host to the resource pool for automatic deployment, set the value to off.
CpuOverCommitRatio	Float	No	1	The CPU overcommit ratio. You can configure CPU overcommit ratios only for the following dedicated host types: g6s, c6s, and r6s. Valid values: 1 to 5. The CPU overcommit ratio affects the number of available vCPUs on a dedicated host. You can use the following formula to calculate the number of available vCPUs on a dedicated host: $\text{Number of available vCPUs} = \text{Number of physical CPU cores} \times 2 \times \text{CPU overcommit ratio}$. For example, the number of physical CPU cores on each g6s dedicated host is 52. If you change the CPU overcommit ratio of a g6s dedicated host to 4, the number of available vCPUs on the dedicated host is 416. For scenarios that have minimal requirements for CPU stability or where CPU load is not heavy, such as development and test environments, you can increase the number of available vCPUs on a dedicated host by increasing the CPU overcommit ratio. This way, you can deploy more ECS instances of the same specifications on the dedicated host and reduce the unit deployment cost.
ChargeType	String	No	PrePaid	The billing method of the dedicated host. Default value: PostPaid. Valid values: - PrePaid: subscription. If you set this parameter to PrePaid, make sure that you have sufficient account balance or credit. Otherwise, <code>InvalidPayMethod</code> is returned. - PostPaid: pay-as-you-go.
Quantity	Integer	No	1	The number of dedicated hosts that you want to create. Valid values: 1 to 100. Default: 1

Parameter	Type	Required	Example	Description
Period	Integer	No	6	The subscription period of the dedicated host. The <code>Period</code> parameter takes effect and is required only when the <code>ChargeType</code> parameter is set to <code>PrePaid</code>. Valid values: - If the <code>PeriodUnit</code> parameter is set to <code>Month</code>, the valid values of <code>Period</code> are 1, 2, 3, 4, 5, 6, 7, 8, and 9. - If the <code>PeriodUnit</code> parameter is set to <code>Year</code>, the valid values of <code>Period</code> are 1, 2, 3, 4, and 5.
PeriodUnit	String	No	Month	The unit of the subscription period of the dedicated host. Valid values: - Month - Year Default value: Month
AutoRenew	Boolean	No	false	Specifies whether to automatically renew the subscription dedicated host.  Note The <code>AutoRenew</code> parameter takes effect only when the <code>ChargeType</code> parameter is set to <code>PrePaid</code>. Default value: false
AutoRenewPeriod	Integer	No	1	The auto-renewal period of the dedicated host. Unit: months. Valid values: 1, 2, 3, 6, and 12.  Note The <code>AutoRenewPeriod</code> parameter takes effect and is required only when the <code>AutoRenew</code> parameter is set to true.
AutoReleaseTime	String	No	2019-08-21T12:30:24Z	The automatic release time of the dedicated host. Specify the time in the ISO 8601 standard in the yyyy-MM-ddTHH:mm:ssZ format. The time must be in UTC.  Note - It must be at least half an hour later than the current time. - It must be at most three years later than the current time. - If the value of the seconds (ss) is not 00, it is automatically set to 00.

Parameter	Type	Required	Example	Description
ClientToken	String	No	123e4567-e89b-12d3-a456-426655440000	The client token that is used to ensure the idempotence of the request. You can use the client to generate the value, but you must ensure that it is unique among different requests. The ClientToken value must contain only ASCII characters and cannot exceed 64 characters in length. For more information, see How to ensure idempotence .

Response parameters

Parameter	Type	Example	Description
DedicatedHostIdSets	List	"DedicatedHostIdSets": {"DedicatedHostId": ["dh-bp67acfmazb4p****", "dh-bp67acfmazb4d****"]}	The IDs of the dedicated hosts.
RequestId	String	E2A664A6-2933-4C64-88AE-5033D003EADF	The ID of the request.

Examples

Sample requests

```
https://ecs.aliyuncs.com/?Action=AllocateDedicatedHosts
&RegionId=cn-hangzhou
&DedicatedHostType=ddh.sn1ne
&Quantity=2
&ChargeType=PostPaid
&ClientToken=123e4567-e89b-12d3-a456-426655440000
&<Common request parameters>
```

Sample success responses

XML format

```
<AllocateDedicatedHostsResponse>
  <RequestId>E2A664A6-2933-4C64-88AE-5033D003EADF</RequestId>
  <DedicatedHostIdSets>
    <DedicatedHostId>dh-bp67acfmazb4p****</DedicatedHostId>
    <DedicatedHostId>dh-bp67acfmazb4d****</DedicatedHostId>
  </DedicatedHostIdSets>
</AllocateDedicatedHostsResponse>
```

JSON format

```
{
  "RequestId":"E2A664A6-2933-4C64-88AE-5033D003EADF",
  "DedicatedHostIdSets":{
    "DedicatedHostId":[
      "dh-bp67acfmxb4p****",
      "dh-bp67acfmxb4d****"
    ]
  }
}
```

Error codes

HTTP status code	Error code	Error message	Description
400	InvalidInstanceType.ValueUnauthorized	The specified InstanceType is not authorized.	The error message returned because you are not authorized to use the specified instance type.
400	InvalidDescription.Malformed	The specified parameter "Description" is not valid.	The error message returned because the specified Description parameter is invalid. The description must be 2 to 256 characters in length and cannot start with http:// or https://.
403	OperationDenied	The creation of Host to the specified Zone is not allowed.	The error message returned because you are not authorized to create a dedicated host in the specified zone.
403	OperationDenied.NoStock	The requested resource is sold out in the specified zone; try other types of resources or other regions and zones.	The error message returned because the requested resources are insufficient.
500	InternalServerError	The request processing has failed due to some unknown error.	The error message returned because an internal error has occurred. Try again later. If the problem persists, submit a ticket.
403	OperationDenied	Sales of this resource are temporarily suspended in the specified region; please try again later.	The error message returned because the requested resource is unavailable in the specified region. Try again later.
400	InvalidParameter.Conflict	The specified region and cluster do not match.	The error message returned because the specified region and the specified cluster do not correspond to each other.
403	NodeControllerUnavailable	The Node Controller is temporarily unavailable.	The error message returned because the node controller is unavailable.
404	OperationDenied	Another Host has been creating	The error message returned because another host is being created.
403	OperationDenied	The resource is out of usage.	The error message returned because the instance is not in the Running state. Start the instance or check whether the operation is valid.
404	PaymentMethodNotFound	No payment method has been registered on the account.	The error message returned because you have not configured the payment method for your account.

HTTP status code	Error code	Error message	Description
404	InvalidDedicatedHostName.Malformed	The specified parameter DedicatedHostName is not valid.	The error message returned because the specified DedicatedHostName parameter is invalid.
403	InvalidParameter.ResourceOwnerAccount	ResourceOwnerAccount is Invalid.	The error message returned because the specified ResourceOwnerAccount parameter is invalid.
403	InvalidUserData.Forbidden	User not authorized to input the parameter "UserData", please apply for permission "UserData"	The error message returned because you are not authorized to manage user data. Apply for the permission first.
403	Zone.NotOpen	The specified zone is not granted to you to buy resources yet.	The error message returned because you are not authorized to purchase resources in the specified zone.
403	Zone.NotOnSale	The specified zone is not available for purchase.	The error message returned because the requested resources are unavailable in the specified zone. Change the resource type or select a different zone.
403	InvalidDedicatedHostType.ValueNotSupported	The specified DedicatedHostType does not exist or beyond the permitted range.	The error message returned because the specified DedicatedHostType parameter does not exist.
403	InvalidDedicatedHostType.ZoneNotSupported	The specified zone does not support this dedicatedHostType.	The error message returned because the specified DedicatedHostType parameter is not supported in the specified zone.
400	InvalidAutoRenewPeriod.ValueNotSupported	The specified autoRenewPeriod is not valid.	The error message returned because the specified AutoRenewPeriod parameter is invalid.
400	InvalidTagKey.Malformed	The specified Tag.n.Key is not valid.	The error message returned because the specified Tag.N.Key parameter is invalid.
400	InvalidDedicatedHostType.ValueNotSupported	%s	The error message returned because the specified DedicatedHostType parameter is invalid.
400	RegionUnauthorized	%s	The error message returned because you are not authorized to perform the operation in the specified region.
500	InternalServerError	%s	The error message returned because an internal error has occurred.
400	Zone.NotOnSale	%s	The error message returned because the service is temporarily unavailable in this zone.
400	OperationDenied	The specified DedicatedHostType or Zone is not available or not authorized.	The error message returned because the specified dedicated host type or zone is unavailable or you are not authorized to manage the resources.
400	InvalidPeriodUnit.ValueNotSupported	The specified parameter PeriodUnit is not valid.	The error message returned because the specified PeriodUnit parameter is invalid.

HTTP status code	Error code	Error message	Description
400	InvalidTagValue.Malformed	The specified Tag.n.Value is not valid.	The error message returned because the specified Tag.N.Value parameter is invalid.
403	InvalidParameter.NotMatch	%s	The error message returned because a specified parameter is invalid. Check whether parameter conflicts exist.
403	Account.Arrearage	Your account has been in arrears.	The error message returned because your account balance is insufficient. Add funds to your account and try again.
400	QuotaExceed.AfterpayDedicatedHost	The maximum number of Pay-As-You-Go DedicatedHosts is exceeded: %s	The error message returned because the pay-as-you-go resources of the specified dedicated host type are insufficient. Reduce the number of dedicated hosts to be created.
400	InvalidChargeType.ValueNotSupported	ChargeType is not valid	The error message returned because the specified ChargeType parameter is invalid.
400	InvalidParameter.SlbUdpTimeout	The specified value is invalid.	The error message returned because the specified NetworkAttributes.SlbUdpTimeout parameter is invalid.
400	InvalidParameter.UdpTimeout	The specified value is invalid.	The error message returned because the specified NetworkAttributes.UdpTimeout parameter is invalid.
400	Duplicate.TagKey	The Tag.N.Key contain duplicate key.	The error message returned because the specified tag key already exists. Tag keys must be unique.

6.2. DescribeDedicatedHostTypes

You can call this operation to query the dedicated host types supported in a region, or the ECS instance families that are supported by a specific dedicated host type.

Debugging

OpenAPI Explorer automatically calculates the signature value. For your convenience, we recommend that you call this operation in OpenAPI Explorer. OpenAPI Explorer dynamically generates the sample code of the operation for different SDKs.

Request parameters

Parameter	Type	Required	Example	Description
Action	String	Yes	DescribeDedicatedHostTypes	The operation that you want to perform. Set the value to DescribeDedicatedHostTypes.
RegionId	String	Yes	cn-hangzhou	The ID of the region. You can call the DescribeRegions operation to query the most recent region list.

Parameter	Type	Required	Example	Description
DedicatedHostType	String	No	ddh.sn1ne	The dedicated host type. For more information, see Dedicated host types .
SupportedInstanceTypeFamily	String	No	ecs.sn1ne	The ECS instance families supported by the dedicated host type.

Response parameters

Parameter	Type	Example	Description
DedicatedHostTypes	Array		The information about dedicated host types.
DedicatedHostType			
Cores	Integer	2	The number of cores in a physical CPU.
DedicatedHostType	String	ddh.sn1ne	The dedicated host type. You can submit a ticket to request more dedicated host types.
GPUSpec	String	gpu	
LocalStorageAmount	Integer	0	The number of local disks on a dedicated host.
LocalStorageCapacity	Long	0	The capacity of a local disk. Unit: GiB.
LocalStorageCategory	String	local	The category of the local disks.
MemorySize	Float	112.0	The size of the memory. Unit: GiB.
PhysicalGpus	Integer	2	
Sockets	Integer	2	
SupportedInstanceTypeFamilies	List	ecs.sn1ne	The list of ECS instance families supported by the dedicated host type.
SupportedInstanceTypesList	List	ecs.sn1ne.large	The list of ECS instance types supported by the dedicated host type.
TotalVcpus	Integer	56	The total number of vCPUs.
TotalVgpus	Integer	10	
RequestId	String	5FE5FF06-3A33-4658-8495-6445FC54E327	The ID of the request.

Examples

Sample requests


```
https://ecs.aliyuncs.com/?Action=DescribeDedicatedHostTypes
&RegionId=cn-hangzhou
&<Common request parameters>
```

Sample success responses

XML format

```
<DescribeDedicatedHostTypesResponse>
  <DedicatedHostTypes>
    <DedicatedHostType>
      <LocalStorageAmount>0</LocalStorageAmount>
      <Sockets>2</Sockets>
      <DedicatedHostType>ddh.sn1ne</DedicatedHostType>
      <LocalStorageCapacity>0</LocalStorageCapacity>
      <SupportedInstanceTypeFamilies>
        <SupportedInstanceTypeFamily>ecs.sn1ne</SupportedInstanceTypeFamily>
      </SupportedInstanceTypeFamilies>
      <MemorySize>112.0</MemorySize>
      <Cores>32</Cores>
      <TotalVcpus>56</TotalVcpus>
      <LocalStorageCategory></LocalStorageCategory>
    </DedicatedHostType>
    <DedicatedHostType>
      <LocalStorageAmount>0</LocalStorageAmount>
      <Sockets>2</Sockets>
      <DedicatedHostType>ddh.sn2ne</DedicatedHostType>
      <LocalStorageCapacity>0</LocalStorageCapacity>
      <SupportedInstanceTypeFamilies>
        <SupportedInstanceTypeFamily>ecs.sn2ne</SupportedInstanceTypeFamily>
      </SupportedInstanceTypeFamilies>
      <MemorySize>224.0</MemorySize>
      <Cores>32</Cores>
      <TotalVcpus>56</TotalVcpus>
      <LocalStorageCategory></LocalStorageCategory>
    </DedicatedHostType>
  </DedicatedHostTypes>
  <RequestId>5FE5FF06-3A33-4658-8495-6445FC54E327</RequestId>
</DescribeDedicatedHostTypesResponse>
```

JSON format

```
{
  "DedicatedHostTypes":{
    "DedicatedHostType":[
      {
        "LocalStorageAmount":0,
        "Sockets":2,
        "DedicatedHostType":"ddh.sn1ne",
        "LocalStorageCapacity":0,
        "SupportedInstanceTypeFamilies":{
          "SupportedInstanceTypeFamily":[
            "ecs.sn1ne"
          ]
        },
        "MemorySize":112,
        "Cores":32,
        "TotalVcpus":56,
        "LocalStorageCategory":""
      },
      {
        "LocalStorageAmount":0,
        "Sockets":2,
        "DedicatedHostType":"dh.c60m83.n1",
        "LocalStorageCapacity":0,
        "SupportedInstanceTypeFamilies":{
          "SupportedInstanceTypeFamily":[
            "ecs.n1"
          ]
        },
        "MemorySize":84,
        "Cores":32,
        "TotalVcpus":40,
        "LocalStorageCategory":""
      }
    ]
  },
  "RequestId":"9A0FE8A2-720C-45AE-B2D9-813060FCBBF5"
}
```

6.3. DescribeDedicatedHosts

You can call this operation to query the details of one or more dedicated hosts, including the physical performance specifications, machine codes, service status, and a list of ECS instances that are created on the dedicated hosts.

Debugging

OpenAPI Explorer automatically calculates the signature value. For your convenience, we recommend that you call this operation in OpenAPI Explorer. OpenAPI Explorer dynamically generates a sample code of the operation for different SDKs.

Request parameters

Parameter	Type	Required	Example	Description
Action	String	Yes	DescribeDedicatedHosts	The operation that you want to perform. Set the value to DescribeDedicatedHosts.
RegionId	String	Yes	cn-hangzhou	The region ID of the dedicated host. You can call the DescribeRegions operation to query the most recent region list.
ZoneId	String	No	cn-hangzhou-g	The zone ID of the dedicated host.
DedicatedHostIds	String	No	["dh-bp165p6xk2tlw61e***", "dh-bp1f9vxnmo7emy96***"]	The IDs of the dedicated hosts. You can specify up to 100 dedicated host IDs in a single request. Separate multiple IDs with commas (,).
DedicatedHostName	String	No	MyDDHTestName	The name of the dedicated host.
Status	String	No	Available	The service status of the dedicated host. Valid values: - Available: The dedicated host is available. - UnderAssessment: The dedicated host has potential failures and may fail when it is used. - PermanentFailure: The dedicated host has permanent failures and cannot be used. Default value: Available
DedicatedHostType	String	No	ddh.g5	The dedicated host type.
LockReason	String	No	financial	The reasons why the resources of the dedicated host were locked. Valid values: - financial: The resources were locked due to overdue payments. - security: The resources were locked for security reasons.
PageNumber	Integer	No	1	The number of the page to return. Default: 1.
PageSize	Integer	No	10	The number of entries to return on each page. Valid values: 1 to 100. Default value: 10
Tag.N.Key	String	No	TestKey	The key of tag N of the dedicated host. Valid values of N: 1 to 20. The tag key cannot be an empty string. It can be up to 128 characters in length and cannot start with acs: or aliyun. It cannot contain http:// or https://.

Parameter	Type	Required	Example	Description
Tag.N.Value	String	No	TestValue	The value of tag N of the dedicated host. Valid values of N: 1 to 20. The tag value can be an empty string. It can be up to 128 characters in length and cannot start with <code>acs:</code> or <code>aliyun</code> . It cannot contain <code>http://</code> or <code>https://</code> .
ResourceGroupId	String	No	rg-aek3b6jzp66****	The ID of the resource group to which the dedicated host belongs.

Response parameters

Parameter	Type	Example	Description
DedicatedHosts	Array of DedicatedHost		Details about the dedicated hosts.
DedicatedHost			
ActionOnMaintenance	String	Migrate	The policy used to migrate the instances deployed on the dedicated host when the dedicated host fails or needs to be repaired online. Valid values: • Migrate: The instances are migrated to another physical server and restarted. If the dedicated host is attached with cloud disks, the default value is Migrate. • Stop: The instances are stopped. If the dedicated host cannot be repaired, the instances are migrated to another physical server and restarted. If the dedicated host is attached with local disks, the default value is Stop.
AutoPlacement	String	on	Indicates whether the dedicated host was added to the resource pool for automatic deployment. Valid values: • on: The dedicated host was added to the resource pool for automatic deployment. • off: The dedicated host was not added to the resource pool for automatic deployment. For more information about automatic deployment, see Automatic deployment.
AutoReleaseTime	String	2017-01-01T12:00Z	The automatic release time of the dedicated host. The time follows the ISO 8601 standard in the <code>yyyy-MM-ddTHH:mmZ</code> format. The time is displayed in UTC.
Capacity	Struct		The performance specifications of the dedicated host.
AvailableLocalStorage	Integer	65	The available space of the local disks. Unit: GiB.
AvailableMemory	Float	25	The available space of the memory. Unit: GiB.

Parameter	Type	Example	Description
AvailableVcpus	Integer	5	The number of available vCPUs.
AvailableVgpus	Integer	2	The number of available vGPUs.
LocalStorageCategory	String	i2	The category of the local disks.
TotalLocalStorage	Integer	512	The total capacity of the local disks. Unit: GiB.
TotalMemory	Float	1024	The total capacity of the memory. Unit: GiB.
TotalVcpus	Integer	56	The total number of vCPUs.
TotalVgpus	Integer	10	The total number of vGPUs.
ChargeType	String	Prepaid	The billing method of the dedicated host.
Cores	Integer	3	The number of physical cores in a single CPU.
CpuOverCommitRatio	Float	1	The CPU overcommit ratio.
CreationTime	String	2018-01-01T12:00Z	The time when the dedicated host was created. The time follows the ISO 8601 standard in the <code>yyyy-MM-ddTHH:mmZ</code> format. The time is displayed in UTC.
DedicatedHostClusterId	String	dc-bp12wlf6am0vz9v2****	The ID of the dedicated host cluster to which the dedicated host belongs.
DedicatedHostId	String	dh-bp165p6xk2tlw61e****	The ID of the dedicated host.
DedicatedHostName	String	MyDDHTestName	The name of the dedicated host.
DedicatedHostType	String	ddh.g5	The type of the dedicated host.
Description	String	this-is-my-DDH	The description of the dedicated host.
ExpiredTime	String	2019-01-01T12:00Z	The expiration time of the subscription dedicated host. The time follows the ISO 8601 standard in the <code>yyyy-MM-ddTHH:mmZ</code> format. The time is displayed in UTC.
GPUSpec	String	gpu	The GPU model.
Instances	Array of Instance		The ECS instances that were created on the dedicated host.
Instance			

Parameter	Type	Example	Description
InstanceId	String	i-bp14ot0ykf8w13a1****	The ID of the ECS instance.
InstanceType	String	ecs.g5.large	The instance type of the ECS instance.
MachineId	String	12aaa123456ff19dec12345d3026e****	The machine code of the dedicated host.
NetworkAttributes	Struct		The network attributes of the dedicated host.
SlbUdpTimeout	Integer	60	The timeout period of the UDP session that was established between Server Load Balancer (SLB) and the dedicated host.
UdpTimeout	Integer	60	The timeout period of the UDP session that was established between a user and an Alibaba Cloud service on the dedicated host.
OperationLocks	Array of OperationLock		The reasons why the resources of the dedicated host were locked.
OperationLock			
LockReason	String	financial	The reason why the resources of the dedicated host were locked. Example value: financial. It indicates that the resources were locked due to overdue payments.
PhysicalGpus	Integer	10	The number of physical GPUs.
RegionId	String	cn-hangzhou	The region ID of the dedicated host.
ResourceGroupId	String	rg-aek3b6jzp66****	The ID of the resource group to which the dedicated host belongs.
SaleCycle	String	Month	The unit of the subscription period. Valid values: - Month - Year
Sockets	Integer	5	The number of physical CPUs.
Status	String	Available	The service status of the dedicated host. Valid values: - Available - UnderAssessment - PermanentFailure
SupportedCustomInstanceTypeFamilies	List	ecs.ddh6s.custom	The custom ECS instance families supported by the dedicated host.

Parameter	Type	Example	Description
SupportedInstanceTypeFamilies	List	ecs.g5	The ECS instance families supported by the dedicated host.
SupportedInstanceTypesList	List	ecs.g5.large	The ECS instance types supported by the dedicated host.
Tags	Array of Tag		The tags of the dedicated host.
Tag			
TagKey	String	TestKey	The tag key of the dedicated host.
TagValue	String	TestValue	The tag value of the dedicated host.
ZoneId	String	cn-hangzhou-g	The zone ID of the dedicated host.
PageNumber	Integer	5	The page number of the returned page.
PageSize	Integer	1	The number of entries returned per page.
RequestId	String	7654525A-9964-4ABB-8BCD-98F8835E809A	The ID of the request.
TotalCount	Integer	3	The total number of dedicated hosts.

Examples

Sample requests

```
https://ecs.aliyuncs.com/?Action=DescribeDedicatedHosts
&RegionId=cn-hangzhou
&<Common request parameters>
```

Sample success responses

XML format

```
<DescribeDedicatedHostsResponse>
  <TotalCount>1</TotalCount>
  <DedicatedHosts>
    <DedicatedHost>
      <PhysicalGpus>0</PhysicalGpus>
      <MachineId>73aaa79494ff19dec79446d3026e****</MachineId>
      <DedicatedHostId>dh-bp165p6xk2tlw61e****</DedicatedHostId>
      <Description></Description>
      <ResourceGroupId></ResourceGroupId>
      <SupportedCustomInstanceTypeFamilies>
        </SupportedCustomInstanceTypeFamilies>
      <NetworkAttributes></NetworkAttributes>
      <GPUSpec></GPUSpec>
      <DedicatedHostName>MyDDHTestName</DedicatedHostName>
```

```

    <Capacity>
      <AvailableVgpus>0</AvailableVgpus>
      <LocalStorageCategory></LocalStorageCategory>
      <TotalVgpus>0</TotalVgpus>
      <TotalMemory>768</TotalMemory>
      <AvailableMemory>768</AvailableMemory>
      <AvailableVcpus>104</AvailableVcpus>
      <TotalVcpus>104</TotalVcpus>
      <AvailableLocalStorage>0</AvailableLocalStorage>
      <TotalLocalStorage>0</TotalLocalStorage>
    </Capacity>
    <ExpiredTime>2999-09-08T16:00Z</ExpiredTime>
    <SaleCycle></SaleCycle>
    <Status>Available</Status>
    <ZoneId>cn-hangzhou-h</ZoneId>
    <AutoPlacement>on</AutoPlacement>
    <DedicatedHostType>ddh.r6</DedicatedHostType>
    <OperationLocks>
  </OperationLocks>
  <Cores>52</Cores>
  <Instances>
</Instances>
  <Sockets>2</Sockets>
  <ChargeType>PostPaid</ChargeType>
  <SupportedInstanceTypeFamilies>
    <SupportedInstanceTypeFamily>ecs.c6</SupportedInstanceTypeFamily>
    <SupportedInstanceTypeFamily>ecs.g6</SupportedInstanceTypeFamily>
    <SupportedInstanceTypeFamily>ecs.ic6</SupportedInstanceTypeFamily>
    <SupportedInstanceTypeFamily>ecs.r6</SupportedInstanceTypeFamily>
  </SupportedInstanceTypeFamilies>
  <ActionOnMaintenance>Migrate</ActionOnMaintenance>
  <CreationTime>2020-04-15T07:12Z</CreationTime>
  <RegionId>cn-hangzhou</RegionId>
  <SupportedInstanceTypesList>
    <SupportedInstanceTypesList>ecs.g6.26xlarge</SupportedInstanceTypesList>
    <SupportedInstanceTypesList>ecs.g6.3xlarge</SupportedInstanceTypesList>
    <SupportedInstanceTypesList>ecs.g6.8xlarge</SupportedInstanceTypesList>
    <SupportedInstanceTypesList>ecs.g6.2xlarge</SupportedInstanceTypesList>
    <SupportedInstanceTypesList>ecs.g6.13xlarge</SupportedInstanceTypesList>
    <SupportedInstanceTypesList>ecs.g6.6xlarge</SupportedInstanceTypesList>
    <SupportedInstanceTypesList>ecs.c6.8xlarge</SupportedInstanceTypesList>
    <SupportedInstanceTypesList>ecs.g6.4xlarge</SupportedInstanceTypesList>
    <SupportedInstanceTypesList>ecs.g6.xlarge</SupportedInstanceTypesList>
    <SupportedInstanceTypesList>ecs.g6.16xlarge</SupportedInstanceTypesList>
    <SupportedInstanceTypesList>ecs.c6.13xlarge</SupportedInstanceTypesList>
    <SupportedInstanceTypesList>ecs.c6.26xlarge</SupportedInstanceTypesList>
    <SupportedInstanceTypesList>ecs.r6.xlarge</SupportedInstanceTypesList>
    <SupportedInstanceTypesList>ecs.r6.26xlarge</SupportedInstanceTypesList>
    <SupportedInstanceTypesList>ecs.r6.3xlarge</SupportedInstanceTypesList>
    <SupportedInstanceTypesList>ecs.r6.13xlarge</SupportedInstanceTypesList>
  </SupportedInstanceTypesList>

```



```

    <SupportedInstanceTypesList>ecs.r6.16xlarge</SupportedInstanceTypesList>
    <SupportedInstanceTypesList>ecs.r6.4xlarge</SupportedInstanceTypesList>
    <SupportedInstanceTypesList>ecs.c6.16xlarge</SupportedInstanceTypesList>
    <SupportedInstanceTypesList>ecs.r6.6xlarge</SupportedInstanceTypesList>
    <SupportedInstanceTypesList>ecs.g6.large</SupportedInstanceTypesList>
    <SupportedInstanceTypesList>ecs.c6.2xlarge</SupportedInstanceTypesList>
    <SupportedInstanceTypesList>ecs.r6.2xlarge</SupportedInstanceTypesList>
    <SupportedInstanceTypesList>ecs.c6.xlarge</SupportedInstanceTypesList>
    <SupportedInstanceTypesList>ecs.c6.3xlarge</SupportedInstanceTypesList>
    <SupportedInstanceTypesList>ecs.c6.6xlarge</SupportedInstanceTypesList>
    <SupportedInstanceTypesList>ecs.c6.4xlarge</SupportedInstanceTypesList>
    <SupportedInstanceTypesList>ecs.c6.large</SupportedInstanceTypesList>
    <SupportedInstanceTypesList>ecs.r6.large</SupportedInstanceTypesList>
    <SupportedInstanceTypesList>ecs.r6.8xlarge</SupportedInstanceTypesList>
    <SupportedInstanceTypesList>ecs.ic6.4xlarge</SupportedInstanceTypesList>
    <SupportedInstanceTypesList>ecs.ic6.8xlarge</SupportedInstanceTypesList>
    <SupportedInstanceTypesList>ecs.ic6.xlarge</SupportedInstanceTypesList>
    <SupportedInstanceTypesList>ecs.ic6.3xlarge</SupportedInstanceTypesList>
    <SupportedInstanceTypesList>ecs.ic6.6xlarge</SupportedInstanceTypesList>
    <SupportedInstanceTypesList>ecs.ic6.2xlarge</SupportedInstanceTypesList>
    <SupportedInstanceTypesList>ecs.ic6.large</SupportedInstanceTypesList>
    <SupportedInstanceTypesList>ecs.r6-dbeni.8xlarge</SupportedInstanceTypesList>
    <SupportedInstanceTypesList>ecs.g6nv.8xlarge</SupportedInstanceTypesList>
    <SupportedInstanceTypesList>ecs.c6vn.8xlarge</SupportedInstanceTypesList>
    <SupportedInstanceTypesList>ecs.r6vn.8xlarge</SupportedInstanceTypesList>
    <SupportedInstanceTypesList>ecs.g6-nfveni.large</SupportedInstanceTypesList>
  </SupportedInstanceTypesList>
  <DedicatedHostClusterId></DedicatedHostClusterId>
  <AutoReleaseTime></AutoReleaseTime>
</DedicatedHost>
</DedicatedHosts>
<RequestId>9E9354D4-C89E-4A82-A70E-3EEAD6007885</RequestId>
<PageSize>10</PageSize>
<PageNumber>1</PageNumber>
</DescribeDedicatedHostsResponse>

```

JSON format

```

{
  "TotalCount": 1,
  "DedicatedHosts": {
    "DedicatedHost": [
      {
        "PhysicalGpus": 0,
        "MachineId": "73aaa79494ff19dec79446d3026e****",
        "DedicatedHostId": "dh-bp165p6xk2tlw61e****",
        "Description": "",
        "ResourceGroupId": "",
        "SupportedCustomInstanceTypeFamilies": {
          "SupportedCustomInstanceTypeFamily": []
        }
      }
    ]
  }
}

```

```

    },
    "NetworkAttributes": {},
    "GPUSpec": "",
    "DedicatedHostName": "MyDDHTestName",
    "Capacity": {
        "AvailableVgpu": 0,
        "LocalStorageCategory": "",
        "TotalVgpu": 0,
        "TotalMemory": 768,
        "AvailableMemory": 768,
        "AvailableVcpu": 104,
        "TotalVcpu": 104,
        "AvailableLocalStorage": 0,
        "TotalLocalStorage": 0
    },
    "ExpiredTime": "2999-09-08T16:00Z",
    "SaleCycle": "",
    "Status": "Available",
    "ZoneId": "cn-hangzhou-h",
    "AutoPlacement": "on",
    "DedicatedHostType": "ddh.r6",
    "OperationLocks": {
        "OperationLock": []
    },
    "Cores": 52,
    "Instances": {
        "Instance": []
    },
    "Sockets": 2,
    "ChargeType": "PostPaid",
    "SupportedInstanceTypeFamilies": {
        "SupportedInstanceTypeFamily": [
            "ecs.c6",
            "ecs.g6",
            "ecs.ic6",
            "ecs.r6"
        ]
    },
    "ActionOnMaintenance": "Migrate",
    "CreationTime": "2020-04-15T07:12Z",
    "RegionId": "cn-hangzhou",
    "SupportedInstanceTypesList": {
        "SupportedInstanceTypesList": [
            "ecs.g6.26xlarge",
            "ecs.g6.3xlarge",
            "ecs.g6.8xlarge",
            "ecs.g6.2xlarge",
            "ecs.g6.13xlarge",
            "ecs.g6.6xlarge",
            "ecs.c6.8xlarge",
            "ecs.c6.4xlarge"
        ]
    }
}

```

```

        "ecs.g6.xlarge",
        "ecs.g6.xlarge",
        "ecs.g6.16xlarge",
        "ecs.c6.13xlarge",
        "ecs.c6.26xlarge",
        "ecs.r6.xlarge",
        "ecs.r6.26xlarge",
        "ecs.r6.3xlarge",
        "ecs.r6.13xlarge",
        "ecs.r6.16xlarge",
        "ecs.r6.4xlarge",
        "ecs.c6.16xlarge",
        "ecs.r6.6xlarge",
        "ecs.g6.large",
        "ecs.c6.2xlarge",
        "ecs.r6.2xlarge",
        "ecs.c6.xlarge",
        "ecs.c6.3xlarge",
        "ecs.c6.6xlarge",
        "ecs.c6.4xlarge",
        "ecs.c6.large",
        "ecs.r6.large",
        "ecs.r6.8xlarge",
        "ecs.ic6.4xlarge",
        "ecs.ic6.8xlarge",
        "ecs.ic6.xlarge",
        "ecs.ic6.3xlarge",
        "ecs.ic6.6xlarge",
        "ecs.ic6.2xlarge",
        "ecs.ic6.large",
        "ecs.r6-dbeni.8xlarge",
        "ecs.g6nv.8xlarge",
        "ecs.c6vn.8xlarge",
        "ecs.r6vn.8xlarge",
        "ecs.g6-nfveni.large"
    ]
},
"DedicatedHostClusterId": "",
"AutoReleaseTime": ""
}
]
},
"RequestId": "9E9354D4-C89E-4A82-A70E-3EEAD6007885",
"PageSize": 10,
"PageNumber": 1
}

```

Error codes

HTTP status code	Error code	Error message	Description
400	InvalidStatus.ValueNotSupported	The specified dedicated host status is not supported.	The error message returned because the operation is not supported while the dedicated host is in the current state.
400	MissingParameter.RegionId	The regionId should not be null.	The error message returned because the required RegionId parameter is not specified.
403	InvalidDedicatedHostIds.Malformed	The amount of specified dedicatedHostIds exceeds the limit.	The error message returned because more than 100 dedicated host IDs are specified in the DedicatedHostIds value.
400	InvalidParameter.DedicatedHostIds	The specified parameter dedicatedHostIds is not valid.	The error message returned because the specified DedicatedHostIds parameter is invalid.
400	InvalidRegion.NotFound	The specified parameter RegionId is not valid.	The error message returned because the specified RegionId parameter is invalid.
400	InvalidZone.NotFound	The specified parameter ZoneId is not valid.	The error message returned because the specified ZoneId parameter is invalid.
404	InvalidLockReason.NotFound	The specified LockReason is not found	The error message returned because the specified LockReason parameter does not exist.

6.4. DescribeDedicatedHostAutoRenew

You can call this operation to query the auto-renewal status of one or more subscription dedicated hosts.

Debugging

OpenAPI Explorer automatically calculates the signature value. For your convenience, we recommend that you call this operation in OpenAPI Explorer. OpenAPI Explorer dynamically generates the sample code of the operation for different SDKs.

Request parameters

Parameter	Type	Required	Example	Description
DedicatedHostIds	String	Yes	dh-dedicatedhost1,dh-dedicatedhost2	The ID of the dedicated host. You can enter up to 100 dedicated host IDs in the list. Separate the IDs with commas (,).
RegionId	String	Yes	cn-hangzhou	The region ID of the dedicated host.
Action	String	Yes	DescribeDedicatedHostAutoRenew	The operation that you want to perform. Set the value to DescribeDedicatedHostAutoRenew.

Response parameters

Parameter	Type	Example	Description

Parameter	Type	Example	Description
DedicatedHostRenewAttributes			An array of auto-renewal attributes for dedicated hosts.
AutoRenewEnabled	Boolean	true	Indicates whether auto-renewal is enabled.
DedicatedHostId	String	ddh-xxxxxxxxxxxxxxxxxxxxxx	The ID of the dedicated host.
Duration	Integer	0	The auto-renewal period.
PeriodUnit	String	Month	The unit of the auto-renewal period. Valid values: Week and Month
RenewalStatus	String	Normal	Indicates whether the subscription dedicated host is automatically renewed. Valid values: - AutoRenewal: The cluster is automatically renewed. - Normal: The dedicated host is not automatically renewed but you will still receive notifications for renewals. - NotRenewal: Auto-renewal is disabled and no expiration notification is sent. You receive notifications for renewal 3 days before the expiration time of the dedicated host subscription. You can set the dedicated host that is not renewed to Normal and manually renew it by calling the RenewDedicatedHosts operation. Otherwise, you can renew it by setting this parameter to AutoRenewal.
RequestId	String	04F0F334-1335-436C-A1D7-6C044FE73368	The ID of the request.

Examples

Sample requests

```
https://ecs.aliyuncs.com/?Action=DescribeDedicatedHostAutoRenew
&RegionId=cn-hangzhou
&DedicatedHostIds=dh-dedicatedhost1,dh-dedicatedhost2
&<Common request parameters>
```

Sample success responses

XML format

```

<DescribeDedicatedHostAutoRenewResponse>
  <RequestId>04F0F334-1335-436C-A1D7-6C044FE73368</RequestId>
  <DedicatedHostRenewAttributes>
    <DedicatedHostRenewAttribute>
      <DedicatedHostId>dh-dedicatedhost1</DedicatedHostId>
      <Duration>0</Duration>
      <AutoRenewEnabled>false</AutoRenewEnabled>
      <PeriodUnit>Month</PeriodUnit>
      <RenewalStatus>Normal</RenewalStatus>
    </DedicatedHostRenewAttribute>
    <DedicatedHostRenewAttribute>
      <DedicatedHostId>dh-dedicatedhost2</DedicatedHostId>
      <Duration>1</Duration>
      <PeriodUnit>Month</PeriodUnit>
      <AutoRenewEnabled>true</AutoRenewEnabled>
      <RenewalStatus>AutoRenewal</RenewalStatus>
    </DedicatedHostRenewAttribute>
  </DedicatedHostRenewAttributes>
</DescribeDedicatedHostAutoRenewResponse>

```

JSON format

```

{
  "DedicatedHostIdRenewAttributes":{
    "DedicatedHostIdRenewAttribute":[
      {
        "RenewalStatus":"Normal",
        "DedicatedHostId":"dh-dedicatedhost1",
        "Duration":0,
        "AutoRenewEnabled":false,
        "PeriodUnit":"Month"
      },
      {
        "RenewalStatus":"AutoRenewal",
        "DedicatedHostId":"dh-dedicatedhost2",
        "Duration":1,
        "AutoRenewEnabled":true,
        "PeriodUnit":"Month"
      }
    ]
  },
  "RequestId":"04F0F334-1335-436C-A1D7-6C044FE73368"
}

```

Error codes

HTTP status code	Error code	Error message	Description
403	MissingParameter.DedicatedHostId	DedicatedHostId should not be null.	The error message returned because the host ID cannot be empty.

HTTP status code	Error code	Error message	Description
403	InvalidParameter.ToManyDedicatedHostIds	DedicatedHostId should be less than 100.	The error message returned because the number of dedicated host IDs specified in DedicatedHostIds exceeds the upper limit. DedicatedHostIds supports a maximum of 100 IDs.
403	InvalidParameter.InvalidDedicatedHostId	%s	The error message returned because the specified DedicatedHostId is invalid.
403	IncorrectDedicatedHostStatus	The current status of the resource does not support this operation.	The error message returned because this operation is not supported while the resource is in the current state.
403	ChargeTypeViolation	Pay-As-You-Go dedicated host do not support this operation.	The error message returned because the current operation is not supported for pay-as-you-go dedicated hosts.

6.5. ModifyDedicatedHostAttribute

You can call this operation to modify some attributes of a dedicated host, such as the name, description, and instance migration policy that is applied when the dedicated host fails.

Description

- All the ECS instances that are hosted on a dedicated host must be in the Stopped (`Stopped`) state before you can modify the CPU overcommit ratio of the dedicated host.
- Modifications to the CPU overcommit ratio of a dedicated host does not affect the running status of the dedicated host. After a modification is complete, the number of allocated vCPUs on the dedicated host must not exceed the new total number of vCPUs. Otherwise, ECS instances that use the excess vCPUs cannot be started.

Debugging

OpenAPI Explorer automatically calculates the signature value. For your convenience, we recommend that you call this operation in OpenAPI Explorer. OpenAPI Explorer dynamically generates a sample code of the operation for different SDKs.

Request parameters

Parameter	Type	Required	Example	Description
Action	String	Yes	ModifyDedicatedHostAttribute	The operation that you want to perform. Set the value to ModifyDedicatedHostAttribute.
DedicatedHostId	String	Yes	dh-bp165p6xk2tlw61e***	The ID of the dedicated host.
RegionId	String	Yes	cn-hangzhou	The region ID of the dedicated host. You can call the DescribeRegions operation to query the most recent region list.
DedicatedHostName	String	No	testDedicatedHostName	The name of the dedicated host. The name must be 2 to 128 characters in length and can contain letters, digits, colons (:), underscores (_), and hyphens (-). It must start with a letter and cannot start with http:// or https://.

Parameter	Type	Required	Example	Description
Description	String	No	testDescription	The description of the dedicated host. The description must be 2 to 256 characters in length and cannot start with http:// or https://.
ActionOnMaintenance	String	No	Migrate	The policy used to migrate the instances deployed on the dedicated host when the dedicated host fails or needs to be repaired online. Valid values: • Migrate: The instances are migrated to another physical server and restarted. • Stop: The instances are stopped. If the dedicated host cannot be repaired, the instances are migrated to another physical server and restarted. If the dedicated host is attached with cloud disks, the default value is Migrate. If the dedicated host is attached with local disks, the default value is Stop.
NetworkAttributes.SlbUdpTimeout	Integer	No	60	The timeout period for the UDP session between Server Load Balancer (SLB) and the dedicated host. Unit: seconds. Valid values: 15 to 310.
NetworkAttributes.UdpTimeout	Integer	No	60	The timeout period for the UDP session between a user and an Alibaba Cloud service on the dedicated host. Unit: seconds. Valid values: 15 to 310.
AutoPlacement	String	No	on	Specifies whether to add the dedicated host to the resource pool for automatic deployment. If you do not specify the DedicatedHostId parameter when you create an instance on a dedicated host, Alibaba Cloud automatically selects a dedicated host from the resource pool to host the instance. Valid values: • on: adds the dedicated host to the resource pool for automatic deployment. • off: does not add the dedicated host to the resource pool for automatic deployment. For information about automatic deployment, see Features.
DedicatedHostClusterId	String	No	dc-bp165p6xk2tlw61e***	The ID of the dedicated host cluster to which the dedicated host belongs.

Parameter	Type	Required	Example	Description
CpuOverCommitRatio	Float	No	1	The CPU overcommit ratio. You can configure CPU overcommit ratios only for the following dedicated host types: g6s, c6s, and r6s. Valid values: 1 to 5. The CPU overcommit ratio affects the number of available vCPUs on a dedicated host. You can use the following formula to calculate the number of available vCPUs on a dedicated host: Number of available vCPUs = Number of physical CPU cores × 2 × CPU overcommit ratio. For example, the number of physical CPU cores on each g6s dedicated host is 52. If you change the CPU overcommit ratio of a g6s dedicated host to 4, the number of available vCPUs on the dedicated host is 416. For scenarios that have minimal requirements for CPU stability or where CPU load is not heavy, such as development and test environments, you can increase the number of available vCPUs on a dedicated host by increasing the CPU overcommit ratio. This way, you can deploy more ECS instances of the same specifications on the dedicated host and reduce the unit deployment cost.

Response parameters

Parameter	Type	Example	Description
RequestId	String	2A4EA075-CB5B-41B7-B0EB-70D339F64DE7	The ID of the request.

Examples

Sample requests

```
http(s)://ecs.aliyuncs.com/? Action=ModifyDedicatedHostAttribute
&DedicatedHostId=dh-bp165p6xk2tlw61e****
&RegionId=cn-hangzhou
&<Common request parameters>
```

Sample success responses

XML format

```
<ModifyDedicatedHostAttributeResponse>
  <RequestId>2A4EA075-CB5B-41B7-B0EB-70D339F64DE7</RequestId>
</ModifyDedicatedHostAttributeResponse>
```

JSON format

```
{
  "RequestId": "2A4EA075-CB5B-41B7-B0EB-70D339F64DE7"
}
```

Error codes

HTTP status code	Error code	Error message	Description
404	InvalidDedicatedHostId.NotFound	The specified DedicatedHostId does not exist.	The error message returned because the specified DedicatedHostId parameter does not exist.
400	InvalidDedicatedHostName.Malformed	The specified parameter DedicatedHostName is not valid.	The error message returned because the specified DedicatedHostName parameter is invalid.
400	InvalidDescription.Malformed	The specified parameter Description is not valid.	The error message returned because the specified Description parameter is invalid. The description must be 2 to 256 characters in length and cannot start with http:// or https://.
403	InvalidUser.Unauthorized	The user is not authorized	The error message returned because you are not authorized to perform this operation.
400	InvalidParameter.SlbUdpTimeout	The specified value is invalid.	The error message returned because the specified NetworkAttributes.SlbUdpTimeout parameter is invalid.
400	InvalidParameter.UdpTimeout	The specified value is invalid.	The error message returned because the specified NetworkAttributes.UdpTimeout parameter is invalid.

6.6. ModifyDedicatedHostAutoRenewAttribute

You can call this operation to enable or disable auto-renewal for one or more subscription dedicated hosts.

Description

Subscription dedicated hosts are automatically renewed nine days before expiration. The automatic payment is deducted at 08:00:00 (UTC+8). If the automatic payment fails, the payment is deducted at the same time the next day. Automatic payment stops after the payment succeeds or after the dedicated host is expired and locked. Make sure that your account has sufficient balance or credit for the payment.

Debugging

OpenAPI Explorer automatically calculates the signature value. For your convenience, we recommend that you call this operation in OpenAPI Explorer. OpenAPI Explorer dynamically generates the sample code of the operation for different SDKs.

Request parameters

Parameter	Type	Required	Example	Description
DedicatedHostIds	String	Yes	ddh-xxxxxxxxxxxxxxxxxx	The ID of the dedicated host. You can enter up to 100 subscription dedicated host IDs in the list. Separate multiple IDs with commas (,).
RegionId	String	Yes	cn-hangzhou	The region ID of the dedicated host.
Action	String	Yes	ModifyDedicatedHostAutoRenewAttribute	The operation that you want to perform. Set the value to ModifyDedicatedHostAutoRenewAttribute.

Parameter	Type	Required	Example	Description
AutoRenew	Boolean	No	false	Specifies whether to automatically renew the subscription dedicated host. Default value: false. Valid values: - true: The subscription dedicated host is automatically renewed. - false: The subscription dedicated host is not automatically renewed.
Duration	Integer	No	1	The billing cycle of the subscription dedicated host. For more information about the valid values, see the description of the <code>PeriodUnit</code> parameter.
PeriodUnit	String	No	Month	The unit of the renewal period. Default value: Month. Valid values: - Week: When the <code>PeriodUnit</code> parameter is set to Week, the valid values of the <code>Duration</code> parameter are 1, 2, and 3. - Month: When the <code>PeriodUnit</code> parameter is set to Month, the valid values of the <code>Duration</code> parameter are 1, 2, 3, 6, and 12.
RenewalStatus	String	No	Normal	Specifies whether to enable auto-renewal for the subscription dedicated host. The <code>RenewalStatus</code> parameter takes precedence over the <code>AutoRenew</code> parameter. Valid values: - AutoRenewal: Auto-renewal is enabled. - Normal: The dedicated host is not renewed, but you still receive notifications for renewal. - NotRenewal: Auto-renewal is disabled and no expiration notification is sent. You receive notifications for renewal three days before the expiration time of a subscription dedicated host. You can set the dedicated host that is not renewed to Normal and manually renew it by calling the RenewDedicatedHosts operation. Alternatively, you can renew it by setting this parameter to AutoRenewal.

Response parameters

Parameter	Type	Example	Description
RequestId	String	2A4EA075-CB5B-41B7-B0EB-70D339F64DE7	The ID of the request.

Examples

Sample requests

```
https://ecs.aliyuncs.com/?Action=ModifyDedicatedHostAutoRenewAttribute
&DedicatedHostIds=ddh-xxxxxxxxxxxxxxxxxx
&RegionId=cn-hangzhou
&<Common request parameters>
```

Sample success responses

XML format

```
<ModifyDedicatedHostAutoRenewAttributeResponse>
  <RequestId>2A4EA075-CB5B-41B7-B0EB-70D339F64DE7</RequestId>
</ModifyDedicatedHostAutoRenewAttributeResponse>
```

JSON format

```
{
  "RequestId": "2A4EA075-CB5B-41B7-B0EB-70D339F64DE7"
}
```

Error codes

HTTP status code	Error code	Error message	Description
403	MissingParameter.DedicatedHostId	DedicatedHostId should not be null.	The error message returned because the host ID is not specified.
403	InvalidParameter.ToManyDedicatedHostIds	DedicatedHostId should be less than 100.	The error message returned because the number of dedicated host IDs specified in DedicatedHostIds exceeds the upper limit. DedicatedHostIds supports up to 100 IDs.
403	InvalidParameter.InvalidDedicatedHostId	%s	The error message returned because the specified DedicatedHostId is invalid.
403	IncorrectHostStatus	The current status of the resource does not support this operation.	The error message returned because the operation is not supported while the dedicated host is in the current state.
403	ChargeTypeViolation	Pay-As-You-Go dedicated host do not support this operation.	The error message returned because the current operation is not supported for pay-as-you-go dedicated hosts.
403	InvalidParameter.Duration	%s	The error message returned because the specified value of the Duration parameter is invalid.
403	InvalidParameter.RenewalStatus	%s	The error message returned because the specified value of the RenewalStatus parameter is invalid.
403	InvalidPeriodUnit.ValueNotSupported	The specified parameter PeriodUnit is not valid.	The error message returned because the specified value of the PeriodUnit parameter is invalid.

6.7. ModifyDedicatedHostAutoReleaseTime

You can call this operation to set the automatic release time of a pay-as-you-go dedicated host or cancel the automatic release of a pay-as-you-go dedicated host.

Description

When the specified time for automatic release is reached, the pay-as-you-go dedicated host will be automatically released. Make sure that you no longer use the host and have backed up all necessary application data.

Debugging

OpenAPI Explorer automatically calculates the signature value. For your convenience, we recommend that you call this operation in OpenAPI Explorer. OpenAPI Explorer dynamically generates the sample code of the operation for different SDKs.

Request parameters

Parameter	Type	Required	Example	Description
Action	String	Yes	ModifyDedicatedHostAutoReleaseTime	The operation that you want to perform. Set the value to <code>ModifyDedicatedHostAutoReleaseTime</code> .
DedicatedHostId	String	Yes	dh-bp165p6xk2tlw61e***	The ID of the dedicated host that you want to automatically release.
RegionId	String	Yes	cn-hangzhou	The region ID of the dedicated host. You can call the DescribeRegions operation to query the most recent region list.
AutoReleaseTime	String	No	2019-06-04T13:35:00Z	The automatic release time of the dedicated host. Specify the time in the ISO 8601 standard in the yyyy-MM-ddTHH:mm:ssZ format. The time must be in UTC+0. - The scheduled release time must be at least 30 mins from the current time. - The scheduled release time must be at most 3 years from the current time. - If the value of the seconds (ss) is not 00, it is automatically set to 00. - If you do not specify the <code>AutoReleaseTime</code> parameter, the automatic release is disabled. The dedicated host will not be released when the scheduled time is reached.

Response parameters

Parameter	Type	Example	Description
RequestId	String	04F0F334-1335-436C-A1D7-6C044FE73368	The ID of the request.

Examples

Sample requests

```
http(s)://ecs.aliyuncs.com/? Action=ModifyDedicatedHostAutoReleaseTime
&DedicatedHostId=dh-bp165p6xk2tlw61e****
&RegionId=cn-hangzhou
&<Common request parameters>
```

Sample success responses

XML format

```
<ModifyDedicatedHostAutoReleaseTimeResponse>
  <RequestId>04F0F334-1335-436C-A1D7-6C044FE73368</RequestId>
</ModifyDedicatedHostAutoReleaseTimeResponse>
```

JSON format

```
{
  "RequestId": "04F0F334-1335-436C-A1D7-6C044FE73368"
}
```

Error codes

HTTP status code	Error code	Error message	Description
400	MissingParameter	DedicatedHostId should not be null.	The error message returned because the DedicatedHostId parameter is not specified.
400	InvalidAutoReleaseTime.Malformed	The specified paramter autoReleaseTime is not valid.	The error message returned because the specified AutoReleaseTime parameter is invalid. Specify the time in the ISO 8601 standard in the yyyy-MM-ddTHH:mm:ssZ format. The time must be in UTC.
500	InternalError	The request processing has failed due to some unknown error, exception or failure.	The error message returned because an internal error has occurred. Try again later. If the problem persists, submit a ticket.
400	UnsupportedParameter	The parameters is unsupported.	The error message returned because the specified parameter is invalid.
403	ChargeTypeViolation	The operation is not permitted due to charge type of the dedicated host.	The error message returned because the billing method of the dedicated host does not support the operation.
404	NoSuchResource	The specified resource is not found.	The error message returned because the specified resource does not exist.

6.8. ModifyDedicatedHostsChargeType

You can call this operation to modify the billing method of dedicated hosts.

Debugging

OpenAPI Explorer automatically calculates the signature value. For your convenience, we recommend that you call this operation in OpenAPI Explorer. OpenAPI Explorer dynamically generates the sample code of the operation for different SDKs.

Request parameters

Parameter	Type	Required	Example	Description
Action	String	Yes	ModifyDedicatedHostsChargeType	The operation that you want to perform. Set the value to ModifyDedicatedHostsChargeType.

Parameter	Type	Required	Example	Description
DedicatedHostIds	String	Yes	<code>["dh-bp181e5064b5sotr****","dh-bp18064b5sotrr9c****"]</code>	The ID of the dedicated host. The value can be a JSON array that consists of up to 20 dedicated host IDs. Separate multiple dedicated host IDs with commas (,).
RegionId	String	Yes	cn-hangzhou	The region ID of the dedicated host. You can call the DescribeRegions operation to query the most recent region list.
Period	Integer	No	1	The renewal period of the subscription instance. Valid values: - When <code>PeriodUnit</code> is set to Week, valid values of <code>Period</code> are 1, 2, 3, and 4. - When <code>PeriodUnit</code> is set to Month, valid values of <code>Period</code> are 1, 2, 3, 4, 5, 6, 7, 8, 9, 12, 24, 36, 48, and 60.
PeriodUnit	String	No	Month	The unit of the renewal period (<code>Period</code>). Valid values: - Week - Month Default value: Month.
DryRun	Boolean	No	false	Specifies whether to check the validity of the request without actually making the request. Valid values: - true: The validity of the request is checked but resources are not queried. The system checks whether your AccessKey pair is valid, whether RAM users are authorized, and whether required parameters are specified. If the check fails, the corresponding error message is returned. If the check succeeds, the <code>DryRunOperation</code> error code is returned. - false: The request is checked. If the check succeeds, a 2XX HTTP status code is returned and available resources are queried. Default value: false.

Parameter	Type	Required	Example	Description
AutoPay	Boolean	No	false	Specifies whether to enable automatic payment. Valid values: • true: Automatic payment is enabled. Make sure that you have sufficient balance in your account. Otherwise, your order becomes invalid and must be canceled. • false: An order is generated but no payment is made. Default value: true.  Note If you do not have sufficient balance in your account, you can set the <code>AutoPay</code> parameter to <code>false</code> to generate an unpaid order. Then, you can manually complete the payment for the order.
DedicatedHostChargeType	String	No	PrePaid	The new billing method for the dedicated host. Valid values: • PrePaid: changes the billing method from pay-as-you-go to subscription. • PostPaid: changes the billing method from subscription to pay-as-you-go. Default value: PrePaid.
ClientToken	String	No	e4567-e89b-12d3-a456-426655440000	The client token that is used to ensure the idempotence of the request. You can use the client to generate the value that is unique among different requests. The <code>ClientToken</code> value must contain only ASCII characters and cannot exceed 64 characters in length. For more information, see How to ensure idempotence.
DetailFee	Boolean	No	false	Specifies whether to return the billing details of the order when the billing method is changed from subscription to pay-as-you-go. Default value: false.

Response parameters

Parameter	Type	Example	Description
FeeOfInstances	Array		An array consisting of FeeOfInstance data.
FeeOfInstance			
Currency	String	CNY	The unit of currency for the bill.
Fee	String	0	The total fees.
InstanceId	String	dh-bp181e5064b5sotrr****	The ID of the dedicated host.

Parameter	Type	Example	Description
OrderId	String	20413515388****	The ID of the generated order.
RequestId	String	B61C08E5-403A-46A2-96C1-F7B1216DB10C	The ID of the request.

Examples

Sample requests

```
https://ecs.aliyuncs.com/?Action=ModifyDedicatedHostsChargeType
&RegionId=cn-hangzhou
&InstanceIds=["dh-bp181e5064b5sotr****","dh-bpe5064b5sotrr9c****"]
&Period=1
&PeriodUnit=Month
&AutoPay=false
&IncludeAllDisks=true
&ClientToken=e4567-e89b-12d3-a456-426655440000
&<Common request parameters>
```

Sample success responses

XML format

```
<ModifyDedicatedHostsChargeTypeResponse>
  <RequestId>B61C08E5-403A-46A2-96C1-F7B1216DB10C</RequestId>
  <OrderId>20413515388****</OrderId>
  <FeeOfInstances>
    <FeeOfInstance>
      <Fee>0</Fee>
      <InstanceId>dh-bp181e5064b5sotr****</InstanceId>
      <Currency>CNY</Currency>
    </FeeOfInstance>
    <FeeOfInstance>
      <Fee>0</Fee>
      <InstanceId>dh-bp181e5064b5sotr****</InstanceId>
      <Currency>CNY</Currency>
    </FeeOfInstance>
  </FeeOfInstances>
</ModifyDedicatedHostsChargeTypeResponse>
```

JSON format

```
{
  "RequestId": "B61C08E5-403A-46A2-96C1-F7B1216DB10C",
  "OrderId": "20413515388****",
  "FeeOfInstances": {
    "FeeOfInstance": [
      {
        "Fee": "0",
        "InstanceId": "dh-bp181e5064b5sotr****",
        "Currency": "CNY"
      },
      {
        "Fee": "0",
        "InstanceId": "dh-bp181e5064b5sotr****",
        "Currency": "CNY"
      }
    ]
  }
}
```

Error codes

HttpCode	Error code	Error message	Description
400	InvalidParameter.InstanceIds	The specified InstanceIds are invalid.	The error message returned because the specified instance is invalid.
400	InvalidParameter	%s	The error message returned because the specified parameter is invalid.
400	InvalidStatus.ValueNotSupported	%s	The error message returned because the operation is not supported while the resource is in the current state.
400	InvalidInstanceChargeType.ValueNotSupported	%s	The error message returned because the billing method is not supported. Change the billing method and try again.
400	ExpiredInstance	The specified instance has expired.	The error message returned because the specified instance has expired.
400	InstancesIdQuotaExceeded	The maximum number of Instances is exceeded.	The error message returned because the maximum number of instances has been reached.
400	InvalidClientToken.ValueNotSupported	The ClientToken provided is invalid.	The error message returned because the specified client token is invalid.
403	InvalidInstanceType.ValueNotSupported	The specified InstanceType does not exist or beyond the permitted range.	The error message returned because the specified instance type does not exist or you are not authorized to manage instances of this instance type.
403	InstanceType.Offline	%s	The error message returned because the instance type is phased-out or instances of this instance type are insufficient.

HttpCode	Error code	Error message	Description
500	InternalServerError	The request processing has failed due to some unknown error, exception or failure.	The error message returned because an internal error has occurred. Try again later. If the problem persists, submit a ticket.
400	ReleaseTimeHaveBeenSet	The specified instance has been set released time.	The error message returned because an automatic release time has been set for the specified instance.
403	InvalidAccountStatus.NotEnoughBalance	Your account does not have enough balance.	The error message returned because your account balance is insufficient. Top up your account before you proceed.
403	Account.Arrearage	Your account has an outstanding payment.	The error message returned because you have overdue payments in your account.
400	Throttling	Request was denied due to request throttling, please try again after 5 minutes.	The error message returned because your request is denied due to throttling. Try again five minutes later.
403	InvalidParameter.NotMatch	%s	The error message returned because the specified parameter is invalid. Check whether the parameter conflicts with another parameter.
403	InvalidAction	%s	The error message returned because this operation is invalid.
400	Throttling	%s	The error message returned because the request is denied due to throttling.
400	QuotaExceed.AfterpayInstance	The maximum number of Pay-As-You-Go instances is exceeded: %s	The error message returned because the pay-as-you-go resources of the specified instance type are insufficient. Reduce the number of instances to be created.
400	InvalidPeriod.UnitMismatch	The specified Period must be correlated with the PeriodUnit.	The error message returned because the specified renewal period is not associated with PeriodUnit.
400	InvalidImageType.NotSupported	%s	The error message returned because the specified image type is invalid. Check whether the region supports this image type.
400	InvalidPeriod.ExceededDedicatedHost	Instance expired date can't exceed dedicated host expired date.	The error message returned because the expiration date of the instance is later than that of the dedicated host.
403	QuotaExceed.PostPaidDisk	Living postPaid disks quota exceeded.	The error message returned because the maximum number of pay-as-you-go disks has been reached.
403	ImageNotSupportInstanceType	The specified instanceType is not supported by instance with marketplace image.	The error message returned because the specified Alibaba Cloud Marketplace image does not support the specified instance type.
403	InvalidInstanceType.PhasedOut	This instanceType is no longer offered.	The error message returned because the specified instance type is no longer available.

HttpCode	Error code	Error message	Description
400	InvalidSystemDiskCategory.ValueNotSupported	%s	The error message returned because the operation is not applicable to the specified system disk category.
500	InternalServerError	The request processing has failed due to some unknown error.	The error message returned because an internal error has occurred. Try again later. If the problem persists, submit a ticket.
403	RealNameAuthenticationError	Your account has not passed the real-name authentication yet.	The error message returned because you have not completed the real-name verification. Complete the real-name verification and try again.

6.9. RenewDedicatedHosts

You can call this operation to renew one or more subscription dedicated hosts.

Description

When you renew the subscription dedicated hosts, deductible vouchers are used first by default. You must also make sure that your account supports the credit payment method.

Debugging

OpenAPI Explorer automatically calculates the signature value. For your convenience, we recommend that you call this operation in OpenAPI Explorer. OpenAPI Explorer dynamically generates the sample code of the operation for different SDKs.

Request parameters

Parameter	Type	Required	Example	Description
Action	String	Yes	RenewDedicatedHosts	The operation that you want to perform. Set the value to RenewDedicatedHosts.
DedicatedHostIds	String	Yes	dh-xxxxxxxxxxxxxxxxxx	The list of dedicated host IDs. A maximum of 100 IDs of subscription dedicated hosts can be specified in the list. Specify the dedicated host IDs in a JSON array. Example: ["dh-xxxxxxxx", "dh-yyyyyyyy", ... "dh-zzzzzzzz"] . Separate the IDs with commas (,).
Period	Integer	Yes	1	The renewal period of the subscription dedicated host. For information about the valid values, see the description of the PeriodUnit parameter.
RegionId	String	Yes	cn-hangzhou	The region ID of the dedicated host. You can call the DescribeRegions operation to query the most recent region list.

Parameter	Type	Required	Example	Description
PeriodUnit	String	No	Month	The unit of the renewal period. Default value: Month. Valid values: • Week: When the PeriodUnit parameter is set to Week, valid values of the Period parameter are 1, 2, 3, and 4. • Month: When the PeriodUnit parameter is set to Month, valid values of the Period parameter are 1, 2, 3, 4, 5, 6, 7, 8, 9, 12, 24, 36, 48, and 60.
ClientToken	String	No	xxxxxxxxxxxxxxxxxxxxxx xxxxx	The client token that is used to ensure the idempotence of the request. You can use the client to generate the value, but you must make sure that the value is unique among different requests. The token can only contain ASCII characters and cannot exceed 64 characters in length. For more information, see How to ensure idempotence.

Response parameters

Parameter	Type	Example	Description
RequestId	String	2A4EA075-CB5B-41B7-B0EB-70D339F64DE7	The ID of the request.

Examples

Sample requests

```

http(s)://ecs.aliyuncs.com/?Action=RenewDedicatedHosts
&DedicatedHostIds=dh-xxxxxxxxxxxxxxxxxx
&Period=1
&RegionId=cn-hangzhou
&<Common request parameters>

```

Sample success responses

XML format

```

<RenewDedicatedHostsResponse>
  <RequestId>2A4EA075-CB5B-41B7-B0EB-70D339F64DE7</RequestId>
</RenewDedicatedHostsResponse>

```

JSON format

```

{
  "RequestId": "2A4EA075-CB5B-41B7-B0EB-70D339F64DE7"
}

```

Error codes

HTTP status code	Error code	Error message	Description

HTTP status code	Error code	Error message	Description
400	IdempotenceParamNotMatch	Request uses a client token in a previous request but is not identical to that request.	The error message returned because the parameter used in this request is different from the one in the previous request even though the ClientToken value in this request is identical to the one in the previous request.
400	InvalidClientToken.ValueNotSupported	The ClientToken provided is invalid.	The error message returned because the specified ClientToken parameter is invalid.
403	ChargeTypeViolation	Pay-As-You-Go dedicated host do not support this operation.	The error message returned because the current operation is not supported for pay-as-you-go dedicated hosts.
403	IncorrectHostStatus	The current status of the resource does not support this operation.	The error message returned because this operation is not supported while the dedicated host is in the current state.
400	InvalidPeriod	The specified period is not valid.	The error message returned because the specified Period parameter is invalid.
403	LastTokenProcessing	The last token request is processing.	The error message returned because the last token request is being processed. Try again later.
400	InvalidPeriodUnit.ValueNotSupported	The specified parameter PeriodUnit is not valid.	The error message returned because the specified PeriodUnit parameter is invalid.
400	InvalidDedicatedHostId.NotFound	The specified DedicatedHostId does not exist.	The error message returned because the specified dedicated host ID does not exist.
400	InvalidStatus.Updating	The dedicated host is upgrading, please try it later.	The error message returned because the specified dedicated host is being upgraded. Try again later.
500	InternalError	The request processing has failed due to some unknown error.	The error message returned because an internal error has occurred. Try again later. If the problem persists, submit a ticket.
400	LastOrderProcessing	The previous order is still processing, please try again later.	The error message returned because an order is being processed. Try again later.

6.10. ReleaseDedicatedHost

You can call this operation to release a pay-as-you-go dedicated host.

Description

Before you release a pay-as-you-go dedicated host, make sure that no Elastic Compute Service (ECS) instance is deployed on the dedicated host.

Debugging

OpenAPI Explorer automatically calculates the signature value. For your convenience, we recommend that you call this operation in OpenAPI Explorer. OpenAPI Explorer dynamically generates the sample code of the operation for different SDKs.

Request parameters

Parameter	Type	Required	Example	Description
DedicatedHostId	String	Yes	dh-xxxxxxxxxxxxxxxxxx	The ID of the dedicated host.
RegionId	String	Yes	cn-hangzhou	The region ID of the dedicated host. You can call the DescribeRegions operation to query the latest region list.
Action	String	Yes	ReleaseDedicatedHost	The operation that you want to perform. Set the value to ReleaseDedicatedHost.

Response parameters

Parameter	Type	Example	Description
RequestId	String	A1B15AC8-E6F6-49A4-8985-8C07104B9199	The ID of the request.

Examples

Sample requests

```
http(s)://ecs.aliyuncs.com/? Action=ReleaseDedicatedHost
&DedicatedHostId=dh-xxxxxxxxxxxxxxxxxx
&RegionId=cn-hangzhou
&<Common request parameters>
```

Sample success responses

XML format

```
<ReleaseDedicatedHostResponse>
  <RequestId>A1B15AC8-E6F6-49A4-8985-8C07104B9199</RequestId>
</ReleaseDedicatedHostResponse>
```

JSON format

```
{
  "RequestId": "A1B15AC8-E6F6-49A4-8985-8C07104B9199"
}
```

Error codes

HTTP status code	Error code	Error message	Description
403	InstanceExist	Instance exists on the dedicated host.	The error message returned because instances still exist on the dedicated host and the dedicated host cannot be released.
400	ChargeTypeViolation	The operation is not permitted due to charge type of the dedicated host.	The error message returned because the billing method of the dedicated host is subscription. The release operation is not supported for subscription dedicated hosts.

HTTP status code	Error code	Error message	Description
400	IncorrectHostStatus.Initializing	The specified dedicatedHost status is not support this operation	The error message returned because the operation is not supported while the dedicated host is in the current state.
404	InvalidDedicatedHostId.NotFound	The specified DedicatedHostId does not exist.	The error message returned because the specified dedicated host ID does not exist.
500	InternalServerError	The request processing has failed due to some unknown error.	The error message returned because an internal error has occurred. Try again later. If the problem persists, submit a ticket.

6.11. RedeployDedicatedHost

Migrates instances from a failed dedicated host.

Description

If a dedicated host is in the UnderAssessment state, we recommend that you call this operation to migrate the instances of the dedicated host to prevent permanent failures. You can call the [DescribeDedicatedHosts](#) operation to query the status of a dedicated host.

Debugging

OpenAPI Explorer automatically calculates the signature value. For your convenience, we recommend that you call this operation in OpenAPI Explorer. OpenAPI Explorer dynamically generates the sample code of the operation for different SDKs.

Request parameters

Parameter	Type	Required	Example	Description
Action	String	Yes	RedeployDedicatedHost	The operation that you want to perform. Set the value to RedeployDedicatedHost.
DedicatedHostId	String	Yes	dh-bp165p6xk2tlw61e***	The ID of the dedicated host.
RegionId	String	Yes	cn-hangzhou	The region ID of the dedicated host. You can call the DescribeRegions operation to query the most recent region list.

Response parameters

Parameter	Type	Example	Description
RequestId	String	FCED4B7A-53D5-4C04-ABE3-26D4F3890D57	The ID of the request.

Examples

Sample requests


```
https://ecs.aliyuncs.com/?Action=RedeployDedicatedHost
&RegionId=cn-hangzhou
&DedicatedHostId=dh-bp165p6xk2tlw61e****
&<Common request parameters>
```

Sample success responses

XML format

```
<RedeployDedicatedHostResponse>
  <RequestId>FCED4B7A-53D5-4C04-ABE3-26D4F3890D57</RequestId>
</RedeployDedicatedHostResponse>
```

JSON format

```
{
  "RequestId": "FCED4B7A-53D5-4C04-ABE3-26D4F3890D57"
}
```

Error codes

HttpCode	Error code	Error message	Description
404	InvalidDedicatedHostId.NotFound	The specified DedicatedHostId does not exist.	The error message returned because the specified dedicated host ID does not exist.

6.12. ModifyInstanceDeployment

You can call this operation to modify the deployment set of an ECS instance or migrate an instance to a dedicated host. You can change the instance type when you migrate the instance.

Description

Before you migrate an instance to a dedicated host or change the instance type when you migrate an instance, the following conditions must be met:

- The ECS instance is in the **Stopped** state before migration. The instance is automatically restarted after migration.
- You can migrate only VPC-type instances.
- The instance and the dedicated host must belong to the same region and zone and in the same account.
- A pay-as-you-go instance can be migrated to a subscription dedicated host. A subscription instance can only be migrated between subscription dedicated hosts. The expiration date of the subscription instance cannot be later than the target dedicated host.
- When you migrate an instance from a shared host to a dedicated host, the instance must be a pay-as-you-go instance, instead of a subscription or preemptible instance.

Debugging

OpenAPI Explorer automatically calculates the signature value. For your convenience, we recommend that you call this operation in OpenAPI Explorer. OpenAPI Explorer dynamically generates the sample code of the operation for different SDKs.

Request parameters

Parameter	Type	Required	Example	Description
Action	String	Yes	ModifyInstanceDeployment	The operation that you want to perform. Set the value to ModifyInstanceDeployment.

Parameter	Type	Required	Example	Description
InstanceId	String	Yes	i-bp67acfmazb4ph***	The ID of the instance. The instance must be in the Stopped state.
RegionId	String	Yes	cn-hangzhou	The region ID of the instance. You can call the DescribeRegions operation to query the most recent region list.
DeploymentSetId	String	No	ds-bp67acfmazb4ph***	The ID of the deployment set. This parameter is required when you add an ECS instance to a deployment set or change the deployment set of an instance.  Note You cannot change the deployment set when you modify the dedicated host-related parameters, which consist of <code>Tenancy</code> , <code>Affinity</code> , and <code>DedicatedHostId</code> .
Force	Boolean	No	false	Specifies whether to forcibly change the host. Default value: false. Valid values: • true: The host can be forcibly changed. You can restart instances that are in the Running or Stopped state.  Note The instances in the Stopped state do not include pay-as-you-go instances that have the No Fees for Stopped Instances (VPC-Connected) feature enabled. • false: The host cannot be forcibly changed. The instance can only be added to a deployment set when it is on the current host. When the Force parameter is set to this value, the replacement of the deployment set may fail.
DedicatedHostId	String	No	dh-bp67acfmazb4ph***	The ID of the dedicated host. You can call the DescribeDedicatedHosts operation to query available dedicated hosts. When you migrate the instance from a shared host to a dedicated host or migrate the instance from a dedicated host to another one: • If you want to migrate the instance to a specified dedicated host, this parameter is required. • If you want to migrate the instance to a dedicated host that is automatically allocated by the system, this parameter must be empty and the <code>Tenancy</code> parameter must be set to <code>host</code>. For more information about the automatic deployment feature, see Features of dedicated hosts.

Parameter	Type	Required	Example	Description
Tenancy	String	No	host	Specifies whether to deploy the instance on a dedicated host. Set the value to host, which indicates that the instance is deployed on a dedicated host.
Affinity	String	No	host	Specifies whether to associate the instance with a dedicated host. Valid values: - host: The instance is associated with a dedicated host. With the No Fees for Stopped Instances (VPC-Connected) feature enabled, when the instance is restarted after being stopped, it still resides on the original dedicated host. - default: The instance is not associated with a dedicated host. With the No Fees for Stopped Instances (VPC-Connected) feature enabled, when the instance is restarted after being stopped, it can be automatically deployed to another dedicated host in the automatic deployment resource pool if resources of the original dedicated host are insufficient. When the instance is migrated from a shared host to a dedicated host, the default value is default.
MigrationType	String	No	live	Specifies whether to stop the instance before it is migrated to the target dedicated host. Default value: reboot. Valid values: - reboot: Stops the instance before migration. - live: Migrates the instance without stopping it. If the MigrationType parameter is set to this value, you must specify the DedicatedHostId parameter. In this case, you cannot change the instance type when you migrate the instance.
InstanceType	String	No	ecs.c6.large	The instance type to which the instance will be changed. You can call the DescribeInstanceTypes operation to query the most recent list of instance types. You can change the instance type of the instance when you migrate the instance to a dedicated host. The target instance type must match the type of the specified dedicated host. For more information, see Dedicated host types. - When you specify this parameter, you must also specify the DedicatedHostId parameter. - You cannot change the instance type if you use the automatic deployment feature to migrate the instance.

Response parameters

Parameter	Type	Example	Description
RequestId	String	04F0F334-1335-436C-A1D7-6C044FE73368	The ID of the request.

Examples

Sample requests

```
https://ecs.aliyuncs.com/?Action=ModifyInstanceDeployment
&InstanceId=i-bp67acfmazb4ph***
&RegionId=cn-hangzhou
&DedicatedHostId=dh-bp67acfmazb4ph***
&Tenancy=host
&MigrationType=live
&<Common request parameters>
```

Sample success responses

XML format

```
<ModifyInstanceDeploymentResponse>
  <RequestId>04F0F334-1335-436C-A1D7-6C044FE73368</RequestId>
</ModifyInstanceDeploymentResponse>
```

JSON format

```
{
  "RequestId": "04F0F334-1335-436C-A1D7-6C044FE73368"
}
```

Error codes

HTTP status code	Error code	Error message	Description
404	InvalidDedicatedHostId.NotFound	The specified DedicatedHostId does not exist.	The error message returned because the specified DedicatedHostId parameter does not exist.
404	InvalidInstanceId.NotFound	The specified InstanceId does not exist.	The error message returned because the specified InstanceId parameter does not exist. Check whether the instance ID is correct.
400	OperationDenied.UnstoppedInstance	Operation denied due to unstopped instance.	The error message returned because the current operation is invalid. Check whether the instance is in the Stopped state.
400	InvalidDedicatedHostStatus.NotSupport	Operation denied due to dedicated host status.	The error message returned because the operation is not supported while the dedicated host is in the current state.
400	InvalidPeriod.ExceededDedicatedHost	Instance expired date can't exceed dedicated host expired date.	The error message returned because the expiration date of the instance is later than that of the dedicated host.

HTTP status code	Error code	Error message	Description
404	InvalidInstanceNetworkType.NotSupport	The specified Instance network type not support.	The error message returned because the network type of the current instance does not support this operation.
404	InvalidInstanceType.NotSupport	The Dedicated host not support the specified instance type.	The error message returned because the current dedicated host does not support the specified instance type.
400	OperationDenied.LocalDiskInstance	Operation denied due to instance has local disk	The error message returned because the instance is attached with a local disk and the operation is denied.
403	IncorrectInstanceState	%s	The error message returned because this operation is not supported while the instance is in the current state.
400	InvalidParam.Tenancy	The specified Tenancy is invalid.	The error message returned because the specified Tenancy parameter is invalid.
403	OperationDenied.NoStock	The resource is out of usage.	The error message returned because the instance is not in the Running state. Start the instance or check whether the operation is valid.
400	ChargeTypeViolation.PostPaidDedicatedHost	Prepaid instance onto postpaid dedicated host is not allowed	The error message returned because subscription instances cannot be deployed on pay-as-you-go dedicated hosts.

7. Launch templates

7.1. CreateLaunchTemplate

You can call this operation to create an ECS instance launch template (template). An instance launch template removes the need to configure a large number of parameters every time you create an instance.

Description

Instance launch templates contain preset configurations used to create instances, such as the region, image ID, instance type, security group ID, and public bandwidth settings. If the setting of a certain parameter is not included in the template, that parameter must be specified manually during instance creation.

After you create a template (`CreateLaunchTemplate`), its version number is set to 1 by default. You can create multiple versions (`CreateLaunchTemplateVersion`) based on this template. Version numbers start from 1 and increase sequentially. If you do not specify a template version number when you create instances (`RunInstances`), the default version is used.

When you call this operation, take note of the following points:

- You can create up to 30 instance launch templates in each region. Each template can have up to 30 versions.
- Most parameters of instance launch templates are optional. When you create a template, ECS does not verify the existence or validity of its parameter values. The validity of specified parameter values cannot be verified until you create instances with the template.
- If you set a certain parameter in an instance launch template, you cannot filter out this setting when you create instances (`RunInstances`). For example, if you set `HostName=LocalHost` for a template, and then do not specify the value of `HostName` when you create instances (`RunInstances`), the instance hostname is still `LocalHost` . If you want to overwrite `HostName=LocalHost` , you can set `HostName=MyHost` or set the `HostName` parameter to other values when you create instances (`RunInstances`).

Debugging

OpenAPI Explorer automatically calculates the signature value. For your convenience, we recommend that you call this operation in OpenAPI Explorer. OpenAPI Explorer dynamically generates the sample code of the operation for different SDKs.

Request parameters

Parameter	Type	Required	Example	Description
Action	String	Yes	CreateLaunchTemplate	The operation that you want to perform. Set the value to CreateLaunchTemplate.
LaunchTemplateName	String	Yes	WinPrePaid	The name of the instance launch template. The name must be 2 to 128 characters in length. The name can contain letters, digits, colons (:), underscores (_), and hyphens (-). The name must start with a letter and cannot start with http:// or https://.
RegionId	String	Yes	cn-hangzhou	The region ID of the instance launch template. You can call the DescribeRegions operation to query the most recent region list.
TemplateTag.N.Key	String	No	LTtest	The key of tag N of the launch template. Valid values of N: 1 to 20. The tag key cannot be an empty string. The tag key can be up to 128 characters in length and cannot contain http:// or https://. It cannot start with acs: or aliyun.

Parameter	Type	Required	Example	Description
TemplateTag.N.Value	String	No	LTtest	The value of tag N of the launch template. Valid values of N: 1 to 20. The tag value can be an empty string. The tag value can be up to 128 characters in length and cannot contain <code>http://</code> or <code>https://</code> . It cannot start with <code>acs:</code> or <code>aliyun</code> .
VersionDescription	String	No	LTtest	The description of the version 1 of instance launch template. The description must be 2 to 256 characters in length and cannot start with <code>http://</code> or <code>https://</code> .
ImageId	String	No	win2008r2_64_ent_sp1_en-us_40G_alibase_20170915.vhd	The ID of the image used to create the instance. You can call the DescribeImages operation to query available images.
ImageOwnerAlias	String	No	system	The source of the image. Valid values: - system: public images provided by Alibaba Cloud. - self: your custom images. - others: images shared from other Alibaba Cloud accounts. This parameter is empty by default, indicating that the results matching system, self, and others are returned.
PasswordInherit	Boolean	No	false	Specifies whether to use the password preset in the image.  Note To use the PasswordInherit parameter, the Password parameter must be empty and you must make sure that the selected image has a password configured.
InstanceType	String	No	ecs.g5.large	The instance type. For more information, see Instance families or call the DescribeInstanceTypes operation to query the most recent instance type list.
SecurityGroupId	String	No	sg-bp15ed6xe1yxe1cg7**	The ID of the security group to which the instance belongs. Instances in the same security group can communicate with each other. One security group can contain a maximum of 1,000 instances.
VpcId	String	No	vpc-bp12433upq1y5sceni**	The ID of the VPC to which the new instance belongs.
VSwitchId	String	No	vsw-bp1s5f1vkv4gn2tws03***	The ID of the VSwitch. If you are creating a VPC-type instance, you must specify this parameter.

Parameter	Type	Required	Example	Description
InstanceName	String	No	EcsHost	The name of the instance. The name must be 2 to 128 characters in length. The name can contain letters, digits, colons (:), underscores (_), and hyphens (-). It must start with a letter and cannot start with http:// or https://.
Description	String	No	EcsHost	The description of the instance. The description must be 2 to 256 characters in length and cannot start with http:// or https://.
InternetMaxBandwidthIn	Integer	No	10	The maximum inbound bandwidth for Internet traffic. Unit: Mbit/s. Valid values: - If the purchased outbound bandwidth for Internet traffic is less than or equal to 10 Mbit/s, valid values are 1 to 10. Default value: 10. - If the purchased outbound bandwidth for Internet traffic is greater than 10 Mbit/s, valid values are 1 to the value of the <code>InternetMaxBandwidthOut</code> parameter. The value of the <code>InternetMaxBandwidthOut</code> parameter is used by default.
InternetMaxBandwidthOut	Integer	No	10	The maximum outbound bandwidth for Internet traffic. Unit: Mbit/s. Valid values: 0 to 100.
HostName	String	No	EcsHost	The hostname of the instance. - The hostname cannot start or end with a period (.) or a hyphen (-). It cannot contain consecutive periods (.) or hyphens (-). - Windows instances: The hostname must be 2 to 15 characters in length, and can contain letters, digits, and hyphens (-). The hostname cannot contain periods (.) or only contain digits. - Non-Windows Instances: The hostname must be 2 to 64 characters in length. You can use periods (.) to separate a name into multiple segments. Each segment can contain letters, digits, and hyphens (-).
ZoneId	String	No	cn-hangzhou-g	The zone ID of the instance.
SystemDisk.Category	String	No	cloud_ssd	The category of the system disk. Valid values: - cloud: basic disks - cloud_efficiency: ultra disks - cloud_ssd: standard SSDs - cloud_essd: enhanced SSDs

Parameter	Type	Required	Example	Description
SystemDisk.Size	Integer	No	40	The size of the system disk. Unit: GiB. Valid values: 20 to 500. The value of the parameter must be at least 20 and greater than or equal to the size of the image.
SystemDisk.DiskName	String	No	cloud_ssdSystem	The name of the system disk of the created instance. The name must be 2 to 128 characters in length. The name can contain letters, digits, colons (:), underscores (_), and hyphens (-). The name must start with a letter and cannot start with http:// or https://.
SystemDisk.Description	String	No	TestDisk	The description of the system disk. The description must be 2 to 256 characters in length and cannot start with http:// or https://.
DataDisk.N.Size	Integer	No	2000	The size of data disk N. Valid values of N: 1 to 16. Unit: GiB. Valid values: - cloud: 5 to 2000 - cloud_efficiency: 20 to 32768 - cloud_ssd: 20 to 32768 - cloud_essd: 20 to 32768 The value of this parameter must be greater than or equal to the size of the snapshot specified by the <code>SnapshotId</code> parameter.
DataDisk.N.SnapshotId	String	No	s-bp17441ohwka0yuhx**	The ID of the snapshot used to create data disk N. Valid values of N: 1 to 16. If the <code>DataDisk.N.SnapshotId</code> parameter is specified, the <code>DataDisk.N.Size</code> parameter will be ignored, and the size of the created disk will be the specified snapshot size. Snapshots created on or before July 15, 2013 cannot be used here. Otherwise, an error message will be returned and your request will be rejected.
DataDisk.N.Category	String	No	cloud_ssd	The category of data disk N. Valid values: - cloud: basic disks - cloud_efficiency: ultra disks - cloud_ssd: standard SSDs - cloud_essd: enhanced SSDs
DataDisk.N.Encrypted	String	No	false	Specifies whether to encrypt data disk N.
DataDisk.N.DiskName	String	No	cloud_ssdData	The disk name of data disk N. The name must be 2 to 128 characters in length. The name can contain letters, digits, colons (:), underscores (_), and hyphens (-). It must start with a letter and cannot start with http:// or https://.

Parameter	Type	Required	Example	Description
DataDisk.N.Description	String	No	TestDisk	The description of data disk N. The description must be 2 to 256 characters in length and cannot start with http:// or https://.
DataDisk.N.DeleteWithInstance	Boolean	No	true	Specifies whether to release data disk N along with the instance.
IoOptimized	String	No	optimized	Specifies whether the instance is an I/O optimized instance. Valid values: - none: The instance is a non-I/O optimized instance. - optimized: The instance is an I/O optimized instance.
NetworkInterface.N.PrimaryIpAddress	String	No	192.168.2.***	The IP address of primary elastic network interface (ENI) N.  Note The value of N in the NetworkInterface.N parameter cannot be greater than 1.
NetworkInterface.N.VSwitchId	String	No	vsw-bp1s5fnvk4gn2tws03***	The ID of the VSwitch to which ENI N belongs. The instance and ENI N must be in the same zone of the same VPC, but they can belong to different VSwitches.  Note The value of N in the NetworkInterface.N parameter cannot be greater than 1.
NetworkInterface.N.SecurityGroupId	String	No	sg-bp1s5ed6xe1yxeycg7***	The ID of the security group to which ENI N belongs. The security group of ENI N must belong to the same VPC as that of the instance.  Note The value of N in the NetworkInterface.N parameter cannot be greater than 1.
NetworkInterface.N.NetworkInterfaceName	String	No	TestEni	The name of ENI N.  Note The value of N in the NetworkInterface.N parameter cannot be greater than 1.

Parameter	Type	Required	Example	Description
NetworkInterface.N.Description	String	No	TestEni	The description of ENI N. The description must be 2 to 256 characters in length and cannot start with http:// or https://.  Note The value of N in the <code>NetworkInterface.N</code> parameter cannot be greater than 1.
InstanceChargeType	String	No	PrePaid	The billing method of the instance. Valid values: - PrePaid: subscription. If it is set to PrePaid, you must make sure that your payment account has sufficient credit. Otherwise, the error message <code>InvalidPayMethod</code> is returned. - PostPaid: pay-as-you-go.
Period	Integer	No	1	The subscription period of the instance. Unit: months. This parameter takes effect and is required only when the value of the <code>InstanceChargeType</code> parameter is set to <code>PrePaid</code>. If the <code>DedicatedHostId</code> parameter is specified, values of the Period parameter must be within the subscription period of the dedicated host. Valid values: - In case of <code>PeriodUnit=Week</code>, valid values of the Period parameter are 1, 2, 3, and 4. - In case of <code>PeriodUnit=Month</code>, valid values of the Period parameter are 1, 2, 3, 4, 5, 6, 7, 8, 9, 12, 24, 36, 48, and 60.
InternetChargeType	String	No	PayByTraffic	The billing method for network usage. Valid values: - PayByBandwidth - PayByTraffic
EnableVmOsConfig	Boolean	No	false	Specifies whether to enable the operating system configurations of the instance.  Note This parameter will be removed in the future. We recommend that you use other parameters to ensure future compatibility.
NetworkType	String	No	vpc	The network type of the instance. Valid values: - classic - vpc
UserData	String	No	ZWNobyBoZWxsbyBlY3Mh	The user data of the instance. It must be encoded in Base64. The maximum size of the raw data is 16 KB.

Parameter	Type	Required	Example	Description
KeyPairName	String	No	Instancetest	The name of the SSH key pair. - For Windows instances, this parameter is ignored. The <code>Password</code> parameter still takes effect even if the <code>KeyPairName</code> parameter is specified. - For Linux instances, if this parameter is set, the username and password authentication method is disabled for instance logon.
RamRoleName	String	No	TestRamRole	The RAM role name of the instance. You can call the ListRoles operation provided by RAM to query the RAM roles that you have created.
AutoReleaseTime	String	No	2018-01-01T12:05:00Z	The time scheduled for a created ECS instance to be automatically released. Specify the time in the ISO 8601 standard in the yyyy-MM-ddTHH:mm:ssZ format. The time must be in UTC. - If the value of seconds (<code>ss</code>) is not <code>00</code> , it is automatically set to the start time of the current minute (<code>mm</code>). - It must be at least 30 minutes later than the current time. - The maximum release time must be at most three years from the current time.
SpotStrategy	String	No	NoSpot	The preemption policy for a preemptible or pay-as-you-go instance. This parameter takes effect when the <code>InstanceChargeType</code> parameter is set to <code>PostPaid</code> . Valid values: <code>NoSpot</code>: the regular pay-as-you-go instance. <code>SpotWithPriceLimit</code>: the preemptible instance with a user-defined upper price limit. <code>SpotAsPriceGo</code>: the preemptible instance whose price is based on the current market price.
SpotPriceLimit	Float	No	0.97	The maximum hourly price of the instance. It can be accurate to three decimal places and takes effect when the <code>SpotStrategy</code> parameter is set to <code>SpotWithPriceLimit</code> .
SpotDuration	Integer	No	1	The protection period of the instance.  Note This parameter will be removed in the future. We recommend that you use other parameters to ensure future compatibility.
ResourceGroupId	String	No	rg-bp67acfmazb4ph***	The ID of the resource group to which the instance, Block Storage, and ENI belong.

Parameter	Type	Required	Example	Description
TemplateResourceGroupId	String	No	rg-bp67acfmxazb4ph***	The ID of the resource group to which the launch template belongs.
SecurityEnhancementStrategy	String	No	Deactive	Specifies whether to enable security enhancement for the operating system. Valid values: • Active: enables security enhancement. It is applicable only to Alibaba Cloud public images. • Deactive: disables security enhancement. It is applicable to all image types.
Tag.N.Key	String	No	TestTag	The key of tag N of the instance, Block Storage, or primary NIC. Valid values of N: 1 to 20. The tag key cannot be an empty string. The tag key can be up to 64 characters in length and cannot contain http:// or https://. It cannot start with acs: or aliyun.
Tag.N.Value	String	No	TestTag	The value of tag N of the instance, Block Storage, or primary NIC. Valid values of N: 1 to 20. The tag value can be an empty string. The tag value can be up to 128 characters in length and cannot contain http:// or https://. It cannot start with acs: or aliyun.

Response parameters

Parameter	Type	Example	Description
RequestId	String	473469C7-AA6F-4DC5-B3DB-A3DC0DE3C83E	The ID of the request.
LaunchTemplateId	String	lt-m5eiaupmvm2op9d*****	The ID of the instance launch template.

Examples

Sample requests

```

https://ecs.aliyuncs.com/?Action=CreateLaunchTemplate
&LaunchTemplateName=WinPrePaid
&RegionId=cn-hangzhou
&TemplateTag.1.Key=LTtest
&TemplateTag.1.Value=LTtest
&VersionDescription=LTtest
&ImageId=win2008r2_64_ent_sp1_en-us_40G_alibase_20170915.vhd
&InstanceType=ecs.g5.large
&SecurityGroupId=sg-bp15ed6xe1yxeycg7***
&VpcId=vpc-bp12433upq1y5sceni***
&VSwitchId=vsw-bp1s5fnvk4gn2tws03***
&InstanceName=EcsHost
&Description=EcsHost
&InternetMaxBandwidthIn=10
&InternetMaxBandwidthOut=10
&HostName=EcsHost
&ZoneId=cn-hangzhou-g
&SystemDisk.Category=cloud_ssd
&SystemDisk.Size=40
&SystemDisk.DiskName=cloud_ssdSystem
&SystemDisk.Description=TestDisk
&DataDisk.1.Size=2000
&DataDisk.1.SnapshotId=s-bp17441ohwka0yuhx***
&DataDisk.1.Category=cloud_ssd
&DataDisk.1.Encrypted=false
&DataDisk.1.DiskName=cloud_ssdData
&DataDisk.1.Description=TestDisk
&DataDisk.1.DeleteWithInstance=true
&IoOptimized=optimized
&NetworkInterface.1.PrimaryIpAddress=192.168.2. ***
&NetworkInterface.1.VSwitchId=vsw-bp1s5fnvk4gn2tws03***
&NetworkInterface.1.SecurityGroupId=sg-bp15ed6xe1yxeycg7***
&NetworkInterface.1.NetworkInterfaceName=TestEni
&NetworkInterface.1.Description=TestEni
&InstanceChargeType=PrePaid
&Period=1
&InternetChargeType=PayByTraffic
&NetworkType=vpc
&UserData=ZWNoByBoZWxsbyBLY3Mh
&RamRoleName=TestRamRole
&AutoReleaseTime=2018-01-01T12:05:00Z
&SpotStrategy=NoSpot
&SpotPriceLimit=0.97
&SecurityEnhancementStrategy=Deactive
&Tag.1.Key=TestTag
&Tag.1.Value=TestTag
&<Common request parameters>

```

Sample success responses

XML format

```
<CreateLaunchTemplateResponse>
  <RequestId>04F0F334-1335-436C-A1D7-6C044FExxxxx</RequestId>
  <LaunchTemplateId>lt-m5eiaupmvm2op9d*****</LaunchTemplateId>
</CreateLaunchTemplateResponse>
```

JSON format

```
{
  "RequestId": "04F0F334-1335-436C-A1D7-6C044FExxxxx",
  "LaunchTemplateId": "lt-m5eiaupmvm2op9d*****"
}
```

Error codes

HTTP status code	Error code	Error message	Description
400	InvalidRegion.NotExist	%s	The error message returned because the specified RegionId parameter does not exist. Check whether the region ID is correct.
403	LaunchTemplateLimitExceed	%s	The error message returned because the maximum number of launch templates has been reached.
403	LaunchTemplateName.Duplicated	%s	The error message returned because the specified LaunchTemplateName parameter already exists.
400	MissingParameter	%s	The error message returned because a required parameter is not specified.
400	InvalidParameter	%s	The error message returned because the specified parameter is invalid.
400	InvalidLaunchTemplateName.Malformed	The specified parameter LaunchTemplateName is not valid.	The error message returned because the specified LaunchTemplateName parameter is invalid.
400	InvalidDescription.Malformed	The specified parameter "VersionDescription" is not valid.	The error message returned because the specified VersionDescription parameter is invalid.
403	InnerServiceFailed	%s	The error message returned because an internal service failed to be called.
400	InvalidUserData.SizeExceeded	%s	The error message returned because the size of the specified UserData parameter exceeds the upper limit.
400	InvalidUserData.Base64FormatInvalid	%s	The error message returned because the UserData parameter is invalid. Select valid data.
400	Duplicate.TagKey	The Tag.N.Key contain duplicate key.	The error message returned because the specified Tag.N.Key parameter already exists. Tag keys must be unique.

HTTP status code	Error code	Error message	Description
400	InvalidTagKey.Malformed	The specified Tag.n.Key is not valid.	The error message returned because the specified Tag.N.Key parameter is invalid.
400	InvalidTagValue.Malformed	The specified Tag.n.Value is not valid.	The error message returned because the specified Tag.N.Value parameter is invalid.
403	QuotaExceed.Tags	%s	The error message returned because the maximum number of tags has been reached.

7.2. CreateLaunchTemplateVersion

You can call this operation to create a version for a specific launch template.

Description

To modify the parameters of a specific launch template version, you can create a new version. You can create a maximum of 30 versions for each launch template.

Debugging

OpenAPI Explorer automatically calculates the signature value. For your convenience, we recommend that you call this operation in OpenAPI Explorer. OpenAPI Explorer dynamically generates the sample code of the operation for different SDKs.

Request parameters

Parameter	Type	Required	Example	Description
Action	String	Yes	CreateLaunchTemplateVersion	The operation that you want to perform. Set the value to CreateLaunchTemplateVersion.
RegionId	String	Yes	cn-hangzhou	The region ID of the launch template for which you want to create a new version. You can call the DescribeRegions operation to query the most recent region list.
LaunchTemplateId	String	No	lt-m5eiaupmvm2op9dxx-xxx	The ID of the launch template. For more information, call the DescribeLaunchTemplates operation to query the ID of the launch template. You must set <code>LaunchTemplateId</code> or <code>LaunchTemplateName</code> to specify the launch template.
LaunchTemplateName	String	No	JoshuaWinPrePaid	The name of the launch template. The name must be 2 to 128 characters in length. It must start with a letter and cannot start with <code>http://</code> or <code>https://</code> . It can contain letters, digits, colons (:), underscores (_), and hyphens (-).
VersionDescription	String	No	LTFinanceJoshua	The description of the launch template version. The description must be 2 to 256 characters in length and cannot start with <code>http://</code> or <code>https://</code> .

Parameter	Type	Required	Example	Description
ImageId	String	No	win2008r2_64_ent_sp1_en-us_40G_alibase_20170915.vhd	The ID of the image used to create an instance. You can call the DescribeImages operation to query the available images.
ImageOwnerAlias	String	No	system	The source of the image.  Note This parameter will be removed in the future. We recommend that you use other parameters to ensure future compatibility.
InstanceType	String	No	ecs.g5.large	The instance type of the instance to be created. For more information, see Instance families . Alternatively, you can call the DescribeInstanceTypes operation to query the most recent instance type list.
SecurityGroupId	String	No	sg-bp15ed6xe1yxeycg7**	The ID of the security group to which the instance to be created belongs. Instances within the same security group can access each other.
VpcId	String	No	vpc-bp12433upq1y5sceni**	The ID of the VPC to which the instance to be created belongs.
VSwitchId	String	No	vsw-bp1s5fnvk4gn2tws03***	The ID of the VSwitch. You must specify this parameter after you specify the VpcId parameter.
InstanceName	String	No	JoshuaHost	The name of the instance to be created. The name must be 2 to 128 characters in length. It must start with a letter and cannot start with http:// or https://. It can contain letters, digits, colons (:), underscores (_), and hyphens (-).
Description	String	No	FinaceDept	The description of the instance to be created. The description must be 2 to 256 characters in length and cannot start with http:// or https://.

Parameter	Type	Required	Example	Description
InternetMaxBandwidthIn	Integer	No	50	The maximum inbound public bandwidth. Unit: Mbit/s. Valid values: - When the purchased outbound public bandwidth is less than 10 Mbit/s: 1 to 10. Default value: 10. - When the purchased outbound public bandwidth is greater than 10 Mbit/s: 1 to the value of <code>InternetMaxBandwidthOut</code>. The <code>InternetMaxBandwidthOut</code> value is used by default.
InternetMaxBandwidthOut	Integer	No	5	The maximum outbound public bandwidth. Unit: Mbit/s. Valid values: 0 to 100.
HostName	String	No	JoshuaHost	The hostname of the instance to be created. - The hostname cannot start or end with a period (.) or a hyphen (-). It cannot contain consecutive periods (.) or hyphens (-). - For Windows instances, the hostname must be 2 to 15 characters in length, and can contain letters, digits, and hyphens (-). The hostname cannot contain periods (.) or only contain digits. - For instances running other operating systems such as Linux, the hostname must be 2 to 64 characters in length. You can use periods (.) to separate a name into multiple segments. Each segment can contain letters, digits, and hyphens (-).
ZoneId	String	No	cn-hangzhou-g	The zone ID of the instance to be created.
SystemDisk.Category	String	No	cloud_ssd	The category of the system disk. Valid values: - cloud: basic disk - cloud_efficiency: ultra disk - cloud_ssd: standard SSD - cloud_essd: enhanced SSD
SystemDisk.Size	Integer	No	40	The size of the system disk. Unit: GiB. Valid values: 20 to 500. The value of this parameter must be at least 20 and greater than or equal to the size of the image.
SystemDisk.DiskName	String	No	cloud_ssdSystem	The name of the system disk. The name must be 2 to 128 characters in length. It must start with a letter and cannot start with http:// or https://. It can contain letters, digits, colons (:), underscores (_), and hyphens (-).
SystemDisk.Description	String	No	FinanceDept	The description of the system disk. The description must be 2 to 256 characters in length and cannot start with http:// or https://.

Parameter	Type	Required	Example	Description
DataDisk.N.Size	Integer	No	2000	The size of data disk N. Valid values of N: 1 to 16. Unit: GiB. Valid values: - For basic disks: 5 to 2000 - For ultra disks: 20 to 32768 - For standard SSDs: 20 to 32768 - For enhanced SSDs: 20 to 32768 The value of this parameter must be greater than or equal to the size of the snapshot specified by the <code>SnapshotId</code> parameter.
DataDisk.N.SnapshotId	String	No	S-bp17441ohwka0yuhx**	The ID of the snapshot used to create data disk N. Valid values of N: 1 to 16. If the <code>DataDisk.N.SnapshotId</code> parameter is specified, the <code>DataDisk.N.Size</code> parameter will be ignored, and the size of the created disk will be the specified snapshot size. Use snapshots created after July 15, 2013. Otherwise, an error message will be returned and your request will be rejected.
DataDisk.N.Category	String	No	cloud_ssd	The category of data disk N. Valid values: - cloud: basic disk - cloud_efficiency: ultra disk - cloud_ssd: standard SSD - cloud_essd: enhanced SSD
DataDisk.N.Encrypted	String	No	false	Specifies whether to encrypt data disk N.
DataDisk.N.DiskName	String	No	cloud_ssdData	The name of data disk N. The name must be 2 to 128 characters in length. It must start with a letter and cannot start with <code>http://</code> or <code>https://</code> . It can contain letters, digits, colons (:), underscores (_), and hyphens (-).
DataDisk.N.Description	String	No	FinanceDept	The description of data disk N. The description must be 2 to 256 characters in length and cannot start with <code>http://</code> or <code>https://</code> .
DataDisk.N.DeleteWithInstance	Boolean	No	true	Specifies whether to release data disk N along with the instance to be created.
IoOptimized	String	No	optimized	Specifies whether the instance to be created is I/O optimized. Valid values: - none: The instance to be created is not I/O optimized. - optimized: The instance to be created is I/O optimized.

Parameter	Type	Required	Example	Description
NetworkInterface.N.PrimaryIpAddress	String	No	192.168.2.XXX	The primary private IP address of ENI N.  Note The value of N in this parameter cannot be greater than 1.
NetworkInterface.N.VSwitchId	String	No	vsw-bp1s5fnnvk4gn2tws03***	The ID of the VSwitch to which ENI N is connected. The instance to be created and ENI N must be in the same zone of the same VPC, but they can be connected to different VSwitches.  Note The value of N in this parameter cannot be greater than 1.
NetworkInterface.N.SecurityGroupId	String	No	sg-bp15ed6xe1yxeycg7**	The ID of the security group to which ENI N is connected. The security group of ENI N must belong to the same VPC as that of the instance to be created.  Note The value of N in this parameter cannot be greater than 1.
NetworkInterface.N.NetworkInterfaceName	String	No	FinnanceJoshua	The name of ENI N.  Note The value of N in this parameter cannot be greater than 1.
NetworkInterface.N.Description	String	No	FinnanceDept	The description of ENI N. The description must be 2 to 256 characters in length and cannot start with http:// or https://.  Note The value of N in this parameter cannot be greater than 1.
InstanceChargeType	String	No	PrePaid	The billing method of the instance to be created. Valid values: - PrePaid: subscription. If you set the value of this parameter to PrePaid, make sure that you have sufficient balance or credit in your payment account. Otherwise, the InvalidPayMethod error message is returned. - PostPaid: pay-as-you-go.

Parameter	Type	Required	Example	Description
Period	Integer	No	1	The subscription period of the instance to be created. Unit: months. This parameter takes effect and is required only when the <code>InstanceChargeType</code> parameter is set to <code>PrePaid</code>. If the <code>DedicatedHostId</code> parameter is specified, the value of the <code>Period</code> parameter must fall within the subscription period of the dedicated host. Valid values: - Valid values in the case of <code>PeriodUnit=Week</code>: 1, 2, 3, and 4 - Valid values in the case of <code>PeriodUnit=Month</code>: 1, 2, 3, 4, 5, 6, 7, 8, 9, 12, 24, 36, 48, and 60
InternetChargeType	String	No	PayByTraffic	The billing method for outbound Internet usage. Valid values: <code>PayByBandwidth</code> <code>PayByTraffic</code>
EnableVmOsConfig	Boolean	No	false	Specifies whether to enable the operating system configuration of the instance to be created.
NetworkType	String	No	vpc	The network type of the instance to be created. Valid values: <code>classic</code> <code>vpc</code>
UserData	String	No	ZWNobyBoZWxsbyBlY***	The user data of the instance to be created. It must be encoded in Base64. The maximum size of the raw data is 16 KB.
KeyPairName	String	No	Instancetest	The name of the SSH key pair. - For Windows instances, this parameter is ignored. The <code>Password</code> parameter still takes effect even if the <code>KeyPairName</code> parameter is specified. - For Linux instances, the username and password authentication method is disabled by default.
RamRoleName	String	No	FinanceDept	The RAM role name of the instance to be created. You can call the ListRoles operation provided by RAM to query the RAM roles that you have created.

Parameter	Type	Required	Example	Description
AutoReleaseTime	String	No	2018-01-01T12:05:00Z	The time scheduled for the instance to be automatically released. Specify the time in the ISO 8601 standard in the yyyy-MM-ddTHH:mm:ssZ format. The time must be in UTC. - If the value of <code>ss</code> is not <code>00</code>, the time will be automatically set to the start of the current minute (<code>mm</code>). - It must be at least 30 minutes later than the current time. - It must be at most three years from the current time.
SpotStrategy	String	No	NoSpot	The preemption policy for a preemptible or pay-as-you-go instance. This parameter takes effect when the <code>InstanceChargeType</code> parameter is set to <code>PostPaid</code>. Valid values: <code>NoSpot</code>: The instance to be created is a regular pay-as-you-go instance. <code>SpotWithPriceLimit</code>: The instance to be created is a preemptible instance with a user-defined maximum hourly price. <code>SpotAsPriceGo</code>: The instance to be created is a preemptible instance whose price is based on the market price at the time of purchase.
SpotPriceLimit	Float	No	0.97	The maximum hourly price of the instance to be created. This parameter supports up to three decimal places.
SpotDuration	Integer	No	1	The protection period of the instance to be created.  Note This parameter will be removed in the future. We recommend that you use other parameters to ensure future compatibility.
ResourceGroupId	String	No	rg-bp67acfmazb4ph***	The ID of the resource group to which the instance to be created belongs.
SecurityEnhancementStrategy	String	No	Active	Specifies whether to enable security hardening for the operating system. Valid values: <code>Active</code>: enables security hardening for public images. <code>Deactive</code>: disables security hardening for all image types.

Parameter	Type	Required	Example	Description
Tag.N.Key	String	No	FinanceDept	The key of tag N of the instance, Block Storage device, or primary NIC. Valid values of N: 1 to 5. The tag key cannot be an empty string. It can be up to 64 characters in length, cannot start with acs: or aliyun, and cannot contain http:// or https://.
Tag.N.Value	String	No	FinanceDept.Joshua	The value of tag N of the instance, Block Storage device, or primary NIC. Valid values of N: 1 to 5. The tag value can be an empty string. It can be up to 128 characters in length, cannot start with acs: or aliyun, and cannot contain http:// or https://.

Response parameters

Parameter	Type	Example	Description
RequestId	String	473469C7-AA6F-4DC5-B3DB-A3DC0DE3C83E	The ID of the request.
LaunchTemplateVersionNumber	Long	2	The version number of the launch template.

Examples

Sample requests

```

https://ecs.aliyuncs.com/?Action=CreateLaunchTemplateVersion
&RegionId=cn-hangzhou
&LaunchTemplateId=lt-m5eiaupmvm2op9d****
&LaunchTemplateName=JoshuaWinPrePaid
&VersionDescription=LTFinanceJoshua
&ImageId=win2008r2_64_ent_sp1_en-us_40G_alibase_20170915.vhd
&InstanceType=ecs.g5.large
&SecurityGroupId=sg-bp15ed6xe1yxe1cg7***
&VpcId=vpc-bp12433upq1y5sceni07X
&VSwitchId=vsw-bp1s5fnvk4gn2tws03***
&InstanceName=JoshuaHost
&Description=FinanceDept
&InternetMaxBandwidthIn=50
&InternetMaxBandwidthOut=5
&HostName=JoshuaHost
&ZoneId=cn-hangzhou-g
&SystemDisk.Category=cloud_ssd
&SystemDisk.Size=40
&SystemDisk.DiskName=cloud_ssdSystem
&SystemDisk.Description=FinanceDept
&DataDisk.1.Size=2000
&DataDisk.1.SnapshotId=s-bp17441ohwka0yuhx***
&DataDisk.1.Category=cloud_ssd
&DataDisk.1.Encrypted=false
&DataDisk.1.DiskName=cloud_ssdData
&DataDisk.1.Description=FinanceDept
&DataDisk.1.DeleteWithInstance=true
&IoOptimized=optimized
&NetworkInterface.1.PrimaryIpAddress=192.168.2. ***
&NetworkInterface.1.VSwitchId=vsw-bp1s5fnvk4gn2tws03***
&NetworkInterface.1.SecurityGroupId=sg-bp15ed6xe1yxe1cg7***
&NetworkInterface.1.NetworkInterfaceName=FinnanceJoshua
&NetworkInterface.1.Description=FinnanceDept
&InstanceChargeType=PrePaid
&Period=1
&InternetChargeType=PayByTraffic
&NetworkType=vpc
&UserData=ZWNoByBoZWxsbyBLY3Mh
&RamRoleName=FinanceDept
&AutoReleaseTime=2020-02-02T12:05:00Z
&SpotStrategy=NoSpot
&SpotPriceLimit=0.97
&SecurityEnhancementStrategy=Active
&Tag.1.Key=FinanceDept
&Tag.1.Value=FinanceDept.Joshua
&<Common request parameters>

```

Sample success responses

XML format


```
<CreateLaunchTemplateVersionResponse>
  <RequestId>04F0F334-1335-436C-A1D7-6C044FExxxxx</RequestId>
  <LaunchTemplateVersionNumber>2</LaunchTemplateVersionNumber>
</CreateLaunchTemplateVersionResponse>
```

JSON format

```
{
  "RequestId": "04F0F334-1335-436C-A1D7-6C044FExxxxx",
  "LaunchTemplateVersionNumber": 2
}
```

Error codes

HttpCode	Error code	Error message	Description
400	InvalidRegion.NotExist	%s	The error message returned because the specified RegionId parameter does not exist. Check whether the region ID is correct.
403	LaunchTemplateVersionLimitExceed	%s	The error message returned because the maximum number of launch template versions has been reached.
404	InvalidLaunchTemplate.NotFound	%s	The error message returned because the specified launch template does not exist. Check whether the specified value of the LaunchTemplateId or LaunchTemplateName parameter is correct.
400	MissingParameter	%s	The error message returned because a required parameter is not specified.
400	InvalidParameter	%s	The error message returned because the specified parameter is invalid.
400	InvalidDescription.Malformed	The specified parameter "Description" is not valid.	The error message returned because the specified Description parameter is invalid. The description must be 2 to 256 characters in length and cannot start with http:// or https://.
403	InnerServiceFailed	%s	The error message returned because an internal service failed to be called.
400	InvalidUserData.SizeExceeded	%s	The error message returned because the size of the specified user data exceeds the upper limit.
400	InvalidUserData.Base64FormatInvalid	%s	The error message returned because the format you specified for the user data is invalid. Select a valid data format.

7.3. DeleteLaunchTemplate

You can call this operation to delete an instance launch template.

Debugging

OpenAPI Explorer automatically calculates the signature value. For your convenience, we recommend that you call this operation in OpenAPI Explorer. OpenAPI Explorer dynamically generates the sample code of the operation for different SDKs.

Request parameters

Parameter	Type	Required	Example	Description
RegionId	String	Yes	cn-hangzhou	The ID of the region to which the instance launch template belongs. You can call the DescribeRegions operation to query the most recent region list.
Action	String	Yes	DeleteLaunchTemplate	The operation that you want to perform. Set the value to DeleteLaunchTemplate.
LaunchTemplateId	String	No	lt-bp1apo0bbbkuy0rj3**	The ID of the instance launch template. For more information, call the DescribeLaunchTemplates operation. You must specify the <code>LaunchTemplateId</code> parameter or the <code>LaunchTemplateName</code> parameter to determine an instance launch template.
LaunchTemplateName	String	No	JoshuaWinPostPaid	The name of the instance launch template. You must specify the <code>LaunchTemplateId</code> parameter or the <code>LaunchTemplateName</code> parameter to determine an instance launch template.

Response parameters

Parameter	Type	Example	Description
RequestId	String	473469C7-AA6F-4DC5-B3DB-A3DC0DE3C83E	The ID of the request. This parameter is returned regardless of whether the operation is successful.

Examples

Sample requests

```
https://ecs.aliyuncs.com/?Action=DeleteLaunchTemplate
&RegionId=cn-hangzhou
&LaunchTemplateId=lt-bp1apo0bbbkuy0rj3***
&LaunchTemplateName=JoshuaWinPostPaid
&<Common request parameters>
```

Sample success responses

XML format

```
<DeleteLaunchTemplateResponse>
  <RequestId>04F0F334-1335-436C-A1D7-6C044FExxxxx</RequestId>
</DeleteLaunchTemplateResponse>
```

JSON format

```
{
  "RequestId": "04F0F334-1335-436C-A1D7-6C044FExxxxx"
}
```

Error codes

HTTP status code	Error code	Error message	Description
400	InvalidRegion.NotExist	%s	The error message returned because the specified region does not exist.
400	MissingParameter	%s	The error message returned because a required parameter is not specified.
400	InvalidParameter	%s	The error message returned because the parameter format is invalid.
403	InnerServiceFailed	%s	The error message returned because an internal service failed to be called.

7.4. DeleteLaunchTemplateVersion

You can call this operation to delete a version for the specified instance launch template. This operation does not delete the default version of an instance launch template. To delete the default version, you must call `DeleteLaunchTemplate` to delete the instance launch template.

Debugging

OpenAPI Explorer automatically calculates the signature value. For your convenience, we recommend that you call this operation in OpenAPI Explorer. OpenAPI Explorer dynamically generates the sample code of the operation for different SDKs.

Request parameters

Parameter	Type	Required	Example	Description
DeleteVersion.N	RepeatList	Yes	2	The version number of the instance launch template. Valid values of N: 1 to 29. You can call DescribeLaunchTemplateVersions to query all versions of an instance launch template.
RegionId	String	Yes	cn-hangzhou	The ID of the region to which the instance launch template belongs. You can call the DescribeRegions operation to query the most recent region list.
Action	String	Yes	DeleteLaunchTemplateVersion	The operation that you want to perform. Set the value to DeleteLaunchTemplateVersion.
LaunchTemplateId	String	No	lt-bp1apo0bbbkuy0rj3** *	The ID of the instance launch template. For more information, call the DescribeLaunchTemplates operation.
LaunchTemplateName	String	No	JoshuaWinPostPaid	The name of the instance launch template.

Response parameters

Parameter	Type	Example	Description
RequestId	String	473469C7-AA6F-4DC5-B3DB-A3DC0DE3C83E	The ID of the request.

Examples

Sample requests

```
https://ecs.aliyuncs.com/?Action=DeleteLaunchTemplateVersion
&DeleteVersion.1=2
&RegionId=cn-hangzhou
&LaunchTemplateId=lt-bp1apo0bbbku0rj3***
&LaunchTemplateName=JoshuaWinPostPaid
&<Common request parameters>
```

Sample success responses

XML format

```
<DeleteLaunchTemplateVersionResponse>
  <RequestId>04F0F334-1335-436C-A1D7-6C044FExxxxx</RequestId>
</DeleteLaunchTemplateVersionResponse>
```

JSON format

```
{
  "RequestId": "04F0F334-1335-436C-A1D7-6C044FExxxxx"
}
```

Error codes

HTTP status code	Error code	Error message	Description
400	InvalidRegion.NotExist	%s	The error message returned because the specified region does not exist.
403	InvalidOperation.DeleteDefaultVersion	%s	The error message returned because the specified operation is invalid.
400	MissingParameter	%s	The error message returned because a required parameter is not specified.
400	InvalidParameter	%s	The error message returned because the parameter format is invalid.
403	InnerServiceFailed	%s	The error message returned because an internal service failed to be called.

7.5. DescribeLaunchTemplates

You can call this operation to query one or more available instance launch templates.

Debugging

OpenAPI Explorer automatically calculates the signature value. For your convenience, we recommend that you call this operation in OpenAPI Explorer. OpenAPI Explorer dynamically generates the sample code of the operation for different SDKs.

Request parameters

Parameter	Type	Required	Example	Description
Action	String	Yes	DescribeLaunchTemplates	The operation that you want to perform. Set the value to DescribeLaunchTemplates.
RegionId	String	Yes	cn-hangzhou	The region ID of the template. You can call the DescribeRegions operation to query the most recent region list.
TemplateTag.N.Key	String	No	FinanceDept	The key of tag N of the instance launch template. Valid values of N: 1 to 20.
TemplateTag.N.Value	String	No	FinanceDeptJoshua	The value of tag N of the instance launch template. Valid values of N: 1 to 20.
LaunchTemplateId.N	RepeatList	No	lt-m5e3ofjr1zn1aw7qd**	The IDs of one or more instance launch templates to be queried. You can specify a maximum of 100 launch template IDs. You must specify the LaunchTemplateId parameter or the LaunchTemplateName parameter to determine an instance launch template.
LaunchTemplateName.N	RepeatList	No	wd-1526307480***	The names of one or more instance launch templates to be queried. You can specify a maximum of 100 launch template names.
PageNumber	Integer	No	1	The number of the page to return. Pages start from page 1. Default value: 1
PageSize	Integer	No	10	The number of entries to return on each page. Default value: 10
TemplateResourceGroupId	String	No	rg-resourcegroupid1	The ID of the resource group to which the instance launch template belongs.

Response parameters

Parameter	Type	Example	Description
RequestId	String	04F0F334-1335-436C-A1D7-6C044FExxxxx	The ID of the request.
TotalCount	Integer	1	The total number of instance launch templates.
PageNumber	Integer	1	The page number of the returned page.
PageSize	Integer	10	The number of entries returned per page.
LaunchTemplateSets	Array		The collection of instance launch templates.

Parameter	Type	Example	Description
CreateTime	String	2018-05-14T14:18:00Z	The time when the instance launch template was created.
ModifiedTime	String	2018-05-14T14:18:00Z	The time when the instance launch template was modified.
LaunchTemplateId	String	lt-m5e3ofjr1zn1aw7qd***	The ID of the instance launch template.
LaunchTemplateName	String	wd-1526307480***	The name of the instance launch template.
DefaultVersionNumber	Long	1	The default version number of the instance launch template.
LatestVersionNumber	Long	1	The latest version number of the instance launch template.
CreatedBy	String	1942111349714***	The creator of the instance launch template.
ResourceGroupId	String	rg-resourcegroupid1	The ID of the resource group to which the instance launch template belongs.
Tags	Array		The tag of the instance launch template.
TagKey	String	FinanceDept	The tag key of the instance launch template.
TagValue	String	FinanceDeptJoshua	The tag value of the instance launch template.

Examples

Sample requests

```
https://ecs.aliyuncs.com/?Action=DescribeLaunchTemplates
&RegionId=cn-hangzhou
&TemplateTag.1.Key=FinanceDept
&TemplateTag.1.Value=FinanceDeptJoshua
&LaunchTemplateId.1=lt-m5e3ofjr1zn1aw7qd***
&LaunchTemplateName.1=wd-1526307480***
&PageNumber=1
&PageSize=10
&TemplateResourceGroupId=rg-resourcegroupid1
&<Common request parameters>
```

Sample success responses

XML format

```
<DescribeLaunchTemplatesResponse>
  <RequestId>04F0F334-1335-436C-A1D7-6C044FExxxxx</RequestId>
  <TotalCount>1</TotalCount>
  <PageNumber>1</PageNumber>
  <PageSize>10</PageSize>
  <LaunchTemplateSets>
    <LaunchTemplateSet>
      <CreateTime>2018-05-14T14:18:00Z</CreateTime>
      <ModifiedTime>2018-05-14T14:18:00Z</ModifiedTime>
      <LaunchTemplateId>lt-m5e3ofjr1zn1aw7****</LaunchTemplateId>
      <LaunchTemplateName>wd-1526307480***</LaunchTemplateName>
      <DefaultVersionNumber>1</DefaultVersionNumber>
      <LatestVersionNumber>1</LatestVersionNumber>
      <CreatedBy>1942111349714***</CreatedBy>
    </LaunchTemplateSet>
  </LaunchTemplateSets>
</DescribeLaunchTemplatesResponse>
```

JSON format

```
{
  "RequestId": "04F0F334-1335-436C-A1D7-6C044FExxxxx",
  "TotalCount": 1,
  "PageNumber": 1,
  "PageSize": 10,
  "LaunchTemplateSets": {
    "LaunchTemplateSet": [
      {
        "LaunchTemplateName": "wd-1526307480***",
        "CreatedBy": "1942111349714***",
        "ModifiedTime": "2018-05-14T14:18:00Z",
        "LatestVersionNumber": 1,
        "CreateTime": "2018-05-14T14:18:00Z",
        "LaunchTemplateId": "lt-m5e3ofjr1zn1aw7qd***",
        "DefaultVersionNumber": 1
      }
    ]
  }
}
```

Error codes

HTTP status code	Error code	Error message	Description
400	InvalidRegion.NotExist	%s	The error message returned because the specified InstanceId parameter does not exist. Check whether the instance ID is correct.
400	MissingParameter	%s	The error message returned because a required parameter is not specified.

HTTP status code	Error code	Error message	Description
400	InvalidParameter	%s	The error message returned because the specified parameter value is invalid.
403	InnerServiceFailed	%s	The error message returned because an internal service failed to be called.

7.6. DescribeLaunchTemplateVersions

You call this operation to query versions of ECS instance launch templates.

Debugging

OpenAPI Explorer automatically calculates the signature value. For your convenience, we recommend that you call this operation in OpenAPI Explorer. OpenAPI Explorer dynamically generates the sample code of the operation for different SDKs.

Request parameters

Parameter	Type	Required	Example	Description
Action	String	Yes	DescribeLaunchTemplateVersions	The operation that you want to perform. Set the value to DescribeLaunchTemplateVersions.
RegionId	String	Yes	cn-hangzhou	The ID of the region to which the launch template belongs. You can call the DescribeRegions operation to query the most recent region list.
LaunchTemplateId	String	No	lt-launchtemplateid1	The ID of the launch template. You must specify either the LaunchTemplateId parameter or the LaunchTemplateName parameter to determine a specific launch template.
LaunchTemplateName	String	No	FinanceJoshua	The name of the launch template.
LaunchTemplateVersion.N	RepeatList	No	1	The version of launch template N.
MinVersion	Long	No	1	The minimum version number when a range is used to specify the launch template.
MaxVersion	Long	No	10	The maximum version number when a range is used to specify the launch template.
DefaultVersion	Boolean	No	true	Specifies whether to query the default version.
PageNumber	Integer	No	1	The number of the page to return. Pages start from page 1. Default value: 1.

Parameter	Type	Required	Example	Description
PageSize	Integer	No	10	The number of entries to return on each page. Default value: 10.

Response parameters

Parameter	Type	Example	Description
RequestId	String	04F0F334-1335-436C-A1D7-6C044FExxxxx	The ID of the request.
TotalCount	Integer	1	The total number of launch templates.
PageNumber	Integer	1	The page number of the returned page.
PageSize	Integer	10	The number of entries returned per page.
LaunchTemplateVersionSets	Array		An array consisting of LaunchTemplateVersionSet data.
CreateTime	String	2018-05-14T14:18:00Z	The time when the launch template was created.
ModifiedTime	String	2018-05-14T14:18:00Z	The time when the launch template was last modified.
LaunchTemplateId	String	lt-bp67acfmxazb4ph***	The ID of the launch template.
LaunchTemplateName	String	FinanceJoshua	The name of the launch template.
DefaultVersion	Boolean	true	The default version of the launch template.
VersionNumber	Long	1	The version number of the launch template.
VersionDescription	String	InitialVersion	The description of the launch template version.
CreatedBy	String	1942111349714***	The creator of the launch template.
LaunchTemplateData	Struct		The specific configurations of the launch template.
ImageId	String	m-bp67acfmxazb4ph***	The ID of the image from which the instance is created.
ImageOwnerAlias	String	system	The source of the image.
PasswordInherit	Boolean	true	Indicates whether the username and password pair of the original image is used.

Parameter	Type	Example	Description
InstanceType	String	ecs.g5.large	The instance type of the instance.
SecurityGroupId	String	sg-bp67acfmazb4ph***	The ID of the security group to which the instance belongs.
VpcId	String	v-bp67acfmazb4ph***	The ID of the VPC to which the instance belongs.
VSwitchId	String	vsw-bp67acfmazb4ph***	The ID of the VSwitch that is in the VPC to which the instance belongs.
InstanceName	String	FinanceJoshua	The name of the instance.
Description	String	FinanceDept	The description of the instance.
InternetMaxBandwidthIn	Integer	5	The maximum bandwidth of inbound traffic from the Internet.
InternetMaxBandwidthOut	Integer	100	The maximum bandwidth of outbound traffic to the Internet.
HostName	String	JoshuaHost	The hostname of the instance.
ZoneId	String	cn-hangzhou-g	The zone ID of the instance.
SystemDisk.Size	Integer	80	The size of the system disk. Unit: GiB.
SystemDisk.Category	String	cloud_ssd	The category of the system disk.
SystemDisk.DiskName	String	FinanceJoshua	The name of the system disk.
SystemDisk.Description	String	FinanceDept	The description of the system disk.
SystemDisk.Iops	Integer	30000	The number of I/O operations per second of the system disk. ? Note This parameter will be removed in the future. We recommend that you use other parameters to ensure future compatibility.
IoOptimized	String	none	Indicates whether the instance is I/O optimized.
InstanceChargeType	String	Postpaid	The billing method of the instance.
Period	Integer	1	The subscription period.
InternetChargeType	String	PayByTraffic	The billing method for network usage.

Parameter	Type	Example	Description
EnableVmOsConfig	Boolean	false	Indicates whether the operating system configuration of the instance is enabled.
NetworkType	String	vpc	The network type.
UserData	String	SGVsbG9FQ1M=	The user data of the instance, which is Base64-encoded.
KeyPairName	String	FinanceJoshuaV25	The name of the key pair.
RamRoleName	String	FinanceDeptTest	The RAM role name of the instance.
AutoReleaseTime	String	2018-05-14T14:18:00Z	The time when the instance was automatically released.
SpotStrategy	String	NoSpot	The bidding policy of the pay-as-you-go instance.
SpotPriceLimit	Float	0.98	The maximum hourly price of the instance.
SpotDuration	Integer	1	The protection period of the instance.
ResourceGroupId	String	rg-bp67acfmazb4ph***	The ID of the enterprise resource group to which the launch template belongs.
SecurityEnhancementStrategy	String	active	Indicates whether the security hardening is enabled.
DataDisks	Array		An array consisting of DataDisk data.
Size	Integer	2000	The size of the data disk.
SnapshotId	String	s-bp67acfmazb4ph***	The ID of the snapshot used to create the data disk.
Category	String	cloud_ssd	The category of the data disk.
Encrypted	String	false	Indicates whether the data disk is encrypted.
DiskName	String	FinanceJoshua	The name of the data disk.
Description	String	FinanceDept	The description of the data disk.
DeleteWithInstance	Boolean	true	Indicates whether the data disk is released together with the instance.

Parameter	Type	Example	Description
Device	String	/dev/xvda	The device name of the data disk.  Note This parameter will be removed in the future. We recommend that you use other parameters to ensure future compatibility.
NetworkInterfaces	Array		An array consisting of NetworkInterface data.
PrimaryIpAddress	String	203.0.113.2	The primary private IP address of the ENI.
VSwitchId	String	vsw-bp67acfmazb4ph***	The ID of the VSwitch to which the ENI belongs.
SecurityGroupId	String	sg-bp67acfmazb4ph***	The ID of the security group to which the ENI belongs. The security group of the ENI must be within the same VPC as that of the instance.
NetworkInterfaceName	String	FinanceJoshua	The name of the ENI.
Description	String	FinanceDept	The description of the ENI.
Tags	Array		An array consisting of Tag data.
Key	String	FinanceDept	The key of the tag.
Value	String	FinanceDeptJoshua	The value of the tag.

Examples

Sample requests

```
https://ecs.aliyuncs.com/?Action=DescribeLaunchTemplateVersions
&RegionId=cn-hangzhou
&LaunchTemplateName=lt-name1
&<Common request parameters>
```

Sample success responses

XML format

```
<DescribeLaunchTemplateVersionsResponse>
  <RequestId>04F0F334-1335-436C-A1D7-6C044FExxxxx</RequestId>
  <TotalCount>1</TotalCount>
  <PageNumber>1</PageNumber>
  <PageSize>10</PageSize>
  <LaunchTemplateVersionSets>
    <LaunchTemplateVersionSet>
      <CreateTime>2018-05-14T14:18:00Z</CreateTime>
      <ModifiedTime>2018-05-14T14:18:00Z</ModifiedTime>
      <LaunchTemplateId>lt-m5e3ofjr1zn1aw7****</LaunchTemplateId>
      <LaunchTemplateName>lt-m5e3ofjr1zn1aw7****</LaunchTemplateName>
```

```

<LaunchTemplateName>wd-1526307480</LaunchTemplateName>
<DefaultVersion>true</DefaultVersion>
<VersionNumber>1</VersionNumber>
<CreatedBy>1942111349714xxx</CreatedBy>
<VersionDescription>www</VersionDescription>
<launchtemplatedata>
  <imageowneralias>ImageOwnerAlias1</imageowneralias>
  <description>Description1</description>
  <resourcegroupid>ResourceGroupId1</resourcegroupid>
  <datadisks>
    <datadisk>
      <snapshotid>SnapshotId1</snapshotid>
      <description>Description1</description>
      <category>cloud_efficiency</category>
      <encrypted>>false</encrypted>
      <size>44</size>
      <deletewithinstance>true</deletewithinstance>
      <diskname>DataDiskName1</diskname>
    </datadisk>
  </datadisks>
  <userdata>UserData1</userdata>
  <systemdisk.diskname>SystemDiskDiskName1</systemdisk.diskname>
  <systemdisk.size>44</systemdisk.size>
  <ramrolename>RamRoleName1</ramrolename>
  <networktype>NetworkType1</networktype>
  <networkinterfaces>
    <networkinterface>
      <description>Description1</description>
      <securitygroupid>SecurityGroupId1</securitygroupid>
      <vswitchid>VSwitchId1</vswitchid>
      <networkinterfacename>NetworkInterfaceName1</networkinterfacename>
      <primaryipaddress>PrimaryIpAddress1</primaryipaddress>
    </networkinterface>
  </networkinterfaces>
  <imageid>windows2008.vhd</imageid>
  <spotpricelimit>1</spotpricelimit>
  <systemdisk.category>cloud_efficiency</systemdisk.category>
  <instancetype>ecs.xn4.small</instancetype>
  <spotstrategy>SpotWithPriceLimit</spotstrategy>
  <hostname>HostName1</hostname>
  <tags>
    <instancetag>
      <value>bb</value>
      <key>ss</key>
    </instancetag>
  </tags>
  <keypairname>KeyPairName1</keypairname>
  <systemdisk.iops>22</systemdisk.iops>
  <iioptimized>true</iioptimized>
  <zoneid>ZoneId1</zoneid>
  <systemdisk.description>SystemDiskDescription1</systemdisk.description>

```

```
<securitygroupid>sg-tiantt****</securitygroupid>
<vswitchid>vsw-xxxxxx</vswitchid>
<period>1</period>
<internetcharge>PayByBandwidth</internetcharge>
<instancetype>InstanceName1</instancetype>
<internetmaxbandwidthout>20</internetmaxbandwidthout>
<internetmaxbandwidthin>1</internetmaxbandwidthin>
<securityenhancementstrategy>Active</securityenhancementstrategy>
<autoreleasetime>2019-10-21T00:00:00Z</autoreleasetime>
</launchtemplatedata>
</LaunchTemplateVersionSet>
</LaunchTemplateVersionSets>
</DescribeLaunchTemplateVersionsResponse>
```

JSON format

```

{
  "PageNumber": 1,
  "TotalCount": 1,
  "PageSize": 10,
  "RequestId": "3989ED0C-20A1-4351-A127-2067FF8390AX",
  "LaunchTemplateVersionSets": {
    "LaunchTemplateVersionSet": [
      {
        "LaunchTemplateId": "lt-bp16jovvln1cgaaqg***",
        "CreateTime": "2018-10-17T07:36:22Z",
        "CreatedBy": "1942111349714xxx",
        "ModifiedTime": "2018-10-17T07:36:22Z",
        "LaunchTemplateData": {
          "ImageId": "centos_7_04_64_20G_alibase_201701015.vhd",
          "SecurityGroupId": "sg-bp1azkttqpldxgtd***",
          "Description": "DocV587!",
          "NetworkInterfaces": {
            "NetworkInterface": []
          },
          "DataDisks": {
            "DataDisk": []
          },
          "SecurityEnhancementStrategy": "Active",
          "ZoneId": "random",
          "ImageOwnerAlias": "system",
          "InternetChargeType": "PayByTraffic",
          "VSwitchId": "vsw-bp1s5fnvk4gn2tws03***",
          "VpcId": "vpc-bp1opxu1zkh00gzv2***",
          "HostName": "LocalHost",
          "InstanceType": "ecs.g5.large",
          "IoOptimized": "true",
          "Tags": {
            "InstanceTag": []
          },
          "NetworkType": "vpc",
          "InternetMaxBandwidthOut": 5,
          "SystemDisk.Size": 40,
          "InstanceChargeType": "PostPaid",
          "SystemDisk.Category": "cloud_efficiency",
          "InstanceName": "JoshuaCentOSPAYG"
        },
        "VersionNumber": 1,
        "DefaultVersion": true,
        "VersionDescription": "EcsV587!",
        "LaunchTemplateName": "JoshuaCentOSPAYG"
      }
    ]
  }
}

```

Error codes

HTTP status code	Error code	Error message	Description
400	InvalidRegion.NotExist	%s	The error message returned because the specified region does not exist. Check whether the region ID is correct.
400	MissingParameter	%s	The error message returned because a required parameter is not specified.
400	InvalidParameter	%s	The error message returned because the specified parameter is invalid.
404	InvalidLaunchTemplate.NotFound	The specified LaunchTemplate is not found.	The error message returned because the specified launch template does not exist.
403	InnerServiceFailed	%s	The error message returned because an internal service failed to be called.

7.7. ModifyLaunchTemplateDefaultVersion

You can call this operation to change the default version of an instance launch template. If you do not specify a template version number when you create an instance (RunInstances), the default version is used.

Debugging

OpenAPI Explorer automatically calculates the signature value. For your convenience, we recommend that you call this operation in OpenAPI Explorer. OpenAPI Explorer dynamically generates the sample code of the operation for different SDKs.

Request parameters

Parameter	Type	Required	Example	Description
Action	String	Yes	ModifyLaunchTemplateDefaultVersion	The operation that you want to perform. Set the value to <code>ModifyLaunchTemplateDefaultVersion</code> .
DefaultVersionNumber	Long	Yes	2	The default version number of the instance launch template.
RegionId	String	Yes	cn-hangzhou	The region ID of the launch template. You can call the DescribeRegions operation to query the most recent region list.
LaunchTemplateId	String	No	lt-s-bp177juajht6****	The ID of the launch template. You must specify the LaunchTemplateId or LaunchTemplateName parameter to determine an instance launch template.
LaunchTemplateName	String	No	testLaunchTemplateName	The name of the instance launch template. You must specify the LaunchTemplateId or LaunchTemplateName parameter to determine an instance launch template.

Response parameters

Parameter	Type	Example	Description
RequestId	String	473469C7-AA6F-4DC5-B3DB-A3DC0DE3C83E	The ID of the request.

Examples

Sample requests

```
https://ecs.aliyuncs.com/?Action=ModifyLaunchTemplateDefaultVersion
&DefaultVersionNumber=2
&RegionId=cn-hangzhou
&LaunchTemplateId=lt-s-bp177juajht6****
&LaunchTemplateName=testLaunchTemplateName
&<Common request parameters>
```

Sample success responses

XML format

```
<ModifyLaunchTemplateDefaultVersionResponse>
  <RequestId>473469C7-AA6F-4DC5-B3DB-A3DC0DE3C83E</RequestId>
</ModifyLaunchTemplateDefaultVersionResponse>
```

JSON format

```
{
  "RequestId": "473469C7-AA6F-4DC5-B3DB-A3DC0DE3C83E"
}
```

Error codes

HTTP status code	Error code	Error message	Description
400	InvalidRegion.NotExist	%s	The error message returned because the specified RegionId parameter does not exist. Check whether the region ID is correct.
404	InvalidLaunchTemplate.NotFound	%s	The error message returned because the specified launch template does not exist. Check whether the specified LaunchTemplateId or LaunchTemplateName parameter is correct.
404	InvalidLaunchTemplateVersion.NotFound	%s	The error message returned because the specified LaunchTemplateVersion parameter does not exist. Check whether the launch template version is correct.
400	MissingParameter	%s	The error message returned because a required parameter is not specified.
400	InvalidParameter	%s	The error message returned because the specified parameter is invalid.
403	InnerServiceFailed	%s	The error message returned because an internal service failed to be called.

8.Auto provisioning group

8.1. CreateAutoProvisioningGroup

You can call this operation to create an auto provisioning group.

Description

Auto Provisioning is a service to quickly deploy an instance cluster that consists of preemptible and pay-as-you-go instances. Auto Provisioning supports one-click deployment of instance clusters with specified billing methods, zones, and instance families.

Auto Provisioning uses auto provisioning groups to schedule and maintain computing resources. You can use auto provisioning groups to provide stable computing power. This alleviates the instability problem caused by reclaiming preemptible instances.

Auto Provisioning is free to use. However, you are charged for instance resources created through auto provisioning groups. For more information about billing, see [Preemptible instance](#) and [Pay-as-you-go](#).

Debugging

OpenAPI Explorer automatically calculates the signature value. For your convenience, we recommend that you call this operation in OpenAPI Explorer. OpenAPI Explorer dynamically generates the sample code of the operation for different SDKs.

Request parameters

Parameter	Type	Required	Example	Description
Action	String	Yes	CreateAutoProvisioningGroup	The operation that you want to perform. Set the value to CreateAutoProvisioningGroup.
LaunchTemplateId	String	Yes	lt-bp1fgzds4bdogu03***	The ID of the instance launch template associated with the auto provisioning group. You can call the DescribeLaunchTemplates operation to query available instance launch templates.
RegionId	String	Yes	cn-hangzhou	The region ID of the auto provisioning group. You can call the DescribeRegions operation to query the most recent region list.
TotalTargetCapacity	String	Yes	60	The total target capacity of the auto provisioning group. The value must be a positive integer. The total target capacity of the auto provisioning group must be at least the sum of the target capacity of pay-as-you-go instances specified by the <code>PayAsYouGoTargetCapacity</code> parameter and target capacity of preemptible instances specified by the <code>SpotTargetCapacity</code> parameter.

Parameter	Type	Required	Example	Description
ResourceGroupId	String	No	rg-bp67acfmazb4ph***	The ID of the resource group to which to add the auto provisioning group.
AutoProvisioningGroupName	String	No	apg-test	The name of the auto provisioning group to be created. It must be 2 to 128 characters in length. It must start with a letter and cannot start with http:// or https://. It can contain letters, digits, colons (:), underscores (_), and hyphens (-).
AutoProvisioningGroupType	String	No	maintain	The delivery type of the auto provisioning group. Valid values: - request: one-time delivery. After the auto provisioning group is started, Auto Provisioning attempts to create an instance cluster only once. If the cluster fails to be created, Auto Provisioning will not try again. - maintain: continuous delivery. After the auto provisioning group is started, Auto Provisioning continuously attempts to create and maintain an instance cluster. Auto Provisioning compares the real-time capacity and the target capacity of the cluster. If the cluster does not meet the target capacity, Auto Provisioning will continue to create instances until the cluster meets the target capacity. Default value: maintain
SpotAllocationStrategy	String	No	diversified	The policy for creating preemptible instances. Valid values: - lowest-price: cost optimization policy. Auto Provisioning attempts to create instances based on the prices of instance types in ascending order. - diversified: balanced distribution policy. Auto Provisioning attempts to create instances in zones that are specified by extended configurations and then distribute the instances across the zones. Default value: lowest-price
SpotInstanceInterruptionBehavior	String	No	terminate	The next action to take after the excess preemptible instances are stopped. Valid values: - stop: maintains the instances in the stopped state. - terminate: releases the instances. Default value: stop

Parameter	Type	Required	Example	Description
SpotInstancePoolsToUseCount	Integer	No	2	The number of preemptible instances that Auto Provisioning attempts to create based on the prices of instance types in ascending order. This parameter takes effect when the <code>SpotAllocationStrategy</code> parameter is set to <code>lowest-price</code>. The parameter value must be less than N specified in the <code>LaunchTemplateConfig.N</code> parameter.
PayAsYouGoAllocationStrategy	String	No	prioritized	The policy for creating pay-as-you-go instances. Valid values: <code>lowest-price</code>: cost optimization policy. Auto Provisioning attempts to create instances based on the prices of instance types in ascending order. <code>prioritized</code>: priority policy. Auto Provisioning attempts to create instances based on the priority specified by the <code>LaunchTemplateConfig.N.Priority</code> parameter. Default value: <code>lowest-price</code>
ExcessCapacityTerminationPolicy	String	No	termination	Specifies whether to stop excess preemptible instances when the target total capacity of the specified auto provisioning group is reached. Valid values: <code>no-termination</code>: continues to run excess preemptible instances. <code>termination</code>: stops excess preemptible instances. The action to be performed on these stopped instances is specified by the <code>SpotInstanceInterruptionBehavior</code> parameter. Default value: <code>no-termination</code>
ValidFrom	String	No	2019-04-01T15:10:20Z	The time when the auto provisioning group is started. The period of time between this point in time and the point in time specified by the <code>ValidUntil</code> parameter is the effective time period of the auto provisioning group. Specify the time in the ISO 8601 standard in the <code>yyyy-MM-ddTHH:mm:ssZ</code> format. The time must be in UTC. By default, an auto provisioning group is immediately started after creation.

Parameter	Type	Required	Example	Description
ValidUntil	String	No	2019-06-01T15:10:20Z	The time when the auto provisioning group expires. The period of time between this point in time and the point in time specified by the <code>ValidFrom</code> parameter is the effective time period of the auto provisioning group. Specify the time in the ISO 8601 standard in the yyyy-MM-ddTHH:mm:ssZ format. The time must be in UTC. By default, an auto provisioning group is immediately started after creation.
TerminateInstancesWithExpiration	Boolean	No	true	Specifies whether to stop preemptible instances when the auto provisioning group expires. Valid values: • true: stops preemptible instances. The action to be performed on these stopped instances is specified by the <code>SpotInstanceC interruptionBehavior</code> parameter. • false: continues to run preemptible instances. Default value: false
TerminateInstances	Boolean	No	true	Specifies whether to release instances in the auto provisioning group when the auto provisioning group is deleted. Default value: false
MaxSpotPrice	Float	No	2	The maximum price of preemptible instances in the auto provisioning group.  Note When the <code>MaxSpotPrice</code> and <code>LaunchTemplateConfig.N.MaxPrice</code> parameters are both specified, the maximum price is the lower value of the two parameters.
PayAsYouGoTargetCapacity	String	No	30	The target capacity of pay-as-you-go instances in the auto provisioning group. Valid values: less than the value of <code>TotalTargetCapacity</code> .
SpotTargetCapacity	String	No	20	The target capacity of preemptible instances in the auto provisioning group. Valid values: less than the value of <code>TotalTargetCapacity</code> .

Parameter	Type	Required	Example	Description
DefaultTargetCapacityType	String	No	Spot	Specifies the billing method of the capacity difference when the sum of the values of <code>PayAsYouGoTargetCapacity</code> and <code>SpotTargetCapacity</code> is less than the value of <code>TotalTargetCapacity</code>. Valid values: - PayAsYouGo: pay-as-you-go instances - Spot: preemptible instances Default value: Spot
LaunchTemplateVersion	String	No	1	The version of the instance launch template associated with the auto provisioning group. You can call the DescribeLaunchTemplateVersions operation to query the versions of available instance launch templates. Default value: the default version of the instance launch template
LaunchTemplateConfig.N.InstanceType	String	No	ecs.g5.large	The instance type of extended configuration N. Valid values of N: 1 to 20. For more information about valid values, see Instance families.
LaunchTemplateConfig.N.MaxPrice	Double	No	3	The maximum price of preemptible instances in extended configuration N.  Note If you set the <code>LaunchTemplateConfig</code> parameter, you must also set the <code>LaunchTemplateConfig.N.MaxPrice</code> parameter.
LaunchTemplateConfig.N.VSwitchId	String	No	vsw-sn5bsitu4lfzgc5o7****	The ID of the VSwitch in extended configuration N. The zone of the ECS instances created from the extended configurations is determined by the VSwitch.  Note If you set the <code>LaunchTemplateConfig</code> parameter, you must also set the <code>LaunchTemplateConfig.N.VSwitchId</code> parameter.

Parameter	Type	Required	Example	Description
LaunchTemplateConfig.N.WeightedCapacity	Double	No	2	The weight of the instance type specified in extended configuration N. A greater weight indicates that a single instance has more computing power, and as a result fewer instances are required. The value of this parameter must be greater than 0. The weight is calculated based on the computing power of the specified instance type and the minimum computing power of a single node of the cluster. For example, if the minimum computing power of a single node is 8 vCPUs and 60 GiB: • The weight of the instance type with 8 vCPUs and 60 GiB can be set to 1. • The weight of the instance type with 16 vCPUs and 120 GiB can be set to 2.
LaunchTemplateConfig.N.Priority	Integer	No	1	The priority of extended configuration N. A value of 0 indicates the highest priority. Valid values: 0 to ∞.
Description	String	No	test	The description of the auto provisioning group.

Response parameters

Parameter	Type	Example	Description
RequestId	String	745CEC9F-0DD7-4451-9FE7-8B752F39****	The ID of the request.
AutoProvisioningGroupId	String	apg-sn54avj8htgvtjh8****	The ID of the auto provisioning group.

Examples

Sample requests

```
http(s)://ecs.aliyuncs.com/? Action=CreateAutoProvisioningGroup
&LaunchTemplateId=lt-bp1fgzds4bdogu03****
&RegionId=cn-hangzhou
&TotalTargetCapacity=60
&SpotInstancePoolsToUseCount=2
&ExcessCapacityTerminationPolicy=termination
&TerminateInstancesWithExpiration=true
&TerminateInstances=false
&PayAsYouGoTargetCapacity=30
&SpotTargetCapacity=20
&DefaultTargetCapacityType=Spot
&LaunchTemplateConfig.1.InstanceType=ecs.g5.large
&LaunchTemplateConfig.1.MaxPrice=3
&LaunchTemplateConfig.1.VSwitchId=vsw-sn5bsitu4lfzgc5o7****
&LaunchTemplateConfig.1.WeightedCapacity=2
&LaunchTemplateConfig.1.Priority=1
&<Common request parameters>
```

Sample success responses

XML format

```
<CreateAutoProvisioningGroupResponse>
  <CreateAutoProvisioningGroupId>apg-sn54avj8htgvtyh8****</CreateAutoProvisioningGroupId>
  <RequestId>745CEC9F-0DD7-4451-9FE7-8B752F39****</RequestId>
</CreateAutoProvisioningGroupResponse>
```

JSON format

```
{
  "CreateAutoProvisioningGroupId": "apg-sn54avj8htgvtyh8****",
  "RequestId": "745CEC9F-0DD7-4451-9FE7-8B752F39****"
}
```

Error codes

HTTP status code	Error code	Error message	Description
400	InvalidFleetExcessCapacityTerminationPolicy.ValueNotSupported	The specified parameter "ExcessCapacityTerminationPolicy" is not supported.	The error message returned because the specified ExcessCapacityTerminationPolicy parameter is invalid.
500	InternalServerError	The request processing has failed due to some unknown error.	The error message returned because an internal error has occurred. Try again later. If the problem persists, submit a ticket.

8.2. ModifyAutoProvisioningGroup

You can call this operation to modify the configurations of an auto provisioning group.

Description

Before you call this operation, take note of the following items:

- If you modify the capacity or capacity-related settings of an auto provisioning group, the group will execute scheduling tasks once after modification.
- You cannot modify an auto provisioning group when the group is being deleted.

Debugging

OpenAPI Explorer automatically calculates the signature value. For your convenience, we recommend that you call this operation in OpenAPI Explorer. OpenAPI Explorer dynamically generates the sample code of the operation for different SDKs.

Request parameters

Parameter	Type	Required	Example	Description
Action	String	Yes	ModifyAutoProvisioningGroup	The operation that you want to perform. Set the value to ModifyAutoProvisioningGroup.
RegionId	String	Yes	cn-hangzhou	The region ID of the auto provisioning group to be modified. You can call the DescribeRegions operation to query the most recent region list.
AutoProvisioningGroupId	String	No	apg-bp67acfmazb4ph***	The ID of the auto provisioning group.
ExcessCapacityTerminationPolicy	String	No	no-termination	Specifies whether to terminate excess preemptible instances when the target total capacity of the specified auto provisioning group is reached. Valid values: • no-termination: The system continues to run excess preemptible instances. • termination: The system terminates excess preemptible instances. The next action after termination is specified by the SpotInstanceInterruptionBehavior parameter.  Note You must specify the SpotInstanceInterruptionBehavior parameter when you create the auto provisioning group and cannot change the parameter value later.
DefaultTargetCapacityType	String	No	Spot	Specifies the billing method of the capacity difference when the sum of the values of the PayAsYouGoTargetCapacity and SpotTargetCapacity parameters is less than the value of the TotalTargetCapacity parameter. Valid values: • PayAsYouGo: bill based on pay-as-you-go instances. • Spot: bill based on preemptible instances.

Parameter	Type	Required	Example	Description
TerminateInstancesWithExpiration	Boolean	No	false	Specifies whether to terminate preemptible instances when the auto provisioning group expires. Valid values: • true: The system terminates preemptible instances. The next action after termination is specified by the SpotInstanceInterruptionBehavior parameter. • false: The system continues running preemptible instances.  Note You must specify the SpotInstanceInterruptionBehavior parameter when you create the auto provisioning group and cannot change the parameter value later.
MaxSpotPrice	Float	No	0.5	The maximum price of preemptible instances in the auto provisioning group.  Note When both the MaxSpotPrice and LaunchTemplateConfig.N.MaxPrice parameters are specified, the maximum price is the lower value of the two parameters. You must specify the LaunchTemplateConfig.N.MaxPrice parameter when you create the auto provisioning group and cannot change the parameter value later.
TotalTargetCapacity	String	No	70	The total target capacity of the auto provisioning group. The parameter value is a positive integer. The total target capacity of the auto provisioning group must be at least the sum of the target capacity of pay-as-you-go instances specified by the PayAsYouGoTargetCapacity parameter and target capacity of preemptible instances specified by the SpotTargetCapacity parameter.
PayAsYouGoTargetCapacity	String	No	30	The target capacity of pay-as-you-go instances in the auto provisioning group. Valid values: less than the value of the TotalTargetCapacity parameter.
SpotTargetCapacity	String	No	30	The target capacity of preemptible instances in the auto provisioning group. Valid values: less than the value of the TotalTargetCapacity parameter.

Parameter	Type	Required	Example	Description
AutoProvisioningGroupName	String	No	apg-test	The name of the auto provisioning group to be created. The name must be 2 to 128 characters in length. It can contain letters, digits, colons (:), underscores (_), and hyphens (-). It must start with a letter but cannot start with http:// or https://.

Response parameters

Parameter	Type	Example	Description
RequestId	String	B48A12CD-1295-4A38-A8F0-0E92C937****	The ID of the request.

Examples

Sample requests

```
http(s)://ecs.aliyuncs.com/? Action=ModifyAutoProvisioningGroup
&RegionId=cn-hangzhou
&AutoProvisioningGroupId=apg-bp67acfmazb4ph***
&TotalTargetCapacity=70
&MaxSpotPrice=0.5
&<Common request parameters>
```

Sample success responses

XML format

```
<ModifyAutoProvisioningGroupResponse>
  <RequestId>928E2273-5715-46B9-A730-238DC996****</RequestId>
</ModifyAutoProvisioningGroupResponse>
```

JSON format

```
{
  "RequestId": "B48A12CD-1295-4A38-A8F0-0E92C937****"
}
```

Error codes

HTTP status code	Error code	Error message	Description
403	Forbidden.RAM	User not authorized to operate on the specified resource, or this API doesn't support RAM.	The error message returned because you are not authorized to operate this resource, or this API does not support RAM roles.

8.3. DeleteAutoProvisioningGroup

You can call this operation to delete an auto provisioning group.

When deleting an auto provisioning group, you can use the `TerminateInstances` parameter to specify the behavior of the instances within the group.

Debugging

Alibaba Cloud provides [OpenAPI Explorer](#) to simplify API usage. You can use OpenAPI Explorer to search for APIs, call APIs, and dynamically generate SDK example code.

Request parameters

Parameter	Type	Required	Example	Description
AutoProvisioningGroupId	String	Yes	apg-uf6jel2bbl62wh13****	The ID of the auto provisioning group to be deleted.
RegionId	String	Yes	cn-hangzhou	The region ID of the auto provisioning group.
TerminateInstances	Boolean	Yes	true	Specifies whether to release instances of the auto provisioning group. Valid values: - true - false
Action	String	Yes	DeleteAutoProvisioningGroup	The operation that you want to perform. Set this parameter to DeleteAutoProvisioningGroup .

Response parameters

Parameter	Type	Example	Description
RequestId	String	B48A12CD-1295-4A38-A8F0-0E92C937****	The ID of the request.

Examples

Sample requests

```
http(s)://ecs.aliyuncs.com/? Action=DeleteAutoProvisioningGroup
&AutoProvisioningGroupId=fleet-uf6jel2bbl62wh13****
&RegionId=cn-hangzhou
&TerminateInstances=true
&<Common request parameters>
```

Sample success responses

XML format

```
<DeleteAutoProvisioningGroupResponse>
  <RequestId>928E2273-5715-46B9-A730-238DC996****</RequestId>
</DeleteAutoProvisioningGroupResponse>
```

JSON format

```
{
  "RequestId": "B48A12CD-1295-4A38-A8F0-0E92C937****"
}
```

Error codes

HTTP status code	Error code	Error message	Description
403	Forbidden.RAM	User not authorized to operate on the specified resource, or this API doesn't support RAM.	The error message returned because the RAM user is not authorized.

[View error codes](#)

8.4. DescribeAutoProvisioningGroups

You can call this operation to query one or more auto provisioning groups.

Debugging

OpenAPI Explorer automatically calculates the signature value. For your convenience, we recommend that you call this operation in OpenAPI Explorer. OpenAPI Explorer dynamically generates the sample code of the operation for different SDKs.

Request parameters

Parameter	Type	Required	Example	Description
Action	String	Yes	DescribeAutoProvisioningGroups	The operation that you want to perform. Set the value to DescribeAutoProvisioningGroups.
RegionId	String	Yes	cn-hangzhou	The region ID of the auto provisioning group.
AutoProvisioningGroupIds.N	RepeatList	No	apg-sn54avj8htgvtyh8****	The ID of auto provisioning group N. Valid values of N: 1 to 20.
AutoProvisioningGroupName	String	No	testAutoProvisioningGroupName	The name of the auto provisioning group.
PageSize	Integer	No	2	The number of entries to return on each page. Maximum value: 100. Default value: 10.
PageNumber	Integer	No	1	The number of the page to return. Pages start from page 1. Default value: 1.
AutoProvisioningGroupStatus.N	RepeatList	No	active	The status of auto provisioning group N. Valid values: - submitted: The auto provisioning group has been created but has not started to execute scheduling tasks. - active: The auto provisioning group is executing scheduling tasks. - deleted: The auto provisioning group is deleted. - deleted-running: The auto provisioning group is being deleted. - modifying: The auto provisioning group is being modified.

Response parameters

Parameter	Type	Example	Description
AutoProvisioningGroups	Array		An array consisting of AutoProvisioningGroup data.
AutoProvisioningGroup			
AutoProvisioningGroupId	String	apg-sn54avj8htgvyh8****	The ID of the auto provisioning group.
AutoProvisioningGroupName	String	EcsDocTest	The name of the auto provisioning group.
AutoProvisioningGroupType	String	maintain	The delivery type of the auto provisioning group. Valid values: - request: one-time delivery. After the auto provisioning group is started, it only attempts to deliver an instance cluster once. If the cluster fails to be delivered, the group does not retry the operation. - maintain: continuous delivery. After the auto provisioning group is started, it continuously attempts to create and deliver an instance cluster. The auto provisioning group compares the real-time and target capacity of the cluster. If the cluster does not meet the target capacity, the group will create instances until the cluster meets the target capacity.
CreationTime	String	2019-04-01T15:10:20Z	The time when the auto provisioning group was created.
ExcessCapacityTerminationPolicy	String	termination	The shutdown policy of the auto provisioning group for excess preemptible instances when the target capacity is exceeded. Valid values: - no-termination: Excess preemptible instances are not shut down. - termination: Excess preemptible instances are shut down. The action to be performed on these shutdown instances is specified by the SpotInstanceInterruptionBehavior parameter.  Note The ExcessCapacityTerminationPolicy parameter is set when the auto provisioning group is created and cannot be modified. For more information, see CreateAutoProvisioningGroup.
LaunchTemplateConfigs	Array		An array consisting of LaunchTemplateConfig data.
LaunchTemplateConfig			
InstanceType	String	ecs.g5.large	The instance type specified in extended configurations.
MaxPrice	Float	3	The maximum price of the instance type specified in extended configurations.

Parameter	Type	Example	Description
Priority	Float	1	The priority of the instance type specified in extended configurations. A value of 0 indicates the highest priority.
VSwitchId	String	vsw-sn5bsitu4lfzgc5o7****	The ID of the VSwitch specified in extended configurations.
WeightedCapacity	Float	2	The weight of the instance type specified in extended configurations.
LaunchTemplateId	String	lt-bp1fgzds4bdogu03****	The ID of the launch template associated with the auto provisioning group.
LaunchTemplateVersion	String	1	The version of the launch template associated with the auto provisioning group.
MaxSpotPrice	Float	2	The maximum price for preemptible instances in the auto provisioning group.  Note If both the <code>MaxSpotPrice</code> and <code>LaunchTemplateConfig.N.MaxPrice</code> parameters are specified, the maximum price is the lower value of the two parameters. The <code>LaunchTemplateConfig.N.MaxPrice</code> parameter is set when the auto provisioning group is created and cannot be modified.
PayAsYouGoOptions	Struct		The policies related to pay-as-you-go instances.
AllocationStrategy	String	prioritized	The scale-out policy for pay-as-you-go instances. Valid values: - lowest-price: the cost optimization policy. This policy indicates that instance types of the lowest cost are used to create instances. - prioritized: the priority-based policy. This policy indicates that instances are created based on the priority specified by the <code>LaunchTemplateConfig.N.Priority</code> parameter.  Note The <code>LaunchTemplateConfig.N.Priority</code> parameter is set when the auto provisioning group is created and cannot be modified.
RegionId	String	cn-hangzhou	The region ID of the auto provisioning group.
SpotOptions	Struct		The policy of preemptible instances.

Parameter	Type	Example	Description
AllocationStrategy	String	diversified	The scale-out policy for preemptible instances. Valid values: - lowest-price: the cost optimization policy. This policy indicates that instance types of the lowest cost are used to create instances. - diversified: the distribution balancing policy. This policy indicates that instances are created evenly across multiple zones specified in extended template configurations.
InstanceInterrupti onBehavior	String	stop	The action performed after the excess preemptible instances are shut down. Valid values: - stop: keeps the excess preemptible instances stopped. - terminate: releases the excess preemptible instances.
InstancePoolsToUs eCount	Integer	2	The number of instances that are created by the auto provisioning group based on the lowest-price policy.  Note This parameter is set when the auto provisioning group is created and cannot be modified.
State	String	fulfilled	The overall status of instance scheduling of the auto provisioning group. Valid values: - fulfilled: Scheduling is complete and the instance cluster is delivered. - pending-fulfillment: The instances are being created. - pending-termination: The instances are being removed. - error: An exception has occurred during scheduling and the instance cluster was not delivered.
Status	String	submitted	The status of the auto provisioning group. Valid values: - submitted: The auto provisioning group has been created but has not started to execute scheduling tasks. - active: The auto provisioning group is executing scheduling tasks. - deleted: The auto provisioning group is deleted. - deleted-running: The auto provisioning group is being deleted. - modifying: The auto provisioning group is being modified.
TargetCapacitySpe cification	Struct		The settings of the target capacity of the auto provisioning group.

Parameter	Type	Example	Description
DefaultTargetCapacityType	String	Spot	The type of supplemental instances. When the total value of <code>PayAsYouGoTargetCapacity</code> and <code>SpotTargetCapacity</code> is smaller than the value of <code>TotalTargetCapacity</code>, the auto provisioning group creates instances of the specified type to meet the capacity requirements. Valid values: - PayAsYouGo: pay-as-you-go instances. - Spot: preemptible instances.
PayAsYouGoTargetCapacity	Float	30	The target capacity of pay-as-you-go instances in the auto provisioning group.
SpotTargetCapacity	Float	20	The target capacity of preemptible instances in the auto provisioning group.
TotalTargetCapacity	Float	60	The total capacity of the auto provisioning group. The capacity consists of the following three parts: - The target capacity of pay-as-you-go instances specified by the <code>PayAsYouGoTargetCapacity</code> parameter - The target capacity of preemptible instances specified by the <code>SpotTargetCapacity</code> parameter - The supplemental capacity besides instance capacities specified by the <code>PayAsYouGoTargetCapacity</code> and <code>SpotTargetCapacity</code> parameters
TerminateInstances	Boolean	false	Indicates whether instances are released together with the auto provisioning group to which the instances belong.
TerminateInstancesWithExpiration	Boolean	True	Indicates whether the preemptible instances are shut down when the auto provisioning group expires. Valid values: - true: The preemptible instances are shut down. The action performed on these shutdown instances is specified by the <code>SpotInstanceInterruptionBehavior</code> parameter. - false: The preemptible instances continue to run.  Note The <code>SpotInstanceInterruptionBehavior</code> parameter is set when the auto provisioning group is created and cannot be modified.
ValidFrom	String	2019-04-01T15:10:20Z	The time when the auto provisioning group was started. The period of time between this point in time and the point in time specified by the <code>ValidUntil</code> parameter is the effective time period of the auto provisioning group.

Parameter	Type	Example	Description
ValidUntil	String	2019-06-01T15:10:20Z	The time when the auto provisioning group expires. The period of time between this point in time and the point in time specified by the <code>ValidFrom</code> parameter is the effective time period of the auto provisioning group.
PageNumber	Integer	1	The page number of the returned page.
PageSize	Integer	10	The number of entries returned per page.
RequestId	String	745CEC9F-0DD7-4451-9FE7-8B752F39****	The ID of the request.
TotalCount	Integer	10	The number of queried auto provisioning groups.

Examples

Sample requests

```
http(s)://ecs.aliyuncs.com/?Action=DescribeAutoProvisioningGroups
&AutoProvisioningGroupId.1=apg-sn54avj8htgvtyh8****
&RegionId=cn-hangzhou
&<Common request parameters>
```

Sample success responses

XML format

```
<DescribeAutoProvisioningGroups>
  <PageNumber>1</PageNumber>
  <TotalCount>1</TotalCount>
  <PageSize>10</PageSize>
  <RequestId>85331AC9-82C0-4604-9A14-048865BE****</RequestId>
  <AutoProvisioningGroups>
    <AutoProvisioningGroup>
      <TerminateInstancesWithExpiration>>false</TerminateInstancesWithExpiration>
      <TerminateInstances>>false</TerminateInstances>
      <ValidFrom>2019-06-17T15:22Z</ValidFrom>
      <AutoProvisioningGroupType>maintain</AutoProvisioningGroupType>
      <PayAsYouGoOptions>
        <AllocationStrategy>lowest-price</AllocationStrategy>
      </PayAsYouGoOptions>
      <AutoProvisioningGroupName>test61****</AutoProvisioningGroupName>
      <CreationTime></CreationTime>
      <ExcessCapacityTerminationPolicy>no-termination</ExcessCapacityTerminationPolicy>
      <Status>active</Status>
      <MaxSpotPrice>5</MaxSpotPrice>
      <LaunchTemplateVersion>1</LaunchTemplateVersion>
      <ValidUntil>2100-01-01T07:59Z</ValidUntil>
      <TargetCapacitySpecification>
        <SpotTargetCapacity>180</SpotTargetCapacity>
```

```

<TotalTargetCapacity>300</TotalTargetCapacity>
<PayAsYouGoTargetCapacity>120</PayAsYouGoTargetCapacity>
<DefaultTargetCapacityType>PayAsYouGo</DefaultTargetCapacityType>
</TargetCapacitySpecification>
<State>fulfilled</State>
<LaunchTemplateId>lt-uf657o6auob6aivd****</LaunchTemplateId>
<RegionId>cn-shanghai</RegionId>
<AutoProvisioningGroupId>apg-uf6c7pl7b30t4m98****</AutoProvisioningGroupId>
<SpotOptions>
  <InstancePoolsToUseCount>1</InstancePoolsToUseCount>
  <InstanceInterruptionBehavior>terminate</InstanceInterruptionBehavior>
  <AllocationStrategy>lowest-price</AllocationStrategy>
</SpotOptions>
<LaunchTemplateConfigs>
  <LaunchTemplateConfig>
    <MaxPrice>3</MaxPrice>
    <WeightedCapacity>1</WeightedCapacity>
    <VSwitchId>vsw-uf6qbjwokzl67uqqf****</VSwitchId>
    <Priority>1</Priority>
    <InstanceType>ecs.c5.xlarge</InstanceType>
  </LaunchTemplateConfig>
  <LaunchTemplateConfig>
    <MaxPrice>2</MaxPrice>
    <WeightedCapacity>2</WeightedCapacity>
    <VSwitchId>vsw-uf6n6iy1ib39eqvph****</VSwitchId>
    <Priority>1</Priority>
    <InstanceType>ecs.g5.large</InstanceType>
  </LaunchTemplateConfig>
  <LaunchTemplateConfig>
    <MaxPrice>1</MaxPrice>
    <WeightedCapacity>3</WeightedCapacity>
    <VSwitchId>vsw-uf6gs8uerj5osels4****</VSwitchId>
    <Priority>1</Priority>
    <InstanceType>ecs.hfc5.large</InstanceType>
  </LaunchTemplateConfig>
</LaunchTemplateConfigs>
</AutoProvisioningGroup>
</AutoProvisioningGroups>
</DescribeAutoProvisioningGroups>

```

JSON format

```

{
  "PageNumber": 1,
  "TotalCount": 1,
  "PageSize": 10,
  "RequestId": "85331AC9-82C0-4604-9A14-048865BE****",
  "AutoProvisioningGroups": {
    "AutoProvisioningGroup": {
      "TerminateInstancesWithExpiration": false,
      "TerminateInstances": false,

```

```

"ValidFrom": "2019-06-17T15:22Z",
"AutoProvisioningGroupType": "maintain",
"PayAsYouGoOptions": {
  "AllocationStrategy": "lowest-price"
},
"AutoProvisioningGroupName": "test61****",
"CreationTime": "",
"ExcessCapacityTerminationPolicy": "no-termination",
"Status": "active",
"MaxSpotPrice": 5,
"LaunchTemplateVersion": 1,
"ValidUntil": "2100-01-01T07:59Z",
"TargetCapacitySpecification": {
  "SpotTargetCapacity": 180,
  "TotalTargetCapacity": 300,
  "PayAsYouGoTargetCapacity": 120,
  "DefaultTargetCapacityType": "PayAsYouGo"
},
"State": "fulfilled",
"LaunchTemplateId": "lt-uf657o6auob6aivd****",
"RegionId": "cn-shanghai",
"AutoProvisioningGroupId": "apg-uf6c7pl7b30t4m98****",
"SpotOptions": {
  "InstancePoolsToUseCount": 1,
  "InstanceInterruptionBehavior": "terminate",
  "AllocationStrategy": "lowest-price"
},
"LaunchTemplateConfigs": {
  "LaunchTemplateConfig": [
    {
      "MaxPrice": 3,
      "WeightedCapacity": 1,
      "VSwitchId": "vsw-uf6qbjwokzl67uqqf****",
      "Priority": 1,
      "InstanceType": "ecs.c5.xlarge"
    },
    {
      "MaxPrice": 2,
      "WeightedCapacity": 2,
      "VSwitchId": "vsw-uf6n6iy1ib39eqvph****",
      "Priority": 1,
      "InstanceType": "ecs.g5.large"
    },
    {
      "MaxPrice": 1,
      "WeightedCapacity": 3,
      "VSwitchId": "vsw-uf6gs8uerj5osels4****",
      "Priority": 1,
      "InstanceType": "ecs.hfc5.large"
    }
  ]
}

```

```
    ]
  }
}
}
```

Error codes

HTTP status code	Error code	Error message	Description
400	MissingParamter.RegionId	The regionId should not be null.	The error message returned because the RegionId parameter is not specified.

8.5. DescribeAutoProvisioningGroupInstances

You can call this operation to query instances in an auto provisioning group.

Debugging

OpenAPI Explorer automatically calculates the signature value. For your convenience, we recommend that you call this operation in OpenAPI Explorer. OpenAPI Explorer dynamically generates the sample code of the operation for different SDKs.

Request parameters

Parameter	Type	Required	Example	Description
Action	String	Yes	DescribeAutoProvisioningGroupInstances	The operation that you want to perform. Set the value to DescribeAutoProvisioningGroupInstances.
AutoProvisioningGroupId	String	Yes	apg-uf6jel2bbl62wh13****	The ID of the auto provisioning group.
RegionId	String	Yes	cn-hangzhou	The region ID of the auto provisioning group. You can call the DescribeRegions operation to query the most recent region list.
PageNumber	Integer	No	1	The number of the page to return. Pages start from page 1. Default value: 1.
PageSize	Integer	No	10	The number of entries to return on each page. Maximum value: 100. Default value: 10.

Response parameters

Parameter	Type	Example	Description
Instances	Array		An array consisting of Instance data.
Instance			

Parameter	Type	Example	Description
CPU	Integer	2	The number of vCPUs.
CreationTime	String	2017-12-10T04:04Z	The time when the instance was created.
InstanceId	String	i-bp67acfmxazb4p****	The ID of the instance.
InstanceType	String	ecs.g5.large	The instance type of the ECS instance.
IoOptimized	Boolean	true	Indicates whether the instance is I/O optimized.
IsSpot	Boolean	True	Indicates whether the instance is a preemptible instance.
Memory	Integer	1024	The memory size of the instance. Unit: MiB.
NetworkType	String	vpc	The network type of the instance. Valid values: - vpc - classic
OsType	String	linux	The operating system type of the instance. Valid values: - windows - linux
RegionId	String	cn-hangzhou	The region ID of the instance.
Status	String	Running	The status of the instance.
ZoneId	String	cn-hangzhou-g	The zone ID of the instance.
PageNumber	Integer	1	The page number of the returned page.
PageSize	Integer	10	The number of entries returned per page.
RequestId	String	B48A12CD-1295-4A38-A8F0-0E92C937****	The ID of the request.
TotalCount	Integer	2	The number of queried instances in the auto provisioning group.

Examples

Sample requests

```
https://ecs.aliyuncs.com/?Action=DescribeAutoProvisioningGroupInstances
$AutoProvisioningGroupId=apg-uf6jel2bb62wh13****
&RegionId=cn-hangzhou
&<Common request parameters>
```

Sample success responses

XML format

```
<DescribeAutoProvisioningGroupInstancesResponse>
  <PageNumber>1</PageNumber>
  <TotalCount>2</TotalCount>
  <PageSize>2</PageSize>
  <RequestId>A43735F7-30BD-4D89-AB8A-030EB24B****</RequestId>
  <Instances>
    <Instance>
      <CreationTime>2019-06-17T15:25Z</CreationTime>
      <IoOptimized>true</IoOptimized>
      <OsType>linux</OsType>
      <NetworkType>vpc</NetworkType>
      <Status>Running</Status>
      <Memory>8192</Memory>
      <RegionId>cn-shanghai</RegionId>
      <InstanceId>i-bp67acfmazb4p****</InstanceId>
      <CPU>2</CPU>
      <ZoneId>cn-shanghai-a</ZoneId>
      <InstanceType>ecs.g5.large</InstanceType>
    </Instance>
    <Instance>
      <CreationTime>2019-06-17T15:25Z</CreationTime>
      <IoOptimized>true</IoOptimized>
      <OsType>linux</OsType>
      <NetworkType>vpc</NetworkType>
      <Status>Running</Status>
      <Memory>8192</Memory>
      <RegionId>cn-shanghai</RegionId>
      <InstanceId>i-bp67acfmazb5p****</InstanceId>
      <CPU>2</CPU>
      <ZoneId>cn-shanghai-a</ZoneId>
      <InstanceType>ecs.g5.large</InstanceType>
    </Instance>
  </Instances>
</DescribeAutoProvisioningGroupInstancesResponse>
```

JSON format

```
{
  "PageNumber": 1,
  "TotalCount": 2,
  "PageSize": 2,
  "RequestId": "A43735F7-30BD-4D89-AB8A-030EB24B****",
  "Instances": {
    "Instance": [
      {
        "CreationTime": "2019-06-17T15:25Z",
        "IoOptimized": true,
        "OsType": "linux",
        "NetworkType": "vpc",
        "Status": "Running",
        "Memory": 8192,
        "RegionId": "cn-shanghai",
        "InstanceId": "i-bp67acfmazb4p****",
        "CPU": 2,
        "ZoneId": "cn-shanghai-a",
        "InstanceType": "ecs.g5.large"
      },
      {
        "CreationTime": "2019-06-17T15:25Z",
        "IoOptimized": true,
        "OsType": "linux",
        "NetworkType": "vpc",
        "Status": "Running",
        "Memory": 8192,
        "RegionId": "cn-shanghai",
        "InstanceId": "i-bp67acfmazb5p****",
        "CPU": 2,
        "ZoneId": "cn-shanghai-a",
        "InstanceType": "ecs.g5.large"
      }
    ]
  }
}
```

Error codes

HTTP status code	Error code	Error message	Description
403	Forbidden.RAM	User not authorized to operate on the specified resource, or this API doesn't support RAM.	The error message returned because you are not authorized to manage this resource, or this API operation does not support RAM roles.
400	MissingParamter.RegionId	The regionId should not be null.	The error message returned because the RegionId parameter is not specified.

8.6. DescribeAutoProvisioningGroupHistory

You can call this operation to query the scheduling tasks of an auto provisioning group.

Debugging

OpenAPI Explorer automatically calculates the signature value. For your convenience, we recommend that you call this operation in OpenAPI Explorer. OpenAPI Explorer dynamically generates the sample code of the operation for different SDKs.

Request parameters

Parameter	Type	Required	Example	Description
Action	String	Yes	DescribeAutoProvisioningGroupHistory	The operation that you want to perform. Set the value to DescribeAutoProvisioningGroupHistory.
AutoProvisioningGroupId	String	Yes	apg-bp67acfmazb4p****	The ID of the auto provisioning group.
RegionId	String	Yes	cn-hangzhou	The region ID of the auto provisioning group.
PageNumber	Integer	No	1	The number of the page to return. Pages start from page 1. Default value: 1.
PageSize	Integer	No	5	The number of entries to return on each page. Maximum value: 50. Default value: 10.
StartTime	String	No	2019-04-01T15:10:20Z	The beginning of the time range of the queried data. Specify the time in the ISO 8601 standard in the yyyy-MM-ddTHH:mm:ssZ format. The time must be in UTC.
EndTime	String	No	2019-06-20T15:10:20Z	The end of the time range of the queried data. Specify the time in the ISO 8601 standard in the yyyy-MM-ddTHH:mm:ssZ format. The time must be in UTC.

Response parameters

Parameter	Type	Example	Description
AutoProvisioningGroupHistories	Array		An array consisting of AutoProvisioningGroupHistory data.
AutoProvisioningGroupHistory			
ActivityDetails	Array		An array consisting of ActivityDetail data.
ActivityDetail			
Detail	String	New ECS instances "i-bp67acfmazb4p****, i-bp67acfmazb5p****" created.	The execution details of instance creation performed by the single scheduling task.

Parameter	Type	Example	Description
Status	String	Successful	The execution status of instance creation performed by the single scheduling task. Valid values: - Successful: Instances are created. - Failed: Instances failed to be created. - InProgress: Instances are being created. - Warning: Partial instances are created.
LastEventTime	String	2019-04-01T15:10:20Z	The execution time of the last instance creation performed by the single scheduling task.
StartTime	String	2019-04-01T15:10:20Z	The start time of executing the single scheduling task.
Status	String	Success	The execution status of the single scheduling task. Valid values: - prepare: The scheduling task is being executed. - success: The scheduling task is executed. - failed: The scheduling task failed to be executed.
TaskId	String	apg-task-bp67acfmazb4p****	The ID of the scheduling task.
PageNumber	Integer	1	The page number of the returned page.
PageSize	Integer	10	The number of entries returned per page.
RequestId	String	B48A12CD-1295-4A38-A8F0-0E92C937****	The ID of the request.
TotalCount	Integer	10	The number of queried scheduling tasks in the auto provisioning group.

Examples

Sample requests

```
https://ecs.aliyuncs.com/?Action=DescribeAutoProvisioningGroupHistory
&AutoProvisioningGroupId=apg-bp67acfmazb4p****
&RegionId=cn-hangzhou
&<Common request parameters>
```

Sample success responses

XML format

```

<DescribeAutoProvisioningGroups>
  <PageNumber>1</PageNumber>
  <TotalCount>1</TotalCount>
  <PageSize>10</PageSize>
  <RequestId>BA55349F-6E36-4E64-964B-419515D1****</RequestId>
  <AutoProvisioningGroupHistories>
    <AutoProvisioningGroupHistory>
      <Status>success</Status>
      <ActivityDetails>
        <ActivityDetail>
          <Detail>New ECS instances i-bp67acfmazb4ph***, i-bp67acfmazb4pi*** created. </Detail>
          <Status>Successful</Status>
        </ActivityDetail>
      </ActivityDetails>
      <LastEventTime>2019-06-17T08:48:00Z</LastEventTime>
      <StartTime>2019-06-17T08:47:52Z</StartTime>
      <TaskId>apg-task-uf66bqtabg10wcf6****</TaskId>
    </AutoProvisioningGroupHistory>
  </AutoProvisioningGroupHistories>
</DescribeAutoProvisioningGroups>

```

JSON format

```

{
  "PageNumber": 1,
  "TotalCount": 1,
  "PageSize": 10,
  "RequestId": "BA55349F-6E36-4E64-964B-419515D1****",
  "AutoProvisioningGroupHistories": {
    "AutoProvisioningGroupHistory": [
      {
        "Status": "success",
        "ActivityDetails": {
          "ActivityDetail": [
            {
              "Detail": "New ECS instances i-bp67acfmazb4ph***, i-bp67acfmazb4pi*** created.",
              "Status": "Successful"
            }
          ]
        }
      }
    ],
    "LastEventTime": "2019-06-17T08:48:00Z",
    "StartTime": "2019-06-17T08:47:52Z",
    "TaskId": "apg-task-uf66bqtabg10wcf6****"
  }
}

```

Error codes

HTTP status code	Error code	Error message	Description
403	Forbidden.RAM	User not authorized to operate on the specified resource, or this API doesn't support RAM.	The error message returned because you are not authorized to manage this resource, or this API operation does not support RAM roles.
400	MissingParamter.RegionId	The regionId should not be null.	The error message returned because the RegionId parameter is not specified.

9. Disks

9.1. CreateDisk

You can call this operation to create a pay-as-you-go or subscription data disk, such as a basic disk, ultra disk, standard SSD, or enhanced SSD (ESSD).

Description

- When you create a disk, resources used for the disk may incur costs. We recommend that you fully understand the ECS billing methods before you create a disk. For more information, see [Pricing overview](#).
- By default, the `DeleteAutoSnapshot` parameter is set to true when a disk is created. This indicates that when the disk is released, snapshots that were automatically created from the disk are deleted together with the disk. You can call the [ModifyDiskAttribute](#) operation to modify the parameter value.
- If you do not configure the performance level when you create an ESSD, the performance level for the ESSD is PL1 by default. You can call the [ModifyDiskSpec](#) operation to modify the performance level of the ESSD.
- By default, the `Portable` parameter of a disk created by calling this operation is set to true, and the billing method of the disk is pay-as-you-go.
- You must specify either the `Size` or `SnapshotId` parameter. The `Size` parameter specifies the size of the disk and the `SnapshotId` parameter specifies the snapshot that is used to create the disk.

Debugging

OpenAPI Explorer automatically calculates the signature value. For your convenience, we recommend that you call this operation in OpenAPI Explorer. OpenAPI Explorer dynamically generates the sample code of the operation for different SDKs.

Request parameters

Parameter	Type	Required	Example	Description
Action	String	Yes	CreateDisk	The operation that you want to perform. Set the value to CreateDisk.
RegionId	String	Yes	cn-hangzhou	The region ID of the disk. You can call the DescribeRegions operation to query the most recent region list.
ZoneId	String	No	cn-hangzhou-g	The ID of the zone in which a pay-as-you-go disk is to be created. • If the <code>InstanceId</code> parameter is not specified, the <code>ZoneId</code> parameter is required. • You cannot specify both the <code>ZoneId</code> and <code>InstanceId</code> parameters.
SnapshotId	String	No	s-bp67acfmxazb4p****	The ID of the snapshot used to create the disk. If this parameter is specified, the <code>Size</code> parameter is ignored, and the size of the created disk is the size of the specified snapshot. The snapshots that were created on or before July 15, 2013 cannot be used to create disks.

Parameter	Type	Required	Example	Description
DiskName	String	No	testDiskName	The name of the disk. The name must be 2 to 128 characters in length and start with a letter. It cannot start with http:// or https://. It can contain letters, digits, colons (:), underscores (_), and hyphens (-). This parameter is empty by default.
Size	Integer	No	2000	The size of the disk. Unit: GiB. The value of this parameter must be greater than or equal to the size of the specified snapshot. Valid values: - Valid values when DiskCategory is set to cloud: 5 to 2000 - Valid values when DiskCategory is set to cloud_efficiency: 20 to 32768 - Valid values when DiskCategory is set to cloud_ssd: 20 to 32768 - Valid values when DiskCategory is set to cloud_essd: 20 to 32768
DiskCategory	String	No	cloud_ssd	The category of the data disk. Valid values: - cloud: basic disk - cloud_efficiency: ultra disk - cloud_ssd: standard SSDs - cloud_essd: ESSDs Default value: cloud.
Description	String	No	testDescription	The description of the disk. The description must be 2 to 256 characters in length and cannot start with http:// or https://. This parameter is empty by default.
Encrypted	Boolean	No	false	Specifies whether to encrypt the disk. Default value: false.
ClientToken	String	No	123e4567-e89b-12d3-a456-426655440000	The client token that is used to ensure the idempotence of the request. You can use the client to generate the value, but you must ensure that it is unique among different requests. The ClientToken value can only contain ASCII characters and cannot exceed 64 characters in length. For more information, see How to ensure idempotence.

Parameter	Type	Required	Example	Description
InstanceId	String	No	i-bp18pnlg1ds9rky4****	The ID of the instance to which the created subscription disk is automatically attached. - After you specify the instance ID, the specified ResourceGroupId, Tag.N.Key, Tag.N.Value, ClientToken, and KMSKeyId parameters are ignored. - You cannot specify both the ZoneId and InstanceId parameters. This parameter is empty by default. This indicates that a pay-as-you-go disk is created and the RegionId and ZoneId parameters determine where the disk resides.
Tag.N.Key	String	No	TestKey	The key of tag N of the disk. Valid values of N: 1 to 20. It cannot be an empty string. It can be up to 128 characters in length and cannot start with acs: or aliyun. It cannot contain http:// or https://.
Tag.N.Value	String	No	TestValue	The value of tag N of the disk. Valid values of N: 1 to 20. It can be an empty string. It can be up to 128 characters in length and cannot start with acs:. It cannot contain http:// and https://.
ResourceGroupId	String	No	rg-bp67acfmazb4p****	The ID of the enterprise resource group to which the disk belongs.
KMSKeyId	String	No	0e478b7a-4262-4802-b8cb-00d3fb40826X	The ID of the KMS key corresponding to the disk.
PerformanceLevel	String	No	PL1	Specifies the performance level of an ESSD when you create the ESSD. Default value: PL1. Valid values: - PL1: A single ESSD delivers up to 50,000 random read/write IOPS. - PL2: A single ESSD delivers up to 100,000 random read/write IOPS. - PL3: A single ESSD delivers up to 1,000,000 random read/write IOPS. For more information about ESSD performance levels, see Enhanced SSDs.
StorageSetId	String	No	ss-bp67acfmazb4p****	The ID of the storage set.
StorageSetPartitionNumber	Integer	No	3	The number of partitions in the storage set.

Response parameters

Parameter	Type	Example	Description
DiskId	String	d-bp131n0q38u3a4zi****	The ID of the disk.

Parameter	Type	Example	Description
RequestId	String	473469C7-AA6F-4DC5-B3DB-A3DC0DE3C83E	The ID of the request.

Examples

Sample requests

```
https://ecs.aliyuncs.com/?Action=CreateDisk
&RegionId=cn-hangzhou
&ZoneId=cn-hangzhou-g
&SnapshotId=s-bp67acfmxazb4p****
&DiskName=testDiskName
&Size=2000
&DiskCategory=cloud_ssd
&Description=testDescription
&Encrypted=false
&ClientToken=123e4567-e89b-12d3-a456-426655440000
&Tag.1.Key=TestKey
&Tag.1.Value=TestValue
&<Common request parameters>
```

Sample success responses

XML format

```
<CreateDiskResponse>
  <RequestId>473469C7-AA6F-4DC5-B3DB-A3DC0DE3C83E</RequestId>
  <DiskId>d-bp131n0q38u3a4zi****</DiskId>
</CreateDiskResponse>
```

JSON format

```
{
  "RequestId": "473469C7-AA6F-4DC5-B3DB-A3DC0DE3C83E",
  "DiskId": "d-bp131n0q38u3a4zi****"
}
```

Error codes

HTTP status code	Error code	Error message	Description
400	InvalidSize.ValueNotSupported	The specified parameter Size is not valid.	The error message returned because the specified Size parameter is invalid.
403	InvalidDataDiskCategory.NotSupported	Specified disk category is not supported.	The error message returned because the specified DiskCategory parameter is not supported.
404	InvalidRegionId.NotFound	The specified RegionId does not exist.	The error message returned because the specified RegionId parameter does not exist.

HTTP status code	Error code	Error message	Description
404	InvalidZoneId.NotFound	The specified zone does not exist.	The error message returned because the specified ZoneId parameter does not exist.
404	InvalidSnapshotId.NotFound	The specified SnapshotId does not exist.	The error message returned because the specified SnapshotId parameter does not exist. Check whether the snapshot ID is correct.
400	InvalidDiskName.Malformed	The specified disk name is wrongly formed.	The error message returned because the specified DiskName parameter is invalid. The name must be 2 to 128 characters in length and can contain letters, digits, periods (.), underscores (_), and hyphens (-). It must start with a letter but cannot start with http:// or https://.
400	InvalidDescription.Malformed	The specified description is wrongly formed.	The error message returned because the specified Description parameter is invalid. The description must be 2 to 256 characters in length and cannot start with http:// or https://.
403	InstanceDiskCategoryLimitExceed	The total size of specified disk category in an instance exceeds.	The error message returned because the total size of the specified disks exceeds the maximum capacity that is allowed for the instance type.
403	InvalidSnapshot.NotReady	The specified snapshot creation is not completed yet.	The error message returned because the specified snapshot has not been created.
403	InvalidSnapshot.TooOld	This operation is forbidden because the specified snapshot is created before 2013-07-15.	The error message returned because the specified source snapshot was created on or before July 15, 2013 and cannot be re-initialized.
403	InvalidSnapshot.TooLarge	The capacity of snapshot exceeds 2000GB.	The error message returned because the size of the specified snapshot exceeds 2,000 GB.
403	OperationDenied	The specified snapshot is not allowed to create disk.	The error message returned because the specified snapshot cannot be used to create disks.
403	QuotaExceed.PortableCloudDisk	The quota of portable cloud disk exceeds.	The error message returned because the maximum number of removable disks has been reached.
400	MissingParameter	The input parameter either "SnapshotId" or "Size" should be specified.	The error message returned because neither the SnapshotId parameter nor the Size parameter is specified.
403	InvalidDiskCategory.ValueUnauthorized	The disk category is not authorized.	The error message returned because you are not authorized to manage the specified disk category.
403	InvalidSnapshotId.NotReady	The specified snapshot has not completed yet.	The error message returned because the specified snapshot has not been created.
403	InvalidSnapshotId.NotDataDiskSnapshot	The specified snapshot is system disk snapshot.	The error message returned because the specified snapshot is a system disk snapshot.

HTTP status code	Error code	Error message	Description
403	InvalidDiskSize.TooSmall	Specified disk size is less than the size of snapshot.	The error message returned because the specified disk size is smaller than that of the snapshot.
403	OperationDenied	The type of the disk does not support the operation.	The error message returned because the specified disk category does not support this operation.
403	InvalidDataDiskCategory.NotSupported	%s	The error message returned because the specified DiskCategory parameter is invalid.
403	InvalidDiskSize.NotSupported	disk size is not supported.	The error message returned because the specified Size parameter is invalid.
400	InvalidDiskCategory.NotSupported	The specified disk category is not support.	The error message returned because the specified DiskCategory parameter is not supported.
400	Account.Arrearage	Your account has an outstanding payment.	The error message returned because your account has overdue payments.
400	InvalidDiskCategory.ValueNotSupported	The specified parameter "DiskCategory" is not valid.	The error message returned because the specified DiskCategory parameter is invalid.
403	InvalidAccountStatus.NotEnoughBalance	Your account does not have enough balance.	The error message returned because your account balance is insufficient. Add funds to your account before you proceed.
403	InvalidAccountStatus.SnapshotServiceUnavailable	Snapshot service has not been opened yet.	The error message returned because the operation is not supported while the snapshot service is not enabled.
400	InvalidDataDiskCategory.ValueNotSupported	%s	The error message returned because the specified DiskCategory parameter is invalid.
400	InvalidParameter.Conflict	%s	The error message returned because the specified parameter is invalid. Check whether the parameter conflicts with another parameter.
400	RegionUnauthorized	%s	The error message returned because you are not authorized to create disks in the specified region.
500	InternalServerError	The request processing has failed due to some unknown error.	The error message returned because an internal error has occurred. Try again later. If the problem persists, submit a ticket.
400	Zone.NotOnSale	%s	The error message returned because the service is temporarily unavailable in this zone.
400	InvalidDataDiskSize.ValueNotSupported	%s	The error message returned because the specified Size parameter is invalid.
403	InvalidPayMethod	The specified pay method is not valid.	The error message returned because the specified payment method is invalid.

HTTP status code	Error code	Error message	Description
400	OperationDenied	The specified Zone is not available or not authorized.	The error message returned because the specified zone is unavailable or you are not authorized to access it.
404	InvalidResourceGroup.NotFound	The ResourceGroup provided does not exist in our records.	The error message returned because the specified resource group does not exist.
403	InvalidDiskCategory.NotSupported	The specified disk category is not supported.	The error message returned because the specified disk category does not support the current operation.
403	InvalidDiskSize.NotSupported	The specified disk size is not supported.	The error message returned because the specified disk size is not supported.
400	InvalidDiskSize.NotSupported	The specified parameter size is not valid.	The error message returned because the specified Size parameter is invalid.
403	UserNotInTheWhiteList	The user is not in disk white list.	The error message returned because you are not in the whitelist to manage the disk. Try again when you are in the whitelist.
400	InvalidDiskSizeOrCategory	The specified disk category or size is invalid.	The error message returned because the specified disk category or size is invalid.
400	InvalidParameter.EncryptedIllegal	%s	The error message returned because the specified parameter is invalid. Check whether the encryption is valid.
400	InvalidParameter.EncryptedNotSupported	%s	The error message returned because the specified parameter is invalid and your encryption operation is not supported.
400	EncryptedOption.Conflict	%s	The error message returned because encrypted disks do not support the specified parameter.
400	InvalidParameter.Encrypted.KmsNotEnabled	The encrypted disk need enable KMS	The error message returned because KMS has not been enabled.
500	InternalServerError	The request processing has failed due to some unknown error, exception or failure.	The error message returned because an internal error has occurred. Try again later. If the problem persists, submit a ticket.
403	QuotaExceed.PostPaidDisk	Living postPaid disks quota exceeded.	The error message returned because the maximum number of pay-as-you-go disks has been reached.
403	InvalidRegion.NotSupport	The specified region does not support byok.	The error message returned because the bring your own key (BYOK) feature is not supported in this region.
403	UserNotInTheWhiteList	The user is not in byok white list.	The error message returned because you are not in the BYOK whitelist. Join in the whitelist and try again.
400	InvalidParameter.EncryptedIllegal	The specified parameter Encrypted must be true when kmsKeyId is not empty.	The error message returned because the encryption feature is not enabled after the KMSKeyId parameter is specified.

HTTP status code	Error code	Error message	Description
404	InvalidParameter.KMSKeyId.NotFound	The specified KMSKeyId does not exist.	The error message returned because the specified KMSKeyId parameter does not exist.
403	InvalidParameter.KMSKeyId.KMSUnauthorized	ECS service have no right to access your KMS.	The error message returned because ECS is not authorized to access your KMS resources.
403	SecurityRisk.3DVerification	We have detected a security risk with your default credit or debit card. Please proceed with verification via the link in your email.	The error message returned because risks are detected in your default credit card or debit card. Use the link in the email for verification.
400	Duplicate.TagKey	The Tag.N.Key contain duplicate key.	The error message returned because a tag with the identical key already exists.
400	InvalidTagKey.Malformed	The specified Tag.n.Key is not valid.	The error message returned because the specified Tag.N.Key parameter is invalid.
400	InvalidTagValue.Malformed	The specified Tag.n.Value is not valid.	The error message returned because the specified Tag.N.Value parameter is invalid.
404	InvalidInstanceId.NotFound	The InstanceId provided does not exist in our records.	The error message returned because the specified InstanceId parameter does not exist. Check whether the instance ID is correct.
403	InvalidStatus.Updating	The instance is upgrading; please try again later.	The error message returned because the specified instance is being upgraded. Try again later.
400	InvalidPerformanceLevel.Malformed	The specified parameter PerformanceLevel is not valid.	The error message returned because the specified PerformanceLevel parameter is invalid.
403	QuotaExceed.Tags	%s	The error message returned because the maximum number of tags has been reached.
404	InvalidInstanceId.NotFound	The specified InstanceId does not exist.	The error message returned because the specified InstanceId parameter does not exist. Check whether the instance ID is correct.

9.2. DeleteDisk

You can call this operation to release a pay-as-you-go data disk. The data disk can be a basic disk, an ultra disk, a standard SSD, or an enhanced SSD (ESSD).

Description

When you call this operation, take note of the following items:

- Manual snapshots of the disk are retained.
- You can call the [ModifyDiskAttribute](#) operation to configure whether to release automatic snapshots together with the disk. We recommend that you delete unnecessary snapshots to ensure enough snapshot quota for automatic snapshot policies.
- The disk must be in the Unattached (Available) state.
- If the specified disk does not exist, the request is ignored.

Debugging

OpenAPI Explorer automatically calculates the signature value. For your convenience, we recommend that you call this operation in OpenAPI Explorer. OpenAPI Explorer dynamically generates the sample code of the operation for different SDKs.

Request parameters

Parameter	Type	Required	Example	Description
Action	String	Yes	DeleteDisk	The operation that you want to perform. Set the value to DeleteDisk.
DiskId	String	Yes	d-bp14k9cxvr5uzy5****	The ID of the disk to be released.

Response parameters

Parameter	Type	Example	Description
RequestId	String	473469C7-AA6F-4DC5-B3DB-A3DC0DE3C83E	The ID of the request.

Examples

Sample requests

```
https://ecs.aliyuncs.com/?Action=DeleteDisk
&DiskId=d-bp14k9cxvr5uzy5****
&<Common request parameters>
```

Sample success responses

XML format

```
<DeleteDiskResponse>
  <RequestId>CEF72CEB-54B6-4AE8-B225-F876FF7BA984</RequestId>
</DeleteDiskResponse>
```

JSON format

```
{
  "RequestId": "CEF72CEB-54B6-4AE8-B225-F876FF7BA984"
}
```

Error codes

HTTP status code	Error code	Error message	Description
403	IncorrectDiskStatus	The current disk status does not support this operation.	The error message returned because the operation is not supported while the disk is in the current state. Ensure that the disk is available and has no overdue payments.
500	InternalServerError	The request processing has failed due to some unknown error.	The error message returned because an internal error has occurred. Try again later. If the problem persists, submit a ticket.

HTTP status code	Error code	Error message	Description
403	DiskNotPortable	The specified disk is not a portable disk.	The error message returned because the specified disk is not removable.
403	DiskTypeViolation	The specified disk is a system disk and cannot support the operation.	The error message returned because the specified disk is a system disk and cannot be detached.
403	DiskCreatingSnapshot	The operation is denied due to a snapshot of the specified disk is not completed yet.	The error message returned because a snapshot of the specified disk is being created.
403	IncorrectDiskStatus.Initializing	The current disk status does not support this operation.	The error message returned because the operation is not supported while the disk is in the current state. Ensure that the disk is available and has no overdue payments.
404	InvalidDiskId.NotFound	The specified disk does not exist.	The error message returned because the specified DiskId parameter does not exist. Check whether the disk ID is correct.
403	DiskStillAttached	The disk is still attached to the disk.	The error message returned because the disk to be released is attached to an instance.
403	UserNotInTheWhiteList	The user is not in disk white list.	The error message returned because you are not in the whitelist to manage the disk. Try again when you are in the whitelist.
400	InvalidRegionId.MalFormed	The specified parameter RegionId is not valid.	The error message returned because the specified RegionId parameter is invalid.

9.3. DescribeDisks

You can call this operation to query one or more Elastic Block Storage (EBS) devices that you created, including cloud disks and local disks.

Description

- You can specify multiple request parameters such as `RegionId`, `ZoneId`, `DiskIds`, and `InstanceId` to be queried. Specified parameters have logical AND relations. Only the specified parameters are used as filter conditions.
- The `DiskIds` value is a JSON array. If `DiskIds` is not specified, it is not used as a filter condition. If `DiskIds` is set to an empty JSON array, it is regarded as a valid filter condition and an empty response is returned.
- You can use the following methods to view return data:
 - Method 1: Use `NextToken` to configure the query token. Set the value of this parameter to the `NextToken` value that is returned in the last call to the `DescribeDisks` operation. Then use `MaxResults` to specify the maximum number of entries to return on each page.
 - Method 2: Use `PageSize` to specify the number of entries to return on each page and then use `PageNumber` to specify the number of the page to return.

You can use only one of the preceding methods. If a large number of entries are returned, we recommend that you use method 1. If `NextToken` is specified, `PageSize` and `PageNumber` do not take effect and `TotalCount` in the response is invalid.

When you call an API operation by using Alibaba Cloud CLI, you must specify request parameter values of different data types in required formats. For more information, see [CLI parameter format](#).

Debugging

OpenAPI Explorer automatically calculates the signature value. For your convenience, we recommend that you call this operation in OpenAPI Explorer. OpenAPI Explorer dynamically generates the sample code of the operation for different SDKs.

Request parameters

Parameter	Type	Required	Example	Description
Action	String	Yes	DescribeDisks	The operation that you want to perform. Set the value to DescribeDisks.
RegionId	String	Yes	cn-hangzhou	The region ID of the disk. You can call the DescribeRegions operation to query the most recent region list.
ZoneId	String	No	cn-hangzhou-g	The zone ID of the disk.
DiskIds	String	No	["d-bp67acfmazb4p****", "d-bp67acfmazb4g****", ... "d-bp67acfmazb4d****"]	The IDs of the disks. The value is a JSON array that consists of up to 100 disk IDs. Separate multiple disk IDs with commas (,).
InstanceId	String	No	i-bp67acfmazb4q****	The ID of the instance to which the disk is attached.
DiskType	String	No	all	The type of the disk. Valid values: - all: system disk and data disk - system: system disk - data: data disk Default value: all
Category	String	No	all	The category of the disk. Valid values: - all: all disk categories - cloud: basic disk - cloud_efficiency: ultra disk - cloud_ssd: standard SSD - cloud_essd: enhanced SSD - local_ssd_pro: I/O-intensive local disk - local_hdd_pro: throughput-intensive local disk - ephemeral: phased-out local disk - ephemeral_ssd: phased-out local SSD Default value: all

Parameter	Type	Required	Example	Description
Status	String	No	All	The status of the disk. For more information, see Cloud disk status table. Valid values: - In_use - Available - Attaching - Detaching - Creating - Relniting - All Default value: All
SnapshotId	String	No	s-bp67acfmazb4p****	The ID of the snapshot used to create the disk.
Portable	Boolean	No	false	Specifies whether the disk is removable. Valid values: - true: The disk is removable. A removable disk can exist independently and can be attached to or detached from an instance within the same zone. - false: The disk is not removable. A disk that is not removable cannot exist independently or be attached to or detached from an instance within the same zone. If the disk is of one of the following categories or types, <code>Portable</code> is set to <code>false</code> and the lifecycle of the disk is the same as that of the instance to which the disk is attached: - Local disk - Local SSD - System disk - Subscription data disk
DeleteWithInstance	Boolean	No	false	Specifies whether the disk is released when its attached instance is released. Valid values: - true: The disk is released when its attached instance is released. - false: The disk is not released but is retained as a pay-as-you-go data disk when its attached instance is released. Default value: false
DeleteAutoSnapshot	Boolean	No	false	Specifies whether the automatic snapshots of the disk are deleted when the disk is released. Default value: false
PageNumber	Integer	No	1	The number of the page to return. Pages start from page 1. Default: 1

Parameter	Type	Required	Example	Description
PageSize	Integer	No	10	The number of entries to return per page. Valid values: 1 to 100 Default value: 10
NextToken	String	No	AAAAAdWBF2****	The query token. Set the value to the <code>NextToken</code> value that is returned in the last call to the <code>DescribeDisks</code> operation. For more information about how to check responses returned by this operation, see the preceding "Description" section.
MaxResults	Integer	No	50	The maximum number of entries to return on each page. Valid values: 1 to 500. Default value: 10
DiskName	String	No	testDiskName	The name of the disk.
AutoSnapshotPolicyId	String	No	sp-m5e2w2jutw8bv31****	The ID of the automatic snapshot policy that is applied to the disk.
EnableAutomatedSnapshotPolicy	Boolean	No	false	Specifies whether to query the disks to which automatic snapshot policies are applied. Default value: false
DiskChargeType	String	No	PostPaid	The billing method of the disk. Valid values: - PrePaid: subscription - PostPaid: pay-as-you-go
LockReason	String	No	recycling	The reason why the disk is locked. Valid values: - financial: The instance is locked due to overdue payments. - security: The instance is locked for security reasons. - recycling: The preemptible instance is locked and pending for release. - dedicatedhostfinancial: The instance is locked due to overdue payments for the dedicated host.
Filter.1.Key	String	No	CreationStartTime	The key of filter 1 used to query resources. Set the value to <code>CreationStartTime</code> .
Filter.2.Key	String	No	CreationEndTime	The key of filter 2 used to query resources. Set the value to <code>CreationEndTime</code> .
Filter.1.Value	String	No	2017-12-05T22:40:00Z	The value of filter 1 used to query resources. The value must be the beginning of the time range in which to query created resources.

Parameter	Type	Required	Example	Description
Filter.2.Value	String	No	2017-12-06T22:40:00Z	The value of filter 2 used to query resources. The value must be the end of the time range in which to query created resources.
Tag.N.value	String	No	null	The value of tag N of the disk.  Note This parameter will be removed in the future. We recommend that you use the Tag.N.Value parameter to ensure future compatibility.
Tag.N.key	String	No	null	The key of tag N of the disk.  Note This parameter will be removed in the future. We recommend that you use the Tag.N.Key parameter to ensure future compatibility.
Tag.N.Key	String	No	TestKey	The key of tag N of the disk. Valid values of N: 1 to 20.
Tag.N.Value	String	No	TestValue	The value of tag N of the disk. Valid values of N: 1 to 20.
ResourceGroupId	String	No	rg-bp67acfmazb4p****	The ID of the resource group to which the disk belongs.
EnableShared	Boolean	No	false	Specifies whether the disk is a Shared Block Storage device.
Encrypted	Boolean	No	false	Specifies whether to query only encrypted disks. Default value: false
AdditionalAttributes.N	RepeatList	No	null	Other attribute values.  Note This parameter will be removed in the future. We recommend that you use other parameters to ensure future compatibility.

Parameter	Type	Required	Example	Description
DryRun	Boolean	No	false	Specifies whether to check the validity of the request without actually making the request. Valid values: • true: The validity of the request is checked but the request is not made. Check items include whether your AccessKey pair is valid, whether RAM users are authorized, and whether the required parameters are specified. If the check fails, the corresponding error message is returned. If the check succeeds, the <code>DryRunOperation</code> error code is returned. • false: The validity of the request is checked. If the check succeeds, a 2XX HTTP status code is returned and the request is made. Default value: false
KMSKeyId	String	No	0e478b7a-4262-4802-b8cb-00d3fb40****	The ID of the KMS key used by the disk.

Response parameters

Parameter	Type	Example	Description
Disks	Array of Disk		Details about the disks.
Disk			
AttachedTime	String	2018-01-01T01:04:22Z	The time when the disk was attached. The time follows the ISO 8601 standard in the yyyy-MM-ddThh:mmZ format. The time is displayed in UTC. This parameter is valid only when the value of <code>Status</code> is <code>Available</code>.
AutoSnapshotPolicyId	String	sp-bp67acfmazb4p****	The ID of the automatic snapshot policy applied to the disk.
BdfId	String	null	This parameter is in invitational preview and not available.
Category	String	cloud_ssd	The category of the disk. Valid values: • cloud: basic disk • cloud_efficiency: ultra disk • cloud_ssd: standard SSD • cloud_essd: enhanced SSD • local_ssd_pro: I/O-intensive local disk • local_hdd_pro: throughput-intensive local disk • ephemeral: phased-out local disk • ephemeral_ssd: phased-out local SSD
CreationTime	String	2018-01-01T01:01:22Z	The time when the disk was created.

Parameter	Type	Example	Description
DeleteAutoSnapshot	Boolean	false	Indicates whether the automatic snapshots of the disk are deleted when the disk is released. Valid values: • true: The automatic snapshots of the disk are deleted when the disk is released. • false: The automatic snapshots of the disk are retained when the disk is released. Snapshots created by calling the CreateSnapshot operation or by using the console are retained permanently and not affected by this parameter setting.
DeleteWithInstance	Boolean	true	Indicates whether the disk is released when its attached instance is released. Valid values: • true: The disk is released when its attached instance is released. • false: The disk is retained when its attached instance is released.
Description	String	testDescription	The description of the disk.
DetachedTime	String	2018-01-08T01:01:22Z	The time when the disk was detached. This parameter is valid only when the value of <code>Status</code> is <code>Available</code>.
Device	String	/dev/xvdb	The device name of the disk on its attached instance, such as <code>/dev/xvdb</code>. This parameter has a value when the value of <code>Status</code> is <code>In_use</code>. Otherwise, the parameter is empty.  Note This parameter will be removed in the future. We recommend that you use other parameters to ensure future compatibility.
DiskChargeType	String	PostPaid	The billing method of the disk. Valid values: • PrePaid: subscription • PostPaid: pay-as-you-go
DiskId	String	d-bp18um4r4f2fve24****	The ID of the disk.
DiskName	String	testDiskName	The name of the disk.
EnableAutoSnapshot	Boolean	false	Indicates whether an automatic snapshot policy was applied to the disk.  Note This parameter will be removed in the future. We recommend that you use other parameters to ensure future compatibility.

Parameter	Type	Example	Description
EnableAutomatedSnapshotPolicy	Boolean	false	Indicates whether an automatic snapshot policy was applied to the disk.
Encrypted	Boolean	false	Indicates whether the disk was encrypted.
ExpiredTime	String	2018-01-10T01:01:22Z	The time when the subscription disk expires.
IOPS	Integer	4000	The number of input/output operations per second (IOPS).
IOPSRead	Integer	2000	The number of I/O reads per second.
IOPSWrite	Integer	2000	The number of I/O writes per second.
ImageId	String	m-bp13aqm171qynt3u***	The ID of the image used to create the instance. This parameter is empty unless the disk was created from an image. The value of this parameter remains unchanged throughout the lifecycle of the disk.
InstanceId	String	i-bp1j4i2jdf3owlheb***	The ID of the instance to which the disk is attached. This parameter has a value only when the value of <code>Status</code> is <code>In_use</code> . Otherwise, the parameter is empty.
KMSKeyId	String	0e478b7a-4262-4802-b8cb-00d3fb408***	The ID of the KMS key used by the disk.
MountInstanceNum	Integer	1	The number of instances to which the Shared Block Storage device is attached.
MountInstances	Array of MountInstance		The attaching information of the disk.
MountInstance			
AttachedTime	String	2017-12-05T2340:00Z	The time when the disk was attached. The time follows the ISO 8601 standard in the yyyy-MM-ddTHH:mm:ssZ format. The time is displayed in UTC.
Device	String	/dev/xvda	The mount point of the disk.
InstanceId	String	i-bp1j4i2jdf3owlhe****	The ID of the instance to which the disk is attached.
OperationLocks	Array of OperationLock		The reasons why the disk was locked.
OperationLock			
LockReason	String	security	The security reason why the disk was locked.

Parameter	Type	Example	Description
PerformanceLevel	String	PL2	The performance level of the enhanced SSD. Valid values: - PL1: A single enhanced SSD can deliver up to 50,000 random read/write IOPS. - PL2: A single enhanced SSD can deliver up to 100,000 random read/write IOPS. - PL3: A single enhanced SSD can deliver up to 1,000,000 random read/write IOPS.
Portable	Boolean	false	Indicates whether the disk is removable.
ProductCode	String	jxsc000204	The product code in Alibaba Cloud Marketplace.
RegionId	String	cn-hangzhou	The region ID of the disk.
ResourceGroupId	String	rg-bp67acfmazb4p****	The ID of the resource group to which the disk belongs.
SerialNumber	String	bp18um4r4f2fve2****	The serial number of the disk.
Size	Integer	2000	The size of the disk. Unit: GiB.
SourceSnapshotId	String	s-bp67acfmazb4p****	The ID of the snapshot used to create the disk. This parameter is empty unless the disk was created from a snapshot. The value of this parameter remains unchanged throughout the lifecycle of the disk.
Status	String	Available	The status of the disk. Valid values: - In_use - Available - Attaching - Detaching - Creating - Relniting
StorageSetId	String	ss-i-bp1j4i2jdf3owlhe****	The ID of the storage set.
StorageSetPartitionNumber	Integer	11	The maximum number of partitions in a storage set.
Tags	Array of Tag		The tags bound to the disk.
Tag			
TagKey	String	TestKey	The tag key of the disk.
TagValue	String	TestValue	The tag value of the disk.

Parameter	Type	Example	Description
Type	String	data	The type of the disk. Valid values: - system: system disk - data: data disk
ZoneId	String	cn-hangzhou-g	The zone ID of the disk.
NextToken	String	AAAAAdDWBf2****	The query token that is returned in this call.
PageNumber	Integer	1	The page number of the returned page.
PageSize	Integer	1	The number of entries returned per page.
RequestId	String	473469C7-AA6F-4DC5-B3DB-A3DC0DE3C83E	The ID of the request.
TotalCount	Integer	76	The total number of entries returned.

Examples

Sample requests

```
https://ecs.aliyuncs.com/?Action=DescribeDisks
&RegionId=cn-hangzhou
&PageNumber=1
&PageSize=1
&<Common request parameters>
```

Sample success responses

XML format

```
<DescribeDisksResponse>
  <PageNumber>1</PageNumber>
  <TotalCount>76</TotalCount>
  <PageSize>1</PageSize>
  <RequestId>C74847CB-9B69-4360-9969-3595F2B6B9C1</RequestId>
  <Disks>
    <Disk>
      <DiskChargeType>PostPaid</DiskChargeType>
      <ImageId>centos_7_06_64_20G_alibase_20190711.vhd</ImageId>
      <Device>/dev/xvda</Device>
      <DetachedTime></DetachedTime>
      <Type>system</Type>
      <InstanceId>i-bp1j4i2jdf3owlhe****</InstanceId>
      <Encrypted>>false</Encrypted>
      <ZoneId>cn-hangzhou-f</ZoneId>
      <EnableAutoSnapshot>true</EnableAutoSnapshot>
      <AttachedTime>2019-11-11T08:35:32Z</AttachedTime>
      <PerformanceLevel>PL2</PerformanceLevel>
      <SerialNumber>bp18um4r4f2fve2****</SerialNumber>
```

```

    <SourceSnapshotId>s-bp67acfmazb4p****</SourceSnapshotId>
    <DeleteAutoSnapshot>>false</DeleteAutoSnapshot>
    <KMSKeyId></KMSKeyId>
    <Size>40</Size>
    <Description></Description>
    <BdfId></BdfId>
    <ProductCode></ProductCode>
    <Portable>>false</Portable>
    <EnableAutomatedSnapshotPolicy>>false</EnableAutomatedSnapshotPolicy>
    <ResourceGroupId></ResourceGroupId>
    <DiskName></DiskName>
    <StorageSetId></StorageSetId>
    <AutoSnapshotPolicyId></AutoSnapshotPolicyId>
    <CreationTime>2019-11-11T08:35:29Z</CreationTime>
    <MountInstances>
  </MountInstances>
    <Status>In_use</Status>
    <Tags>
      <Tag>
        <TagValue>TestValue</TagValue>
        <TagKey>TestKey</TagKey>
      </Tag>
    </Tags>
    <Category>cloud_efficiency</Category>
    <RegionId>cn-hangzhou</RegionId>
    <DeleteWithInstance>>true</DeleteWithInstance>
    <OperationLocks>
  </OperationLocks>
    <ExpiredTime>2999-09-08T16:00Z</ExpiredTime>
    <DiskId>d-bp18um4r4f2fve24****</DiskId>
  </Disk>
</Disks>
</DescribeDisksResponse>

```

JSON format

```

{
  "PageNumber": 1,
  "TotalCount": 76,
  "PageSize": 1,
  "RequestId": "C74847CB-9B69-4360-9969-3595F2B6B9C1",
  "Disks": {
    "Disk": [
      {
        "DiskChargeType": "PostPaid",
        "ImageId": "centos_7_06_64_20G_alibase_20190711.vhd",
        "Device": "/dev/xvda",
        "DetachedTime": "",
        "Type": "system",
        "InstanceId": "i-bp1j4i2jdf3owlhe****",
        "Encrypted": false.
      }
    ]
  }
}

```



```

    "ZoneId": "cn-hangzhou-f",
    "EnableAutoSnapshot": true,
    "AttachedTime": "2019-11-11T08:35:32Z",
    "PerformanceLevel": "PL2",
    "SerialNumber": "bp18um4r4f2fve2****",
    "SourceSnapshotId": "s-bp67acfmxazb4p****",
    "DeleteAutoSnapshot": false,
    "KMSKeyId": "",
    "Size": 40,
    "Description": "",
    "BdfId": "",
    "ProductCode": "",
    "Portable": false,
    "EnableAutomatedSnapshotPolicy": false,
    "ResourceGroupId": "",
    "DiskName": "",
    "StorageSetId": "",
    "AutoSnapshotPolicyId": "",
    "CreationTime": "2019-11-11T08:35:29Z",
    "MountInstances": {
      "MountInstance": []
    },
    "Status": "In_use",
    "Tags": {
      "Tag": [
        {
          "TagValue": "TestValue",
          "TagKey": "TestKey"
        }
      ]
    },
    "Category": "cloud_efficiency",
    "RegionId": "cn-hangzhou",
    "DeleteWithInstance": true,
    "OperationLocks": {
      "OperationLock": []
    },
    "ExpiredTime": "2999-09-08T16:00Z",
    "DiskId": "d-bp18um4r4f2fve24****"
  }
]
}
}

```

Error codes

HTTP status code	Error code	Error message	Description

HTTP status code	Error code	Error message	Description
400	InvalidDiskType.ValueNotSupported	The specified disk type is not supported.	The error message returned because the specified DiskType parameter is invalid.
400	InvalidCategory.ValueNotSupported	The specified disk category is not supported.	The error message returned because the specified Category parameter is invalid.
400	InvalidStatus.ValueNotSupported	The specified disk status is not supported.	The error message returned because the operation is not supported while the disk is in the current state.
403	InvalidDiskIds.Malformed	The amount of specified disk Ids exceeds the limit.	The error message returned because the specified DiskIds parameter is invalid.
404	InvalidDiskChargeType.NotFound	The DiskChargeType does not exist in our records	The error message returned because the specified DiskChargeType parameter does not exist.
404	InvalidLockReason.NotFound	The specified LockReason is not found	The error message returned because the specified LockReason parameter does not exist.
404	InvalidFilterKey.NotFound		The error message returned because the specified start time or end time is invalid.
400	InvalidTag.Mismatch	The specified Tag.n.Key and Tag.n.Value are not match.	The error message returned because the specified Tag.N.Key and Tag.N.Value parameters do not match.
400	InvalidTagCount	The specified tags are beyond the permitted range.	The error message returned because the number of specified tags exceeds the upper limit.
400	InvalidRegion.NotFound	The specified parameter RegionId is not valid.	The error message returned because the specified RegionId parameter is invalid.
500	InternalServerError	The request processing has failed due to some unknown error.	The error message returned because an internal error has occurred. Try again later. If the problem persists, submit a ticket.
400	InvalidZoneId.NotFound	The zoneId provided does not exist in our records.	The error message returned because the specified ZoneId parameter does not exist.
400	MissingParamter.RegionId	The regionId should not be null.	The error message returned because the required RegionId parameter is not specified.
400	InvalidParameter.DiskIds	The specified parameter diskIds is not valid.	The error message returned because the specified DiskIds parameter is invalid.
400	IncompleteParamter	Some fields can not be null in this request.	The error message returned because a required parameter is not specified.
400	InvalidParamter	Some parameters are invalid in this request.	The error message returned because the request contains invalid parameters.

HTTP status code	Error code	Error message	Description
400	InvalidSnapshot.NotFound	The specified parameter SnapshotId is not valid.	The error message returned because the specified SnapshotId parameter is invalid.
403	UserNotInTheWhiteList	The user is not in volume white list.	The error message returned because you are not authorized to manage Shared Block Storage devices. Submit a ticket to apply for the authorization.
404	InvalidDiskIds.ValueNotSupported	The specified parameter "DiskIds" is not supported.	The error message returned because the specified DiskIds parameter is invalid.

9.4. AttachDisk

You can call this operation to attach a pay-as-you-go data disk or a system disk to an instance. The instance and the disk must be in the same zone.

Description

When you call this operation, take note of the following items:

- The disk must be in the **Unattached (Available)** state.
- When the disk is attached as a data disk:
 - The target instance must be in the **Running (Running)** or **Stopped (Stopped)** state.
 - If the disk is purchased separately, the billing method of the disk must be pay-as-you-go.
 - If the disk is a system disk detached from an instance, the billing method is not restricted.
- When the disk is attached as a system disk:
 - The target instance must be the original instance from which the system disk is detached.
 - The instance must be in the **Stopped (Stopped)** state.
 - The logon credentials must be configured.
- When you query the instance information and the responses contain `{"OperationLocks": {"LockReason": "security"}}`, the instance is locked for security reasons and all operations cannot take effect on the instance.

Debugging

OpenAPI Explorer automatically calculates the signature value. For your convenience, we recommend that you call this operation in OpenAPI Explorer. OpenAPI Explorer dynamically generates the sample code of the operation for different SDKs.

Request parameters

Parameter	Type	Required	Example	Description
Action	String	Yes	AttachDisk	The operation that you want to perform. Set the value to AttachDisk.

Parameter	Type	Required	Example	Description
DiskId	String	Yes	d-bp1j4l5axzdy6ftk****	The ID of the disk to be attached. The disk specified by the <code>DiskId</code> parameter and the instance specified by the <code>InstanceId</code> parameter must be in the same zone.  Note For more information about restrictions on attaching a data disk and a system disk, see the "Description" section.
InstanceId	String	Yes	i-bp1dq5lozx5f4pmd***	The ID of the target instance.
Device	String	No	testDeviceName	The name of the disk.  Note This parameter will be removed in the future. We recommend that you use other parameters to ensure future compatibility.
DeleteWithInstance	Boolean	No	false	Specifies whether to release the disk together with the instance. <code>true</code>: The disk is released together with the instance. <code>false</code>: The disk is not released together with the instance. It is retained as a pay-as-you-go data disk. Default value: <code>false</code>.  Note For an instance that is under security control and the value of <code>OperationLocks</code> is <code>"LockReason": "security"</code>, even if <code>DeleteWithInstance</code> of attached disks is set to <code>false</code>, the <code>DeleteWithInstance</code> parameter is ignored and disks are released together with the instance.
Bootable	Boolean	No	false	Specifies whether to attach the disk as a system disk. Default value: <code>false</code>.  Note If the <code>Bootable</code> parameter is set to <code>true</code>, the instance must be in the No System Disk state.

Parameter	Type	Required	Example	Description
Password	String	No	EcsV587!	The password set when you attach the system disk. The password is applicable only to the administrator and root users. The password must be 8 to 30 characters in length. It must contain at least three of the following character types: uppercase letters, lowercase letters, digits, and special characters. Special characters include <pre>() ` ~ ! @ # \$ % ^ & * - _ + = { } [] ; ' < > , . ? /</pre> For Windows instances, the password cannot start with a forward slash (/).  Note If the Password parameter is specified, we recommend that you send requests over HTTPS to secure your password.
KeyPairName	String	No	KeyPairTestName	The name of the SSH key pair that you bind to the Linux instance when you attach the system disk. - Windows instances do not allow login on by using SSH key pairs. The Password parameter takes effect even if the KeyPairName parameter is specified. - Linux instances do not allow login by password, and the KeyPairName value is used instead.

Response parameters

Parameter	Type	Example	Description
RequestId	String	473469C7-AA6F-4DC5-B3DB-A3DC0DE3C83E	The ID of the request.

Examples

Sample requests

```
https://ecs.aliyuncs.com/?Action=AttachDisk
&DiskId=d-bp1j4l5axzdy6ftk****
&InstanceId=i-bp1dq5lozx5f4pmd****
&DeleteWithInstance=false
&<Common request parameters>
```

Sample success responses

XML format

```
<AttachDiskResponse>
  <RequestId>473469C7-AA6F-4DC5-B3DB-A3DC0DE3C83E</RequestId>
</AttachDiskResponse>
```

JSON format

```
{
  "RequestId": "473469C7-AA6F-4DC5-B3DB-A3DC0DE3C83E"
}
```

Error codes

HTTP status code	Error code	Error message	Description
404	InvalidInstanceId.NotFound	The specified InstanceId does not exist.	The error message returned because the specified InstanceId parameter does not exist. Check whether the instance ID is correct.
404	InvalidDiskId.NotFound	The specified disk does not exist.	The error message returned because the specified DiskId parameter does not exist. Check whether the disk ID is correct.
400	InvalidDevice.Malformed	The specified device is not valid.	The error message returned because the specified Device parameter does not exist.
403	InstanceDiskLimitExceeded	The amount of the disk on instance in question reach its limits.	The error message returned because the maximum number of disks that can be attached to the specified instance has been reached.
403	InvalidDevice.InUse	The specified device has been occupied.	The error message returned because the specified device already has a disk attached.
403	IncorrectDiskStatus	The operation is not supported in this status.	The error message returned because the operation is not supported while the disk is in the current state. Ensure that the disk is available and has no overdue payments.
403	DiskNotPortable	The specified disk is not a portable disk.	The error message returned because the specified disk is not removable.
403	InstanceLockedForSecurity	The instance is locked due to security.	The error message returned because the operation is not supported while the resource is locked for security reasons.
403	ResourcesNotInSameZone	The specified instance and disk are not in the same zone.	The error message returned because the specified instance and disk are not in the same zone.
403	InstanceExpiredOrInArrears	The specified operation is denied as your prepay instance is expired (prepay mode) or in arrears (afterpay mode).	The error message returned because the subscription instance has expired. Renew the instance first.
403	DiskInArrears	The specified operation is denied as your disk owing fee.	The error message returned because the specified disk has an overdue payment.

HTTP status code	Error code	Error message	Description
400	IncorrectInstanceStatus	The current status of the resource does not support this operation.	The error message returned because the operation is not supported while the instance is in the current state.
403	DiskError	IncorrectDiskStatus.	The error message returned because the specified disk status is invalid.
500	InternalError	The request processing has failed due to some unknown error.	The error message returned because an internal error has occurred. Try again later. If the problem persists, submit a ticket.
400	InvalidParameter	The input parameter is mandatory for processing this request is empty.	The error message returned because a required parameter is not specified.
403	DiskId.ValueNotSupported	The specified parameter diskid is not supported.	The error message returned because the category of the specified Block Storage device does not support this operation.
403	DiskId.StatusNotSupported	The specified disk status is not supported.	The error message returned because this operation is not supported while the disk is in the current state.
404	InvalidDisk.InUse	The specified disk has been occupied.	The error message returned because the specified disk is in use.
404	DiskAttachedNumberExceeded	The attaching times of the specified disk exceeded.	The error message returned because the maximum number of times that the disk can be attached has been reached.
403	UserNotInTheWhiteList	The user is not in disk white list.	The error message returned because you are not in the whitelist to manage the disk. Try again when you are in the whitelist.
400	InvalidRegionId.Malformed	The specified RegionId is not valid	The error message returned because the specified RegionId parameter is invalid.
400	InvalidOperation.InstanceTypeNotSupported	The instance type of the specified instance does not support hot attach disk.	The error message returned because the instance to which the disk is attached does not support the hot swapping of disks.
400	DiskCategory.OperationNotSupported	The operation is not supported to the specified disk due to its disk category	The error message returned because the specified disk category does not support the operation.
400	InvalidOperation.InstanceTypeNotSupported	The specified disk which has kms key should only attach to ioOptimized instance.	The error message returned because the specified instance is not supported. You can set KMS keys only for I/O optimized instances.
403	InvalidParameter.KMSKeyId.KMSUnauthorized	ECS service have no right to access your KMS.	The error message returned because ECS is not authorized to access your KMS resources.
500	InternalError	The request processing has failed due to some unknown error, exception or failure.	The error message returned because an internal error has occurred. Try again later. If the problem persists, submit a ticket.

HTTP status code	Error code	Error message	Description
400	InvalidParameter.AllEmpty	%s	The error message returned because you did not specify the required parameters.

9.5. DetachDisk

You can call this operation to detach a pay-as-you-go data disk or a system disk from an ECS instance.

Description

When you call this operation, note that:

- The disk must have been attached to the ECS instance and be in the In Use state.
- If you want to detach a data disk from an ECS instance, the instance must be in the **Running** or **Stopped** state.
- If you want to detach a system disk from an ECS instance, the instance must be in the **Stopped** state.
- If the attached instance is under security control and its `OperationLocks` parameter is set to `"LockReason": "security"`, you cannot start the instance.
- DetachDisk is an asynchronous operation. It takes about one minute to complete the detachment after the DetachDisk operation is called.

Debugging

OpenAPI Explorer automatically calculates the signature value. For your convenience, we recommend that you call this operation in OpenAPI Explorer. OpenAPI Explorer dynamically generates the sample code of the operation for different SDKs.

Request parameters

Parameter	Type	Required	Example	Description
DiskId	String	Yes	d-bp67acfmazb4ph***	The ID of the disk to be detached.
InstanceId	String	Yes	i-bp67acfmazb4ph***	The ID of the ECS instance from which the disk is to be detached.
Action	String	Yes	DetachDisk	The operation that you want to perform. Set the value to DetachDisk.
DeleteWithInstance	Boolean	No	false	Specifies the automatic release attribute of a system disk. That is, whether the system disk is released together with the ECS instance. Valid values: • true: The system disk is to be released together with the instance. • false: The system disk is not to be released together with the instance. The system disk is changed into a pay-as-you-go data disk and is retained. Default value: true.  Note If a data disk is to be detached from an instance, the default value is <code>false</code>.

Response parameters

Parameter	Type	Example	Description
RequestId	String	473469C7-AA6F-4DC5-B3DB-A3DC0DE3C83E	The ID of the request.

Examples

Sample requests

```
https://ecs.aliyuncs.com/?Action=DetachDisk
&DiskId=d-bp67acfmazb4ph***
&InstanceId=i-bp67acfmazb4ph***
&<Common request parameters>
```

Sample success responses

XML format

```
<DetachDiskResponse>
  <RequestId>473469C7-AA6F-4DC5-B3DB-A3DC0DE3C83E</RequestId>
</DetachDiskResponse>
```

JSON format

```
{
  "RequestId": "473469C7-AA6F-4DC5-B3DB-A3DC0DE3C83E"
}
```

Error codes

HTTP status code	Error code	Error message	Description
404	InvalidInstanceId.NotFound	The specified InstanceId does not exist.	The error message returned because the specified value of the InstanceId parameter does not exist.
404	InvalidDiskId.NotFound	The specified disk does not exist.	The error message returned because the specified value of the DiskId parameter does not exist.
403	IncorrectDiskStatus	The current disk status does not support this operation.	The error message returned because the operation is not supported while the disk is in the current state. Ensure that the disk is available and has no overdue payments.
403	DiskNotPortable	The specified disk is not a portable disk.	The error message returned because the specified disk is not detachable when the Portable parameter is set to false.
403	InstanceLockedForSecurity	The instance is locked due to security.	The error message returned because the operation is not supported while the resource is locked for security reasons.

HTTP status code	Error code	Error message	Description
403	DependencyViolation	The specified disk has not been attached on the specified instance.	The error message returned because the operation is not supported while the resource has other dependencies. For example, the specified disk is not attached to the specified instance or the specified security group cannot be deleted while it contains instances.
403	DiskTypeViolation	The specified disk is a system disk and cannot support the operation.	The error message returned because the specified disk is a system disk and cannot be detached from its associated instance.
403	IncorrectInstanceState	The current status of the resource does not support this operation.	The error message returned because the operation is not supported while the instance is in the current state.
500	InternalServerError	The request processing has failed due to some unknown error.	The error message returned because an internal error has occurred. Try again later. If the problem persists, submit a ticket.
400	InvalidParameter	The input parameter is mandatory for processing this request is empty.	The error message returned because the required parameter is not specified.
403	UserNotInTheWhiteList	The user is not in disk white list.	The error message returned because you are not authorized to use the specified disk.
400	InvalidRegionId.MalFormed	The specified RegionId is not valid	The error message returned because the specified RegionId parameter is invalid.
404	InvalidDisk.AlreadyDetached	The specified disk has been detached.	The error message returned because the specified disk has been detached from the instance.
400	InvalidOperation.InstanceTypeNotSupport	The instance type of the specified instance does not support hot detach disk.	The error message returned because the instance to which the disk is attached does not support the hot swapping of disks.
500	InternalServerError	The request processing has failed due to some unknown error, exception or failure.	The error message returned because an unknown error has occurred.

9.6. ModifyDiskChargeType

You can call this operation to change the billing method for one or up to 16 disks attached to a single ECS instance.

Description

When you call this operation, take note of the following items:

- You can change the billing method from subscription to pay-as-you-go for subscription disks that are attached to a subscription instance.
- You can change the billing method from pay-as-you-go to subscription for pay-as-you-go data disks that are attached to a subscription or pay-as-you-go instance.
- The instance cannot be in the Stopped state due to overdue payments.
- You can change the billing method for each disk three times at most. A maximum of three refunds can be made for price differences for a single instance.
- The price difference is refunded to the payment account you used. Coupons that have been redeemed are not

refundable.

- You cannot change the billing method of a disk again within five minutes after the billing method is changed.

Debugging

OpenAPI Explorer automatically calculates the signature value. For your convenience, we recommend that you call this operation in OpenAPI Explorer. OpenAPI Explorer dynamically generates the sample code of the operation for different SDKs.

Request parameters

Parameter	Type	Required	Example	Description
Action	String	Yes	ModifyDiskChargeType	The operation that you want to perform. Set the value to ModifyDiskChargeType.
DiskIds	String	Yes	["d-bp67acfmazb4ph****", "d-bp67acfmazb4pi****", ... "d-bp67acfmazb4pj****"]	The list of disk IDs. The value is a JSON array that consists of up to 16 disk IDs. Separate multiple disk IDs with commas (,).
InstanceId	String	Yes	i-bp1i778bq705cvx1****	The ID of the instance to which the disk is attached.
RegionId	String	Yes	cn-hangzhou	The region ID of the instance. You can call the DescribeRegions operation to query the most recent region list.
AutoPay	Boolean	No	true	Specifies whether to enable automatic payment. Default value: true. Valid values: • true: Automatic payment is enabled. Make sure that you have sufficient balance in your account. Otherwise, your order becomes invalid and must be canceled. • false: An order is generated but no payment is made. If your account balance is insufficient, you can set the AutoPay parameter to false to generate an unpaid order. Then, you can log on to the ECS console to pay for the order.
ClientToken	String	No	123e4567-e89b-12d3-a456-426655440000	The client token that is used to ensure the idempotence of the request. You can use the client to generate the value, but you must make sure that it is unique among different requests. The ClientToken value must contain only ASCII characters and cannot exceed 64 characters in length. For more information, see How to ensure idempotence .
DiskChargeType	String	No	PostPaid	The new billing method of the disk. Default value: PrePaid. Valid values: • PrePaid: changes the billing method from pay-as-you-go to subscription. • PostPaid: changes the billing method from subscription to pay-as-you-go.

Response parameters

Parameter	Type	Example	Description
OrderId	String	1234567890	The ID of the generated order.
RequestId	String	473469C7-AA6F-4DC5-B3DB-A3DC0DE3C83E	The ID of the request.

Examples

Sample requests

```
https://ecs.aliyuncs.com/?Action=ModifyDiskChargeType
&DiskIds=["d-bp67acfmazb4ph****", "d-bp67acfmazb4pi****", ... "d-bp67acfmazb4pj****"]
&InstanceId=i-bp1i778bq705cvx1****
&RegionId=cn-hangzhou
&AutoPay=true
&ClientToken=123e4567-e89b-12d3-a456-426655440000
&DiskChargeType=PostPaid
&<Common request parameters>
```

Sample success responses

XML format

```
<ModifyDiskChargeType>
  <RequestId>04F0F334-1335-436C-A1D7-6C044FE73368</RequestId>
  <Order>1234567890</Order>
</ModifyDiskChargeType>
```

JSON format

```
{
  "RequestId": "04F0F334-1335-436C-A1D7-6C044FE73368",
  "Order": "1234567890"
}
```

Error codes

HTTP status code	Error code	Error message	Description
404	InvalidRegionId.NotFound	The RegionId provided does not exist.	The error message returned because the specified RegionId parameter does not exist. Check whether the region ID is correct.
400	InvalidInstanceType.ValueUnauthorized	The specified InstanceType is not authorized.	The error message returned because you are not authorized to use the specified instance type.
400	InvalidInstanceType.ValueNotSupported	The specified InstanceType is not supported.	The error message returned because the specified instance type is not supported. Try another instance type.
400	MissingParameter.RegionId	RegionId should not be null.	The error message returned because the required RegionId parameter is not specified.

HTTP status code	Error code	Error message	Description
400	MissingParameter.InstanceIdNotSupported	InstanceId should not be null.	The error message returned because the required InstanceId parameter is not specified.
400	ChargeTypeViolation	The operation is not permitted due to charge type of the instance.	The error message returned because the operation is not supported while the instance uses the current billing method.
400	InvalidInstanceId.Released	The specified Instance is not exist.	The error message returned because the specified InstanceId parameter does not exist. Check whether the instance ID is correct.
400	InvalidInstance.PurchaseNotFound	The specified Instance has no purchase.	The error message returned because the specified instance cannot be purchased.
400	InvalidInstance.UnPaidOrder	The specified Instance has unpaid order.	The error message returned because the specified instance has outstanding orders. You must pay for the orders before you proceed.
400	InvalidClientToken.ValueNotSupported	The ClientToken provided is invalid.	The error message returned because the specified ClientToken parameter is invalid.
400	Account.Arrearage	Your account has been in arrears.	The error message returned because your account balance is insufficient. Add funds to your account and try again.
400	Idempotence.SignatureMismatch	There is a idempotence signature mismatch between this and last request.	The error message returned because the ClientToken value is the same in the current and last requests but the other parameters in these requests do not match.
400	InvalidInstanceType.ValueUnauthorized	The specified InstanceType is not Supported.	The error message returned because you are not authorized to use the specified instance type.
400	OrderCreationFailed	Create Order failed, please check your parameters and try it later.	The error message returned because the order failed to be created. Check your parameter settings and try again.
400	Throttling	Request was denied due to request throttling, please try again after 5 minutes.	The error message returned because your request is denied due to throttling. Try again five minutes later.
403	Forbidden	%s	The error message returned because you are not authorized to use the specified resource.
404	PaymentMethodNotFound	No billing method has been registered on the account.	The error message returned because you have not selected a payment method. Select a payment method and try again.
404	InvalidRamRole.NotFound	The specified parameter "RAMRoleName" does not exist.	The error message returned because the specified RAM role does not exist.

HTTP status code	Error code	Error message	Description
400	InstanceDowngrade.QuotaExceed	Quota of instance downgrade is exceed.	The error message returned because the maximum number of configuration downgrades allowed for the instance has reached.
404	InvalidDiskIds.NotFound	Some of the specified data disks do not exist.	The error message returned because some data disks specified by the DiskIds parameter do not exist.
404	InvalidDiskIds.NotPortable	The specified DiskId is not portable.	The error message returned because the specified disk is not removable.
500	InternalServerError	The request processing has failed due to some unknown error.	The error message returned because an internal error has occurred. Try again later. If the problem persists, submit a ticket.
403	InvalidAccountStatus.NotEnoughBalance	Your account does not have enough balance.	The error message returned because your account balance is insufficient. Add funds to your account and try again.
403	InvalidInstanceChargeType.NotFound	The chargeType of the instance does not support this operation.	The error message returned because instances that use the specified billing method do not support the operation.
404	InvalidDataDiskSize.ValueNotSupported	The specified parameter "Size" is not supported.	The error message returned because the specified DataDiskSize parameter is not supported.
404	InvalidAction.NotSupported	The specified action is not supported.	The error message returned because the specified Action parameter is not supported.
404	InvalidInstanceStatus.NotSupported	The status of the specified instance is invalid.	The error message returned because the operation is not supported while the instance is in the current state.
404	InvalidInstanceId.NOT_FOUND	The specified instance is not exist.	The error message returned because the specified InstanceId parameter does not exist.
400	InvalidInstanceId.NotFound	The specified InstanceId does not exist.	The error message returned because the specified InstanceId parameter does not exist. Check whether the instance ID is correct.
400	LastOrderProcessing	The previous order is still processing, please try again later.	The error message returned because the previous order is being processed. Try again later.

9.7. ModifyDiskAttribute

You can call this operation to modify the attributes of one or more Elastic Block Storage devices, including their names, descriptions, and whether they are released along with their attached instances.

Description

- If you set `DeleteWithInstance` to false and the instance to which the disk is attached is locked for security reasons (the `OperationLocks` parameter is set to `"LockReason": "security"`), the `DeleteWithInstance` parameter will be ignored and the disk will be released with the instance.
- You can call the `DiskIds.N` operation to modify the attributes of multiple Elastic Block Storage devices at a time, including their names, descriptions, and whether they are released along with their attached instances.

Debugging

OpenAPI Explorer automatically calculates the signature value. For your convenience, we recommend that you call this operation in OpenAPI Explorer. OpenAPI Explorer dynamically generates the sample code of the operation for different SDKs.

Request parameters

Parameter	Type	Required	Example	Description
Action	String	Yes	ModifyDiskAttribute	The operation that you want to perform. Set the value to ModifyDiskAttribute.
DiskId	String	No	d-bp1famypsna20bv*** *	The ID of the disk to be modified.  Note You can specify <code>DiskId</code> or <code>DiskIds.N</code> but you cannot specify both of them.
DiskIds.N	RepeatList	No	d-bp1famypsna20bv*** *	The IDs of disk N to be modified. Valid values of N: 0 to 100.  Note You can specify <code>DiskId</code> or <code>DiskIds.N</code> but you cannot specify both of them.
DiskName	String	No	MyDiskName	The name of the disk. The name must be 2 to 128 characters in length, and can contain letters, digits, colons (:), underscores (_), and hyphens (-). It must start with a letter and cannot start with http:// or https://.
Description	String	No	TestDescription	The description of the disk. The description must be 2 to 256 characters in length and cannot start with http:// or https://.
DeleteWithInstance	Boolean	No	false	Specifies whether the disk is released with the instance. This parameter is empty by default, which indicates that the current value remains unchanged. An error will be returned if you set this parameter to false in the following cases: - When Category is set to ephemeral. - When Category is set to cloud and Portable is set to false.
DeleteAutoSnapshot	Boolean	No	false	Specifies whether automatic snapshots are deleted when the disk is released. This parameter is empty by default, which indicates that the current value remains unchanged.
EnableAutoSnapshot	Boolean	No	true	Specifies whether to apply an existing automatic snapshot policy to the disk. This parameter is empty by default, which indicates that the current value remains unchanged.

Response parameters

Parameter	Type	Example	Description
RequestId	String	473469C7-AA6F-4DC5-B3DB-A3DC0DE3C83E	The ID of the request.

Examples

Sample requests

```
https://ecs.aliyuncs.com/?Action=ModifyDiskAttribute
&DiskId=d-bp1famypsna20bv****
&DiskName=MyDiskName
&<Common request parameters>
```

Sample success responses

XML format

```
<ModifyDiskAttributeResponse>
  <RequestId>473469C7-AA6F-4DC5-B3DB-A3DC0DE3C83E</RequestId>
</ModifyDiskAttributeResponse>
```

JSON format

```
{
  "RequestId": "473469C7-AA6F-4DC5-B3DB-A3DC0DE3C83E"
}
```

Error codes

HTTP status code	Error code	Error message	Description
404	InvalidDiskId.NotFound	The specified disk does not exist.	The error message returned because the specified disk ID does not exist. Check whether the disk ID is correct.
400	InvalidDiskName.Malformed	The specified disk name is wrongly formed.	The error message returned because the specified DiskName parameter is invalid. The name must be 2 to 128 characters in length and can contain letters, digits, periods (.), underscores (_), and hyphens (-). It must start with a letter and cannot start with http:// or https://.
404	InvalidDescription.Malformed	The specified description is wrongly formed.	The error message returned because the specified description is invalid. The description must be 2 to 256 characters in length and cannot start with http:// or https://.
400	NoAttributeToModify	No attribute to be modified in this request.	The error message returned because no attributes of the specified snapshot are modified.

HTTP status code	Error code	Error message	Description
403	QuotaExceed.Snapshot	The snapshot quota exceeds.	The error message returned because the maximum number of snapshots has been reached. To create new snapshots, delete unnecessary snapshots without affecting your business.
403	DiskNotPortable	The specified disk is not a portable disk.	The error message returned because the specified disk is not removable.
403	IncorrectDiskStatus	The operation is not supported in this status.	The error message returned because the operation is not supported while the disk is in the current state. Make sure that the disk is available and you have no overdue payment for it.
400	IncompleteParamter	Some fields can not be null in this request.	The error message returned because the required parameters are not specified.
403	UserNotInTheWhiteList	The user is not in disk white list.	The error message returned because you are not in the whitelist to manage the disk. Try again when you are in the whitelist.
400	InvalidRegionId.MalFormed	The specified RegionId is not valid	The error message returned because the specified RegionId parameter is invalid.
404	InvalidInstanceId.NotFound	Specified attached instance does not exist.	The error message returned because the specified InstanceId parameter does not exist. Check whether the instance ID is correct.

9.8. ReplaceSystemDisk

You can call this operation to replace the system disk or operating system of an ECS instance. After the replacement is complete, the ID of the system disk is changed and the original disk is released.

Description

When you call this operation, take note of the following items:

- You cannot change the category of the system disk.
- You cannot change the billing method of the system disk.
- The instance must be in the Stopped (Stopped) state.

 **Note** For VPC-type instances only: You must disable the No Fees for Stopped Instances (VPC-Connected) feature when you stop an instance. This prevents the instance from failing to be restarted due to insufficient ECS resources after the system disk is replaced. For more information, see [StopInstance](#).

- Make sure that the `OperationLocks` parameter of the instance is not set to `"LockReason": "security"`. For more information, see [API behavior when an instance is locked for security reasons](#).
- You cannot have overdue payments for the instance to which the system disk is attached.
- You can configure the `SystemDisk.Size` parameter to re-specify the capacity of the system disk.

Debugging

OpenAPI Explorer automatically calculates the signature value. For your convenience, we recommend that you call this operation in OpenAPI Explorer. OpenAPI Explorer dynamically generates the sample code of the operation for different SDKs.

Request parameters

Parameter	Type	Required	Example	Description
Action	String	Yes	ReplaceSystemDisk	The operation that you want to perform. Set the value to ReplaceSystemDisk.
InstanceId	String	Yes	i-m-bp67acfmazb4ph****	The ID of the instance.
ImageId	String	No	m-bp67acfmazb4ph****	The ID of the image to be used to replace the system disk.
SystemDisk.Size	Integer	No	80	The capacity of the new system disk. Unit: GiB. Valid values: Max{20, the size of the image specified by ImageId} to 500. Default value: Max{40, the size of the specified image specified by ImageId}  Note You will be charged for the capacity that exceeds Max{20, the capacity of the original system disk} .
ClientToken	String	No	123e4567-e89b-12d3-a456-426655440000	The client token that is used to ensure the idempotence of the request. You can use the client to generate the value, but you must ensure that it is unique among different requests. The ClientToken value can only contain ASCII characters and cannot exceed 64 characters in length. For more information, see How to ensure idempotence.
UseAdditionalService	Boolean	No	true	Specifies whether to use the virtual machine system configuration provided by Alibaba Cloud (Windows: NTP and KMS. Linux: NTP and YUM).  Note This parameter takes effect only when you attach a system disk whose device name is /dev/xvda.

Parameter	Type	Required	Example	Description
Password	String	No	EcsV587!	Specifies whether to reset the password for the instance. The password must be 8 to 30 characters in length and contain at least three of the following character types: uppercase letters, lowercase letters, digits, and special characters. Special characters include: <pre>() ` ~ ! @ # \$ % ^ & * _ + = { } [] ; ' < > , . ? /</pre> For Windows instances, the password cannot start with a forward slash (/). The default value is the original password. Note If the Password parameter is specified, we recommend that you send requests over HTTPS to keep your password confidential.
PasswordInherit	Boolean	No	false	Specifies whether to use the password preset in the image. Default value: false Note If the PasswordInherit parameter is set to true, you must leave the Password parameter empty and make sure that the selected image has a password preset.
KeyPairName	String	No	testKeyPairName	The name of the key pair. Note This parameter is applicable only to Linux instances. You can bind an SSH key pair to the instance as a logon credential. However, the password logon method will be disabled after you bind the SSH key pair.
Platform	String	No	CentOS	The release version of the operating system. Valid values: - CentOS - Ubuntu
Architecture	String	No	i386	The system architecture. Valid values: - i386 - x86_64

Parameter	Type	Required	Example	Description
SecurityEnhancementStrategy	String	No	Active	Specifies whether to use Security Center for free after you replace the system disk. Valid values: - Active: Security Center is used for free after the system disk is replaced. This value is applicable only to public images. - Deactive: Security Center is not used for free after the system disk is replaced. This value is applicable to all images. Default value: Deactive

Response parameters

Parameter	Type	Example	Description
DiskId	String	d-bp67acfmxazb4ph****	The ID of the new system disk.
RequestId	String	473469C7-AA6F-4DC5-B3DB-A3DC0DE3C83E	The ID of the request.

Examples

Sample requests

```
https://ecs.aliyuncs.com/?Action=ReplaceSystemDisk
&InstanceId=i-bp67acfmxazb4ph****
&ImageId=m-bp67acfmxazb4ph****
&SystemDisk.Size=80
&ClientToken=123e4567-e89b-12d3-a456-426655440000
&PasswordInherit=false
&KeyPairName=testKeyPairName
&SecurityEnhancementStrategy=Active
&<Common request parameters>
```

Sample success responses

XML format

```
<ReplaceSystemDiskResponse>
  <DiskId>d-bp67acfmxazb4ph****</DiskId>
  <RequestId>F3CD6886-D8D0-4FEE-B93E-1B73239673DE</RequestId>
</ReplaceSystemDiskResponse>
```

JSON format

```
{
  "RequestId": "337568C5-64F3-4B76-8CDD-D3D8C57B5B8C",
  "DiskId": "d-bp67acfmxazb4ph****"
}
```

Error codes

HTTP status code	Error code	Error message	Description
404	InvalidInstanceId.NotFound	The specified InstanceId does not exist.	The error message returned because the specified instance does not exist. Check whether the instance ID is correct.
400	InvalidSystemDiskSize.ValueNotSupported	The specified parameter SystemDisk.Size is invalid.	The error message returned because the specified SystemDisk.Size parameter is invalid.
404	InvalidInstanceId.NotFound	The specified instance does not exist.	The error message returned because the specified instance does not exist. Check whether the instance ID is correct.
403	InvalidSystemDiskStatus.IsTransferring	The current status of the resource does not support this operation, system disk is transferring.	The error message returned because the operation is not supported while the resource is in the current state. Try again after the system disk stops transmitting data.
403	IncorrectDiskStatus	The current disk status does not support this operation.	The error message returned because the operation is not supported while the disk is in the current state. Make sure that the disk is available and you have no overdue payments.
404	InvalidImageId.NotFound	The specified ImageId does not exist.	The error message returned because the specified image does not exist in this account. Check whether the image ID is correct.
403	IncorrectInstanceStatus	The current status of the resource does not support this operation.	The error message returned because the operation is not supported while the resource is in the current state.
403	InstanceLockedForSecurity	The instance is locked due to security.	The error message returned because the operation is not supported while the instance is locked for security reasons.
403	ImageNotSubscribed	The specified image has not been subscribed.	The error message returned because you have not subscribed to the specified Alibaba Cloud Marketplace image.
403	ImageRemovedInMarket	The specified market image is not available, Or the specified user defined image includes product code because it is based on an image subscribed from marketplace, and that image in marketplace including exact the same product code has been removed.	The error message returned because the specified Alibaba Cloud Marketplace image is unavailable, or the specified custom image contains the product code of the Alibaba Cloud Marketplace image from which the custom image is derived and the Alibaba Cloud Marketplace image has been removed from Alibaba Cloud Marketplace.
500	OperationDenied	Internal Error.	The error message returned because an unknown internal error occurs.
400	InvalidParameter.Conflict	The specified image does not support the specified instance type.	The error message returned because the specified image cannot be used for the specified instance type.

HTTP status code	Error code	Error message	Description
404	InvalidSystemDiskSize.MoreThanMaxSize	The specified SystemDisk.Size parameter exceeds the maximum size.	The error message returned because the maximum size of the specified system disk has been reached.
500	InternalError	The request processing has failed due to some unknown error.	The error message returned because an internal error has occurred. Try again later. If the problem persists, submit a ticket.
403	InstanceExpiredOrInArrears	The specified operation is denied as your prepay instance is expired (prepay mode) or in arrears (afterpay mode).	The error message returned because the subscription instance has expired. Renew the instance first.
403	ChargeTypeViolation	The operation is not permitted due to charge type of the instance.	The error message returned because the billing method of the instance does not support this operation.
403	DiskCreatingSnapshot	The operation is denied due to a snapshot of the specified disk is not completed yet.	The error message returned because a snapshot of the specified disk is being created.
403	IoOptimized.NotSupported	The specified image is not support IoOptimized Instance.	The error message returned because the specified image does not support I/O optimized instances.
403	ImageNotSupportInstanceType	The specified image don not support the InstanceType instance.	The error message returned because the specified image does not support the specified instance type.
403	QuotaExceed.BuyImage	The specified image is from the image market,You have not bought it or your quota has been exceeded.	The error message returned because you have not purchased the specified Alibaba Cloud Marketplace image or you have no image quotas.
404	InvalidSystemDiskSize.LessThanImageSize	The specified parameter SystemDisk.Size is less than the image size.	The error message returned because the specified system disk size is smaller than the image size.
404	InvalidSystemDiskSize.LessThanMinSize	The specified parameter SystemDisk.Size is less than the min size.	The error message returned because the specified system disk size is smaller than the minimum size.
404	NoSuchResource	The specified resource is not found.	The error message returned because the specified resource does not exist.
400	InvalidSystemDiskSize.ImageNotSupportResize	The specified image does not support resize.	The error message returned because the specified image does not support resizing.
400	InvalidSystemDiskSize	The specified parameter SystemDisk.Size is invalid.	The error message returned because the specified SystemDisk.Size parameter is invalid.
403	INST_HAS_UNPAID_ORDER	The instance has unpaid order.	The error message returned because you have overdue payments for the instance.
400	InvalidSystemDiskSize.ValueNotSupported	The specified parameter SystemDisk.Size is invalid	The error message returned because the specified SystemDisk.Size parameter is invalid.
400	InvalidPassword.Malformed	The specified parameter "Password" is not valid.	The error message returned because the specified Password parameter is invalid.

HTTP status code	Error code	Error message	Description
400	InvalidPasswordParam.Mismatch	The input password should be null when passwdInherit is true.	The error message returned because the Password parameter is specified while PasswdInherit is set to true.
400	OperationDenied	The specified image contains the snapshot of the data disk,does not support this operation.	The error message returned because the operation is not supported while the image contains data disk snapshots.
400	InvalidDiskCategory.ValueNotSupported	The specified parameter "DiskCategory" is not valid.	The error message returned because the specified DiskCategory parameter is invalid.
403	OperationDenied.InstanceCreating	The specified instance is creating.	The error message returned because the specified instance already exists.
400	InvalidParameter.Conflict	%s	The error message returned because the specified parameters are invalid. Check whether the parameters conflict with each other.
400	InvalidSystemDiskSize.ValueNotSupported	%s	The error message returned because the specified system disk size is not supported.
400	OperationDenied	%s	The error message returned because the operation is denied.
400	InvalidKeyPairName.NotFound	The specified KeyPairName does not exist.	The error message returned because the specified key pair name does not exist.
400	DependencyViolation.IoOptimize	The specified parameter InstanceId is not valid.	The error message returned because the specified instance is not an I/O optimized instance.
403	InvalidParameter.NotMatch	%s	The error message returned because the specified parameters are invalid. Check whether the parameters conflict with each other.
400	MissingParameter.Architecture	Architecture should not be null.	The error message returned because the Architecture parameter is not specified.
400	InvalidArchitecture.Malformed	Architecture is not valid.	The error message returned because the specified Architecture parameter is invalid. Check whether the parameter is specified in the correct format.
400	MissingParameter.Platform	Platform should not be null.	The error message returned because the Platform parameter is not specified.
400	InvalidPlatform.Malformed	Platform is not valid.	The error message returned because the specified Platform parameter is invalid.
400	InvalidParameter.AllEmpty	%s	The error message returned because the required parameters are specified.
400	InvalidDiskId.NotFound	The specified disk do not exist.	The error message returned because the specified disk does not exist.

HTTP status code	Error code	Error message	Description
400	InvalidDatadisk.DiskStatusViolation	The operation is not permitted due to status of the Datadisk.	The error message returned because the operation is not supported while the disk is in the current state.
400	InvalidDatadisk.DiskCategoryViolation	The operation is not permitted due to category of the Datadisk.	The error message returned because the disk category does not support the operation.
403	ResourcesNotInSameZone	The specified instance and disk are not in the same zone.	The error message returned because the specified instance and disk are not in the same zone.
400	InvalidSystemDiskSize.ValueNotSupported	The specified SystemDiskSize is not valid.	The error message returned because the specified SystemDisk.Size parameter is invalid.
400	MissingParameter	The input parameter "ImageId" that is mandatory for processing this request is not supplied.	The error message returned because the ImageId parameter is not specified.
403	ImageNotSupportInstanceType	The specified instanceType is not supported by instance with marketplace image.	The error message returned because the specified Alibaba Cloud Marketplace image does not support the specified instance type.
500	InternalServerError	The request processing has failed due to some unknown error, exception or failure.	The error message returned because an internal error has occurred. Try again later. If the problem persists, submit a ticket.
403	OperationDenied.ImageNotValid	%s	The error message returned because the image does not support the operation.

9.9. ReInitDisk

You can call this operation to re-initialize a disk to restore it to the status when it was created.

Description

When you call this operation, take note of the following items:

- The disk to be re-initialized must be in the **In Use (In_use)** state and the instance to which the disk is attached must be in the **Stopped (Stopped)** state.
- If an instance has never been started since it was created, its attached disks cannot be re-initialized.
- If a local snapshot has been created for a disk, the disk cannot be re-initialized.
- When a system disk is re-initialized, it is restored to the state of the image from which it was created. If the source image is deleted, the system disk cannot be re-initialized.
- When a separately created data disk is re-initialized, it is restored to an empty data disk.
- When a data disk that is created from a snapshot is re-initialized, the disk is restored to the state of the source snapshot. If the source snapshot is deleted, the disk cannot be re-initialized and an error is returned.

Debugging

OpenAPI Explorer automatically calculates the signature value. For your convenience, we recommend that you call this operation in OpenAPI Explorer. OpenAPI Explorer dynamically generates the sample code of the operation for different SDKs.

Request parameters

Parameter	Type	Required	Example	Description
Action	String	Yes	ReInitDisk	The operation that you want to perform. Set the value to ReInitDisk.
DiskId	String	Yes	d-bp67acfmxazb4ph****	The ID of the disk.
Password	String	No	EcsV587!	Specifies whether to reset the password of the instance when you re-initialize its system disk. The password must be 8 to 30 characters in length. It must contain at least three of the following character types: uppercase letters, lowercase letters, digits, and special characters. Special characters include: <pre>() ` ~ ! @ # \$ % ^ & * - _ + = { } [] ; ' < > , . ? /</pre> Passwords for Windows instances cannot start with a forward slash (/). Note If the Password parameter is specified, we recommend that you send requests over HTTPS to secure your password.
KeyPairName	String	No	testKeyPairName	The name of the key pair. Note The parameter is applicable to only Linux instances. You can bind an SSH key pair to an instance as the logon credential when you re-initialize its system disk. After the SSH key pair is bound, the username and password logon method is disabled for the instance.
AutoStartInstance	Boolean	No	true	Specifies whether to automatically start the instance after the disk is re-initialized. Default value: false.
SecurityEnhancementStrategy	String	No	Active	Specifies whether to use Security Center for free after the system disk is re-initialized. Valid values: - Active: Security Center is used after the system disk is replaced. This value is applicable to only public images. - Deactive: Security Center is not used after the system disk is replaced. This value is applicable to all images. Default value: Deactive.

Response parameters

Parameter	Type	Example	Description
RequestId	String	473469C7-AA6F-4DC5-B3DB-A3DC0DE3C83E	The ID of the request.

Examples

Sample requests

```
https://ecs.aliyuncs.com/?Action=ReInitDisk
&DiskId=d-bp67acfmazb4ph****
&KeyPairName=testKeyPairName
&AutoStartInstance=true
&SecurityEnhancementStrategy=Active
&<Common request parameters>
```

Sample success responses

XML format

```
<ReInitDiskResponse>
  <RequestId>F3CD6886-D8D0-4FEE-B93E-1B73239673DE</RequestId>
</ReInitDiskResponse>
```

JSON format

```
{
  "RequestId": "F3CD6886-D8D0-4FEE-B93E-1B73239673DE"
}
```

Error codes

HTTP status code	Error code	Error message	Description
404	InvalidDiskId.NotFound	The specified disk does not exist.	The error message returned because the specified DiskId parameter does not exist. Check whether the disk ID is correct.
403	IncorrectDiskStatus	The current disk status does not support this operation.	The error message returned because the operation is not supported while the disk is in the current state. Ensure that the disk is available and your account has no overdue payments.
403	IncorrectInstanceStatus	The current status of the resource does not support this operation.	The error message returned because the operation is not supported while the resource is in the current state.
403	InstanceLockedForSecurity	The instance is locked due to security.	The error message returned because the operation is not supported while the instance is locked for security reasons.
403	InvalidSnapshot.TooOld	The disk is created from a snapshotId made before 2013-07-15, it cannot be re-initiated the specified disk any more since the detached first time.	The error message returned because snapshots created before July 15, 2013 do not support this operation.

HTTP status code	Error code	Error message	Description
403	OperationDenied	The snapshot which is used to create the specified disk has been deleted.	The error message returned because the snapshot used to create the specified disk does not exist.
403	InstanceExpiredOrInArrears	The specified operation is denied as your prepay instance is expired (prepay mode) or in arrears (afterpay mode).	The error message returned because the subscription instance has expired. Renew the instance first.
403	DiskCreatingSnapshot	The operation is denied due to a snapshot of the specified disk is not completed yet.	The error message returned because a snapshot of the specified disk is being created.
403	InvalidSourceSnapshot	The snapshot which is used to create the specified disk has been deleted.	The error message returned because the snapshot used to create the specified disk is deleted.
404	InvalidImageId.NotFound	The specified ImageId does not exist.	The error message returned because the specified image does not exist in this account. Check whether the image ID is correct.
403	SharedImageDeleted	The specified image by others shared is deleted.	The error message returned because the specified shared image is deleted.
400	InvalidPassword.Malformed	The specified parameter "Password" is not valid.	The error message returned because the specified Password parameter is invalid.
400	DiskCategory.OperationNotSupported	The operation is not supported to the specified disk due to its disk category	The error message returned because the specified disk category does not support the operation.
400	InvalidKeyPairName.NotFound	The specified KeyPairName does not exist.	The error message returned because the specified KeyPairName parameter does not exist.
400	DependencyViolation.IoOptimize	The specified parameter InstanceId is not valid.	The error message returned because the specified InstanceId parameter and the I/O optimization of the instance specified by the InstanceId parameter are invalid.
403	UserNotInTheWhiteList	The user is not in volume white list.	The error message returned because you are not in the Shared Block Storage whitelist. Submit a ticket to apply for the permission.
400	InvalidRegionId.Malformed	The specified RegionId is not valid	The error message returned because the specified RegionId parameter is invalid.
404	InvalidDiskId.OperationNotSupported	The operation is not supported due to image not exist.	The error message returned because the specified image does not exist.
403	InvalidParameter.KMSKeyId.KMSUnauthorized	ECS service have no right to access your KMS.	The error message returned because ECS is not authorized to access your KMS resources.
500	InternalServerError	The request processing has failed due to some unknown error, exception or failure.	The error message returned because an internal error has occurred. Try again later. If the problem persists, submit a ticket.

9.10. ResetDisk

You can call this operation to roll back a disk to a specific state based on a snapshot of the disk.

Description

When you call this operation, take note of the following items:

- The disk must be in the In Use (In_Use) state.
- The instance to which the disk is attached must be in the Stopped (Stopped) state.
- The specified snapshot must be created from the disk specified by the DiskId parameter.
- When you call the [DescribeInstances](#) operation to query the instance information and if the responses contain `{"OperationLocks": {"LockReason": "security"}}`, the instance is locked for security reasons and all operations are denied.

Debugging

OpenAPI Explorer automatically calculates the signature value. For your convenience, we recommend that you call this operation in OpenAPI Explorer. OpenAPI Explorer dynamically generates the sample code of the operation for different SDKs.

Request parameters

Parameter	Type	Required	Example	Description
Action	String	Yes	ResetDisk	The operation that you want to perform. Set the value to ResetDisk.
DiskId	String	Yes	d-bp199lyny9b3****	The ID of the disk.
SnapshotId	String	Yes	s-bp199lyny9b3****	The ID of the snapshot that is used to roll back the disk to a specific state.

Response parameters

Parameter	Type	Example	Description
RequestId	String	F3CD6886-D8D0-4FEE-B93E-1B73239673DE	The ID of the request.

Examples

Sample requests

```
https://ecs.aliyuncs.com/?Action=ResetDisk
&DiskId=d-bp199lyny9b3****
&SnapshotId=s-bp199lyny9b3****
&<Common request parameters>
```

Sample success responses

XML format

```
<ResetDiskResponse>
  <RequestId>F3CD6886-D8D0-4FEE-B93E-1B73239673DE</RequestId>
</ResetDiskResponse>
```

JSON format

```
{
  "RequestId": "F3CD6886-D8D0-4FEE-B93E-1B73239673DE"
}
```

Error codes

HTTP status code	Error code	Error message	Description
404	InvalidDiskId.NotFound	The specified disk does not exist.	The error message returned because the specified disk does not exist. Check whether the disk ID is correct.
404	Disk.NotFound	The specified disk does not exist.	The error message returned because the specified disk does not exist. Check whether the disk ID is correct.
404	InvalidSnapshotId.NotFound	The specified SnapshotId does not exist.	The error message returned because the specified snapshot does not exist. Check whether the snapshot ID is correct.
403	IncorrectDiskStatus	The current disk status does not support this operation.	The error message returned because the operation is not supported while the disk is in the current state. Make sure that the disk is available and you have no overdue payments.
403	IncorrectInstanceStatus	The current status of the resource does not support this operation.	The error message returned because the operation is not supported while the resource is in the current state.
403	InstanceLockedForSecurity	The instance is locked due to security.	The error message returned because the operation is not supported while the instance is locked for security reasons.
403	InvalidParameter.Mismatch	The specified snapshot is not created from the specified disk.	The error message returned because the encrypted snapshot is not created from the unencrypted disk.
403	InvalidSnapshot.TooOld	The snapshotId is created before 2013-07-15, it cannot be restored since the first time the disk detached.	The error message returned because snapshots created before July 15, 2013 do not support this operation.
403	InstanceExpiredOrInArrears	The specified operation is denied as your prepay instance is expired (prepay mode) or in arrears (afterpay mode).	The error message returned because the subscription instance has expired. Renew the instance first.
403	OperationDenied	The specified snapshot does not support ResetDisk.	The error message returned the specified snapshot does not support the ResetDisk operation.
403	InvalidSnapshotId.NotReady	The specified snapshot has not completed yet.	The error message returned because the specified snapshot is being created.
500	InternalServerError	The request processing has failed due to some unknown error.	The error message returned because an internal error has occurred. Try again later. If the problem persists, submit a ticket.
400	DiskCategory.OperationNotSupported	The operation is not supported to the specified disk due to its disk category	The error message returned because the specified disk category does not support the operation.

HTTP status code	Error code	Error message	Description
403	InvalidAccountStatus.NotEnoughBalance	Your account does not have enough balance.	The error message returned because your account balance is insufficient. Top up your account before proceeding.
403	InvalidAccountStatus.SnapshotServiceUnavailable	Snapshot service has not been opened yet.	The error message returned because the operation is not supported while the snapshot service is not activated.
404	InvalidInstanceId.NotFound	The specified InstanceId does not exist.	The error message returned because the specified instance does not exist. Check whether the instance ID is correct.
403	Operation.Conflict	The operation may conflicts with others.	The error message returned because the specified operation conflicts with other operations.
403	UserNotInTheWhiteList	The user is not in disk white list.	The error message returned because you are not in the whitelist to manage the disk. Try again when you are in the whitelist.
400	InvalidRegionId.Malformed	The specified RegionId is not valid	The error message returned because the specified RegionId parameter is invalid.
500	InternalServerError	The request processing has failed due to some unknown error, exception or failure.	The error message returned because an internal error has occurred. Try again later. If the problem persists, submit a ticket.
403	InvalidParameter.KMSKeyId.KMSUnauthorized	ECS service have no right to access your KMS.	The error message returned because ECS is not authorized to access your KMS resources.

9.11. ResizeDisk

You can call this operation to resize a system disk or data disk.

Description

 **Note** Before you call this operation, you must check the partition format of the disk. If an existing partition of the disk is created with MBR, you cannot resize the disk to greater than or equal to 2 TiB. Otherwise, data may be lost. In this case, we recommend that you create and attach another data disk. Format a GPT partition and copy the data in the MBR partition to the GPT partition. For more information, see [Resize cloud disks offline](#).

- You can resize the following categories of disks: basic disks (`cloud`), ultra disks (`cloud_efficiency`), standard SSDs (`cloud_ssd`), and enhanced SSDs (`cloud_essd`).
- You are not allowed to resize a disk when a snapshot is being created from the disk.
- The instance to which the disk is attached must be in the **Running** (`Running`) or **Stopped** (`Stopped`) state.
- After you resize a disk, its partitions and file systems will not be changed. You must manually allocate the storage space after resizing.

Debugging

OpenAPI Explorer automatically calculates the signature value. For your convenience, we recommend that you call this operation in OpenAPI Explorer. OpenAPI Explorer dynamically generates the sample code of the operation for different SDKs.

Request parameters

Parameter	Type	Required	Example	Description
Action	String	Yes	ResizeDisk	The operation that you want to perform. If you use a custom HTTP URL or HTTPS URL to make an API request, you must specify the <code>Action</code> parameter. Set the value to <code>ResizeDisk</code> .
DiskId	String	Yes	d-bp67acfmazb4p****	The ID of the disk to be resized.
NewSize	Integer	Yes	1900	The new disk capacity that you want to specify. Unit: GiB. Valid values: - Ultra disk (cloud_efficiency): 20 to 32768 - Standard SSD (cloud_essd): 20 to 32768 - Enhanced SSD (cloud_essd): 20 to 32768 - Basic disk (cloud): 5 to 2000 The new disk capacity must be greater than the original disk capacity.
Type	String	No	offline	The mode used to resize the disk. Default value: offline. Valid values: - offline. After you resize a disk offline, you must restart the instance in the console or by calling the <code>RebootInstance</code> operation to validate the resizing operation. For more information, see Restart the instance and RebootInstance. - online. After you resize a disk online, you do not need to restart the instance. You can resize ultra disks, standard SSDs, and enhanced SSDs online.
ClientToken	String	No	123e4567-e89b-12d3-a456-426655440000	The client token that is used to ensure the idempotence of the request. You can use the client to generate the value, but you must ensure that it is unique among different requests. The <code>ClientToken</code> value can only contain ASCII characters and cannot exceed 64 characters in length. For more information, see How to ensure idempotence .

Response parameters

Parameter	Type	Example	Description
RequestId	String	F3CD6886-D8D0-4FEE-B93E-1B73239673DE	The ID of the request.

Examples

Sample requests

```
https://ecs.aliyuncs.com/?Action=ResizeDisk
&DiskId=d-bp67acfmazb4p****
&NewSize=1900
&ClientToken=123e4567-e89b-12d3-a456-426655440000
&<Common request parameters>
```

Sample success responses

XML format

```
<ResizeDiskResponse>
  <RequestId>F3CD6886-D8D0-4FEE-B93E-1B73239673DE</RequestId>
</ResizeDiskResponse>
```

JSON format

```
{
  "RequestId": "F3CD6886-D8D0-4FEE-B93E-1B73239673DE"
}
```

Error codes

HTTP status code	Error code	Error message	Description
403	InvalidDataDiskSize.ValueNotSupported	The specified DataDisk.n.Size beyond the permitted range, or the capacity of snapshot exceeds the size limit of the specified disk category.	The error message returned because the specified DataDisk.N.Size parameter or the snapshot capacity exceeds the maximum capacity that is allowed for the specified disk category.
404	InvalidDiskId.NotFound	The specified disk does not exist.	The error message returned because the specified DiskId parameter does not exist. Check whether the disk ID is correct.
404	InvalidInstanceId.NotFound	The specified InstanceId does not exist.	The error message returned because the specified InstanceId parameter does not exist. Check whether the instance ID is correct.
403	OperationDenied	The type of the disk does not support the operation.	The error message returned because the specified disk category does not support this operation.
403	OperationDenied	The status of the disk or the instance that the disk is attaching with does not support the operation.	The error message returned because the operation is not supported while the disk or instance is in the current state.
403	InvalidDiskSize.TooSmall	Specified new disk size is less than the original disk size.	The error message returned because the specified new disk capacity is smaller than the original disk capacity.
403	InvalidDiskSize.TooLarge	Specified new disk size is beyond the permitted range.	The error message returned because the specified new disk capacity exceeds the capacity limit.
403	InstanceExpiredOrInArrears	The specified operation is denied as your prepay instance is expired (prepay mode) or in arrears (afterpay mode).	The error message returned because the subscription instance has expired. Renew the instance first.
403	DiskError	IncorrectDiskStatus	The error message returned because the specified DiskStatus parameter is invalid.
403	DiskInArrears	The specified operation is denied as your disk owing fee.	The error message returned because the disk has an overdue payment.

HTTP status code	Error code	Error message	Description
403	IncorrectInstanceStatus	The current status of the resource does not support this operation.	The error message returned because the operation is not supported while the resource is in the current state.
500	InternalError	The request processing has failed due to some unknown error.	The error message returned because an internal error has occurred. Try again later. If the problem persists, submit a ticket.
403	DiskCreatingSnapshot	The operation is denied due to a snapshot of the specified disk is not completed yet.	The error message returned because a snapshot is being created from the specified disk.
400	InvalidDataDiskCategory.ValueNotSupported	%s	The error message returned because the specified data disk category is invalid.
400	InvalidParameter.Conflict	%s	The error message returned because the specified parameter is invalid. Check whether the parameter conflicts with another parameter.
400	InvalidDataDiskSize.ValueNotSupported	%s	The error message returned because the specified data disk capacity is invalid.
400	InvalidSystemDiskSize.ValueNotSupported	%s	The error message returned because the operation is not applicable to the specified system disk size.
403	InvalidDiskSize	Specified new disk size is less than or equal the original disk size.	The error message returned because the specified new disk capacity is smaller than or equal to the original disk capacity.
400	IncompleteParamter	Some fields can not be null in this request.	The error message returned because some required parameters are not specified.
403	Operation.Conflict	The operation may conflicts with others.	The error message returned because the specified operation conflicts with other operations.
403	InstanceLockedForSecurity	The instance is locked due to security.	The error message returned because the operation is not supported while the resource is locked for security reasons.
403	IncorrectDiskStatus	The current disk status does not support this operation.	The error message returned because the operation is not supported while the disk is in the current state. Ensure that the disk is available and has no overdue payments.
403	UserNotInTheWhiteList	The user is not in disk white list.	The error message returned because you are not in the whitelist to manage the disk. Try again when you are in the whitelist.
400	InvalidRegionId.MalFormed	The specified RegionId is not valid	The error message returned because the specified RegionId parameter is invalid.

HTTP status code	Error code	Error message	Description
403	InvalidDiskCategory.NotSupported	The specified disk category is not supported.	The error message returned because the operation is not supported by the specified disk category.
400	InvalidParam.Type	The specified type is not supported.	The error message returned because the specified Type parameter is invalid.
403	InvalidRegion.NotSupport	The specified region does not support resize online.	The error message returned because online resizing is not available in the specified region.
403	InvalidDiskCategory.NotSupported	The specified disk category does not support resize online.	The error message returned because the specified disk category does not support online resizing.
403	IncorrectInstanceStatus	The current status of the resource does not support resize online.	The error message returned because this operation is not supported while the resource is in the current state.
403	InvalidInstanceStatus.NotRunning	The status of instance to which the disk attaches must be running when resizing online.	The error message returned because the instance to which the disk is attached is not in the Running state when you resize the disk online.
403	IncorrectDiskStatus	The current status of the resource does not support resize online	The error message returned because online resizing is not supported while the resource is in the current state.
400	LastOrderProcessing	The previous order is still processing, please try again later.	The error message returned because the previous order is being processed. Try again later.
403	InvalidParameter.KMSKeyId.KMSUnauthorized	ECS service have no right to access your KMS.	The error message returned because ECS is not authorized to access your KMS resources.
500	InternalError	The request processing has failed due to some unknown error, exception or failure.	The error message returned because an internal error has occurred. Try again later. If the problem persists, submit a ticket.
403	SecurityRisk.3DVerification	We have detected a security risk with your default credit or debit card. Please proceed with verification via the link in your email.	The error message returned because risks are detected in your default credit card or debit card. Use the link in the email for verification.
400	InvalidSystemDiskSize.ImageNotSupportResize	The specified image does not support resize.	The error message returned because the specified image does not support resizing.

9.12. ModifyDiskSpec

You can call this operation to modify the performance level of an enhanced SSD (ESSD).

Description

To modify the performance level of an enhanced SSD, note the following content:

- You can only upgrade the performance level of a subscription enhanced SSD. However, you can upgrade or downgrade the performance level of a pay-as-you-go enhanced SSD.
- The enhanced SSD must be in the **In Use** or **Unattached** state.
- If the enhanced SSD is attached to an ECS instance, the instance must be in the **Running** or **Stopped** state. The instance cannot be expired or stopped due to an overdue payment.

- The new performance level of the enhanced SSD takes effect immediately after you call this operation. The enhanced SSD is then billed based on the unit price specific to the new performance level.
- If you cannot upgrade the performance level of the enhanced SSD due to its capacity limit, resize the enhanced SSD by calling the [ResizeDisk](#) operation and then try again. For more information, see [Enhanced SSD \(ESSD\)](#).

Debugging

OpenAPI Explorer automatically calculates the signature value. For your convenience, we recommend that you call this operation in OpenAPI Explorer. OpenAPI Explorer dynamically generates the sample code of the operation for different SDKs.

Request parameters

Parameter	Type	Required	Example	Description
Action	String	Yes	ModifyDiskSpec	The operation that you want to perform. If you use a custom HTTP URL or HTTPS URL to make an API request, you must specify the <code>Action</code> parameter. Set the value to ModifyDiskSpec.
DiskId	String	Yes	d-bp131n0q38u3a4zi*** **	The ID of the enhanced SSD.
PerformanceLevel	String	Yes	PL2	The performance level of the enhanced SSD. Default value: PL1. Valid values: • PL1: A single enhanced SSD delivers up to 50,000 random read/write IOPS. • PL2: A single enhanced SSD delivers up to 100,000 random read/write IOPS. • PL3: A single enhanced SSD delivers up to 1,000,000 random read/write IOPS.

Response parameters

Parameter	Type	Example	Description
RequestId	String	473469C7-AA6F-4DC5-B3DB-A3DC0DE3C83E	The ID of the request.

Examples

Sample requests

```
https://ecs.aliyuncs.com/?Action=ModifyDiskSpec
&DiskId=d-bp131n0q38u3a4zi*****
&PerformanceLevel=PL2
&<Common request parameters>
```

Sample success responses

XML format

```
<ModifyDiskSpecResponse>
  <RequestId>473469C7-AA6F-4DC5-B3DB-A3DC0DE3C83E</RequestId>
</ModifyDiskSpecResponse>
```

JSON format

```
{
  "RequestId": "473469C7-AA6F-4DC5-B3DB-A3DC0DE3C83E"
}
```

Error codes

HTTP status code	Error code	Error message	Description
404	InvalidDiskId.NotFound	The specified disk does not exist.	The error message returned because the specified disk ID does not exist. Check whether the disk ID is correct.
403	DiskInArrears	The specified operation is denied as your disk owing fee.	The error message returned because the specified disk has an overdue payment.
404	InvalidInstanceId.NotFound	The specified InstanceId does not exist.	The error message returned because the specified instance ID does not exist. Check whether the instance ID is correct.
403	InstanceExpiredOrInArrears	The specified operation is denied as your prepay instance is expired (prepay mode) or in arrears (afterpay mode).	The error message returned because the subscription instance has expired. Renew the instance first.
403	IncorrectDiskStatus	The current disk status does not support this operation.	The error message returned because the operation is not supported while the disk is in the current state. Ensure that the disk is available and has no overdue payments.
403	DiskCreatingSnapshot	The operation is denied due to a snapshot of the specified disk is not completed yet.	The error message returned because a snapshot of the specified disk is being created.
403	OperationDenied	The type of the disk does not support the operation.	The error message returned because the disk category does not support the specified operation.
400	InvalidPerformanceLevel.Malformed	The specified parameter PerformanceLevel is not valid.	The error message returned because the specified PerformanceLevel parameter is invalid.
403	OperationDenied.PerformanceLevelNotMatch	The specified PerformanceLevel and disk size do not match.	The error message returned because the specified performance level and the disk size do not correspond to each other.

10.Reserved Instances

10.1. PurchaseReservedInstancesOffering

You can call this operation to purchase a reserved instance. Reserved instances can be used to automatically offset bills of pay-as-you-go instances.

Description

- Before you call this operation, make sure that you have fully understood the billing method of reserved instances. For more information, see [Reserved instance billing](#).
- Before you purchase a reserved instance, you can call the [DescribeAvailableResource](#) operation to query available instance resources.

Debugging

OpenAPI Explorer automatically calculates the signature value. For your convenience, we recommend that you call this operation in OpenAPI Explorer. OpenAPI Explorer dynamically generates the sample code of the operation for different SDKs.

Request parameters

Parameter	Type	Required	Example	Description
Action	String	Yes	PurchaseReservedInstancesOffering	The operation that you want to perform. Set the value to PurchaseReservedInstancesOffering.
InstanceType	String	Yes	ecs.g5.large	The instance type of the instance. For more information, see Instance families .
RegionId	String	Yes	cn-hangzhou	The region ID of the instance. You can call the DescribeRegions operation to query the most recent region list.
Scope	String	No	Zone	The scope of the reserved instance. Valid values: - Region: regional - Zone: zonal Default value: Region
ZoneId	String	No	cn-hangzhou-g	The zone ID of the instance. If the <code>Scope</code> parameter is set to <code>Zone</code> , you must set the zone ID. For more information, call the DescribeZones operation to query the most recent zone list.
InstanceAmount	Integer	No	3	The number of pay-as-you-go instances of the same instance type that the reserved instance can match. Valid values: 1 to 50. For example, if InstanceAmount is set to 3 for an ecs.g5.large reserved instance, the reserved instance can match three ecs.g5.large pay-as-you-go instances.

Parameter	Type	Required	Example	Description
Platform	String	No	Linux	The operating system of the image used by the instance. Default value: Linux. Valid values: - Windows: Windows Server operating systems - Linux: Linux and Unix-like operating systems
PeriodUnit	String	No	Year	The term unit of the reserved instance. Valid value: Year.
Period	Integer	No	1	The term of the reserved instance. Valid values: 1 and 3. Default: 1
OfferingType	String	No	All Upfront	The payment option of the reserved instance. Default value: All Upfront. Valid values: - No Upfront: No upfront payment is required. - Partial Upfront: A portion of upfront payment is required. - All Upfront: Full upfront payment is required.
ReservedInstanceName	String	No	testReservedInstanceName	The name of the reserved instance. The name must be 2 to 128 characters in length. It must start with a letter and cannot start with http:// or https://. It can contain letters, digits, colons (:), underscores (_), and hyphens (-).
Description	String	No	testDescription	The description of the reserved instance. The description must be 2 to 256 characters in length and cannot start with http:// or https://. This parameter is empty by default.
ResourceGroupId	String	No	rg-bp199lyny9b3****	The ID of the resource group.
ClientToken	String	No	123e4567-e89b-12d3-a456-426655440000	The client token that is used to ensure the idempotence of the request. You can use the client to generate the value, but you must ensure that it is unique among different requests. The ClientToken value can only contain ASCII characters and cannot exceed 64 characters in length. For more information, see How to ensure idempotence .
Tag.N.Key	String	No	TestKey	The tag key of the reserved instance.
Tag.N.Value	String	No	TestValue	The tag value of the reserved instance.

Response parameters

Parameter	Type	Example	Description
RequestId	String	8C314443-AF0D-4766-9562-C83B7F1A3C8B	The ID of the request.
ReservedInstanceIdSets	List	ecsri-2ze53qonjqxg7r****	The ID of the reserved instance.

Examples

Sample requests

```
https://ecs.aliyuncs.com/?Action=PurchaseReservedInstancesOffering
&RegionId=cn-hangzhou
&Scope=Zone
&ZoneId=cn-hangzhou-a
&ReservedInstanceName=test
&InstanceType=ecs.g5.2xlarge
&InstanceAmount=1
&OfferingType=AllUpfront
&Period=1
&PeriodUnit=Year
&<Common request parameters>
```

Sample success responses

XML format

```
<PurchaseReservedInstancesOfferingResponse>
  <RequestId>8C314443-AF0D-4766-9562-C83B7F1A3C8B</RequestId>
  <ReservedInstanceIdSets>
    <ReservedInstanceId>ecsri-2ze53qonjqxg7r****</ReservedInstanceId>
  </ReservedInstanceIdSets>
</PurchaseReservedInstancesOfferingResponse>
```

JSON format

```
{
  "ReservedInstanceIdSets":{
    "ReservedInstanceId":[
      "ecsri-2ze53qonjqxg7r****"
    ]
  },
  "RequestId":"8C314443-AF0D-4766-9562-C83B7F1A3C8B"
}
```

Error codes

HTTP status code	Error code	Error message	Description
400	InvalidInstanceType.ValueUnauthorized	The specified InstanceType is not authorized.	The error message returned because you are not authorized to use the specified instance type.

HTTP status code	Error code	Error message	Description
400	InvalidDescription.Malformed	The specified parameter "Description" is not valid.	The error message returned because the specified description is invalid. The description must be 2 to 256 characters in length and cannot start with http:// or https://.
403	OperationDenied	The creation of Host to the specified Zone is not allowed.	The error message returned because you are not authorized to create a dedicated host in the specified zone.
403	OperationDenied.NoStock	The requested resource is sold out in the specified zone; try other types of resources or other regions and zones.	The error message returned because the requested resource is insufficient.
500	InternalError	The request processing has failed due to some unknown error.	The error message returned because an internal error has occurred. Try again later. If the problem persists, submit a ticket.
403	OperationDenied	Sales of this resource are temporarily suspended in the specified region; please try again later.	The error message returned because this resource is unavailable in the specified region. Try again later.
400	InvalidParameter.Conflict	The specified region and cluster do not match.	The error message returned because the specified region does not match the specified cluster.
403	NodeControllerUnavailable	The Node Controller is temporarily unavailable.	The error message returned because the node controller is unavailable.
403	OperationDenied	The resource is out of usage.	The error message returned because the instance is not in the running state. Start the instance or check whether a proper operation is performed.
404	PaymentMethodNotFound	No payment method has been registered on the account.	The error message returned because you have not configured the payment method for your account.
403	InvalidParameter.ResourceOwnerAccount	ResourceOwnerAccount is Invalid.	The error message returned because the specified ResourceOwnerAccount parameter is invalid.
403	Zone.NotOpen	The specified zone is not granted to you to buy resources yet.	The error message returned because you are not authorized to purchase resources in the specified zone.
403	Zone.NotOnSale	The specified zone is not available for purchase.	The error message returned because the requested resources are unavailable in the specified zone. Change the instance type or select a different zone.
400	InvalidTagKey.Malformed	The specified Tag.n.Key is not valid.	The error message returned because the specified Tag.N.Key parameter is invalid.
400	RegionUnauthorized	%s	The error message returned because the specified region is not authorized.
500	InternalError	%s	The error message returned because an unknown internal error occurs.

HTTP status code	Error code	Error message	Description
400	Zone.NotOnSale	%s	The error message returned because the service is temporarily unavailable in this zone.
400	InvalidPeriodUnit.ValueNotSupported	The specified parameter PeriodUnit is not valid.	The error message returned because the specified PeriodUnit parameter is invalid.
400	InvalidTagValue.Malformed	The specified Tag.n.Value is not valid.	The error message returned because the specified Tag.N.Value parameter is invalid.
403	InvalidParameter.NotMatch	%s	The error message returned because the specified parameters are invalid. Check whether the parameters conflict with each other.
403	Account.Arrearage	Your account has been in arrears.	The error message returned because your account balance is insufficient. Top up your account before proceeding.
400	InvalidChargeType.ValueNotSupported	ChargeType is not valid	The error message returned because the specified ChargeType parameter is invalid.
400	InvalidInstanceType.ValueNotSupported	The specified InstanceType beyond the permitted range.	The error message returned because the specified InstanceType parameter is invalid.
500	InternalServerError	The request processing has failed due to some unknown error, exception or failure.	The error message returned because an internal error has occurred. Try again later. If the problem persists, submit a ticket.
400	InvalidInstanceType.ValueNotSupported	The specified InstanceType does not exist or beyond the permitted range.	The error message returned because the specified instance type does not exist or you are not authorized to manage the instance type.

10.2. DescribeReservedInstances

You can call this operation to query purchased reserved instances.

Debugging

OpenAPI Explorer automatically calculates the signature value. For your convenience, we recommend that you call this operation in OpenAPI Explorer. OpenAPI Explorer dynamically generates the sample code of the operation for different SDKs.

Request parameters

Parameter	Type	Required	Example	Description
Action	String	Yes	DescribeReservedInstances	The operation that you want to perform. Set the value to DescribeReservedInstances.
RegionId	String	Yes	cn-hangzhou	The region ID of the reserved instance. You can call the DescribeRegions operation to query the most recent region list.

Parameter	Type	Required	Example	Description
Tag.N.Key	String	No	TestKey	The key of tag N of the reserved instance. Valid values of N: 1 to 20. The tag key cannot be an empty string. It can be up to 128 characters in length and cannot contain http:// or https://. It cannot start with acs: or aliyun.
Tag.N.Value	String	No	TestValue	The value of tag N of the reserved instance. Valid values of N: 1 to 20. The tag value can be an empty string. It can be up to 128 characters in length and cannot contain http:// or https://. It cannot start with acs:.
PageNumber	Integer	No	1	The number of the page to return. Pages start from page 1. Default value: 1.
PageSize	Integer	No	50	The number of entries to return on each page. Maximum value: 100. Default value: 10.
Zoneld	String	No	cn-hangzhou-z	The zone ID of the reserved instance. This parameter is required when Scope is set to Zone. For more information, call the DescribeZones operation to query the most recent zone list.
ReservedInstanceId.N	RepeatList	No	ri-bpzhex2ulpzf53****	The ID of reserved instance N. Valid values of N: 1 to 100.
ReservedInstanceName	String	No	testReservedInstanceName	The name of the reserved instance.
Status.N	RepeatList	No	Active	The status of reserved instance N. Valid values of N: 1 to 100. Valid values: - Creating - Active - Expired - Updating
LockReason	String	No	security	The reason why the reserved instance is locked. Valid values: - financial: The account has an overdue payment or the reserved instance has expired. - security: The reserved instance is locked for security reasons.
InstanceType	String	No	ecs.g5.large	The instance type of the reserved instance. For more information about the values, see Instance families .

Parameter	Type	Required	Example	Description
InstanceTypeFamily	String	No	ecs.g5	The instance family of the reserved instance. For more information about the values, see Instance families .
Scope	String	No	Region	The scope of the reserved instance. Valid values: - Region: regional - Zone: zonal Default value: Region.
OfferingType	String	No	All Upfront	The payment option of the reserved instance. Valid values: - No Upfront - Partial Upfront - All Upfront

Response parameters

Parameter	Type	Example	Description
PageNumber	Integer	1	The page number of the returned page.
PageSize	Integer	1	The number of entries returned per page.
RequestId	String	E572643C-6A29-49D6-9D4E-6CFA4E063A3E	The ID of the request.
ReservedInstances	Array of ReservedInstance		Details about the reserved instances.
ReservedInstance			
AllocationStatus	String	null	? Note This parameter is in invitational preview and not available.
CreationTime	String	2018-12-10T12:07Z	The time when the reserved instance was created.
Description	String	testDescription	The description of the reserved instance.
ExpiredTime	String	2019-12-10T12:07Z	The time when the reserved instance expires.
InstanceAmount	Integer	10	The number of pay-as-you-go instances that are of the same instance type as the reserved instance and can be matched with the reserved instance.
InstanceType	String	ecs.g5.large	The instance type of the instances that can be matched with the reserved instance.
OfferingType	String	All Upfront	The payment option of the reserved instance.

Parameter	Type	Example	Description
OperationLocks	Array of OperationLock		Details about the lock status of the reserved instance.
OperationLock			
LockReason	String	security	The reason why the reserved instance was locked.
Platform	String	Linux	The operating system of the reserved instance. Valid values: - Windows: Windows Server operating systems. - Linux: Linux and Unix-like operating systems.
RegionId	String	cn-hangzhou	The region ID of the reserved instance.
ReservedInstanceId	String	ri-bpzhex2ulpzf53****	The ID of the reserved instance.
ReservedInstanceName	String	riZbpzhex2ulpzf53****	The name of the reserved instance.
ResourceGroupId	String	EcsDocTest	The ID of the resource group.
Scope	String	region	The scope of the reserved instance.
StartTime	String	2018-12-10T12:00Z	The time when the reserved instance took effect.
Status	String	Active	The status of the reserved instance.
Tags	Array of Tag		Details about tags of the reserved instance.
Tag			
TagKey	String	TestKey	The tag key of the reserved instance.
TagValue	String	TestValue	The tag value of the reserved instance.
ZoneId	String	cn-hangzhou-z	The zone ID of the reserved instance.
TotalCount	Integer	1	The total number of reserved instances.

Examples

Sample requests

```
https://ecs.aliyuncs.com/?Action=DescribeReservedInstances
&RegionId=cn-hangzhou
&Scope=Region
&<Common request parameters>
```

Sample success responses

XML format

```
<DescribeReservedInstancesResponse>
  <ReservedInstances>
    <ReservedInstance>
      <CreationTime>2018-12-10T12:07Z</CreationTime>
      <ExpiredTime>2019-12-10T16:00Z</ExpiredTime>
      <InstanceAmount>1</InstanceAmount>
      <ReservedInstanceId>ri-0xzhex2ulpzf53****</ReservedInstanceId>
      <InstanceType>ecs.g5.large</InstanceType>
      <OfferingType>All Upfront</OfferingType>
      <RegionId>cn-hangzhou-test-307</RegionId>
      <ReservedInstanceName>riZ0xzhex2ulpzf53****</ReservedInstanceName>
      <Scope>region</Scope>
      <StartTime>2018-12-10T12:00Z</StartTime>
      <Status>Active</Status>
      <Tags>
        <Tag>
          <TagKey>TestKey</TagKey>
          <TagValue>TestValue</TagValue>
        </Tag>
      </Tags>
    </ReservedInstance>
  </ReservedInstances>
  <RequestId>E572643C-6A29-49D6-9D4E-6CFA4E063A3E</RequestId>
  <PageNumber>1</PageNumber>
  <PageSize>50</PageSize>
  <Total>1</Total>
</DescribeReservedInstancesResponse>
```

JSON format

```

{
  "ReservedInstances":{
    "ReservedInstance":[
      {
        "CreationTime":"2018-12-10T12:07Z",
        "ExpiredTime":"2019-12-10T16:00Z",
        "InstanceAmount":1,
        "ReservedInstanceId":"ri-0xzhex2ulpzf53****",
        "InstanceType":"ecs.g5.large",
        "OfferingType":"All Upfront",
        "RegionId":"cn-hangzhou-test-307",
        "ReservedInstanceName":"riZ0xzhex2ulpzf53****",
        "Scope":"region",
        "StartTime":"2018-12-10T12:00Z",
        "Status":"Active",
        "Tags": {
          "Tag": [
            {
              "TagKey": "TestKey",
              "TagValue": "TestValue"
            }
          ]
        }
      ]
    ],
    "RequestId":"E572643C-6A29-49D6-9D4E-6CFA4E063A3E",
    "PageNumber":1,
    "PageSize":50,
    "Total":1
  }
}

```

Error codes

HTTP status code	Error code	Error message	Description
400	MissingParamter.RegionId	The regionId should not be null.	The error message returned because the RegionId parameter is not specified.
400	InvalidRegion.NotFound	The specified parameter RegionId is not valid.	The error message returned because the specified RegionId parameter is invalid.
400	InvalidZone.NotFound	The specified parameter ZoneId is not valid.	The error message returned because the specified ZoneId parameter is invalid.
400	InvalidEndTime.ValueNotSupported	The specified endTime is out of the permitted range.	The error message returned because the value of the specified EndTime parameter is out of range.
400	InvalidAllocationType.ValueNotSupported	The specified AllocationType is not supported.	The error message returned because the specified allocation type is invalid.

HTTP status code	Error code	Error message	Description
404	InvalidRegionId.NotFound	The specified RegionId does not exist in our records.	The error message returned because the specified RegionId parameter does not exist. Check whether the reserved instance service is available in the region.

10.3. ModifyReservedInstances

You can call this operation to split, merge, or modify reserved instances.

Description

When you call this operation, take note of the following items:

- For information about limits on reserved instances, see the "Limits" section in [Reserved instance overview](#).
- If you call this operation to split a reserved instance, make sure that you fully understand the limits on splitting a reserved instance. For more information, see [Split a reserved instance](#).
- If you call this operation to merge reserved instances, make sure that you fully understand the limits on merging reserved instances. For more information, see [Merge reserved instances](#).
- If you call this operation to modify a reserved instance, make sure that you fully understand the limits and methods of modifying a reserved instance. For more information, see [Modify a reserved instance](#).

Debugging

OpenAPI Explorer automatically calculates the signature value. For your convenience, we recommend that you call this operation in OpenAPI Explorer. OpenAPI Explorer dynamically generates the sample code of the operation for different SDKs.

Request parameters

Parameter	Type	Required	Example	Description
Action	String	Yes	ModifyReservedInstances	The operation that you want to perform. Set the value to ModifyReservedInstances.
RegionId	String	Yes	cn-hangzhou	The region ID of the reserved instance. You can call the DescribeRegions operation to query the most recent region list.
ReservedInstanceId.N	RepeatList	Yes	ReservedInstanceId.1="ecsri-bp1cx3****",ReservedInstanceId.2="ecsri-bp15xx2****"	The ID of reserved instance N. Valid values of N: 1 to 20.
Configuration.N.ZoneId	String	No	cn-hangzhou-i	The zone ID of reserved instance N. Valid values of N: 1 to 100. This parameter is required when <code>Scope</code> is set to <code>Zone</code> . You can call the DescribeZones operation to query the most recent zone list.

Parameter	Type	Required	Example	Description
Configuration.N.ReservedInstanceName	String	No	testReservedInstanceName	The name of reserved instance N. Valid values of N: 1 to 100. The name must be 2 to 128 characters in length. It must start with a letter but cannot start with http:// or https://. It can contain letters, digits, colons (:), underscores (_), and hyphens (-).
Configuration.N.InstanceType	String	No	ecs.c5.4xlarge	The number of instance types that reserved instance N can match. Valid values of N: 1 to 100.  Note The applicable instance types are continuously updated. For more information, see the "Attributes" section in Reserved instance overview.
Configuration.N.Scope	String	No	Zone	The scope of reserved instance N. Valid values: - Region: regional - Zone: zonal Valid values of N: 1 to 100. Default value: Region.
Configuration.N.InstanceAmount	Integer	No	1	The number of pay-as-you-go instances that are of the instance type matched with reserved instance N. The value must be greater than or equal to 1. Valid values of N: 1 to 100.

Response parameters

Parameter	Type	Example	Description
RequestId	String	ED9E4A5F-FF4D-4C96-BE80-6B4227060DD7	The ID of the request.
ReservedInstanceIds	List	{"ReservedInstanceId": "ecsri-bp1cx3****", "ecsri-bp15xx2****"}	The list of reserved instance IDs.

Examples

Sample requests

```
https://ecs.aliyuncs.com/?Action=ModifyReservedInstances
&RegionId=cn-hangzhou
&ReservedInstanceId.1=ecsri-bp1cx3****
&ReservedInstanceId.2=ecsri-bp15xx2****
&Configuration.1.InstanceType=ecs.c5.4xlarge
&Configuration.1.Scope=Zone
&Configuration.2.InstanceType=ecs.g5.4xlarge
&Configuration.2.Scope=Region
&<Common request parameters>
```


Sample success responses

XML format

```
<ModifyReservedInstancesResponse>
  <ReservedInstanceIdsSets>
    <ReservedInstanceId>ecsri-bp1cx3****</ReservedInstanceId>
    <ReservedInstanceId>ecsri-bp15xx2****</ReservedInstanceId>
  </ReservedInstanceIdsSets>
  <RequestId>ED9E4A5F-FF4D-4C96-BE80-6B4227060DD7</RequestId>
</ModifyReservedInstancesResponse>
```

JSON format

```
{
  "ReservedInstanceIdsSets": {
    "ReservedInstanceId": [
      "ecsri-bp1cx3****",
      "ecsri-bp15xx2****"
    ]
  },
  "RequestId": "ED9E4A5F-FF4D-4C96-BE80-6B4227060DD7"
}
```

Error codes

HTTP status code	Error code	Error message	Description
400	InvalidInstanceType.ValueUnauthorized	The specified InstanceType is not authorized.	The error message returned because you are not authorized to use the specified instance type.
403	OperationDenied.NoStock	The requested resource is sold out in the specified zone; try other types of resources or other regions and zones.	The error message returned because the requested resources are insufficient.
500	InternalError	The request processing has failed due to some unknown error.	The error message returned because an internal error has occurred. Try again later. If the problem persists, submit a ticket.
403	OperationDenied	Sales of this resource are temporarily suspended in the specified region; please try again later.	The error message returned because the sales of the requested resource are suspended in the specified region. Try again later.
400	InvalidParameter.Conflict	The specified region and cluster do not match.	The error message returned because the specified region does not match the specified cluster.
403	NodeControllerUnavailable	The Node Controller is temporarily unavailable.	The error message returned because the node controller is unavailable.
403	OperationDenied	The resource is out of usage.	The error message returned because the instance is not in the Running state. Start the instance or check whether the specified operation is valid.

HTTP status code	Error code	Error message	Description
403	InvalidParameter.ResourceOwnerAccount	ResourceOwnerAccount is Invalid.	The error message returned because the specified ResourceOwnerAccount parameter is invalid.
403	Zone.NotOpen	The specified zone is not granted to you to buy resources yet.	The error message returned because you are not authorized to purchase resources in the specified zone.
403	Zone.NotOnSale	The specified zone is not available for purchase.	The error message returned because the requested instance resources are unavailable in the specified zone. Change the instance type or select a different zone.
400	InvalidTagKey.Malformed	The specified Tag.n.Key is not valid.	The error message returned because the specified Tag.N.Key parameter is invalid.
400	RegionUnauthorized	%s	The error message returned because you are not authorized to perform the operation in the specified region.
500	InternalError	%s	The error message returned because an internal error has occurred.
400	Zone.NotOnSale	%s	The error message returned because the sales of the specified resources in the specified zone are suspended.
400	InvalidPeriodUnit.ValueNotSupported	The specified parameter PeriodUnit is not valid.	The error message returned because the specified PeriodUnit parameter is invalid.
400	InvalidTagValue.Malformed	The specified Tag.n.Value is not valid.	The error message returned because the specified Tag.N.Value parameter is invalid.
403	InvalidParameter.NotMatch	%s	The error message returned because the specified parameter is invalid. Check whether the parameter conflicts with another parameter.
403	Account.Arrearage	Your account has been in arrears.	The error message returned because your account balance is insufficient. Add funds to your account before you proceed.
400	InvalidChargeType.ValueNotSupported	ChargeType is not valid	The error message returned because the billing method is invalid.
403	IncorrectInstanceStatus	The current status of the resource does not support this operation.	The error message returned because the operation is not supported while the resource is in the current state.

11.Images

11.1. CreateImage

You can call this operation to create a custom image. The created custom image can be used to create ECS instances (RunInstances) and replace system disks (ReplaceSystemDisk).

Description

When you call this operation, take note of the following items:

- The created custom image can be used only when it is in the Available (Available) state.
- If the response contains `{"OperationLocks": {"LockReason": "security"}}` when you query information of an instance, the instance is locked for security reasons and all operations are prohibited on it.

You can use one of the following methods to call the CreateImage operation to create a custom image. The request parameters have the following priorities: `InstanceId` > `DiskDeviceMapping` > `SnapshotId`. If your request contains two or more parameters, the custom image is created based on the parameter with a higher priority by default.

- **Method 1:** Create a custom image from an instance. You only need to specify the instance ID (`InstanceId`). The instance must be in the Running (`Running`) or Stopped (`Stopped`) state. After the CreateImage operation is called, a new snapshot is created for each disk of the instance.
- **Method 2:** Create a custom image from the system disk snapshot of an ECS instance. You only need to specify the ID of the system disk snapshot (`SnapshotId`). The specified snapshot cannot be created on or before July 15, 2013.
- **Method 3:** Create a custom image from multiple disk snapshots. You must specify the data mapping between the disks corresponding to the snapshots (`DiskDeviceMapping` parameters).

When you use Method 3 to create a custom image, take note of the following items:

- You can specify only one system disk snapshot. The device name of the system disk must be `/dev/xvda`.
- You can specify multiple data disk snapshots. The device names of the data disks are unique and ascend from `/dev/xvdb` to `/dev/xvdz`.
- `SnapshotId` may not be specified. In this case, an empty data disk with a specific size is created.
- The specified snapshot cannot be created on or before July 15, 2013.

Debugging

OpenAPI Explorer automatically calculates the signature value. For your convenience, we recommend that you call this operation in OpenAPI Explorer. OpenAPI Explorer dynamically generates the sample code of the operation for different SDKs.

Request parameters

Parameter	Type	Required	Example	Description
Action	String	Yes	CreateImage	The operation that you want to perform. Set the value to CreateImage.
RegionId	String	Yes	cn-hangzhou	The region ID of the image. You can call the DescribeRegions operation to query the most recent region list.
DiskDeviceMapping.N.SnapshotId	String	No	s-bp17441ohwkdca0****	The ID of snapshot N that is used to create the custom image.

Parameter	Type	Required	Example	Description
DiskDeviceMapping.N.Size	Integer	No	2000	The size of disk N in the custom image. Unit: GiB. The valid values and default value of DiskDeviceMapping.N.Size depend on DiskDeviceMapping.N.SnapshotId. - If corresponding snapshot IDs are not specified in the DiskDeviceMapping.N.SnapshotId value, the following valid values and default value are available for DiskDeviceMapping.N.Size: - For basic disks, the valid values are 5 to 2000, and the default value is 5. - For other disk categories, the valid values are 20 to 32768, and the default value is 20. - If a corresponding snapshot ID is specified in the DiskDeviceMapping.N.SnapshotId value, the value of DiskDeviceMapping.N.Size must be greater than or equal to the size of the specified snapshot. The default value of DiskDeviceMapping.N.Size is the size of the specified snapshot.
DiskDeviceMapping.N.Device	String	No	/dev/vdb	The device name of disk N in the custom image. Valid values: - For disk categories other than basic disks, such as standard SSDs, ultra disks, and enhanced SSDs, the valid values are /dev/vda to /dev/vdz. - For basic disks, the valid values are /dev/xvda to /dev/xvdz.
DiskDeviceMapping.N.DiskType	String	No	system	The type of disk N in the custom image. You can set this parameter to create the system disk of the custom image from a data disk snapshot. If you do not set this parameter, the disk type is determined by the corresponding snapshot. Valid values: - system: system disk - data: data disk
SnapshotId	String	No	s-bp17441ohwkda0****	The ID of the snapshot that is used to create the custom image.
InstanceId	String	No	i-bp1g6zv0ce8oghu7*** *	The ID of the instance.
ImageName	String	No	TestCentOS	The name of the image. The name must be 2 to 128 characters in length and can contain letters, digits, colons (:), underscores (_), and hyphens (-). It must start with a letter and cannot start with http:// or https://. This parameter is empty by default.

Parameter	Type	Required	Example	Description
Description	String	No	ImageTestDescription	The description of the image. The description must be 2 to 256 characters in length and cannot start with http:// or https://. This parameter is empty by default.
Platform	String	No	CentOS	The distribution of the operating system for the system disk in the custom image. When you specify a data disk snapshot to create the system disk of the custom image, you must use the Platform parameter to determine the distribution of the operating system for the system disk. Default value: Others Linux. Valid values: - CentOS - Ubuntu - SUSE - OpenSUSE - RedHat - Debian - CoreOS - Aliyun - Windows Server 2012 - Windows 7 - Customized Linux - Others Linux
Architecture	String	No	x86_64	The system architecture of the system disk in the custom image. When you specify a data disk snapshot to create the system disk of the custom image, you must use the Architecture parameter to determine the system architecture of the system disk. Default value: x86_64. Valid values: - i386 - x86_64
ClientToken	String	No	123e4567-e89b-12d3-a456-426655440000	The client token that is used to ensure the idempotence of the request. You can use the client to generate the value, but you must make sure that it is unique among different requests. The ClientToken value can only contain ASCII characters and cannot exceed 64 characters in length. For more information, see How to ensure idempotence .
Tag.N.value	String	No	null	The value of tag N of the custom image.  Note This parameter will be removed in the future. We recommend that you use the Tag.N.Value parameter to ensure future compatibility.

Parameter	Type	Required	Example	Description
Tag.N.key	String	No	null	The key of tag N of the custom image.  Note This parameter will be removed in the future. We recommend that you use the Tag.N.Key parameter to ensure future compatibility.
Tag.N.Key	String	Yes	KeyTest	The key of tag N of the custom image. Valid values of N: 1 to 20. The tag key cannot be an empty string. It can be up to 128 characters in length and cannot contain http:// or https://. It cannot start with acs: or aliyun.
Tag.N.Value	String	No	ValueTest	The value of tag N of the custom image. Valid values of N: 1 to 20. The tag value can be an empty string. It can be up to 128 characters in length. It cannot start with acs: or contain http:// or https://.
ResourceGroupId	String	No	rg-bp67acfmazb4p****	The ID of the resource group to which to assign the custom image.
ImageFamily	String	No	hangzhou-daily-update	The name of the image family of the custom image. The name must be 2 to 128 characters in length and can contain letters, digits, colons (:), underscores (_), and hyphens (-). It cannot contain http:// or https://. It must start with a letter and cannot start with acs: or aliyun. This parameter is empty by default.

Response parameters

Parameter	Type	Example	Description
ImageId	String	m-bp146shijn7hujku****	The ID of the image.
RequestId	String	473469C7-AA6F-4DC5-B3DB-A3DC0DE3C83E	The ID of the request.

Examples

Sample requests

```

https://ecs.aliyuncs.com/?Action=CreateImage
&RegionId=cn-hangzhou
&DiskDeviceMapping.1.Size=2000
&DiskDeviceMapping.1.SnapshotId=s-bp17441ohwkdca0****
&DiskDeviceMapping.1.DiskType=system
&SnapshotId=s-bp17441ohwkdca0****
&InstanceId=i-bp1g6zv0ce8oghu7****
&ImageName=TestCentOS
&ImageVersion=2017011017
&Description=ImageTestDescription
&Platform=CentOS
&Architecture=x86_64
&ClientToken=123e4567-e89b-12d3-a456-426655440000
&Tag.1.Key=KeyTest
&Tag.1.Value=ValueTest
&<Common request parameters>

```

Sample success responses

XML format

```

<CreateImageResponse>
  <RequestId>C8B26B44-0189-443E-9816-D951F59623A9</RequestId>
  <ImageId>m-bp146shijn7hujku****</ImageId>
</CreateImageResponse>

```

JSON format

```

{
  "RequestId": "C8B26B44-0189-443E-9816-D951F59623A9",
  "ImageId": "m-bp146shijn7hujku****"
}

```

Error codes

HTTP status code	Error code	Error message	Description
404	InvalidSnapshotId.NotFound	The specified SnapshotId does not exist.	The error message returned because the specified snapshot ID does not exist. Check whether the snapshot ID is correct.
400	InvalidImageName.Malformed	The specified Image name is wrongly formed.	The error message returned because the specified ImageName parameter is invalid. The name must be 2 to 128 characters in length and can contain letters, digits, periods (.), underscores (_), and hyphens (-). It must start with a letter and cannot start with http:// or https://.
400	InvalidImageName.Duplicated	The specified Image name has already been used.	The error message returned because the specified image name is already in use.

HTTP status code	Error code	Error message	Description
400	InvalidDescription.Malformed	The specified description is wrongly formed.	The error message returned because the specified Description parameter is invalid. The description must be 2 to 256 characters in length and cannot start with http:// or https://.
400	InvalidImageVersion.Malformed	The specified ImageVersion is wrongly formed.	The error message returned because the specified image version is invalid or you are not authorized to use the snapshot.
403	InvalidSnapshotId.NotReady	The current status of the DiskDeviceMapping.n.SnapshotId or SnapshotId does not support this operation.	The error message returned because the operation is not supported while the specified snapshot is in the current state.
403	InvalidSnapshot.TooOld	This operation is denied because the specified snapshot by DiskDeviceMapping.n.SnapshotId or SnapshotId is created before 2013-07-15.	The error message returned because the operation is not supported while the snapshot specified by the DiskDeviceMapping.N.SnapshotId or SnapshotId parameter was created before July 15, 2013.
403	OperationDenied	The specified snapshot is not allowed to create image.	The error message returned because the specified snapshot cannot be used to create images.
403	QuotaExceed.Image	The Image Quota exceeds.	The error message returned because the maximum number of custom images has been reached.
403	OperationDenied	The specified snapshot is not from system disk.	The error message returned because the specified snapshot was not created from a system disk.
403	InvalidParamter.Conflict	The specified same token is trying to make requests with different parameters.	The error message returned because the same token is used to make requests that have different parameters.
404	InvalidInstanceId.NotFound	The specified InstanceId does not exist.	The error message returned because the specified InstanceId parameter does not exist. Check whether the instance ID is correct.
400	IncorrectInstanceStatus	The current status of the instance does not support this operation.	The error message returned because the operation is not supported while the instance is in the current state.
400	InstanceLockedForSecurity	The specified operation is denied as your instance is locked for security reasons.	The error message returned because the operation is not supported while the instance is locked for security reasons.
400	InvalidDevice.Malformed	The specified parameter DiskDeviceMapping.n.Device is not valid.	The error message returned because the specified DiskDeviceMapping.N.Device parameter is invalid.
400	MissingParameter	The input parameter SnapshotId or InstanceId or DiskDeviceMapping that is mandatory for processing this request is not supplied.	The error message returned because the SnapshotId, InstanceId, or DiskDeviceMapping parameter is not specified.

HTTP status code	Error code	Error message	Description
400	InvalidSize.ValueNotSupported	The specified parameter DiskDeviceMapping.n.Size beyond the permitted range.	The error message returned because the specified DiskDeviceMapping.N.Size parameter is not within the permitted range.
400	InvalidDevice.InUse	The specified parameter DiskDeviceMapping.n.Device has been occupied.	The error message returned because device names specified in the DiskDeviceMapping.N.Device value are already in use.
400	OperationDenied	The specified parameter DiskDeviceMapping.n.SnapshotId does not contain system disk snapshot.	The error message returned because the specified DiskDeviceMapping.N.SnapshotId parameter does not contain a system disk snapshot ID.
400	OperationDenied	The specified parameter DiskDeviceMapping.n.SnapshotId contains two or more system disk snapshots.	The error message returned because the specified DiskDeviceMapping.N.SnapshotId parameter already contains system disk snapshot IDs.
400	InvalidDiskCategory.CreateImage	The specified diskCategory is not allowed to create image.	The error message returned because the operation is not supported by the specified disk category.
403	InvalidAccountStatus.NotEnoughBalance	Your account does not have enough balance.	The error message returned because your account balance is insufficient. Top up your account and try again.
403	InvalidAccountStatus.SnapshotServiceUnavailable	Snapshot service has not been opened yet.	The error message returned because the operation is not supported while the snapshot service is not activated.
403	UserNotInTheWhiteList	The user is not in the white list of create image by data disk snapshot.	The error message returned because you are not authorized to create an image from data disk snapshots. Try again when you are authorized to do so.
400	InvalidArchitecture.Malformed	The specified Architecture is wrongly formed.	The error message returned because the specified Architecture parameter is invalid.
400	InvalidPlatform.Malformed	The specified Platform is wrongly formed.	The error message returned because the specified Platform parameter is invalid.
400	OperationDenied	Not support creating system image from an encrypted snapshot/disk.	The error message returned because an encrypted disk or snapshot cannot be used to create custom images.
400	InvalidParameter.AllEmpty	%s	The error message returned because no parameters are specified. Specify required parameters.
403	IncorrectDiskStatus.Invalid	Device status is invalid, please restart instance and try again.	The error message returned because the device status is invalid. Restart the instance and try again.
403	OperationDenied.InvalidSnapshotCategory	%s	The error message returned because the operation is not supported by the snapshot type.

HTTP status code	Error code	Error message	Description
403	QuotaExceed.Snapshot	The snapshot quota exceeds.	The error message returned because the maximum number of snapshots has been reached. To create new snapshots, delete snapshots that are no longer needed.
403	IncorrectDiskStatus.Transferring	The specified device is transferring, you can retry after the process is finished.	The error message returned because the specified disk is being migrated. Wait until the disk is migrated and try again.
403	IncorrectDiskStatus	The current disk status does not support this operation.	The error message returned because the operation is not supported while the disk is in the current state. Make sure that the disk is available and you have no overdue payment for it.
403	InvalidSystemSnapshot.Missing	? s	The error message returned because the specified SnapshotId parameter is invalid. Check whether the snapshot exists.
403	IncorrectDiskStatus.CreatingSnapshot	A previous snapshot creation is in process.	The error message returned because another snapshot is being created. Wait until the snapshot is created and try again.
404	InvalidResourceGroup.NotFound	The ResourceGroup provided does not exist in our records.	The error message returned because the specified ResourceGroupId parameter does not exist.
500	InternalError	The process of creating snapshot has failed due to some unknown error.	The error message returned because the snapshot has failed to be created.
403	InvalidParameter.KMSKeyId.KMSUnauthorized	ECS service have no right to access your KMS.	The error message returned because ECS is not authorized to access your KMS resources.
500	InternalError	The request processing has failed due to some unknown error, exception or failure.	The error message returned because an internal error has occurred. Try again later. If the problem persists, submit a ticket.
400	Duplicate.TagKey	The Tag.N.Key contain duplicate key.	The error message returned because the specified tag key already exists. Tag keys must be unique.
400	InvalidTagKey.Malformed	The specified Tag.n.Key is not valid.	The error message returned because the specified Tag.N.Key parameter is invalid.
400	InvalidTagValue.Malformed	The specified Tag.n.Value is not valid.	The error message returned because the specified Tag.N.Value parameter is invalid.
403	QuotaExceed.Tags	%s	The error message returned because the number of specified tags has exceeded the upper limit.
400	InvalidDiskType.ValueNotSupported	The specified disk type is not supported.	The error message returned because the specified disk type is not supported.

HTTP status code	Error code	Error message	Description
400	IdempotenceParamNotMatch	Request uses a client token in a previous request but is not identical to that request.	The error message returned because this request and the previous request contain the same client token but different parameters.

11.2. ImportImage

You can call this operation to import a local image to ECS. The local image then appears as a custom image in the corresponding region. The imported image can be used to create ECS instances (RunInstances) or replace system disks of instances (ReplaceSystemDisk).

Description

When you call this operation, take note of the following points:

- You must upload the image file to an Object Storage Service (OSS) bucket before you can import the image. For more information, see [Upload objects](#).
- You must use RAM to authorize ECS to access your OSS buckets before you import an image for the first time. Otherwise, the `NoSetRoletoECSServiceAccount` error code is returned. For information about the procedure, see [Implement access control by using RAM](#). The following example shows the procedure to configure RAM authorization policies:

1. Create a role named `AliyunECSImageImportDefaultRole`. You must use this exact name. Otherwise, the image will fail to be imported. Refer to the following code to set the policy for the role:

```
{
  "Statement": [
    {
      "Action": "sts:AssumeRole",
      "Effect": "Allow",
      "Principal": {
        "Service": [
          "ecs.aliyuncs.com"
        ]
      }
    }
  ],
  "Version": "1"
}
```

2. Attach the `AliyunECSImageImportRolePolicy` permission policy to the role. For more information, see the [RAM console](#). You can also create a custom policy, which must contain the following permissions:

```
{
  "Version": "1",
  "Statement": [
    {
      "Action": [
        "oss:GetObject",
        "oss:GetBucketLocation",
        "oss:GetBucketInfo"
      ],
      "Resource": "*",
      "Effect": "Allow"
    }
  ]
}
```

- You cannot delete an image that is being imported. However, you can call the [CancelTask](#) operation to cancel the image import task.
- You can import an image only to the same region as the OSS bucket to which the image file is uploaded.
- Valid values of N in the `DiskDeviceMapping.N` parameter: 1 to 17. When N is set to 1, the disk is a system disk. When N is set to an integer ranging from 2 to 17, the disk is a data disk.

Debugging

OpenAPI Explorer automatically calculates the signature value. For your convenience, we recommend that you call this operation in OpenAPI Explorer. OpenAPI Explorer dynamically generates the sample code of the operation for different SDKs.

Request parameters

Parameter	Type	Required	Example	Description
Action	String	Yes	ImportImage	The operation that you want to perform. Set the value to ImportImage.
RegionId	String	Yes	cn-hangzhou	The region ID of the source custom image. You can call the DescribeRegions operation to query the most recent region list.
DiskDeviceMapping.N.Format	String	No	QCOW2	The format of the image. Valid values: • RAW • VHD • QCOW2 This parameter is empty by default. This indicates that when you import an image, the system automatically detects the format of the image. The checking result is used as the value of this parameter.

Parameter	Type	Required	Example	Description
DiskDeviceMapping.N.OSSBucket	String	Yes	ecsimageos	The OSS bucket where the image file is stored.  Note Before you import the image file to the OSS bucket for the first time, see the "Description" section in this topic to add RAM authorization policies. If you do not add RAM authorization policies, the <code>NoSetRoletoECSServiceAccount</code> error code is returned.
DiskDeviceMapping.N.OSSObject	String	Yes	CentOS_5.4_32.raw	The OSS object (key) where the image file is stored.
DiskDeviceMapping.N.DiskImgSize	Integer	No	80	The size of the custom image.  Note This parameter will be removed in the future. We recommend that you use the <code>DiskDeviceMapping.N.DiskImageSize</code> parameter to ensure future compatibility.
DiskDeviceMapping.N.DiskImageSize	Integer	No	80	The size of the image. The space of the system disk must be greater than or equal to the actual used space of file systems. Valid values: - When N is set to 1, the disk is a system disk and the range of the parameter value is 5-500 GiB. - When N is an integer ranging from 2 to 17, the disk is a data disk and the range of the parameter value is 5-1000 GiB. When you import an image, the system automatically scans and checks the size of the image, and the checking result is used as the value of this parameter.
DiskDeviceMapping.N.Device	String	No	null	The name of disk N in the custom image.  Note This parameter will be removed in the future. We recommend that you use other parameters to ensure future compatibility.
ImageName	String	No	ImageTestName	The name of the image. The name must be 2 to 128 characters in length. It must start with a letter and cannot start with <code>http://</code> or <code>https://</code>. It can contain letters, digits, colons (:), underscores (_), and hyphens (-). This parameter is empty by default.

Parameter	Type	Required	Example	Description
Description	String	No	TestDescription	The description of the image. The description must be 2 to 256 characters in length and cannot start with http:// or https://. This parameter is empty by default.
Architecture	String	No	x86_64	The system architecture. Default value: x86_64. Valid values: • i386 • x86_64
OSType	String	No	linux	The type of the operating system. Default value: linux. Valid values: • windows • linux
Platform	String	No	Aliyun	The release version of the operating system. Default value: Others Linux. Valid values: • CentOS • Ubuntu • SUSE • openSUSE • Debian • CoreOS • Aliyun • Windows Server 2003 • Windows Server 2008 • Windows Server 2012 • Others Linux • Customized Linux
RoleName	String	No	AliyunECSImageImportDefaultRole	The name of the RAM role used to import the image.

Parameter	Type	Required	Example	Description
LicenseType	String	No	Auto	The type of the license used to activate the operating system after the image is imported. Default value: Auto. Valid values: - Auto: Alibaba Cloud detects the source operating system and allocates a license to the system. In this mode, the system first checks whether the release version specified by the <code>Platform</code> parameter has a license granted by Alibaba Cloud. If yes, ECS allocates the license to the imported image. If not, the license is switched to the bring your own license (BYOL) mode. - Aliyun: The license that is granted by Alibaba Cloud to the release version specified by the <code>Platform</code> parameter is used. - BYOL: The license for the source operating system is used. In this mode, make sure that your license key can be used in Alibaba Cloud.
Tag.N.Key	String	No	TestKey	The key of tag N for the image. Valid values of N: 1 to 20. The tag key cannot be an empty string. The tag key can be up to 128 characters in length and cannot contain <code>http://</code> or <code>https://</code> . It cannot start with <code>acs:</code> or <code>aliyun</code> .
Tag.N.Value	String	No	TestValue	The value of tag N for the image. Valid values of N: 1 to 20. The tag value can be an empty string. The tag value can be up to 128 characters in length and cannot contain <code>http://</code> or <code>https://</code> . It cannot start with <code>acs:</code> .
ResourceGroupId	String	No	rg-bp67acfmazb4p****	The ID of the enterprise resource group to which the image to be imported belongs.

Response parameters

Parameter	Type	Example	Description
ImageId	String	m-bp67acfmazb4p****	The ID of the image.
RegionId	String	cn-hangzhou	The ID of the region.
RequestId	String	473469C7-AA6F-4DC5-B3DB-A3DC0DE3C83E	The ID of the request.
TaskId	String	t-bp67acfmazb4p****	The ID of the image import task.

Examples

Sample requests

```

https://ecs.aliyuncs.com/?Action=ImportImage
&RegionId=cn-hangzhou
&DiskDeviceMapping.1.Format=QCOW2
&DiskDeviceMapping.1.OSSBucket=ecsimageos
&DiskDeviceMapping.1.OSSObject=CentOS_5.4_32.raw
&DiskDeviceMapping.1.DiskImageSize=80
&ImageName=Test
&Description=Test
&Architecture=x86_64
&OSType=linux
&Platform=Aliyun
&LicenseType=Aliyun
&<Common request parameters>

```

Sample success responses

XML format

```

<ImportImageResponse>
  <RequestId>C8B26B44-0189-443E-9816-D951F59623A9</RequestId>
  <ImageId>m-bp67acfmazb4p****</ImageId>
  <RegionId>cn-hangzhou</RegionId>
  <ImportTaskId>t-bp67acfmazb4p****</ImportTaskId>
</ImportImageResponse>

```

JSON format

```

{
  "RequestId": "C8B26B44-0189-443E-9816-D951F59623A9",
  "ImageId": "m-bp67acfmazb4p****",
  "RegionId": "cn-hangzhou",
  "ImportTaskId": "t-bp67acfmazb4p****"
}

```

Error codes

HTTP status code	Error code	Error message	Description
400	MissingParameter	An input parameter "RegionId" that is mandatory for processing the request is not supplied.	The error message returned because the required RegionId parameter is not specified.
400	MissingParameter	An input parameter "DiskDeviceMapping.1.OSSBucket" that is mandatory for processing the request is not supplied.	The error message returned because the required DiskDeviceMapping.N.OSSBucket parameter is not specified.
400	MissingParameter	An input parameter "DiskDeviceMapping.1.OSSObject" that is mandatory for processing the request is not supplied.	The error message returned because the required DiskDeviceMapping.N.OSSObject parameter is not specified.

HTTP status code	Error code	Error message	Description
400	InvalidImageName.Malformed	The specified Image name is wrongly formed.	The error message returned because the specified ImageName parameter is invalid. The name must be 2 to 128 characters in length and can contain letters, digits, periods (.), underscores (_), and hyphens (-). It cannot start with http:// or https://.
400	InvalidOSSObject.Malformed	The specified OSS object is wrongly formed.	The error message returned because the specified OSS object is invalid.
400	InvalidDescription.Malformed	The specified Image description is wrongly formed.	The error message returned because the specified Description parameter is invalid.
400	InvalidArchitecture.Malformed	The specified Architecture is wrongly formed.	The error message returned because the specified Architecture parameter is invalid.
400	InvalidPlatform.Malformed	The specified Platform is wrongly formed.	The error message returned because the specified Platform parameter is invalid.
400	InvalidOSType.Malformed	The specified OSType is wrongly formed.	The error message returned because the specified OSType parameter is invalid.
400	InvalidImageName.Duplicated	The destination image is exist.	The error message returned because the specified image name already exists.
400	InvalidImageSize	%s	The error message returned because the specified DiskDeviceMapping.N.DiskImageSize parameter is invalid.
400	InvalidDataDiskSize	The specified DiskDeviceMapping.N.DiskImageSize should be in the specified range.	The error message returned because the specified value of the DiskDeviceMapping.N.DiskImageSize parameter is out of range.
400	InvalidImageFormat.Malformed	The specified Image Format is wrongly formed.	The error message returned because the specified image format is invalid.
400	InvalidRegionId.NotFound	The specified RegionId does not exist.	The error message returned because the specified RegionId parameter does not exist.
400	InvalidRegion.NotSupported	The specified region does not support image import or export.	The error message returned because the specified region does not support this operation.
403	ImagesImporting	The specified Image is importing.	The error message returned because the specified image is being imported and cannot be managed.
403	QuotaExceed.Image	The Image Quota exceeds.	The error message returned because the maximum number of custom images has been reached.
403	ImportImageFailed	Importing image is failed, Please contact the administrator.	The error message returned because the image failed to be imported. Contact the system administrator.

HTTP status code	Error code	Error message	Description
403	UserNotInTheWhiteList	The user is not in the white list of importing image.	The error message returned because you are not authorized to import images.
403	NoSetRoletoECSServiceAccount	ECS service account Have no right to access your OSS,please attach a role of access your oss to ECS service account.	The error message returned because ECS is not authorized to access the specified OSS bucket and object.
400	InvalidOSSBucket.NotFound	The specified OSS bucket does not exist in this region.	The error message returned because the specified OSS bucket does not exist.
403	InvalidParameter.Malformed	The specified parameter "DiskDeviceMapping.n.Device " is not valid.	The error message returned because the specified DiskDeviceMapping.N.Device parameter is invalid.
403	MissingParameter.DiskDeviceMapping	The specified parameter DiskDeviceMapping is not supplied.	The error message returned because the DiskDeviceMapping parameter is not specified.
400	InvalidOSSObject.NotFound	The specified OSS object does not exist in this region.	The error message returned because the specified OSS object does not exist.
400	InvalidOSSObject.NotFound	The specified OSS object cannot be retrieved.	The error message returned because the specified OSS object cannot be retrieved.
400	InvalidLicenseType.NotSupported	The specified LicenseType is not supported	The error message returned because the specified LicenseType parameter is not supported.
400	InvalidLicenseType.BYOLOnly	Only BYOL LicenseType is supported for the current platform provided	The error message returned because the current platform supports only BYOL-type licenses.

11.3. CopyImage

You can call this operation to copy a custom image from one region to another. By copying images, you can deploy and copy ECS instances across regions.

Description

You can use copied images to create ECS instances (RunInstances) or replace system disks of instances (ReplaceSystemDisk) in the destination region.

When you call this operation, take note of the following points:

- The custom image must be in the Available (Available) state.
- You can only copy the images in your Alibaba Cloud account. Images cannot be copied from one account to another.
- If the copying process is not completed, you cannot delete the image copy by calling the [DeleteImage](#) operation, but you can cancel the copying task by calling the [CancelCopyImage](#) operation.

Debugging

OpenAPI Explorer automatically calculates the signature value. For your convenience, we recommend that you call this operation in OpenAPI Explorer. OpenAPI Explorer dynamically generates the sample code of the operation for different SDKs.

Request parameters

Parameter	Type	Required	Example	Description
Action	String	Yes	CopyImage	The operation that you want to perform. Set the value to CopyImage.
ImageId	String	Yes	m-bp1h46wfpjsjastc****	The ID of the source custom image.
RegionId	String	Yes	cn-hangzhou	The region ID of the source custom image. You can call the DescribeRegions operation to query the most recent region list.
DestinationRegionId	String	No	cn-shanghai	The region ID of the image copy.
DestinationImageName	String	No	YourImageName	The name of the image copy. The name must be 2 to 128 characters in length and can contain letters, digits, colons (:), underscores (_), and hyphens (-). The name must start with a letter and cannot start with http:// or https://. This parameter is empty by default.
DestinationDescription	String	No	This is a description example.	The description of the image copy. The description must be 2 to 256 characters in length and cannot start with http:// or https://. This parameter is empty by default.
Encrypted	Boolean	No	false	Specifies whether to encrypt the image copy. Default value: false.
KMSKeyId	String	No	e522b26d-abf6-4e0d-b5da-04b7*****3c	The ID of the key used to encrypt the image.

Response parameters

Parameter	Type	Example	Description
ImageId	String	m-bp1h46wfpjsjastd****	The ID of the image copy.
RequestId	String	473469C7-AA6F-4DC5-B3DB-A3DC0DE3C83E	The ID of the request.

Examples

Sample requests

```
https://ecs.aliyuncs.com/?Action=CopyImage
&ImageId=m-bp1h46wfpjsjastc****
&RegionId=cn-hangzhou
&<Common request parameters>
```

Sample success responses

XML format

```
<CopyImageResponse>
  <RequestId>C8B26B44-0189-443E-9816-D951F59623A9</RequestId>
  <ImageId>m-bp1h46wfpjsjstd****</ImageId>
</CopyImageResponse>
```

JSON format

```
{
  "RequestId": "C8B26B44-0189-443E-9816-D951F59623A9",
  "ImageId": "m-bp1h46wfpjsjstd****"
}
```

Error codes

HTTP status code	Error code	Error message	Description
401	InvalidAliUid.IsNull	The aliUid must not be null	The error message returned because the required aliUid parameter is not specified.
400	InvalidImageName.Malformed	The specified Image name is wrongly formed.	The error message returned because the specified image name is invalid. The name must be 2 to 128 characters in length and can contain letters, digits, periods (.), underscores (_), and hyphens (-). The name must start with a letter and cannot start with http:// or https://.
403	Forbidden	User not authorized to operate on the specified resource.	The error message returned because you are not authorized to operate on the specified resource.
400	InvalidImageName.Malformed	The specified destination Image name is wrongly formed.	The error message returned because the specified image name is invalid. The name must be 2 to 128 characters in length and can contain letters, digits, periods (.), underscores (_), commas (,), and hyphens (-). The name must start with a letter and cannot start with http:// or https://.
400	InvalidDescription.Malformed	The specified destination description is wrongly formed.	The error message returned because the specified DestinationDescription parameter is invalid. The description must be 2 to 256 characters in length and cannot start with http:// or https://.
400	InvalidDescription.Malformed	The specified description is wrongly formed.	The error message returned because the specified DestinationDescription parameter is invalid. The description must be 2 to 256 characters in length and cannot start with http:// or https://.
400	SourceRegion.NotFound	The source region not found	The error message returned because the specified region of the source image does not exist.

HTTP status code	Error code	Error message	Description
400	DestinationRegion.NotFound	The destination region not found	The error message returned because the specified region of the destination image does not exist.
404	InvalidImageId.NotFound	The specified ImageId does not exist.	The error message returned because the specified ImageId parameter does not exist in this account.
400	IncorrectImageStatus	The image not available.	The error message returned because the specified image is unavailable.
400	InvalidSnapshotId.NotFound	The specified SnapshotId does not exist.	The error message returned because the specified snapshot ID does not exist. Check whether the snapshot ID is correct.
400	InvalidImageName.Duplicated	The destination image is exist.	The error message returned because the specified image name already exists.
403	QuotaExceed.Image	The Image Quota exceeds.	The error message returned because the maximum number of custom images has been reached.
403	QuotaExceed.Snapshot	The snapshot quota exceeds.	The error message returned because the maximum number of snapshots has been reached. To create new snapshots, delete unnecessary snapshots without affecting your business.
403	OperationDenied.Image Copying	The Image are coping.	The error message returned because the source image is being copied. Try again later.
403	RegionNotSupportCopy	The region not support copy.	The error message returned because image copying is not supported in the region where the source image or the image copy is located.
403	InvalidSnapshot.TooOld	This operation is denied because the specified snapshot is created before 2013-07-15.	The error message returned because the operation is not supported when the specified snapshot was created before July 15, 2013.
403	OperationDenied	The specified snapshot is not allowed to create image.	The error message returned because the specified snapshot cannot be used to create images.
403	IncorrectDestinationRegion	The destination region is not equal the target region.	The error message returned because the region of the source image cannot be the same as the image copy.
403	SizeExceed.Image	The image exceeds the maximum size. Please open a ticket to add the account to the white list.	The error message returned because the size of the image exceeds the upper limit. Contact customer service to add the image to the whitelist.
403	OperationDeined.EncryptedSnapshot	The image contains encrypted snapshots, which do not support copying.	The error message returned because the specified image contains encrypted snapshots and cannot be copied.

HTTP status code	Error code	Error message	Description
403	InternalServerError	The request processing has failed due to some unknown error.	The error message returned because an internal error has occurred. Try again later. If the problem persists, submit a ticket.
403	OperationDenied.SameRegionOnly	The image shared from others can not be copied to another region directly.	The error message returned because you cannot copy images shared by other Alibaba Cloud accounts to another region.
403	OperationDenied.NotPublished	The operation is denied because corresponding marketplace image is not published in destination region.	The error message returned because the destination region does not support images of this type and the operation is rejected.
404	InvalidParameter.KMSKeyId.NotFound	The specified KMSKeyId does not exist.	The error message returned because the specified KMSKeyID parameter does not exist.
403	InvalidParameter.KMSKeyId.KMSUnauthorized	ECS service have no right to access your KMS.	The error message returned because ECS is not authorized to access your KMS resources.
500	InternalServerError	The request processing has failed due to some unknown error, exception or failure.	The error message returned because an internal error has occurred. Try again later. If the problem persists, submit a ticket.
403	InvalidRegion.NotSupportByok	The specified region does not support byok.	The error message returned because the bring your own key (BYOK) feature is not supported in this region.
403	UserNotInTheWhiteList	The user is not in byok white list.	The error message returned because you are not in the BYOK whitelist. Try again when you are in the whitelist.
400	InvalidParameter.EncryptedIllegal	The specified parameter Encrypted must be true when kmsKeyId is not empty.	The error message returned because the encryption feature is not enabled after the KMS key ID is specified.

11.4. CancelCopyImage

You can call this operation to cancel an ongoing image copying (CopyImage) task.

Description

When you call this operation, take note of the following items:

- After you cancel the task, the image copy created in the target region is deleted, and the source image remains unchanged.
- If the image copying process is complete, the CancelCopyImage operation fails and an error is returned.

Debugging

OpenAPI Explorer automatically calculates the signature value. For your convenience, we recommend that you call this operation in OpenAPI Explorer. OpenAPI Explorer dynamically generates the sample code of the operation for different SDKs.

Request parameters

Parameter	Type	Required	Example	Description

Parameter	Type	Required	Example	Description
Action	String	Yes	CancelCopyImage	The operation that you want to perform. Set the value to CancelCopyImage.
ImageId	String	Yes	m-bp1caf3yicx5jlf****	The ID of the image being copied.
RegionId	String	Yes	cn-hangzhou	The region ID of the image copy. You can call the DescribeRegions operation to query the most recent region list.

Response parameters

Parameter	Type	Example	Description
RequestId	String	473469C7-AA6F-4DC5-B3DB-A3DC0DE3C83E	The ID of the request.

Examples

Sample requests

```
https://ecs.aliyuncs.com/?Action=CancelCopyImage
&ImageId=m-bp1caf3yicx5jlf****
&RegionId=cn-hangzhou
&<Common request parameters>
```

Sample success responses

XML format

```
<CancelCopyImageResponse>
  <RequestId>C8B26B44-0189-443E-9816-D951F59623A9</RequestId>
</CancelCopyImageResponse>
```

JSON format

```
{
  "RequestId": "C8B26B44-0189-443E-9816-D951F59623A9"
}
```

Error codes

HTTP status code	Error code	Error message	Description
404	InvalidRegionId.NotFound	The specified RegionId does not exist.	The error message returned because the specified RegionId parameter does not exist.
404	InvalidImageId.NotFound	The specified ImageId does not exist.	The error message returned because the specified image does not exist in the account. Check whether the image ID is correct.

HTTP status code	Error code	Error message	Description
400	ImageCreatedNotFromCopy	The specified image is not the target image of a copy action.	The error message returned because the specified image ID is not the ID of the image that is being copied. Enter the ID of the image that is being copied.
400	IncorrectImageStatus	The image is copied finished.	The error message returned because the specified image has been copied and the copying task cannot be canceled.
400	InvalidDescription.Malformed	The specified description is wrongly formed.	The error message returned because the specified Description parameter is invalid. The description must be 2 to 256 characters in length and cannot start with http:// or https://.
400	IncorrectImageStatus	The specified snapshot is not coping.	The error message returned because the specified snapshot is not being copied.
400	IncorrectImageStatus	The specified image is not coping.	The error message returned because the specified image is not being copied.
400	IncorrectImageStatus	The image has completed copy.	The error message returned because the specified image has been copied and the copying task cannot be canceled.
400	IncorrectImageStatus	The Image copy has been failed.	The error message returned because the specified image failed to be copied.
500	InternalServerError	The request processing has failed due to some unknown error.	The error message returned because an internal error has occurred. Try again later. If the problem persists, submit a ticket.
400	CancelNotSupported	The specified image coping can not be cancelled.	The error message returned because the specified copying task cannot be canceled.

11.5. ExportImage

You can call this operation to export a custom image to an OSS bucket in the same region.

Description

- If system disk snapshots have been taken for the instances created from Alibaba Cloud Marketplace images, you cannot call this operation to export the custom images created from these system disk snapshots.
- A custom disk cannot be exported if it contains more than four data disk snapshots or if any of the data disks exceed 500 GiB in size.
- Before you export a custom image, you must use Resource Access Management (RAM) to create a RAM role for ECS, and then authorize ECS to write data to OSS by attaching a permission policy to the role.
 1. Create a role named `AliyunECSImageExportDefaultRole`. Any other role names are invalid. Configure the following trust policy for the role:


```
{
  "Statement": [
    {
      "Action": "sts:AssumeRole",
      "Effect": "Allow",
      "Principal": {
        "Service": [
          "ecs.aliyuncs.com"
        ]
      }
    }
  ],
  "Version": "1"
}
```

2. Attach the default system permission policy `AliyunECSImageExportRolePolicy` to the `AliyunECSImageExportDefaultRole` role. This policy is the default policy used for ECS to export images. For more information, go to the [Cloud Resource Access Authorization](#) page. You can also create your custom policies with the following permissions:

```
{
  "Version": "1",
  "Statement": [
    {
      "Action": [
        "oss:GetObject",
        "oss:PutObject",
        "oss:DeleteObject",
        "oss:GetBucketLocation",
        "oss:GetBucketInfo",
        "oss:AbortMultipartUpload",
        "oss:ListMultipartUploads",
        "oss:ListParts"
      ],
      "Resource": "*",
      "Effect": "Allow"
    }
  ]
}
```

Debugging

OpenAPI Explorer automatically calculates the signature value. For your convenience, we recommend that you call this operation in OpenAPI Explorer. OpenAPI Explorer dynamically generates the sample code of the operation for different SDKs.

Request Parameters

Parameter	Type	Required	Example	Description
Action	String	Yes	ExportImage	The operation that you want to perform. Set the value to ExportImage.

Parameter	Type	Required	Example	Description
ImageId	String	Yes	m-bp67acfmazb4p****	The ID of the custom image to be exported.
OSSBucket	String	Yes	testexportImage	The OSS bucket to which the custom image is to be exported.
RegionId	String	Yes	cn-hangzhou	The region ID of the custom image. You can call the DescribeRegions operation to query the most recent region list.
OSSPrefix	String	No	EcsExport	The prefix of the OSS object. It must be 1 to 30 characters in length and can contain digits and letters.
ImageFormat	String	No	raw	The format of the exported image file. Valid values: - raw - vhd - qcow2 - vmdk - vdi Default value: raw
RoleName	String	No	EcsServiceRole-EcsDocGuideTest	The name of the RAM role used to export the custom image.

Response parameters

Parameter	Type	Example	Description
RegionId	String	cn-hangzhou	The ID of the region.
RequestId	String	C8B26B44-0189-443E-9816-D951F59623A9	The ID of the request.
TaskId	String	tsk-bp67acfmazb4p****	The ID of the image export task.

Examples

Sample requests

```
https://ecs.aliyuncs.com/?Action=ExportImage
&ImageId=m-bp67acfmazb4p****
&OSSBucket=testexportImage
&RegionId=cn-hangzhou
&OSSPrefix=EcsExport
&ImageFormat=raw
&<Common request parameters>
```

Sample success responses

XML format

```
<ExportImageResponse>
  <RequestId>C8B26B44-0189-443E-9816-D951F59623A9</RequestId>
  <ExportTaskId>tsk-bp67acfmxb4p****</ExportTaskId>
  <RegionId>cn-hangzhou</RegionId>
</ExportImageResponse>
```

JSON format

```
{
  "RequestId": "C8B26B44-0189-443E-9816-D951F59623A9",
  "ExportTaskId": "tsk-bp67acfmxb4p****",
  "RegionId": "cn-hangzhou"
}
```

Error codes

HTTP status code	Error code	Error message	Description
400	MissingParameter	An input parameter "RegionId" that is mandatory for processing the request is not supplied.	The error message returned because the required RegionId parameter is not specified.
400	MissingParameter	An input parameter "ImageId" that is mandatory for processing the request is not supplied.	The error message returned because the required ImageId parameter is not specified.
400	MissingParameter	An input parameter "OSSBucket" that is mandatory for processing the request is not supplied.	The error message returned because the required OSSBucket parameter is not specified.
400	InvalidImageName.Malformed	The specified Image name is wrongly formed.	The error message returned because the specified image name is invalid. The name must be 2 to 128 characters in length and can contain letters, digits, periods (.), underscores (_), and hyphens (-). It must start with a letter and cannot start with http:// or https://.
400	InvalidOSSPrefix.Malformed	The specified OSSPrefix format is wrongly formed.	The error message returned because the specified OSSPrefix parameter is invalid.
400	InvalidRegionId.NotFound	The specified RegionId does not exist.	The error message returned because the specified region ID does not exist.
400	InvalidRegion.NotSupported	The specified region does not support image import or export.	The error message returned because the specified region does not support this operation.
404	InvalidImageId.NotFound	The specified ImageId does not exist.	The error message returned because the specified image does not exist under this account.
400	IncorrectImageStatus	The specified Image is not available.	The error message returned because the operation is not supported while the specified image is in the current state.

HTTP status code	Error code	Error message	Description
403	ImageNotSupported	The specified image from the image market, do not support export image.	The error message returned because the specified image is an Alibaba Cloud Marketplace image and cannot be exported.
400	InvalidImageFormat.Malformed	The specified Image Format is wrongly formed.	The error message returned because the specified ImageFormat parameter is invalid.
403	ImageIsExporting	The specified Image is exporting.	The error message returned because the specified image is being exported.
403	ExportImageFailed	Exporting image is failed, Please contact the administrator.	The error message returned because the image has failed to be exported. Contact a system administrator.
403	UserNotInTheWhiteList	The user is not in the white list of exporting image.	The error message returned because you are not authorized to export images.
403	NoSetRoletoECSServiceAccount	ECS service account Have no right to access your OSS, please attach a role of access your oss to ECS service account.	The error message returned because ECS is not authorized to access the specified OSS bucket and object.
400	InvalidOSSBucket.NotFound	The specified OSS bucket does not exist in this region.	The error message returned because the specified bucket does not exist.
400	OperationDenied	The specified image contains the snapshot of the data disk, does not support this operation.	The error message returned because the operation is not supported while the specified image contains data disk snapshots.
400	InvalidImage.DiskAmountOrSize	%s	The error message returned because the number of data disk snapshots contained in the image or the size of one of the data disks exceeds the upper limit for image export.
400	ImageNotSupported	The specified Image contains encrypted snapshots, do not support export.	The error message returned because the specified image contains encrypted snapshots and cannot be exported.
400	ImageNotSupported	Image from image market does not support exporting.	The error message returned because Alibaba Cloud Marketplace images cannot be exported.
403	ConcurrentQuotaExceed.ExportImage	%s	The error message returned because the maximum number of concurrent ongoing tasks has been reached. Try again later.
403	WeeklyQuotaExceed.ExportImage	%s	The error message returned because the weekly quota for exported images of this week has been used up. Retry when the quota becomes available again.

11.6. DescribeImages

You can call this operation to query available images.

Description

- You can query your custom images, public images provided by Alibaba Cloud, Alibaba Cloud Marketplace images, and shared images from other Alibaba Cloud accounts.
- This operation supports paged query. The response contains the total number of available images and the images on the returned page. By default, ten entries are displayed on each page.

When you call an API operation by using Alibaba Cloud Command Line Interface (CLI), you must specify request parameter values of different data types in required formats. For more information, see [CLI parameter format](#).

Debugging

OpenAPI Explorer automatically calculates the signature value. For your convenience, we recommend that you call this operation in OpenAPI Explorer. OpenAPI Explorer dynamically generates the sample code of the operation for different SDKs.

Request parameters

Parameter	Type	Required	Example	Description
Action	String	Yes	DescribeImages	The operation that you want to perform. Set the value to DescribeImages.
RegionId	String	Yes	cn-hangzhou	The region ID of the images to be queried. You can call the DescribeRegions operation to query the most recent region list.
Status	String	No	Available	The status of the image. Default value: Available. Valid values: • Creating: The image is being created. • Waiting: The image is waiting to be processed. • Available: The image is available. • UnAvailable: The image is unavailable. • CreateFailed: The image failed to be created. • Deprecated: The image is discontinued. Separate multiple parameter values by using commas (,).
ImageId	String	No	m-bp1g7004ksh0euc*** *	The ID of the image.
ShowExpired	Boolean	No	false	Specifies whether the subscription image has expired.  Note This parameter will be removed in the future. We recommend that you use other parameters to ensure future compatibility.
SnapshotId	String	No	s-bp17ot2q7x72ggtw*** *	The ID of the snapshot used to create the custom image.
ImageName	String	No	testImageName	The name of the image.

Parameter	Type	Required	Example	Description
ImageFamily	String	No	hangzhou-daily-update	The name of the image family. You can set this parameter to query images of the specified image family. This parameter is empty by default.
ImageOwnerAlias	String	No	self	The source of the image. Valid values: • system: public images provided by Alibaba Cloud • self: your custom images • others: shared images from other Alibaba Cloud accounts • marketplace: Alibaba Cloud Marketplace images If Alibaba Cloud Marketplace images are returned in the response, you can use the images without subscription. You must pay attention to the billing details of Alibaba Cloud Marketplace images. This parameter is empty by default, which indicates that the results matching system, self, and others are returned.
InstanceType	String	No	ecs.g5.large	The instance type for which the image can be used.
IsSupportIoOptimized	Boolean	No	true	Specifies whether the image can be used on I/O optimized instances.
IsSupportCloudinit	Boolean	No	true	Specifies whether the image supports cloud-init.
OSType	String	No	linux	The operating system type of the image. Valid values: • windows • linux
Architecture	String	No	i386	The image architecture. Valid values: • i386 • x86_64
PageNumber	Integer	No	1	The number of the page to return. Pages start from page 1. Default value: 1
PageSize	Integer	No	1	The number of entries to return on each page. Valid values: 1 to 100. Default value: 10

Parameter	Type	Required	Example	Description
Usage	String	No	instance	Specifies whether the image is running on an ECS instance. Valid values: - instance: The image is already in use and running on an ECS instance. - none: The image is not in use.
Tag.N.value	String	No	null	The value of tag N of the image.  Note This parameter will be removed in the future. We recommend that you use the Tag.N.Value parameter to ensure future compatibility.
Tag.N.key	String	No	null	The key of tag N of the image.  Note This parameter will be removed in the future. We recommend that you use the Tag.N.Key parameter to ensure future compatibility.
Tag.N.Key	String	No	TestKey	The key of tag N of the image. Valid values of N: 1 to 20.
Tag.N.Value	String	No	TestValue	The value of tag N of the image. Valid values of N: 1 to 20.
DryRun	Boolean	No	false	Specifies whether to check the validity of the request without actually making the request. - true: The validity of the request is checked but resources are not queried. Check items include whether your AccessKey pair is valid, whether RAM users are authorized, and whether the required parameters are specified. If the check fails, the corresponding error message is returned. If the check succeeds, the DryRunOperation error code is returned. - false: The validity of the request is checked, and a 2XX HTTP status code is returned and resources are queried if the check succeeds. Default value: false.
ActionType	String	No	CreateEcs	The scenario in which the image will be used. Default value: CreateEcs. Valid values: - CreateEcs: instance creation - ChangeOS: replacement of the system disk or operating system
Filter.N.Key	String	No	CreationStartTime	The key of filter N.
Filter.N.Value	String	No	2017-12-05T22:40:00Z	The value of filter N.

Parameter	Type	Required	Example	Description
ResourceGroupId	String	No	rg-bp67acfmazb4p****	The ID of the resource group to which the custom image belongs.

Response parameters

Parameter	Type	Example	Description
Images	Array		The collection of information about images.
Image			
Architecture	String	x86_64	The image architecture. Valid values: - i386 - x86_64
CreationTime	String	2018-01-10T01:01:10Z	The time when the image was created.
Description	String	Archive log for Oracle	The description of the image.
DiskDeviceMappings	Array		The mappings between disks and snapshots under the image.
DiskDeviceMapping			
Device	String	/dev/xvdb	The device name of the disk, such as /dev/xvdb.  Note This parameter will be removed in the future. We recommend that you use other parameters to ensure future compatibility.
Format	String	qcow2	The format of the image.
ImportOSSBucket	String	testEcsImport	The OSS bucket that contains the imported image file.
ImportOSSObject	String	imageImport	The OSS object that corresponds to the imported image file.
Progress	String	32%	The progress of an image copy task.
RemainTime	Integer	213	The remaining time for an image copy task. Unit: seconds.
Size	String	80	The size of the disk.
SnapshotId	String	s-bp17ot2q7x72ggtw****	The ID of the snapshot.

Parameter	Type	Example	Description
Type	String	custom	The type of the image.
ImageFamily	String	as-hangzhou-game-01	The name of the image family.
ImageId	String	m-bp1g7004ksh0euc****	The ID of the image.
ImageName	String	testImageName	The name of the image.
ImageOwnerAlias	String	self	The alias of the image owner. Valid values: - system: public images provided by Alibaba Cloud - self: your custom images - others: shared images from other Alibaba Cloud accounts - marketplace: Alibaba Cloud Marketplace images
ImageVersion	String	2	The version of the image.
IsCopied	Boolean	false	Indicates whether the image is a copy of another image.
IsSelfShared	String	true	Indicates whether the image has been shared to other Alibaba Cloud accounts.
IsSubscribed	Boolean	false	Indicates whether you have subscribed to the image that corresponds to the specified product code.
IsSupportCloudinit	Boolean	true	Indicates whether the image supports cloud-init.
IsSupportIoOptimized	Boolean	true	Indicates whether the image can be used on I/O optimized instances.
OSName	String	Alibaba Cloud Linux 2.1903	The Chinese name of the operating system.
OSNameEn	String	Alibaba Cloud Linux 2.1903	The English name of the operating system.
OSType	String	Linux	The type of the operating system. Valid values: - windows - linux
Platform	String	Alibaba Cloud Linux	The platform of the operating system.
ProductCode	String	jxsc000204	The product code of the Alibaba Cloud Marketplace image.
Progress	String	100	The image creation progress. Unit: percent (%).

Parameter	Type	Example	Description
ResourceGroupId	String	rg-bp67acfmazb4p****	The ID of the resource group to which the image belongs.
Size	Integer	80	The size of the image. Unit: GiB.
Status	String	Available	The status of the image. Valid values: - Unavailable: The image is unavailable. - Available: The image is available. - Creating: The image is being created. - CreateFailed: The image failed to be created.
Tags	Array		An array that consists of Tag data.
Tag			
TagKey	String	TestKey	The tag key of the image.
TagValue	String	TestValue	The tag value of the image.
Usage	String	none	Indicates whether the image has been used to create ECS instances. Valid values: - instance: The image has been used to create one or more ECS instances. - none: The image has not been used to create ECS instances.
PageNumber	Integer	1	The page number of the returned page.
PageSize	Integer	1	The number of entries returned per page.
RegionId	String	cn-hangzhou	The region ID of the image.
RequestId	String	473469C7-AA6F-4DC5-B3DB-A3DC0DE3C83E	The ID of the request.
TotalCount	Integer	24	The total number of images.

Examples

Sample requests

```
https://ecs.aliyuncs.com/?Action=DescribeImages
&RegionId=cn-hangzhou
&PageSize=1
&PageNumber=1
&<Common request parameters>
```

Sample success responses

XML format

```

<DescribeImagesResponse>
  <PageNumber>1</PageNumber>
  <TotalCount>61</TotalCount>
  <PageSize>1</PageSize>
  <RegionId>cn-hangzhou</RegionId>
  <RequestId>66189103-EDB2-43E2-BB60-BFF2B62F4EB8</RequestId>
  <Images>
    <Image>
      <ImageId>m-bp1g7004ksh0euc****</ImageId>
      <ImageFamily>hangzhou-daily-update</ImageFamily>
      <Description>Archive log for Oracle</Description>
      <OSNameEn>Windows Server 2016 Data Center Edition 64bit Chinese Edition</OSNameEn>
      <ProductCode></ProductCode>
      <ResourceGroupId></ResourceGroupId>
      <OSType>windows</OSType>
      <Architecture>x86_64</Architecture>
      <OSName>Windows Server 2016 Datacenter Edition 64-bit (Chinese)</OSName>
      <DiskDeviceMappings>
        <DiskDeviceMapping>
          <ImportOSSObject></ImportOSSObject>
          <Format></Format>
          <Device>/dev/xvda</Device>
          <Type>system</Type>
          <SnapshotId>s-bp17ot2q7x72ggtw****</SnapshotId>
          <ImportOSSBucket></ImportOSSBucket>
          <Progress></Progress>
          <Size>60</Size>
        </DiskDeviceMapping>
      </DiskDeviceMappings>
      <ImageOwnerAlias>self</ImageOwnerAlias>
      <Progress>100%</Progress>
      <IsSupportCloudinit>true</IsSupportCloudinit>
      <Usage>none</Usage>
      <CreationTime>2019-11-15T06:07:05Z</CreationTime>
      <ImageVersion></ImageVersion>
      <Tags>
        <Tag>
          <TagValue>Oracle</TagValue>
          <TagKey>DTS</TagKey>
        </Tag>
      </Tags>
      <Status>Available</Status>
      <ImageName>Oracle_DTS</ImageName>
      <IsSupportIoOptimized>true</IsSupportIoOptimized>
      <IsSelfShared>False</IsSelfShared>
      <IsCopied>false</IsCopied>
      <IsSubscribed>false</IsSubscribed>
      <Platform>Windows Server 2016</Platform>
      <Size>60</Size>
    </Image>
  </Images>

```

```
</Images>
</DescribeImagesResponse>
```

JSON format

```
{
  "PageNumber": 1,
  "TotalCount": 61,
  "PageSize": 1,
  "RegionId": "cn-hangzhou",
  "RequestId": "66189103-EDB2-43E2-BB60-BFF2B62F4EB8",
  "Images": {
    "Image": [
      {
        "ImageId": "m-bp1g7004ksh0oeuc****",
        "ImageFamily": "hangzhou-daily-update",
        "Description": "Archive log for Oracle",
        "OSNameEn": "Windows Server 2016 Data Center Edition 64bit Chinese Edition",
        "ProductCode": "",
        "ResourceGroupId": "",
        "OSType": "windows",
        "Architecture": "x86_64",
        "OSName": "Windows Server 2016 Datacenter Edition 64-bit (Chinese)",
        "DiskDeviceMappings": {
          "DiskDeviceMapping": [
            {
              "ImportOSSObject": "",
              "Format": "",
              "Device": "/dev/xvda",
              "Type": "system",
              "SnapshotId": "s-bp17ot2q7x72ggtw****",
              "ImportOSSBucket": "",
              "Progress": "",
              "Size": "60"
            }
          ]
        },
        "ImageOwnerAlias": "self",
        "Progress": "100%",
        "IsSupportCloudinit": true,
        "Usage": "none",
        "CreationTime": "2019-11-15T06:07:05Z",
        "ImageVersion": "",
        "Tags": {
          "Tag": [
            {
              "TagValue": "Oracle",
              "TagKey": "DTS"
            }
          ]
        }
      }
    ]
  }
}
```

```

    },
    "Status": "Available",
    "ImageName": "Oracle_DTS",
    "IsSupportIoOptimized": true,
    "IsSelfShared": "False",
    "IsCopied": false,
    "IsSubscribed": false,
    "Platform": "Windows Server 2016",
    "Size": 60
  }
]
}
}

```

Error codes

HTTP status code	Error code	Error message	Description
400	InvalidImageOwnerAlias.ValueNotSupported	The specified ImageOwnerAlias value is not supported.	The error message returned because the specified ImageOwnerAlias parameter is invalid.
400	InvalidParamter	Invalid Parameter	The error message returned because a specified parameter is invalid.
404	InvalidFilterKey.NotFound		The error message returned because the specified start time or end time is invalid.
404	InvalidUsage	The specified Usage is not valid	The error message returned because the specified Usage parameter is invalid.
400	InvalidTag.Mismatch	The specified Tag.n.Key and Tag.n.Value are not match.	The error message returned because the specified Tag.N.Key and Tag.N.Value parameters do not match.
400	InvalidTagCount	The specified tags are beyond the permitted range.	The error message returned because the number of specified tags has exceeded the upper limit.
400	InvalidInstanceType.ValueNotSupported	The specified InstanceType does not exist or beyond the permitted range.	The error message returned because the specified instance type does not exist or you are not authorized to manage instances of this instance type.
404	InvalidOSType	The specified OSType is not valid	The error message returned because the specified operating system is not supported.
404	InvalidArchitecture	The specified Architecture is not valid	The error message returned because the specified Architecture parameter does not exist.
500	InternalServerError	The request processing has failed due to some unknown error.	The error message returned because an internal error has occurred. Try again later. If the problem persists, submit a ticket.

11.7. DeleteImage

You can call this operation to delete a custom image.

Debugging

OpenAPI Explorer automatically calculates the signature value. For your convenience, we recommend that you call this operation in OpenAPI Explorer. OpenAPI Explorer dynamically generates the sample code of the operation for different SDKs.

Request parameters

Parameter	Type	Required	Example	Description
Action	String	Yes	DeleteImage	The operation that you want to perform. Set the value to DeleteImage.
ImageId	String	Yes	m-bp67acfmazb4p****	The ID of the image. If the specified custom image does not exist, the request will be ignored.
RegionId	String	Yes	cn-hangzhou	The region ID of the custom image. You can call the DescribeRegions operation to query the most recent region list.
Force	Boolean	No	false	Specifies whether to forcibly delete the custom image. Valid values: • true: forcibly deletes the custom image, regardless of whether the image is being used by other instances. • false: verifies that the image is not being used by other instances and then deletes the image. Default value: false

Response parameters

Parameter	Type	Example	Description
RequestId	String	473469C7-AA6F-4DC5-B3DB-A3DC0DE3C83E	The ID of the request.

Examples

Sample requests

```
https://ecs.aliyuncs.com/?Action=DeleteImage
&ImageId=m-bp67acfmazb4p****
&RegionId=cn-hangzhou
&Force=false
&<Common request parameters>
```

Sample success responses

XML format

```
<DeleteImageResponse>
  <RequestId>CEF72CEB-54B6-4AE8-B225-F876FF7BA984</RequestId>
</DeleteImageResponse>
```

JSON format

```
{
  "RequestId": "CEF72CEB-54B6-4AE8-B225-F876FF7BA984"
}
```

Error codes

HTTP status code	Error code	Error message	Description
403	ImageUsingByInstance	The specified image has been used to create instances.	The error message returned because the specified image is being used for instance creation and cannot be deleted.
403	ImageUseShared	The specified image has been shared to others.	The error message returned because the specified image is already shared with other accounts.
403	OperationDenied.Image Copying	The Image is coping.	The error message returned because the source image is being copied. Try again later.
403	ImageIsImporting	The specified Image is importing.	The error message returned because the specified image is being imported and cannot be managed.
403	ImageIsExporting	The specified Image is exporting. Please cancel task first.	The error message returned because the specified image is being exported. Cancel the export task first.
404	InvalidImageId.NotFound	The specified ImageId does not exist.	The error message returned because the specified image does not exist in this account. Check whether the image ID is correct.

11.8. DescribeImageSharePermission

You can call this operation to query users who share a custom image. The response can be displayed by page. By default, ten entries are displayed on each page.

Debugging

OpenAPI Explorer automatically calculates the signature value. For your convenience, we recommend that you call this operation in OpenAPI Explorer. OpenAPI Explorer dynamically generates the sample code of the operation for different SDKs.

Request parameters

Parameter	Type	Required	Example	Description
Action	String	Yes	DescribeImageSharePermission	The operation that you want to perform. Set the value to DescribeImageSharePermission.
ImageId	String	Yes	m-282dz****	The ID of the custom image.

Parameter	Type	Required	Example	Description
RegionId	String	Yes	cn-hangzhou	The ID of the region to which the custom image belongs. You can call the DescribeRegions operation to query the most recent region list.
PageNumber	Integer	No	1	The page number of the page to return. Pages start from page 1. Default value: 1
PageSize	Integer	No	10	The number of entries to return on each page. Valid values: 1 to 100 Default value: 10

Response parameters

Parameter	Type	Example	Description
RequestId	String	473469C7-AA6F-4DC5-B3DB-A3DC0DE3C83E	The ID of the request.
RegionId	String	cn-hangzhou	The ID of the region to which the image belongs.
TotalCount	Integer	1	The total number of entries returned.
PageNumber	Integer	1	The page number of the returned page.
PageSize	Integer	10	The number of entries returned per page.
ImageId	String	m-282dz****	The ID of the custom image.
ShareGroups	Array		The shared groups.
Group	String	all	The name of the shared group.
Accounts	Array		The Alibaba Cloud accounts.
AliyunId	String	1234567890	The ID of the Alibaba Cloud account.

Examples

Sample requests

```
https://ecs.aliyuncs.com/?Action=DescribeImageSharePermission
&ImageId=m-282dz****
&RegionId=cn-hangzhou &PageNumber=1 &PageSize=10 &<Common request parameters>
```

Sample success responses

XML format

```
<DescribeImageSharePermissionResponse>
  <ImageId>m-282dz****</ImageId>
  <PageNumber>1</PageNumber>
  <PageSize>10</PageSize>
  <RegionId>cn-qingdao</RegionId>
  <TotalCount>1</TotalCount>
  <RequestId>441CF898-42FF-47CF-9348-3C3BFF557278</RequestId>
  <ShareGroups>
    <ShareGroup>
      <Group>all</Group>
    </ShareGroup>
  </ShareGroups>
  <Accounts>
    <Account>
      <AliyunId>1234567890</AliyunId>
    </Account>
  </Accounts>
</DescribeImageSharePermissionResponse>
```

JSON format

```
{ "ShareGroups": {
  "ShareGroup": [
    {
      "Group": "all"
    }
  ]
},
"Accounts": {
  "Account": [
    {
      "AliyunId": "1234567890"
    }
  ]
},
"ImageId": "m-282dz****",
"PageNumber": 1,
"PageSize": 10,
"RegionId": "cn-qingdao",
"TotalCount": 1,
"RequestId": "9AD96F49-0BE5-4868-A66A-224352549CEC"
}
```

Error codes

HTTP status code	Error code	Error message	Description

HTTP status code	Error code	Error message	Description
400	MissingParameter	The input parameter "RegionId" that is mandatory for processing this request is not supplied.	The error message returned because the RegionId parameter is not specified.
400	MissingParameter	The input parameter "ImageId" that is mandatory for processing this request is not supplied.	The error message returned because the ImageId parameter is not specified.
404	InvalidImageId.NotFound	The specified ImageId does not exist.	The error message returned because the specified image does not exist under this account. Check whether the image ID is correct.

11.9. ModifyImageAttribute

You can call this operation to modify the name, description, status, or image family of a custom image.

Debugging

OpenAPI Explorer automatically calculates the signature value. For your convenience, we recommend that you call this operation in OpenAPI Explorer. OpenAPI Explorer dynamically generates the sample code of the operation for different SDKs.

Request parameters

Parameter	Type	Required	Example	Description
Action	String	Yes	ModifyImageAttribute	The operation that you want to perform. If you use a custom HTTP URL or HTTPS URL to make an API request, you must specify the <code>Action</code> parameter. Set the value to <code>ModifyImageAttribute</code> .
ImageId	String	Yes	m-bp18ygjuqnwhehc***	The ID of the custom image.
RegionId	String	Yes	cn-hangzhou	The region ID of the custom image. You can call the DescribeRegions operation to query the most recent region list.
ImageName	String	No	testImageName	The name of the custom image. The name must be 2 to 128 characters in length and can contain letters, digits, colons (:), underscores (_), and hyphens (-). It must start with a letter and cannot start with <code>http://</code> or <code>https://</code> . This parameter is empty by default, which indicates that the original name is retained.

Parameter	Type	Required	Example	Description
Status	String	No	Deprecated	The status of the custom image. Valid values: - Deprecated: sets the image to the Deprecated state. If the custom image is shared, you must unshare it before you can set it to the Deprecated state. Images in the Deprecated state cannot be shared or copied, but can be used to create instances or replace system disks. - Available: sets the image to the Available state. You can restore an image from the Deprecated state to the Available state.  Note If you want to roll back a custom image in the image family to a previous version, you can set the most recent available custom image to the Deprecated state. However, if the custom image is the only one in the image family that is in the Available state, the image family contains no available custom image that can be used to create instances after you set the custom image to the Deprecated state. Proceed with caution when you set a custom image to the Deprecated state.
ImageFamily	String	No	hangzhou-daily-update	The name of the image family. The name must be 2 to 128 characters in length and can contain letters, digits, colons (:), underscores (_), and hyphens (-). It must start with a letter and cannot start with acs: or aliyun. It cannot contain http:// or https://. This parameter is empty by default.
Description	String	No	testDescription	The description of the custom image. The description must be 2 to 256 characters in length and cannot start with http:// or https://. This parameter is empty by default, which indicates that the original description is retained.

Response parameters

Parameter	Type	Example	Description
RequestId	String	473469C7-AA6F-4DC5-B3DB-A3DC0DE3C83E	The ID of the request.

Examples

Sample requests

```
https://ecs.aliyuncs.com/?Action=ModifyImageAttribute
&ImageId=m-bp18yjuqnwhehc****
&RegionId=cn-hangzhou
&ImageName=testImageName
&Description=testDescription
&<Common request parameters>
```

Sample success responses

XML format

```
<ModifyImageAttributeResponse>
  <RequestId>C8B26B44-0189-443E-9816-D951F59623A9</RequestId>
</ModifyImageAttributeResponse>
```

JSON format

```
{
  "RequestId": "C8B26B44-0189-443E-9816-D951F59623A9"
}
```

Error codes

HTTP status code	Error code	Error message	Description
400	InvalidImageName.Malformed	The specified Image name is wrongly formed.	The error message returned because the specified ImageName parameter is invalid. The name must be 2 to 128 characters in length and can contain letters, digits, periods (.), underscores (_), and hyphens (-). It must start with a letter and cannot start with http:// or https://.
400	MissingParameter	The input parameter "RegionId" that is mandatory for processing this request is not supplied.	The error message returned because the required RegionId parameter is not specified.
400	InvalidImageName.Duplicated	The specified Image name has already been used.	The error message returned because the specified image name already exists.
400	InvalidDescription.Malformed	The specified description is wrongly formed.	The error message returned because the specified Description parameter is invalid. The description must be 2 to 256 characters in length and cannot start with http:// or https://.
404	InvalidImageId.NotFound	The specified ImageId does not exist.	The error message returned because the specified image does not exist in the account. Check whether the image ID is correct.

11.10. ModifyImageSharePermission

You can call this operation to manage the share permission of an image. After you share a custom image with another Alibaba Cloud account, the account can use the shared image to create ECS instances (RunInstances) or replace the system disk of an ECS instance (ReplaceSystemDisk).

Description

When you call this operation, take note of the following items:

- You can share only your own custom images to other Alibaba Cloud accounts.
- A single request can contain a maximum of 10 accounts to which you share a custom image. You can specify a maximum of 10 values for the `AddAccount.n` or `RemoveAccount.n` parameter at a time. If you specify more than 10 values, the parameter will be ignored.
- If an instance is created ([RunInstances](#)) with a shared image, after the image owner stops sharing or deletes the custom image ([DeleteImage](#)), the created instance cannot be re-initialized ([ReInitDisk](#)).

Debugging

OpenAPI Explorer automatically calculates the signature value. For your convenience, we recommend that you call this operation in OpenAPI Explorer. OpenAPI Explorer dynamically generates the sample code of the operation for different SDKs.

Request parameters

Parameter	Type	Required	Example	Description
<code>ImageId</code>	String	Yes	m-imageid1	The ID of the custom image to be shared.
<code>RegionId</code>	String	Yes	cn-hangzhou	The ID of the region to which the custom image belongs. You can call the DescribeRegions operation to query the most recent region list.
<code>Action</code>	String	Yes	ModifyImageSharePermission	The operation that you want to perform. Set the value to <code>ModifyImageSharePermission</code> .
<code>AddAccount.N</code>	RepeatList	No	155780923***	The ID of the Alibaba Cloud account N to which the image is shared. Valid values of N: 1 to 10. If the value of N is greater than 10, this parameter will be ignored.
<code>RemoveAccount.N</code>	RepeatList	No	155780923***	The IDs of the Alibaba Cloud account N to which the image is no longer to be shared. Valid values of N: 1 to 10. If the value of N is greater than 10, this parameter will be ignored.

Response parameters

Parameter	Type	Example	Description
<code>RequestId</code>	String	473469C7-AA6F-4DC5-B3DB-A3DC0DE3C83E	The ID of the request.

Examples

Sample requests

```
https://ecs.aliyuncs.com/?Action=ModifyImageSharePermission
&ImageId=m-imageid1
&RegionId=cn-hangzhou
&AddAccount.1=155780923***
&RemoveAccount.1=155780923***
&&Common request parameters&&
```

Sample success responses

XML format

```
<ModifyImageSharePermissionResponse>
  <RequestId>C8B26B44-0189-443E-9816-D951F59623A9</RequestId>
</ModifyImageSharePermissionResponse>
```

JSON format

```
{
  "RequestId": "C8B26B44-0189-443E-9816-D951F59623A9"
}
```

Error codes

HTTP status code	Error code	Error message	Description
400	MissingParameter	The input parameter "RegionId" that is mandatory for processing this request is not supplied.	The error message returned because the required RegionId parameter is not specified.
404	InvalidImageId.NotFound	The specified ImageId does not exist.	The error message returned because the specified image does not exist in the account. Check whether the image ID is correct.
404	InvalidAccount.NotFound	The specified parameter "AddAccount.n" or "RemoveAccount.n" does not exist.	The error message returned because the specified AddAccount.n or RemoveAccount.n parameter does not exist.
404	InvalidAccount.Forbidden	The specified Account does not yourself.	The error message returned because you are trying to share the image to your own account.
403	QuotaExceed.ShareImage	The shared Image Quota exceeds.	The error message returned because the maximum number of custom images that can be shared has been reached.
403	QuotaExceed.ShareImageUser	The shared Image user Quota exceeds.	The error message returned because the maximum number of Alibaba Cloud accounts to which one image can be shared has been reached.
400	InvalidGroup.Malformed	The specified Group is wrongly formed.	The error message returned because the specified group does not exist.
403	InvalidImageId.BidMismatch	Cannot share image with other bid user.	The error message returned because images cannot be shared among users of different carriers.
403	OperationDenied.EncryptedSnapshot	The image contains encrypted snapshots, which do not support share.	The error message returned because the specified image contains encrypted snapshots.

11.11. DescribeImageSupportInstanceTypes

You can call this operation to query the instance types supported by a specified image.

Debugging

OpenAPI Explorer automatically calculates the signature value. For your convenience, we recommend that you call this operation in OpenAPI Explorer. OpenAPI Explorer dynamically generates the sample code of the operation for different SDKs.

Request parameters

Parameter	Type	Required	Example	Description
Action	String	Yes	DescribeImageSupportInstanceTypes	The operation that you want to perform. Set the value to DescribeImageSupportInstanceTypes.
RegionId	String	Yes	cn-hangzhou	The region ID of the image. You can call the DescribeRegions operation to query the most recent region list.
ImageId	String	No	m-o6w3gy99qf89rkga*** *	The ID of the image.
ActionType	String	No	CreateEcs	The scenario in which the instance type is to be used. Default value: CreateEcs. Valid values: - CreateEcs - Upgrade - Downgrade - RenewDowngrade
Filter.N.Key	String	No	imageId	The key of filter condition N. Only the image ID can be used to filter instance types. Valid values: - imageId: The image ID is used as the filter condition. - filter: The image ID is used as the filter condition.
Filter.N.Value	String	No	m-o6w3gy99qf89rkga*** *	The value of filter condition N.

Response parameters

Parameter	Type	Example	Description
ImageId	String	m-o6w3gy99qf89rkga****	The ID of the image.
InstanceTypes	Array		An array consisting of InstanceType data.
InstanceType			
CpuCoreCount	Integer	1	The number of vCPUs of the instance type.
InstanceTypeFamily	String	ecs.t1	The instance family.
InstanceTypeId	String	ecs.t1.xsmall	The ID of the instance type.

Parameter	Type	Example	Description
MemorySize	Float	1024	The memory size of the instance type. Unit: GiB.
RegionId	String	cn-hangzhou	The region ID of the image.
RequestId	String	473469C7-AA6F-4DC5-B3DB-A3DC0DE3C83E	The ID of the request.

Examples

Sample requests

```
https://ecs.aliyuncs.com/?Action=DescribeImageSupportInstanceTypes
&RegionId=cn-hangzhou
&ImageId=m-o6w3gy99qf89rkga****
&<Common request parameters>
```

Sample success responses

XML format

```
<DescribeImageSupportInstanceTypesResponse>
  <RequestId>CF661E2D-4AFE-4BCD-959A-A65E14416B44</RequestId>
  <RegionId>cn-hangzhou</RegionId>
  <ImageId>ubuntu_16_0402_64_20G_alibase_20180409.vhd</ImageId>
  <InstanceTypes>
    <InstanceType>
      <InstanceTypeId>ecs.t1.xsmall</InstanceTypeId>
      <CpuCoreCount>1</CpuCoreCount>
      <MemorySize>0.5</MemorySize>
      <InstanceTypeFamily>ecs.t1</InstanceTypeFamily>
    </InstanceType>
    <InstanceType>
      <InstanceTypeId>ecs.t1.small</InstanceTypeId>
      <CpuCoreCount>1</CpuCoreCount>
      <MemorySize>1</MemorySize>
      <InstanceTypeFamily>ecs.t1</InstanceTypeFamily>
    </InstanceType>
  </InstanceTypes>
</DescribeImageSupportInstanceTypesResponse>
```

JSON format


```
{
  "RequestId": "CF661E2D-4AFE-4BCD-959A-A65E14416B44",
  "RegionId": "cn-hangzhou",
  "ImageId": "ubuntu_16_0402_64_20G_alibase_20180409.vhd",
  "InstanceTypes": {
    "InstanceType": [{
      "InstanceTypeId": "ecs.t1.xsmall",
      "CpuCoreCount": 1,
      "MemorySize": 0.5,
      "InstanceTypeFamily": "ecs.t1"
    },
    {
      "InstanceTypeId": "ecs.t1.small",
      "CpuCoreCount": 1,
      "MemorySize": 1,
      "InstanceTypeFamily": "ecs.t1"
    }
  ]
}
```

Error codes

HTTP status code	Error code	Error message	Description
400	InvalidParamter	Invalid Parameter	The error message returned because the specified parameter is invalid.
404	InvalidUsage	The specifed Usage is not valid	The error message returned because the specified Usage parameter value (image, disk, image_disk, or none) is invalid.
400	InvalidInstanceType.ValueNotSupported	The specified InstanceType does not exist or beyond the permitted range.	The error message returned because the specified instance type does not exist or you are not authorized to manage instances of this instance type.

11.12. DescribeImageFromFamily

You can call this operation to query available custom images that are newly created in a specific image family.

Description

- This API operation only returns the available custom images that are newly created in the specified image family. Public images, Alibaba Cloud Marketplace images, community images, or shared images are not queried.
- If no available custom images exist in the specified image family, the response is empty.

Debugging

OpenAPI Explorer automatically calculates the signature value. For your convenience, we recommend that you call this operation in OpenAPI Explorer. OpenAPI Explorer dynamically generates the sample code of the operation for different SDKs.

Request parameters

Parameter	Type	Required	Example	Description
Action	String	Yes	DescribeImageFromFamily	The operation that you want to perform. Set the value to DescribeImageFromFamily.
ImageFamily	String	Yes	hangzhou-daily-update	The name of the image family. The name must be 2 to 128 characters in length and can contain letters, digits, colons (:), underscores (_), and hyphens (-). It must start with a letter and cannot start with http://, https://, acs:, or aliyun.
RegionId	String	Yes	cn-hangzhou	The region ID of the image. You can call the DescribeRegions operation to query the most recent region list.

Response parameters

Parameter	Type	Example	Description
Image	Struct		The image information.
Architecture	String	x86_64	The image architecture. Valid values: - i386 - x86_64
CreationTime	String	2018-01-10T01:01:10Z	The time when the image was created.
Description	String	Archive log for Oracle	The description of the image.
DiskDeviceMappings	Array		The mappings between disks and snapshots under the image.
DiskDeviceMapping			
Device	String	/dev/xvdb	The device name of the disk, such as /dev/xvdb.  Note This parameter will be removed in the future. We recommend that you use other parameters to ensure future compatibility.
Format	String	qcow2	The format of the image.
ImportOSSBucket	String	testEcsImport	The OSS bucket that contains the imported image file.
ImportOSSObject	String	imageImport	The OSS object corresponding to the imported image file.
Size	String	80	The size of the disk. Unit: GiB.

Parameter	Type	Example	Description
SnapshotId	String	s-bp17ot2q7x72ggtw****	The ID of the snapshot.
Type	String	custom	The type of the image.
ImageFamily	String	testImageFamily	The name of the image family.
ImageId	String	m-bp1g7004ksh0euc****	The ID of the image.
ImageName	String	testImageName	The name of the image.
ImageOwnerAlias	String	self	The alias of the image owner. Valid values: - system: public images provided by Alibaba Cloud - self: your custom images - others: shared images from other Alibaba Cloud accounts - marketplace: Alibaba Cloud Marketplace images
ImageVersion	String	2	The version of the image.
IsCopied	Boolean	false	Indicates whether the image is a copy of another image.
IsSelfShared	String	true	Indicates whether the image has been shared to other Alibaba Cloud accounts.
IsSubscribed	Boolean	false	Indicates whether you have subscribed to the image corresponding to the specified product code.
IsSupportCloudinit	Boolean	true	Indicates whether the image supports cloud-init.
IsSupportIoOptimized	Boolean	true	Indicates whether the image can be used on I/O optimized instances.
OSName	String	Aliyun Linux 2.1903	The name of the operating system.
OSType	String	linux	The type of the operating system. Valid values: - windows - linux
Platform	String	Aliyun	The platform of the operating system.
ProductCode	String	jxsc00****	The product code of the Alibaba Cloud Marketplace image.
Progress	String	100	The image creation progress. Unit: percent (%).

Parameter	Type	Example	Description
Size	Integer	80	The size of the image. Unit: GiB.
Status	String	Available	The status of the image. Valid values: - UnAvailable: The image is unavailable. - Available: The image is available. - Creating: The image is being created. - CreateFailed: The image failed to be created.
Tags	Array		An array that consists of Tag data.
Tag			
TagKey	String	TestKey	The tag key of the image.
TagValue	String	TestValue	The tag value of the image.
Usage	String	none	Indicates whether the image has been used to create ECS instances. Valid values: - instance: The image has been used to create one or more ECS instances. - none: The image has not been used to create ECS instances.
RequestId	String	473469C7-AA6F-4DC5-B3DB-A3DC0DE3C83E	The ID of the request.

Examples

Sample requests

```
https://ecs.aliyuncs.com/?Action=DescribeImageFromFamily
&RegionId=cn-hangzhou
&ImageFamily=as-hangzhou-game-01
&<Common request parameters>
```

Sample success responses

XML format

```

<DescribeImageFromFamilyResponse>
  <RequestId>E39053A7-C3E6-41FA-8F8D-F5BD8063E61C</RequestId>
  <Image>
    <ImageOwnerAlias>self</ImageOwnerAlias>
    <Status>Available</Status>
    <Progress></Progress>
    <Usage></Usage>
    <Description>testDescription</Description>
    <IsSelfShared></IsSelfShared>
    <Architecture>x86_64</Architecture>
    <Platform>CentOS</Platform>
    <ProductCode></ProductCode>
    <Size>40</Size>
    <IsSubscribed>false</IsSubscribed>
    <IsCopied>false</IsCopied>
    <ImageFamily>testImageFamily</ImageFamily>
    <OSName>CentOS 8.0 64-bit</OSName>
    <IsSupportIoOptimized>true</IsSupportIoOptimized>
    <IsSupportCloudinit>true</IsSupportCloudinit>
    <ImageName>testImageName</ImageName>
    <DiskDeviceMappings>
      <DiskDeviceMapping>
        <SnapshotId>s-bp1ejhb4r1lyu55t****</SnapshotId>
        <Type>system</Type>
        <Format></Format>
        <Size>40</Size>
        <Device>/dev/xvda</Device>
        <ImportOSSBucket></ImportOSSBucket>
        <ImportOSSObject></ImportOSSObject>
      </DiskDeviceMapping>
    </DiskDeviceMappings>
    <ImageVersion></ImageVersion>
    <OSType>linux</OSType>
    <ImageId>m-bp1ejhb4r1lyu55t****</ImageId>
    <CreationTime>2020-03-17T06:19:19Z</CreationTime>
    <Tags>
  </Tags>
</Image>
</DescribeImageFromFamilyResponse>

```

JSON format

```

{
  "RequestId": "E39053A7-C3E6-41FA-8F8D-F5BD8063E61C",
  "Image": {
    "ImageOwnerAlias": "self",
    "Status": "Available",
    "Progress": "",
    "Usage": "",
    "Description": "testDescription",
    "IsSelfShared": "",
    "Architecture": "x86_64",
    "Platform": "CentOS",
    "ProductCode": "",
    "Size": 40,
    "IsSubscribed": false,
    "IsCopied": false,
    "ImageFamily": "testImageFamily",
    "OSName": "CentOS 8.0 64-bit",
    "IsSupportIoOptimized": true,
    "IsSupportCloudinit": true,
    "ImageName": "testImageName",
    "DiskDeviceMappings": {
      "DiskDeviceMapping": [
        {
          "SnapshotId": "s-bp1ejhb4r1lyu55t****",
          "Type": "system",
          "Format": "",
          "Size": "40",
          "Device": "/dev/xvda",
          "ImportOSSBucket": "",
          "ImportOSSObject": ""
        }
      ]
    },
    "ImageVersion": "",
    "OSType": "linux",
    "ImageId": "m-bp1ejhb4r1lyu55t****",
    "CreationTime": "2020-03-17T06:19:19Z",
    "Tags": {
      "Tag": []
    }
  }
}

```

Error codes

HTTP status code	Error code	Error message	Description

HTTP status code	Error code	Error message	Description
404	InvalidRegionId.NotFound	The RegionId provided does not exist.	The error message returned because the specified RegionId parameter does not exist. Check whether the region ID is correct.

12.Snapshots

12.1. CreateSnapshot

You can call this operation to create a snapshot for a disk.

Description

In the following scenarios, you cannot create snapshots for a disk:

- The number of manual snapshots (also called user-created snapshots) of the disk has reached 256.
- A snapshot is being created for the disk.
- The instance to which the disk is attached has never been started.
- The instance to which the disk is attached is not in the **Stopped** (`Stopped`) or **Running** (`Running`) state.
- If the response contains `{"OperationLocks": {"LockReason": "security"}}` when you query information of an instance, the instance is locked for security reasons and all operations are prohibited on the instance.

When you create a snapshot, take note of the following items:

- About one hour after an instance is created or the system disk of an instance is replaced, you can create a snapshot for a disk that is attached to the instance. After a data disk is added, you must wait a period of time before you can create a snapshot. The amount of time to wait depends on the size of data stored on the disk.
- If a snapshot is being created, you cannot call the **CreateImage** operation to create a custom image from this snapshot.
- If the disk for which you want to create a snapshot is attached to an ECS instance, do not change the instance status during snapshot creation.
- You can create snapshots for a disk that is in the **Expired** (`Expired`) state. If the release time scheduled for a disk in the **Expired** state arrives when a snapshot is being created for the disk, the snapshot is in the **Creating** (`Creating`) state and is deleted when the disk is released.

Debugging

OpenAPI Explorer automatically calculates the signature value. For your convenience, we recommend that you call this operation in OpenAPI Explorer. OpenAPI Explorer dynamically generates the sample code of the operation for different SDKs.

Request parameters

Parameter	Type	Required	Example	Description
Action	String	Yes	CreateSnapshot	The operation that you want to perform. Set the value to CreateSnapshot.
DiskId	String	Yes	d-bp1s5fnvk4gn2tws0**	The ID of the disk for which to create the snapshot.
SnapshotName	String	No	testSnapshotName	The name of the snapshot. The name must be 2 to 128 characters in length and can contain letters, digits, colons (:), underscores (_), and hyphens (-). It must start with a letter and cannot start with http:// or https://. It cannot start with auto because snapshots whose names start with auto are recognized as automatic snapshots.

Parameter	Type	Required	Example	Description
Description	String	No	testDescription	The description of the snapshot. The description must be 2 to 256 characters in length and cannot start with http:// or https://. This parameter is empty by default.
RetentionDays	Integer	No	30	The retention period of the snapshot. Valid values: 1 to 65536. Unit: days. The snapshot will be automatically released when the retention period expires. This parameter is empty by default, indicating that the snapshot will not be automatically released.
Category	String	No	Standard	The type of the snapshot. Valid values: - Standard: normal snapshot - Flash: local snapshot  Note This parameter will be removed in the future. We recommend that you use other parameters to ensure future compatibility.
ClientToken	String	No	123e4567-e89b-12d3-a456-426655440000	The client token that is used to ensure the idempotence of the request. You can use the client to generate the value, but you must ensure that it is unique among different requests. The ClientToken value can only contain ASCII characters and cannot exceed 64 characters in length. For more information, see How to ensure idempotence.
Tag.N.value	String	No	null	The value of tag N to be bound to the snapshot.  Note This parameter will be removed in the future. We recommend that you use the Tag.N.Value parameter to ensure future compatibility.
Tag.N.key	String	No	null	The key of tag N to be bound to the snapshot.  Note This parameter will be removed in the future. We recommend that you use the Tag.N.Key parameter to ensure future compatibility.
Tag.N.Key	String	No	TestKey	The key of tag N to be bound to the snapshot. Valid values of N: 1 to 20. The tag key cannot be an empty string. It can be up to 128 characters in length and cannot start with acs: or aliyun. It cannot contain http:// or https://.

Parameter	Type	Required	Example	Description
Tag.N.Value	String	No	TestValue	The value of tag N to be bound to the snapshot. Valid values of N: 1 to 20. The tag value can be an empty string. It can be up to 128 characters in length and cannot start with acs: or contain http:// or https://.
ResourceGroupId	String	No	rg-bp67acfmazb4p****	The ID of the resource group to which to assign the snapshot.

Response parameters

Parameter	Type	Example	Description
RequestId	String	473469C7-AA6F-4DC5-B3DB-A3DC0DE3C83E	The ID of the request.
SnapshotId	String	s-bp17441ohwka0yuh****	The ID of the snapshot.

Examples

Sample requests

```
https://ecs.aliyuncs.com/?Action=CreateSnapshot
&DiskId=d-bp1s5fnvk4gn2tws0****
&SnapshotName=testSnapshotName
&Description=testDescription
&ClientToken=123e4567-e89b-12d3-a456-426655440000
&Tag.1.Key=TestKey
&Tag.1.Value=TestValue
&<Common request parameters>
```

Sample success responses

XML format

```
<CreateSnapshotResponse>
  <RequestId>C8B26B44-0189-443E-9816-D951F59623A9</RequestId>
  <SnapshotId>s-bp17441ohwka0yuh****</SnapshotId>
</CreateSnapshotResponse>
```

JSON format

```
{
  "RequestId": "C8B26B44-0189-443E-9816-D951F59623A9",
  "SnapshotId": "s-bp17441ohwka0yuh****"
}
```

Error codes

HTTP status code	Error code	Error message	Description
404	InvalidDiskId.NotFound	The specified DiskId does not exist.	The error message returned because the specified DiskId parameter does not exist. Check whether the disk ID is correct.
400	InvalidSnapshotName.Malformed	The specified SnapshotName is wrongly formed.	The error message returned because the specified SnapshotName parameter is invalid.
404	InvalidDescription.Malformed	The specified description is wrongly formed.	The error message returned because the specified Description parameter is invalid. The description must be 2 to 256 characters in length and cannot start with http:// or https://.
400	IncorrectInstanceStatus	The current status of the resource does not support this operation.	The error message returned because the operation is not supported while the resource is in the current state.
403	IncorrectDiskStatus.CreatingSnapshot	A previous snapshot creation is in process.	The error message returned because another snapshot is being created. Wait until the snapshot is created and try again.
403	InstanceLockedForSecurity	The disk attached instance is locked due to security.	The error message returned because the instance to which the disk is attached is locked for security reasons.
403	IncorrectDiskStatus.NeverAttached	The specified disk has never been attached to any instance.	The error message returned because the removable disk has never been attached to instances and its content remains unchanged.
403	QuotaExceed.Snapshot	The snapshot quota exceeds.	The error message returned because the maximum number of snapshots has been reached. To create new snapshots, delete snapshots that are no longer needed.
403	IncorrectDiskStatus.NeverUsed	The specified disk has never been used after creating.	The error message returned because the specified disk has never been used and its content remains unchanged.
403	CreateSnapshot.Failed	The process of creating snapshot is failed.	The error message returned because the snapshot fails to be created.
403	DiskInArrears	The specified operation is denied as your disk has expired.	The error message returned because the disk has expired due to an overdue payment.
500	InternalError	The request processing has failed due to some unknown error.	The error message returned because an internal error has occurred. Try again later. If the problem persists, submit a ticket.
403	DiskId.ValueNotSupported	The specified parameter diskid is not supported.	The error message returned because the category of the specified Elastic Block Storage device does not support this operation.

HTTP status code	Error code	Error message	Description
400	DiskCategory.OperationNotSupported	The operation is not supported to the specified disk due to its disk category	The error message returned because the disk category does not support the operation.
403	IncorrectDiskStatus	The current disk status does not support this operation.	The error message returned because the operation is not supported while the disk is in the current state. Ensure that the disk is available and you have no overdue payments for it.
403	InvalidAccountStatus.NoEnoughBalance	Your account does not have enough balance.	The error message returned because your account balance is insufficient. Add funds to your account and try again.
403	InvalidAccountStatus.SnapshotServiceUnavailable	Snapshot service has not been opened yet.	The error message returned because the operation is not supported while the snapshot service is not activated.
404	InvalidInstanceId.NotFound	The specified InstanceId does not exist.	The error message returned because the specified instance does not exist. Check whether the instance ID is correct.
403	IncorrectVolumeStatus	The current volume status does not support this operation.	The error message returned because the operation is not supported while the Shared Block Storage device is in the current state.
404	InvalidVolumeId.NotFound	The specified volume does not exist.	The error message returned because the specified Shared Block Storage device does not exist. Check whether the Shared Block Storage device ID is correct.
403	IdempotentParameterMismatch	The specified clientToken is used.	The error message returned because the specified client token is already in use.
403	IncorrectDiskStatus.Invalid	The specified device status invalid, restart instance and try again.	The error message returned because the status of the specified disk is invalid. Restart the instance and try again.
403	IncorrectDiskType.NotSupported	The specified device type is not supported.	The error message returned because the disk type does not support the operation.
403	IncorrectDiskStatus.Transferring	The specified device is transferring, you can retry after the process is finished.	The error message returned because the specified disk is being migrated. Wait until the disk is migrated and try again.
403	InvalidParameter.KMSKeyId.KMSUnauthorized	ECS service have no right to access your KMS.	The error message returned because ECS is not authorized to access your KMS resources.
500	InternalError	The request processing has failed due to some unknown error, exception or failure.	The error message returned because an internal error has occurred. Try again later. If the problem persists, submit a ticket.
400	Duplicate.TagKey	The Tag.N.Key contain duplicate key.	The error message returned because the specified tag key already exists. Tag keys must be unique.

HTTP status code	Error code	Error message	Description
400	InvalidTagKey.Malformed	The specified Tag.n.Key is not valid.	The error message returned because the specified Tag.N.Key parameter is invalid.
400	InvalidTagValue.Malformed	The specified Tag.n.Value is not valid.	The error message returned because the specified Tag.N.Value parameter is invalid.
403	IdempotentProcessing	The previous idempotent request(s) is still processing.	The error message returned because a previous idempotent request is being processed. Try again later.
403	QuotaExceed.Tags	%s	The error message returned because the number of specified tags exceeds the upper limit.

12.2. DeleteSnapshot

You can call this operation to delete a specified snapshot. If you call this operation to delete a snapshot that is being created, the task of creating the snapshot is canceled.

Precautions

When you call this operation, take note of the following items:

- If the specified snapshot ID does not exist, the request is ignored.
- A snapshot that has been used to create custom images cannot be deleted. The snapshot can be deleted only after the created custom images are deleted ([DeleteImage](#)).

Debugging

OpenAPI Explorer automatically calculates the signature value. For your convenience, we recommend that you call this operation in OpenAPI Explorer. OpenAPI Explorer dynamically generates the sample code of the operation for different SDKs.

Request parameters

Parameter	Type	Required	Example	Description
Action	String	Yes	DeleteSnapshot	The operation that you want to perform. Set the value to DeleteSnapshot.
SnapshotId	String	Yes	s-bp1c0doj0taqyzl****	The ID of the snapshot.
Force	Boolean	No	false	Specifies whether to force delete the snapshots that is associated with a disk.  Note The disk cannot be re-initialized after its associated snapshot is deleted.

Response parameters

Parameter	Type	Example	Description
RequestId	String	473469C7-AA6F-4DC5-B3DB-A3DC0DE3C83E	The ID of the request.

Examples

Sample requests

```
https://ecs.aliyuncs.com/?Action=DeleteSnapshot
&SnapshotId=s-bp1c0doj0taqyzl****
&<Common request parameters>
```

Sample success responses

XML format

```
<DeleteSnapshotResponse>
  <RequestId>CEF72CEB-54B6-4AE8-B225-F876FF7BA984</RequestId>
</DeleteSnapshotResponse>
```

JSON format

```
{
  "RequestId": "CEF72CEB-54B6-4AE8-B225-F876FF7BA984"
}
```

Error codes

HTTP status code	Error code	Error message	Description
403	SnapshotCreatedImage	The snapshot has been used to create user defined image(s).	The error message returned because the specified snapshot has been used to create custom images. You must delete the associated images before you delete the snapshot. If you force delete the snapshot, the images associated with the snapshot will become unavailable.
403	SnapshotCreatedDisk	The snapshot has been used to create disk(s).	The error message returned because the specified snapshot has been used to create disks.
400	MissingParameter	The input parameter SnapshotId that is mandatory for processing this request is not supplied.	The error message returned because the SnapshotId parameter is not specified.
500	InternalServerError	The request processing has failed due to some unknown error.	The error message returned because an internal error has occurred. Try again later. If the problem persists, submit a ticket.
404	InvalidSnapshotId.NotFound	The specified snapshot is not found	The error message returned because the specified SnapshotId parameter does not exist.
403	Operation.Conflict	The operation may conflicts with others, please retry later.	The error message returned because the current operation may conflict with operations performed by others. Try again later.

12.3. CopySnapshot

You can call this operation to copy a normal snapshot from one region to another.

Description

When you call this operation, note that:

- New snapshots, which are snapshot copies created from source snapshots, cannot be used to roll back the disks from which the source snapshots were created.
- Encrypted snapshots cannot be copied.
- Local snapshots cannot be copied.

Debugging

OpenAPI Explorer automatically calculates the signature value. For your convenience, we recommend that you call this operation in OpenAPI Explorer. OpenAPI Explorer dynamically generates the sample code of the operation for different SDKs.

Request parameters

Parameter	Type	Required	Example	Description
Action	String	Yes	CopySnapshot	The operation that you want to perform. Set the value to CopySnapshot.
SnapshotId	String	Yes	s-bp67acfmxazb4p****	The ID of the source snapshot.
RegionId	String	Yes	cn-chengdu	The region ID of the source snapshot. You can call the DescribeRegions operation to query the most recent region list.
DestinationRegionId	String	Yes	us-east-1	The region ID of the new snapshot that is copied from the source snapshot.
DestinationSnapshotName	String	Yes	CopySnapshotDemo	The name of the new snapshot. The name must be 2 to 128 characters in length. It must start with a letter and cannot start with http:// or https://. It can contain letters, digits, colons (:), underscores (_), and hyphens (-). Default value: null.
DestinationSnapshotDescription	String	Yes	CopySnapshotDemo	The description of the new snapshot. The description must be 2 to 256 characters in length and cannot start with http:// or https://. Default value: null.
RetentionDays	Integer	No	60	The retention period of the new snapshot. Unit: days. The new snapshot is automatically released when it expires. Valid values: 1 to 65536. Default value: null, indicating that the new snapshot will not be automatically released.

Parameter	Type	Required	Example	Description
Tag.N.Key	String	No	ECS	The tag key of the new snapshot. The tag key cannot be an empty string. It can be up to 128 characters in length and cannot start with acs: or aliyun. It cannot contain http:// or https://.
Tag.N.Value	String	No	Documentation	The tag value of the new snapshot. The tag value can be an empty string. It can be up to 128 characters in length and cannot start with acs: or aliyun. It cannot contain http:// or https://.

Response parameters

Parameter	Type	Example	Description
RequestId	String	C8B26B44-0189-443E-9816-D951F59623A9	The ID of the request.
SnapshotId	String	s-bp17441ohwka0yui****	The ID of the new snapshot.

Examples

Sample requests

```
https://ecs.aliyuncs.com/?Action=CopySnapshot
&DestinationRegionId=us-east-1
&RegionId=cn-chengdu
&SnapshotId=s-bp67acfmazb4p****
&<Common request parameters>
```

Sample success responses

XML format

```
<CopySnapshotResponse>
  <RequestId>C8B26B44-0189-443E-9816-D951F59623A9</RequestId>
  <SnapshotId>s-bp17441ohwka0yui****</SnapshotId>
</CopySnapshotResponse>
```

JSON format

```
{
  "RequestId": "C8B26B44-0189-443E-9816-D951F59623A9",
  "SnapshotId": "s-bp17441ohwka0yui****"
}
```

Error codes

HTTP status code	Error code	Error message	Description
403	InvalidSnapshotId.NotFound	The specified snapshot is not exists.	The error message returned because the specified source snapshot does not exist.

HTTP status code	Error code	Error message	Description

403	InvalidUser.NotInWhiteList	The user is not in the white list of copying snapshot.	The error message returned because you are not authorized to perform this operation.
403	InvalidAccountStatus.NotEnoughBalance	Your account does not have enough balance.	The error message returned because your account balance is insufficient. Top up your account before you proceed.
403	InvalidAccountStatus.SnapshotServiceUnavailable	Snapshot service has not been opened yet.	The error message returned because the operation is not supported while the snapshot service is not activated.
400	Duplicate.TagKey	The Tag.N.Key contain duplicate key.	The error message returned because a tag with the identical key already exists.
400	InvalidTagKey.Malformed	The specified Tag.n.Key is not valid.	The error message returned because the specified Tag.N.Key parameter is invalid.
400	InvalidTagValue.Malformed	The specified Tag.n.Value is not valid.	The error message returned because the specified Tag.N.Value parameter is invalid.
400	InvalidRegionId.Malformed	The specified RegionId is not valid	The error message returned because the specified RegionId parameter is invalid.

12.4. DescribeSnapshots

You can call this operation to query all snapshots of an ECS instance or a disk.

Description

You can specify multiple request parameters such as InstanceId, DiskId, and SnapshotIds to be queried. Specified parameters are used as filter conditions and have logical AND relations.

When you call an API operation by using Alibaba Cloud CLI, specify request parameter values of different data types in required formats. For more information, see [Parameter format overview](#).

Debugging

OpenAPI Explorer automatically calculates the signature value. For your convenience, we recommend that you call this operation in OpenAPI Explorer. OpenAPI Explorer dynamically generates the sample code of the operation for different SDKs.

Request parameters

Parameter	Type	Required	Example	Description
Action	String	Yes	DescribeSnapshots	The operation that you want to perform. Set the value to DescribeSnapshots.
RegionId	String	Yes	cn-hangzhou	The region ID of the disk. You can call the DescribeRegions operation to query the most recent region list.

Parameter	Type	Required	Example	Description
InstanceId	String	No	i-bp67acfmxazb4p****	The ID of the instance.
DiskId	String	No	d-bp67acfmxazb4p****	The ID of the disk.
SnapshotLinkId	String	No	sp-bp67acfmxazb4p****	The ID of the snapshot chain.
SnapshotIds	String	No	["s-bp67acfmxazb4p****", "s-bp67acfmxazb5p****", ... "s-bp67acfmxazb6p****"]	The IDs of the snapshots. The value is a JSON array that consists of up to 100 snapshot IDs. Separate multiple snapshot IDs with commas (,).
PageNumber	Integer	No	1	The number of the page to return. Pages start from page 1. Default: 1
PageSize	Integer	No	10	The number of entries to return on each page. Valid values: 1 to 100. Default value: 10
SnapshotName	String	No	testSnapshotName	The name of the snapshot.
Status	String	No	all	The status of the snapshot. Default value: all. Valid values: - progressing: The snapshot is being created. - accomplished: The snapshot is created. - failed: The snapshot fails to be created. - all: All snapshot statuses.
SnapshotType	String	No	all	The type of the snapshot. Default value: all. Valid values: - auto: automatic snapshot - user: manual snapshot (also called user-created snapshot) - all: all snapshot types
Filter.1.Key	String	No	CreationStartTime	The key of filter 1 used to query resources. Set the value to CreationStartTime.
Filter.2.Key	String	No	CreationEndTime	The key of filter 2 used to query resources. Set the value to CreationEndTime.
Filter.1.Value	String	No	2019-12-13T17:00Z	The value of filter 1 used to query resources. The value must be the beginning of the time range in which to query created resources.
Filter.2.Value	String	No	2019-12-13T22:00Z	The value of filter 2 used to query resources. The value must be the end of the time range in which to query created resources.

Parameter	Type	Required	Example	Description
Usage	String	No	none	Specifies whether the snapshot has been used to create images or disks. Valid values: - image: The snapshot has been used to create custom images. - disk: The snapshot has been used to create disks. - image_disk: The snapshot has been used to create custom images and data disks. - none: The snapshot has not been used to create custom images or disks.
SourceDiskType	String	No	Data	The type of the disk for which the snapshot was created. Valid values: - System: system disk - Data: data disk  Note The values are case-insensitive.
Tag.N.Key	String	No	TestKey	The key of tag N of the snapshot. Valid values of N: 1 to 20.
Tag.N.Value	String	No	TestValue	The value of tag N of the snapshot. Valid values of N: 1 to 20.
Encrypted	Boolean	No	false	Specifies whether the snapshot is encrypted. Default value: false.
ResourceGroupId	String	No	rg-bp67acfmazb4p****	The ID of the resource group.
DryRun	Boolean	No	false	Specifies whether to check the validity of the request without actually making the request. Default value: false. Valid values: - true: The validity of the request is checked but the request is not made. Check items include whether your AccessKey pair is valid, whether RAM users are authorized, and whether the required parameters are specified. If the check fails, the corresponding error message is returned. If the check succeeds, the DryRunOperation error code is returned. - false: The validity of the request is checked. If the check succeeds, a 2XX HTTP status code is returned and the request is made.
KMSKeyId	String	No	0e478b7a-4262-4802-b8cb-00d3fb40****	The ID of the KMS key used by the data disk.

Parameter	Type	Required	Example	Description
Category	String	No	Standard	The type of the snapshot. Default value: all. Valid values: - Standard: normal snapshot - Flash: local snapshot  Note This parameter will be removed in the future. We recommend that you use other parameters to ensure future compatibility.

Response parameters

Parameter	Type	Example	Description
PageNumber	Integer	1	The page number of the returned page.
PageSize	Integer	10	The number of entries returned per page.
RequestId	String	473469C7-AA6F-4DC5-B3DB-A3DC0DE3C83E	The ID of the request.
Snapshots	Array of Snapshot		Details about the snapshots.
Snapshot			
Category	String	standard	The type of the snapshot.  Note This parameter will be removed in the future. We recommend that you use other parameters to ensure future compatibility.
CreationTime	String	2020-08-20T14:52:28Z	The time when the snapshot was created. The time follows the ISO 8601 standard in the yyyy-MM-ddTHH:mm:ssZ format. The time is displayed in UTC.
Description	String	testDescription	The description of the snapshot.
Encrypted	Boolean	false	Indicates whether the snapshot was encrypted.
KMSKeyId	String	0e478b7a-4262-4802-b8cb-00d3fb40826X	The ID of the KMS key used by the data disk.
LastModifiedTime	String	2020-08-25T14:18:09Z	The time when the snapshot was last changed. The time follows the ISO 8601 standard in the yyyy-MM-ddTHH:mm:ssZ format. The time is displayed in UTC.
ProductCode	String	jxsc000****	The product code of the Alibaba Cloud Marketplace image.
Progress	String	100	The progress of the snapshot creation task. Unit: percent (%).

Parameter	Type	Example	Description
RemainTime	Integer	38	The remaining time required to create the snapshot. Unit: seconds.
ResourceGroupId	String	rg-bp67acfmazb4p****	The ID of the resource group.
RetentionDays	Integer	30	The number of days that an automatic snapshot can be retained.
SnapshotId	String	s-bp67acfmazb4p****	The ID of the snapshot.
SnapshotName	String	testSnapshotName	The name of the snapshot. This parameter is returned only if a snapshot name was specified during snapshot creation.
SnapshotSN	String	64472-116742336-61976****	The serial number of the snapshot.
SnapshotType	String	all	The type of the snapshot. Default value: all. Valid values: • auto: automatic snapshot • user: manual snapshot (also called user-created snapshot) • all: all snapshot types
SourceDiskId	String	d-bp67acfmazb4ph****	The ID of the source disk for which the snapshot was created. This parameter is retained even if the source disk of the snapshot is released.
SourceDiskSize	String	2000	The size of the source disk. Unit: GiB.
SourceDiskType	String	Data	The type of the source disk. Valid values: • system • data
SourceStorageType	String	disk	The category of the source disk.  Note This parameter will be removed in the future. We recommend that you use other parameters to ensure future compatibility.
Status	String	accomplished	The status of the snapshot. Valid values: • progressing • accomplished • failed
Tags	Array of Tag		Details about the tags bound to the snapshot.
Tag			

Parameter	Type	Example	Description
TagKey	String	TestKey	The tag key of the snapshot.
TagValue	String	TestValue	The tag value of the snapshot.
Usage	String	none	Indicates whether the snapshot was used to create images or disks. Valid values: • image • disk • image_disk • none
TotalCount	Integer	36	The total number of snapshots.

Examples

Sample requests

```
https://ecs.aliyuncs.com/?Action=DescribeSnapshots
&RegionId=cn-hangzhou
&InstanceId=i-bp67acfmazb4p****
&DiskId=d-bp67acfmazb4p****
&SnapshotIds=["s-bp67acfmazb4p****", "s-bp67acfmazb5p****", ... "s-bp67acfmazb6p****"]
&PageNumber=1
&PageSize=10
&SnapshotName=testSnapshotName
&Status=all
&SnapshotType=all
&Usage=none
&SourceDiskType=Data
&Tag.1.Key=TestKey
&Tag.1.Value=TestValue
&Encrypted=false
&DryRun=false
&<Common request parameters>
```

Sample success responses

XML format

```

<DescribeSnapshotsResponse>
  <PageNumber>1</PageNumber>
  <PageSize>2</PageSize>
  <RequestId>659F91C6-1949-43B0-90C4-B6342CA757D5</RequestId>
  <Snapshots>
    <Snapshot>
      <CreationTime>2020-08-20T14:52:28Z</CreationTime>
      <LastModifiedTime>2020-08-25T14:18:09Z</LastModifiedTime>
      <Progress>100%</Progress>
      <SnapshotId>s-943ypfg****</SnapshotId>
      <SnapshotName>auto_20150730_3</SnapshotName>
      <SourceDiskId>d-944qyqj****</SourceDiskId>
      <SourceDiskSize>20</SourceDiskSize>
      <SnapshotType>user</SnapshotType>
      <SourceDiskType>system</SourceDiskType>
      <Status>accomplished</Status>
      <Usage>none</Usage>
    </Snapshot>
    <Snapshot>
      <CreationTime>2015-07-30T05:00:14Z</CreationTime>
      <Progress>100%</Progress>
      <SnapshotId>s-94osg32****</SnapshotId>
      <SnapshotName>auto_20150730_3</SnapshotName>
      <SourceDiskId>d-94j355j****</SourceDiskId>
      <SourceDiskSize>20</SourceDiskSize>
      <SourceDiskType>system</SourceDiskType>
      <Status>accomplished</Status>
      <Usage>none</Usage>
    </Snapshot>
  </Snapshots>
  <TotalCount>36</TotalCount>
</DescribeSnapshotsResponse>

```

JSON format

```

{
  "PageNumber": 1,
  "PageSize": 2,
  "RequestId": "659F91C6-1949-43B0-90C4-B6342CA757D5",
  "Snapshots": {
    "Snapshot": [
      {
        "CreationTime": "2020-08-20T14:52:28Z",
        "LastModifiedTime": "2020-08-25T14:18:09Z",
        "Progress": "100%",
        "SnapshotId": "s-943ypfg****",
        "SnapshotName": "auto_20150730_3",
        "SourceDiskId": "d-944qyqj****",
        "SourceDiskSize": 20,
        "SnapshotType": "user",
        "SourceDiskType": "system",
        "Status": "accomplished",
        "Usage": "none"
      },
      {
        "CreationTime": "2015-07-30T05:00:14Z",
        "Progress": "100%",
        "SnapshotId": "s-94osg32****",
        "SnapshotName": "auto_20150730_3",
        "SourceDiskId": "d-94j355j****",
        "SourceDiskSize": 20,
        "SourceDiskType": "system",
        "Status": "accomplished",
        "Usage": "none"
      }
    ]
  },
  "TotalCount": 36
}

```

Error codes

HTTP status code	Error code	Error message	Description
403	InvalidSnapshotIds.Malformed	The amount of specified specified snapshot Ids exceeds the limit.	The error message returned because the specified SnapshotIds parameter is invalid.
404	InvalidFilterKey.NotFound		The error message returned because the specified start time or end time is invalid.
404	InvalidUsage	The specified Usage is not valid	The error message returned because the specified Usage parameter is invalid. The valid values are image, disk, image_disk, or none.

HTTP status code	Error code	Error message	Description
404	InvalidSourceDiskType	The specified SourceDiskType is not valid	The error message returned because the specified SourceDiskType parameter is invalid.
404	InvalidStatus.NotFound	The specified Status is not found	The error message returned because the specified Status parameter does not exist.
404	InvalidSnapshotType.NotFound	The specified SnapshotType is not found	The error message returned because the specified SnapshotType parameter does not exist.
400	InvalidTag.Mismatch	The specified Tag.n.Key and Tag.n.Value are not match.	The error message returned because the specified Tag.N.Key and Tag.N.Value parameters do not match.
400	InvalidTagCount	The specified tags are beyond the permitted range.	The error message returned because the number of specified tags exceeds the upper limit.
500	InternalServerError	The request processing has failed due to some unknown error.	The error message returned because an internal error has occurred. Try again later. If the problem persists, submit a ticket.
404	InvalidSnapshotLinkId.NotFound	The specified snapshot link is not found.	The error message returned because the specified SnapshotLinkId parameter does not exist.

12.5. DescribeSnapshotsUsage

You can call this operation to query the number of snapshots and the total size of snapshots in a region.

If you want to view the snapshot usage information on each disk in the current region, we recommend that you call the [DescribeSnapshotLinks](#) operation to query snapshot chain information.

Debugging

OpenAPI Explorer automatically calculates the signature value. For your convenience, we recommend that you call this operation in OpenAPI Explorer. OpenAPI Explorer dynamically generates the sample code of the operation for different SDKs.

Request parameters

Parameter	Type	Required	Example	Description
RegionId	String	Yes	cn-hangzhou	The region ID of the snapshot. You can call the DescribeRegions operation to query the most recent region list.
Action	String	Yes	DescribeSnapshotsUsage	The operation that you want to perform. Set the value to DescribeSnapshotsUsage.

Response parameters

Parameter	Type	Example	Description
RequestId	String	473469C7-AA6F-4DC5-B3DB-A3DC0DE3C83E	The ID of the request.

Parameter	Type	Example	Description
SnapshotCount	Integer	5	The number of snapshots stored in the current region.
SnapshotSize	Long	122	The size of snapshots stored in the current region. Unit: bytes.

Examples

Sample requests

```
https://ecs.aliyuncs.com/?Action=DescribeSnapshotsUsage
&RegionId=cn-hangzhou
&<Common request parameters>
```

Sample success responses

XML format

```
<DescribeSnapshotsUsageResponse>
  <SnapshotCount>5</SnapshotCount>
  <SnapshotSize>122</SnapshotSize>
  <RequestId>ED5CF6DD-71CA-462C-9C94-A61A78A01479</RequestId>
</DescribeSnapshotsUsageResponse>
```

JSON format

```
{
  "SnapshotSize": "122",
  "RequestId": "ACD9BBB0-A9D1-46D7-9630-B7A69889E110",
  "SnapshotCount": "5"
}
```

Error codes

HTTP status code	Error code	Error message	Description
403	InvalidParam.RegionId	The specified region is not exist.	The error message returned because the specified RegionId parameter does not exist.

12.6. DescribeSnapshotPackage

You can call this operation to query the Object Storage Service (OSS) storage plans that you have purchased in an Alibaba Cloud region. OSS storage plans can be used to offset the storage space of snapshots.

Debugging

OpenAPI Explorer automatically calculates the signature value. For your convenience, we recommend that you call this operation in OpenAPI Explorer. OpenAPI Explorer dynamically generates the sample code of the operation for different SDKs.

Request parameters

Parameter	Type	Required	Example	Description
RegionId	String	Yes	cn-hangzhou	The region ID of the snapshot. You can call the DescribeRegions operation to query the most recent region list.
Action	String	Yes	DescribeSnapshotPackage	The operation that you want to perform. Set the value to DescribeSnapshotPackage.
PageNumber	Integer	No	1	The number of the page to return. Pages start from page 1. Default value: 1.
PageSize	Integer	No	10	The number of entries to return on each page. Maximum value: 100. Default value: 10.

Response parameters

Parameter	Type	Example	Description
PageNumber	Integer	1	The page number of the returned page.
PageSize	Integer	10	The number of entries returned per page.
RequestId	String	473469C7-AA6F-4DC5-B3DB-A3DC0DE3C83E	The ID of the request.
SnapshotPackages			An array consisting of SnapshotPackage data.
DisplayName	String	FinanceJoshua	The name of the OSS storage plan.
EndTime	String	2018-11-30T06:32:31Z	The time when the OSS storage plan expires. The time follows the ISO 8601 standard in the yyyy-MM-ddTHH:mm:ssZ format. The time is displayed in UTC.
InitCapacity	Long	500	The storage space offered by the OSS storage plan.
StartTime	String	2017-11-30T06:32:31Z	The time when the OSS storage plan was purchased. The time follows the ISO 8601 standard in the yyyy-MM-ddTHH:mm:ssZ format. The time is displayed in UTC.
TotalCount	Integer	1	The total number of returned OSS storage plans.

Examples

Sample requests

```
https://ecs.aliyuncs.com/?Action=DescribeSnapshotPackage
&RegionId=cn-hangzhou
&<Common request parameters>
```

Sample success responses

XML format

```
<DescribeSnapshotPackageResponse>
  <TotalCount>1</TotalCount>
  <PageNumber>1</PageNumber>
  <PageSize>5</PageSize>
  <SnapshotPackages>
    <SnapshotPackage>
      <StartTime>2017-11-30T06:32:31Z</StartTime>
      <EndTime>2018-11-30T06:32:31Z</EndTime>
      <InitCapacity>500</InitCapacity>
      <DisplayName>sp-snapshotpackage1</DisplayName>
    </SnapshotPackage>
  </SnapshotPackages>
  <RequestId>ACD9BBB0-A9D1-46D7-9630-B7A69889E110</RequestId>
</DescribeSnapshotPackageResponse>
```

JSON format

```
{
  "SnapshotPackages":{
    "SnapshotPackage":[
      {
        "InitCapacity":"500",
        "EndTime":"2018-11-30T06:32:31Z",
        "StartTime":"2017-11-30T06:32:31Z",
        "DisplayName":"sp-snapshotpackage1"
      }
    ]
  },
  "PageNumber":"1",
  "TotalCount":"1",
  "PageSize":"5",
  "RequestId":"ACD9BBB0-A9D1-46D7-9630-B7A69889E110"
}
```

Error codes

12.7. DescribeSnapshotLinks

You can call this operation to query the snapshot chains of one or more disks. A snapshot chain is a chain of all the snapshots created for a disk. A disk corresponds to a chain of snapshots.

Description

When you call this operation, take note of the following items:

- You can specify multiple request parameters such as `RegionId` , `DiskIds` , and `InstanceId` to be queried. Specified parameters have logical AND relations.
- Only the specified parameters are used as filter conditions. If both `DiskIds` and `SnapshotLinkIds` are set to empty JSON arrays, they are regarded as valid filter conditions and an empty response is returned.

Debugging

OpenAPI Explorer automatically calculates the signature value. For your convenience, we recommend that you call this operation in OpenAPI Explorer. OpenAPI Explorer dynamically generates the sample code of the operation for different SDKs.

Request parameters

Parameter	Type	Required	Example	Description
Action	String	Yes	DescribeSnapshotLinks	The operation that you want to perform. Set the value to DescribeSnapshotLinks.
RegionId	String	Yes	cn-hangzhou	The region ID of the disk. You can call the DescribeRegions operation to query the most recent region list.
InstanceId	String	No	i-bp1h6jmbefj2cyqs****	The ID of the instance.
DiskIds	String	No	["d-bp1d6tsvznfghy7y***", "d-bp1ippxbaql9zet7****", ... "d-bp1ib7bcz07lca9*****"]	The IDs of the disks. The value is a JSON array that consists of up to 100 disk IDs. Separate multiple disk IDs with commas (,).
SnapshotLinkIds	String	No	["sl-bp1grgphbcc9brb5***", "sl-bp1c4izumvq0i5bs****", ... "sl-bp1akk7isz866dds*****"]	The IDs of the snapshot chains. The value is a JSON array that consists of up to 100 snapshot chain IDs. Separate multiple snapshot chain IDs with commas (,).
PageNumber	Integer	No	1	The number of the page to return. Pages start from page 1. Default: 1
PageSize	Integer	No	50	The number of entries to return on each page. Valid values: 1 to 100. Default value: 10

Response parameters

Parameter	Type	Example	Description
PageNumber	Integer	1	The page number of the returned page.
PageSize	Integer	50	The number of entries returned per page.
RequestId	String	473469C7-AA6F-4DC5-B3DB-A3DC0DE3C83E	The ID of the request.
SnapshotLinks	Array of SnapshotLink		Details about the snapshot chains.
SnapshotLink			

Parameter	Type	Example	Description
Category	String	standard	The type of the snapshot.  Note This parameter will be removed in the future. We recommend that you use other parameters to ensure future compatibility.
InstanceId	String	i-bp1h6jmbefj2cyqs****	The ID of the instance.
InstanceName	String	testInstanceName	The name of the instance.
RegionId	String	cn-hangzhou	The ID of the region in which the source disk of the snapshot chain is located.
SnapshotLinkId	String	sl-2ze0y1jwzpb1geqx****	The ID of the snapshot chain.
SourceDiskId	String	d-bp1d6tsvznfghy7y****	The ID of the source disk. This parameter is retained even if the source disk is deleted.
SourceDiskName	String	testSourceDiskName	The name of the source disk.
SourceDiskSize	Integer	40	The size of the source disk. Unit: GiB.
SourceDiskType	String	data	The type of the source disk. Valid values: - system: system disk - data: data disk
TotalCount	Integer	1	The total number of snapshots in the snapshot chain.
TotalSize	Long	2097152	The total size of all snapshots in the snapshot chain. Unit: byte.
TotalCount	Integer	9	The total number of snapshot chains.

Examples

Sample requests

```
https://ecs.aliyuncs.com/?Action=DescribeSnapshotLinks
&RegionId=cn-hangzhou
&InstanceId=i-bp1h6jmbefj2cyqs****
&DiskIds=["d-bp1d6tsvznfghy7y****", "d-bp1ippxbaql9zet7****", ... "d-bp1ib7bcz07lxa9****"]
&SnapshotLinkIds=["sl-bp1grgphbcc9brb5****", "sl-bp1c4izumvq0i5bs****", ... "sl-bp1akk7isz866dds****"]
&PageNumber=1
&PageSize=10
&<Common request parameters>
```

Sample success responses

XML format

```

<DescribeSnapshotLinksResponse>
  <SnapshotLinks>
    <SnapshotLink>
      <InstanceName>testInstanceName1</InstanceName>
      <TotalCount>1</TotalCount>
      <Category>standard</Category>
      <SourceDiskSize>40</SourceDiskSize>
      <InstanceId>i-bp1dh0xo8nucqe1o****</InstanceId>
      <SnapshotLinkId>sl-bp1hgvjgqo3wn8u7****</SnapshotLinkId>
      <SourceDiskName>testSourceDiskName1</SourceDiskName>
      <RegionId></RegionId>
      <SourceDiskType>system</SourceDiskType>
      <TotalSize>3806330880</TotalSize>
      <SourceDiskId>d-bp149tb0mqn0boy6****</SourceDiskId>
    </SnapshotLink>
    <SnapshotLink>
      <InstanceName>testInstanceName2</InstanceName>
      <TotalCount>1</TotalCount>
      <Category>standard</Category>
      <InstanceId>i-bp1c84ts5f4b6t6z****</InstanceId>
      <SnapshotLinkId>sl-bp163h35n7endbpv****</SnapshotLinkId>
      <SourceDiskName>testSourceDiskName2</SourceDiskName>
      <RegionId></RegionId>
      <TotalSize>2709520384</TotalSize>
      <SourceDiskType>data</SourceDiskType>
      <SourceDiskId>d-bp1cl4hqnh0i2u5h****</SourceDiskId>
    </SnapshotLink>
  </SnapshotLinks>
  <PageNumber>1</PageNumber>
  <PageSize>2</PageSize>
  <RequestId>473469C7-AA6F-4DC5-B3DB-A3DC0DE3C83E</RequestId>
  <TotalCount>9</TotalCount>
</DescribeSnapshotLinksResponse>

```

JSON format

```

{
  "SnapshotLinks": {
    "SnapshotLink": [
      {
        "InstanceName": "testInstanceName1",
        "TotalCount": 1,
        "Category": "standard",
        "SourceDiskSize": 40,
        "InstanceId": "i-bp1dh0xo8nucqe1o****",
        "SnapshotLinkId": "sl-bp1hgvjgqo3wn8u7****",
        "SourceDiskName": "testSourceDiskName1",
        "RegionId": "",
        "SourceDiskType": "system",
        "TotalSize": 3806330880,
        "SourceDiskId": "d-bp149tb0mqn0boy6****"
      },
      {
        "InstanceName": "testInstanceName2",
        "TotalCount": 1,
        "Category": "standard",
        "InstanceId": "i-bp1c84ts5f4b6t6z****",
        "SnapshotLinkId": "sl-bp163h35n7endbpv****",
        "SourceDiskName": "testSourceDiskName2",
        "RegionId": "",
        "TotalSize": 2709520384,
        "SourceDiskType": "data",
        "SourceDiskId": "d-bp1cl4hqnh0i2u5h****"
      }
    ]
  },
  "PageNumber": 1,
  "PageSize": 2,
  "RequestId": "473469C7-AA6F-4DC5-B3DB-A3DC0DE3C83E",
  "TotalCount": 9
}

```

Error codes

HTTP status code	Error code	Error message	Description
400	InvalidRegionId	The specified regionId is invalid.	The error message returned because the specified RegionId parameter is invalid.
400	InvalidSnapshotLinkIds	The specified snapshotLinkIds is invalid.	The error message returned because the specified SnapshotLinkIds parameter is invalid.
400	InvalidDiskIds	The specified diskIds is invalid.	The error message returned because the specified DiskIds parameter is invalid.

HTTP status code	Error code	Error message	Description
500	InternalError	The request processing has failed due to some unknown error.	The error message returned because an internal error has occurred. Try again later. If the problem persists, submit a ticket.

12.8. ModifySnapshotAttribute

You can call the ModifySnapshotAttribute operation to modify the name or description of a snapshot.

Debugging

OpenAPI Explorer automatically calculates the signature value. For your convenience, we recommend that you call this operation in OpenAPI Explorer. OpenAPI Explorer dynamically generates the sample code of the operation for different SDKs.

Request parameters

Parameter	Type	Required	Example	Description
Action	String	Yes	ModifySnapshotAttribute	The operation that you want to perform. Set the value to ModifySnapshotAttribute.
SnapshotId	String	Yes	s-bp199lyny9bb47pa***	The ID of the snapshot.
SnapshotName	String	No	testSnapshotName	The name of the snapshot. The name must be 2 to 128 characters in length. It must start with a letter and cannot start with http:// or https://. It can contain letters, digits, colons (:), underscores (_), and hyphens (-). It cannot start with auto because snapshot names that start with auto are recognized as automatic snapshots.
Description	String	No	testDescription	The description of the snapshot. The description must be 2 to 256 characters in length and cannot start with http:// or https://.

Response parameters

Parameter	Type	Example	Description
RequestId	String	473469C7-AA6F-4DC5-B3DB-A3DC0DE3C83E	The ID of the request.

Examples

Sample requests

```
https://ecs.aliyuncs.com/?Action=ModifySnapshotAttribute
&SnapshotId=s-bp199lyny9bb47pa****
&SnapshotName=testSnapshotName
&Description=testDescription
&<Common request parameters>
```

Sample success responses

XML format

```
<ModifySnapshotAttributeResponse>
  <RequestId>C8B26B44-0189-443E-9816-D951F59623A9</RequestId>
</ModifySnapshotAttributeResponse>
```

JSON format

```
{
  "RequestId": "C8B26B44-0189-443E-9816-D951F59623A9"
}
```

Error codes

HTTP status code	Error code	Error message	Description
404	InvalidDescription.Malformed	The specified description is wrongly formed.	The error message returned because the specified Description parameter is invalid. The description must be 2 to 256 characters in length and cannot start with http:// or https://.
400	InvalidSnapshotName.Malformed	The specified SnapshotName is wrongly formed.	The error message returned because the specified SnapshotName parameter is invalid.
400	NoAttributeToModify	No attribute to be modified in this request.	The error message returned because no properties of the specified snapshot are modified.
404	InvalidSnapshotId.NotFound	The specified SnapshotId does not exist.	The error message returned because the specified SnapshotId parameter does not exist. Check whether the snapshot ID is correct.

12.9. CreateAutoSnapshotPolicy

You can call this operation to create an automatic snapshot policy.

Description

After you create an automatic snapshot policy, you can call the [ApplyAutoSnapshotPolicy](#) operation to apply it to a disk. You can also call the [ModifyAutoSnapshotPolicyEx](#) operation to modify a created automatic snapshot policy.

When you call this operation, take note of the following items:

- You can create a maximum of 100 automatic snapshot policies in each region for a single Alibaba Cloud account.
- If an automatic snapshot is being created when the time scheduled for a new automatic snapshot to be created is due, the new snapshot task is skipped. This may occur when a disk contains a large volume of data. For example, you have scheduled snapshots to be created at 09:00, 10:00, 11:00, and 12:00. The system starts to create a snapshot at 09:00 and completes the process at 10:20. The process takes 80 minutes because the disk has a large volume of data. The system does not create a snapshot at 10:00, but creates a snapshot at 11:00.

Debugging

OpenAPI Explorer automatically calculates the signature value. For your convenience, we recommend that you call this operation in OpenAPI Explorer. OpenAPI Explorer dynamically generates the sample code of the operation for different SDKs.

Request parameters

Parameter	Type	Required	Example	Description
Action	String	Yes	CreateAutoSnapshotPolicy	The operation that you want to perform. Set the value to CreateAutoSnapshotPolicy.
regionId	String	Yes	cn-hangzhou	The region ID of the automatic snapshot policy. You can call the DescribeRegions operation to query the most recent region list.
repeatWeekdays	String	Yes	["1","2"]	The days of the week on which to create automatic snapshots. Valid values: 1 to 7. For example, 1 indicates Monday. You can specify multiple days from Monday to Sunday. - You can specify up to 7 days over a one-week period. - You must specify the parameter in a JSON-formatted array such as ["1", "2", ... "7"] . Separate multiple values with commas (,).
retentionDays	Integer	Yes	30	The retention period of an automatic snapshot. Unit: days. Valid values: -1: The automatic snapshot is retained permanently. 1-65536: The automatic snapshot is retained for the specified number of days. Default value: -1.
timePoints	String	Yes	["0", "1", ... "23"]	The point in time at which to create automatic snapshots. Unit: hours. Valid values: 0 to 23. The values indicate a total of 24 hours from 00:00 to 23:00. For example, 1 indicates 01:00. To schedule multiple automatic snapshot tasks for a disk in a day, you can set the timePoints parameter to a JSON-formatted array. You can specify a maximum of 24 points in time.
autoSnapshotPolicyName	String	No	TestName	The name of the automatic snapshot policy. The name must be 2 to 128 characters in length. It must start with a letter and cannot start with http:// or https://. It can contain letters, digits, colons (:), underscores (_), and hyphens (-). This parameter is empty by default.
Tag.N.Key	String	No	TestKey	The key of tag N of the snapshot. Valid values of N: 1 to 20. It cannot be an empty string. The tag key can be up to 128 characters in length and cannot contain http:// or https://. It cannot start with acs: or aliyun.
Tag.N.Value	String	No	TestValue	The value of tag N of the snapshot. Valid values of N: 1 to 20. It can be an empty string. The tag value can be up to 128 characters in length and cannot contain http:// or https://. It cannot start with acs:.

Response parameters

Parameter	Type	Example	Description
AutoSnapshotPolicyId	String	sp-bp12m37ccmxvbm5****	The ID of the automatic snapshot policy.
RequestId	String	473469C7-AA6F-4DC5-B3DB-A3DC0DE3C83E	The ID of the request.

Examples

Sample requests

```
https://ecs.aliyuncs.com/?Action=CreateAutoSnapshotPolicy
&regionId=cn-hangzhou
&repeatWeekdays=["1"]
&retentionDays=30
&timePoints=["0", "19"]
&autoSnapshotPolicyName=TestName
&<Common request parameters>
```

Sample success responses

XML format

```
<CreateAutoSnapshotPolicyResponse>
  <RequestId>F3CD6886-D8D0-4FEE-B93E-1B73239673DE</RequestId>
  <AutoSnapshotPolicyId>sp-bp12m37ccmxvbm5****</AutoSnapshotPolicyId>
</CreateAutoSnapshotPolicyResponse>
```

JSON format

```
{
  "RequestId": "F3CD6886-D8D0-4FEE-B93E-1B73239673DE",
  "AutoSnapshotPolicyId": "sp-bp12m37ccmxvbm5****"
}
```

Error codes

HTTP status code	Error code	Error message	Description
403	ParameterInvalid	The specified RegionId parameter is invalid.	The error message returned because the specified regionId parameter is invalid.
403	ParameterInvalid	The specified RepeatWeekDays parameter is invalid.	The error message returned because the specified repeatWeekdays parameter is invalid.
403	ParameterInvalid	The specified TimePoints parameter is invalid.	The error message returned because the specified timePoints parameter is invalid.
403	ParameterInvalid	The specified RetentionDays parameter is invalid.	The error message returned because the specified retentionDays parameter is invalid.

HTTP status code	Error code	Error message	Description
403	AutoSnapshotPolicy.QuotaExceed	The maximum number of automatic snapshot policy has been reached.	The error message returned because the maximum number of automatic snapshot policies has been reached.
400	DiskCategory.OperationNotSupported	The type of the specified disk does not support creating a snapshot.	The error message returned because the operation is not supported by the current disk category.
403	InvalidAccountStatus.NotEnoughBalance	Your account does not have enough balance.	The error message returned because your account balance is insufficient. Top up your account before you proceed.
403	InvalidAccountStatus.SnapshotServiceUnavailable	Snapshot service has not been opened yet.	The error message returned because the operation is not supported while the snapshot service is disabled.
400	Duplicate.TagKey	The Tag.N.Key contain duplicate key.	The error message returned because a tag with the identical key already exists. Tag keys must be unique.
400	InvalidTagKey.Malformed	The specified Tag.n.Key is not valid.	The error message returned because the specified Tag.N.Key parameter is invalid.
400	InvalidTagValue.Malformed	The specified Tag.n.Value is not valid.	The error message returned because the specified Tag.N.Value parameter is invalid.

12.10. ApplyAutoSnapshotPolicy

You can call this operation to apply an automatic snapshot policy to one or more disks. If the target disk has an automatic snapshot policy applied, you can call this API operation to replace the automatic snapshot policy.

Description

- A disk can have only one automatic snapshot policy.
- A single automatic snapshot policy can be applied to multiple disks.

Debugging

OpenAPI Explorer automatically calculates the signature value. For your convenience, we recommend that you call this operation in OpenAPI Explorer. OpenAPI Explorer dynamically generates the sample code of the operation for different SDKs.

Request parameters

Parameter	Type	Required	Example	Description
Action	String	Yes	ApplyAutoSnapshotPolicy	The operation that you want to perform. Set the value to ApplyAutoSnapshotPolicy.
regionId	String	Yes	cn-hangzhou	The ID of the region to which the automatic snapshot policy and the disk belong. You can call the DescribeRegions operation to query the most recent region list.
autoSnapshotPolicyId	String	Yes	sp-bp14yziuvu3s6jn****	The ID of the automatic snapshot policy to apply.

Parameter	Type	Required	Example	Description
diskIds	String	Yes	["d-bp14k9cxvr5uzy54****", "d-bp1dtj8v7x6u08iw****", "d-bp1c0tyj9tfl2r8****"]	The IDs of one or more disks. The value is a JSON array. Separate multiple disk IDs with commas (,).

Response parameters

Parameter	Type	Example	Description
RequestId	String	473469C7-AA6F-4DC5-B3DB-A3DC0DE3C83E	The ID of the request.

Examples

Sample requests

```
https://ecs.aliyuncs.com/?Action=ApplyAutoSnapshotPolicy
&autoSnapshotPolicyId=sp-bp14yziiuvu3s6jn****
&diskIds=["d-bp14k9cxvr5uzy54****", "d-bp1dtj8v7x6u08iw****", "d-bp1c0tyj9tfl2r8****"]
&regionId=cn-hangzhou
&<Common request parameters>
```

Sample success responses

XML format

```
<ApplyAutoSnapshotPolicyResponse>
  <RequestId>F3CD6886-D8D0-4FEE-B93E-1B73239673DE</RequestId>
</ApplyAutoSnapshotPolicyResponse>
```

JSON format

```
{
  "RequestId": "F3CD6886-D8D0-4FEE-B93E-1B73239673DE"
}
```

Error codes

HTTP status code	Error code	Error message	Description
404	ParameterInvalid	The specified automatic snapshot policy does not exist.	The error message returned because the specified autoSnapshotPolicyId parameter does not exist. Check whether the policy ID is correct.
404	ParameterInvalid	The specified automatic snapshot policy does not exist in the region.	The error message returned because the specified automatic snapshot policy does not exist in this region. Check whether the policy ID is correct.

HTTP status code	Error code	Error message	Description
404	InvalidDiskId.NotFound	The specified disk does not exist in the region.	The error message returned because the specified disk does not exist in the current region.
403	ParameterInvalid	The specified RegionId parameter is invalid.	The error message returned because the specified regionId parameter is invalid.
403	ParameterInvalid	The specified AutoSnapshotPolicyId parameter is invalid.	The error message returned because the specified autoSnapshotPolicyId parameter is invalid.
403	ParameterInvalid	The specified DiskIds are invalid.	The error message returned because the specified diskIds parameter is invalid.
400	DiskCategory.OperationNotSupported	The type of the specified disk does not support creating a snapshot.	The error message returned because the operation is not supported by the current disk category.
400	PartofDiskCategory.OperationNotSupported	The types of some disks in the disk list do not support creating snapshots.	The error message returned because some of the specified disks do not support this operation.
403	InvalidAccountStatus.NoEnoughBalance	Your account does not have enough balance.	The error message returned because your account balance is insufficient. Top up your account before you proceed.
403	InvalidAccountStatus.SnapshotServiceUnavailable	Snapshot service has not been opened yet.	The error message returned because the operation is not supported while the snapshot service is disabled.

12.11. CancelAutoSnapshotPolicy

You can call this operation to cancel the automatic snapshot policy for one or more disks.

Debugging

OpenAPI Explorer automatically calculates the signature value. For your convenience, we recommend that you call this operation in OpenAPI Explorer. OpenAPI Explorer dynamically generates the sample code of the operation for different SDKs.

Request parameters

Parameter	Type	Required	Example	Description
Action	String	Yes	CancelAutoSnapshotPolicy	The operation that you want to perform. Set the value to CancelAutoSnapshotPolicy.
diskIds	String	Yes	["d-bp14k9cxvr5uzy54****", "d-bp1dtj8v7x6u08iw****", "d-bp1c0tyj9tfl2r8****"]	The IDs of the target disks. To cancel the automatic snapshot policy for multiple disks, you can set this parameter to a JSON-formatted array such as [d-xxxxxxx", "d-yyyyyyyy", ... "d-zzzzzzzz"]. Separate multiple IDs with commas (,).

Parameter	Type	Required	Example	Description
regionId	String	Yes	cn-hangzhou	The ID of the region to which the automatic snapshot policy and the disk belong. You can call the DescribeRegions operation to query the most recent region list.

Response parameters

Parameter	Type	Example	Description
RequestId	String	473469C7-AA6F-4DC5-B3DB-A3DC0DE3C83E	The ID of the request.

Examples

Sample requests

```
https://ecs.aliyuncs.com/?Action=CancelAutoSnapshotPolicy
&diskIds=["d-bp14k9cxvr5uzy54****", "d-bp1dtj8v7x6u08iw****", "d-bp1c0tyj9tflir8****"]
&regionId=cn-hangzhou
&<Common request parameters>
```

Sample success responses

XML format

```
<CancelAutoSnapshotPolicyResponse>
  <RequestId>F3CD6886-D8D0-4FEE-B93E-1B73239673DE</RequestId>
</CancelAutoSnapshotPolicyResponse>
```

JSON format

```
{
  "RequestId": "F3CD6886-D8D0-4FEE-B93E-1B73239673DE"
}
```

Error codes

HTTP status code	Error code	Error message	Description
403	ParameterInvalid	The specified RegionId parameter is invalid.	The error message returned because the specified regionId parameter is invalid.
403	ParameterInvalid	The specified DiskIds are invalid.	The error message returned because the specified diskIds parameter is invalid.
404	InvalidDiskId.NotFound	The specified DiskIds are not found.	The error message returned because the specified diskIds parameter does not exist.

12.12. DeleteAutoSnapshotPolicy

You can call this operation to delete an automatic snapshot policy. After you delete an automatic snapshot policy, the policy will no longer be applied to the disks that it previously took effect on.

Debugging

OpenAPI Explorer automatically calculates the signature value. For your convenience, we recommend that you call this operation in OpenAPI Explorer. OpenAPI Explorer dynamically generates the sample code of the operation for different SDKs.

Request parameters

Parameter	Type	Required	Example	Description
Action	String	Yes	DeleteAutoSnapshotPolicy	The operation that you want to perform. Set the value to DeleteAutoSnapshotPolicy.
autoSnapshotPolicyId	String	Yes	sp-bp14yziiuvu3s6jn****	The ID of the automatic snapshot policy. You can call the DescribeAutoSnapshotPolicyEx operation to query the available automatic snapshot policies.
regionId	String	Yes	cn-hangzhou	The region ID of the automatic snapshot policy. You can call the DescribeRegions operation to query the most recent region list.

Response parameters

Parameter	Type	Example	Description
RequestId	String	473469C7-AA6F-4DC5-B3DB-A3DC0DE3C83E	The ID of the request.

Examples

Sample requests

```
https://ecs.aliyuncs.com/?Action=DeleteAutoSnapshotPolicy
&autoSnapshotPolicyId=sp-bp14yziiuvu3s6jn****
&regionId=cn-hangzhou
&<Common request parameters>
```

Sample success responses

XML format

```
<DeleteAutoSnapshotPolicyResponse>
  <RequestId>F3CD6886-D8D0-4FEE-B93E-1B73239673DE</RequestId>
</DeleteAutoSnapshotPolicyResponse>
```

JSON format

```
{
  "RequestId": "F3CD6886-D8D0-4FEE-B93E-1B73239673DE"
}
```

Error codes

HTTP status code	Error code	Error message	Description

HTTP status code	Error code	Error message	Description
404	ParameterInvalid	The specified automatic snapshot policy does not exist.	The error message returned because the specified autoSnapshotPolicyID parameter does not exist. Check whether the policy ID is correct.
404	ParameterInvalid	The specified automatic snapshot policy does not exist in the region.	The error message returned because the specified automatic snapshot policy does not exist in this region. Check whether the policy ID is correct.

12.13. DescribeAutoSnapshotPolicyEX

You can call this operation to query the automatic snapshot policies that you have created.

Debugging

OpenAPI Explorer automatically calculates the signature value. For your convenience, we recommend that you call this operation in OpenAPI Explorer. OpenAPI Explorer dynamically generates the sample code of the operation for different SDKs.

Request parameters

Parameter	Type	Required	Example	Description
Action	String	Yes	DescribeAutoSnapshotPolicyEx	The operation that you want to perform. Set the value to DescribeAutoSnapshotPolicyEx.
RegionId	String	Yes	cn-hangzhou	The region ID of the automatic snapshot policy. You can call the DescribeRegions operation to query the most recent region list
AutoSnapshotPolicyId	String	No	sp-bp67acfmxazb4ph***	The ID of the automatic snapshot policy.
PageNumber	Integer	No	1	The number of the page to return. Pages start from page 1. Default value: 1.
PageSize	Integer	No	1	The number of entries to return on each page. Valid values: 1 to 100. Default value: 10.
Tag.N.Key	String	No	Test	The key of tag N of the snapshot. Valid values of N: 1 to 20. It cannot be an empty string. The tag key can be up to 128 characters in length and cannot contain http:// or https://. It cannot start with acs: or aliyun.
Tag.N.Value	String	No	Test	The value of tag N of the snapshot. Valid values of N: 1 to 20. It can be an empty string. The tag value can be up to 128 characters in length and cannot contain http:// or https://. It cannot start with acs:.

Response parameters

Parameter	Type	Example	Description
AutoSnapshotPolicies	Array		An array consisting of AutoSnapshotPolicy data.
AutoSnapshotPolicy			
AutoSnapshotPolicyId	String	FinanceJoshua	The ID of the automatic snapshot policy.
AutoSnapshotPolicyName	String	sp-bp67acfmazb4ph***	The name of the automatic snapshot policy.
CreationTime	String	2014-04-21T12:08:52Z	The time when the auto snapshot policy was created. The time follows the ISO 8601 standard in the yyyy-MM-ddTHH:mm:ssZ format. The time is displayed in UTC.
DiskNums	Integer	1	The number of disks to which the automatic snapshot policy is applied.
RegionId	String	cn-hangzhou	The ID of the region to which the automatic snapshot policy belongs.
RepeatWeekdays	String	["6"]	The days of a week on which automatic snapshots are created. Valid values: 1 to 7, corresponding to the days of a week, where 1 indicates Monday. One or more days can be specified.
RetentionDays	Integer	30	The retention period of the automatic snapshot. Unit: days. Valid values: -1: The automatic snapshot is retained permanently. 1-65536: The automatic snapshot is retained for the specified number of days.
Status	String	Normal	The status of the automatic snapshot policy. Valid values: - Normal: The automatic snapshot policy is normal. - Expire: The automatic snapshot policy cannot be used because the account has overdue payments.
Tags	Array		An array consisting of Tag data.
Tag			
TagKey	String	Test	The tag key of the snapshot.
TagValue	String	Test	The tag value of the snapshot.

Parameter	Type	Example	Description
TimePoints	String	["4", "19"]	The points in time at which automatic snapshots were created. The least interval that snapshots can be taken at is one hour. Valid values: 0 to 23, corresponding to 24 hours in the range of 00:00 to 23:00. 1 indicates 01:00. You can specify multiple points in time. The parameter is a JSON-formatted array: ["0", "1", ... "23"]. You can specify a maximum of 24 points in time. Separate multiple points in time with commas (,).
VolumeNums	Integer	2	The number of extended volumes on which this policy is enabled.
PageNumber	Integer	1	The page number of the returned page.
PageSize	Integer	1	The number of entries returned per page.
RequestId	String	473469C7-AA6F-4DC5-B3DB-A3DC0DE3C83E	The ID of the request.
TotalCount	Integer	2	The total number of automatic snapshot policies.

Examples

Sample requests

```
https://ecs.aliyuncs.com/?Action=DescribeAutoSnapshotPolicyEx
&RegionId=cn-hangzhou
&AutoSnapshotPolicyId=sp-bp67acfmxazb4ph***
&PageNumber=1
&PageSize=1
&<Common request parameters>
```

Sample success responses

XML format

```
<DescribeAutoSnapshotPolicyResponse>
  <PageNumber>1</PageNumber>
  <TotalCount>2</TotalCount>
  <AutoSnapshotPolicies>
    <AutoSnapshotPolicy>
      <CreationTime>2019-01-22 11:38:08</CreationTime>
      <Status>Normal</Status>
      <DiskNums>1</DiskNums>
      <AutoSnapshotPolicyName>SnapshotPolicyUserManual</AutoSnapshotPolicyName>
      <RegionId>cn-hangzhou</RegionId>
      <VolumeNums>2</VolumeNums>
      <RetentionDays>30</RetentionDays>
      <TimePoints>["0"]</TimePoints>
      <AutoSnapshotPolicyId>sp-bp67acfmazb4ph***</AutoSnapshotPolicyId>
      <RepeatWeekdays>["7"]</RepeatWeekdays>
      <Tags>
        <Tag>
          <TagKey>Test</TagKey>
          <TagValue>Test</TagValue>
        </Tag>
      </Tags>
    </AutoSnapshotPolicy>
  </AutoSnapshotPolicies>
  <PageSize>1</PageSize>
  <RequestId>CC323EDF-BBB7-420F-BCD1-D9B9D2E9D424</RequestId>
</DescribeAutoSnapshotPolicyResponse>
```

JSON format

```
{
  "PageNumber": 1,
  "TotalCount": 2,
  "AutoSnapshotPolicies": {
    "AutoSnapshotPolicy": [
      {
        "CreationTime": "2019-01-22 11:38:08",
        "Status": "Normal",
        "DiskNums": 1,
        "AutoSnapshotPolicyName": "SnapshotPolicyUserManual",
        "RegionId": "cn-hangzhou",
        "VolumeNums": 2,
        "RetentionDays": 30,
        "TimePoints": "[\"0\"]",
        "AutoSnapshotPolicyId": "sp-bp67acfmxyzb4ph***",
        "RepeatWeekdays": "[\"7\"]",
        "Tags": {
          "Tag": [
            {
              "TagKey": "Test",
              "TagValue": "Test"
            }
          ]
        }
      }
    ]
  },
  "PageSize": 1,
  "RequestId": "CC323EDF-BBB7-420F-BCD1-D9B9D2E9D424"
}
```

Error codes

HTTP status code	Error code	Error message	Description
400	InvalidRegionId.NotFound	The specified RegionId does not exist.	The error message returned because the specified RegionId parameter does not exist.
400	InvalidTag.Mismatch	The specified Tag.n.Key and Tag.n.Value are not match.	The error message returned because the specified Tag.N.Key and Tag.N.Value parameters do not match.
400	InvalidTagCount	The specified tags are beyond the permitted range.	The error message returned because the maximum number of the specified tags has been reached.

12.14. ModifyAutoSnapshotPolicyEx

You can call this operation to modify an automatic snapshot policy. After you modify an automatic snapshot policy, the new policy takes effect immediately on the disks that have applied the policy.

Debugging

OpenAPI Explorer automatically calculates the signature value. For your convenience, we recommend that you call this operation in OpenAPI Explorer. OpenAPI Explorer dynamically generates the sample code of the operation for different SDKs.

Request parameters

Parameter	Type	Required	Example	Description
Action	String	Yes	ModifyAutoSnapshotPolicyEx	The operation that you want to perform. Set the value to ModifyAutoSnapshotPolicyEx.
autoSnapshotPolicyId	String	Yes	sp-bp12m37ccmxvbm5**	The ID of the automatic snapshot policy to be modified. You can call the DescribeAutoSnapshotPolicyEx operation to view the available automatic snapshot policies.
regionId	String	Yes	cn-hangzhou	The ID of the region to which the automatic snapshot policy belongs. You can call the DescribeRegions operation to query the most recent region list.
autoSnapshotPolicyName	String	No	SPTestName	The name of the automatic snapshot policy. If you do not want to change the name, you can leave the parameter empty.
timePoints	String	No	["0", "1"]	The point in time at which automatic snapshots are created. Unit: hour. Valid values: 0 to 23, representing 24 points in time that range from 00:00 to 23:00. For example, 1 indicates 01:00. If you want to create multiple automatic snapshots a day, you can specify multiple points in time. - You can specify up to 24 points in time. - You must specify the parameter in a JSON-formatted array: ["0", "1", ... "23"]. Separate multiple values with commas (,).
repeatWeekdays	String	No	["1", "7"]	The days when the automatic snapshot policy recurs within a week. Unit: days. Valid values: 1 to 7, corresponding to the days of a week, where 1 indicates Monday. To schedule multiple automatic snapshot tasks for a disk in a week, you can set the repeatWeekdays parameter to an array. - You can specify up to seven days over a one-week period. - You must specify the parameter in a JSON-formatted array: ["1", "2", ... "7"]. Separate multiple values with commas (,).
retentionDays	Integer	No	30	The retention period of an automatic snapshot. Unit: days. Default value: -1. Valid values: -1: The automatic snapshot is retained permanently. 1-65536: The automatic snapshot is retained for the specified number of days.

Response parameters

Parameter	Type	Example	Description
RequestId	String	473469C7-AA6F-4DC5-B3DB-A3DC0DE3C83E	The ID of the request.

Examples

Sample requests

```
https://ecs.aliyuncs.com/?Action=ModifyAutoSnapshotPolicyEx
&autoSnapshotPolicyId=sp-bp12m37ccmxvbm5****
&regionId=cn-hangzhou
&<Common request parameters>
```

Sample success responses

XML format

```
<ModifyAutoSnapshotPolicyResponse>
  <RequestId>F3CD6886-D8D0-4FEE-B93E-1B73239673DE</RequestId>
</ModifyAutoSnapshotPolicyResponse>
```

JSON format

```
{
  "RequestId": "F3CD6886-D8D0-4FEE-B93E-1B73239673DE"
}
```

Error codes

HTTP status code	Error code	Error message	Description
404	ParameterInvalid	The specified automatic snapshot policy does not exist.	The error message returned because the specified automatic snapshot policy does not exist. Check whether the policy is correct.
404	ParameterInvalid	The specified automatic snapshot policy does not exist in the region.	The error message returned because the specified automatic snapshot policy does not exist in the region. Check whether the policy is correct.
403	ParameterInvalid	The specified RegionId parameter is invalid.	The error message returned because the specified regionId parameter is invalid.
403	ParameterInvalid	The specified RepeatWeekDays parameter is invalid.	The error message returned because the specified repeatWeekDays parameter is invalid.
403	ParameterInvalid	The specified TimePoints parameter is invalid.	The error message returned because the specified timePoints parameter is invalid.
403	ParameterInvalid	The specified AutoSnapshotPolicyId is invalid.	The error message returned because the specified autoSnapshotPolicyId parameter is invalid.

HTTP status code	Error code	Error message	Description
403	ParameterInvalid	The specified RetentionDays parameter is invalid.	The error message returned because the specified retentionDays parameter is invalid.

13.Security groups

13.1. CreateSecurityGroup

You can call this operation to create a security group. For a newly created security group, only ECS instances in the security group can access each other by default. Access requests to the security group from outside are restricted. If you want to accept requests from the Internet or requests from instances of other security groups, you can call the `AuthorizeSecurityGroup` operation to allow the requests.

Description

When you call this operation, take note of the following items:

- You can create a maximum of 100 security groups within a single Alibaba Cloud region.
- If you are creating a security group of the VPC type, you must specify the `VpcId` parameter.

Debugging

OpenAPI Explorer automatically calculates the signature value. For your convenience, we recommend that you call this operation in OpenAPI Explorer. OpenAPI Explorer dynamically generates the sample code of the operation for different SDKs.

Request parameters

Parameter	Type	Required	Example	Description
Action	String	Yes	CreateSecurityGroup	The operation that you want to perform. Set the value to <code>CreateSecurityGroup</code> .
RegionId	String	Yes	cn-hangzhou	The region ID of the security group. You can call the DescribeRegions operation to query the most recent region list.
VpcId	String	No	vpc-bp1opxu1zkhn00gzv***	The ID of the VPC to which the security group belongs.
Description	String	No	testDescription	The description of the security group. The description must be 2 to 256 characters in length and cannot start with <code>http://</code> or <code>https://</code> . This parameter is empty by default.
ClientToken	String	No	123e4567-e89b-12d3-a456-426655440000	The client token that is used to ensure the idempotence of the request. You can use the client to generate the value, but you must ensure that it is unique among different requests. The <code>ClientToken</code> value can only contain ASCII characters and cannot exceed 64 characters in length. For more information, see How to ensure idempotence .
SecurityGroupName	String	No	testSecurityGroupName	The name of the security group. The name must be 2 to 128 characters in length. It must start with a letter and cannot start with <code>http://</code> or <code>https://</code> . It can contain letters, digits, colons (:), underscores (_), and hyphens (-). This parameter is empty by default.

Parameter	Type	Required	Example	Description
SecurityGroupType	String	No	enterprise	The type of the security group. Valid values : - normal: basic security group. - enterprise: advanced security group. For more information, see Advanced security group.
Tag.N.value	String	No	null	The value of tag N of the security group.  Note We recommend that you use the Tag.N.Value parameter to ensure future compatibility.
Tag.N.key	String	No	null	The key of tag N of the security group.  Note We recommend that you use the Tag.N.Key parameter to ensure future compatibility.
Tag.N.Key	String	No	TestKey	The key of tag N of the security group. Valid values of N: 1 to 20. It cannot be an empty string. The tag key can be up to 128 characters in length and cannot contain http:// or https://. It cannot start with acs: or aliyun.
Tag.N.Value	String	No	TestValue	The value of tag N of the security group. Valid values of N: 1 to 20. It can be an empty string. The tag value can be up to 128 characters in length and cannot contain http:// or https://. It cannot start with acs:.
ResourceGroupId	String	No	rg-bp67acfmazb4p****	The ID of the enterprise resource group to which the security group belongs.

Response parameters

Parameter	Type	Example	Description
RequestId	String	473469C7-AA6F-4DC5-B3DB-A3DC0DE3C83E	The ID of the request.
SecurityGroupId	String	sg-bp1fg655nh68xyz9****	The ID of the security group.

Examples

Sample requests

```
https://ecs.aliyuncs.com/?Action=CreateSecurityGroup
&RegionId=cn-hangzhou
&Description=testDescription
&VpcId=vpc-bp1opxu1zkhn00gzv****
&<Common request parameters>
```

Sample success responses

XML format

```
<CreateSecurityGroupResponse>
  <RequestId>CEF72CEB-54B6-4AE8-B225-F876FF7BA984</RequestId>
  <SecurityGroupId>sg-bp1fg655nh68xyz9****</SecurityGroupId>
</CreateSecurityGroupResponse>
```

JSON format

```
{
  "RequestId": "CEF72CEB-54B6-4AE8-B225-F876FF7BA984",
  "SecurityGroupId": "sg-bp1fg655nh68xyz9****"
}
```

Error codes

HTTP status code	Error code	Error message	Description
400	InvalidDescription.Malformed	The specified parameter "Description" is not valid.	The error message returned because the specified Description parameter is invalid. The description must be 2 to 256 characters in length and cannot start with http:// or https://.
403	QuotaExceed.SecurityGroup	The maximum number of security groups is reached.	The error message returned because the maximum number of security groups has been reached. Submit a ticket to apply for a higher quota.
404	InvalidVpcId.NotFound	Specified VPC does not exist.	The error message returned because the specified VpcId parameter does not exist.
400	InvalidSecurityGroupName.Malformed	Specified security group name is not valid.	The error message returned because the specified SecurityGroupName parameter is invalid. The name is displayed in the console. By default, no name is specified for a security group. The name must be 2 to 128 characters in length. It must start with a letter and can contain letters, digits, colons (:), underscores (_), and hyphens (-). It cannot start with http:// or https://.
400	InvalidSecurityGroupDescription.Malformed	Specified security group description is not valid.	The error message returned because the specified Description parameter is invalid.

HTTP status code	Error code	Error message	Description
500	InternalServerError	The request processing has failed due to some unknown error.	The error message returned because an internal error has occurred. Try again later. If the problem persists, submit a ticket.
403	InvalidVpcId.NotFound	vpc id must not empty when only support vpc vm.	The error message returned because the VpcId parameter is not specified.
400	IncorrectVpcStatus	Current VPC status does not support this operation.	The error message returned because the operation is not supported while the VPC is in the current state.
400	InvalidTagKey.Malformed	Specified tag key is not valid.	The error message returned because the specified tag key is invalid.
400	InvalidTagValue.Malformed	Specified tag value is not valid.	The error message returned because the specified tag value is invalid.
404	InvalidResourceGroup.NotFound	The ResourceGroup provided does not exist in our records.	The error message returned because the specified ResourceGroupId parameter does not exist.
400	Duplicate.TagKey	The Tag.N.Key contain duplicate key.	The error message returned because a tag with the identical key already exists. Tag keys must be unique.
400	InvalidTagKey.Malformed	The specified Tag.n.Key is not valid.	The error message returned because the specified Tag.N.Key parameter is invalid.
400	InvalidTagValue.Malformed	The specified Tag.n.Value is not valid.	The error message returned because the specified Tag.N.Value parameter is invalid.
403	IdempotentProcessing	The previous idempotent request(s) is still processing.	The error message returned because the previous idempotence request is being processed. Try again later.
403	QuotaExceed.Tags	%s	The error message returned because the maximum number of tags has been reached.
500	InternalServerError	The request processing has failed due to some unknown error, exception or failure.	The error message returned because an internal error has occurred. Try again later. If the problem persists, submit a ticket.

13.2. AuthorizeSecurityGroup

You can call this operation to create an inbound security group rule. This operation allows or denies the inbound traffic from other devices to ECS instances in the security group.

Description

In the security group-related API documents, inbound traffic refers to the traffic sent by the source device and received at the destination device.

When you call this operation, take note of the following points:

- The maximum number of outbound and inbound security group rules in total is 200.
- The priority (`Priority`) of a security group rule ranges from 1 to 100. A smaller value indicates a higher priority.
- When multiple security group rules have the same priority, drop (`drop`) rules will take precedence.
- The source device can belong to a specified CIDR block (SourceCidrIp) or can be an ECS instance in another security

group (SourceGroupId).

- If the rule to be created matches an existing rule, the operation succeeds but no rules are created.
- You can determine a security group rule by specifying one of the following groups of parameters. You cannot determine a security group rule by specifying only one parameter.
 - Parameters used to grant access permissions to specified CIDR blocks: For a security group of the classic network type, you can set the NicType parameter to internet or intranet. For a security group of the VPC type, you can set the NicType parameter only to intranet. You can specify the following group of parameters: IpProtocol, PortRange, SourcePortRange (optional), NicType, Policy, and SourceCidrIp.

```
https://ecs.aliyuncs.com/?Action=AuthorizeSecurityGroup
&SecurityGroupId=sg-F876FF7**
&SourceCidrIp=10.0.0.0/8
&IpProtocol=tcp
&PortRange=22/22
&NicType=intranet
&Policy=accept
&<Common request parameters>
```

- Parameters used to grant access permissions to other security groups: In this case, you can set the NicType parameter only to intranet. For mutual access between security groups of the classic network type, you can configure permissions for another security group in the same region to access your security group. The security group granted access can belong to your own Alibaba Cloud account, or can belong to another Alibaba Cloud account specified by the SourceGroupOwnerAccount parameter. For mutual access between security groups of the VPC type, you can configure the permission for another security group in the same VPC to access your security group. You can specify the following group of parameters: IpProtocol, PortRange, SourcePortRange (optional), NicType, Policy, SourceGroupOwnerAccount, and SourceGroupId.

```
https://ecs.aliyuncs.com/?Action=AuthorizeSecurityGroup
&SecurityGroupId=sg-F876FF7**
&SourceGroupId=sg-1651FBB**
&SourceGroupOwnerAccount=test@aliyun.com
&IpProtocol=tcp
&PortRange=22/22
&NicType=intranet
&Policy=drop
&<Common request parameters>
```

- For more information about examples on security group rule settings, see [Scenarios for security groups](#) and [Security group quintuple rules](#).

Debugging

OpenAPI Explorer automatically calculates the signature value. For your convenience, we recommend that you call this operation in OpenAPI Explorer. OpenAPI Explorer dynamically generates the sample code of the operation for different SDKs.

Request parameters

Parameter	Type	Required	Example	Description
Action	String	Yes	AuthorizeSecurityGroup	The operation that you want to perform. Set the value to AuthorizeSecurityGroup.

Parameter	Type	Required	Example	Description
IpProtocol	String	Yes	all	The transport layer protocol. This parameter is case-sensitive. Valid values: - tcp - udp - icmp - gre - all  Note IpProtocol can be set to icmp only for IPv4 addresses.
PortRange	String	Yes	22/22	The range of destination ports relevant to the transport layer protocol. Valid values: - When the IpProtocol parameter is set to tcp or udp, the port number range is 1 to 65535. Separate the start port and the end port with a forward slash (/). Example: 1/200. - When the IpProtocol parameter is set to icmp, the port number range is -1/-1, indicating that all ports are available. - When the IpProtocol parameter is set to gre, the port number range is -1/-1, indicating that all ports are available. - When the IpProtocol parameter is set to all, the port number range is -1/-1, indicating that all ports are available. For more information, see Typical applications of commonly used ports.
RegionId	String	Yes	cn-hangzhou	The region ID of the security group. You can call the DescribeRegions operation to query the most recent region list.
SecurityGroupId	String	Yes	sg-bp67acfmazb4p****	The ID of the destination security group.
SourceGroupId	String	No	sg-bp67acfmazb4p****	The ID of the source security group to which you want to grant access permissions. Either SourceGroupId or SourceCidrIp must be specified. - If SourceGroupId is specified but SourceCidrIp is not, the NicType parameter can only be set to intranet. - If SourceGroupId and SourceCidrIp are specified at the same time, SourceCidrIp takes precedence.

Parameter	Type	Required	Example	Description
SourceGroupOwnerId	Long	No	1234567890	The ID of the Alibaba Cloud account that manages the source security group when you set a security group rule across accounts. - If neither SourceGroupOwnerId nor SourceGroupOwnerAccount is specified, the access permissions are configured for another security group managed by your account. - If SourceCidrIp is specified, the SourceGroupOwnerId parameter is ignored.
SourceGroupOwnerAccount	String	No	test@aliyun.com	The Alibaba Cloud account of the source security group when you set a security group rule across accounts. - If neither SourceGroupOwnerId nor SourceGroupOwnerAccount is specified, access permissions are configured for another security group managed by your account. - If SourceCidrIp is specified, the SourceGroupOwnerAccount parameter is ignored.
SourceCidrIp	String	No	10.0.0.0/8	The range of source IPv4 addresses. CIDR blocks and IPv4 addresses are supported. This parameter is empty by default.
Ipv6SourceCidrIp	String	No	2001:250:6000::***	The range of source IPv6 addresses. CIDR blocks and IPv6 addresses are supported.  Note Only IPv6 addresses of VPC-type instances are supported. This parameter is empty by default.
SourcePortRange	String	No	22/22	The range of source ports relevant to the transport layer protocol. Valid values: - When the IpProtocol parameter is set to tcp or udp, the port number range is 1 to 65535. Separate the start port and the end port with a forward slash (/). Example: 1/200. - When the IpProtocol parameter is set to icmp, the port number range is -1/-1, indicating that all ports are available. - When the IpProtocol parameter is set to gre, the port number range is -1/-1, indicating that all ports are available. - When the IpProtocol parameter is set to all, the port number range is -1/-1, indicating that all ports are available.
DestCidrIp	String	No	10.0.0.0/8	The range of destination IPv4 addresses. CIDR blocks and IPv4 addresses are supported. This parameter is empty by default.

Parameter	Type	Required	Example	Description
Ipv6DestCidrIp	String	No	2001:250:6000::***	The range of destination IPv6 addresses. CIDR blocks and IPv6 addresses are supported.  Note Only IPv6 addresses of VPC-type instances are supported. This parameter is empty by default.
Policy	String	No	accept	The access control policy. Default value: accept. Valid values: - accept: grants access. - drop: denies access without returning a rejection response. The request will be timeout or the connection failed to be built.
Priority	String	No	1	The priority of the security group rule. A smaller value indicates a higher priority. Valid values: 1 to 100. Default value: 1.
NicType	String	No	intranet	The NIC type of security group rules in the classic network. Valid values: - internet - intranet - If the security group is in a VPC, the parameter is set to intranet by default and cannot be modified. - If DestGroupId is specified but DestCidrIp is not, this parameter must be set to intranet. Default value: internet.
ClientToken	String	No	123e4567-e89b-12d3-a456-426655440000	The client token that is used to ensure the idempotence of the request. You can use the client to generate the value, but you must ensure that it is unique among different requests. The ClientToken value can only contain ASCII characters and cannot exceed 64 characters in length. For more information, see How to ensure idempotence.
Description	String	No	testDescription	The description of the security group rule. The description must be 1 to 512 characters in length.

Response parameters

Parameter	Type	Example	Description
RequestId	String	473469C7-AA6F-4DC5-B3DB-A3DC0DE3C83E	The ID of the request.

Examples

Sample requests

```
https://ecs.aliyuncs.com/?Action=AuthorizeSecurityGroup
&SecurityGroupId=sg-bp67acfmazb4p****
&SourceCidrIp=10.0.0.0/8
&IpProtocol=tcp
&PortRange=22/22
&NicType=intranet
&Policy=accept
&<Common request parameters>
```

Sample success responses

XML format

```
<AuthorizeSecurityGroupResponse>
  <RequestId>CEF72CEB-54B6-4AE8-B225-F876FF7BA984</RequestId>
</AuthorizeSecurityGroupResponse>
```

JSON format

```
{
  "RequestId": "CEF72CEB-54B6-4AE8-B225-F876FF7BA984"
}
```

Error codes

HTTP status code	Error code	Error message	Description
404	InvalidSecurityGroupId.NotFound	The specified SecurityGroupId does not exist.	The error message returned because the specified security group does not exist under this account. Check whether the security group ID is correct.
404	InvalidSourceGroupId.NotFound	The SourceGroupId provided does not exist in our records.	The error message returned because the specified SourceGroupId parameter does not exist.
400	OperationDenied	The specified IpProtocol does not exist or IpProtocol and PortRange do not match.	The error message returned because the specified IpProtocol parameter does not exist or does not match the specified PortRange parameter.
400	InvalidIpProtocol.Malformed	The specified parameter "PortRange" is not valid.	The error message returned because the specified PortRange parameter is invalid.
403	InvalidSourceGroupId.Mismatch	NicType is required or NicType expects intranet.	The error message returned because the NicType parameter is not specified or is not set to intranet.
400	InvalidSourceCidrIp.Malformed	The specified parameter "SourceCidrIp" is not valid.	The error message returned because the specified SourceCidrIp parameter is invalid.
403	MissingParameter	The input parameter "SourceGroupId" or "SourceCidrIp" cannot be both blank.	The error message returned because the SourceGroupId and SourceCidrIp parameters cannot be empty at the same time.

HTTP status code	Error code	Error message	Description
400	InvalidPolicy.Malformed	The specified parameter "Policy" is not valid.	The error message returned because the specified Policy parameter is invalid.
400	InvalidNicType.ValueNotSupported	The specified NicType does not exist.	The error message returned because the specified NicType parameter does not exist. Check whether the NIC type is correct.
400	InvalidNicType.Mismatch	Specified nic type conflicts with the authorization record.	The error message returned because the specified NIC type conflicts with the security group rule.
403	AuthorizationLimitExceeded	The limit of authorization records in the security group reaches.	The error message returned because the maximum number of authorized security group rules has been reached. Check whether the authorization rule is valid.
403	InvalidParamter.Conflict	The specified SecurityGroupId should be different from the SourceGroupId.	The error message returned because the authorized security group is the same as the source security group.
400	InvalidSourceGroupId.Mismatch	Specified security group and source group are not in the same VPC.	The error message returned because the specified security group and the source security group are not in the same VPC.
400	InvalidSourceGroup.NotFound	Specified source security group does not exist.	The error message returned because the specified SourceGroupId parameter does not exist.
400	VPCDisabled	Can't use the SecurityGroup in VPC.	The error message returned because the current VPC does not support security groups.
400	InvalidPriority.Malformed	The parameter Priority is invalid.	The error message returned because the specified Priority parameter is invalid.
400	InvalidPriority.ValueNotSupported	The parameter Priority is invalid.	The error message returned because the specified Priority parameter is invalid.
500	InternalError	The request processing has failed due to some unknown error.	The error message returned because an internal error has occurred. Try again later. If the problem persists, submit a ticket.
403	InvalidNetworkType.Mismatch	The specified SecurityGroup network type should be same with SourceGroup network type (vpc or classic).	The error message returned because the network type of the specified security group is different from that of the source group.
403	InvalidNetworkType.Conflict	The specified SecurityGroup network type should be same with SourceGroup network type (vpc or classic).	The error message returned because the network type of the specified security group is different from that of the source group.
400	InvalidNicType.ValueNotSupported	The specified NicType is not valid.	The error message returned because the specified NicType parameter does not exist. Check whether the NIC type is correct.

HTTP status code	Error code	Error message	Description
400	InvalidSecurityGroupDescription.Malformed	The specified security group rule description is not valid.	The error message returned because the specified Description parameter is invalid.
400	InvalidSecurityGroup.InvalidNetworkType	The specified security group network type is not support this operation, please check the security group network types. For VPC security groups, ClassicLink must be enabled.	The error message returned because the operation is not supported by security groups of the current network type. Check the network type of the security group. If the network type is VPC, ClassicLink must be enabled.
400	MissingParameter.Source	Either SourceCidrIp or SourceGroupId must be specified.	The error message returned because SourceCidrIp and SourceGroupId cannot be empty at the same time.
400	InvalidIpProtocol.ValueNotSupported	The parameter IpProtocol must be specified with case insensitive TCP, UDP, ICMP, GRE or All.	The error message returned because the IpProtocol parameter is not set to tcp, udp, icmp, gre, or all.
400	InvalidSecurityGroupId.Malformed	The specified parameter "SecurityGroupId" is not valid.	The error message returned because the specified SecurityGroupId parameter is invalid.
400	InvalidParameter.Conflict	The specified SourceCidrIp should be different from the DestCidrIp.	The error message returned because SourceCidrIp cannot be set to the same value as DestCidrIp.
500	InvalidGressFlow.Malformed	The specified parameter GressFlow is not valid,it cause by internal,try calling again.	The error message returned because the specified GressFlow parameter is invalid.
400	InvalidSourcePortRange.Malformed	The specified parameter "SourcePortRange" is not valid.	The error message returned because the specified SourcePortRange parameter is invalid.
400	InvalidParam.SourceCidrIp	%s	The error message returned because the specified SourceCidrIp parameter is invalid.
400	InvalidParam.DestIp	%s	The error message returned because the specified DestCidrIp parameter is invalid.
400	InvalidParam.Ipv6DestCidrIp	%s	The error message returned because the specified Ipv6DestCidrIp parameter is invalid.
400	InvalidParam.Ipv6SourceCidrIp	%s	The error message returned because the specified Ipv6SourceCidrIp parameter is invalid.
400	InvalidParam.Ipv4ProtocolConflictWithIpv6Address	%s	The error message returned because the specified parameter is invalid. Check whether you have entered an IPv6 address under an IPv4 protocol.
400	InvalidParam.Ipv6ProtocolConflictWithIpv4Address	%s	The error message returned because the specified parameter is invalid. Check whether you have entered an IPv4 address under an IPv6 protocol.
400	ILLEGAL_IPV6_CIDR	%s	The error message returned because the specified IPv6 address is invalid.

HTTP status code	Error code	Error message	Description
400	InvalidDestCidrIp.Malformed	The specified parameter DestCidrIp is not valid.	The error message returned because the specified DestCidrIp parameter is invalid.

13.3. AuthorizeSecurityGroupEgress

You can call this operation to create an outbound security group rule. This operation allows or denies the outbound traffic from the instances in the security group to other devices.

Description

In the security group-related API documents, inbound traffic refers to the traffic sent by the source device and received at the destination device.

When you call this operation, take note of the following points:

- The maximum number of outbound and inbound security group rules in total is 200.
- You can set Policy to accept or drop.
- The value of Priority ranges from 1 to 100. A smaller value indicates a higher priority.
- When several security group rules have the same priority, drop rules will take precedence.
- The destination device can belong to a specified CIDR block (DestCidrIp) or can be an ECS instance that belongs to another security group (DestGroupId).
- If the rule to be created matches an existing rule, the AuthorizeSecurityGroupEgress operation succeeds but no rules are created.
- You can determine a security group rule by specifying one of the following groups of parameters. You cannot determine a security group rule by specifying only one parameter.
 - Parameters used to grant access permissions to specified CIDR blocks: IpProtocol, PortRange, SourcePortRange (optional), NicType, Policy, and DestCidrIp.

```
https://ecs.aliyuncs.com/?Action=AuthorizeSecurityGroupEgress
&SecurityGroupId=sg-bp67acfmazb4ph***
&IpProtocol=icmp
&DestCidrIp=10.0.0.0/8
&PortRange=-1/-1
&NicType=intranet
&Policy=Allow
&<Common request parameters>
```

- Parameters used to grant access permissions to other security groups: IpProtocol, PortRange, SourcePortRange (optional), NicType, Policy, DestGroupOwnerAccount, and DestGroupId.

```
https://ecs.aliyuncs.com/?Action=AuthorizeSecurityGroupEgress
&SecurityGroupId=sg-bp67acfmazb4ph***
&DestGroupId=sg-bp67acfmazb4pi***
&DestGroupOwnerAccount=Test@aliyun.com
&IpProtocol=tcp
&PortRange=22/22
&NicType=intranet
&Policy=Drop
&<Common request parameters>
```

Debugging

OpenAPI Explorer automatically calculates the signature value. For your convenience, we recommend that you call this operation in OpenAPI Explorer. OpenAPI Explorer dynamically generates the sample code of the operation for different SDKs.

Request parameters

Parameter	Type	Required	Example	Description
Action	String	Yes	AuthorizeSecurityGroupEgress	The operation that you want to perform. Set the value to AuthorizeSecurityGroupEgress.
IpProtocol	String	Yes	all	The transport layer protocol. This parameter is case-sensitive. Valid values: - icmp - gre - tcp - udp - all
PortRange	String	Yes	80/80	The range of destination ports relevant to the transport layer protocol. Valid values: - When the IpProtocol parameter is set to tcp or udp, the port number range is 1 to 65535. Separate the start port and the end port with a forward slash (/). Example: 1/200. - When the IpProtocol parameter is set to icmp, the port number range is -1/-1, indicating that all ports are available. - When the IpProtocol parameter is set to gre, the port number range is -1/-1, indicating that all ports are available. - When IpProtocol is set to all, the port number range is -1/-1, indicating that all ports are available.
RegionId	String	Yes	cn-hangzhou	The region ID of the source security group. You can call the DescribeRegions operation to query the most recent region list.
SecurityGroupId	String	Yes	sg-bp67acfmazb4p****	The ID of the source security group.
DestGroupId	String	No	sg-bp67acfmazb4p****	The ID of the source security group for which you want to configure access permissions. - Either DestGroupId or DestCidrIp must be specified. - If DestGroupId is specified but DestCidrIp is not, the NicType parameter must be set to intranet. - If DestGroupId and DestCidrIp are specified at the same time, the DestCidrIp parameter takes precedence.

Parameter	Type	Required	Example	Description
DestGroupOwnerId	Long	No	12345678910	The ID of the Alibaba Cloud account that manages the destination security group when you set a security group rule across accounts. - If neither DestGroupOwnerId nor DestGroupOwnerAccount is specified, access permissions are configured for another security group managed by your account. - If DestCidrIp is specified, the DestGroupOwnerId parameter is ignored.
DestGroupOwnerAccount	String	No	Test@aliyun.com	The Alibaba Cloud account that manages the destination security group when you set a security group rule across accounts. - If neither DestGroupOwnerAccount nor DestGroupOwnerId is specified, access permissions are configured for another security group managed by your account. - If DestCidrIp is specified, the DestGroupOwnerAccount parameter is ignored.
DestCidrIp	String	No	10.0.0.0/8	The range of destination IP addresses. CIDR blocks and IPv4 addresses are supported. This parameter is empty by default.
Ipv6DestCidrIp	String	No	2001:db8:1233:1a00::***	The range of destination IPv6 addresses. CIDR blocks and IPv6 addresses are supported. This parameter is empty by default.  Note You can specify only the IP addresses of VPC-type instances.
SourceCidrIp	String	No	10.0.0.0/8	The range of source IP addresses. CIDR blocks and IPv4 addresses are supported. This parameter is empty by default.
Ipv6SourceCidrIp	String	No	2001:db8:1234:1a00::***	The range of source IPv6 addresses. CIDR blocks and IPv6 addresses are supported. This parameter is empty by default.  Note You can specify only the IP addresses of VPC-type instances.

Parameter	Type	Required	Example	Description
SourcePortRange	String	No	80/80	The range of source ports relevant to the transport layer protocol. Valid values: - When the IpProtocol parameter is set to tcp or udp, the port number range is 1 to 65535. Separate the start port and the end port with a forward slash (/). Example: 1/200. - When the IpProtocol parameter is set to icmp, the port number range is -1/-1, indicating that all ports are available. - When the IpProtocol parameter is set to gre, the port number range is -1/-1, indicating that all ports are available. - When IpProtocol is set to all, the port number range is -1/-1, indicating that all ports are available.
Policy	String	No	accept	The access control policy. Default value: accept. Valid values: - accept: grants access. - drop: denies access without returning a rejection response. Default value: accept.
Priority	String	No	1	The priority of security group rules. Valid values: 1 to 100. Default value: 1.
NicType	String	No	intranet	The NIC type of security group rules in the classic network. Valid values: - internet - intranet - If the security group is in a VPC, the parameter is set to intranet by default and cannot be modified. - If DestGroupId is specified but DestCidrIp is not, this parameter must be set to intranet. Default value: internet.
ClientToken	String	No	123e4567-e89b-12d3-a456-426655440000	The client token that is used to ensure the idempotence of the request. You can use the client to generate the value, but you must ensure that it is unique among different requests. The ClientToken value can only contain ASCII characters and cannot exceed 64 characters in length. For more information, see How to ensure idempotence.
Description	String	No	testDescription	The description of the security group rule. The description must be 1 to 512 characters in length.

Response parameters

Parameter	Type	Example	Description
RequestId	String	473469C7-AA6F-4DC5-B3DB-A3DC0DE3C83E	The ID of the request.

Examples

Sample requests

```
https://ecs.aliyuncs.com/?Action=AuthorizeSecurityGroupEgress
&SecurityGroupId=sg-Fbp67acmxazb4p****
&DestGroupId=sg-bp67acmxazb4p****
&DestGroupOwnerAccount=Test@aliyun.com
&IpProtocol=all
&PortRange=22/22
&NicType=intranet
&Policy=Drop
&<Common request parameters>
```

Sample success responses

XML format

```
<AuthorizeSecurityGroupEgressResponse>
  <RequestId>CEF72CEB-54B6-4AE8-B225-F876FF7BA984</RequestId>
</AuthorizeSecurityGroupEgressResponse>
```

JSON format

```
{
  "RequestId": "CEF72CEB-54B6-4AE8-B225-F876FF7BA984"
}
```

Error codes

HTTP status code	Error code	Error message	Description
404	InvalidSecurityGroupId.NotFound	The specified SecurityGroupId does not exist.	The error message returned because the specified security group does not exist under this account. Check whether the security group ID is correct.
404	InvalidDestGroupId.NotFound	The DestGroupId provided does not exist in our records.	The error message returned because the specified DestGroupId parameter does not exist.
400	OperationDenied	The specified IpProtocol does not exist or IpProtocol and PortRange do not match.	The error message returned because the specified IpProtocol parameter does not exist or does not match the specified PortRange parameter.
400	InvalidIpProtocol.Malformed	The specified parameter "PortRange" is not valid.	The error message returned because the specified PortRange parameter is invalid.
403	InvalidDestGroupId.Mismatch	NicType is required or NicType expects intranet.	The error message returned because the NicType parameter is not specified or is not set to intranet.

HTTP status code	Error code	Error message	Description
400	InvalidDestCidrIp.Malformed	The specified parameter "DestCidrIp" is not valid.	The error message returned because the specified DestCidrIp parameter is invalid.
403	MissingParameter	The input parameter "DestGroupId" or "DestCidrIp" cannot be both blank.	The error message returned because the DestGroupId and DestCidrIp parameters cannot be empty at the same time.
400	InvalidPolicy.Malformed	The specified parameter "Policy" is not valid.	The error message returned because the specified Policy parameter is invalid.
400	InvalidNicType.ValueNotSupported	The specified NicType does not exist.	The error message returned because the specified NicType parameter does not exist. Check whether the NIC type is correct.
400	InvalidNicType.Mismatch	Specified nic type conflicts with the authorization record.	The error message returned because the specified NIC type conflicts with the security group rule.
403	AuthorizationLimitExceeded	The limit of authorization records in the security group reaches.	The error message returned because the maximum number of authorized security group rules has been reached. Check whether the authorization rule is valid.
403	InvalidParamter.Conflict	The specified SecurityGroupId should be different from the SourceGroupId.	The error message returned because the authorized security group is the same as the source security group.
400	InvalidDestGroupId.Mismatch	Specified security group and destination group are not in the same VPC.	The error message returned because the specified security group and the destination security group do not belong to the same VPC.
400	InvalidDestGroup.NotFound	Specified destination security group does not exist.	The error message returned because the specified DestGroupId parameter does not exist.
400	VPCDisabled	Can't use the SecurityGroup in VPC.	The error message returned because the current VPC does not support security groups.
400	InvalidPriority.Malformed	The parameter Priority is invalid.	The error message returned because the specified Priority parameter is invalid.
400	InvalidPriority.ValueNotSupported	The parameter Priority is invalid.	The error message returned because the specified Priority parameter is invalid.
400	InvalidDestCidrIp.Malformed	The specified parameter DestCidrIp is not valid.	The error message returned because the specified DestCidrIp parameter is invalid.
500	InternalServerError	The request processing has failed due to some unknown error.	The error message returned because an internal error has occurred. Try again later. If the problem persists, submit a ticket.

HTTP status code	Error code	Error message	Description
403	InvalidNetworkType.Conflict	The specified SecurityGroup network type should be same with SourceGroup network type (vpc or classic).	The error message returned because the network type of the specified security group is different from that of the source group.
403	InvalidSecurityGroup.IsSame	The authorized SecurityGroupId should be different from the DestGroupId.	The error message returned because the authorized security group is the same as the destination group.
400	InvalidDestCidrIp.Malformed	The parameter DestCidrIp is not valid.	The error message returned because the specified DestCidrIp parameter is invalid.
403	InvalidNetworkType.Conflict	The parameter SecurityGroup network type should be same with SourceGroup network type (vpc or classic).	The error message returned because the network type of the specified security group is different from that of the source group.
400	InvalidNicType.ValueNotSupported	The parameter NicType is not valid.	The error message returned because the specified NicType parameter is invalid.
400	InvalidSecurityGroupDescription.Malformed	The specified security group rule description is not valid.	The error message returned because the specified Description parameter is invalid.
400	InvalidSecurityGroup.InvalidNetworkType	The specified security group network type is not support this operation, please check the security group network types. For VPC security groups, ClassicLink must be enabled.	The error message returned because the operation is not supported by security groups of the current network type. Check the network type of the security group. If the network type is VPC, ClassicLink must be enabled.
400	MissingParameter.Dest	Either DestCidrIp or DestGroupId must be specified.	The error message returned because DestCidrIp and DestGroupId cannot be empty at the same time.
400	InvalidIpProtocol.ValueNotSupported	The parameter IpProtocol must be specified with case insensitive TCP, UDP, ICMP, GRE or All.	The error message returned because the IpProtocol parameter is not set to tcp, udp, icmp, gre, or all.
400	InvalidSecurityGroupId.Malformed	The specified parameter "SecurityGroupId" is not valid.	The error message returned because the specified SecurityGroupId parameter is invalid.
400	InvalidParamter.Conflict	The specified SourceCidrIp should be different from the DestCidrIp.	The error message returned because SourceCidrIp cannot be set to the same value as DestCidrIp.
500	InvalidGressFlow.Malformed	The specified parameter GressFlow is not valid,it cause by internal,try calling again.	The error message returned because the specified GressFlow parameter is invalid.
400	InvalidSourcePortRange.Malformed	The specified parameter "SourcePortRange" is not valid.	The error message returned because the specified SourcePortRange parameter is invalid.
400	InvalidParam.SourceCidrIp	%s	The error message returned because the specified SourceCidrIp parameter is invalid.
400	InvalidParam.DestIp	%s	The error message returned because the specified DestCidrIp parameter is invalid.

HTTP status code	Error code	Error message	Description
400	InvalidParam.Ipv6DestCidrIp	%s	The error message returned because the specified Ipv6DestCidrIp parameter is invalid.
400	InvalidParam.Ipv6SourceCidrIp	%s	The error message returned because the specified Ipv6SourceCidrIp parameter is invalid.
400	InvalidParam.Ipv4ProtocolConflictWithIpv6Address	%s	The error message returned because the specified parameter is invalid. Check whether you have entered an IPv6 address under an IPv4 protocol.
400	InvalidParam.Ipv6ProtocolConflictWithIpv4Address	%s	The error message returned because the specified parameter is invalid. Check whether you have entered an IPv4 address under an IPv6 protocol.
400	ILLEGAL_IPV6_CIDR	%s	The error message returned because the specified IPv6 address is invalid.

13.4. RevokeSecurityGroup

You can call this operation to delete an inbound security group rule and revoke inbound permissions specified by this rule.

Description

In the security group-related API documents, inbound traffic refers to the traffic sent by the source device and received at the destination device.

- You can determine an inbound rule by specifying one of the following groups of parameters. You cannot determine a security group rule by specifying only one parameter.
 - Parameters used to revoke access permissions from specified CIDR blocks: IpProtocol, PortRange, SourcePortRange (optional), NicType, Policy, DestCidrIp, and SourceCidrIp (optional).
 - Parameters used to revoke access permissions from other security groups: IpProtocol, PortRange, SourcePortRange (optional), NicType, Policy, DestCidrIp (optional), DestGroupOwnerAccount, and DestGroupId.
- If the security group rule to match does not exist, the RevokeSecurityGroup operation succeeds but no rules are deleted.

Debugging

OpenAPI Explorer automatically calculates the signature value. For your convenience, we recommend that you call this operation in OpenAPI Explorer. OpenAPI Explorer dynamically generates the sample code of the operation for different SDKs.

Request parameters

Parameter	Type	Required	Example	Description
Action	String	Yes	RevokeSecurityGroup	The operation that you want to perform. If you use a custom HTTP URL or HTTPS URL to make an API request, you must specify the Action parameter. Set the value to RevokeSecurityGroup.

Parameter	Type	Required	Example	Description
IpProtocol	String	Yes	all	The transport layer protocol. This parameter is case-sensitive. Valid values: - icmp - gre - tcp - udp - all
PortRange	String	Yes	1/200	The range of destination ports relevant to transport layer protocols. Valid values: - When the IpProtocol parameter is set to tcp or udp, the port number range is 1 to 65535. Separate the start port and the end port with a forward slash (/). Correct example: 1/200. Incorrect example: 200/1. - When the IpProtocol parameter is set to icmp, the port number range is -1/-1, indicating that all ports are available. - When the IpProtocol parameter is set to gre, the port number range is -1/-1, indicating that all ports are available. - When the IpProtocol parameter is set to all, the port number range is -1/-1, indicating that all ports are available.
RegionId	String	Yes	cn-hangzhou	The ID of the region where the destination security group resides. You can call the DescribeRegions operation to query the most recent region list.
SecurityGroupId	String	Yes	sg-bp67acfmazb4ph***	The ID of the destination security group.
DestCidrIp	String	No	10.0.0.0/8	The range of destination IP addresses. CIDR blocks and IPv4 addresses are supported. Default value: 0.0.0.0/0.
Ipv6DestCidrIp	String	No	2001:db8:1233:1a00::***	The range of destination IPv6 addresses. CIDR blocks and IPv6 addresses are supported.  Note You can specify only the IP addresses of VPC-type instances. This parameter is empty by default.
SourceGroupId	String	No	sg-bp67acfmazb4pi***	The ID of the source security group on which access permissions are to be revoked. - Either SourceGroupId or SourceCidrIp must be specified. - If SourceGroupId is specified but SourceCidrIp is not, the NicType parameter can only be set to intranet. - If SourceGroupId and SourceCidrIp are specified at the same time, SourceCidrIp will take precedence.

Parameter	Type	Required	Example	Description
SourceGroupOwnerId	Long	No	12345678910	The ID of the Alibaba Cloud account that manages the source security group when you delete security group rules across accounts. - If neither SourceGroupOwnerId nor SourceGroupOwnerAccount is specified, access permissions on another security group under your account are revoked. - If SourceCidrIp is specified, the SourceGroupOwnerId parameter is ignored.
SourceGroupOwnerAccount	String	No	Test@aliyun.com	The Alibaba Cloud account that manages the source security group when you delete security group rules across accounts. - If neither SourceGroupOwnerAccount nor SourceGroupOwnerId is specified, access permissions on another security group under your account are revoked. - If SourceCidrIp is specified, the SourceGroupOwnerAccount parameter is ignored.
SourceCidrIp	String	No	10.0.0.0/8	The range of source IP addresses. CIDR blocks and IPv4 addresses are supported. Default value: 0.0.0.0/0.
Ipv6SourceCidrIp	String	No	2001:db8:1234:1a00:: ***	The range of source IPv6 addresses. CIDR blocks and IPv6 addresses are supported.  Note You can specify only the IP addresses of VPC-type instances. This parameter is empty by default.
SourcePortRange	String	No	80/80	The range of source ports relevant to the transport layer protocol. Valid values: - When the IpProtocol parameter is set to tcp or udp, the port number range is 1 to 65535. Separate the start port and the end port with a forward slash (/). Correct example: 1/200. Incorrect example: 200/1. - When the IpProtocol parameter is set to icmp, the port number range is -1/-1, indicating that all ports are available. - When the IpProtocol parameter is set to gre, the port number range is -1/-1, indicating that all ports are available. - When the IpProtocol parameter is set to all, the port number range is -1/-1, indicating that all ports are available.
Policy	String	No	accept	The access control policy. Valid values: - accept: grants access. - drop: denies access without returning a rejection response. Default value: accept.

Parameter	Type	Required	Example	Description
Priority	String	No	1	The priority of security group rules. Valid values: 1 to 100. Default value: 1.
NicType	String	No	intranet	The NIC type of security groups in the classic network. Valid values: - internet - intranet - If the security group is in a VPC, the parameter is set to intranet by default and cannot be modified. - If DestGroupId is specified but DestCidrIp is not, this parameter can only be set to intranet. Default value: internet.
ClientToken	String	No	123e4567-e89b-12d3-a456-426655440000	The client token that is used to ensure the idempotence of the request. You can use the client to generate the value, but you must ensure that it is unique among different requests. The ClientToken value can only contain ASCII characters and cannot exceed 64 characters in length. For more information, see How to ensure idempotence .
Description	String	No	Test	The description of the security group rule.

Response parameters

Parameter	Type	Example	Description
RequestId	String	473469C7-AA6F-4DC5-B3DB-A3DC0DE3C83E	The ID of the request.

Examples

Sample requests

```
https://ecs.aliyuncs.com/?Action=RevokeSecurityGroup
&SecurityGroupId=sg-bp67acfmazb4ph***
&SourceGroupId=sg-bp67acfmazb4pi***
&SourceGroupOwnerAccount=Test@aliyun.com
&IpProtocol=all
&PortRange=80/80
&Priority=1
&<Common request parameters>
```

Sample success responses

XML format

```
<RevokeSecurityGroupResponse>
  <RequestId>CEF72CEB-54B6-4AE8-B225-F876FF7BA984</RequestId>
</RevokeSecurityGroupResponse>
```

JSON format

```
{
  "RequestId": "CEF72CEB-54B6-4AE8-B225-F876FF7BA984"
}
```

Error codes

HTTP status code	Error code	Error message	Description
404	InvalidSecurityGroupId.NotFound	The specified SecurityGroupId does not exist.	The error message returned because the specified SecurityGroupId parameter does not exist under this account. Check whether the security group ID is correct.
400	InvalidSecurityGroupId.Malformed	The specified SecurityGroupId is not valid.	The error message returned because the specified SecurityGroupId parameter is invalid.
400	InvalidIpProtocol.ValueNotSupported	The specified IpProtocol does not exist.	The error message returned because the specified IpProtocol parameter is invalid.
400	InvalidIpPortRange.Malformed	The specified parameter "PortRange" is not valid.	The error message returned because the specified PortRange parameter is invalid.
404	InvalidSourceGroupId.NotFound	The SourceGroupId provided does not exist in our records.	The error message returned because the specified SourceGroupId parameter does not exist.
403	InvalidNicType.Mismatch	Specified nic type conflicts with the authorization record.	The error message returned because the specified NIC type conflicts with the authorization record.
403	InvalidGroupAuthItem.NotFound	Specified group authorized item does not exist in our records.	The error message returned because the specified group authorization entry does not exist.
400	InvalidSourceCidrIp.Malformed	The specified parameter "SourceCidrIp" is not valid.	The error message returned because the specified SourceCidrIp parameter is invalid.
400	MissingParameter	The input parameter "SourceGroupId" or "SourceCidrIp" cannot be both blank.	The error message returned because SourceGroupId and SourceCidrIp cannot be empty at the same time.
400	InvalidPolicy.Malformed	The specified parameter "Policy" is not valid.	The error message returned because the specified Policy parameter is invalid.
400	InvalidNicType.ValueNotSupported	The specified NicType does not exist.	The error message returned because the specified NicType parameter does not exist. Check whether the parameter is correct.
400	InvalidSourceGroupId.Mismatch	Specified security group and source group are not in the same VPC.	The error message returned because the specified security group and source security group are not in the same VPC.
400	VPCDisabled	Can't use the SecurityGroup in VPC.	The error message returned because the current VPC does not support security groups.

HTTP status code	Error code	Error message	Description
500	InternalServerError	The request processing has failed due to some unknown error.	The error message returned because an internal error has occurred. Try again later. If the problem persists, submit a ticket.
400	MissingParameter.Source	Either SourceCidrIp or SourceGroupId must be specified.	The error message returned because SourceCidrIp and SourceGroupId cannot be empty at the same time.
400	InvalidIpProtocol.ValueNotSupported	The parameter IpProtocol must be specified with case insensitive TCP, UDP, ICMP, GRE or All.	The error message returned because the IpProtocol parameter is not set to tcp, udp, icmp, gre, or all.
400	InvalidPriority.Malformed	The parameter Priority is invalid.	The error message returned because the specified Priority parameter is invalid.
400	InvalidPriority.ValueNotSupported	The parameter Priority is invalid.	The error message returned because the specified Priority parameter is invalid.
400	InvalidParameter.Conflict	The specified SecurityGroupId should be different from the SourceGroupId.	The error message returned because the authorized security group is the same as the source security group.
400	InvalidParam.SourceCidrIp	%s	The error message returned because the specified SourceCidrIp parameter is invalid.
400	InvalidParam.DestIp	%s	The error message returned because the specified DestCidrIp parameter is invalid.
400	InvalidParam.Ipv6DestCidrIp	%s	The error message returned because the specified Ipv6DestCidrIp parameter is invalid.
400	InvalidParam.Ipv6SourceCidrIp	%s	The error message returned because the specified Ipv6SourceCidrIp parameter is invalid.
400	InvalidParam.Ipv4ProtocolConflictWithIpv6Address	%s	The error message returned because the specified parameter value is invalid. Check whether you have entered an IPv6 address under an IPv4 protocol.
400	InvalidParam.Ipv6ProtocolConflictWithIpv4Address	%s	The error message returned because the specified parameter value is invalid. Check whether you have entered an IPv4 address under an IPv6 protocol.
400	ILLEGAL_IPV6_CIDR	%s	The error message returned because the specified IPv6 address is invalid.

13.5. RevokeSecurityGroupEgress

You can call this operation to delete an outbound security group rule and revoke outbound access permissions specified by this rule.

Description

In the security group-related API documents, inbound traffic refers to the traffic sent by the source device and received at the destination device.

You can determine a security group rule by specifying one of the following groups of parameters. You cannot determine a security group rule by specifying only one parameter.

- Parameters used to revoke access permissions on specified CIDR blocks: IpProtocol, PortRange, SourcePortRange (optional), NicType, Policy, DestCidrIp, and SourceCidrIp (optional).

```
https://ecs.aliyuncs.com/?Action=RevokeSecurityGroupEgress
&SecurityGroupId=sg-bp67acfmazb4ph***
&IpProtocol=tcp
&DestCidrIp=10.0.0.0/8
&PortRange=-22/22
&NicType=intranet
&Policy=Allow
&<Common request parameters>
```

- Parameters used to revoke access permissions on other security groups: IpProtocol, PortRange, SourcePortRange (optional), NicType, Policy, DestCidrIp (optional), DestGroupOwnerAccount, and DestGroupId.

```
https://ecs.aliyuncs.com/?Action=RevokeSecurityGroupEgress
&SecurityGroupId=sg-bp67acfmazb4ph***
&DestGroupId=sg-bp67acfmazb4pi***
&DestGroupOwnerAccount=test@aliyun.com
&IpProtocol=tcp
&PortRange=22/22
&NicType=intranet
&Policy=Drop
&<Common request parameters>
```

If the security group rule to match does not exist, the RevokeSecurityGroupEgress operation succeeds but no rules are deleted.

Debugging

OpenAPI Explorer automatically calculates the signature value. For your convenience, we recommend that you call this operation in OpenAPI Explorer. OpenAPI Explorer dynamically generates the sample code of the operation for different SDKs.

Request parameters

Parameter	Type	Required	Example	Description
Action	String	Yes	RevokeSecurityGroupEgress	The operation that you want to perform. Set the value to RevokeSecurityGroupEgress.
IpProtocol	String	Yes	tcp	The transport layer protocol. The value is case-insensitive. Valid values: - icmp - gre - tcp - udp - all

Parameter	Type	Required	Example	Description
PortRange	String	Yes	22/22	The range of destination ports relevant to the transport layer protocol. Valid values: - When the IpProtocol parameter is set to tcp or udp, the port number range is 1 to 65535. Separate the start port and the end port with a forward slash (/). Correct example: 1/200. Incorrect example: 200/1. - When the IpProtocol parameter is set to icmp, the port number range is -1/-1, indicating that all ports are available. - When the IpProtocol parameter is set to gre, the port number range is -1/-1, indicating that all ports are available. - When the IpProtocol parameter is set to all, the port number range is -1/-1, indicating that all ports are available.
RegionId	String	Yes	cn-hangzhou	The ID of the region to which the source security group belongs. You can call the DescribeRegions operation to query the most recent region list.
SecurityGroupId	String	Yes	sg-bp67acfmazb4p****	The ID of the source security group.
DestGroupId	String	No	sg-bp67acfmazb4p****	The ID of the destination security group from which you want to revoke access permissions. - You must specify either DestGroupId or DestCidrIp. - If DestGroupId is specified but DestCidrIp is not, the NicType parameter must be set to intranet. - If DestGroupId and DestCidrIp are both specified, the DestCidrIp parameter will take precedence.
DestGroupOwnerId	Long	No	12345678910	The ID of the Alibaba Cloud account that manages the destination security group when you delete security group rules across accounts. - If neither DestGroupOwnerId nor DestGroupOwnerAccount is specified, the access permission is revoked from another security group managed by your account. - If DestCidrIp is specified, the DestGroupOwnerId parameter is ignored.
DestGroupOwnerAccount	String	No	EcsforCloud@Alibaba.com	The Alibaba Cloud account that manages the destination security group when you delete security group rules across accounts. - If neither DestGroupOwnerAccount nor DestGroupOwnerId is specified, the access permission is revoked from another security group managed by your account. - If DestCidrIp is specified, the DestGroupOwnerAccount parameter is ignored.

Parameter	Type	Required	Example	Description
DestCidrIp	String	No	10.0.0.0/8	The range of destination IP addresses. CIDR blocks and IPv4 addresses are supported. This parameter is empty by default.
Ipv6DestCidrIp	String	No	2001:db8:1233:1a00:: ***	The range of destination IPv6 addresses. CIDR blocks and IPv6 addresses are supported. This parameter is empty by default.  Note You can specify only the IP addresses of VPC-type instances.
SourceCidrIp	String	No	10.0.0.0/8	The range of source IP addresses. CIDR blocks and IPv4 addresses are supported. This parameter is empty by default.
Ipv6SourceCidrIp	String	No	2001:db8:1234:1a00:: ***	The range of source IPv6 addresses. CIDR blocks and IPv6 addresses are supported. This parameter is empty by default.  Note You can specify only the IP addresses of VPC-type instances.
SourcePortRange	String	No	22/22	The range of source ports relevant to the transport layer protocol. Valid values: - When the IpProtocol parameter is set to tcp or udp, the port number range is 1 to 65535. Separate the start port and the end port with a forward slash (/). Correct example: 1/200. Incorrect example: 200/1. - When the IpProtocol parameter is set to icmp, the port number range is -1/-1, indicating that all ports are available. - When the IpProtocol parameter is set to gre, the port number range is -1/-1, indicating that all ports are available. - When the IpProtocol parameter is set to all, the port number range is -1/-1, indicating that all ports are available.
Policy	String	No	accept	The access control policy. Valid values: - accept: grants access. - drop: denies access without returning a rejection response. Default value: accept.
Priority	String	No	1	The priority of security group rules. Valid values: 1 to 100. Default value: 1.

Parameter	Type	Required	Example	Description
NicType	String	No	intranet	The NIC type of security groups in the classic network. Valid values: - internet - intranet - If the security group is in a VPC, this parameter is set to intranet by default and cannot be modified. - If DestGroupId is specified but DestCidrIp is not, this parameter must be set to intranet. Default value: internet.
ClientToken	String	No	473469C7-AA6F-4DC5-B3DB-A3DC0DE3C83E	The client token that is used to ensure the idempotence of the request. You can use the client to generate the value, but you must ensure that it is unique among different requests. The ClientToken value can only contain ASCII characters and cannot exceed 64 characters in length. For more information, see How to ensure idempotence.
Description	String	No	TestDescription	The description of the security group rule.

Response parameters

Parameter	Type	Example	Description
RequestId	String	473469C7-AA6F-4DC5-B3DB-A3DC0DE3C83E	The ID of the request.

Examples

Sample requests

```
https://ecs.aliyuncs.com/?Action=RevokeSecurityGroupEgress
&SecurityGroupId=sg-bp67acfmazb4p****
&IpProtocol=tcp
&DestCidrIp=10.0.0.0/8
&PortRange=22/22
&NicType=intranet
&Policy=Allow
&<Common request parameters>
```

Sample success responses

XML format

```
<RevokeSecurityGroupEgressResponse>
  <RequestId>CEF72CEB-54B6-4AE8-B225-F876FF7BA984</RequestId>
</RevokeSecurityGroupEgressResponse>
```

JSON format

```
{
  "RequestId": "CEF72CEB-54B6-4AE8-B225-F876FF7BA984"
}
```

Error codes

HTTP status code	Error code	Error message	Description
404	InvalidSecurityGroupId.NotFound	The specified SecurityGroupId does not exist.	The error message returned because the specified security group does not exist under this account. Check whether the security group ID is correct.
400	InvalidIpProtocol.ValueNotSupported	The specified IpProtocol does not exist.	The error message returned because the specified IpProtocol parameter is invalid.
400	InvalidIpPortRange.Malformed	The specified parameter "PortRange" is not valid.	The error message returned because the specified PortRange parameter is invalid.
404	InvalidDestGroupId.NotFound	The DestGroupId provided does not exist in our records.	The error message returned because the specified DestGroupId parameter does not exist.
403	InvalidNicType.Mismatch	Specified nic type conflicts with the authorization record.	The error message returned because the specified NicType parameter does not exist.
403	InvalidGroupAuthItem.NotFound	Specified group authorized item does not exist in our records.	The error message returned because the specified group authorization entry does not exist.
400	InvalidDestCidrIp.Malformed	The specified parameter "DestCidrIp" is not valid.	The error message returned because the specified DestCidrIp parameter is invalid.
400	MissingParameter	The input parameter "DestGroupId" or "DestCidrIp" cannot be both blank.	The error message returned because the DestGroupId and DestCidrIp parameters cannot be empty at the same time.
400	InvalidPolicy.Malformed	The specified parameter "Policy" is not valid.	The error message returned because the specified Policy parameter is invalid.
400	InvalidNicType.ValueNotSupported	The specified NicType does not exist.	The error message returned because the specified NicType parameter does not exist. Check whether the Nic type is correct.
400	InvalidDestGroupId.Mismatch	Specified security group and destination group are not in the same VPC.	The error message returned because the specified security group and the destination security group do not belong to the same VPC.
400	VPCDisabled	Can't use the SecurityGroup in VPC.	The error message returned because the current VPC does not support security groups.
403	InvalidSecurityGroup.IsSame	The authorized SecurityGroupId should be different from the DestGroupId.	The error message returned because the authorized security group cannot be the same as the destination security group.

HTTP status code	Error code	Error message	Description
500	InternalServerError	The request processing has failed due to some unknown error.	The error message returned because an internal error has occurred. Try again later. If the problem persists, submit a ticket.
400	InvalidDestCidrIp.Malformed	The specified parameter "DestCidrIp" is not valid.	The error message returned because the specified DestCidrIp parameter is invalid.
400	MissingParameter.Dest	Either DestCidrIp or DestGroupId must be specified.	The error message returned because the DestCidrIp and DestGroupId parameters cannot be empty at the same time.
400	InvalidIpProtocol.ValueNotSupported	The parameter IpProtocol must be specified with case insensitive TCP, UDP, ICMP, GRE or All.	The error message returned because the IpProtocol parameter is not set to tcp, udp, icmp, gre, or all.
400	InvalidPriority.Malformed	The parameter Priority is invalid.	The error message returned because the specified Priority parameter is invalid.
400	InvalidPriority.ValueNotSupported	The parameter Priority is invalid.	The error message returned because the specified Priority parameter is invalid.
403	InvalidParameter.Conflict	The specified SecurityGroupId should be different from the SourceGroupId.	The error message returned because the authorized security group is the same as the source security group.
400	InvalidDestCidrIp.Malformed	The specified parameter DestCidrIp is not valid.	The error message returned because the specified DestCidrIp parameter is invalid.
400	InvalidParam.SourceCidrIp	%s	The error message returned because the specified SourceCidrIp parameter is invalid.
400	InvalidParam.DestIp	%s	The error message returned because the specified DestCidrIp parameter is invalid.
400	InvalidParam.Ipv6DestCidrIp	%s	The error message returned because the specified Ipv6DestCidrIp parameter is invalid.
400	InvalidParam.Ipv6SourceCidrIp	%s	The error message returned because the specified Ipv6SourceCidrIp parameter is invalid.
400	InvalidParam.Ipv4ProtocolConflictWithIpv6Address	%s	The error message returned because the specified parameter is invalid. Check whether you have entered an IPv6 address under an IPv4 protocol by mistake.
400	InvalidParam.Ipv6ProtocolConflictWithIpv4Address	%s	The error message returned because the specified parameter is invalid. Check whether you have entered an IPv4 address under an IPv6 protocol by mistake.
400	ILLEGAL_IPV6_CIDR	%s	The error message returned because the specified IPv6 address is invalid.

HTTP status code	Error code	Error message	Description
400	InvalidSecurityGroupId.Malformed	The specified parameter "SecurityGroupId" is not valid.	The error message returned because the specified SecurityGroupId parameter is invalid.
400	InvalidSourcePortRange.Malformed	The specified parameter "SourcePortRange" is not valid.	The error message returned because the specified SourcePortRange parameter is invalid.
400	InvalidSecurityGroupDescription.Malformed	The specified security group rule description is not valid.	The error message returned because the specified Description parameter is invalid.

13.6. JoinSecurityGroup

You can call this operation to add an ECS instance to a security group.

Description

 **Note** This operation is not recommended. We recommend that you call the [ModifyInstanceAttribute](#) operation to add or remove ECS instances to or from a security group, and call the [ModifyNetworkInterfaceAttribute](#) operation to add or remove elastic network interfaces (ENIs) to or from a security group.

When you call this operation, take note of the following items:

- Before you add an instance to a security group, the instance must be in the **Stopped (Stopped)** or **Running (Running)** state.
- An instance can be added to a maximum of five security groups.
- A basic security group can contain a maximum of 2,000 instances. An advanced security group can contain a maximum of 65,536 instances.
- The security group and the instance must belong to the same region.
- The security group and the instance must be of the same network type. If the network type is VPC, the security group and the instance must be in the same VPC.

Debugging

OpenAPI Explorer automatically calculates the signature value. For your convenience, we recommend that you call this operation in OpenAPI Explorer. OpenAPI Explorer dynamically generates the sample code of the operation for different SDKs.

Request parameters

Parameter	Type	Required	Example	Description
Action	String	Yes	JoinSecurityGroup	The operation that you want to perform. Set the value to JoinSecurityGroup.
InstanceId	String	Yes	i-bp67acfmazb4p****	The ID of the instance. You can call the DescribeRegions operation to query the most recent region list.
SecurityGroupId	String	Yes	sg-bp67acfmazb4p****	The ID of the security group. You can call the DescribeSecurityGroups operation to view available security groups.

Response parameters

Parameter	Type	Example	Description
RequestId	String	473469C7-AA6F-4DC5-B3DB-A3DC0DE3C83E	The ID of the request.

Examples

Sample requests

```
https://ecs.aliyuncs.com/?Action=JoinSecurityGroup
&InstanceId=i-bp67acfmazb4p****
&SecurityGroupId=sg-bp67acfmazb4p****
&<Common request parameters>
```

Sample success responses

XML format

```
<JoinSecurityGroupResponse>
  <RequestId>473469C7-AA6F-4DC5-B3DB-A3DC0DE3C83E</RequestId>
</JoinSecurityGroupResponse>
```

JSON format

```
{
  "RequestId": "473469C7-AA6F-4DC5-B3DB-A3DC0DE3C83E"
}
```

Error codes

HTTP status code	Error code	Error message	Description
404	InvalidSecurityGroupId.NotFound	The specified SecurityGroupId does not exist.	The error message returned because the specified security group does not exist in this account. Check whether the security group ID is correct.
400	InstanceSecurityGroupLimitExceeded	Exceeding the allowed amount of security groups that an instance can be in.	The error message returned because the maximum number of security groups to which the instance can be added has been reached.
403	IncorrectInstanceState	The current status of the resource does not support this operation.	The error message returned because the operation is not supported while the resource is in the current state.
403	InstanceLockedForSecurity	The specified operation is denied as your instance is locked for security reasons.	The error message returned because the operation is not supported while the instance is locked for security reasons.
403	SecurityGroupInstanceLimitExceeded	The maximum number of instances in a security group is exceeded.	The error message returned because the maximum number of instances in the specified security group has been reached.
404	InvalidInstanceId.NotFound	The specified InstanceId does not exist.	The error message returned because the specified instance does not exist. Check whether the instance ID is correct.

HTTP status code	Error code	Error message	Description
400	InvalidInstanceid.Mismatch	Specified instance and security group are not in the same VPC.	The error message returned because the specified instance and security group do not belong to the same VPC or one of the following special cases occurs: 1. The security group is of the VPC network type but the instance is not. 2. The instance is of the VPC network type but the security group is not.
403	InvalidInstanceid.AlreadyExists	The specified instance already exists in the specified security group.	The error message returned because the specified instance already exists in the security group.
500	InternalError	The request processing has failed due to some unknown error.	The error message returned because an internal error has occurred. Try again later. If the problem persists, submit a ticket.
403	SecurityGroupInstanceLimitExceeded	%s	The error message returned because the maximum number of instances in the specified security group has been reached.
403	ACLLimitExceed	%s	The error message returned because the value of AccessPoint exceeds the upper limit.
403	InstanceSecurityGroupLimitExceeded	%s	The error message returned because the maximum number of security groups to which the instance can be added has been reached.
400	InvalidInstanceid.Malformed	The specified parameter "Instanceid" is not valid.	The error message returned because the specified Instanceid parameter is invalid.

13.7. LeaveSecurityGroup

You can call this operation to remove an ECS instance from a specified security group.

Description

When you call this operation, take note of the following points:

- Before you remove an instance from a security group, the instance must be in the **Stopped** or **Running** state.
- An instance must belong to at least one security group. Therefore, if the instance to be removed belongs to only a single security group, the LeaveSecurityGroup request fails.

Debugging

OpenAPI Explorer automatically calculates the signature value. For your convenience, we recommend that you call this operation in OpenAPI Explorer. OpenAPI Explorer dynamically generates the sample code of the operation for different SDKs.

Request parameters

Parameter	Type	Required	Example	Description
Instanceid	String	Yes	i-bp67acfmazb4ph***	The ID of the instance.
SecurityGroupid	String	Yes	sg-bp67acfmazb4ph***	The ID of the security group.

Parameter	Type	Required	Example	Description
Action	String	Yes	LeaveSecurityGroup	The operation that you want to perform. Set the value to LeaveSecurityGroup.

Response parameters

Parameter	Type	Example	Description
RequestId	String	473469C7-AA6F-4DC5-B3DB-A3DC0DE3C83E	The ID of the request.

Examples

Sample requests

```
https://ecs.aliyuncs.com/?Action=LeaveSecurityGroup
&InstanceId=i-bp67acfmazb4ph***
&SecurityGroupId=sg-bp67acfmazb4ph***
&<Common request parameters>
```

Sample success responses

XML format

```
<LeaveSecurityGroupResponse>
  <RequestId>473469C7-AA6F-4DC5-B3DB-A3DC0DE3C83E</RequestId>
</LeaveSecurityGroupResponse>
```

JSON format

```
{
  "RequestId": "473469C7-AA6F-4DC5-B3DB-A3DC0DE3C83E"
}
```

Error codes

HTTP status code	Error code	Error message	Description
404	InvalidInstanceId.NotFound	The specified InstanceId does not exist.	The error message returned because the specified InstanceId parameter does not exist. Check whether the instance ID is correct.
404	InvalidSecurityGroupId.NotFound	The specified SecurityGroupId does not exist.	The error message returned because the specified SecurityGroupId parameter does not exist under this account. Check whether the security group ID is correct.
403	InstanceLastSecurityGroup	The specified security group is the last security group for the instance.	The error message returned because the specified security group is the only security group to which the instance belongs.
403	IncorrectInstanceStatus	The current status of the resource does not support this operation.	The error message returned because the operation is not supported while the resource is in the current state.

HTTP status code	Error code	Error message	Description
403	InstanceLockedForSecurity	The specified operation is denied as your instance is locked for security reasons.	The error message returned because the operation is not supported while the instance is locked for security reasons.
403	InstanceNotInSecurityGroup	The instance not in the group.	The error message returned because the specified instance does not belong to the specified security group.
504	RequestTimeout	The request encounters an upstream server timeout.	The error message returned because the request encounters an upstream server timeout.
400	InvalidInstanceId.Malformed	The specified parameter "InstanceId" is not valid.	The error message returned because the specified InstanceId parameter is invalid.

13.8. DeleteSecurityGroup

You can call this operation to delete a security group.

Description

Before you delete a security group, make sure that no instances exist in the security group and that the security group is not referenced by other security groups ([DescribeSecurityGroupReferences](#)). Otherwise, the DeleteSecurityGroup request fails.

Debugging

OpenAPI Explorer automatically calculates the signature value. For your convenience, we recommend that you call this operation in OpenAPI Explorer. OpenAPI Explorer dynamically generates the sample code of the operation for different SDKs.

Request parameters

Parameter	Type	Required	Example	Description
Action	String	Yes	DeleteSecurityGroup	The operation that you want to perform. Set the value to DeleteSecurityGroup.
RegionId	String	Yes	cn-hangzhou	The ID of the region. You can call the DescribeRegions operation to query the most recent region list.
SecurityGroupId	String	Yes	sg-bp1fg655nh68xyz9***	The ID of the security group.

Response parameters

Parameter	Type	Example	Description
RequestId	String	473469C7-AA6F-4DC5-B3DB-A3DC0DE3C83E	The ID of the request.

Examples

Sample requests

```
https://ecs.aliyuncs.com/?Action=DeleteSecurityGroup
&RegionId=cn-hangzhou
&SecurityGroupId=sg-bp1fg655nh68xyz9****
&<Common request parameters>
```

Sample success responses

XML format

```
<DeleteSecurityGroupResponse>
  <RequestId>CEF72CEB-54B6-4AE8-B225-F876FF7BA984</RequestId>
</DeleteSecurityGroupResponse>
```

JSON format

```
{
  "RequestId": "CEF72CEB-54B6-4AE8-B225-F876FF7BA984"
}
```

Error codes

HTTP status code	Error code	Error message	Description
403	DependencyViolation	There is still instance(s) in the specified security group.	The error message returned because instances exist in the security group. Release the instances and try again.
403	DependencyViolation	The specified security group has been authorized in another one.	The error message returned because the specified security group is referenced by another security group.
500	InternalServerError	The request processing has failed due to some unknown error.	The error message returned because an internal error has occurred. Try again later. If the problem persists, submit a ticket.

13.9. DescribeSecurityGroupAttribute

You can call this operation to query the rules of a security group.

Debugging

OpenAPI Explorer automatically calculates the signature value. For your convenience, we recommend that you call this operation in OpenAPI Explorer. OpenAPI Explorer dynamically generates the sample code of the operation for different SDKs.

Request parameters

Parameter	Type	Required	Example	Description
RegionId	String	Yes	cn-hangzhou	The ID of the region to which the security group belongs. You can call the DescribeRegions operation to query the most recent region list.
SecurityGroupId	String	Yes	sg-bp1gwx6bnjjvhu3g** *	The ID of the security group.

Parameter	Type	Required	Example	Description
Action	String	Yes	DescribeSecurityGroupAttribute	The operation that you want to perform. Set the value to DescribeSecurityGroupAttribute.
NicType	String	No	intranet	The NIC type of the security group rule. - Valid values of security groups in the classic network: - internet - intranet  Note By default, the parameter is set to internet. For a single call, you can query only security group rules of one NIC type. If you want to query all security group rules, call the operation twice. - Valid values of security groups in VPCs: - intranet  Note By default, the parameter is set to intranet. If you set the parameter to internet or leave the parameter empty, the parameter is automatically set to intranet.
Direction	String	No	all	The direction in which a security group rule is applied. Valid values: - egress: Outbound traffic is allowed for the security group. - ingress: Inbound traffic is allowed for the security group. - all: Both inbound and outbound traffic is allowed for the security group. Default value: all.

Response parameters

Parameter	Type	Example	Description
Description	String	FinanceDept	The description of the security group.
InnerAccessPolicy	String	Accept	The access control policy within the security group. Valid values: - Accept: All instances within the security group can communicate with each other. - Drop: All instances within the security group are isolated from each other.
Permissions	Array		An array consisting of Permission data.
Permission			The permission rules of the security group.

Parameter	Type	Example	Description
CreateTime	String	2018-12-12T07:28:38Z	The time when the security group was created. The time is displayed in UTC.
Description	String	FinanceDept	The description of the security group.
DestCidrIp	String	0.0.0.0/0	The destination CIDR block for outbound authorization.
DestGroupId	String	sg-securitygroupid1	The ID of the destination security group for outbound authorization.
DestGroupName	String	SecurityGuard	The name of the destination security group.
DestGroupOwnerAccount	String	SecurityGuard	The Alibaba Cloud account that manages the destination security group.
Direction	String	ingress	The allowed direction of traffic.
IpProtocol	String	TCP	The Internet protocol.
Ipv6DestCidrIp	String	2001:db8:1234:1a00::***	The destination IPv6 CIDR block.
Ipv6SourceCidrIp	String	2001:db8:1234:1a00::***	The source IPv6 CIDR block.
NicType	String	intranet	The NIC type of the security group.
Policy	String	Accept	The authorization policy.
PortRange	String	80/80	The port range.
Priority	String	1	The rule priority.
SourceCidrIp	String	0.0.0.0/0	The source CIDR block for inbound authorization.
SourceGroupId	String	sg-securitygroupid2	The ID of the source security group for inbound authorization.
SourceGroupName	String	FinanceDeptJoshua	The name of the source security group.
SourceGroupOwnerAccount	String	FinanceJoshua	The Alibaba Cloud account that manages the source security group.
SourcePortRange	String	80/80	The source port range.
RegionId	String	cn-hangzhou	The ID of the region.

Parameter	Type	Example	Description
RequestId	String	473469C7-AA6F-4DC5-B3DB-A3DC0DE3C83E	The ID of the request.
SecurityGroupId	String	sg-bp1gwx6bznjjvhu3g***	The ID of the destination security group.
SecurityGroupName	String	FinanceJoshua	The name of the destination security group.
VpcId	String	vpc-bp1opxu1zkhn00gzv2***	The ID of the VPC. If a VPC ID is returned, the network type of the security group is VPC. Otherwise, the network type of the security group is the classic network.

Examples

Sample requests

```
https://ecs.aliyuncs.com/?RegionId=cn-hangzhou
&SecurityGroupId=sg-bp1gwx6bznjjvhu3g***
&<Common request parameters>
```

Sample success responses

XML format

```
<DescribeSecurityGroupAttributeResponse>
  <SecurityGroupId>sg-bp1gwx6bznjjvhu3g***</SecurityGroupId>
  <InnerAccessPolicy>Accept</InnerAccessPolicy>
  <SecurityGroupName>FinanceJoshua</SecurityGroupName>
  <Description>FinanceDept</Description>
  <RegionId>cn-hangzhou</RegionId>
  <RequestId>A72322C1-47C0-491E-8088-8B17E4EA859F</RequestId>
  <Permissions>
    <Permission>
      <SourceCidrIp>10.0.0.0/8</SourceCidrIp>
      <Description></Description>
      <DestCidrIp></DestCidrIp>
      <NicType>intranet</NicType>
      <DestGroupName></DestGroupName>
      <PortRange>22/22</PortRange>
      <DestGroupId></DestGroupId>
      <Ipv6DestCidrIp></Ipv6DestCidrIp>
      <Direction>ingress</Direction>
      <Priority>1</Priority>
      <IpProtocol>TCP</IpProtocol>
      <SourcePortRange></SourcePortRange>
      <SourceGroupOwnerAccount></SourceGroupOwnerAccount>
      <Policy>Accept</Policy>
      <CreateTime>2018-12-12T07:28:38Z</CreateTime>
      <SourceGroupId></SourceGroupId>
      <DestGroupOwnerAccount></DestGroupOwnerAccount>
      <Ipv6SourceCidrIp></Ipv6SourceCidrIp>
      <SourceGroupName></SourceGroupName>
```



```

    <SourceGroupName></SourceGroupName>
  </Permission>
  <Permission>
    <SourceCidrIp>0.0.0.0/0</SourceCidrIp>
    <Description></Description>
    <DestCidrIp></DestCidrIp>
    <NicType>intranet</NicType>
    <DestGroupName></DestGroupName>
    <PortRange>443/443</PortRange>
    <DestGroupId></DestGroupId>
    <Ipv6DestCidrIp></Ipv6DestCidrIp>
    <Direction>ingress</Direction>
    <Priority>1</Priority>
    <IpProtocol>TCP</IpProtocol>
    <SourcePortRange></SourcePortRange>
    <SourceGroupOwnerAccount></SourceGroupOwnerAccount>
    <Policy>Accept</Policy>
    <CreateTime>2018-12-12T07:28:38Z</CreateTime>
    <SourceGroupId></SourceGroupId>
    <DestGroupOwnerAccount></DestGroupOwnerAccount>
    <Ipv6SourceCidrIp></Ipv6SourceCidrIp>
    <SourceGroupName></SourceGroupName>
  </Permission>
  <Permission>
    <SourceCidrIp>10.0.0.0/8</SourceCidrIp>
    <Description></Description>
    <DestCidrIp></DestCidrIp>
    <NicType>intranet</NicType>
    <DestGroupName></DestGroupName>
    <PortRange>80/80</PortRange>
    <DestGroupId></DestGroupId>
    <Ipv6DestCidrIp></Ipv6DestCidrIp>
    <Direction>ingress</Direction>
    <Priority>1</Priority>
    <IpProtocol>TCP</IpProtocol>
    <SourcePortRange></SourcePortRange>
    <SourceGroupOwnerAccount></SourceGroupOwnerAccount>
    <Policy>Accept</Policy>
    <CreateTime>2018-12-12T07:28:38Z</CreateTime>
    <SourceGroupId></SourceGroupId>
    <DestGroupOwnerAccount></DestGroupOwnerAccount>
    <Ipv6SourceCidrIp></Ipv6SourceCidrIp>
    <SourceGroupName></SourceGroupName>
  </Permission>
  <Permission>
    <SourceCidrIp>10.0.0.0/8</SourceCidrIp>
    <Description></Description>
    <DestCidrIp></DestCidrIp>
    <NicType>intranet</NicType>
    <DestGroupName></DestGroupName>
    <PortRange>-1/-1</PortRange>

```

```

    <DestGroupId></DestGroupId>
    <Ipv6DestCidrIp></Ipv6DestCidrIp>
    <Direction>ingress</Direction>
    <Priority>1</Priority>
    <IpProtocol>ICMP</IpProtocol>
    <SourcePortRange>-1/-1</SourcePortRange>
    <SourceGroupOwnerAccount></SourceGroupOwnerAccount>
    <Policy>Accept</Policy>
    <CreateTime>2018-12-12T07:28:38Z</CreateTime>
    <SourceGroupId></SourceGroupId>
    <DestGroupOwnerAccount></DestGroupOwnerAccount>
    <Ipv6SourceCidrIp></Ipv6SourceCidrIp>
    <SourceGroupName></SourceGroupName>
  </Permission>
</Permissions>
  <VpcId>vpc-bp1opxu1zkhn00gzv2***</VpcId>
</DescribeSecurityGroupAttributeResponse>

```

JSON format

```

{
  "SecurityGroupId": "sg-bp1gxw6bznjjvhu3g****",
  "Description": "FinanceDept",
  "SecurityGroupName": "FinanceJoshua",
  "InnerAccessPolicy": "Accept",
  "RequestId": "A72322C1-47C0-491E-8088-8B17E4EA859F",
  "RegionId": "cn-hangzhou",
  "Permissions": {
    "Permission": [
      {
        "SourceCidrIp": "10.0.0.0/8",
        "Description": "",
        "DestCidrIp": "",
        "NicType": "intranet",
        "DestGroupName": "",
        "PortRange": "22/22",
        "DestGroupId": "",
        "Ipv6DestCidrIp": "",
        "Direction": "ingress",
        "Priority": 1,
        "IpProtocol": "TCP",
        "SourcePortRange": "",
        "SourceGroupOwnerAccount": "",
        "Policy": "Accept",
        "CreateTime": "2018-12-12T07:28:38Z",
        "SourceGroupId": "",
        "DestGroupOwnerAccount": "",
        "Ipv6SourceCidrIp": "",
        "SourceGroupName": ""
      }
    ]
  },
}

```

```

{
  "SourceCidrIp": "0.0.0.0/0",
  "Description": "",
  "DestCidrIp": "",
  "NicType": "intranet",
  "DestGroupName": "",
  "PortRange": "443/443",
  "DestGroupId": "",
  "Ipv6DestCidrIp": "",
  "Direction": "ingress",
  "Priority": 1,
  "IpProtocol": "TCP",
  "SourcePortRange": "",
  "SourceGroupOwnerAccount": "",
  "Policy": "Accept",
  "CreateTime": "2018-12-12T07:28:38Z",
  "SourceGroupId": "",
  "DestGroupOwnerAccount": "",
  "Ipv6SourceCidrIp": "",
  "SourceGroupName": ""
},
{
  "SourceCidrIp": "0.0.0.0/0",
  "Description": "",
  "DestCidrIp": "",
  "NicType": "intranet",
  "DestGroupName": "",
  "PortRange": "80/80",
  "DestGroupId": "",
  "Ipv6DestCidrIp": "",
  "Direction": "ingress",
  "Priority": 1,
  "IpProtocol": "TCP",
  "SourcePortRange": "",
  "SourceGroupOwnerAccount": "",
  "Policy": "Accept",
  "CreateTime": "2018-12-12T07:28:38Z",
  "SourceGroupId": "",
  "DestGroupOwnerAccount": "",
  "Ipv6SourceCidrIp": "",
  "SourceGroupName": ""
},
{
  "SourceCidrIp": "10.0.0.0/8",
  "Description": "",
  "DestCidrIp": "",
  "NicType": "intranet",
  "DestGroupName": "",
  "PortRange": "-1/-1",
  "DestGroupId": "",

```

```

    "Ipv6DestCidrIp": "",
    "Direction": "ingress",
    "Priority": 1,
    "IpProtocol": "ICMP",
    "SourcePortRange": "-1/-1",
    "SourceGroupOwnerAccount": "",
    "Policy": "Accept",
    "CreateTime": "2018-12-12T07:28:38Z",
    "SourceGroupId": "",
    "DestGroupOwnerAccount": "",
    "Ipv6SourceCidrIp": "",
    "SourceGroupName": ""
  }
]
},
"VpcId": "vpc-bp1opxu1zkhn00gzv2****"
}

```

Error codes

HTTP status code	Error code	Error message	Description
404	InvalidRegionId.NotFound	The specified RegionId does not exist.	The error message returned because the specified RegionId parameter does not exist.
404	InvalidSecurityGroupId.NotFound	The specified SecurityGroupId does not exist.	The error message returned because the specified SecurityGroupId parameter does not exist. Check whether the security group ID is correct.
400	InvalidNicType.ValueNotSupported	The specified NicType does not exist.	The error message returned because the specified NicType parameter does not exist. Check whether the NIC type is correct.
500	InternalServerError	The request processing has failed due to some unknown error.	The error message returned because an internal error has occurred. Try again later. If the problem persists, submit a ticket.
400	InvalidParamter	Invalid Parameter	The error message returned because the specified parameter is invalid.

13.10. DescribeSecurityGroups

You can call this operation to query basic information of security groups.

Description

Basic information of security groups includes security group IDs and descriptions. Security groups are displayed in descending order of their IDs.

When calling an API operation through Alibaba Cloud CLI, specify request parameter values of different data types in required formats. For more information, see [CLI parameter formats](#).

Debugging

OpenAPI Explorer automatically calculates the signature value. For your convenience, we recommend that you call this operation in OpenAPI Explorer. OpenAPI Explorer dynamically generates the sample code of the operation for different SDKs.

Request parameters

Parameter	Type	Required	Example	Description
RegionId	String	Yes	cn-hangzhou	The region ID of the security group to be queried. You can call the DescribeRegions operation to query the most recent region list.
Action	String	Yes	DescribeSecurityGroups	The operation that you want to perform. Set the value to DescribeSecurityGroups.
DryRun	Boolean	No	false	Specifies whether to check the request only. Valid values: - true: The request is checked but basic information of the security group is not queried. Check items include whether your AccessKey pair is valid, whether RAM users are authorized, and whether the required parameters are specified. If the check fails, the corresponding error message is returned. If the check succeeds, the DryRunOperation error code is returned. - false: The request is checked, and a 2XX HTTP status code is returned and basic information of the security group is queried if the check succeeds. Default value: false
NetworkType	String	No	vpc	The network type of the security group. Valid values: - vpc - classic
PageNumber	Integer	No	1	The number of the page to return. Pages start from page 1. Default value: 1
PageSize	Integer	No	10	The number of entries to return on each page. Valid values: 1 to 50 Default value: 10
ResourceGroupId	String	No	rg-bp67acfmazb4ph***	The ID of the resource group to which the security group belongs.
SecurityGroupId	String	No	sg-bp67acfmazb4ph***	The ID of the security group.

Parameter	Type	Required	Example	Description
SecurityGroupIds	String	No	["sg-bp67acfmazb4ph****", "sg-bp67acfmazb4pi****", "sg-bp67acfmazb4pj****", ...]	The list of security group IDs. This list is in JSON array format. A maximum of 100 security group IDs can be entered at a time. Separate multiple security group IDs with commas (,).
SecurityGroupName	String	No	DocTest	The name of the security group.
Tag.N.Key	String	No	FinanceDept	The key of the Nth tag of the security group. Valid values of N: 1 to 20.
Tag.N.Value	String	No	FinanceJoshua	The value of the Nth tag of the security group. Valid values of N: 1 to 20.
Tag.N.key	String	No	null	The key of the Nth tag of the security group.  Note This parameter will be removed in the future. We recommend that you use the Tag.N.Key parameter to ensure compatibility.
Tag.N.value	String	No	null	The value of the Nth tag of the security group.  Note This parameter will be removed in the future. We recommend that you use the Tag.N.Value parameter to ensure compatibility.
VpcId	String	No	vpc-bp67acfmazb4ph***	The ID of the VPC to which the security group belongs.

Response parameters

Parameter	Type	Example	Description
PageNumber	Integer	1	The page number of the returned page.
PageSize	Integer	1	The number of entries returned per page.
RegionId	String	cn-hangzhou	The region ID of the security group.
RequestId	String	473469C7-AA6F-4DC5-B3DB-A3DC0DE3C83E	The ID of the request.
SecurityGroups	Array		An array of information about the security groups.
SecurityGroup			The information of the security group.

Parameter	Type	Example	Description
CreationTime	String	2017-12-05T22:40:00Z	The time when the security group was created. The time follows the ISO8601 standard in the yyyy-MM-ddThh:mmZ format. The time is displayed in UTC.
Description	String	FinanceDept	The description of the security group.
ResourceGroupId	String	rg-bp67acfmxazb4ph***	The ID of the resource group to which the security group belongs.
SecurityGroupId	String	sg-bp67acfmxazb4ph***	The ID of the security group.
SecurityGroupName	String	DocTest	The name of the security group.
SecurityGroupType	String	normal	The type of the security group. Valid values: - normal: basic security group - enterprise: advanced security group
Tags	Array		An array of tags of the security groups.
Tag			The tag of the security group.
TagKey	String	FinanceDept	The tag key of the security group.
TagValue	String	FinanceJoshua	The tag value of the security group.
VpcId	String	vpc-bp67acfmxazb4ph***	The ID of the VPC to which the security group belongs.
TotalCount	Integer	49	The total number of security groups.

Examples

Sample requests

```
https://ecs.aliyuncs.com/?Action=DescribeSecurityGroups
&RegionId=cn-hangzhou
&PageSize=1
&PageNumber=1
&<Common request parameters>
```

Sample success responses

XML format

```
<DescribeSecurityGroupsResponse>
  <PageNumber>1</PageNumber>
  <TotalCount>49</TotalCount>
  <PageSize>1</PageSize>
  <RegionId>cn-hangzhou</RegionId>
  <RequestId>A1707FC0-430C-423A-B624-284046B20399</RequestId>
  <SecurityGroups>
    <SecurityGroup>
      <CreationTime>2019-11-01T06:08:46Z</CreationTime>
      <SecurityGroupId>sg-bp67acfmazb4ph***</SecurityGroupId>
      <Description></Description>
      <SecurityGroupName>DocTest</SecurityGroupName>
      <ResourceGroupId></ResourceGroupId>
      <SecurityGroupType>normal</SecurityGroupType>
      <VpcId>vpc-bp67acfmazb4ph***</VpcId>
    </SecurityGroup>
  </SecurityGroups>
</DescribeSecurityGroupsResponse>
```

JSON format

```
{
  "PageNumber": 1,
  "TotalCount": 49,
  "PageSize": 1,
  "RequestId": "A1707FC0-430C-423A-B624-284046B20399",
  "RegionId": "cn-hangzhou",
  "SecurityGroups": {
    "SecurityGroup": [
      {
        "CreationTime": "2019-11-01T06:08:46Z",
        "SecurityGroupId": "sg-bp67acfmazb4ph***",
        "Tags": {
          "Tag": []
        },
        "SecurityGroupName": "DocTest",
        "Description": "",
        "ResourceGroupId": "",
        "SecurityGroupType": "normal",
        "VpcId": "vpc-bp67acfmazb4ph***"
      }
    ]
  }
}
```

Error codes

HTTP status code	Error code	Error message	Description
500	InternalServerError	The request processing has failed due to some unknown error.	The error message returned because an internal error has occurred. Try again later. If the problem persists, submit a ticket.

13.11. DescribeSecurityGroupReferences

You can call this operation to query whether a specified security group is authorized by other security groups.

Description

When you call this operation, take note of the following items:

- Security group authorization includes authorization for inbound and outbound traffic rules.
- A maximum of 100 authorization entries can be returned each time.
- When you fail to delete a security group ([DeleteSecurityGroup](#)), you can call the `DescribeSecurityGroupReferences` operation to query whether the specified security group is authorized by other security groups. If the security group is authorized by other security groups, you must revoke the authorization before the security group can be deleted.

Debugging

OpenAPI Explorer automatically calculates the signature value. For your convenience, we recommend that you call this operation in OpenAPI Explorer. OpenAPI Explorer dynamically generates the sample code of the operation for different SDKs.

Request parameters

Parameter	Type	Required	Example	Description
Action	String	Yes	DescribeSecurityGroupReferences	The operation that you want to perform. Set the value to <code>DescribeSecurityGroupReferences</code> .
RegionId	String	Yes	cn-hangzhou	The region ID of the security group.
SecurityGroupId.N	RepeatList	Yes	sg-bp14vtedjtbkvj****	The ID of security group N to be queried. Valid values of N: 1 to 10.

Response parameters

Parameter	Type	Example	Description
RequestId	String	473469C7-AA6F-4DC5-B3DB-A3DC0DE3C83E	The ID of the request.
SecurityGroupReferences	Array		An array consisting of SecurityGroupReference data.
SecurityGroupReference			
ReferencingSecurityGroups	Array		An array consisting of ReferencingSecurityGroup data.
ReferencingSecurityGroup			

Parameter	Type	Example	Description
AliUid	String	1234567890	The ID of the Alibaba Cloud account to which the security group belongs.
SecurityGroupId	String	sg-bp67acfmazb4j****	The ID of the security group.
SecurityGroupId	String	sg-bp67acfmazb4p****	The ID of the queried security group.

Examples

Sample requests

```
https://ecs.aliyuncs.com/?Action=DescribeSecurityGroupReferences
&RegionId=cn-hangzhou
&SecurityGroupId.1=sg-bp14vtedjtobkvi****
&<Common request parameters>
```

Sample success responses

XML format

```
<DescribeSecurityGroupReferencesResponse>
  <RequestId>CEF72CEB-54B6-4AE8-B225-F876FF7BA984</RequestId>
  <SecurityGroupReferences>
    <SecurityGroupReference>
      <SecurityGroupId>sg-bp67acfmazb4ph****</SecurityGroupId>
      <ReferencingSecurityGroups>
        <ReferencingSecurityGroup>
          <SecurityGroupId>sg-bp67acfmazb4pi****</SecurityGroupId>
          <AliUid>1234567890</AliUid>
        </ReferencingSecurityGroup>
        <ReferencingSecurityGroup>
          <SecurityGroupId>sg-bp67acfmazb4pj****</SecurityGroupId>
          <AliUid>1234567890</AliUid>
        </ReferencingSecurityGroup>
      </ReferencingSecurityGroups>
    </SecurityGroupReference>
  </SecurityGroupReferences>
</DescribeSecurityGroupReferencesResponse>
```

JSON format

```
{
  "RequestId": "CEF72CEB-54B6-4AE8-B225-F876FF7BA984",
  "SecurityGroupReferences": [
    {
      "SecurityGroupId": "sg-bp67acfmxazb4ph****",
      "SecurityReferencingGroups": [
        {
          "AliUid": "1234567890",
          "SecurityGroupId": "sg-bp67acfmxazb4pi****"
        },
        {
          "AliUid": "1234567890",
          "SecurityGroupId": "sg-bp67acfmxazb4pj****"
        }
      ]
    }
  ]
}
```

Error codes

HTTP status code	Error code	Error message	Description
400	InvalidSecurityGroupId.Malformed	The specified parameter SecurityGroupId is essential and size should less than 10	The error message returned because the specified SecurityGroupId.N parameter must be specified and the value of N cannot exceed 10.
404	InvalidSecurityGroupId.NotFound	The SecurityGroupId provided does not exist in our records.	The error message returned because the specified security group does not exist under this account. Check whether the security group ID is correct.

13.12. ModifySecurityGroupAttribute

You can call this operation to modify the name or description of a security group.

Debugging

OpenAPI Explorer automatically calculates the signature value. For your convenience, we recommend that you call this operation in OpenAPI Explorer. OpenAPI Explorer dynamically generates the sample code of the operation for different SDKs.

Request parameters

Parameter	Type	Required	Example	Description
Action	String	Yes	ModifySecurityGroupAttribute	The operation that you want to perform. Set the value to ModifySecurityGroupAttribute.
RegionId	String	Yes	cn-hangzhou	The ID of the region. You can call the DescribeRegions operation to query the most recent region list.

Parameter	Type	Required	Example	Description
SecurityGroupId	String	Yes	sg-bp67acfmazb4p****	The ID of the security group.
SecurityGroupName	String	No	SecurityGroupTestName	The name of the security group. The name must be 2 to 128 characters in length. It must start with a letter and cannot start with http:// or https://. It can contain letters, digits, colons (:), underscores (_), and hyphens (-). This parameter is empty by default.
Description	String	No	TestDescription	The description of the security group. The description must be 2 to 256 characters in length and cannot start with http:// or https://. This parameter is empty by default.

Response parameters

Parameter	Type	Example	Description
RequestId	String	473469C7-AA6F-4DC5-B3DB-A3DC0DE3C83E	The ID of the request.

Examples

Sample requests

```
https://ecs.aliyuncs.com/?Action=ModifySecurityGroupAttribute
&SecurityGroupId=sg-bp67acfmazb4p****
&RegionId=cn-hangzhou
&SecurityGroupName=SecurityGroupTestName
&<Common request parameters>
```

Sample success responses

XML format

```
<ModifySecurityGroupAttributeResponse>
  <RequestId>CEF72CEB-54B6-4AE8-B225-F876FF7BA984</RequestId>
</ModifySecurityGroupAttributeResponse>
```

JSON format

```
{
  "RequestId": "CEF72CEB-54B6-4AE8-B225-F876FF7BA984"
}
```

Error codes

HTTP status code	Error code	Error message	Description

HTTP status code	Error code	Error message	Description
404	InvalidSecurityGroupId.NotFound	The specified SecurityGroupId does not exist.	The error message returned because the specified SecurityGroupId parameter does not exist under this account. Check whether the security group ID is correct.
400	InvalidSecurityGroupName.Malformed	Specified security group name is not valid.	The error message returned because the specified SecurityGroupName parameter is invalid. The name is displayed in the console. By default, no name is specified for a security group. The name must be 2 to 128 characters in length. It must start with a letter and can contain letters, digits, periods (.), underscores (_), and hyphens (-). It cannot start with http:// or https://.
400	InvalidSecurityGroupDescription.Malformed	Specified security group description is not valid.	The error message returned because the specified Description parameter is invalid.

13.13. ModifySecurityGroupEgressRule

You can call this operation to modify the description of outbound rules of a security group. You can modify only the description by calling this operation. If you need to modify the policies, port ranges, and authorization objects of security group rules, log on to the ECS console.

Description

You can determine an outbound rule by specifying one of the following groups of parameters. You cannot determine a security group rule by specifying only one parameter.

- Parameters used to grant access permissions to specified CIDR blocks: IpProtocol, PortRange, SourcePortRange (optional), NicType, Policy, DestCidrIp, and SourceCidrIp (optional).
- Parameters used to grant access permissions to other security groups: IpProtocol, PortRange, SourcePortRange (optional), NicType, Policy, DestCidrIp (optional), DestGroupOwnerAccount, and DestGroupId.

Debugging

OpenAPI Explorer automatically calculates the signature value. For your convenience, we recommend that you call this operation in OpenAPI Explorer. OpenAPI Explorer dynamically generates the sample code of the operation for different SDKs.

Request Parameters

Parameter	Type	Required	Example	Description
Action	String	Yes	ModifySecurityGroupEgressRule	The operation that you want to perform. Set the value to ModifySecurityGroupRule.
IpProtocol	String	Yes	tcp	The transport layer protocol. The value is case-insensitive. Valid values: - icmp - gre - tcp - udp - all

Parameter	Type	Required	Example	Description
PortRange	String	Yes	80/80	The range of destination ports relevant to the transport layer protocol. Valid values: - When the IpProtocol parameter is set to tcp or udp, the port number range is from 1 to 65535. Separate the start port and the end port with a forward slash (/). Example: 1/200. - When the IpProtocol parameter is set to icmp, the port number range is -1/-1, indicating that all ports are available. - When the IpProtocol parameter is set to gre, the port number range is -1/-1, indicating that all ports are available. - When IpProtocol is set to all, the port number range is -1/-1, indicating that all ports are available.
RegionId	String	Yes	cn-hangzhou	The ID of the region to which the source security group belongs. You can call the DescribeRegions operation to query the most recent region list.
SecurityGroupId	String	Yes	sg-bp67acfmazb4p****	The ID of the source security group.
DestGroupId	String	No	sg-bp67acfmazb4p****	The ID of the destination security group.
DestGroupOwnerId	Long	No	155780923770	The ID of the Alibaba Cloud account (UID) that manages the destination security group.
DestGroupOwnerAccount	String	No	EcsforCloud@Alibaba.com	The name of the Alibaba Cloud account that manages the destination security group.
DestCidrIp	String	No	10.0.0.0/8	The range of destination IP addresses. CIDR blocks and IPv4 addresses are supported. This parameter is empty by default.
Ipv6DestCidrIp	String	No	2001:db8:1233:1a00::***	The range of destination IPv6 addresses. CIDR blocks and IPv6 addresses are supported. This parameter is empty by default.
SourceCidrIp	String	No	10.0.0.0/8	The range of source IP addresses. CIDR blocks and IPv4 addresses are supported. This parameter is empty by default.
Ipv6SourceCidrIp	String	No	2001:db8:1234:1a00::***	The range of source IPv6 addresses. CIDR blocks and IPv6 addresses are supported. This parameter is empty by default.

Parameter	Type	Required	Example	Description
SourcePortRange	String	No	80/80	The range of source ports relevant to the transport layer protocol. Valid values: - When the IpProtocol parameter is set to tcp or udp, the port number range is from 1 to 65535. Separate the start port and the end port with a forward slash (/). Example: 1/200. - When the IpProtocol parameter is set to icmp, the port number range is -1/-1, indicating that all ports are available. - When the IpProtocol parameter is set to gre, the port number range is -1/-1, indicating that all ports are available. - When IpProtocol is set to all, the port number range is -1/-1, indicating that all ports are available.
Policy	String	No	accept	The access control policy. Valid values: - accept: grants access. - drop: denies access without returning a rejection response. Default value: accept.
Priority	String	No	1	The priority of security group rules. Valid values: 1 to 100. Default value: 1.
NicType	String	No	intranet	The NIC type of security groups in the classic network. Valid values: - internet - intranet Default value: internet. The NicType parameter can be set to only intranet in the following cases: - If the security group rule is of the VPC type, this parameter is required and must be set to intranet. - If the DestGroupId parameter is specified but the DestCidrIp parameter is not specified to allow the security groups to access each other, the NicType parameter must be set to intranet.
ClientToken	String	No	123e4567-e89b-12d3-a456-426655440000	The client token that is used to ensure the idempotence of the request. You can use the client to generate the value, but you must ensure that it is unique among different requests. The ClientToken value can only contain ASCII characters and cannot exceed 64 characters in length. For more information, see How to ensure idempotence.
Description	String	No	This is a new securitygroup rule.	The description of the security group rule. The description must be 1 to 512 characters in length.

Response parameters

Parameter	Type	Example	Description
RequestId	String	473469C7-AA6F-4DC5-B3DB-A3DC0DE3C83E	The ID of the request.

Examples

Sample requests

```
https://ecs.aliyuncs.com/?Action=ModifySecurityGroupEgressRule
&SecurityGroupId=sg-bp67acfmazb4p****
&DestGroupId=sg-bp67acfmazb4p****
&SourceGroupOwnerAccount=EcsforCloud@Alibaba.com
&IpProtocol=tcp
&PortRange=80/80
&Policy=allow
&Description=This is a new securitygroup rule.
&<Common request parameters>
```

Sample success responses

XML format

```
<ModifySecurityGroupEgressRuleResponse>
  <RequestId>CEF72CEB-54B6-4AE8-B225-F876FF7BA984</RequestId>
</ModifySecurityGroupEgressRuleResponse>
```

JSON format

```
{
  "RequestId": "CEF72CEB-54B6-4AE8-B225-F876FF7BA984"
}
```

Error codes

HTTP status code	Error code	Error message	Description
404	InvalidSecurityGroupId.NotFound	The specified SecurityGroupId does not exist.	The error message returned because the specified security group ID does not exist under this account. Check whether the security group ID is correct.
404	InvalidDestGroupId.NotFound	The DestGroupId provided does not exist in our records.	The error message returned because the specified DestGroupId parameter does not exist.
400	OperationDenied	The specified IpProtocol does not exist or IpProtocol and PortRange do not match.	The error message returned because the specified IpProtocol parameter does not exist or does not match the specified PortRange parameter.
400	InvalidIpProtocol.Malformed	The specified parameter "PortRange" is not valid.	The error message returned because the specified PortRange parameter is invalid.

HTTP status code	Error code	Error message	Description
403	InvalidDestGroupId.Mismatch	NicType is required or NicType expects intranet.	The error message returned because the NicType parameter is not specified or is not set to intranet.
400	InvalidDestCidrIp.Malformed	The specified parameter "DestCidrIp" is not valid.	The error message returned because the specified DestCidrIp parameter is invalid.
403	MissingParameter	The input parameter "DestGroupId" or "DestCidrIp" cannot be both blank.	The error message returned because the DestGroupId and DestCidrIp parameters cannot be empty at the same time.
400	InvalidPolicy.Malformed	The specified parameter "Policy" is not valid.	The error message returned because the specified Policy parameter is invalid.
400	InvalidNicType.ValueNotSupported	The specified NicType does not exist.	The error message returned because the specified NicType parameter does not exist. Check whether the NIC type is correct.
400	InvalidNicType.Mismatch	Specified nic type conflicts with the authorization record.	The error message returned because the specified NIC type conflicts with the security group rule.
403	AuthorizationLimitExceeded	The limit of authorization records in the security group reaches.	The error message returned because the maximum number of authorized security group rules has been reached. Check whether your authorization rule is valid.
403	InvalidParameter.Conflict	The specified SecurityGroupId should be different from the SourceGroupId.	The error message returned because the authorized security group is the same as the source security group.
400	InvalidDestGroupId.Mismatch	Specified security group and destination group are not in the same VPC.	The error message returned because the specified security group and the destination security group do not belong to the same VPC.
400	InvalidDestGroup.NotFound	Specified destination security group does not exist.	The error message returned because the specified DestGroupId parameter does not exist.
400	VPCDisabled	Can't use the SecurityGroup in VPC.	The error message returned because the current VPC does not support security groups.
400	InvalidPriority.Malformed	The specified parameter "Priority" is not valid.	The error message returned because the specified Priority parameter is invalid.
400	InvalidPriority.ValueNotSupported	The specified Priority is invalid.	The error message returned because the specified Priority parameter is invalid.
400	InvalidDestCidrIp.Malformed	The specified parameter DestCidrIp is not valid.	The error message returned because the specified DestCidrIp parameter is invalid.
500	InternalServerError	The request processing has failed due to some unknown error.	The error message returned because an internal error has occurred. Try again later. If the problem persists, submit a ticket.

HTTP status code	Error code	Error message	Description
403	InvalidNetworkType.Conflict	The specified SecurityGroup network type should be same with SourceGroup network type (vpc or classic).	The error message returned because the network type of the specified security group is different from that of the source security group.
403	InvalidSecurityGroup.IsSame	The authorized SecurityGroupId should be different from the DestGroupId.	The error message returned because the authorized security group cannot be the same as the destination security group.
400	InvalidNicType.ValueNotSupported	The specified NicType is not valid.	The error message returned because the specified NicType parameter does not exist. Check whether the NIC type is correct.
400	InvalidSecurityGroupDescription.Malformed	The specified security group rule description is not valid.	The error message returned because the specified Description parameter is invalid.
404	SecurityGroupRule.NotFound	The target security group rule do not exist.	The error message returned because the specified security group rule does not exist.
400	InvalidSecurityGroup.InvalidNetworkType	The specified security group network type is not support this operation, please check the security group network types. For VPC security groups, ClassicLink must be enabled.	The error message returned because the operation is not supported by security groups of the current network type. Check the network type of the security group. You must enable ClassicLink for security groups in VPCs.
400	MissingParameter.Dest	The parameter DestCidrIp or DestGroupId is essential.	The error message returned because the DestCidrIp and DestGroupId parameters cannot be empty at the same time.
400	InvalidParam.PortRange	The specified param PortRange or SourcePortRange is not valid. should be integer and less than 65535, range separator is '/'. The parameter values must be integers smaller than 65535 and separated with forward slashes (/).	The error message returned because the specified PortRange or SourcePortRange parameter is invalid. The parameter values must be integers smaller than 65535 and separated with forward slashes (/).
400	InvalidIpProtocol.ValueNotSupported	The specified parameter IpProtocol should not be null and only tcp, udp, icmp, gre or all is supported. Ignore case.	The error message returned because the IpProtocol parameter is not set to tcp, udp, icmp, gre, or all.
400	InvalidPriority.ValueNotSupported	The parameter Priority is invalid.	The error message returned because the specified Priority parameter is invalid.
400	InvalidParam.SourceCidrIp	%s	The error message returned because the specified SourceCidrIp parameter is invalid.
400	InvalidParam.DestIp	%s	The error message returned because the specified DestCidrIp parameter is invalid.
400	InvalidParam.Ipv6DestCidrIp	%s	The error message returned because the specified Ipv6DestCidrIp parameter is invalid.

HTTP status code	Error code	Error message	Description
400	InvalidParam.Ipv6SourceCidrIp	%s	The error message returned because the specified Ipv6SourceCidrIp parameter is invalid.
400	InvalidParam.Ipv4ProtocolConflictWithIpv6Address	%s	The error message returned because the specified parameter is invalid. Check whether you have entered an IPv6 address under an IPv4 protocol by mistake.
400	InvalidParam.Ipv6ProtocolConflictWithIpv4Address	%s	The error message returned because the specified parameter is invalid. Check whether you have entered an IPv4 address under an IPv6 protocol by mistake.
400	ILLEGAL_IPV6_CIDR	%s	The error message returned because the specified IPv6 address is invalid.
400	InvalidSourcePortRange.Malformed	The specified parameter "SourcePortRange" is not valid.	The error message returned because the specified SourcePortRange parameter is invalid.

13.14. ModifySecurityGroupPolicy

You can call this operation to modify the internal access policy of a basic security group. The internal access policy of an advanced security group cannot be modified.

Description

When you call this operation, take note of the following points:

- When InnerAccessPolicy is set to Accept, instances within the security group can communicate with each other. In this case, the Accept policy has the highest priority of all rules, and all other user-defined rules are ignored.
- When InnerAccessPolicy is set to Drop, instances within the security group are isolated from each other. In this case, user-defined security group rules have a higher priority and can be used to change the internal access policy. For example, you can call the [AuthorizeSecurityGroup](#) operation to allow ECS instances in the security group to communicate with each other.
- You can call the [DescribeSecurityGroupAttribute](#) operation to query the internal access policy of the current security group.

Debugging

OpenAPI Explorer automatically calculates the signature value. For your convenience, we recommend that you call this operation in OpenAPI Explorer. OpenAPI Explorer dynamically generates the sample code of the operation for different SDKs.

Request parameters

Parameter	Type	Required	Example	Description
InnerAccessPolicy	String	Yes	Drop	The internal access policy of the security group. Valid values: • Accept: All instances within the security group can communicate with each other. • Drop: All instances within the security group are isolated from each other. The values are case-insensitive.

Parameter	Type	Required	Example	Description
RegionId	String	Yes	cn-hangzhou	The ID of the region to which the security group belongs. You can call the DescribeRegions operation to query the most recent region list.
SecurityGroupId	String	Yes	sg-bp67acfmxazb4ph***	The ID of the security group.
Action	String	Yes	ModifySecurityGroupPolicy	The operation that you want to perform. Set the value to ModifySecurityGroupPolicy.
ClientToken	String	No	123e4567-e89b-12d3-a456-426655440000	The client token that is used to ensure the idempotence of the request. You can use the client to generate the value, but you must ensure that it is unique among different requests. The ClientToken value can only contain ASCII characters and cannot exceed 64 characters in length. For more information, see How to ensure idempotence .

Response parameters

Parameter	Type	Example	Description
RequestId	String	CEF72CEB-54B6-4AE8-B225-F876FF7BA984	The ID of the request.

Examples

Sample requests

```
https://ecs.aliyuncs.com/?Action=ModifySecurityGroupPolicy
&RegionId=cn-hangzhou
&SecurityGroupId=sg-bp67acfmxazb4ph***
&InnerAccessPolicy=Drop
&<Common request parameters>
```

Sample success responses

XML format

```
<ModifySecurityGroupPolicyResponse>
  <RequestId>CEF72CEB-54B6-4AE8-B225-F876xxxxxxx</RequestId>
</ModifySecurityGroupPolicyResponse>
```

JSON format

```
{
  "RequestId": "CEF72CEB-54B6-4AE8-B225-F876FF7BA984"
}
```

Error codes

HTTP status code	Error code	Error message	Description
400	InvalidSecurityGroupId.Malformed	The SecurityGroupId is invalid. Only letters, numbers and underscores are supported. Maximum length is 100 characters.	The error message returned because the specified SecurityGroupId parameter is invalid. The security group ID can be up to 100 characters in length and can contain only letters, digits, and underscores (_).
400	InvalidPolicy.Malformed	The Policy is invalid. Only 'Accept' and 'Drop' are supported. Ignore case.	The error message returned because the specified Policy parameter is invalid.

13.15. ModifySecurityGroupRule

You can call this operation to modify the description of inbound rules of a security group. You can modify only the description by calling this operation. If you need to modify the policy, port range, and authorized objects of a security group, log on to the ECS console.

Description

In the security group-related API documents, inbound traffic refers to the traffic that is sent by the source device and received at the destination device.

You can determine an inbound rule by specifying one of the following groups of parameters. You cannot determine a security group rule by specifying only one parameter.

- Parameters used to grant access permissions to specified CIDR blocks: IpProtocol, PortRange, SourcePortRange (optional), NicType, Policy, DestCidrIp, and SourceCidrIp (optional).
- Parameters used to grant access permissions to other security groups: IpProtocol, PortRange, SourcePortRange (optional), NicType, Policy, DestCidrIp (optional), DestGroupOwnerAccount, and DestGroupId.

Debugging

OpenAPI Explorer automatically calculates the signature value. For your convenience, we recommend that you call this operation in OpenAPI Explorer. OpenAPI Explorer dynamically generates the sample code of the operation for different SDKs.

Request parameters

Parameter	Type	Required	Example	Description
Action	String	Yes	ModifySecurityGroupRule	The operation that you want to perform. Set the value to ModifySecurityGroupRule.
IpProtocol	String	Yes	all	The transport layer protocol. The value is case-insensitive. Valid values: - icmp - gre - tcp - udp - all: All protocols are supported.

Parameter	Type	Required	Example	Description
PortRange	String	Yes	80/80	The range of destination ports relevant to the transport layer protocol. Valid values: - When the IpProtocol parameter is set to tcp or udp, the port number range is 1 to 65535. Separate the start port and the end port with a forward slash (/). Correct example: 1/200. Incorrect example: 200/1. - When the IpProtocol parameter is set to icmp, the port number range is -1/-1, indicating that all ports are available. - When the IpProtocol parameter is set to gre, the port number range is -1/-1, indicating that all ports are available. - When IpProtocol is set to all, the port number range is -1/-1, indicating that all ports are available.
RegionId	String	Yes	cn-hangzhou	The ID of the region to which the destination security group belongs. You can call the DescribeRegions operation to query the most recent region list.
SecurityGroupId	String	Yes	sg-bp67acfmazb4p****	The ID of the destination security group.
SourceGroupId	String	No	sg-bp67acfmazb4p****	The ID of the source security group to which you want to grant access permissions. You must specify at least one of the SourceGroupId and SourceCidrIp parameters. If the SourceGroupId parameter is specified but the SourceCidrIp parameter is not, the NicType parameter must be set to intranet. If both the SourceGroupId and SourceCidrIp parameters are specified, the SourceCidrIp parameter will take precedence.
SourceGroupOwnerId	Long	No	12345678910	The ID of the Alibaba Cloud account that manages the source security group when you set a security group rule across accounts. - If neither the SourceGroupOwnerId parameter nor the SourceGroupOwnerAccount parameter is specified, the access permissions are configured for another security group managed by your account. - If the SourceCidrIp parameter is specified, the SourceGroupOwnerId parameter is ignored.

Parameter	Type	Required	Example	Description
SourceGroupOwnerAccount	String	No	EcsforCloud@Alibaba.com	The Alibaba Cloud account that manages the source security group when you set a security group rule across accounts. - If neither SourceGroupOwnerId nor SourceGroupOwnerAccount is specified, access permissions are configured for another security group managed by your account. - If SourceCidrIp is specified, the SourceGroupOwnerAccount parameter is ignored.
SourceCidrIp	String	No	10.0.0.0/8	The range of source IP addresses. CIDR blocks and IPv4 addresses are supported. Default value: 0.0.0.0/0.
Ipv6SourceCidrIp	String	No	2001:db8:1233:1a00::***	The range of source IPv6 addresses. CIDR blocks and IPv6 addresses are supported.  Note You can only specify the IP addresses of instances in VPCs. This parameter is empty by default.
SourcePortRange	String	No	80/80	The range of source ports relevant to the transport layer protocol. Valid values: - When the IpProtocol parameter is set to tcp or udp, the port number range is 1 to 65535. Separate the start port and the end port with a forward slash (/). Correct example: 1/200. Incorrect example: 200/1. - When the IpProtocol parameter is set to icmp, the port number range is -1/-1, indicating that all ports are available. - When the IpProtocol parameter is set to gre, the port number range is -1/-1, indicating that all ports are available. - When IpProtocol is set to all, the port number range is -1/-1, indicating that all ports are available.
DestCidrIp	String	No	10.0.0.0/8	The range of destination IP addresses. CIDR blocks and IPv4 addresses are supported. Default value: 0.0.0.0/0.
Ipv6DestCidrIp	String	No	2001:db8:1234:1a00::***	The range of destination IPv6 addresses. CIDR blocks and IPv6 addresses are supported.  Note You can only specify the IP addresses of instances in VPCs. This parameter is empty by default.

Parameter	Type	Required	Example	Description
Policy	String	No	accept	The access control policy. Valid values: - accept: grants access. - drop: denies access without returning a rejection response. Default value: accept.
Priority	String	No	1	The priority of security group rules. Valid values: 1 to 100. Default value: 1.
NicType	String	No	intranet	The NIC type of security groups in the classic network. Valid values: - internet - intranet Default value: internet. The NicType parameter can only be set to intranet in the following cases: - If the security group is in a VPC, this parameter is required to be intranet. - If DestGroupId is specified but DestCidrIp is not, NicType must be set to intranet.
ClientToken	String	No	123e4567-e89b-12d3-a456-426655440000	The client token that is used to ensure the idempotence of the request. You can use the client to generate the value, but you must ensure that it is unique among different requests. The ClientToken value can only contain ASCII characters and cannot exceed 64 characters in length. For more information, see How to ensure idempotence .
Description	String	No	This is a new security group rule.	The description of the security group rule. The description must be 1 to 512 characters in length.

Response parameters

Parameter	Type	Example	Description
RequestId	String	473469C7-AA6F-4DC5-B3DB-A3DC0DE3C83E	The ID of the request.

Examples

Sample requests


```
https://ecs.aliyuncs.com/?Action=ModifySecurityGroupRule
&SecurityGroupId=sg-bp67acfmazb4p****
&SourceGroupId=sg-bp67acfmazb4p****
&SourceGroupOwnerAccount=EcsforCloud@Alibaba.com
&IpProtocol=all
&PortRange=80/80
&Policy=accept
&Description=This is a new security group rule.
&<Common request parameters>
```

Sample success responses

XML format

```
<ModifySecurityGroupRuleResponse>
  <RequestId>CEF72CEB-54B6-4AE8-B225-F876FF7BA984</RequestId>
</ModifySecurityGroupRuleResponse>
```

JSON format

```
{
  "RequestId": "CEF72CEB-54B6-4AE8-B225-F876FF7BA984"
}
```

Error codes

Http status code	Error code	Error message	Description
404	InvalidSecurityGroupId.NotFound	The specified SecurityGroupId does not exist.	The error message returned because the specified security group does not exist under this account. Check whether the security group ID is correct.
404	InvalidSourceGroupId.NotFound	The SourceGroupId provided does not exist in our records.	The error message returned because the specified SourceGroupId parameter does not exist.
400	OperationDenied	The specified IpProtocol does not exist or IpProtocol and PortRange do not match.	The error message returned because the specified IpProtocol parameter does not exist or does not match the specified PortRange parameter.
400	InvalidIpProtocol.Malformed	The specified parameter "PortRange" is not valid.	The error message returned because the specified IpProtocol parameter is invalid.
403	InvalidSourceGroupId.Mismatch	NicType is required or NicType expects intranet.	The error message returned because the NicType parameter is not specified or is not set to intranet.
400	InvalidSourceCidrIp.Malformed	The specified parameter "SourceCidrIp" is not valid.	The error message returned because the specified SourceCidrIp parameter is invalid.
403	MissingParameter	The input parameter "SourceGroupId" or "SourceCidrIp" cannot be both blank.	The error message returned because the SourceGroupId and SourceCidrIp parameters cannot be empty at the same time.

Http status code	Error code	Error message	Description
400	InvalidPolicy.Malformed	The specified parameter "Policy" is not valid.	The error message returned because the specified Policy parameter is invalid.
400	InvalidNicType.ValueNotSupported	The specified NicType does not exist.	The error message returned because the specified NicType parameter does not exist.
400	InvalidNicType.Mismatch	Specified nic type conflicts with the authorization record.	The error message returned because the specified NIC type conflicts with the authorization record.
403	AuthorizationLimitExceeded	The limit of authorization records in the security group reaches.	The error message returned because the maximum number of authorized security group rules has been reached. Check whether your authorization policy is valid.
403	InvalidParamter.Conflict	The specified SecurityGroupId should be different from the SourceGroupId.	The error message returned because the specified security group is the same as the source security group.
400	InvalidSourceGroupId.Mismatch	Specified security group and source group are not in the same VPC.	The error message returned because the specified security group and the source security group do not belong to the same VPC.
400	InvalidSourceGroup.NotFound	Specified source security group does not exist.	The error message returned because the specified SourceGroupId parameter does not exist.
400	VPCDisabled	Can't use the SecurityGroup in VPC.	The error message returned because the current VPC does not support security groups.
400	InvalidPriority.Malformed	The parameter Priority is invalid.	The error message returned because the specified Priority parameter is invalid.
400	InvalidPriority.ValueNotSupported	The parameter Priority is invalid.	The error message returned because the specified Priority parameter is invalid.
500	InternalError	The request processing has failed due to some unknown error.	The error message returned because an internal error has occurred. Try again later. If the problem persists, submit a ticket.
403	InvalidNetworkType.Mismatch	The specified SecurityGroup network type should be same with SourceGroup network type (vpc or classic).	The error message returned because the network type of the specified security group is different from that of the source group.
400	InvalidSecurityGroupDescription.Malformed	The specified security group rule description is not valid.	The error message returned because the description of the specified security group rule is invalid.
404	SecurityGroupRule.NotFound	The target security group rule not exist.	The error message returned because the specified security group rule do not exist.
400	MissingParameter.Source	Either SourceCidrIp or SourceGroupId must be specified.	The error message returned because the SourceCidrIp and SourceGroupId parameters cannot be empty at the same time.

Http status code	Error code	Error message	Description
400	InvalidIpProtocol.ValueNotSupported	The parameter IpProtocol must be specified with case insensitive TCP, UDP, ICMP, GRE or All.	The error message returned because the IpProtocol parameter is not set to tcp, udp, icmp, gre, or all.
400	InvalidParam.SourceCidrIp	%s	The error message returned because the specified SourceCidrIp parameter is invalid.
400	InvalidParam.DestIp	%s	The error message returned because the specified DestCidrIp parameter is invalid.
400	InvalidParam.Ipv6DestCidrIp	%s	The error message returned because the specified Ipv6DestCidrIp parameter is invalid.
400	InvalidParam.Ipv6SourceCidrIp	%s	The error message returned because the specified Ipv6SourceCidrIp parameter is invalid.
400	InvalidParam.Ipv4ProtocolConflictWithIpv6Address	%s	The error message returned because the specified parameter is invalid. Check whether you have entered an IPv6 address under an IPv4 protocol by mistake.
400	InvalidParam.Ipv6ProtocolConflictWithIpv4Address	%s	The error message returned because the specified parameter is invalid. Check whether you have entered an IPv4 address under an IPv6 protocol by mistake.
400	ILLEGAL_IPV6_CIDR	%s	The error message returned because the specified IPv6 address is invalid.
400	InvalidSourcePortRange.Malformed	The specified parameter "SourcePortRange" is not valid.	The error message returned because the specified SourcePortRange parameter is invalid.
400	InvalidSecurityGroupId.Malformed	The specified parameter "SecurityGroupId" is not valid.	The error message returned because the specified SecurityGroupId parameter is invalid.

14. Deployment sets

14.1. CreateDeploymentSet

You can call this operation to create a deployment set in a specified region.

Debugging

OpenAPI Explorer automatically calculates the signature value. For your convenience, we recommend that you call this operation in OpenAPI Explorer. OpenAPI Explorer dynamically generates the sample code of the operation for different SDKs.

Request parameters

Parameter	Type	Required	Example	Description
RegionId	String	Yes	cn-hangzhou	The region ID of the deployment set. You can call the DescribeRegions operation to query the most recent region list.
Action	String	Yes	CreateDeploymentSet	The operation that you want to perform. Set the value to CreateDeploymentSet.
ClientToken	String	No	123e4567-e89b-12d3-a456-426655440000	The client token that is used to ensure the idempotence of the request. You can use the client to generate the value, but you must ensure that it is unique among different requests. The ClientToken value can only contain ASCII characters and cannot exceed 64 characters in length. For more information, see How to ensure idempotence .
DeploymentSetName	String	No	FinanceDeployment	The name of the deployment set. The name must be 2 to 128 characters in length. It must start with a letter and cannot start with http:// or https://. It can contain letters, digits, colons (:), underscores (_), and hyphens (-).
Description	String	No	FinanceJoshua	The description of the deployment set. The description must be 2 to 256 characters in length and cannot start with http:// or https://.
Domain	String	No	null	The deployment domain.  Note We recommend that you use other parameters to ensure future compatibility.
Granularity	String	No	null	The deployment granularity.  Note We recommend that you use other parameters to ensure future compatibility.

Parameter	Type	Required	Example	Description
OnUnableToRedeployFailedInstance	String	No	CancelMembershipAndStart	The emergency solution to redeploy failed instances in the deployment set. Default value: CancelMembershipAndStart. Valid values: - CancelMembershipAndStart: restarts the instances immediately after they are shut down and migrated to other deployment sets. - KeepStopped: keeps the instances shut down and restarts them after the deployment set is replenished.
Strategy	String	No	null	The deployment strategy.  Note We recommend that you use other parameters to ensure future compatibility.

Response parameters

Parameter	Type	Example	Description
DeploymentSetId	String	ds-bp1frxuzdg87zh4pzq***	The ID of the deployment set.
RequestId	String	473469C7-AA6F-4DC5-B3DB-A3DC0DE3C83E	The ID of the request.

Examples

Sample requests

```
https://ecs.aliyuncs.com/?Action=CreateDeploymentSet
&RegionId=cn-hangzhou
&DeploymentStrategy=Availability
&DeploymentSetName=AvailMySet
&<Common request parameters>
```

Sample success responses

XML format

```
<CreateDeploymentSetResponse>
  <RequestId>04F0F334-1335-436C-A1D7-6C044FE73368</RequestId>
  <DeploymentSetId>ds-bp1frxuzdg87zh4pzq***</DeploymentSetId>
</CreateDeploymentSetResponse>
```

JSON format

```
{
  "RequestId": "04F0F334-1335-436C-A1D7-6C044FE73368",
  "DeploymentSetId": "ds-bp1frxuzdg87zh4pzq***"
}
```

Error codes

HTTP status code	Error code	Error message	Description
400	MissingParameter	The input parameter RegionId that is mandatory for processing this request is not supplied.	The error message returned because the required RegionId parameter is not specified.
400	InvalidDeploymentSetName.Malformed	Specified deployment set name is not valid.	The error message returned because the specified DeploymentSetName parameter is invalid.
400	InvalidDescription.Malformed	The specified parameter Description is not valid.	The error message returned because the specified Description parameter is invalid. The description must be 2 to 256 characters in length and cannot start with http:// or https://.
400	InvalidDeploymentSetId.NotFound	The specified DeploymentSetId does not exist.	The error message returned because the specified DeploymentSetId parameter does not exist. Check whether the deployment set ID is correct.
400	MissingParameter	The input parameter DeploymentSetId that is mandatory for processing this request is not supplied.	The error message returned because the required DeploymentSetId parameter is not specified.
400	InvalidParameter.Domain	The specified parameter Domain is not valid.	The error message returned because the specified Domain parameter is invalid.
400	InvalidParameter.Strategy	The specified parameter Strategy is not valid	The error message returned because the specified Strategy parameter is invalid.
400	InvalidParameter.granularity	The specified parameter Granularity is not valid.	The error message returned because the specified Granularity parameter is invalid.
400	DependencyViolation.domain.granularity	The DeploymentSet domain and granularity is violation.	The error message returned because the domain and the data granularity of the deployment set conflict with each other.
400	DependencyViolation.strategy.granularity	The DeploymentSet strategy and granularity is violation.	The error message returned because the strategy and the data granularity of the deployment set conflict with each other.
400	DEPLOYMENTSET.QUOTA_FULL	The deploymentSet quota is full	The error message returned because the maximum number of deployment sets has been reached. Reduce the number of deployment sets.

14.2. ModifyDeploymentSetAttribute

You can call this operation to modify the name and description of a deployment set.

Debugging

OpenAPI Explorer automatically calculates the signature value. For your convenience, we recommend that you call this operation in OpenAPI Explorer. OpenAPI Explorer dynamically generates the sample code of the operation for different SDKs.

Request parameters

Parameter	Type	Required	Example	Description
Action	String	Yes	ModifyDeploymentSetAttribute	The operation that you want to perform. If you use a custom HTTP URL or HTTPS URL to make an API request, you must specify the <code>Action</code> parameter. Set the value to <code>ModifyDeploymentSetAttribute</code> .
DeploymentSetId	String	Yes	ds-bp1frxuzdg87zh4p***	The ID of the deployment set.
RegionId	String	Yes	cn-hangzhou	The ID of the region where the deployment set resides. You can call the DescribeRegions operation to query the most recent region list.
Description	String	No	TestDescription	The new description of the deployment set. The description must be 2 to 256 characters in length and cannot start with <code>http://</code> or <code>https://</code> .
DeploymentSetName	String	No	DeploymentSetTestName	The new name of the deployment set. The name must be 2 to 128 characters in length. It must start with a letter and cannot start with <code>http://</code> or <code>https://</code> . It can contain letters, digits, colons (:), underscores (_), and hyphens (-).

Response parameters

Parameter	Type	Example	Description
RequestId	String	473469C7-AA6F-4DC5-B3DB-A3DC0DE3C83E	The ID of the request.

Examples

Sample requests

```
https://ecs.aliyuncs.com/?Action=ModifyDeploymentSetAttribute
&RegionId=cn-hangzhou
&DeploymentSetId=ds-bp1frxuzdg87zh4p****
&DeploymentSetName=DeploymentSetTestName
&<Common request parameters>
```

Sample success responses

XML format

```
<ModifyDeploymentSetAttributeResponse>
  <RequestId>04F0F334-1335-436C-A1D7-6C044FE73368</RequestId>
</ModifyDeploymentSetAttributeResponse>
```

JSON format

```
{
  "RequestId": "04F0F334-1335-436C-A1D7-6C044FE73368"
}
```

Error codes

HTTP status code	Error code	Error message	Description
400	MissingParameter	The input parameter RegionId that is mandatory for processing this request is not supplied.	The error message returned because the required RegionId parameter is not specified.
400	InvalidDeploymentSetName.Malformed	Specified deployment set name is not valid.	The error message returned because the specified DeploymentSetName parameter is invalid.
400	InvalidDescription.Malformed	The specified parameter Description is not valid.	The error message returned because the specified Description parameter is invalid. The description must be 2 to 256 characters in length and cannot start with http:// or https://.
400	InvalidDeploymentSetId.NotFound	The specified DeploymentSetId does not exist.	The error message returned because the specified DeploymentSetId parameter does not exist. Check whether the deployment set ID is correct.
403	QuotaExceed.DeploymentSetInstanceQuotaFull	instance quota in one deployment set exceeded.	The error message returned because the maximum number of instances in the current deployment set has been reached.

14.3. DeleteDeploymentSet

You can call this operation to delete a deployment set.

Debugging

OpenAPI Explorer automatically calculates the signature value. For your convenience, we recommend that you call this operation in OpenAPI Explorer. OpenAPI Explorer dynamically generates the sample code of the operation for different SDKs.

Request parameters

Parameter	Type	Required	Example	Description
DeploymentSetId	String	Yes	ds-deploymentsetid1	The ID of the deployment set. You cannot delete a deployment set that contains instances.
RegionId	String	Yes	cn-hangzhou	The ID of the region where the deployment set resides. You can call the DescribeRegions operation to query the most recent region list.
Action	String	Yes	DeleteDeploymentSet	The operation that you want to perform. Set the value to DeleteDeploymentSet.

Response parameters

Parameter	Type	Example	Description
RequestId	String	473469C7-AA6F-4DC5-B3DB-A3DC0DE3C83E	The ID of the request.

Examples

Sample requests

```
https://ecs.aliyuncs.com/?Action=DeleteDeploymentSet
&RegionId=cn-hangzhou
&DeploymentSetId=ds-bp1frxuzdg87zh4pz***
&<Common request parameters>
```

Sample success responses

XML format

```
<DeleteDeploymentSetResponse>
  <RequestId>04F0F334-1335-436C-A1D7-6C044FE73368</RequestId>
</DeleteDeploymentSetResponse>
```

JSON format

```
{
  "RequestId": "04F0F334-1335-436C-A1D7-6C044FE73368"
}
```

Error codes

HTTP status code	Error code	Error message	Description
400	MissingParameter	The input parameter "DeploymentSetId" that is mandatory for processing this request is not supplied.	The error message returned because the specified DeploymentSetId parameter is empty.
403	DependencyViolation.NotEmpty	There are still instance(s) in the specified DeploymentSetId.	The error message returned because the specified deployment set contains one or more instances.
403	DependencyViolation.ReferByHPC	The specified deployment set is still referred by an HPC cluster.	The error message returned because the specified deployment set is associated with other HPC clusters.

14.4. DescribeDeploymentSets

You can call this operation to query attributes of one or more deployment sets.

Debugging

OpenAPI Explorer automatically calculates the signature value. For your convenience, we recommend that you call this operation in OpenAPI Explorer. OpenAPI Explorer dynamically generates the sample code of the operation for different SDKs.

Request parameters

Parameter	Type	Required	Example	Description
RegionId	String	Yes	cn-hangzhou	The ID of the region where the deployment set resides. You can call the DescribeRegions operation to query the most recent region list.
Action	String	Yes	DescribeDeploymentSets	The operation that you want to perform. Set the value to DescribeDeploymentSets.
PageNumber	Integer	No	1	The number of the page to return. Pages start from page 1. Default value: 1.
PageSize	Integer	No	10	The number of entries to return on each page. Maximum value: 50. Default value: 10.
DeploymentSetIds	String	No	["ds-bp67acfmazb4ph***", "ds-bp67acfmazb4pj***", ... "ds-bp67acfmazb4pj***"]	The IDs of deployment sets. The value can be a JSON array consisting of up to 100 deployment set IDs. Separate multiple deployment set IDs with commas (,).
DeploymentSetName	String	No	FinanceJoshua	The name of the deployment set.
Strategy	String	No	Availability	The deployment strategy. Set the value to Availability. This parameter is empty by default.
NetworkType	String	No	null	The network type of instances in the deployment set.  Note We recommend that you use other parameters to ensure future compatibility.
Granularity	String	No	null	The deployment granularity.  Note We recommend that you use other parameters to ensure future compatibility.
Domain	String	No	null	The deployment domain.  Note We recommend that you use other parameters to ensure future compatibility.

Response parameters

Parameter	Type	Example	Description
DeploymentSets	Array		An array consisting of DeploymentSet data.
DeploymentSet			The detailed information of the deployment set returned in an array.
CreationTime	String	2017-12-05T22:40:00Z	The time when the deployment set was created.
DeploymentSetDescription	String	FinanceDeptHighAvailability	The description of the deployment set.
DeploymentSetId	String	ds-deploymentsetid1	The ID of the deployment set.
DeploymentSetName	String	FinanceJoshua	The name of the deployment set.
DeploymentStrategy	String	Availability	The deployment strategy.
Domain	String	Default	The deployment domain.
Granularity	String	Host	The deployment granularity.
InstanceAmount	Integer	1	The number of instances in the deployment set.
InstanceIds	List	["i-instanceid1"]	The list of IDs of instances in the deployment set.
InstanceId			The ID of the instance in the deployment set.
Strategy	String	StrictDispersion	The deployment strategy.
PageNumber	Integer	1	The page number of the returned page.
PageSize	Integer	10	The number of entries returned per page.
RegionId	String	cn-hangzhou	The ID of the region where the deployment set resides.
RequestId	String	473469C7-AA6F-4DC5-B3DB-A3DC0DE3C83E	The ID of the request.
TotalCount	Integer	1	The total number of queried deployment sets.

Examples

Sample requests

```
https://ecs.aliyuncs.com/?Action=DescribeDeploymentSets
&RegionId=cn-hangzhou
&PageSize=1
&<Common request parameters>
```

Sample success responses

XML format

```
<DescribeDeploymentSetsResponse>
  <DeploymentSets>
    <DeploymentSet>
      <CreationTime>Tue Jul 23 17:24:33 CST 2019</CreationTime>
      <Granularity>switch</Granularity>
      <DeploymentSetDescription>autogen deploymentset, do not delete</DeploymentSetDescription>
      <Domain>default</Domain>
      <InstanceIds>
        <InstanceId>i-bp67acfmazb4ph***</InstanceId>
        <InstanceId>i-bp67acfmazb4pi***</InstanceId>
        <InstanceId>i-bp67acfmazb4pj***</InstanceId>
      </InstanceIds>
      <InstanceAmount>0</InstanceAmount>
      <Strategy>LooseAggregation</Strategy>
      <DeploymentSetName>hpc-null-deploymentset</DeploymentSetName>
      <DeploymentStrategy>Availability</DeploymentStrategy>
      <DeploymentSetId>ds-bp120c8htdxx3869****</DeploymentSetId>
    </DeploymentSet>
  </DeploymentSets>
  <PageNumber>1</PageNumber>
  <TotalCount>5</TotalCount>
  <PageSize>1</PageSize>
  <RegionId>cn-hangzhou</RegionId>
  <RequestId>FB5EF912-FD87-4CF7-91D9-9204974A63F3</RequestId>
</DescribeDeploymentSetsResponse>
```

JSON format

```
{
  "DeploymentSets":{
    "DeploymentSet":[
      {
        "CreationTime":"Tue Jul 23 17:24:33 CST 2019",
        "Granularity":"switch",
        "DeploymentSetDescription":"autogen deploymentset, do not delete",
        "Domain":"default",
        "InstanceIds":{"
          "InstanceId":[
            "i-bp67acfmxazb4ph***",
            "i-bp67acfmxazb4pi***",
            "i-bp67acfmxazb4pj***"
          ]
        },
        "InstanceAmount":0,
        "Strategy":"LooseAggregation",
        "DeploymentSetName":"hpc-null-deploymentset",
        "DeploymentStrategy":"Availability",
        "DeploymentSetId":"ds-bp120c8htdzx3869****"
      }
    ]
  },
  "PageNumber":1,
  "TotalCount":5,
  "PageSize":1,
  "RequestId":"FB5EF912-FD87-4CF7-91D9-9204974A63F3",
  "RegionId":"cn-hangzhou"
}
```

Error codes

HTTP status code	Error code	Error message	Description
403	InvalidDeploymentSetIds.TooManyInput	The parameter DeploymentSets size should less than 100.	The error message returned because the number of specified deployment sets exceeds 100.

14.5. DescribeDeploymentSetSupportedInstanceTypeFamily

You can call this operation to query instance families that support deployment sets.

Description

For more information about instance families, see [Instance families](#).

Debugging

OpenAPI Explorer automatically calculates the signature value. For your convenience, we recommend that you call this operation in OpenAPI Explorer. OpenAPI Explorer dynamically generates the sample code of the operation for different SDKs.

Request parameters

Parameter	Type	Required	Example	Description
Action	String	Yes	DescribeDeploymentSetSupportedInstanceTypeFamily	The operation that you want to perform. Set the value to DescribeDeploymentSetSupportedInstanceTypeFamily.
RegionId	String	Yes	cn-hangzhou	The region ID of the deployment set. You can call the DescribeRegions operation to query the most recent region list.

Response parameters

Parameter	Type	Example	Description
InstanceTypeFamilies	String	ecs.i2g, ecs.i1, ecs.i2ne, and ecs.i2gne	The instance families that support deployment sets.
RequestId	String	473469C7-AA6F-4DC5-B7DB-A3DC7DE1C52E	The ID of the request.

Examples

Sample requests

```
https://ecs.aliyuncs.com/?Action=DescribeDeploymentSetSupportedInstanceTypeFamily
&RegionId=cn-hangzhou
&<Common request parameters>
```

Sample success responses

XML format

```
<DescribeDeploymentSetSupportedInstanceTypeFamilyResponse>
  <RequestId>473469C7-AA6F-4DC5-B7DB-A3DC7DE1C52E</RequestId>
  <InstanceTypeFamilies>ecs.sccgn6ex,ecs.i2g,ecs.i1,ecs.i2ne,ecs.i2gne,ecs.hfc6,ecs.hfg6,ecs.hfr6,ecs.sn1nec,ecs.sn2nec,ecs.se1nec,ecs.c6,ecs.g6,ecs.r6,ecs.scch5s,ecs.sccg5s,ecs.ic5,ecs.c5,ecs.d1,ecs.d1-c14d3,ecs.d1-c8d3,ecs.d1ne,ecs.g5,ecs.hfc5,ecs.hfg5,ecs.i2,ecs.mn4,ecs.n1,ecs.n1.tiny,ecs.n2,ecs.n4,ecs.r5,ecs.se1,ecs.se1ne,ecs.sn1,ecs.sn1ne,ecs.sn2,ecs.sn2ne,ecs.xn4,ecs.s1,ecs.s2,ecs.s3,ecs.t1,ecs.scch5,ecs.ebmg5,ecs.sccg5,ecs.sccgn6,ecs.re6,ecs.d2,ecs.d2s,ecs.d2c,ecs.sccgn6ne-inc,ecs.g5ne</InstanceTypeFamilies>
</DescribeDeploymentSetSupportedInstanceTypeFamilyResponse>
```

JSON format

```
{
  "RequestId": "473469C7-AA6F-4DC5-B7DB-A3DC7DE1C52E",
  "InstanceTypeFamilies": "ecs.sccgn6ex,ecs.i2g,ecs.i1,ecs.i2ne,ecs.i2gne,ecs.hfc6,ecs.hfg6,ecs.hfr6,ecs.sn1nec,ecs.sn2nec,ecs.se1nec,ecs.c6,ecs.g6,ecs.r6,ecs.scch5s,ecs.sccg5s,ecs.ic5,ecs.c5,ecs.d1,ecs.d1-c14d3,ecs.d1-c8d3,ecs.d1ne,ecs.g5,ecs.hfc5,ecs.hfg5,ecs.i2,ecs.mn4,ecs.n1,ecs.n1.tiny,ecs.n2,ecs.n4,ecs.r5,ecs.se1,ecs.se1ne,ecs.sn1,ecs.sn1ne,ecs.sn2,ecs.sn2ne,ecs.xn4,ecs.s1,ecs.s2,ecs.s3,ecs.t1,ecs.scch5,ecs.ebmg5,ecs.sccg5,ecs.sccgn6,ecs.re6,ecs.d2,ecs.d2s,ecs.d2c,ecs.sccgn6ne-inc,ecs.g5ne"
}
```

15.SSH key pairs

15.1. CreateKeyPair

You can call this operation to create an SSH key pair. The system stores the public key and returns the unencrypted private key. The private key is encoded with PEM and is in the PKCS#8 format. You must store the private key on your own and ensure its confidentiality.

Description

In addition to calling `CreateKeyPair`, you can create a key pair through a third-party tool and call the `ImportKeyPair` operation to upload the key pair to an Alibaba Cloud region.

A maximum of 500 key pairs can be created in each region. For more information, see [Limits](#).

Debugging

OpenAPI Explorer automatically calculates the signature value. For your convenience, we recommend that you call this operation in OpenAPI Explorer. OpenAPI Explorer dynamically generates the sample code of the operation for different SDKs.

Request parameters

Parameter	Type	Required	Example	Description
Action	String	Yes	CreateKeyPair	The operation that you want to perform. Set the value to <code>CreateKeyPair</code> .
KeyPairName	String	Yes	TestKeyPairV23	The name of the key pair. The name must be 2 to 128 characters in length and can contain letters, digits, colons (:), underscores (_), and hyphens (-). The name must start with a letter but cannot start with <code>http://</code> or <code>https://</code> .
RegionId	String	Yes	cn-hangzhou	The region ID of the key pair. You can call the DescribeRegions operation to query the most recent region list.
Tag.N.Key	String	No	Test	The key of tag N of the key pair. Valid values of N: 1 to 20. It cannot be an empty string. The tag key can be up to 128 characters in length and cannot contain <code>http://</code> or <code>https://</code> . It cannot start with <code>acs:</code> or <code>aliyun</code> .
Tag.N.Value	String	No	Test	The value of tag N of the key pair. Valid values of N: 1 to 20. It can be an empty string. The tag value can be up to 128 characters in length and cannot contain <code>http://</code> or <code>https://</code> . It cannot start with <code>acs:</code> .
ResourceGroupId	String	No	rg-bp67acfmazb4ph***	The ID of the enterprise resource group to which the SSH key pair belongs.

Response parameters

Parameter	Type	Example	Description

Parameter	Type	Example	Description
KeyPairFingerPrint	String	89:f0:ba:62:ac:b8:aa:e1:61:5e:fd:81:69:86:6d:6b:f0:c0:5a:**	The fingerprint of the key pair. The message-digest algorithm 5 (MD5) is used for the fingerprint based on the public key fingerprint format defined in RFC 4716. For more information, see RFC 4716 .
KeyId	String	ssh-bp67acfmazb4ph***	The ID of the SSH key pair.
KeyName	String	TestKeyPairV23	The name of the key pair.
PrivateKeyBody	String	MIIEpAIBAAKCAQEAtReyMzLlcBH78EV2zj****	The private key of the key pair. The private key is encoded with PEM and is in the PKCS#8 format.
RequestId	String	473469C7-AA6F-4DC5-B3DB-A3DC0DE3C83E	The ID of the request.

Examples

Sample requests

```
https://ecs.aliyuncs.com/?Action=CreateKeyPair
&RegionId=cn-hangzhou
&KeyName=TestKeyPairV23
&<Common request parameters>
```

Sample success responses

XML format

```
<CreateKeyPairResponse>
  <RequestId>473469C7-AA6F-4DC5-B3DB-A3DC0DE3C83E</RequestId>
  <KeyName>test</KeyName>
  <KeyId>ssh-bp67acfmazb4ph***</KeyId>
  <KeyPairFingerPrint>89:f0:ba:62:ac:b8:aa:e1:61:5e:fd:81:69:86:6d:6b:f0:c0:5a:**</KeyPairFingerPrint>
  <PrivateKeyBody>MIIEpAIBAAKCAQEAtReyMzLlcBH78EV2zj****</PrivateKeyBody>
</CreateKeyPairResponse>
```

JSON format

```
{
  "RequestId": "473469C7-AA6F-4DC5-B3DB-A3DC0DE3C83E",
  "KeyName": "TestKeyPairV23",
  "KeyId": "ssh-bp67acfmazb4ph***",
  "KeyPairFingerPrint": "89:f0:ba:62:ac:b8:aa:e1:61:5e:fd:81:69:86:6d:6b:f0:c0:5a:**",
  "PrivateKeyBody": "MIIEpAIBAAKCAQEAtReyMzLlcBH78EV2zj****"
}
```

Error codes

HTTP status code	Error code	Error message	Description
400	InvalidKeyPairName.Malformed	Specified Key Pair name is not valid.	The error message returned because the KeyPairName parameter is invalid.
403	QuotaExceed.KeyPair	The key pair quota exceeds.	The error message returned because the maximum number of key pairs has been reached.
400	KeyPair.AlreadyExist	The key pair already exist.	The error message returned because a key pair with the same name already exists. Duplicate key pairs cannot be added.
404	InvalidResourceGroup.NotFound	The ResourceGroup provided does not exist in our records.	The error message returned because the resource group does not exist.
400	Duplicate.TagKey	The Tag.N.Key contain duplicate key.	The error message returned because the specified tag key already exists. Tag keys must be unique.
400	InvalidTagKey.Malformed	The specified Tag.n.Key is not valid.	The error message returned because the specified Tag.N.Key parameter is invalid.
400	InvalidTagValue.Malformed	The specified Tag.n.Value is not valid.	The error message returned because the specified Tag.N.Value parameter is invalid.

15.2. ImportKeyPair

You can call this operation to import the public key of an RSA-encrypted key pair that you created using a third-party tool. After the key pair is imported, the public key is stored on Alibaba Cloud. You must store the private key on your own and ensure its confidentiality.

Description

When you call this operation, note that:

- A maximum of 500 key pairs can be created in each region.
- You must use one of the following methods to encrypt your key pair:
 - RSA
 - DSA
 - SSH-RSA
 - SSH-DSS
 - ECDSA
 - ssh-rsa-cert-v00@openssh.com
 - ssh-dss-cert-v00@openssh.com
 - ssh-rsa-cert-v01@openssh.com
 - ssh-dss-cert-v01@openssh.com
 - ecdsa-sha2-nistp256-cert-v01@openssh.com
 - ecdsa-sha2-nistp384-cert-v01@openssh.com
 - ecdsa-sha2-nistp521-cert-v01@openssh.com

Debugging

OpenAPI Explorer automatically calculates the signature value. For your convenience, we recommend that you call this operation in OpenAPI Explorer. OpenAPI Explorer dynamically generates the sample code of the operation for different SDKs.

Request parameters

Parameter	Type	Required	Example	Description
Action	String	Yes	ImportKeyPair	The operation that you want to perform. Set the value to ImportKeyPair.
KeyPairName	String	Yes	FinanceJoshuaV24	The name of the key pair. The name must be globally unique. It must be 2 to 128 characters in length. It must start with a letter but cannot start with http:// or https://. The name can contain letters, digits, colons (:), underscores (_), and hyphens (-).
PublicKeyBody	String	Yes	xxxxxxxxxxxxxx	The public key of the key pair.
RegionId	String	Yes	cn-hangzhou	The ID of the region. You can call the DescribeRegions operation to query the most recent region list.
Tag.N.Key	String	No	TestKey	The key of tag N of the key pair. Valid values of N: 1 to 20. It cannot be an empty string. It can be up to 128 characters in length and cannot start with acs: or aliyun. It cannot contain http:// or https://.
Tag.N.Value	String	No	TestValue	The value of tag N of the key pair. Valid values of N: 1 to 20. It can be an empty string. It can be up to 128 characters in length and cannot start with acs:. It cannot contain http:// or https://.
ResourceGroupId	String	No	rg-bp67acfmazb4ph***	The ID of the enterprise resource group to which the SSH key pair belongs.

Response parameters

Parameter	Type	Example	Description
KeyPairFingerPrint	String	89:f0:ba:62:ac:b8:aa:e1:61:5e:fd:81:69:86:6d:6b:f0:c0:5a:**	The fingerprint of the key pair. The message-digest algorithm 5 (MD5) is used based on the public key fingerprint format defined in RFC 4716.
KeyPairName	String	FinanceJoshauV24	The name of the key pair.
RequestId	String	473469C7-AA6F-4DC5-B3DB-A3DC0DE3C83E	The ID of the request.

Examples

Sample requests

```
https://ecs.aliyuncs.com/?Action=ImportKeyPair
&RegionId=cn-qingdao
&PublicKeyBody=xxxxxxxxxxxxxx
&KeyPairName=test
&<Common request parameters>
```

Sample success responses

XML format

```
<ImportKeyPairResponse>
  <RequestId>473469C7-AA6F-4DC5-B3DB-A3DC0DE3C83E</RequestId>
  <KeyPairName>test</KeyPairName>
  <KeyPairFingerPrint>89:f0:ba:62:ac:b8:aa:e1:61:5e:fd:81:69:86:6d:6b:f0:c0:5a:**</KeyPairFingerPrint>
</ImportKeyPairResponse>
```

JSON format

```
{
  "RequestId": "473469C7-AA6F-4DC5-B3DB-A3DC0DE3C83E",
  "KeyPairName": "test",
  "KeyPairFingerPrint": "89:f0:ba:62:ac:b8:aa:e1:61:5e:fd:81:69:86:6d:6b:f0:c0:5a:**"
}
```

Error codes

HTTP status code	Error code	Error message	Description
400	InvalidKeyPairName.Malformed	Specified Key Pair name is not valid.	The error message returned because the KeyPairName parameter is invalid.
403	QuotaExceed.KeyPair	The key pair quota exceeds.	The error message returned because the maximum number of key pairs has been reached.
400	InvalidPublicKeyBody.Malformed	The PublicKeyBody format is not supported.	The error message returned because the public key format is not supported.
400	MissingParameter	The input parameter "PublicKeyBody" that is mandatory for processing this request is not supplied.	The error message returned because the required PublicKeyBody parameter is not specified.
400	KeyPair.AlreadyExist	The key pair already exist.	The error message returned because a key pair with the same name already exists. Duplicate key pairs cannot be added.
500	InternalError	The request processing has failed due to some unknown error.	The error message returned because an internal error has occurred. Try again later. If the problem persists, submit a ticket.
404	InvalidResourceGroup.NotFound	The ResourceGroup provided does not exist in our records.	The error message returned because the specified resource group does not exist.

15.3. AttachKeyPair

You can call this operation to attach an SSH key pair to one or more Linux instances.

Description

When you call this operation, take note of the following items:

- SSH key pairs are not supported on Windows instances.
- If an SSH key pair is attached to an instance, the username and password authentication is disabled for the instance.
- If an instance is in the **Running** (Running) state, call the **RebootInstance** operation to restart the instance for the SSH

key pair to take effect.

- If an instance is in the **Stopped (Stopped)** state, call the **StartInstance** operation to start the instance for the SSH key pair to take effect.
- If an instance already has an SSH key pair attached, the new SSH key pair will automatically replace the original one.

Debugging

OpenAPI Explorer automatically calculates the signature value. For your convenience, we recommend that you call this operation in OpenAPI Explorer. OpenAPI Explorer dynamically generates the sample code of the operation for different SDKs.

Request parameters

Parameter	Type	Required	Example	Description
Action	String	Yes	AttachKeyPair	The operation that you want to perform. Set the value to AttachKeyPair.
InstanceIds	String	Yes	["i-bp1gtjxuuvwj17zr****", "i-bp17b7zrsbjwvmfy****", ... "i-bp1h6jmbefj1ytos****"]	The IDs of instances to which you want to attach the SSH key pair. The value can be a JSON array that consists of up to 50 instance IDs. Separate multiple instance IDs with commas (,).
KeyPairName	String	Yes	testKeyPairName	The name of the SSH key pair.
RegionId	String	Yes	cn-hangzhou	The ID of the region to which the SSH key pair belongs. You can call the DescribeRegions operation to query the most recent region list.

Response parameters

Parameter	Type	Example	Description
FailCount	String	0	The number of instances to which the key pair fails to be attached.
KeyPairName	String	testKeyPairName	The name of the key pair.
RequestId	String	473469C7-AA6F-4DC5-B3DB-A3DC0DE3C83E	The ID of the request.
Results	Array of Result		An array consisting of result data.
Result			
Code	String	200	The operation status code returned. 200 indicates that the operation is successful.
InstanceId	String	i-m5eg7be9ndloji64****	The ID of the instance.
Message	String	successful	The operation information returned. When the value of Code is 200, the value of Message becomes successful.

Parameter	Type	Example	Description
Success	String	true	Indicates whether the operation is successful.
TotalCount	String	2	The total number of instances to which the SSH key pair is attached.

Examples

Sample requests

```
https://ecs.aliyuncs.com/?Action=AttachKeyPair
&InstanceId=["i-bp1gtjxuuvwj17zr****", "i-bp17b7zrsbjwvmfy****", ... "i-bp1h6jmbefj1ytos****"]
&KeyPairName=testKeyPairName
&RegionId=cn-hangzhou
&<Common request parameters>
```

Sample success responses

XML format

```
<AttachKeyPairResponse>
  <TotalCount>2</TotalCount>
  <RequestId>4ADF7A06-66BD-4FBF-A2ED-2364E41D8C06</RequestId>
  <Results>
    <Result>
      <Message>successful</Message>
      <InstanceId>i-m5eg7be9ndloji64****</InstanceId>
      <Success>true</Success>
      <Code>200</Code>
    </Result>
    <Result>
      <Message>successful</Message>
      <InstanceId>i-m5e25x2mwr0hk33d****</InstanceId>
      <Success>true</Success>
      <Code>200</Code>
    </Result>
  </Results>
  <FailCount>0</FailCount>
</AttachKeyPairResponse>
```

JSON format

```
{
  "TotalCount": 2,
  "RequestId": "4ADF7A06-66BD-4FBF-A2ED-2364E41D8C06",
  "Results": {
    "Result": [
      {
        "Message": "successful",
        "InstanceId": "i-m5eg7be9ndloji64****",
        "Success": true,
        "Code": "200"
      },
      {
        "Message": "successful",
        "InstanceId": "i-m5e25x2mwr0hk33d****",
        "Success": true,
        "Code": "200"
      }
    ]
  },
  "FailCount": 0
}
```

Error codes

HTTP status code	Error code	Error message	Description
400	InvalidKeyPairName.NotFound	The specified KeyPairName does not exist in our records.	The error message returned because the specified key pair name does not exist.
403	DependencyViolation.WindowsInstance	The instance creating is windows, cannot use ssh key pair to login	The error message returned because the specified instance is a Windows instance and does not support logons with SSH key pairs.
400	InvalidInstanceIds.ValueNotSupported	The specified parameter InstanceIds is not valid.	The error message returned because the specified InstanceIds parameter is invalid.
400	DependencyViolation.IoOptimize	The specified parameter InstanceIds is not valid.	The error message returned because the specified instance is not an I/O optimized instance.

15.4. DetachKeyPair

You can call this operation to detach an SSH key pair from one or more Linux instances.

Description

When you call this operation, take note of the following items:

- After you detach an SSH key pair, you must restart the instance ([RebootInstance](#)) for the operation to take effect.
- By default, the username and password authentication is used after you detach an SSH key pair.

Debugging

OpenAPI Explorer automatically calculates the signature value. For your convenience, we recommend that you call this operation in OpenAPI Explorer. OpenAPI Explorer dynamically generates the sample code of the operation for different SDKs.

Request parameters

Parameter	Type	Required	Example	Description
Action	String	Yes	DetachKeyPair	The operation that you want to perform. Set the value to DetachKeyPair.
InstanceIds	String	Yes	["i-xxxxxxxxx", "i-yyyyyyyyy", ... "i-zzzzzzzz"]	The IDs of instances from which you want to detach the SSH key pair. It can be a JSON array that consists of multiple instance IDs. Separate multiple instance IDs with commas (.). A maximum of 50 instance IDs can be entered.
KeyPairName	String	Yes	FinanceJoshuaV26	The name of the SSH key pair.
RegionId	String	Yes	cn-hangzhou	The ID of the region to which the SSH key pair belongs. You can call the DescribeRegions operation to query the most recent region list.

Response parameters

Parameter	Type	Example	Description
FailCount	String	0	The number of instances from which the key pair fails to be detached.
KeyPairName	String	FinanceJoshuaV26	The name of the key pair.
RequestId	String	473469C7-AA6F-4DC5-B3DB-A3DC0DE3C83E	The ID of the request.
Results	Array		An array consisting of result data.
Result			
Code	String	200	The operation status code returned. 200 indicates that the operation is successful.
InstanceId	String	i-instanceid1	The ID of the instance.
Message	String	successful	The operation information returned. When the value of Code is 200, the value of Message becomes successful.
Success	String	true	Indicates whether the operation is successful.
TotalCount	String	2	The total number of instances from which the key pair is detached.

Examples

Sample requests

```
https://ecs.aliyuncs.com/?Action=DetachKeyPair
&RegionId=cn-qingdao
&InstanceIds=["i-xxxxxxx", "i-yyyyyyy"]
&KeyPairName=test
&<Common request parameters>
```

Sample success responses

XML format

```
<DetachKeyPairResponse>
  <TotalCount>2</TotalCount>
  <RequestId>834B3E6B-2D1D-482F-81A4-810C327D4735</RequestId>
  <Results>
    <Result>
      <Message>successful</Message>
      <InstanceId>i-m5eg7be9ndloji64j***</InstanceId>
      <Success>true</Success>
      <Code>200</Code>
    </Result>
    <Result>
      <Message>successful</Message>
      <InstanceId>i-m5e25x2mwr0hk33dw***</InstanceId>
      <Success>true</Success>
      <Code>200</Code>
    </Result>
  </Results>
  <FailCount>0</FailCount>
</DetachKeyPairResponse>
```

JSON format


```
{
  "TotalCount": 2,
  "RequestId": "834B3E6B-2D1D-482F-81A4-810C327D4735",
  "Results": {
    "Result": [
      {
        "Message": "successful",
        "InstanceId": "i-m5eg7be9ndloji64j****",
        "Success": true,
        "Code": "200"
      },
      {
        "Message": "successful",
        "InstanceId": "i-m5e25x2mwr0hk33dw****",
        "Success": true,
        "Code": "200"
      }
    ]
  },
  "FailCount": 0
}
```

Error codes

HTTP status code	Error code	Error message	Description
400	InvalidKeyPairName.NotFound	The specified KeyPairName does not exist in our records.	The error message returned because the specified KeyPairName parameter does not exist.
403	DependencyViolation.WindowsInstance	The instance creating is windows, cannot use ssh key pair to login	The error message returned because the specified instance is a Windows instance and does not support logons with SSH key pairs.
403	InstanceKeyPairLimitExceeded	Exceeding the allowed amount of instance that an key pair can attach.	The error message returned because the maximum number of key pairs that can be processed in a single request has been reached.
400	InvalidInstanceIds.ValueNotSupported	The specified parameter InstanceIds is not valid.	The error message returned because the specified InstanceIds parameter is invalid.

15.5. DeleteKeyPairs

You can call this operation to delete one or more SSH key pairs.

Description

After you delete an SSH key pair, take note of the following items:

- You cannot query the SSH key pair by calling the [DescribeKeyPairs](#) operation.
- If an ECS instance has been bound with this SSH key pair,
 - Alibaba Cloud no longer stores the SSH key pair for you, but the instance can use the SSH key pair normally.
 - When you call the [DescribeInstances](#) operation to query instance information, the SSH key pair name (KeyPairNames) is still returned, but without other information.

Debugging

OpenAPI Explorer automatically calculates the signature value. For your convenience, we recommend that you call this operation in OpenAPI Explorer. OpenAPI Explorer dynamically generates the sample code of the operation for different SDKs.

Request parameters

Parameter	Type	Required	Example	Description
Action	String	Yes	DeleteKeyPairs	The operation that you want to perform. Set the value to DeleteKeyPairs.
KeyPairNames	String	Yes	["skp-bp67acfmazb4ph****", "skp-bp67acfmazb4pi****", ... "skp-bp67acfmazb4pk****"]	The names of the SSH key pairs. It can be a JSON array that consists of multiple SSH key pairs. Separate multiple SSH key pair names with commas (.). A maximum of 100 key pair names can be entered.
RegionId	String	Yes	cn-hangzhou	The ID of the region to which the SSH key pair belongs. You can call the DescribeRegions operation to query the most recent region list.

Response parameters

Parameter	Type	Example	Description
RequestId	String	473469C7-AA6F-4DC5-B3DB-A3DC0DE3C83E	The ID of the request.

Examples

Sample requests

```
https://ecs.aliyuncs.com/?Action=DeleteKeyPairs
&RegionId=cn-qingdao
&KeyPairNames=["skp-bp67acfmazb4ph****", "skp-bp67acfmazb4pi****", ... "skp-bp67acfmazb4pk****"]
&<Common request parameters>
```

Sample success responses

XML format

```
<DeleteKeyPairsResponse>
  <RequestId>473469C7-AA6F-4DC5-B3DB-A3DC0DE3C83E</RequestId>
</DeleteKeyPairsResponse>
```

JSON format

```
{
  "RequestId": "473469C7-AA6F-4DC5-B3DB-A3DC0DE3C83E"
}
```

Error codes

HTTP status code	Error code	Error message	Description
400	MissingParameter	The input parameter "KeyPairNames" that is mandatory for processing this request is not supplied.	The error message returned because the required KeyPairNames parameter is not specified.
400	InvalidKeyPairNames.ValueNotSupported	The specified parameter "KeyPairNames" is not valid.	The error message returned because the KeyPairNames parameter is invalid.
403	InstanceKeyPairLimitExceeded	Exceeding the allowed amount of instance which will be deleted.	The error message returned because the maximum number of instances from which the SSH key pairs will be deleted has been reached.

15.6. DescribeKeyPairs

You can call this operation to query one or more key pairs.

Debugging

OpenAPI Explorer automatically calculates the signature value. For your convenience, we recommend that you call this operation in OpenAPI Explorer. OpenAPI Explorer dynamically generates the sample code of the operation for different SDKs.

Request Parameters

Parameter	Type	Required	Example	Description
Action	String	Yes	DescribeKeyPairs	The operation that you want to perform. Set the value to DescribeKeyPairs.
RegionId	String	Yes	cn-hangzhou	The region ID of the key pair. You can call the DescribeRegions operation to query the most recent region list.
KeyPairName	String	No	*Finance*	The name of the key pair. The asterisk (*) symbol can be used as a wild card in regular expressions to query key pairs by fuzzy match. Sample patterns: <code>*SshKey</code> : queries key pair names ending with SshKey, including the SshKey key pair. <code>SshKey*</code> : queries key pair names starting with SshKey, including the SshKey key pair. <code>*SshKey*</code> : queries key pair names that have SshKey in the middle, including the SshKey key pair. <code>SshKey</code> : queries SshKey key pair by exact match.
KeyPairFingerPrint	String	No	XXXXXXXXXX	The fingerprint of the key pair. The fingerprint uses the message-digest algorithm 5 (MD5) based on the public key fingerprint format defined in RFC 4716. For more information, see RFC 4716 .

Parameter	Type	Required	Example	Description
PageNumber	Integer	No	1	The number of the page to return. Pages start from page 1. Default value: 1.
PageSize	Integer	No	10	The number of entries to return on each page. Maximum value: 50. Default value: 10.
Tag.N.Key	String	No	FinanceDept	The key of tag N of the key pair. Valid values of N: 1 to 20.
Tag.N.Value	String	No	FinanceDept.Joshua	The value of tag N of the key pair. Valid values of N: 1 to 20.
ResourceGroupId	String	No	rg-resourcegroupid1	The ID of the enterprise resource group to which the key pair belongs.

Response parameters

Parameter	Type	Example	Description
RequestId	String	473469C7-AA6F-4DC5-B3DB-A3DC0DE3C83E	The ID of the request.
TotalCount	Integer	1	The total number of key pairs.
PageNumber	Integer	1	The page number of the returned page.
PageSize	Integer	10	The number of entries returned per page.
KeyPairs	Array		An array consisting of key pair data.
KeyPairName	String	FinanceJoshuaV27	The name of the key pair.
KeyPairFingerPrint	String	xxxxxxxxxx	The fingerprint of the key pair.
CreationTime	String	2019-12-04T13:35:00Z	The time when the key pair was created.
ResourceGroupId	String	rg-resourcegroupid1	The ID of the resource group.
Tags	Array		An array consisting of tag data.
TagKey	String	FinanceDept	The tag key of the key pair.
TagValue	String	FinanceDept.Joshua	The tag value of the key pair.

Examples

Sample requests

```
https://ecs.aliyuncs.com/?Action=DescribeKeyPairs
&RegionId=cn-qingdao
&KeyPairFingerPrint=xxxxxxxxxx
&KeyPairName=test
&PageNumber=1
&PageSize=20
&<Common request parameters>
```

Sample success responses

XML format

```
<DescribeKeyPairsResponse>
  <PageNumber>1</PageNumber>
  <PageSize>2</PageSize>
  <TotalCount>1</TotalCount>
  <KeyPairs>
    <KeyPair>
      <CreationTime>2018-10-10T01:00Z</CreationTime>
      <ResourceGroupId></ResourceGroupId>
      <KeyPairName>test</KeyPairName>
      <KeyPairFingerPrint>xxxxxxxxxx</KeyPairFingerPrint>
    </KeyPair>
  </KeyPairs>
  <RequestId>473469C7-AA6F-4DC5-B3DB-A3DC0DE3C83E</RequestId>
</DescribeKeyPairsResponse>
```

JSON format

```
{
  "PageNumber": 1,
  "PageSize": 2,
  "TotalCount": 1,
  "KeyPairs": {
    "KeyPair": [{
      "CreationTime": "2018-10-10T01:00Z",
      "ResourceGroupId": "",
      "KeyPairName": "test",
      "KeyPairFingerPrint": "xxxxxxxxxx"
    }]
  },
  "RequestId": "473469C7-AA6F-4DC5-B3DB-A3DC0DE3C83E"
}
```

16. Networks

16.1. ModifyInstanceVpcAttribute

You can call this operation to modify the VPC, private IP address, or VSwitch of a VPC-type instance.

Description

The target ECS instance must be in the **Stopped** (`Stopped`) state.

- When you call this operation to modify the private IP address or VSwitch of an instance, take note of the following items:
 - A newly created instance must be restarted before you call this operation.
 - After the private IP address or VSwitch of an instance is modified, you must restart the instance before you can call this operation again.
- When you call this operation to modify the VPC of an instance, take note of the following items:
 - **Instance:**
 - The instance cannot be associated with Server Load Balancer (SLB) instances.
 - The instance cannot be in the Locked, To Be Released, Expired, Expired and Being Recycled, or Overdue and Being Recycled state. For more information, see [ECS instance lifecycle](#).
 - The instance cannot be used in other cloud services. For example, the instance cannot be in the process of being migrated or having its VPC changed, or the databases deployed on the instance cannot be managed by Data Transmission (DTS).
 - **Network:**
 - The cut-through mode or multi-EIP to ENI mode cannot be enabled for the instance.
 - The instance cannot be associated with a high-availability virtual IP address (HaVip).
 - The VSwitch of the instance cannot be associated with a custom route table.
 - Global Accelerator (GA) cannot be activated for the instance.
 - The instance cannot be attached with a secondary NIC.
 - The instance cannot be assigned with an IPv6 address.
 - The primary NIC of the instance cannot be associated with multiple IP addresses.
 - The VSwitch must belong to the target VPC.
 - The zones of the VSwitches before and after the modification must be the same.
 - If the private IP address of the primary NIC is specified, the private IP address must be available and within the CIDR block of the VSwitch. If the private IP address is not specified, the system randomly assigns one. The available IP addresses in the target VSwitch CIDR block must be sufficient.
 - If advanced features are enabled in the target VPC, refer to [Instance families that do not support advanced VPC features](#) for the application scope of advanced features.
 - The Alibaba Cloud account that owns the target VPC cannot share the VPC to other accounts.
 - **Security group (SecurityGroupId.N):**
 - All security groups must be of the same type.
 - The valid values of N are based on the maximum number of security groups to which the instance can belong. For more information, see the "Security groups" section in [Limits](#).
 - The VPC to which the security group belongs must be the target VPC.
 - You can switch the instance to a security group of a different type.

When you switch an ECS instance to a security group of a different type, you must understand the differences between the rule configurations of the two security group types to avoid affecting the instance network. For more information, see [Security group overview](#).

Debugging

OpenAPI Explorer automatically calculates the signature value. For your convenience, we recommend that you call this operation in OpenAPI Explorer. OpenAPI Explorer dynamically generates the sample code of the operation for different SDKs.

Request parameters

Parameter	Type	Required	Example	Description
Action	String	Yes	ModifyInstanceVpcAttribute	The operation that you want to perform. Set the value to ModifyInstanceVpcAttribute.
InstanceId	String	Yes	i-bp1iudwa5b1tqag1***	The ID of the instance.
VSwitchId	String	Yes	vsw-bp1s5fnvk4gn3tw12**	The ID of the VSwitch. - If this parameter is set to the current VSwitch ID, the VSwitch of the instance remains unchanged. - If this parameter is set to the ID of a new VSwitch and the VpcId parameter is not specified, the new VSwitch must belong to the same zone and VPC as the original VSwitch. - If the VpcId parameter is specified, the VSwitch ID specified by this parameter must belong to the VPC specified by the VpcId parameter and must belong to the same zone as the original VSwitch.
PrivateIpAddress	String	No	172.17.**.**	The new private IP address of the instance.  Note The value of the PrivateIpAddress parameter depends on the value of the VSwitchId parameter. The specified IP address must be within the CIDR block of the specified VSwitch. By default, if this parameter is not specified, a private IP address is randomly assigned from the CIDR block of the specified VSwitch.
VpcId	String	No	vpc-bp1vwnn14rqpyiczj***	The ID of the target VPC.
SecurityGroupId.N	RepeatList	No	sg-o6w9l8bc8dgmkw87**	The IDs of security group N to which the instance belongs after the VPC is changed. This parameter is required only when the VpcId parameter is specified. - The specified security groups must be of the same type. - The security group list can contain one or more security groups to which the instance belongs after the modification. The valid values of N are based on the maximum number of security groups to which the instance can belong. For more information, see the "Security groups" section in Limits. - The specified security groups must belong to the VPC specified by the VpcId parameter.

Response parameters

Parameter	Type	Example	Description
RequestId	String	473469C7-AA6F-4DC5-B3DB-A3DC0DE3C83E	The ID of the request.

Examples

Sample requests

```
https://ecs.aliyuncs.com/?Action=ModifyInstanceVpcAttribute
&InstanceId=i-bp1iudwa5b1tqag1****
&VSwitchId=vsw-bp1s5fnvk4gn3tw12****
&<Common request parameters>
```

Sample success responses

XML format

```
<ModifyInstanceAttributeResponse>
  <RequestId>473469C7-AA6F-4DC5-B3DB-A3DC0DE3C83E</RequestId>
</ModifyInstanceAttributeResponse>
```

JSON format

```
{
  "RequestId": "473469C7-AA6F-4DC5-B3DB-A3DC0DE3C83E"
}
```

Error codes

HTTP status code	Error code	Error message	Description
404	InvalidInstanceId.NotFound	The specified InstanceId does not exist.	The error message returned because the specified instance does not exist. Check whether the specified instance ID is correct.
400	InvalidPrivateIpAddress.Malformed	Specified private IP address is malformed.	The error message returned because the specified private IP address is invalid.
400	InvalidPrivateIpAddress.Duplicated	Specified private IP address is duplicated.	The error message returned because the specified private IP address is already in use. Change the IP address and try again.
400	IncorrectVSwitchStatus	The current status of virtual switch does not support this operation.	The error message returned because the specified VSwitch is in the pending state and cannot be deleted.
404	InvalidVSwitchId.NotFound	Specified virtual switch does not exist.	The error message returned because the specified VSwitch ID does not exist.
400	IncorrectInstanceStatus	The current status of instance does not support this operation.	The error message returned because the operation is not supported while the instance is in the current state.

HTTP status code	Error code	Error message	Description
400	OperationDenied	Specified operation is denied as your instance is not in VPC.	The error message returned because the instance is not in a VPC.
400	InvalidVSwitchId.Mismatch	Specified instance and virtual switch are not in the same zone.	The error message returned because the specified instance and VSwitch do not belong to the same zone.
400	InvalidPrivateIpAddress.Mismatch	Specified private IP address is not in the CIDR block of virtual switch.	The error message returned because the specified private IP address is not within the CIDR block of the specified VSwitch.
404	InvalidVSwitchId.NotFound	Specified virtual switch is not found in current VPC.	The error message returned because the specified VSwitch does not exist in the current VPC.
400	InvalidPrivateIp.Changing	Previous action is not finished yet.	The error message returned because the private IP address cannot be modified when the previous modification is not finished.
404	NoSuchResource	The specified resource is not found.	The error message returned because the specified resource does not exist.
400	InvalidPrivateIpAddress.Duplicated	error new ip is the same with old ip	The error message returned because the new IP address is the same as the original one.
500	InternalServerError	The request processing has failed due to some unknown error.	The error message returned because an internal error has occurred. Try again later. If the problem persists, submit a ticket.
403	OperationDenied	%s	The error message returned because the operation is denied.
403	SecurityGroupInstanceLimitExceed	%s	The error message returned because the maximum number of instances in the specified security group has been reached.
404	InvalidSecurityGroupId.NotFound	%s	The error message returned because the specified security group ID does not exist.

16.2. AllocatePublicIpAddress

You can call this operation to assign a fixed public IP address to an ECS instance.

Description

When you call this operation, take note of the following points:

- Before you assign a public IP address to an instance, the instance must be in the **Running** (`Running`) or **Stopped** (`Stopped`) state.
- If the `OperationLocks` parameter of the instance is set to `"LockReason": "security"`, the instance is locked for security reasons and you cannot allocate a public IP address to it. For more information, see [API behavior when an instance is locked for security reasons](#).
- You can assign only one public IP address to an instance. If the instance has an existing public IP address, the `AllocateAlready` error message returns.
- After you restart the instance ([RebootInstance](#)) or start the instance ([StartInstance](#)), the new public IP address takes effect.

In addition to assigning a public IP address, you can also associate an Elastic IP Address (EIP) with the instance. For more information, see [AssociateEipAddress](#).

 **Note** No public IP addresses can be assigned to a VPC-type instance associated with an EIP.

Debugging

OpenAPI Explorer automatically calculates the signature value. For your convenience, we recommend that you call this operation in OpenAPI Explorer. OpenAPI Explorer dynamically generates the sample code of the operation for different SDKs.

Request parameters

Parameter	Type	Required	Example	Description
Action	String	Yes	AllocatePublicIpAddress	The operation that you want to perform. If you use a custom HTTP URL or HTTPS URL to make an API request, you must specify this parameter. Set the value to AllocatePublicIpAddress.
InstanceId	String	Yes	i-bp1ecr*****5go2go	The ID of the instance to which you want to assign a public IP address.
IpAddress	String	No	112.124.**.132	The public IP address of the instance. Default value: a randomly assigned IP address.
VlanId	String	No	100	The VLAN ID.

Response parameters

Parameter	Type	Example	Description
RequestId	String	473469C7-AA6F-4DC5-B3DB-A3DC0DE3C83E	The ID of the request.
IpAddress	String	112.124.**.132	The public IP address of the instance.

Examples

Sample requests

```
https://ecs.aliyuncs.com/?Action=AllocatePublicIpAddress
&InstanceId=i-bp1ecr*****5go2go
&IpAddress=112.124.**.132
&<Common request parameters>
```

Sample success responses

XML format

```
<AllocatePublicIpAddressResponse>
  <RequestId>F2EF6A3B-E345-46B9-931E-0EA094818567</RequestId>
  <IpAddress>112.124.**.132</IpAddress>
</AllocatePublicIpAddressResponse>
```

JSON format

```
{
  "RequestId": "F2EF6A3B-E345-46B9-931E-0EA094818567",
  "IpAddress": "112.124. **.132"
}
```

Error codes

HTTP status code	Error code	Error message	Description
404	InvalidInstanceId.NotFound	The specified InstanceId does not exist.	The error message returned because the specified InstanceId parameter does not exist. Check whether the instance ID is correct.
400	InvalidIpAddress.Malformed	The specified parameter "IpAddress" is not valid.	The error message returned because the specified IpAddress parameter is invalid.
404	InvalidVlanId.NotFound	The VlanId provided does not exist in our records.	The error message returned because the specified VlanId parameter does not exist.
403	IncorrectInstanceStatus	The current status of the resource does not support this operation.	The error message returned because the operation is not supported while the resource is in the current state.
403	InstanceLockedForSecurity	The specified operation is denied as your instance is locked for security reasons.	The error message returned because the operation is not supported while the instance is locked for security reasons.
403	InstanceExpiredOrInArrears	The specified operation is denied as your prepay instance is expired (prepay mode) or in arrears (afterpay mode).	The error message returned because the subscription of the instance has expired. You must renew the instance before proceeding.
404	InvalidIpAddress.NotFound	The specified IP is not in the specified vlan.	The error message returned because the specified IP address is not in the specified VLAN.
403	IpInUse	The specified IP is already in use.	The error message returned because the specified IP address is in use.
403	AllocatedAlready	There is an IpAddress allocated already for the specified instance.	The error message returned because the instance is allocated with another IP address.
400	OperationDenied	Specified operation is denied as your instance is in VPC.	The error message returned because the specified operation is not applicable to VPC-type instances.
400	InsufficientPublicIp	Ip address not found	The error message returned because the IP address does not exist.
500	InternalError	The request processing has failed due to some unknown error.	The error message returned because an internal error has occurred. Try again later. If the problem persists, submit a ticket.
400	AllocateInvalidInstanceBandwidth	OperationDenied The InternetMaxBandwidthOut of the specified instance cannot be less than 0.	The error message returned because the maximum outbound bandwidth must be greater than 0 Mbit/s.

HTTP status code	Error code	Error message	Description
400	OperationDenied	The specified parameter "VlanId" is not valid or vlan has not enough IP address.	The error message returned because the specified VlanId parameter is invalid or the maximum number of IP addresses in the VLAN has been reached.
403	NAT_PUBLIC_IP_BINDING_FAILED	Binding nat public ip failed	The error message returned because the public IP address failed to be bound to a gateway.
403	NAT_PUBLIC_IP_ALLOCATE_FAILED	Nat public ip binding failed.	The error message returned because the public IP address failed to be allocated.

16.3. ConvertNatPublicIpToEip

You can call this operation to convert the public IP address of a VPC-type instance to an elastic IP address (EIP).

Description

After a public IP address is converted to an EIP, the EIP will be billed separately. Make sure that you have fully understood the billing methods of EIPs. For more information, see [Billing overview](#).

Before you call this operation, make sure that the following requirements are met:

- The instance is in the **Stopped** (`Stopped`) or **Running** (`Running`) state.
- The instance has no EIPs associated.
- The instance has no configuration change tasks that have not taken effect.
- The public bandwidth of the instance cannot be 0 Mbit/s.
- The public bandwidth of the instance is billed on a pay-by-traffic basis.
- If the instance is a VPC-type subscription instance, it will not expire within 24 hours.

Debugging

OpenAPI Explorer automatically calculates the signature value. For your convenience, we recommend that you call this operation in OpenAPI Explorer. OpenAPI Explorer dynamically generates the sample code of the operation for different SDKs.

Request parameters

Parameter	Type	Required	Example	Description
Action	String	Yes	ConvertNatPublicIpToEip	The operation that you want to perform. Set the value to ConvertNatPublicIpToEip.
InstanceId	String	Yes	i-bp171jr36ge2ulvk****	The ID of the instance for which you want to convert its public IP address to an EIP.
RegionId	String	Yes	cn-hangzhou	The region ID of the instance. You can call the DescribeRegions operation to query the most recent region list.

Response parameters

Parameter	Type	Example	Description

Parameter	Type	Example	Description
RequestId	String	473469C7-AA6F-4DC5-B3DB-A3DC0DE3C83E	The ID of the request.

Examples

Sample requests

```
https://ecs.aliyuncs.com/?Action=ConvertNatPublicIpToEip
&RegionId=cn-hangzhou
&InstanceId=i-bp171jr36ge2ulvk****
&<Common request parameters>
```

Sample success responses

XML format

```
<ConvertNatPublicIpToEipResponse>
  <RequestId>B154D309-F3E1-4AB7-BA94-FEFC8B89001</RequestId>
</ConvertNatPublicIpToEipResponse>
```

JSON format

```
{
  "RequestId": "B154D309-F3E1-4AB7-BA94-FEFC8B89001"
}
```

Error codes

HTTP status code	Error code	Error message	Description
403	InvalidInstanceId.Planned Change	%s	The error message returned because the instance has scheduled configuration change tasks.
403	InvalidEndTime.Operate NotSupport	%s	The error message returned because this operation is not supported while the instance is in the current state.
403	InvalidInstanceStatus.Re leased	%s	The error message returned because the specified operation is invalid. Check whether the instance status is correct.
403	IncorrectInstanceStatus	%s	The error message returned because the operation is not supported while the instance is in the current state.
403	OperationDenied	%s	The error message returned because the specified operation is denied.
404	InvalidInstanceId.NotFou nd	%s	The error message returned because the specified InstanceId parameter does not exist. Check whether the instance ID is correct.

HTTP status code	Error code	Error message	Description
403	InvalidInternetChargeType.ValueNotSupported	%s	The error message returned because the specified billing method is not supported. Check whether the specified parameter is correct.
403	MaxEIPQuotaExceeded	The number of EIP exceeds the limit per region.	The error message returned because the maximum number of EIPs in the current region has been reached.
403	InvalidInstance.OverduePayment	%s	The error message returned because you have overdue payments in your account. Create an instance again or contact the customer service.
403	InvalidInstance.OverduePayment	The special instance due to overdue payment,this operation is not supported.	The error message returned because you have overdue payments in your account. Top up your account before proceeding.
403	InvalidAccountStatus.NoEnoughBalance	Your account does not have enough balance.	The error message returned because your account balance is insufficient. Top up your account before proceeding.
403	Forbidden.RiskControl	This operation is forbidden by Aliyun RiskControl system.	The error message returned because the specified operation is prohibited by the risk control system.

16.4. AttachClassicLinkVpc

You can call this operation to connect a classic network-type instance with a VPC. This way, the instance can communicate with cloud resources in the VPC through the internal network.

Description

When you call this operation, take note of the following points:

- The instance to be connected must be in the **Running** or **Stopped** state.
- The ClassicLink service must be enabled for the target VPC. For more information, see [Enable ClassicLink](#).
- The instance and the VPC must be in the same region.

Debugging

OpenAPI Explorer automatically calculates the signature value. For your convenience, we recommend that you call this operation in OpenAPI Explorer. OpenAPI Explorer dynamically generates the sample code of the operation for different SDKs.

Request parameters

Parameter	Type	Required	Example	Description
InstanceId	String	Yes	i-test	The ID of the classic network-type instance. You can call the DescribeInstances operation to query available instances.
RegionId	String	Yes	cn-hangzhou	The region ID of the instance. You can call the DescribeRegions operation to query the most recent region list.

Parameter	Type	Required	Example	Description
VpcId	String	Yes	vpc-test	The ID of the VPC for which ClassicLink is enabled. You can call the DescribeVpcs operation to view available VPCs.
Action	String	Yes	AttachClassicLinkVpc	The operation that you want to perform. Set the value to AttachClassicLinkVpc.

Response parameters

Parameter	Type	Example	Description
RequestId	String	473469C7-AA6F-4DC5-B3DB-A3DC0DE3C83E	The ID of the request.

Examples

Sample requests

```
https://ecs.aliyuncs.com/?Action=AttachClassicLinkVpc
&RegionId=cn-hangzhou
&InstanceId=i-test
&VpcId=vpc-test
&<Common request parameters>
```

Sample success responses

XML format

```
<AttachClassicLinkVpcResponse>
  <RequestId>C0003E8B-B930-4F59-ADC0-0E209A9012A8</RequestId>
</AttachClassicLinkVpcResponse>
```

JSON format

```
{
  "RequestId": "C0003E8B-B930-4F59-ADC0-0E209A9012A8"
}
```

Error codes

HTTP status code	Error code	Error message	Description
403	InvalidInstanceId.NotFound	The InstanceId provided does not exist in our records.	The error message returned because the specified InstanceId parameter does not exist. Check whether the instance ID is correct.
403	InvalidRegionId.Malformed	The specified parameter ? RegionId? is not valid.	The error message returned because the specified RegionId parameter is invalid.
403	InvalidVpcId.Malformed	The specified parameter ? VpcId? is not valid.	The error message returned because the specified VpcId parameter is invalid.

HTTP status code	Error code	Error message	Description
403	InvalidInstanceId.Malformed	The specified instance is not a classic network instance.	The error returned because the specified instance is not in the classic network.
403	OperationDenied	The instance does not allow link to vpc.	The error message returned because the instance cannot be connected to a VPC.
403	InvalidParameter.InvalidInstanceIdAndVpcId	The parameter InstanceId and VpcId are not allowed to be empty at the same time.	The error message returned because InstanceId and VpcId cannot be empty at the same time.
403	OperationDenied	The specified vpc is disabled attach classic link.	The error message returned because ClassicLink cannot be enabled for the specified VPC.
403	InvalidInstanceId.NotFound	The specified instances do not exist.	The error message returned because the specified InstanceId parameter does not exist. Check whether the instance ID is correct.
403	InvalidStatus.InstanceStatus	The specified instance status is not support this operation ,expect status is running or shutted.	The error message returned because the operation is not supported while the instance is in the current state. The expected state is Running or Shutted.
403	InvalidStatus.InstanceStatus	The specified instance status is not support this operation ,expect status is running or shutted.	The error message returned because the operation is not supported while the instance is in the current state. The expected state is Running or Shutted.
403	InvalidInstanceId.NotBelong	The specified instance is not belong to you.	The error message returned because the specified instance does not exist under your account.
403	QuotaExceeded	The link quota exceeded in this vpc.	The error message returned because the maximum number of links that can be created in the specified VPC has been reached.
403	InvalidStatus.InstanceLocked	The specified instance is locked,please wait more.	The error message returned because the specified instance is locked. Try again when the instance is unlocked.
403	InvalidInstanceId.LimitedRegion	The specified instance does not support this operation due to the limitation of its region.	The error message returned because a ClassicLink connection cannot be created for the instance due to the region limit.
403	Forbidden.SubUser	User not authorized to operate on the specified resource.	The error message returned because a RAM user is not authorized to perform operations on this resource.

16.5. DetachClassicLinkVpc

You can call this operation to cancel the connection between a classic network-type instance and its linked VPC (ClassicLink). After the ClassicLink is canceled, the classic network-type instance cannot access the VPC.

Debugging

OpenAPI Explorer automatically calculates the signature value. For your convenience, we recommend that you call this operation in OpenAPI Explorer. OpenAPI Explorer dynamically generates the sample code of the operation for different SDKs.

Request Parameters

Parameter	Type	Required	Example	Description
InstanceId	String	Yes	i-test	The ID of the classic network-type instance.
RegionId	String	Yes	cn-hangzhou	The region ID of the instance. You can call the DescribeRegions operation to query the most recent region list.
VpcId	String	Yes	vpc-test	The ID of the VPC to which the instance is connected.
Action	String	Yes	DetachClassicLinkVpc	The operation that you want to perform. Set the value to DetachClassicLinkVpc.

Response parameters

Parameter	Type	Example	Description
RequestId	String	473469C7-AA6F-4DC5-B3DB-A3DC0DE3C83E	The ID of the request.

Examples

Sample requests

```
https://ecs.aliyuncs.com/?Action=DetachClassicLinkVpc
&RegionId=cn-hangzhou
&VpcId=vpc-test
&InstanceId=i-test
&<Common request parameters>
```

Sample success responses

XML format

```
<DetachClassicLinkVpcResponse>
  <RequestId>C0003E8B-B930-4F59-ADC0-0E209A9012A8</RequestId>
</DetachClassicLinkVpcResponse>
```

JSON format

```
{
  "RequestId": "C0003E8B-B930-4F59-ADC0-0E209A9012A8"
}
```

Error codes

HTTP status code	Error code	Error message	Description
403	InvalidInstanceId.NotFound	The InstanceId provided does not exist in our records.	The error message returned because the specified InstanceId parameter does not exist.
403	InvalidRegionId.Malformed	The specified parameter ? RegionId? is not valid.	The error message returned because the specified RegionId parameter is invalid.
403	InvalidVpcId.Malformed	The specified parameter ? VpcId? is not valid.	The error message returned because the specified VpcId parameter is invalid.
403	InvalidInstanceId.MalFormed	The specified instance is not a classic network instance.	The error returned because the specified instance is not in the classic network.
403	OperationDenied	The instances are not allowed to detach from the linked vpc.	The error message returned because the instance cannot be disconnected from the VPC.
403	InvalidParameter.InvalidInstanceIdAndVpcId	The parameter InstanceId and VpcId are not allowed to be empty at the same time.	The error message returned because the InstanceId and VpcId parameters cannot be empty at the same time.
403	InvalidInstanceId.NotFound	The specified instance does not exist.	The error message returned because the specified InstanceId parameter does not exist.
403	InvalidStatus.InstanceStatus	The specified instance status is not support this operation ,expect status is running or shutted.	The error message returned because the operation is not supported while the instance is in the current state. The expected state is Running or Shutted.
403	InvalidInstanceId.NotBelong	The specified instance is not belong to you.	The error message returned because the specified instance does not exist in your account.
403	Forbidden.SubUser	User not authorized to operate on the specified resource.	The error message returned because the RAM user is not authorized to perform operations on this resource.

16.6. DescribeBandwidthLimitation

You can call this operation to query the maximum public bandwidth that can be purchased, upgraded, or downgraded for various instance types.

Debugging

OpenAPI Explorer automatically calculates the signature value. For your convenience, we recommend that you call this operation in OpenAPI Explorer. OpenAPI Explorer dynamically generates the sample code of the operation for different SDKs.

Request parameters

Parameter	Type	Required	Example	Description
Action	String	Yes	DescribeBandwidthLimitation	The operation that you want to perform. Set the value to DescribeBandwidthLimitation.

Parameter	Type	Required	Example	Description
RegionId	String	Yes	cn-hangzhou	The ID of the region. You can call the DescribeRegions operation to query the most recent region list.
InstanceType	String	Yes	ecs.g5.large	The instance type. For more information about the values, see Instance families .  Note This parameter is required.
InstanceChargeType	String	No	PrePaid	The billing method of the instance. For more information, see Billing overview . Valid values: - PrePaid: subscription - PostPaid: pay-as-you-go Default value: PostPaid.
SpotStrategy	String	No	NoSpot	The preemption policy of the preemptible instance. Valid values: - NoSpot: applies to regular pay-as-you-go instances. - SpotWithPriceLimit: applies to preemptible instances with user-defined maximum hourly prices. - SpotAsPriceGo: applies to preemptible instances priced at the market price at the time of purchase. Default value: NoSpot.  Note The SpotStrategy parameter takes effect only when the InstanceChargeType parameter is set to PostPaid.
ResourceId	String	No	i-bp67acfmxazb4ph***	The ID of the resource.  Note When you set the OperationType parameter to Upgrade or Downgrade, the ResourceId parameter is required.
OperationType	String	No	Upgrade	Specifies the specification limit of public bandwidth under different operations. Valid values: - Upgrade: upgrades the public bandwidth. - Downgrade: downgrades the public bandwidth. - Create: creates an ECS instance. Default value: Create.

Response parameters

Parameter	Type	Example	Description
RequestId	String	473469C7-AA6F-4DC5-B3DB-A3DC0DE3C83E	The ID of the request.
Bandwidths	Array		An array consisting of Bandwidth data.
InternetChargeType	String	PayByTraffic	The billing method of the public bandwidth. Valid values: - PayByBandwidth - PayByTraffic
Min	Integer	0	The minimum public bandwidth.
Max	Integer	100	The maximum public bandwidth.
Unit	String	Mbps	The unit of the public bandwidth.

Examples

Sample requests

```
https://ecs.aliyuncs.com/?Action=DescribeBandwidthLimitation
&RegionId=cn-hangzhou
&InstanceType=ecs.g5.large
&<Common request parameters>
```

Sample success responses

XML format

```
<DescribeBandwidthLimitationResponse>
  <Bandwidths>
    <Bandwidth>
      <Max>100</Max>
      <InternetChargeType>PayByBandwidth</InternetChargeType>
      <Unit>Mbps</Unit>
      <Min>0</Min>
    </Bandwidth>
    <Bandwidth>
      <Max>100</Max>
      <InternetChargeType>PayByTraffic</InternetChargeType>
      <Unit>Mbps</Unit>
      <Min>0</Min>
    </Bandwidth>
  </Bandwidths>
  <RequestId>226CB38E-29E3-423E-85DD-DCD1C99832B0</RequestId>
</DescribeBandwidthLimitationResponse>
```

JSON format

```
{
  "Bandwidths": {
    "Bandwidth": [
      {
        "Max": 100,
        "InternetChargeType": "PayByBandwidth",
        "Unit": "Mbps",
        "Min": 0
      },
      {
        "Max": 100,
        "InternetChargeType": "PayByTraffic",
        "Unit": "Mbps",
        "Min": 0
      }
    ]
  },
  "RequestId": "226CB38E-29E3-423E-85DD-DCD1C99832B0"
}
```

Error codes

HTTP status code	Error code	Error message	Description
400	Invalid.InstanceChargeType	The specified InstanceChargeType is not valid.	The error message returned because the specified InstanceChargeType parameter is invalid.
404	Invalid.NetworkCategory	The specified NetworkCategory is not valid.	The error message returned because the specified NetworkCategory parameter is invalid.
404	Invalid.SpotStrategy	The specified SpotStrategy is not valid.	The error message returned because the specified SpotStrategy parameter is invalid.
404	Invalid.IoOptimized	The specified IoOptimized is not valid.	The error message returned because the specified IoOptimized parameter is invalid.
404	Invalid.ResourceId	The specified ResourceId is not valid.	The error message returned because the specified ResourceId parameter is invalid.
404	Invalid.InstancePayType	The specified InstancePayType is not valid.	The error message returned because the specified InstanceChargeType parameter is invalid.

16.7. DescribeClassicLinkInstances

You can call this operation to query one or more classic network-type instances that are connected with VPCs.

Description

When you call this operation, take note of the following items:

- This operation applies only to instances in the classic network.
- You can query a maximum of 100 classic network-type instances at a time.

- At least one of `VpcId` and `InstanceId` must be specified.

Debugging

OpenAPI Explorer automatically calculates the signature value. For your convenience, we recommend that you call this operation in OpenAPI Explorer. OpenAPI Explorer dynamically generates the sample code of the operation for different SDKs.

Request parameters

Parameter	Type	Required	Example	Description
Action	String	Yes	DescribeClassicLinkInstances	The operation that you want to perform. Set the value to DescribeClassicLinkInstances.
RegionId	String	Yes	cn-hangzhou	The region ID of the instance. You can call the DescribeRegions operation to query the most recent region list.
VpcId	String	No	vpc-bp1vwnn14rpyiczj***	The ID of the VPC. The ClassicLink feature must be enabled for the specified VPC. For more information, see Establish a ClassicLink connection .
InstanceId	String	No	i-bp1a5zr3u7nq9cxh***	The ID of the instance. You can specify a maximum of 100 instance IDs in a single request. Separate multiple IDs with commas (,).
PageNumber	String	No	1	The number of the page to return. Pages start from page 1. Default value: 1
PageSize	String	No	10	The number of entries to return on each page. Valid values: 1 to 100. Default value: 10

Response parameters

Parameter	Type	Example	Description
Links	Array of Link		The details about the ClassicLink connections between the classic network-type instances and the VPC.
Link			
InstanceId	String	i-test	The ID of the instance.
VpcId	String	vpc-test	The ID of the VPC.
PageNumber	Integer	1	The page number of the returned page.
PageSize	Integer	10	The number of entries returned per page.

Parameter	Type	Example	Description
RequestId	String	473469C7-AA6F-4DC5-B3DB-A3DC0DE3C83E	The ID of the request.
TotalCount	Integer	2	The total number of connections.

Examples

Sample requests

```
https://ecs.aliyuncs.com/?Action=DescribeClassicLinkInstances
&RegionId=cn-hangzhou
&VpcId=vpc-bp1vwnn14rpyiczj****
&InstanceId=i-bp1a5zr3u7nq9cxh****
&<Common request parameters>
```

Sample success responses

XML format

```
<DescribeClassicLinkInstancesResponse>
  <PageNumber>1</PageNumber>
  <Links>
    <Link>
      <InstanceId>i-bp1a5zr3u7nq9cxh****</InstanceId>
      <VpcId>vpc-bp1vwnn14rpyiczj****</VpcId>
    </Link>
    <Link>
      <InstanceId>i-bp1a5zr3u7nq9abc****</InstanceId>
      <VpcId>vpc-bp1vwnn14rpyiczj****</VpcId>
    </Link>
  </Links>
  <TotalCount>2</TotalCount>
  <PageSize>10</PageSize>
  <RequestId>B154D309-F3E1-4AB7-BA94-FEFC8B89001</RequestId>
</DescribeClassicLinkInstancesResponse>
```

JSON format

```
{
  "PageNumber":1,
  "Links":{
    "Link":[{"
      "InstanceId":"i-bp1a5zr3u7nq9cxh****",
      "VpcId":"vpc-bp1vwnn14rqpysz****"
    },
    {
      "InstanceId": "i-bp1a5zr3u7nq9abc****",
      "VpcId": "vpc-bp1vwnn14rqpysz****"
    }
  ],
  "TotalCount":2,
  "PageSize":10,
  "RequestId":"B154D309-F3E1-4AB7-BA94-FEFC8B89001"
}
```

Error codes

HTTP status code	Error code	Error message	Description
403	InvalidInstanceId.NotFound	The InstanceId provided does not exist in our records.	The error message returned because the specified instance does not exist. Check whether the instance ID is correct.
403	InvalidParameter.ToManyInstanceIds	No more than 100 InstanceIds can be specified.	The error message returned because the maximum number of instance IDs that can be specified has been reached.
403	InvalidParameter.InvalidInstanceIdAndVpcId	The parameter InstanceId and VpcId are not allowed to be empty at the same time.	The error message returned because the InstanceId and VpcId parameters cannot be empty at the same time.
403	InvalidInstanceId.NotBelong	The specified instance is not belong to you.	The error message returned because the specified instance does not exist in your account.
403	InvalidVpc.NotBelong	The specified vpc is not belong to you.	The error message returned because the specified VPC does not exist in your account.

16.8. ModifyInstanceNetworkSpec

You can call this operation to modify the bandwidth configurations of an instance. You can modify the bandwidth configurations of an instance to improve network performance if necessary.

Description

When you call this operation, take note of the following points:

- When you modify the bandwidth configurations of a subscription (PrePaid) instance, you can perform the following operations:
 - You can upgrade or downgrade the bandwidth billed in the pay-by-traffic (PayByTraffic) method. You can only upgrade the bandwidth billed in the pay-by-bandwidth (PayByBandwidth) method.
 - When you upgrade the outbound public bandwidth (`InternetMaxBandwidthOut`) from 0 Mbit/s, a public IP address will be assigned to the instance.

- You can call the `ModifyInstanceNetworkSpec` operation to change the bandwidth billing method from pay-by-traffic (`PayByTraffic`) to pay-by-bandwidth (`PayByBandwidth`).
 - You can use only the [ECS console](#) to change the bandwidth billing method from pay-by-bandwidth (`PayByBandwidth`) to pay-by-traffic (`PayByTraffic`).
- When you modify the bandwidth configurations of a pay-as-you-go (`PostPaid`) instance, you can perform the following operations:
 - You can upgrade or downgrade the bandwidth.
 - When the outbound public bandwidth is upgraded from 0 Mbit/s, no public IP address is allocated. You must call the [AllocatePublicIpAddress](#) operation to allocate a public IP address to the instance.
 - You can change the bandwidth billing method from pay-by-traffic (`PayByTraffic`) to pay-by-bandwidth (`PayByBandwidth`).
 - You can change the bandwidth billing method from pay-by-bandwidth (`PayByBandwidth`) to pay-by-traffic (`PayByTraffic`).
- For an instance in the classic network, when the outbound public bandwidth (`InternetMaxBandwidthOut`) is upgraded from 0 Mbit/s, the instance must be in the `Stopped` state.
- After the bandwidth is upgraded, `AutoPay` is set to `true` by default. Make sure that your account has sufficient balance. Otherwise, your order becomes invalid and you have to cancel this order. If your account balance is insufficient, you can set the `AutoPay` parameter to `false` to generate an unpaid order. Then, you can log on to the ECS console to pay for the order.
- You can downgrade the public bandwidth of each subscription instance for a maximum of three times. Therefore, a maximum of three refunds for price difference can be made.
- The price difference will be refunded to the payment account you used. Used coupons cannot be refunded.
- Each time a modification of bandwidth configurations succeeds, you cannot modify the bandwidth of the instance within five minutes.

Debugging

OpenAPI Explorer automatically calculates the signature value. For your convenience, we recommend that you call this operation in OpenAPI Explorer. OpenAPI Explorer dynamically generates the sample code of the operation for different SDKs.

Request parameters

Parameter	Type	Required	Example	Description
Action	String	Yes	ModifyInstanceNetworkSpec	The operation that you want to perform. Set the value to <code>ModifyInstanceNetworkSpec</code> .
InstanceId	String	Yes	i-bp67acfmazb4ph***	The ID of the instance for which you want to modify network configurations.
InternetMaxBandwidthOut	Integer	No	10	The maximum outbound public bandwidth. Unit: Mbit/s. Valid values: 0 to 100.
InternetMaxBandwidthIn	Integer	No	10	The maximum inbound public bandwidth. Unit: Mbit/s. Valid values: - If the purchased outbound bandwidth is less than 10 Mbit/s, valid values are 1 to 10. Default value: 10. - If the purchased outbound bandwidth is greater than 10 Mbit/s, valid values are 1 to the value of <code>InternetMaxBandwidthOut</code>. Default value: the value of <code>InternetMaxBandwidthOut</code>.

Parameter	Type	Required	Example	Description
NetworkChargeType	String	No	PayByTraffic	The billing method for network usage. Valid values: - PayByBandwidth - PayByTraffic
AllocatePublicIp	Boolean	No	false	Specifies whether to allocate a public IP address. Default value: false.
StartTime	String	No	2017-12-05T22:40Z	The start time of the temporary bandwidth upgrade. Specify the time in the ISO 8601 standard in the yyyy-MM-ddThh:mmZ format. The time must be in UTC and accurate to minutes (mm).
EndTime	String	No	2017-12-06T22Z	The end time of the temporary bandwidth upgrade. Specify the time in the ISO 8601 standard in the yyyy-MM-ddThhZ format. The time must be in UTC and accurate to hours (hh).
AutoPay	Boolean	No	true	Specifies whether to enable automatic payment. Valid values: - true: After the bandwidth is upgraded, the payment is automatically made. Make sure that your account has sufficient balance when you set Autopay to true. If your account has insufficient balance, your order cannot be paid in the ECS console and becomes invalid. You have to cancel it. - false: After the bandwidth is upgraded, an order is generated but it is not paid. If your account balance is insufficient, you can set AutoPay to false to generate an unpaid order. Then, you can log on to the ECS console to pay for the order. Default value: true.
ClientToken	String	No	123e4567-e89b-12d3-a456-426655440000	The client token that is used to ensure the idempotence of the request. You can use the client to generate the value, but you must ensure that it is unique among different requests. The ClientToken value can only contain ASCII characters and cannot exceed 64 characters in length. For more information, see How to ensure idempotence .

Response parameters

Parameter	Type	Example	Description
RequestId	String	473469C7-AA6F-4DC5-B3DB-A3DC0DE3C83E	The ID of the request.
OrderId	String	111111111111111111111111110	The ID of the generated order.

Examples

Sample requests

```
https://ecs.aliyuncs.com/?Action=ModifyInstanceNetworkSpec
&InstanceId=i-bp67acfmazb4ph***
&InternetMaxBandwidthOut=10
&ClientToken=123e4567-e89b-12d3-a456-426655440000
&<Common request parameters>
```

Sample success responses

XML format

```
<ModifyInstanceNetworkSpecResponse>
  <RequestId>04F0F334-1335-436C-A1D7-6C044FE73368</RequestId>
  <OrderId>11111111111111111111111111111110</OrderId>
</ModifyInstanceNetworkSpecResponse>
```

JSON format

```
{
  "RequestId": "04F0F334-1335-436C-A1D7-6C044FE73368",
  "OrderId": "11111111111111111111111111111110"
}
```

Error codes

HTTP status code	Error code	Error message	Description
404	InvalidInstanceId.NotFound	The specified InstanceId does not exist.	The error message returned because the specified InstanceId parameter does not exist. Check whether the instance ID is correct.
400	InvalidInternetMaxBandwidthIn.ValueNotSupported	The specified InternetMaxBandwidthIn is beyond the permitted range.	The error message returned because the specified value of the InternetMaxBandwidthIn parameter is not within the permitted range.
400	InvalidInternetMaxBandwidthOut.ValueNotSupported	The specified InternetMaxBandwidthOut is beyond the permitted range.	The error message returned because the specified value of the InternetMaxBandwidthOut parameter is not within the permitted range.
403	IncorrectInstanceStatus	The current status of the instance does not support this operation.	The error message returned because this operation is not supported while the instance is in the current state.
403	InstanceLockedForSecurity	The specified operation is denied as your instance is locked for security reasons.	The error message returned because the operation is not supported while the instance is locked for security reasons.
403	InstanceExpiredOrInArrears	The specified operation is denied as your prepay instance is expired (prepay mode) or in arrears (afterpay mode).	The error message returned because the subscription of the instance has expired. Renew the instance and try again.

HTTP status code	Error code	Error message	Description
500	InternalServerError	The request processing has failed due to some unknown error.	The error message returned because an internal error has occurred. Try again later. If the problem persists, submit a ticket.
403	ChargeTypeViolation	The operation is not permitted due to billing method of the instance.	The error message returned because this operation is not supported by the billing method.
403	OperationDenied	The operation is denied due to the instance is PrePaid.	The error message returned because the instance is a subscription instance.
400	OperationDenied	Specified instance is in VPC.	The error message returned because the specified instance is in a VPC.
400	InvalidParameter.Bandwidth	%s	The error message returned because the specified Bandwidth parameter is invalid.
400	InvalidParameter.Conflict	%s	The error message returned because the specified parameter is invalid. Check whether the parameter conflicts with other parameters.
400	InvalidStartTime.ValueNotSupported	%s	The error message returned because the end time is earlier than the start time.
400	Account.Arrearage	Your account has an outstanding payment.	The error message returned because your account has an overdue payment.
400	InvalidInternetChargeType.ValueNotSupported	The specified InternetChargeType is invalid.	The error message returned because the specified InstanceChargeType parameter is invalid.
400	DecreasedBandwidthNotAllowed	%s	The error message returned because the bandwidth cannot be downgraded.
400	BandwidthUpgradeDenied.EipBoundInstance	The specified VPC instance has bound EIP, temporary bandwidth upgrade is denied.	The error message returned because the instance is associated with an EIP and the instance bandwidth cannot be temporarily upgraded.
400	InvalidClientToken.ValueNotSupported	The ClientToken provided is invalid.	The error message returned because the specified ClientToken parameter is invalid.
403	InvalidAccountStatus.NoEnoughBalance	Your account does not have enough balance.	The error message returned because your account balance is insufficient. You must top up your account before proceeding.
403	InvalidInstance.UnPaidOrder	The specified Instance has unpaid order.	The error message returned because you have unpaid orders for the specified instance. Pay for the orders and try again.
400	Throttling	Request was denied due to request throttling, please try again after 5 minutes.	The error message returned because your current request is denied due to throttling. Try again five minutes later.
400	InvalidAction	Specified action is not valid.	The error message returned because this operation is invalid.

HTTP status code	Error code	Error message	Description
400	IpAllocationError	Allocate public ip failed.	The error message returned because the allocation of public IP addresses fails.
400	InvalidParam.AllocatePublicIp	The specified param AllocatePublicIp is invalid.	The error message returned because the specified AllocatePublicIp parameter is invalid.
400	InstanceDowngrade.QuotaExceed	Quota of instance downgrade is exceed.	The error message returned because the quota of the instance downgrade is exceeded and the operation is denied.
400	InvalidBandwidth.ValueNotSupported	Instance upgrade bandwidth of temporary not allow less then existed.	The error message returned because the target bandwidth for the temporary upgrade is lower than the current bandwidth.
403	InvalidInstance.InstanceNotSupported	The special vpc instance with eip not need bandwidth.	The error message returned because the VPC-type instance is associated with an EIP and you cannot specify the public bandwidth for the instance.
400	InvalidInstanceStatus	The specified instance status does not support this action.	The error message returned because this operation is not supported while the instance is in the current state.
403	InvalidInstanceStatus	The current status of the instance does not support this operation.	The error message returned because this operation is not supported while the instance is in the current state.
400	InvalidInstance.UnPaidOrder	Unpaid order exists in your account, please complete or cancel the payment in the expense center.	The error message returned because you have unpaid orders in your account. Pay for the orders and try again.
400	OperationDenied	After downgrade, you cannot upgrade or downgrade your instances again in the remaining time of the current billing cycle.	The error message returned because you cannot upgrade or downgrade your instance specifications after the downgrade until a new billing cycle begins.
400	InvalidInternetChargeType.ValueNotSupported	%s	The error message returned because the specified InternetChargeType parameter is invalid.
400	LastOrderProcessing	The previous order is still processing, please try again later.	The error message returned because the previous order is being processed. Try again later.
400	OperationDenied	The current user does not support this operation.	The error message returned because your account does not support this operation.
403	NAT_PUBLIC_IP_BINDING_FAILED	Binding nat public ip failed	The error message returned because the public IP address failed to be bound to the gateway.
403	InvalidInstance.EipNotSupport	The specified instance with eip is not supported, please unassociate eip first.	The error message returned because the operation is not supported while an EIP is associated with this instance. Disassociate the EIP first.
403	InvalidNetworkType.ValueNotSupported	The specified parameter NetworkType is not valid.	The error message returned because the specified network type is invalid.

HTTP status code	Error code	Error message	Description
500	InternalServerError	The request processing has failed due to some unknown error, exception or failure.	The error message returned because an internal error has occurred. Try again later. If the problem persists, submit a ticket.

17.Elastic network interfaces

17.1. CreateNetworkInterface

You can call this operation to create an Elastic Network Interface (ENI).

Description

- The newly created ENI is in the Available state.
- An ENI can be attached only to a VPC-type instance that is in the same zone as the ENI.
- An ENI can be attached only to one instance. Before attaching an ENI to another instance, you must detach the ENI from the current instance.
- When an ENI is attached to another instance, its properties remain unchanged and the data traffic is redirected to the new instance.
- By default, an Alibaba Cloud account can create a maximum of 100 ENIs in a region. You can submit a ticket to apply for a higher quota.

Debugging

OpenAPI Explorer automatically calculates the signature value. For your convenience, we recommend that you call this operation in OpenAPI Explorer. OpenAPI Explorer dynamically generates the sample code of the operation for different SDKs.

Request parameters

Parameter	Type	Required	Example	Description
Action	String	Yes	CreateNetworkInterface	The operation that you want to perform. Set the value to CreateNetworkInterface.
RegionId	String	Yes	cn-hangzhou	The ID of the region where the instance resides. You can call the DescribeRegions operation to query the most recent region list.
VSwitchId	String	Yes	vsw-bp1s5fnvk4gn2tws03***	The ID of the VSwitch in the specified VPC.
Tag.N.Key	String	No	test	The key of tag N that is bound to the ENI. Valid values of N: 1 to 20. It cannot be an empty string. It can be up to 128 characters in length and cannot start with acs: or aliyun. It cannot contain http:// or https://.
Tag.N.Value	String	No	api	The value of tag N that is bound to the ENI. Valid values of N: 1 to 20. It can be an empty string. It can be up to 128 characters in length and cannot start with acs: or aliyun. It cannot contain http:// or https://.
ResourceGroupId	String	No	rg-bp67acfmazb4ph***	The ID of the resource group.
PrimaryIpAddress	String	No	172.17.**.***	The primary private IP address of the ENI. The specified IP address must be available within the CIDR block of the VSwitch. If this parameter is not specified, an available IP address in the VSwitch CIDR block is assigned at random.

Parameter	Type	Required	Example	Description
SecurityGroupId	String	No	sg-bp1fg655nh68xyz9i***	The ID of the security group. The security group and the ENI must belong to the same VPC.
SecurityGroupIds.N	RepeatList	No	sg-bp1fg655nh68xyz9i***	The ID of security group N. The security groups and the ENI must belong to the same VPC. The valid values of N are based on the maximum number of security groups to which an ENI can be added. For more information, see Limits.  Note You cannot specify both <code>SecurityGroupId</code> and <code>SecurityGroupIds.N</code> at the same time.
NetworkInterfaceName	String	No	eni-eniname1	The name of the ENI. The name must be 2 to 128 characters in length. It must start with a letter and cannot start with <code>http://</code> or <code>https://</code>. It can contain letters, digits, colons (:), underscores (_), and hyphens (-). This parameter is empty by default.
Description	String	No	test	The description of the ENI. The description must be 2 to 256 characters in length and cannot start with <code>http://</code> or <code>https://</code>. This parameter is empty by default.
PrivateIpAddress.N	RepeatList	No	172.***.***.177	Specifies secondary private IP address N of the ENI. This IP address must be an available IP address in the CIDR block of the VSwitch to which the ENI belongs. Valid values of N: <code>[0,10]</code>.  Note You cannot specify both <code>PrivateIpAddress.N</code> and <code>SecondaryPrivateIpAddressCount</code> at the same time.
SecondaryPrivateIpAddressCount	Integer	No	1	The number of private IP addresses that can be created automatically by ECS.
ClientToken	String	No	123e4567-e89b-12d3-a456-426655440000	The client token that is used to ensure the idempotence of the request. You can use your client to generate a value of the parameter, but you must ensure that it is unique among different requests. The <code>ClientToken</code> parameter can only contain ASCII characters and cannot exceed 64 characters in length. For more information, see How to ensure idempotence.

Response parameters

Parameter	Type	Example	Description
RequestId	String	473469C7-AA6F-4DC5-B3DB-A3DC0DE3C83E	The ID of the request.
NetworkInterfaceId	String	eni-bp14v2sdd3v8htlnm***	The ID of the ENI.

Examples

Sample requests

```
https://ecs.aliyuncs.com/?Action=CreateNetworkInterface
&RegionId=cn-hangzhou
&SecurityGroupIds.1=sg-bp1fg655nh68xyz9i***
&SecurityGroupIds.2=sg-bp67acfmazb4ph***
&VSwitchId=vsw-bp1s5fnvk4gn2tws03***
&Tag.1.Key=test
&Tag.1.Value=api
&ResourceGroupId=rg-bp67acfmazb4ph***
&PrimaryIpAddress=172.17. **. ***
&NetworkInterfaceName=eni-eniname1
&Description=test
&ClientToken=123e4567-e89b-12d3-a456-426655440000
&<Common request parameters>
```

Sample success responses

XML format

```
<CreateNetworkInterfaceResponse>
  <RequestId>04F0F334-1335-436C-A1D7-6C044FExxxxx</RequestId>
  <NetworkInterfaceId>eni-bp14v2sdd3v8htlnm***</NetworkInterfaceId>
</CreateNetworkInterfaceResponse>
```

JSON format

```
{
  "RequestId": "04F0F334-1335-436C-A1D7-6C044FExxxxx",
  "NetworkInterfaceId": "eni-bp14v2sdd3v8htlnm***"
}
```

Error codes

HTTP status code	Error code	Error message	Description
403	InvalidUserType.NotSupported	%s	The error message returned because the current account does not support this operation.
403	Abs.InvalidAccount.NotFound	%s	The error message returned because your Alibaba Cloud account does not exist or your AccessKey pair has expired.

HTTP status code	Error code	Error message	Description
400	MissingParameter	%s	The error message returned because a required parameter is not specified.
403	Forbidden.NotSupportRAM	%s	The error message returned because RAM users are not allowed to perform this operation.
400	UnsupportedParameter	%s	The error message returned because a specific parameter is not supported.
403	Forbidden.SubUser	%s	The error message returned because you are not authorized to perform operations on this resource. Contact the owner of the Alibaba Cloud account for authorization.
400	InvalidParameter	%s	The error message returned because the specified parameter is invalid.
400	InvalidInstanceId.Malformed	%s	The error message returned because the InstanceId parameter value is invalid.
400	InvalidOperation.InvalidEcsState	%s	The error message returned because the operation is not supported while the instance is in the current state.
400	InvalidOperation.InvalidEniState	%s	The error message returned because the operation is not supported while the ENI is in the current state.
400	InvalidOperation.DetachPrimaryEniNotAllowed	%s	The error message returned because the primary ENI is detached from the instance.
404	InvalidEcsId.NotFound	%s	The error message returned because the specified instance ID does not exist.
404	InvalidEniId.NotFound	%s	The error message returned because the specified ENI ID does not exist.
404	InvalidVSwitchId.NotFound	%s	The error message returned because the specified VSwitch ID does not exist.
404	InvalidSecurityGroupId.NotFound	%s	The error message returned because the specified security group ID does not exist.
403	MaxEniCountExceeded	%s	The error message returned because the maximum number of ENIs that can be managed has been reached.
403	EniPerInstanceLimitExceeded	%s	The error message returned because the maximum number of ENIs that can be attached to an instance has been reached.
403	InvalidOperation.AvailabilityZoneMismatch	%s	The error message returned because this operation is invalid.

HTTP status code	Error code	Error message	Description
403	InvalidOperation.VpcMismatch	%s	The error message returned because this operation is invalid. Check whether the VPC in the operation corresponds to other parameters.
403	SecurityGroupInstanceLimitExceed	%s	The error message returned because the maximum number of instances in the specified security group has been reached.
403	InvalidSecurityGroupId.NotVpc	%s	The error message returned because the SecurityGroupId parameter value is invalid and the network type of the security group is not VPC.
403	InvalidOperation.InvalidEniType	%s	The error message returned because the current ENI type does not support this operation.
403	InvalidVSwitchId.IpNotEnough	%s	The error message returned because IP addresses in the specified VSwitch are insufficient.
403	InvalidVSwitchId.IpInvalid	%s	The error message returned because the specified private IP address is invalid.
400	Forbidden.RegionId	%s	The error message returned because the service is unavailable in the current region.
404	InvalidResourceGroup.NotFound	The ResourceGroup provided does not exist in our records.	The error message returned because the resource group does not exist.
400	Duplicate.TagKey	The Tag.N.Key contain duplicate key.	The error message returned because a tag with the identical key already exists.
400	InvalidTagKey.Malformed	The specified Tag.n.Key is not valid.	The error message returned because the specified Tag.N.Key parameter is invalid.
400	InvalidTagValue.Malformed	The specified Tag.n.Value is not valid.	The error message returned because the specified Tag.N.Value parameter is invalid.
403	QuotaExceed.Tags	%s	The error message returned because the maximum number of tags has been reached.
403	InvalidIp.Address	%s	The error message returned because the specified IPv6 address is invalid.
403	InvalidIp.IpRepeated	%s	The error message returned because the specified IP address already exists.
400	InvalidPrivateIpAddress.Duplicated	Specified private IP address is duplicated.	The error message returned because the specified private IP address is already in use. Try another IP address.

17.2. AttachNetworkInterface

You can call this operation to attach an Elastic Network Interface (ENI) to an ECS instance in a VPC.

Description

When you call this operation, make sure that the following requirements are met:

- The ENI must be in the **Available** (`Available`) state. An ENI can be attached to only one instance.
- The instance must be in the **Running** (`Running`) or **Stopped** (`Stopped`) state. When you attach ENIs to instances that use specific instance types, the instances must be in the **Stopped** (`Stopped`) state. For more information, see [Shared instance families](#) and [Burstable instance overview](#).

 **Note** If the last time when an instance was started is before April 1, 2018 (including the time when a newly purchased instance was started, the time when an instance was restarted, and the time when an instance was reactivated) and the instance stays in the Running state, you must call the `RebootInstance` operation to restart the instance. Otherwise, ENIs cannot be attached to the instance.

- An instance can be attached with multiple ENIs. For more information about the maximum number of ENIs that can be attached to each instance type, see [Elastic Network Interface](#).
- The instance must be in the same zone and the same VPC as the VSwitch to which the ENI belongs.

Debugging

OpenAPI Explorer automatically calculates the signature value. For your convenience, we recommend that you call this operation in OpenAPI Explorer. OpenAPI Explorer dynamically generates the sample code of the operation for different SDKs.

Request parameters

Parameter	Type	Required	Example	Description
Action	String	Yes	AttachNetworkInterface	The operation that you want to perform. Set the value to <code>AttachNetworkInterface</code> .
InstanceId	String	Yes	i-bp16qstyvxj9gpqw***	The ID of the instance.
NetworkInterfaceId	String	Yes	eni-bp17pdijfczax1huji***	The ID of the ENI.
RegionId	String	Yes	cn-hangzhou	The region ID of the instance. You can call the DescribeRegions operation to query the most recent region list.

Response parameters

Parameter	Type	Example	Description
RequestId	String	473469C7-AA6F-4DC5-B3DB-A3DC0DE3C83E	The ID of the request.

Examples

Sample requests

```
https://ecs.aliyuncs.com/?Action=AttachNetworkInterface
&RegionId=cn-hangzhou
&InstanceId=i-bp16qstyvxj9gpqw****
&NetworkInterfaceId=eni-bp17pdijfczax1huji****
&<Common request parameters>
```

Sample success responses

XML format

```
<AttachNetworkInterfaceResponse>
  <RequestId>473469C7-AA6F-4DC5-B3DB-A3DC0DE3C83E</RequestId>
</AttachNetworkInterfaceResponse>
```

JSON format

```
{
  "RequestId": "473469C7-AA6F-4DC5-B3DB-A3DC0DE3C83E"
}
```

Error codes

HTTP status code	Error code	Error message	Description
403	InvalidUserType.NotSupported	%s	The error message returned because the specified account does not support this operation.
403	Abs.InvalidAccount.NotFound	%s	The error message returned because your Alibaba Cloud account does not exist or your AccessKey pair has expired.
400	MissingParameter	%s	The error message returned because a required parameter is not specified.
403	Forbidden.NotSupportRAM	%s	The error message returned because RAM users are not allowed to perform this operation.
400	UnsupportedParameter	%s	The error message returned because the specified parameter is not supported.
403	Forbidden.SubUser	%s	The error message returned because your account has no permission on this resource. Apply for permissions to the Alibaba Cloud account.
400	InvalidParameter	%s	The error message returned because the specified parameter is invalid.
400	InvalidInstanceId.Malformed	%s	The error message returned because the specified InstanceId parameter is invalid.
400	InvalidOperation.InvalidRegion	%s	The error message returned because the specified RegionId parameter is invalid.
400	InvalidOperation.InvalidEcsState	%s	The error message returned because the operation is not supported while the instance is in the current state.
400	InvalidOperation.InvalidEniState	%s	The error message returned because the operation is not supported while the ENI is in the current state.
400	InvalidOperation.DetachPrimaryEniNotAllowed	%s	The error message returned because the primary ENI cannot be detached from the instance.

HTTP status code	Error code	Error message	Description
404	InvalidEcsId.NotFound	%s	The error message returned because the specified instance ID does not exist.
404	InvalidEniId.NotFound	%s	The error message returned because the specified ENI ID does not exist.
404	InvalidVSwitchId.NotFound	%s	The error message returned because the specified VSwitch ID does not exist.
404	InvalidSecurityGroupId.NotFound	%s	The error message returned because the specified security group ID does not exist.
403	MaxEniCountExceeded	%s	The error message returned because the number of ENIs that can be attached exceeds the upper limit.
403	EniPerInstanceLimitExceeded	%s	The error message returned because the number of ENIs that can be attached to the specified instance exceeds the upper limit.
403	InvalidOperation.AvailabilityZoneMismatch	%s	The error message returned because this operation is invalid.
403	InvalidOperation.VpcMismatch	%s	The error message returned because your operation is invalid. Check whether the VPC in the operation matches other parameters.
403	SecurityGroupInstanceLimitExceed	%s	The error message returned because the number of instances in the specified security group exceeds the upper limit.
403	InvalidSecurityGroupId.NotVpc	%s	The error message returned because the specified SecurityGroupId parameter is invalid and the network type of the security group is not VPC.
403	InvalidOperation.InvalidEniType	%s	The error message returned because the current ENI type does not support the operation.
400	Forbidden.RegionId	%s	The error message returned because the service is not available in the current region.
403	InvalidInstanceId.NotFound	%s	The error message returned because the specified instance does not exist. Check the value of the InstanceId parameter.
400	InvalidOperation.InvalidGeneration	%s	The error message returned because this operation is invalid.
400	InvalidParams.EniId	%s	The error message returned because the specified EniId parameter is invalid.
403	InvalidOperation.Ipv4CountExceeded	%s	The error message returned because the number of IPv4 addresses exceeds the upper limit.

HTTP status code	Error code	Error message	Description
403	InvalidOperation.EniServiceManaged	%s	The error message returned because this operation is invalid.
403	InvalidOperation.Ipv6NotSupport	%s	The error message returned because the IPv6 address does not support the current operation.

17.3. AssignPrivateIpAddresses

You can call this operation to assign one or more secondary private IP addresses to an elastic network interface (ENI). You can specify private IP addresses within the CIDR block of the VSwitch that hosts the ENI. Alternatively, you can specify the number of private IP addresses for ECS to assign them automatically.

Description

- The ENI to which you want to assign IP addresses must be in the Available (Available) or Bound (InUse) state.
- When you perform operations on a primary ENI, the instance to which the ENI is attached must be in the Running or Stopped state.
- When an ENI is in the Available state, you can assign up to 10 secondary private IP addresses to the ENI. When an ENI is attached to an instance, the number of private IP addresses that can be assigned to the ENI is subject to the instance type. For more information, see [Instance families](#).

Debugging

OpenAPI Explorer automatically calculates the signature value. For your convenience, we recommend that you call this operation in OpenAPI Explorer. OpenAPI Explorer dynamically generates the sample code of the operation for different SDKs.

Request parameters

Parameter	Type	Required	Example	Description
Action	String	Yes	AssignPrivateIpAddresses	The operation that you want to perform. Set the value to AssignPrivateIpAddresses.
NetworkInterfaceId	String	Yes	eni-bp67acfmazb4p****	The ID of the ENI.
RegionId	String	Yes	cn-hangzhou	The region ID of the ENI. You can call the DescribeRegions operation to query the most recent region list.
PrivateIpAddress.N	RepeatList	No	10.1.2.1	One or more secondary private IP addresses selected from the CIDR block of the VSwitch that hosts the ENI. Valid values of N: - When the ENI is in the Available (Available) state: 1 to 10. - When the ENI is in the Bound (InUse) state: subject to the instance type. For more information, see Instance families. To assign secondary private IP addresses, you must specify the PrivateIpAddress.N parameter or the SecondaryPrivateIpAddressCount parameter. You cannot specify both of them.

Parameter	Type	Required	Example	Description
SecondaryPrivateIpAddressCount	Integer	No	1	The specified number of private IP addresses that are automatically allocated from within the CIDR block of the VSwitch.

Response parameters

Parameter	Type	Example	Description
RequestId	String	473469C7-AA6F-4DC5-B3DB-A3DC0DE3C83E	The ID of the request.

Examples

Sample requests

```
https://ecs.aliyuncs.com/?Action=AssignPrivateIpAddresses
&NetworkInterfaceId=eni-bp67acfmazb4p****
&RegionId=cn-hangzhou
&PrivateIpAddress.1=10.1.2.1
&PrivateIpAddress.2=10.1.2.2
&<Common request parameters>
```

Sample success responses

XML format

```
<AssignPrivateIpAddressesResponse>
  <RequestId>04F0F334-1335-436C-A1D7-6C044FE70008</RequestId>
</AssignPrivateIpAddressesResponse>
```

JSON format

```
{
  "RequestId": "04F0F334-1335-436C-A1D7-6C044FE70008"
}
```

Error codes

HTTP status code	Error code	Error message	Description
403	InvalidUserType.NotSupported	%s	The error message returned because the current account does not support this operation.
403	Abs.InvalidAccount.NotFound	%s	The error message returned because the current Alibaba Cloud account does not exist or your AccessKey pair has expired.
403	MissingParameter	%s	The error message returned because a required parameter is not specified.
403	Forbidden.NotSupportRAM	%s	The error message returned because RAM users are not allowed to perform this operation.

HTTP status code	Error code	Error message	Description
400	UnsupportedParameter	%s	The error message returned because the specified parameter is not supported.
403	Forbidden.SubUser	%s	The error message returned because your account has no permissions on this resource. Apply for permissions from the Alibaba Cloud account.
400	InvalidParameter	%s	The error message returned because the specified parameter is invalid.
400	InvalidInstanceId.Malformed	%s	The error message returned because the specified InstanceId parameter is invalid.
400	InvalidOperation.InvalidEcsState	%s	The error message returned because the operation is not supported while the instance is in the current state.
400	InvalidOperation.InvalidEniState	%s	The error message returned because the operation is not supported while the ENI is in the current state.
400	InvalidOperation.DetachPrimaryEniNotAllowed	%s	The error message returned because the primary ENI cannot be detached from the instance.
404	InvalidEcsId.NotFound	%s	The error message returned because the specified instance ID does not exist.
404	InvalidEniId.NotFound	%s	The error message returned because the specified ENI ID does not exist.
404	InvalidVSwitchId.NotFound	%s	The error message returned because the specified VSwitch ID does not exist.
404	InvalidSecurityGroupId.NotFound	%s	The error message returned because the specified security group ID does not exist.
403	MaxEniCountExceeded	%s	The error message returned because the number of ENIs that can be managed has reached the upper limit.
403	EniPerInstanceLimitExceeded	%s	The error message returned because the number of ENIs that can be attached to the specified instance has reached the upper limit.
403	InvalidOperation.AvailabilityZoneMismatch	%s	The error message returned because this operation is invalid.
403	InvalidOperation.VpcMismatch	%s	The error message returned because your operation is invalid. Check whether the VPC in the operation matches other parameters.
403	SecurityGroupInstanceLimitExceed	%s	The error message returned because the number of instances in the specified security group has reached the upper limit.

HTTP status code	Error code	Error message	Description
403	InvalidSecurityGroupId.NotVpc	%s	The error message returned because the specified SecurityGroupId parameter is invalid and the network type of the security group is not VPC.
403	InvalidOperation.InvalidEniType	%s	The error message returned because the current ENI type does not support the operation.
404	InvalidInstanceId.NotFound	%s	The error message returned because the specified instance does not exist. Check whether the value of the InstanceId parameter is correct.
403	InvalidVSwitchId.IpNotEnough	%s	The error message returned because IP addresses in the specified VSwitch are insufficient.
403	InvalidVSwitchId.IpInvalid	%s	The error message returned because the specified private IP address is invalid.
403	InvalidIp.IpAssigned	%s	The error message returned because the specified IP address is already assigned.
403	Operation.Conflict	%s	The error message returned because the operation conflicts with another operation in progress. Try again later.
400	Forbidden.RegionId	%s	The error message returned because the service is not available in the current region.
400	InvalidAction	%s	The error message returned because this operation is invalid.
403	InvalidOperation.Ipv4CountExceeded	%s	The error message returned because the number of IPv4 addresses has reached the upper limit.
403	InvalidOperation.EniServiceManaged	%s	The error message returned because this operation is invalid.
400	InvalidPrivateIpAddress.Duplicated	Specified private IP address is duplicated.	The error message returned because the specified private IP address is already in use. Try another IP address.

17.4. UnassignPrivateIpAddresses

You can call this operation to delete one or more secondary private IP addresses from an Elastic Network Interface (ENI).

Description

- The ENI from which you want to delete IP addresses must be in the **Available** (Available) or **Bound** (InUse) state.
- When you perform operations on the primary ENI, the instance to which the ENI is attached must be in the **Running** or **Stopped** state.

Debugging

OpenAPI Explorer automatically calculates the signature value. For your convenience, we recommend that you call this operation in OpenAPI Explorer. OpenAPI Explorer dynamically generates the sample code of the operation for different SDKs.

Request parameters

Parameter	Type	Required	Example	Description
NetworkInterfaceId	String	Yes	eni-bp67acfmazb4ph***	The ID of the ENI.
PrivateIpAddress.N	RepeatList	Yes	192.168.**.1	The secondary private IP addresses to be deleted.
RegionId	String	Yes	cn-hangzhou	The region ID of the ENI. You can call the DescribeRegions operation to query the most recent region list.
Action	String	Yes	UnassignPrivateIpAddresses	The operation that you want to perform. Set the value to UnassignPrivateIpAddresses.

Response parameters

Parameter	Type	Example	Description
RequestId	String	473469C7-AA6F-4DC5-B3DB-A3DC0DE3C83E	The ID of the request.

Examples

Sample requests

```
https://ecs.aliyuncs.com/?Action=UnassignPrivateIpAddresses
&NetworkInterfaceId=eni-bp67acfmazb4ph***
&PrivateIpAddress.1=192.168.**.1
&RegionId=cn-hangzhou
&<Common request parameters>
```

Sample responses

XML format

```
<UnassignPrivateIpAddressesResponse>
  <RequestId>04F0F334-1335-436C-A1D7-6C044FE70008</RequestId>
</UnassignPrivateIpAddressesResponse>
```

JSON format

```
{
  "RequestId": "04F0F334-1335-436C-A1D7-6C044FE70008"
}
```

Error codes

HTTP status code	Error code	Error message	Description
403	InvalidUserType.NotSupported	%s	The error message returned because you are not authorized to perform this operation.

HTTP status code	Error code	Error message	Description
403	Abs.InvalidAccount.NotFound	%s	The error message returned because the specified Alibaba Cloud account does not exist or your AccessKey has expired.
403	MissingParameter	%s	The error message returned because a required parameter is not specified.
403	Forbidden.NotSupportRAM	%s	The error message returned because the RAM user is not allowed to perform this operation.
400	UnsupportedParameter	%s	The error message returned because a parameter is not supported.
403	Forbidden.SubUser	%s	The error message returned because the RAM user is not authorized to perform operations on this resource.
400	InvalidParameter	%s	The error message returned because the parameter format is invalid.
400	InvalidInstanceId.Malformed	%s	The error message returned because the instance ID format is invalid.
400	InvalidOperation.InvalidEcsState	%s	The error message returned because the operation is not supported while the instance is in the current state.
400	InvalidOperation.InvalidEniState	%s	The error message returned because the operation is not supported while the ENI is in the current state.
400	InvalidOperation.DetachPrimaryEniNotAllowed	%s	The error message returned because the primary ENI cannot be detached from its instance.
404	InvalidEcsId.NotFound	%s	The error message returned because the specified instance ID does not exist.
404	InvalidEniId.NotFound	%s	The error message returned because the specified ENI ID does not exist.
404	InvalidVSwitchId.NotFound	%s	The error message returned because the specified VSwitch ID does not exist.
404	InvalidSecurityGroupId.NotFound	%s	The error message returned because the specified security group ID does not exist.
403	MaxEniCountExceeded	%s	The error message returned because the maximum number of ENIs in the specified region has been reached.
403	EniPerInstanceLimitExceeded	%s	The error message returned because the maximum number of ENIs for the specified instance type has been reached.
403	InvalidOperation.AvailabilityZoneMismatch	%s	The error message returned because the specified VSwitch, ENI, and instance do not belong to the same zone.

HTTP status code	Error code	Error message	Description
403	InvalidOperation.VpcMismatch	%s	The error message returned because the specified ENI and security group do not belong to the same VPC.
403	SecurityGroupInstanceLimitExceed	%s	The error message returned because the maximum number of instances in the specified security group has been reached.
403	InvalidSecurityGroupId.NotVpc	%s	The error message returned because the specified security group is not VPC-type.
403	InvalidOperation.InvalidEniType	%s	The error message returned because the ENI type does not support the operation.
404	InvalidInstanceId.NotFound	%s	The error message returned because the specified instance does not exist.
403	InvalidVSwitchId.IpInvalid	%s	The error message returned because the specified private IP address is invalid.
403	InvalidIp.IpUnassigned	%s	The error message returned because the specified IP address is not assigned.
403	Operation.Conflict	%s	The error message returned because operations conflict. Try again.
400	Forbidden.RegionId	%s	The error message returned because this feature is not supported in the region.
400	InvalidAction	%s	The error message returned because the operation is invalid.

17.5. DetachNetworkInterface

You can call this operation to detach a Elastic Network Interface (ENI) from an ECS instance.

Description

When you call this operation, take note of the following items:

- Primary ENIs are not allowed to detach from their instances.
- The ENI must be in the Unbinding (Detaching) or Bound (InUse) state.
- The instance must be in the Running (Running) or Stopped (Stopped) state.

Debugging

OpenAPI Explorer automatically calculates the signature value. For your convenience, we recommend that you call this operation in OpenAPI Explorer. OpenAPI Explorer dynamically generates the sample code of the operation for different SDKs.

Request Parameters

Parameter	Type	Required	Example	Description
Action	String	Yes	DetachNetworkInterface	The operation that you want to perform. Set the value to DetachNetworkInterface.

Parameter	Type	Required	Example	Description
InstanceId	String	Yes	i-bp67acfmazb4p****	The ID of the instance.
NetworkInterfaceId	String	Yes	eni-bp67acfmazb4p****	The ID of the ENI.
RegionId	String	Yes	cn-hangzhou	The region ID of the ENI. You can call the DescribeRegions operation to query the most recent region list.

Response parameters

Parameter	Type	Example	Description
RequestId	String	473469C7-AA6F-4DC5-B3DB-A3DC0DE3C83E	The ID of the request.

Examples

Sample requests

```
https://ecs.aliyuncs.com/?Action=DetachNetworkInterface
&InstanceId=i-bp67acfmazb4p****
&NetworkInterfaceId=eni-bp67acfmazb4p****
&RegionId=cn-hangzhou
&<Common request parameters>
```

Sample success responses

XML format

```
<DetachNetworkInterfaceResponse>
  <RequestId>473469C7-AA6F-4DC5-B3DB-A3DC0DE3C83E</RequestId>
</DetachNetworkInterfaceResponse>
```

JSON format

```
{
  "RequestId": "473469C7-AA6F-4DC5-B3DB-A3DC0DE3C83E"
}
```

Error codes

HTTP status code	Error code	Error message	Description
403	InvalidUserType.NotSupported	%s	The error message returned because the specified account does not support this operation.
403	Abs.InvalidAccount.NotFound	%s	The error message returned because your Alibaba Cloud account does not exist or your AccessKey pair has expired.
400	MissingParameter	%s	The error message returned because a required parameter is not specified.

HTTP status code	Error code	Error message	Description
403	Forbidden.NotSupportRAM	%s	The error message returned because RAM users are not allowed to perform this operation.
400	UnsupportedParameter	%s	The error message returned because the specified parameter is not supported.
403	Forbidden.SubUser	%s	The error message returned because your account has no permission to manage this resource. Apply for permissions to the Alibaba Cloud account.
400	InvalidParameter	%s	The error message returned because the specified parameter is invalid.
400	InvalidInstanceId.Malformed	%s	The error message returned because the specified InstanceId parameter is invalid.
400	InvalidOperation.InvalidRegion	%s	The error message returned because the specified RegionId parameter is invalid.
400	InvalidOperation.InvalidEcsState	%s	The error message returned because the operation is not supported while the instance is in the current state.
400	InvalidOperation.InvalidEniState	%s	The error message returned because the operation is not supported while the ENI is in the current state.
400	InvalidOperation.DetachPrimaryEniNotAllowed	%s	The error message returned because the primary ENI cannot be detached from the instance.
404	InvalidEcsId.NotFound	%s	The error message returned because the specified instance ID does not exist.
404	InvalidEniId.NotFound	%s	The error message returned because the specified ENI ID does not exist.
404	InvalidVSwitchId.NotFound	%s	The error message returned because the specified VSwitch ID does not exist.
404	InvalidSecurityGroupId.NotFound	%s	The error message returned because the specified security group ID does not exist.
403	MaxEniCountExceeded	%s	The error message returned because the maximum number of ENIs that can be managed has been reached.
403	EniPerInstanceLimitExceeded	%s	The error message returned because the maximum number of ENIs that can be attached to an instance has been reached.
403	InvalidOperation.AvailabilityZoneMismatch	%s	The error message returned because this operation is invalid.

HTTP status code	Error code	Error message	Description
403	InvalidOperation.VpcMismatch	%s	The error message returned because your operation is invalid. Check whether the VPC in the operation matches other parameters.
403	SecurityGroupInstanceLimitExceed	%s	The error message returned because the maximum number of instances in the specified security group has been reached.
403	InvalidSecurityGroupId.NotVpc	%s	The error message returned because the specified SecurityGroupId parameter is invalid and the network type of the security group is not VPC.
403	InvalidOperation.InvalidEniType	%s	The error message returned because the current ENI type does not support the operation.
400	Forbidden.RegionId	%s	The error message returned because the service is not available in the current region.
400	InvalidParams.EniId	%s	The error message returned because the specified EniId parameter is invalid.
403	InvalidOperation.EniServiceManaged	%s	The error message returned because this operation is invalid.
403	InvalidOperation.EniLinked	%s	The error message returned because an ENI is attached to the instance.
403	InvalidInstanceId.NotFound	%s	The error message returned because the specified instance does not exist. Check whether the value of the InstanceId parameter is correct.

17.6. DeleteNetworkInterface

You can call this operation to delete an Elastic Network Interface (ENI).

Description

- The ENI must be in the Available (Available) state.
- If the ENI is already attached to an ECS instance, you can delete the ENI only after it is detached from the ECS instance ([DetachNetworkInterface](#)).
- After an ENI is deleted:
 - The primary private IP address of the ENI is automatically released.
 - The deleted ENI is automatically removed from all security groups to which the ENI was added.

Debugging

OpenAPI Explorer automatically calculates the signature value. For your convenience, we recommend that you call this operation in OpenAPI Explorer. OpenAPI Explorer dynamically generates the sample code of the operation for different SDKs.

Request Parameters

Parameter	Type	Required	Example	Description

Parameter	Type	Required	Example	Description
NetworkInterfaceId	String	Yes	eni-bp14v2sdd3v8htlnm** *	The ID of the ENI.
RegionId	String	Yes	cn-hangzhou	The region ID of the ENI. You can call the DescribeRegions operation to query the most recent region list.
Action	String	Yes	DeleteNetworkInterface	The operation that you want to perform. Set the value to DeleteNetworkInterface.

Response parameters

Parameter	Type	Example	Description
RequestId	String	F3CD6886-D8D0-4FEE-B93E-1B73239673DE	The ID of the request.

Examples

Sample requests

```
https://ecs.aliyuncs.com/?Action=DeleteNetworkInterface
&NetworkInterfaceId=eni-bp14v2sdd3v8htlnm***
&RegionId=cn-hangzhou
&<Common request parameters>
```

Sample success responses

XML format

```
<DetachNetworkInterface>
  <RequestId>04F0F334-1335-436C-A1D7-6C044FExxxxx</RequestId>
</DetachNetworkInterface>
```

JSON format

```
{
  "RequestId": "04F0F334-1335-436C-A1D7-6C044FExxxxx"
}
```

Error codes

HTTP status code	Error code	Error message	Description
403	InvalidUserType.NotSupported	%s	The error message returned because your account type is not supported.
403	Abs.InvalidAccount.NotFound	%s	The error message returned because your Alibaba Cloud account does not exist or your AccessKey pair has expired.
400	MissingParameter	%s	The error message returned because a required parameter is not specified.

HTTP status code	Error code	Error message	Description
403	Forbidden.NotSupportRAM	%s	The error message returned because RAM users are not allowed to perform this operation.
400	UnsupportedParameter	%s	The error message returned because the specified parameter is not supported.
403	Forbidden.SubUser	%s	The error message returned because the RAM user is not authorized to perform operations on this resource.
400	InvalidParameter	%s	The error message returned because the parameter is invalid.
400	InvalidInstanceId.Malformed	%s	The error message returned because the InstanceId parameter is invalid.
400	InvalidOperation.InvalidEcsState	%s	The error message returned because the private IP address cannot be released while the instance is in the current state.
400	InvalidOperation.InvalidEniState	%s	The error message returned because the private IP address cannot be released while the ENI is in the current state.
400	InvalidOperation.DetachPrimaryEniNotAllowed	%s	The error message returned because primary ENIs cannot be detached from their instances.
404	InvalidEcsId.NotFound	%s	The error message returned because the specified instance ID does not exist.
404	InvalidEniId.NotFound	%s	The error message returned because the specified ENI ID does not exist.
404	InvalidVSwitchId.NotFound	%s	The error message returned because the specified VSwitch ID does not exist.
404	InvalidSecurityGroupId.NotFound	%s	The error message returned because the specified security group ID does not exist.
403	MaxEniCountExceeded	%s	The error message returned because the maximum number of ENIs that can be managed has been reached.
403	EniPerInstanceLimitExceeded	%s	The error message returned because the maximum number of ENIs for the specified instance type has been reached.
403	InvalidOperation.AvailabilityZoneMismatch	%s	The error message returned because the specified VSwitch, ENI, and instance do not belong to the same zone.
403	InvalidOperation.VpcMismatch	%s	The error message returned because the specified ENI and security group do not belong to the same VPC.

HTTP status code	Error code	Error message	Description
403	SecurityGroupInstanceLimitExceed	%s	The error message returned because the maximum number of instances in the specified security group has been reached.
403	InvalidSecurityGroupId.NotVpc	%s	The error message returned because the specified security group is not of the VPC type.
403	InvalidOperation.InvalidEniType	%s	The error message returned because the ENI type does not support the operation.
400	Forbidden.RegionId	%s	The error message returned because this feature is not supported in the region.
400	InvalidParams.EniId	%s	The error message returned because the format of the specified ENI ID is invalid.

17.7. DescribeNetworkInterfaces

You can call this operation to view the list of Elastic Network Interfaces (ENIs).

Description

`DescribeNetworkInterfaces` provides two ways to check responses:

- Method 1: Use `NextToken` to configure the query token. The value of this parameter is the value of `NextToken` returned by the last call of the `DescribeNetworkInterfaces` operation. Then use `MaxResults` to configure the maximum number of entries to return on each page.
- Method 2: Use `PageSize` to configure the number of entries to return on each page and use `PageNumber` to configure the number of the page to return.

You can only use one of the preceding methods. If many entries are contained in the ENI list, we recommend that you use Method 1. If `NextToken` is set, the `PageSize` and the `PageNumber` parameters will not take effect and the `TotalCount` response parameter will be invalid.

Debugging

OpenAPI Explorer automatically calculates the signature value. For your convenience, we recommend that you call this operation in OpenAPI Explorer. OpenAPI Explorer dynamically generates the sample code of the operation for different SDKs.

Request parameters

Parameter	Type	Required	Example	Description
Action	String	No	DescribeNetworkInterfaces	The operation that you want to perform. Set the value to <code>DescribeNetworkInterfaces</code> .
RegionId	String	Yes	cn-hangzhou	The ID of the region. You can call the DescribeRegions operation to query the most recent region list.
Tag.N.Key	String	No	test	The key of tag N that is bound to the ENI. Valid values of N: 1 to 20.

Parameter	Type	Required	Example	Description
Tag.N.Value	String	No	api-test	The value of tag N that is bound to the ENI. Valid values of N: 1 to 20.
ResourceGroupId	String	No	rg-bp67acfmazb4ph***	The ID of the resource group to which the ENI belongs.
VSwitchId	String	No	vsw-bp16usj2p27htro3*****	The ID of the VSwitch to which the ENI belongs.
VpcId	String	No	vsw-bp16usj2p27htro3*****	The ID of the VPC to which the ENI belongs.
PrimaryIpAddress	String	No	192.168.1.2	The primary private IP address of the ENI.
PrivateIpAddress.N	RepeatList	No	192.168.1.1	The secondary private IP address N of the ENI. Valid values of N: 1 to 100.
SecurityGroupId	String	No	sg-bp144yr32sx6ndw*****	The ID of the security group to which the ENI belongs.
NetworkInterfaceName	String	No	my-eni-name	The name of the ENI.
Type	String	No	Secondary	The type of the ENI. Valid values: - Primary - Secondary
InstanceId	String	No	i-bp1e2l6djknidyulib***	The ID of the instance to which the ENI is attached.
NetworkInterfaceId.N	RepeatList	No	eni-bp125p95hhdhn3otz**	The ID of ENI N. Valid values of N: 1 to 100.
ServiceManaged	Boolean	No	true	Specifies whether the user is an Alibaba Cloud service or a distributor.
PageNumber	Integer	No	1	The number of the page to return. Pages start from page 1. Default value: 1.
PageSize	Integer	No	100	The number of entries to return on each page. Maximum value: 100. Default value: 10. For more information about how to check responses of this operation, see the preceding "Description" section.

Parameter	Type	Required	Example	Description
NextToken	String	No	AAAAAdDWBf2****w= =	The query token. Set the value to the <code>NextToken</code> parameter value returned by the last API call. For more information about how to check responses of this operation, see the preceding "Description" section.
MaxResults	Integer	No	50	The maximum number of entries to return on each page. Valid values: 1 to 500. Default value: 10.

Response parameters

Parameter	Type	Example	Description
NetworkInterfaceSets	Array		The set of ENIs.
NetworkInterfaceSet			
AssociatedPublicIp	Struct		The public IP address associated with the secondary private IP address of the ENI.
AllocationId	String	eip-2ze88m67qx5z****	The ID of the allocated Elastic IP address (EIP).
PublicIpAddress	String	116.62.129.***	The public IP address.
CreationTime	String	2017-11-24T06:14:22Z	The time when the ENI was created.
Description	String	test	The description of the ENI.
InstanceId	String	i-bp1e2l6djknidyulib***	The ID of the instance to which the ENI was attached.  Note If you query ENIs managed and controlled by other Alibaba Cloud services, the instance ID will not be returned.
Ipv6Sets	Array		The set of IPv6 addresses assigned to the ENI.
Ipv6Set			
Ipv6Address	String	2001:db8:1234:1a00::***	The IPv6 address assigned to the ENI.
MacAddress	String	2001:db8:1234:1a00::***	The MAC address assigned to the ENI.
NetworkInterfaceId	String	eni-bp125p95hhdhn3otz***	The ID of the ENI.
NetworkInterfaceName	String	my-eni-name	The name of the ENI.

Parameter	Type	Example	Description
OwnerId	String	123456789	The ID of the account that owns the ENI.
PrivateIpAddress	String	172.17.**.***	The private IP address of the ENI.
PrivateIpSets	Array		The set of private IP addresses of the ENI.
PrivateIpSet			
AssociatedPublicIp	Struct		The public IP address associated with the ENI.
AllocationId	String	eip-2ze88m67qx5z*****	The ID of the allocated EIP.
PublicIpAddress	String	116.62.**.250	The public IP address of the instance.
Primary	Boolean	true	Indicates whether the IP address is a primary IP address.
PrivateIpAddress	String	172.17.**.***	The private IP address of the instance.
QueueNumber	Integer	2	The queue number of the ENI.
ResourceGroupId	String	rg-2ze88m67qx5z*****	The ID of the resource group.
SecurityGroupIds	List	sg-bp18kz60mefsicfgo***	The IDs of security groups.
ServiceID	Long	123456789	The ID of the distributor to which the ENI belongs.
ServiceManaged	Boolean	true	Indicates whether the user is an Alibaba Cloud service or a distributor.
Status	String	Available	The status of the ENI.
Tags	Array		The tags of the ENI.
Tag			
TagKey	String	test	The tag key of the ENI.
TagValue	String	api	The tag value of the ENI.
Type	String	Secondary	The type of the ENI.
VSwitchId	String	vsw-bp16usj2p27htro3*****	The ID of the VSwitch to which the ENI belongs.
VpcId	String	vpc-bp1j7w3gc1cexjqd*****	The ID of the VPC to which the ENI belongs.

Parameter	Type	Example	Description
ZoneId	String	cn-hangzhou-e	The ID of the zone.
NextToken	String	AAAAAdDWBf2****w==	The value of the query token returned in this call.
PageNumber	Integer	1	The page number of the returned page.
PageSize	Integer	1	The number of entries returned per page.
RequestId	String	473469C7-AA6F-4DC5-B3DB-A3DC0DE3C83E	The ID of the request.
TotalCount	Integer	70	The total number of ENIs.

Examples

Sample requests

```
https://ecs.aliyuncs.com/?Action=DescribeNetworkInterfaces
&RegionId=cn-hangzhou &PrivateIpAddress.1=192.168.1.1
&PrivateIpAddress.2=192.168.1.2
&NextToken=AAAAAdDWBf2****w==
&<Common request parameters>
```

Sample success responses

XML format

```

<DescribeNetworkInterfacesResponse>
  <PageNumber>1</PageNumber>
  <NextToken>AAAAAdDWBf2w6Olx+cMPjUtUMoOHldehKPIfYtMyAi+***w+IDifXaflLjY/QdPWM1nUw==</NextToken>
  <TotalCount>0</TotalCount>
  <PageSize>10</PageSize>
  <RequestId>F5266102-405B-4EEC-AAD8-ADF227463EA9</RequestId>
  <NetworkInterfaceSets>
    <NetworkInterfaceSet>
      <Type>Primary</Type>
      <ResourceGroupId></ResourceGroupId>
      <InstanceId>i-bp188rg4xz5qev*****</InstanceId>
      <PrivateIpSets>
        <PrivateIpSet>
          <PrivateIpAddress>172.16. ***.99</PrivateIpAddress>
          <Primary>true</Primary>
          <AssociatedPublicIp></AssociatedPublicIp>
        </PrivateIpSet>
      </PrivateIpSets>
      <ZoneId>cn-hangzhou-g</ZoneId>
      <VSwitchId>vsw-bp1s5fnvk4gn2tw*****</VSwitchId>
      <VpcId>vpc-bp1opxu1zkhn00g*****</VpcId>
      <AssociatedPublicIp></AssociatedPublicIp>
      <NetworkInterfaceId>eni-bp14664y88uf9t*****</NetworkInterfaceId>
      <CreationTime>2018-11-09T13:56:24Z</CreationTime>
      <Status>InUse</Status>
      <MacAddress>00:16:3e:15:40:5d</MacAddress>
      <SecurityGroupIds>
        <SecurityGroupId>sg-bp10zcgmybh0qc*****</SecurityGroupId>
      </SecurityGroupIds>
      <PrivateIpAddress>172.16. ***.99</PrivateIpAddress>
    </NetworkInterfaceSet>
  </NetworkInterfaceSets>
</DescribeNetworkInterfacesResponse>

```

JSON format


```
{
  "PageNumber": 1,
  "NextToken": "AAAAAdDWBf2w6Olxc+cMPjUtUMoOHldehKPIfYtMyAi+***w+IDifXafILjY/QdPwM1nUw==",
  "TotalCount": 0,
  "PageSize": 10,
  "RequestId": "F5266102-405B-4EEC-AAD8-ADF227463EA9",
  "NetworkInterfaceSets": {
    "NetworkInterfaceSet": [
      {
        "Type": "Primary",
        "ResourceGroupId": "",
        "InstanceId": "i-bp188rg4xz5qev*****",
        "PrivateIpSets": {
          "PrivateIpSet": [
            {
              "PrivateIpAddress": "172.16. ***.99",
              "Primary": true,
              "AssociatedPublicIp": {}
            }
          ]
        },
        "ZoneId": "cn-hangzhou-g",
        "VSwitchId": "vsw-bp1s5fnvk4gn2tw*****",
        "VpcId": "vpc-bp1opxu1zkhn00g*****",
        "AssociatedPublicIp": {},
        "NetworkInterfaceId": "eni-bp14664y88uf9t*****",
        "CreationTime": "2018-11-09T13:56:24Z",
        "Status": "InUse",
        "MacAddress": "00:16:3e:15:40:5d",
        "SecurityGroupIds": {
          "SecurityGroupId": [
            "sg-bp10zcgmybh0qc*****"
          ]
        },
        "PrivateIpAddress": "172.16. ***.99"
      }
    ]
  }
}
```

Error codes

HTTP status code	Error code	Error message	Description
403	InvalidUserType.NotSupported	%s	The error message returned because the current account does not support this operation.

HTTP status code	Error code	Error message	Description
403	Abs.InvalidAccount.NotFound	%s	The error message returned because your Alibaba Cloud account does not exist or your AccessKey pair has expired.
400	MissingParameter	%s	The error message returned because a required parameter is not specified.
403	Forbidden.NotSupportRAM	%s	The error message returned because RAM users are not authorized to perform this operation.
400	UnsupportedParameter	%s	The error message returned because the specified parameter is not supported.
403	Forbidden.SubUser	%s	The error message returned because you are not authorized to perform operations on this resource. Contact the owner of the Alibaba Cloud account for authorization.
400	InvalidParameter	%s	The error message returned because the specified parameter is invalid.
400	InvalidInstanceId.Malformed	%s	The error message returned because the InstanceId parameter value is invalid.
400	InvalidOperation.InvalidEcsState	%s	The error message returned because the operation is not supported while the instance is in the current state.
400	InvalidOperation.InvalidEniState	%s	The error message returned because the operation is not supported while the ENI is in the current state.
400	InvalidOperation.DetachPrimaryEniNotAllowed	%s	The error message returned because the primary ENI is detached from the instance.
404	InvalidEcsId.NotFound	%s	The error message returned because the specified instance ID does not exist.
404	InvalidEniId.NotFound	%s	The error message returned because the specified ENI ID does not exist.
404	InvalidVSwitchId.NotFound	%s	The error message returned because the specified VSwitch ID does not exist.
404	InvalidSecurityGroupId.NotFound	%s	The error message returned because the specified security group ID does not exist.
403	MaxEniCountExceeded	%s	The error message returned because the maximum number of ENIs that can be managed has been reached.
403	EniPerInstanceLimitExceeded	%s	The error message returned because the maximum number of ENIs that can be attached to an instance has been reached.

HTTP status code	Error code	Error message	Description
403	InvalidOperation.AvailabilityZoneMismatch	%s	The error message returned because this operation is invalid.
403	InvalidOperation.VpcMismatch	%s	The error message returned because this operation is invalid. Check whether the VPC in the operation corresponds to other parameters.
403	SecurityGroupInstanceLimitExceed	%s	The error message returned because the maximum number of instances in the specified security group has been reached.
403	InvalidSecurityGroupId.NotVpc	%s	The error message returned because the SecurityGroupId parameter value is invalid and the network type of the security group is not VPC.
403	InvalidOperation.InvalidEniType	%s	The error message returned because the current ENI type does not support this operation.
400	Forbidden.RegionId	%s	The error message returned because the service is unavailable in the current region.

17.8. ModifyNetworkInterfaceAttribute

You can call this operation to modify the properties such as the name, description, and security group of an elastic network interface (ENI).

Debugging

OpenAPI Explorer automatically calculates the signature value. For your convenience, we recommend that you call this operation in OpenAPI Explorer. OpenAPI Explorer dynamically generates the sample code of the operation for different SDKs.

Request parameters

Parameter	Type	Required	Example	Description
Action	String	Yes	ModifyNetworkInterfaceAttribute	The operation that you want to perform. Set the value to ModifyNetworkInterfaceAttribute.
NetworkInterfaceId	String	Yes	eni-bp67acfmxazb4p****	The ID of the ENI.
RegionId	String	Yes	cn-hangzhou	The region ID of the ENI. You can call the DescribeRegions operation to query the most recent region list.

Parameter	Type	Required	Example	Description
SecurityGroupId.N	RepeatList	No	sg-bp67acfmxazb4p****	The ID of security group N to which the ENI finally belongs. If a security group to which the ENI has belonged is in the ID list, that security group is removed from the list. Valid values of N: 1, 2, 3, 4, and 5.  Note After you modify the security group, the modification will take effect after a short delay.
NetworkInterfaceName	String	No	eniTestName	The name of the ENI. The name must be 2 to 128 characters in length. It must start with a letter and cannot start with http:// or https://. It can contain letters, digits, colons (:), underscores (_), and hyphens (-). This parameter is empty by default.
QueueNumber	Integer	No	8	The number of ENI queues. Valid values: 1 to 2048. - You can modify only the queue numbers of secondary ENIs. - You can modify the queue number of a secondary ENI only when the ENI is in the <code>Available</code> state or the secondary ENI is bound (<code>InUse</code>) to an instance that is in the <code>Stopped</code> state. - The maximum queue number of a single secondary ENI cannot exceed the service quota of queues allowed by the instance type of the instance to which the secondary ENI is bound. The total queue number of all ENIs that are bound to the instance also cannot exceed the total queue quota allowed by the instance type of the instance. To learn the queue quotas for a single ENI and all ENIs bound to an instance, you can call the DescribeInstanceTypes operation to query the <code>MaximumQueueNumberPerEni</code> and <code>TotalEniQueueQuantity</code> fields.
Description	String	No	testDescription	The description of the ENI. The description must be 2 to 256 characters in length and cannot start with http:// or https://. This parameter is empty by default.

Response parameters

Parameter	Type	Example	Description
RequestId	String	473469C7-AA6F-4DC5-B3DB-A3DC0DE3C83E	The ID of the request.

Examples

Sample requests

```
https://ecs.aliyuncs.com/?Action=ModifyNetworkInterfaceAttribute
&NetworkInterfaceId=eni-bp67acfmazb4p****
&RegionId=cn-hangzhou
&SecurityGroupId.sg-bp67acfmazb4p****
&NetworkInterfaceName=eniTestName
&Description=testDescription
&<Common request parameters>
```

Sample success responses

XML format

```
<DetachNetworkInterfaceResponse>
  <RequestId>04F0F334-1335-436C-A1D7-6C044FExxxxx</RequestId>
</DetachNetworkInterfaceResponse>
```

JSON format

```
{
  "RequestId": "04F0F334-1335-436C-A1D7-6C044FExxxxx"
}
```

Error codes

HTTP status code	Error code	Error message	Description
403	InvalidUserType.NotSupported	%s	The error message returned because the current account does not support this operation.
403	Abs.InvalidAccount.NotFound	%s	The error message returned because your Alibaba Cloud account does not exist or your AccessKey pair has expired.
400	MissingParameter	%s	The error message returned because a required parameter is not specified.
403	Forbidden.NotSupportRAM	%s	The error message returned because RAM users are not authorized to perform this operation.
400	UnsupportedParameter	%s	The error message returned because the specified parameter is not supported.
403	Forbidden.SubUser	%s	The error message returned because you are not authorized to manage this resource. Apply for permissions to the Alibaba Cloud account.
400	InvalidParameter	%s	The error message returned because the specified parameter is invalid.
400	InvalidInstanceId.Malformed	%s	The error message returned because the specified InstanceId parameter is invalid.

HTTP status code	Error code	Error message	Description
400	InvalidOperation.InvalidEcsState	%s	The error message returned because the operation is not supported while the instance is in the current state.
400	InvalidOperation.InvalidEniState	%s	The error message returned because the operation is not supported while the ENI is in the current state.
400	InvalidOperation.DetachPrimaryEniNotAllowed	%s	The error message returned because you cannot unbind the primary ENI from the instance.
400	InvalidParams.EniId	%s	The error message returned because the specified EniId parameter is invalid.
404	InvalidEcsId.NotFound	%s	The error message returned because the specified instance ID does not exist.
404	InvalidEniId.NotFound	%s	The error message returned because the specified ENI ID does not exist.
404	InvalidVSwitchId.NotFound	%s	The error message returned because the specified VSwitch ID does not exist.
404	InvalidSecurityGroupId.NotFound	%s	The error message returned because the specified security group ID does not exist.
403	MaxEniCountExceeded	%s	The error message returned because the maximum number of ENIs that can be managed has been reached.
403	EniPerInstanceLimitExceeded	%s	The error message returned because the maximum number of ENIs that can be bound to the specified instance has been reached.
403	InvalidOperation.AvailabilityZoneMismatch	%s	The error message returned because this operation is invalid.
403	InvalidOperation.VpcMismatch	%s	The error message returned because this operation is invalid. Check whether the VPC in the operation corresponds to other parameters.
403	SecurityGroupInstanceLimitExceed	%s	The error message returned because the maximum number of instances in the specified security group has been reached.
403	InvalidSecurityGroupId.NotVpc	%s	The error message returned because the specified SecurityGroupId parameter is invalid and the network type of the security group is not VPC.
403	InvalidOperation.InvalidEniType	%s	The error message returned because the ENI type does not support this operation.
400	Forbidden.RegionId	%s	The error message returned because the service is unavailable in the current region.

HTTP status code	Error code	Error message	Description
403	InvalidOperation.EniServiceManaged	%s	The error message returned because this operation is invalid.

18.System event

18.1. DescribeInstancesFullStatus

You can call this operation to query the full status information of one or more ECS instances. The full status information includes the instance status and the status of an instance system event. The instance status is the lifecycle status of an instance. The status of an instance system event is the health status of a maintenance event.

Description

The response includes the instance status and the instance system events in the Scheduled state.

If a period is specified, all the events within the period are queried.

Debugging

OpenAPI Explorer automatically calculates the signature value. For your convenience, we recommend that you call this operation in OpenAPI Explorer. OpenAPI Explorer dynamically generates the sample code of the operation for different SDKs.

Request parameters

Parameter	Type	Required	Example	Description
Action	String	Yes	DescribeInstancesFullStatus	The operation that you want to perform. Set the value to DescribeInstancesFullStatus.
RegionId	String	Yes	cn-hangzhou	The region ID of the instance. You can call the DescribeRegions operation to query the most recent region list.
InstanceId.N	RepeatList	No	i-bp67acfmazb4p****	The ID of instance N. Valid values of N: 1 to 100. Specify multiple values in the repeated list form.
EventId.N	RepeatList	No	e-bp1hygp5b04o56l0*** *	The ID of event N. Valid values of N: 1 to 100. Specify multiple values in the repeated list form.
Status	String	No	Running	The lifecycle status of the specified instance. Valid values: - Starting - Running - Stopped

Parameter	Type	Required	Example	Description
HealthStatus	String	No	Maintaining	The health status of the specified instance. Valid values: • Impaired: The instance is impaired. • Warning: The instance performance may be degraded because of maintenance or technical issues. • Maintaining: The instance is undergoing maintenance. • Initializing: The instance is being initialized. • InsufficientData: The status cannot be determined because of insufficient data. • NotApplicable: The parameter is not applicable. All the values are case-sensitive.
InstanceEventType.N	RepeatList	No	InstanceExpiration.Stop	The type of instance system event N. Valid values of N: 1 to 30. Specify multiple values in the repeated list form. Valid values: • SystemMaintenance.Reboot: The instance is restarted due to system maintenance. • SystemFailure.Reboot: The instance is restarted due to a system failure. • InstanceFailure.Reboot: The instance is restarted due to an instance failure. • InstanceExpiration.Stop: The instance is stopped due to subscription expiration. • InstanceExpiration.Delete: The instance is released due to subscription expiration. • AccountUnbalanced.Stop: The pay-as-you-go instance is stopped due to overdue payments. • AccountUnbalanced.Delete: The pay-as-you-go instance is released due to overdue payments.
EventType	String	No	InstanceExpiration.Stop	The type of the system event. This parameter takes effect only when the InstanceEventType.N parameter is not specified. Valid values: • SystemMaintenance.Reboot: The instance is restarted due to system maintenance. • SystemFailure.Reboot: The instance is restarted due to a system failure. • InstanceFailure.Reboot: The instance is restarted due to an instance failure. • InstanceExpiration.Stop: The instance is stopped due to subscription expiration. • InstanceExpiration.Delete: The instance is released due to subscription expiration. • AccountUnbalanced.Stop: The pay-as-you-go instance is stopped due to overdue payments. • AccountUnbalanced.Delete: The pay-as-you-go instance is released due to overdue payments.

Parameter	Type	Required	Example	Description
NotBefore.Start	String	No	2017-12-07T00:00:00Z	The start time of the scheduled event execution period. Specify the time in the ISO 8601 standard in the yyyy-MM-ddTHH:mm:ssZ format. The time must be in UTC.
NotBefore.End	String	No	2017-11-30T00:00:00Z	The end time of the scheduled event execution period. Specify the time in the ISO 8601 standard in the yyyy-MM-ddTHH:mm:ssZ format. The time must be in UTC.
EventPublishTime.Start	String	No	2017-11-30T00:00:00Z	The start time of the period during which a system event is pushed. Specify the time in the ISO 8601 standard in the yyyy-MM-ddTHH:mm:ssZ format. The time must be in UTC.
EventPublishTime.End	String	No	2017-12-07T00:00:00Z	The end time of the period during which a system event is pushed. Specify the time in the ISO 8601 standard in the yyyy-MM-ddTHH:mm:ssZ format. The time must be in UTC.
PageNumber	Integer	No	1	The number of the page to return. Pages start from page 1. Default value: 1.
PageSize	Integer	No	10	The number of entries to return on each page. Valid values: 1 to 100. Default value: 10.

Response parameters

Parameter	Type	Example	Description
InstanceFullStatusSet	Array		The array of instance full status data.
InstanceFullStatusType			
HealthStatus	Struct		The health status of the instance.
Code	Integer	64	The code of the health status.
Name	String	Warning	The name of the health status.
InstanceId	String	i-bp67acfmxazb4p****	The ID of the instance.
ScheduledSystemEventSet	Array		The array of scheduled system events.
ScheduledSystemEventType			

Parameter	Type	Example	Description
EventCycleStatus	Struct		The status of the system event.
Code	Integer	24	The code of the system event status.
Name	String	Scheduled	The name of the system event status.
EventId	String	e-bp1hygp5b04o56l0****	The ID of the instance event.
EventPublishTime	String	2017-11-30T06:32:31Z	The time when the system event was published. The time must be in UTC.
EventType	Struct		The type of the system event.
Code	Integer	1	The code of the system event type.
Name	String	SystemMaintenance.Reboot	The name of the system event type.
ExtendedAttribute	Struct		The extended attribute of system events for instances with local disks.
Device	String	/dev/vdb	The device name of the local disk.
DiskId	String	d-bp67acfmxazb4p****	The ID of the local disk.
InactiveDisks	Array		The information of inactive cloud disks or local disks that have been released but need to be removed.
InactiveDisk			
CreationTime	String	2018-07-27T13:53:25Z	The time when the cloud disk or local disk was created. The time follows the ISO 8601 standard in the yyyy-MM-ddTHH:mm:ssZ format. The time is displayed in UTC.
DeviceCategory	String	cloud_ssd	The category of the cloud disk or local disk. Valid values: - cloud: basic disks - cloud_efficiency: ultra disks - cloud_ssd: standard SSDs - cloud_essd: enhanced SSDs (ESSDs) - local_ssd_pro: I/O-intensive local disks - local_hdd_pro: throughput-intensive local disks - ephemeral: phased-out local disks - ephemeral_ssd: phased-out local SSDs
DeviceSize	String	80	The size of the cloud disk or local disk. Unit: GiB.

Parameter	Type	Example	Description
DeviceType	String	system	The type of the disk. Valid values: - system: system disks - data: data disks
ReleaseTime	String	2019-07-27T13:53:25Z	The time when the cloud disk or local disk was released. The time follows the ISO 8601 standard in the yyyy-MM-ddTHH:mm:ssZ format. The time is displayed in UTC.
ImpactLevel	String	100	The level of the system event impact.
NotBefore	String	2017-12-07T00:00:00Z	The scheduled execution time of the system event. The time is displayed in UTC.
Reason	String	A simulated event.	The reason for scheduling the system event.
Status	Struct		The lifecycle status of the instance.
Code	Integer	1	The code of the instance lifecycle status.
Name	String	Running	The name of the instance lifecycle status.
PageNumber	Integer	1	The page number of the returned page.
PageSize	Integer	1	The number of entries returned per page.
RequestId	String	473469C7-AA6F-4DC5-B3DB-A3DC0DE3C83E	The ID of the request.
TotalCount	Integer	2	The total number of entries.

Examples

Sample requests

```
https://ecs.aliyuncs.com/?Action=DescribeInstancesFullStatus
&RegionId=cn-hangzhou
&InstanceId.1=i-bp67acfmxb4p****
&EventId.1=e-bp1hygp5b04o56l0****
&Status=Running
&HealthStatus=Maintaining
&InstanceEventType.1=InstanceExpiration.Stop
&EventType=InstanceExpiration.Stop
&NotBefore.Start=2017-12-07T00:00:00Z
&NotBefore.End=2017-11-30T00:00:00Z
&EventPublishTime.Start=2017-11-30T00:00:00Z
&EventPublishTime.End=2017-12-07T00:00:00Z
&PageNumber=1
&PageSize=1
&<Common request parameters>
```

Sample success responses

XML format

```

<DescribeInstancesFullStatusResponse>
  <TotalCount>1</TotalCount>
  <RequestId>7EBCB534-1CE5-46E7-92A6-507B1654CC03</RequestId>
  <PageSize>10</PageSize>
  <PageNumber>1</PageNumber>
  <InstanceFullStatusSet>
    <InstanceFullStatusType>
      <Status>
        <Code>1</Code>
        <Name>Running</Name>
      </Status>
      <InstanceId>i-bp19cx17f2yx****</InstanceId>
      <HealthStatus>
        <Code>64</Code>
        <Name>Warning</Name>
      </HealthStatus>
      <ScheduledSystemEventSet>
        <ScheduledSystemEventType>
          <EventCycleStatus>
            <Code>24</Code>
            <Name>Scheduled</Name>
          </EventCycleStatus>
          <EventPublishTime>2020-04-24T07:09:37Z</EventPublishTime>
          <EventType>
            <Code>65</Code>
            <Name>SystemFailure.Reboot</Name>
          </EventType>
          <ExtendedAttribute></ExtendedAttribute>
          <EventId>e-bp1hygp5b04o56l0****</EventId>
          <NotBefore>2020-04-24T10:32:31Z</NotBefore>
          <Reason>A simulated event. </Reason>
        </ScheduledSystemEventType>
      </ScheduledSystemEventSet>
    </InstanceFullStatusType>
  </InstanceFullStatusSet>
</DescribeInstancesFullStatusResponse>

```

JSON format

```

{
  "TotalCount": 1,
  "RequestId": "7EBCB534-1CE5-46E7-92A6-507B1654CC03",
  "PageSize": 10,
  "PageNumber": 1,
  "InstanceFullStatusSet": {
    "InstanceFullStatusType": [
      {
        "Status": {
          "Code": 1,
          "Name": "Running"
        },
        "InstanceId": "i-bp19cx17f2yx****",
        "HealthStatus": {
          "Code": 64,
          "Name": "Warning"
        },
        "ScheduledSystemEventSet": {
          "ScheduledSystemEventType": [
            {
              "EventCycleStatus": {
                "Code": 24,
                "Name": "Scheduled"
              },
              "EventPublishTime": "2020-04-24T07:09:37Z",
              "EventType": {
                "Code": 65,
                "Name": "SystemFailure.Reboot"
              },
              "ExtendedAttribute": {},
              "EventId": "e-bp1hygp5b04o56l0****",
              "NotBefore": "2020-04-24T10:32:31Z",
              "Reason": "A simulated event."
            }
          ]
        }
      }
    ]
  }
}

```

Error codes

HTTP status code	Error code	Error message	Description
404	MissingParameter	%s	The error message returned because a required parameter is not specified.
403	InvalidParameter	%s	The error message returned because the specified parameter value is invalid.

HTTP status code	Error code	Error message	Description
403	InvalidParameter.TimeEndBeforeStart	%s	The error message returned because the specified parameter is invalid. Check whether the end time is earlier than the start time.
403	OperationDenied.NotInWhiteList	%s	The error message returned because you are not authorized to perform this operation.
403	InstanceLimitExceeded	%s	The error message returned because the number of values specified for the InstanceId parameter is more than 100.
403	EventLimitExceeded	%s	The error message returned because more than 100 system event IDs are specified.

18.2. DescribeInstanceHistoryEvents

You can call this operation to query the system events of a specific instance. By default, system events that are in the Executed, Avoided, Canceled, or Failed state are queried. You can specify the InstanceEventCycleStatus parameter to query system events in the corresponding state.

Description

- You can query finished system events within the last 30 days. The time range for querying unfinished system events is not restricted.
- You can also specify the InstanceEventCycleStatus parameter to query the system events that are in the Scheduled, Executing, or Inquiring state.

Debugging

OpenAPI Explorer automatically calculates the signature value. For your convenience, we recommend that you call this operation in OpenAPI Explorer. OpenAPI Explorer dynamically generates the sample code of the operation for different SDKs.

Request parameters

Parameter	Type	Required	Example	Description
Action	String	Yes	DescribeInstanceHistoryEvents	The operation that you want to perform. Set the value to DescribeInstanceHistoryEvents.
RegionId	String	Yes	cn-hangzhou	The region ID of the instance. You can call the DescribeRegions operation to query the most recent region list.
InstanceId	String	No	i-uf678mass4zvr9n1***	The ID of the instance. If this parameter is not specified, system events of all instances in the specified region are queried.
EventId.N	RepeatList	No	e-uf64yvznla04jl2c****	The ID of system event N. Valid values of N: 1 to 100. Specify multiple values in the repeated list form.

Parameter	Type	Required	Example	Description
InstanceEventCycleStatus.N	RepeatList	No	Executed	The lifecycle status of system event N. Valid values of N: 1 to 7. Specify multiple values in the repeated list form. Valid values: - Scheduled - Avoided - Executing - Executed - Canceled - Failed - Inquiring
EventCycleStatus	String	No	Executed	The lifecycle status of the system event. This parameter takes effect only when the InstanceEventCycleStatus.N parameter is not specified. Valid values: - Scheduled - Avoided - Executing - Executed - Canceled - Failed - Inquiring
InstanceEventType.N	RepeatList	No	SystemMaintenance.Reboot	The type of system event N. Valid values of N: 1 to 30. Specify multiple values in the repeated list form. Valid values: - SystemMaintenance.Reboot: The instance is restarted due to system maintenance. - SystemMaintenance.Redeploy: The instance is redeployed due to system maintenance. - SystemFailure.Reboot: The instance is restarted due to a system failure. - SystemFailure.Redeploy: The instance is redeployed due to a system failure. - SystemFailure.Delete: The instance is released due to an instance creation failure. - InstanceFailure.Reboot: The instance is restarted due to an instance failure. - InstanceExpiration.Stop: The instance is stopped due to subscription expiration. - InstanceExpiration.Delete: The instance is released due to subscription expiration. - AccountUnbalanced.Stop: The pay-as-you-go instance is stopped due to overdue payments. - AccountUnbalanced.Delete: The pay-as-you-go instance is released due to overdue payments.  Note For more information, see Overview. Values of this parameter are applicable only to instance system events, but not to disk system events.

Parameter	Type	Required	Example	Description
EventType	String	No	SystemMaintenance.Reboot	The system event type. This parameter takes effect only when the InstanceEventType.N parameter is not specified. Valid values: - SystemMaintenance.Reboot: The instance is restarted due to system maintenance. - SystemMaintenance.Redeploy: The instance is redeployed due to system maintenance. - SystemFailure.Reboot: The instance is restarted due to a system failure. - SystemFailure.Redeploy: The instance is redeployed due to a system failure. - SystemFailure.Delete: The instance is released due to an instance creation failure. - InstanceFailure.Reboot: The instance is restarted due to an instance failure. - InstanceExpiration.Stop: The instance is stopped due to subscription expiration. - InstanceExpiration.Delete: The instance is released due to subscription expiration. - AccountUnbalanced.Stop: The pay-as-you-go instance is stopped due to overdue payments. - AccountUnbalanced.Delete: The pay-as-you-go instance is released due to overdue payments.  Note For more information, see Overview. Values of this parameter are applicable only to instance system events, but not to disk system events.
NotBefore.Start	String	No	2017-11-30T06:32:31Z	The start time of the scheduled event execution period. Specify the time in the ISO 8601 standard in the yyyy-MM-ddTHH:mm:ssZ format. The time must be in UTC.
NotBefore.End	String	No	2017-12-01T06:32:31Z	The end time of the scheduled event execution period. Specify the time in the ISO 8601 standard in the yyyy-MM-ddTHH:mm:ssZ format. The time must be in UTC.
EventPublishTime.Start	String	No	2017-11-30T06:32:31Z	The start time of the period during which the system event is published. Specify the time in the ISO 8601 standard in the yyyy-MM-ddTHH:mm:ssZ format. The time must be in UTC.
EventPublishTime.End	String	No	2017-12-01T06:32:31Z	The end time of the period during which the system event is published. Specify the time in the ISO 8601 standard in the yyyy-MM-ddTHH:mm:ssZ format. The time must be in UTC.

Parameter	Type	Required	Example	Description
PageNumber	Integer	No	1	The number of the page to return. Pages start from page 1. Default value: 1.
PageSize	Integer	No	10	The number of entries to return on each page. Valid values: 1 to 100. Default value: 10.

Response parameters

Parameter	Type	Example	Description
InstanceSystemEventSet	Array of InstanceSystemEventType		Details about the history system events.
InstanceSystemEventType			
EventCycleStatus	Struct		The lifecycle status of the system event.
Code	Integer	0	The status code of the system event.
Name	String	Executed	The status name of the system event.
EventFinishTime	String	2017-12-01T06:35:31Z	The time when the system event ended. The time follows the ISO 8601 standard in the yyyy-MM-ddTHH:mm:ssZ format. The time is displayed in UTC.
EventId	String	e-uf64yvznla04jl2c****	The ID of the system event.
EventPublishTime	String	2017-11-30T06:32:31Z	The time when the system event was published. The time follows the ISO 8601 standard in the yyyy-MM-ddTHH:mm:ssZ format. The time is displayed in UTC.
EventType	Struct		The type of the system event.
Code	Integer	34	The code of the system event type.
Name	String	InstanceExpiration.Stop	The name of the system event type.
ExtendedAttribute	Struct		The extended attribute of the system event.
Device	String	/dev/vda	The device name of the local disk.
DiskId	String	d-diskid1	The ID of the local disk.
InactiveDisks	Array of InactiveDisk		Details about inactive cloud disks or local disks that have been released but must be removed.

Parameter	Type	Example	Description
InactiveDisk			
CreationTime	String	2018-11-30T06:32:31Z	The time when the disk was created. The time follows the ISO 8601 standard in the yyyy-MM-ddTHH:mm:ssZ format. The time is displayed in UTC.
DeviceCategory	String	cloud_efficiency	The category of the disk. Valid values: - cloud: basic disk - cloud_efficiency: ultra disk - cloud_ssd: standard SSD - cloud_essd: enhanced SSD (ESSD) - local_ssd_pro: I/O intensive local disk - local_hdd_pro: throughput intensive local disk - ephemeral: retired local disk - ephemeral_ssd: retired local SSD
DeviceSize	String	80	The size of the disk. Unit: GiB.
DeviceType	String	data	The type of the disk. Valid values: - system: system disk - data: data disk
ReleaseTime	String	2019-11-30T06:32:31Z	The time when the disk was released. The time follows the ISO 8601 standard in the yyyy-MM-ddTHH:mm:ssZ format. The time is displayed in UTC.
ImpactLevel	String	100	The impact level of the system event.
InstanceId	String	i-uf678mass4zvr9n1****	The ID of the instance.
NotBefore	String	2017-12-06T00:00:00Z	The scheduled execution time of the system event. The time follows the ISO 8601 standard in the yyyy-MM-ddTHH:mm:ssZ format. The time is displayed in UTC.
Reason	String	System maintenance is scheduled due to ***.	The reason for scheduling the system event.
PageNumber	Integer	1	The page number of the returned page.
PageSize	Integer	10	The number of entries returned per page.
RequestId	String	473469C7-AA6F-4DC5-B3DB-A3DC0DE3C83E	The ID of the request.
TotalCount	Integer	2	The total number of instances.

Examples

Sample requests

```
https://ecs.aliyuncs.com/?Action=DescribeInstanceHistoryEvents
&RegionId=cn-hangzhou
&InstanceId=i-uf678mass4zvr9n1****
&EventId.1=e-uf64yvznlao4jl2c****
&InstanceEventCycleStatus.1=Executed
&EventCycleStatus=Executed
&InstanceEventType.1=SystemMaintenance.Reboot
&NotBefore.Start=2017-11-30T06:32:31Z
&NotBefore.End=2017-12-01T06:32:31Z
&PageNumber=1
&PageSize=1
&<Common request parameters>
```

Sample success responses

XML format

```

<DescribeInstanceHistoryEventsResponse>
  <InstanceSystemEventSet>
    <InstanceSystemEventType>
      <InstanceId>i-uf678mass4zvr9n1****</InstanceId>
      <EventId>e-uf64yvznlao4jl2c****</EventId>
      <EventType>
        <Code>1</Code>
        <Name>SystemMaintenance.Reboot</Name>
      </EventType>
      <EventCycleStatus>
        <Code>0</Code>
        <Name>Executed</Name>
      </EventCycleStatus>
      <EventPublishTime>2017-11-30T06:32:31Z</EventPublishTime>
      <NotBefore>2017-12-01T06:32:31Z</NotBefore>
      <EventFinishTime>2017-12-01T06:35:31Z</EventFinishTime>
    </InstanceSystemEventType>
    <InstanceSystemEventType>
      <InstanceId>i-uf678mass4zvr9n1****</InstanceId>
      <EventId>e-uf61cbvp0w8x2xfx****</EventId>
      <EventType>
        <Code>34</Code>
        <Name>InstanceExpiration.Stop</Name>
      </EventType>
      <EventCycleStatus>
        <Code>8</Code>
        <Name>Avoided</Name>
      </EventCycleStatus>
      <EventPublishTime>2017-11-29T06:32:31Z</EventPublishTime>
      <NotBefore>2017-12-06T00:00:00Z</NotBefore>
      <EventFinishTime>2017-12-05T12:35:31Z</EventFinishTime>
    </InstanceSystemEventType>
  </InstanceSystemEventSet>
  <PageSize>10</PageSize>
  <PageNumber>1</PageNumber>
  <TotalCount>2</TotalCount>
  <RequestId>02EA76D3-5A2A-44EB-XXXX-8901881D8707</RequestId>
</DescribeInstanceHistoryEventsResponse>

```

JSON format

```
{
  "InstanceSystemEventSet": {
    "InstanceSystemEventType": [
      {
        "InstanceId": "i-uf678mass4zvr9n1****",
        "EventId": "e-uf64yvznlao4jl2c****",
        "EventType": {
          "Code": 1,
          "Name": "SystemMaintenance.Reboot"
        },
        "EventCycleStatus": {
          "Code": 0,
          "Name": "Executed"
        },
        "EventPublishTime": "2017-11-30T06:32:31Z",
        "NotBefore": "2017-12-01T06:32:31Z",
        "EventFinishTime": "2017-12-01T06:35:31Z"
      },
      {
        "InstanceId": "i-uf678mass4zvr9n1****",
        "EventId": "e-uf61cbvp0w8x2xfx****",
        "EventType": {
          "Code": 34,
          "Name": "InstanceExpiration.Stop"
        },
        "EventCycleStatus": {
          "Code": 8,
          "Name": "Avoided"
        },
        "EventPublishTime": "2017-11-29T06:32:31Z",
        "NotBefore": "2017-12-06T00:00:00Z",
        "EventFinishTime": "2017-12-05T12:35:31Z"
      }
    ]
  },
  "PageSize": 10,
  "PageNumber": 1,
  "TotalCount": 2,
  "RequestId": "02EA76D3-5A2A-44EB-XXXX-8901881D8707"
}
```

Error codes

HTTP status code	Error code	Error message	Description
404	MissingParameter	%s	The error message returned because a required parameter is not specified.
403	InvalidParameter	%s	The error message returned because the specified parameter is invalid.

HTTP status code	Error code	Error message	Description
403	EventIdLimitExceeded	%s	The error message returned because more than 100 events are specified.
403	InvalidParameter.TimeEndedBeforeStart	%s	The error message returned because the specified parameter is invalid. Check whether the end time is earlier than the start time.
403	OperationDenied.NotInWhitelist	%s	The error message returned because you are not authorized to perform this operation. Try again when you are in the whitelist.

18.3. DescribeDisksFullStatus

You can call this operation to query the full status information of one or more Block Storage devices.

Description

- The full status information of Block Storage devices consists of the lifecycle (`Status`), health status (`HealthStatus`), and event type (`EventType`) of the Block Storage devices.
- The release time, scheduled execution time, and actual execution time of Block Storage devices are the same. If you specify a time period (`EventTime.Start` to `EventTime.End`), the system can query all events that occurred during this time period. You can query events within the last seven days.

Debugging

OpenAPI Explorer automatically calculates the signature value. For your convenience, we recommend that you call this operation in OpenAPI Explorer. OpenAPI Explorer dynamically generates the sample code of the operation for different SDKs.

Request parameters

Parameter	Type	Required	Example	Description
RegionId	String	Yes	cn-hangzhou	The region ID of the Block Storage device. You can call the DescribeRegions operation to query the most recent region list.
Action	String	Yes	DescribeDisksFullStatus	The operation that you want to perform. Set the value to DescribeDisksFullStatus.
DiskId.N	RepeatList	No	d-disk1	The ID of the Block Storage device. Valid values of N: 1 to 100.
EventId.N	RepeatList	No	e-event1	The ID of the event. Valid values of N: 1 to 100.
EventTime.End	String	No	2018-05-08T02:48:52Z	The end time of events to be queried. Specify the time in the ISO 8601 standard in the <code>yyyy-MM-ddTHH:mm:ssZ</code> format. The time must be in UTC.

Parameter	Type	Required	Example	Description
EventTime.Start	String	No	2018-05-06T02:43:10Z	The start time of events to be queried. Specify the time in the ISO 8601 standard in the <code>yyyy-MM-ddTHH:mm:ssZ</code> format. The time must be in UTC.
EventType	String	No	Stalled	The event type of the Block Storage device. Valid values: - Degraded: The performance of the Block Storage device is degraded. - SeverelyDegraded: The performance of the Block Storage device is severely degraded. - Stalled: The performance of the Block Storage device is severely affected.
HealthStatus	String	No	Warning	The health status of the Block Storage device. Valid values: - Impaired: The performance of the Block Storage device is damaged. - Warning: The performance of the Block Storage device may be degraded because of maintenance or technical issues. - Initializing: The Block Storage device is being initialized. - InsufficientData: The status cannot be determined because of insufficient data. - NotApplicable: The parameter is not applicable.
PageNumber	Integer	No	1	The number of the page to return. Pages start from page 1. Default value: 1.
PageSize	Integer	No	10	The number of entries to return on each page. Valid values: 1 to 100. Default value: 10.
Status	String	No	Available	The lifecycle status of the Block Storage device. For more information, see Disk status . Valid values: - In_Use - Available - Attaching - Detaching - Creating - Relniting

Response parameters

Parameter	Type	Example	Description
DiskFullStatusSet	Array		An array consisting of full status of the Block Storage device.

Parameter	Type	Example	Description
DiskFullStatusType			The status type of the Block Storage device.
Device	String	null	The device name of the Block Storage device that is attached to an instance, such as <code>/dev/xvdb</code>. This parameter is empty unless <code>Status</code> is set to <code>In_use</code>.  Note This parameter will be removed in the future. We recommend that you use other parameters to ensure future compatibility.
DiskEventSet	Array		An array consisting of Block Storage event data.
DiskEventType			The event type of the Block Storage device.
EventEndTime	String	2018-05-06T02:48:52Z	The time when the event ended.
EventId	String	e-event1	The ID of the Block Storage event.
EventTime	String	2018-05-08T02:43:10Z	The time when the event occurred.
EventType			The type of the event.
Code	Integer	7	The code of the event type.
Name	String	Stalled	The name of the event type.
DiskId	String	d-disk1	The ID of the Block Storage device.
HealthStatus			The health status of the Block Storage device.
Code	Integer	128	The code of the Block Storage health status.
Name	String	Impaired	The name of the Block Storage health status.
InstanceId	String	i-instance1	The ID of the instance.
Status			The lifecycle status of the Block Storage device.
Code	Integer	129	The code of the lifecycle status of the Block Storage device.
Name	String	Available	The name of the lifecycle status of the Block Storage device.

Parameter	Type	Example	Description
PageNumber	Integer	1	The page number of the returned page.
PageSize	Integer	10	The number of entries returned per page.
RequestId	String	473469C7-AA6F-4DC5-B3DB-A3DC0DE3C83E	The ID of the request.
TotalCount	Integer	2	The total number of full statuses of the Block Storage device.

Examples

Sample requests

```
https://ecs.aliyuncs.com/?Action=DescribeDisksFullStatus
&RegionId=cn-hangzhou
&DiskId.1=d-disk1
&EventId.1=e-event1
&Status=Available
&HealthStatus=Warning
&EventType=Stalled
&EventTime.Start=2018-05-06T02:43:10Z
&EventTime.End=2018-05-08T02:48:52Z
&PageNumber=1
&PageSize=10
&<Common request parameters>
```

Sample success responses

XML format

```
<DescribeDisksFullStatusResponse>
  <DiskFullStatusSet>
    <DiskFullStatusType>
      <DiskEventSet>
        <DiskEventType>
          <EventId>e-bp67acfmazb4ph***</EventId>
          <EventType>
            <Code>7</Code>
            <Name>Stalled</Name>
          </EventType>
          <EventTime>2018-05-08T02:43:10Z</EventTime>
        </DiskEventType>
      </DiskEventSet>
      <DiskId>d-bp67acfmazb4ph***</DiskId>
      <InstanceId>i-bp67acfmazb4ph***</InstanceId>
      <Device>/dev/xvda</Device>
      <HealthStatus>
        <Code>128</Code>
        <Name>Impaired</Name>
      </HealthStatus>
    </DiskFullStatusType>
  </DiskFullStatusSet>
```

```

    <Status>
      <Code>129</Code>
      <Name>Available</Name>
    </Status>
  </DiskFullStatusType>
</DiskFullStatusType>
  <DiskEventSet>
    <DiskEventType>
      <EventId>e-bp67acfmazb4ph***</EventId>
      <EventType>
        <Code>1</Code>
        <Name>Degraded</Name>
      </EventType>
      <EventTime>2018-05-06T02:43:10Z</EventTime>
      <EventEndTime>2018-05-06T02:48:52Z</EventEndTime>
    </DiskEventType>
  </DiskEventSet>
  <DiskId>d-disk2</DiskId>
  <InstanceId>i-instance2</InstanceId>
  <Device>/dev/xvdb</Device>
  <HealthStatus>
    <Code>64</Code>
    <Name>Warning</Name>
  </HealthStatus>
  <Status>
    <Code>0</Code>
    <Name>Ok</Name>
  </Status>
</DiskFullStatusType>
</DiskFullStatusSet>
<PageNumber>1</PageNumber>
<PageSize>10</PageSize>
<RequestId>1A8B4B27-8B2D-XXXX-XXXX-0F64DBE4C211</RequestId>
<TotalCount>2</TotalCount>
</DescribeDisksFullStatusResponse>

```

JSON format

```

{
  "PageNumber": 1,
  "TotalCount": 2,
  "PageSize": 10,
  "RequestId": "1A8B4B27-8B2D-XXXX-XXXX-0F64DBE4C211",
  "DiskFullStatusSet": {
    "DiskFullStatusType": [
      {
        "Status": {
          "Name": "Available",
          "Code": 129
        }
      }
    ]
  }
}

```

```

    "Device": "/dev/xvda",
    "HealthStatus": {
      "Name": "Impaired",
      "Code": 128
    },
    "InstanceId": "i-bp67acfmazb4ph***",
    "DiskEventSet": {
      "DiskEventType": [
        {
          "EventTime": "2018-05-08T02:43:10Z",
          "EventId": "e-bp67acfmazb4ph***",
          "EventType": {
            "Name": "Stalled",
            "Code": "7"
          }
        }
      ]
    },
    "DiskId": "d-bp67acfmazb4ph***"
  },
  {
    "Status": {
      "Name": "Available",
      "Code": 129
    },
    "Device": "/dev/xvdb",
    "HealthStatus": {
      "Name": "Ok",
      "Code": 0
    },
    "InstanceId": "i-instance2",
    "DiskEventSet": {
      "DiskEventType": [
        {
          "EventTime": "2018-05-06T02:43:10Z",
          "EventId": "e-bp67acfmazb4pi***",
          "EventType": {
            "Name": "Degraded",
            "Code": "1"
          }
        }
      ],
      "EventEndTime": "2018-05-06T02:48:52Z"
    }
  ]
},
{
  "DiskId": "d-disk2"
}
]
}
}

```

Error codes

HTTP status code	Error code	Error message	Description
404	MissingParameter	%s	The error message returned because a required parameter is not specified.
403	InvalidParameter	%s	The error message returned because the specified parameter is invalid.
403	DiskIdLimitExceeded	%s	The error message returned because the number of the specified disk IDs exceeds 100.
403	EventIdLimitExceeded	%s	The error message returned because more than 100 system event IDs are specified.
403	InvalidParameter.TimeEndBeforeStart	%s	The error message returned because the end time was earlier the start time.
403	OperationDenied.NotInWhiteList	%s	The error message returned because you are not authorized to perform this operation.
403	TooManyDiskEvent.DiskIdRequired	%s	The error message returned because the number of disk events is beyond the query range. Specify the DiskId parameter to query disk events.

18.4. CancelSimulatedSystemEvents

You can call this operation to cancel one or more simulated system events that are in the Scheduled or Executing state. After you cancel a simulated system event, the simulated event is in the Canceled state.

Debugging

OpenAPI Explorer automatically calculates the signature value. For your convenience, we recommend that you call this operation in OpenAPI Explorer. OpenAPI Explorer dynamically generates the sample code of the operation for different SDKs.

Request parameters

Parameter	Type	Required	Example	Description
EventId.N	RepeatList	Yes	e-xhskHun1256xxxx	The ID of system event N. Valid values of N: 1 to 100. Specify multiple values in the repeated list form.
RegionId	String	Yes	cn-hangzhou	The region ID of the system event. You can call the DescribeRegions operation to query the most recent region list.
Action	String	Yes	CancelSimulatedSystemEvents	The operation that you want to perform. Set the value to CancelSimulatedSystemEvents.

Response parameters

Parameter	Type	Example	Description

Parameter	Type	Example	Description
RequestId	String	473469C7-AA6F-4DC5-B3DB-A3DC0DE3C83E	The ID of the request.

Examples

Sample requests

```
https://ecs.aliyuncs.com/?Action=CancelSimulatedSystemEvents
&EventId.1=e-xhskHun1256****
&RegionId=cn-hangzhou
&<Common request parameters>
```

Sample success responses

XML format

```
<CancelSimulatedSystemEventsResponse>
  <RequestId>E69EF3CC-94CD-42E7-8926-F133B86387C0</RequestId>
</CancelSimulatedSystemEventsResponse>
```

JSON format

```
{
  "RequestId": "E69EF3CC-94CD-42E7-8926-F133B86387C0"
}
```

Error codes

HTTP status code	Error code	Error message	Description
404	MissingParameter	%s	The error message returned because a required parameter is not specified.
403	InvalidParameter	%s	The error message returned because the parameter format is invalid.
403	CannotCancelSystemEvent.NotSimulated	%s	The error message returned because you cannot cancel a non-simulated system event.
403	InvalidEventId.NotFound	%s	The error message returned because the specified EventId parameter does not exist.
400	EventIdLimitExceeded	%s	The error message returned because a maximum of 100 events can be specified at a time.

18.5. CreateSimulatedSystemEvents

You can call this operation to schedule simulated system events for one or more ECS instances. The simulated system events do not actually occur or affect ECS instances.

Description

You can use the ECS console, [ECS API](#), or Cloud Monitor to view the scheduled simulated system events.

The following section describes the lifecycle of a simulated system event:

- **Scheduled:** The status for the simulated system event is automatically changed to Scheduled after it is scheduled.
- **Executed:** The status for the simulated system event is automatically changed to Executed at the scheduled time specified by the NotBefore parameter if no manual intervention is involved.
- **Canceled:** The status for the simulated system event is changed to Canceled if you cancel the event by calling [CancelSimulatedSystemEvents](#).
- **Avoided:** The status for the simulated system event of maintenance-triggered instance restart can be changed to Avoided if you [restart the instance](#) before the scheduled time of the simulated system event. The maintenance-triggered instance restart is indicated by the SystemMaintenance.Reboot value.

Debugging

OpenAPI Explorer automatically calculates the signature value. For your convenience, we recommend that you call this operation in OpenAPI Explorer. OpenAPI Explorer dynamically generates the sample code of the operation for different SDKs.

Request parameters

Parameter	Type	Required	Example	Description
Action	String	Yes	CreateSimulatedSystemEvents	The operation that you want to perform. Set the value to CreateSimulatedSystemEvents.
EventType	String	Yes	SystemMaintenance.Reboot	The type of the system event. Valid values: • SystemMaintenance.Reboot: The instance is restarted due to system maintenance. • SystemFailure.Reboot: The instance is restarted due to a system failure. • InstanceFailure.Reboot: The instance is restarted due to an instance failure.
InstanceId.N	RepeatList	Yes	i-instance1	The ID of ECS instance N. Valid values of N: 1 to 100. Specify multiple values in the repeated list form.
NotBefore	String	Yes	2018-12-01T06:32:31Z	The start time of the scheduled event execution period. Specify the time in the ISO 8601 standard in the yyyy-MM-ddTHH:mm:ssZ format. The time must be in UTC.
RegionId	String	Yes	cn-hangzhou	The ID of the region. You can call the DescribeRegions operation to query the most recent region list.

Response parameters

Parameter	Type	Example	Description
RequestId	String	473469C7-AA6F-4DC5-B3DB-A3DC0DE3C83E	The ID of the request.
EventIdSet	List	"EventId": ["e-bp16helosl7v0ooj**** "]	The list of simulated event IDs.

Examples

Sample requests


```
https://ecs.aliyuncs.com/?Action=CreateSimulatedSystemEvents
&EventType=SystemMaintenance.Reboot
&InstanceId.1=i-instance1
&NotBefore=2018-12-01T06:32:31Z
&RegionId=cn-hangzhou
&<Common request parameters>
```

Sample success responses

XML format

```
<CreateSimulatedSystemEventsResponse>
  <EventIdSet>
    <EventId>e-bp191hqye*****34x</EventId>
    <EventId>e-bp191hqye*****34y</EventId>
  </EventIdSet>
  <RequestId>E69EF3CC-94CD-42E7-8926-F133B86387C0</RequestId>
</CreateSimulatedSystemEventsResponse>
```

JSON format

```
{
  "EventIdSet":{
    "EventId":[
      "e-bp191hqye*****34x",
      "e-bp191hqye*****34y"
    ]
  },
  "RequestId":"679E9056-9B75-4306-8A72-A1DF93EBEF74"
}
```

Error codes

HTTP status code	Error code	Error message	Description
404	MissingParameter	%s	The error message returned because a required parameter is not specified.
403	InvalidParameter	%s	The error message returned because the specified parameter value is invalid.
403	InvalidNotBefore.Passed	%s	The error message returned when the specified value of the NotBefore parameter is earlier than the current time.
404	InvalidInstanceId.NotFound	%s	The error message returned because the specified instance does not exist. Check whether the value specified for the InstanceId parameter is correct.
403	SimulatedEventLimitExceeded	%s	The error message returned because the number of simulated system events has reached the upper limit.

HTTP status code	Error code	Error message	Description
403	InstanceLimitExceeded	%s	The error message returned because more than 100 instance IDs are specified.

18.6. AcceptInquiredSystemEvent

You can call this operation to accept the default operation for a system event in the Inquiring state and authorize the system to perform the default operation.

Debugging

OpenAPI Explorer automatically calculates the signature value. For your convenience, we recommend that you call this operation in OpenAPI Explorer. OpenAPI Explorer dynamically generates the sample code of the operation for different SDKs.

Request parameters

Parameter	Type	Required	Example	Description
Action	String	Yes	AcceptInquiredSystemEvent	The operation that you want to perform. Set the value to AcceptInquiredSystemEvent.
EventId	String	Yes	e-2zeielxl1qzq8slb****	The ID of the system event.
RegionId	String	Yes	cn-hangzhou	The region ID of the system event. You can call the DescribeRegions operation to query the most recent region list.

Response parameters

Parameter	Type	Example	Description
RequestId	String	4DD56CA6-6D75-4D33-BE34-E4A44EBE1C3D	The ID of the request.

Examples

Sample requests

```
http(s)://ecs.aliyuncs.com/? Action=AcceptInquiredSystemEvent
&EventId=e-2zeielxl1qzq8slb****
&RegionId=cn-hangzhou
&<Common request parameters>
```

Sample success responses

XML format

```
<AcceptInquiredSystemEventResponse>
  <RequestId>4DD56CA6-6D75-4D33-BE34-E4A44EBE1C3D</RequestId>
</AcceptInquiredSystemEventResponse>
```

JSON format

```
{
  "RequestId": "4DD56CA6-6D75-4D33-BE34-E4A44EBE1C3D"
}
```

Error codes

HttpCode	Error code	Error message	Description
400	MissingParameter	%s	The error message returned because a required parameter is not specified.
400	InvalidParameter	%s	The error message returned because a specified parameter is invalid.
404	InvalidEventId.NoInquiringEventFound	%s	The error message returned because the specified EventId parameter is invalid.
403	OperationConflict	%s	The error message returned because this operation conflicts with another operation in progress. Try again later.
403	OperationFail.DiskCategoryNotSupported	%s	The error message returned because this operation is not supported by the current disk category.
403	OperationFail.DiskStatusNotSupported	%s	The error message returned because this operation is not supported while the disk is in the current state.
403	OperationFail.InstanceStatusNotSupported	%s	The error message returned because this operation is not supported while the instance is in the current state.
403	IncorrectInstanceStatus	%s	The error message returned because this operation is not supported while the instance is in the current state.

19. Monitoring

19.1. DescribeSnapshotMonitorData

You can call this operation to query the monitoring data of snapshot sizes in a region over the last 30 days.

Description

When you call this operation, take note of the following points:

- A maximum of 400 entries of monitoring data can be returned at a time. If the result of the $(\text{EndTime} - \text{StartTime}) / \text{Period}$ formula is more than 400, an error is returned.
- You can query monitoring data from up to the last 30 days. If the value of `StartTime` is more than 30 days earlier than the current time, an error is returned.

Debugging

OpenAPI Explorer automatically calculates the signature value. For your convenience, we recommend that you call this operation in OpenAPI Explorer. OpenAPI Explorer dynamically generates the sample code of the operation for different SDKs.

Request parameters

Parameter	Type	Required	Example	Description
Action	String	Yes	DescribeSnapshotMonitorData	The operation that you want to perform. Set the value to DescribeSnapshotMonitorData.
EndTime	String	Yes	2019-05-10T03:00:00Z	The end of the time range to query. Specify the time in the ISO 8601 standard in the yyyy-MM-ddTHH:mm:ssZ format. The time must be in UTC. If the specified value of seconds (ss) is not 00, the time is rounded up to the next minute.
RegionId	String	Yes	cn-hangzhou	The ID of the region. You can call the DescribeRegions operation to query the most recent region list.
StartTime	String	Yes	2019-05-10T00:00:00Z	The beginning of the time range to query. Specify the time in the ISO 8601 standard in the yyyy-MM-ddTHH:mm:ssZ format. The time must be in UTC. If the specified value of seconds (ss) is not 00, the time is rounded up to the next minute.
Period	Integer	No	60	The interval at which to query the monitoring data of snapshot sizes. Unit: seconds. Valid values: • 60 • 600 • 3600 Default value: 60.

Parameter	Type	Required	Example	Description
Category	String	No	Standard	The type of the snapshot. Valid values: - Standard: normal snapshot - Flash: local snapshot Default value: Standard.

Response parameters

Parameter	Type	Example	Description
MonitorData	Array of DataPoint		The collection of monitoring data of snapshot sizes.
DataPoint			
Size	Long	243036848128	The total size of the snapshots. Unit: bytes.
TimeStamp	String	2019-05-10T04:00:00Z	The timestamp that corresponds to a snapshot size.
RequestId	String	9F8163A8-F5DE-47A2-A572-4E062D223E09	The ID of the request.

Examples

Sample requests

```
https://ecs.aliyuncs.com/?&Action=DescribeSnapshotMonitorData
&RegionId=cn-hangzhou
&StartTime=2019-05-10T00:00:00Z
&EndTime=2019-05-10T03:00:00Z
&Period=60
&<Common request parameters>
```

Sample success responses

XML format

```
<DescribeSnapshotMonitorDataResponse>
  <MonitorData>
    <DataPoint>
      <element>
        <Size>243036848128</Size>
        <TimeStamp>2019-05-10T01:00:00Z</TimeStamp>
      </element>
      <element>
        <Size>243036848128</Size>
        <TimeStamp>2019-05-10T02:00:00Z</TimeStamp>
      </element>
      <element>
        <Size>243036848128</Size>
        <TimeStamp>2019-05-10T03:00:00Z</TimeStamp>
      </element>
    </DataPoint>
  </MonitorData>
  <RequestId>9F8163A8-F5DE-47A2-A572-4E062D223E09</RequestId>
</DescribeSnapshotMonitorDataResponse>
```

JSON format

```
{
  "RequestId": "9F8163A8-F5DE-47A2-A572-4E062D223E09",
  "MonitorData": {
    "DataPoint": [
      {
        "TimeStamp": "2019-05-10T01:00:00Z",
        "Size": 243036848128
      },
      {
        "TimeStamp": "2019-05-10T02:00:00Z",
        "Size": 243036848128
      },
      {
        "TimeStamp": "2019-05-10T03:00:00Z",
        "Size": 243036848128
      }
    ]
  }
}
```

Error codes

HTTP status code	Error code	Error message	Description
400	InvalidStartTime.Malformed	The specified parameter "StartTime" is not valid.	The error message returned because the specified StartTime parameter is invalid.

HTTP status code	Error code	Error message	Description
400	InvalidEndTime.Malformed	The specified parameter "EndTime" is not valid.	The error message returned because the specified EndTime parameter is invalid.
400	InvalidPeriod.ValueNotSupported	The specified parameter "Period" is not valid.	The error message returned because the specified Period parameter is invalid.
400	InvalidStartTime.TooEarly	The specified parameter "StartTime" is too early.	The error message returned because the specified StartTime parameter is more than 30 days earlier than the current time.
400	InvalidParameter.TooManyDataQueried	Too many data queried.	The error message returned because the amount of queried monitoring data has reached the upper limit.
400	Throttling	Request was denied due to request throttling.	The error message returned because the request is denied due to throttling. Try again later.

19.2. RedeployInstance

You can call this operation to redeploy an ECS instance when the instance receives an event notification.

Description

RedeployInstance is an asynchronous operation. It migrates data before restarting the instance. After the instance is redeployed, it enters the Running (`Running`) state. If the redeployment fails, the instance returns to the original physical server and recovers to its original state.

When you call this operation, take note of the following points:

- The target instance must be in the Running or Stopped state. After the redeployment, the instance status changes as follows:
 - If the instance is in the Running (`Running`) state, it will enter the Stopping (`Stopping`) state.
 - If the instance is in the Stopped (`Stopped`) state, it will enter the Starting (`Starting`) state.
- Instances on dedicated hosts cannot be redeployed.
- If the `OperationLocks` parameter of the instance is set to `"LockReason": "security"`, the instance is locked for security reasons and cannot be redeployed.
- If the instance receives simulated events created by calling the `CreateSimulatedSystemEvent` operation, you cannot redeploy the instance by calling the `RedeployInstance` operation.
- When you handle local disk-related system events, if the damaged local disks are isolated but the instance restart due to scheduled system maintenance and re-initialization of the damaged local disk (`SystemMaintenance.RebootAndReinitErrorDisk`) event is not sent, you can still call the `RedeployInstance` operation to redeploy the instance. For more information, see [Overview of system events on ECS instances equipped with local disks](#).

The following table lists the system events of specific status that the instance needs to receive before you can call the `RedeployInstance` operation to redeploy the instance.

System event	Status
Instance restart due to system maintenance (SystemMaintenance.Reboot)	Inquiring, Scheduled

System event	Status
Instance redeployment due to system maintenance (SystemMaintenance.Redeploy)	Inquiring, Scheduled
Instance restart due to scheduled system maintenance and replacement of the damaged local disk (SystemMaintenance.RebootAndIsolateErrorDisk)	Inquiring
Instance restart due to scheduled system maintenance and re-initialization of the damaged local disk (SystemMaintenance.RebootAndReInitErrorDisk)	Inquiring
Instance redeployment due to a system error (SystemFailure.Redeploy)	Inquiring, Scheduled
For instances equipped with local disks only: instance restart due to a system error (SystemFailure.Reboot)	Executing

 **Warning** Redeploying instances with local disks will re-initialize the local disks and clear data in the storage devices.

Debugging

OpenAPI Explorer automatically calculates the signature value. For your convenience, we recommend that you call this operation in OpenAPI Explorer. OpenAPI Explorer dynamically generates the sample code of the operation for different SDKs.

Request parameters

Parameter	Type	Required	Example	Description
Action	String	Yes	RedeployInstance	The operation that you want to perform. If you use a custom HTTP URL or HTTPS URL to make an API request, you must specify the Action parameter. Set the value to RedeployInstance.
InstanceId	String	Yes	i-bp1azkttqpldxgtd***	The ID of the instance that is in the Running or Stopped state.
ForceStop	Boolean	No	false	Specifies whether to forcibly stop the running instance. Default value: false.  Note The effect of a forced stop is the same as a power failure. Data in the instance operating system that is not written to the storage device may be lost. We recommend that you redeploy instances in the Stopped state.

Response parameters

Parameter	Type	Example	Description
RequestId	String	473469C7-AA6F-4DC5-B3DB-A3DC0DE3C83E	The ID of the request.
TaskId	String	t-bp10e8orkp*****8x	The ID of the redeployment task. You can call the DescribeTasks operation to query the migration result.

Examples

Sample requests

```
https://ecs.aliyuncs.com/?Action=RedeployInstance
&InstanceId=i-bp1azkttqpldxgtd****
&<Common request parameters>
```

Sample success responses

XML format

```
<RedeployInstanceResponse>
  <RequestId>1C488B66-B819-4D14-8711-C4EAAA13AC01</RequestId>
  <TaskId>t-bp10e8orkp*****8x</TaskId>
</RedeployInstanceResponse>
```

JSON format

```
{
  "RequestId": "1C488B66-B819-4D14-8711-C4EAAA13AC01",
  "TaskId": "t-bp10e8orkp*****8x"
}
```

Error codes

HTTP status code	Error code	Error message	Description
404	InvalidInstanceId.NotFound	The InstanceId provided does not exist in our records.	The error message returned because the specified InstanceId parameter does not exist. Check whether the instance ID is correct.
403	IncorrectInstanceStatus	The current status of the resource does not support this operation.	The error message returned because the operation is not supported while the resource is in the current state.
403	InstanceLockedForSecurity	The specified operation is denied as your instance is locked for security reasons.	The error message returned because the operation is not supported while the instance is locked for security reasons.
403	DiskError	IncorrectDiskStatus.	The error message returned because the status of the specified disk is invalid.
500	InternalServerError	The request processing has failed due to some unknown error.	The error message returned because an internal error has occurred. Try again later. If the problem persists, submit a ticket.

HTTP status code	Error code	Error message	Description
403	InstanceExpiredOrInArrears	The specified operation is denied as your prepay instance is expired (prepay mode) or in arrears (afterpay mode).	The error message returned because the subscription instance has expired. Renew the instance first.
403	IncorrectInstanceStatus	%s	The error message returned because the operation is not supported while the instance is in the current state.
403	InvalidOperation.RedeployInstance	%s	The error message returned because the operation is invalid.

19.3. DescribeEniMonitorData

You can call this operation to query the monitoring data of a secondary Elastic Network Interface (ENI) over a specific period.

Description

The monitoring data includes intranet inbound and outbound traffic, the number of packets sent and received by the secondary ENI, and the number of dropped packets sent and received by the secondary ENI. If some content in the returned information is missing, it is possible that the system did not obtain the corresponding information. For example, the monitoring data of the secondary ENI cannot be queried if the instance is in the Stopped state. The monitoring data also cannot be queried if the secondary ENI is not attached to an instance and is in the Available state. When you call this operation, take note of the following points:

- Up to 400 monitoring data entries can be returned per query. If the value of (EndTime – StartTime)/Period is greater than 400, an error is returned.
- You can only query the monitoring data within the last 30 days. If the value of the StartTime parameter is earlier than 30 days, an error is returned.

Debugging

OpenAPI Explorer automatically calculates the signature value. For your convenience, we recommend that you call this operation in OpenAPI Explorer. OpenAPI Explorer dynamically generates the sample code of the operation for different SDKs.

Request parameters

Parameter	Type	Required	Example	Description
Action	String	Yes	DescribeEniMonitorData	The operation that you want to perform. Set the value to DescribeEniMonitorData.
EndTime	String	Yes	2018-05-21T12:22:00Z	The end time of the retrieved data. Specify the time in the ISO 8601 standard in the yyyy-MM-ddTHH:mm:ssZ format. The time must be in UTC. If the specified value of seconds (ss) is not 00, the time is rounded up to the next minute.
InstanceId	String	Yes	myInstance	The ID of the instance to which the secondary ENI is bound.
RegionId	String	Yes	cn-hangzhou	The ID of the region. You can call the DescribeRegions operation to query the most recent region list.

Parameter	Type	Required	Example	Description
StartTime	String	Yes	2018-05-21T12:19:00Z	The start time of the retrieved data. Specify the time in the ISO 8601 standard in the yyyy-MM-ddTHH:mm:ssZ format. The time must be in UTC. If the specified value of seconds (ss) is not 00, the time is rounded up to the next minute.
EniId	String	No	eni-myENI	The ID of the secondary ENI. All secondary ENIs that are bound to the specified instance are queried by default.
Period	Integer	No	60	The interval to retrieve the monitoring data. Unit: seconds. Valid values: 60 600 3600 Default value: 60.

Response parameters

Parameter	Type	Example	Description
MonitorData	Array		An array consisting of EniMonitorDataType data.
EniMonitorData			
DropPacketRx	String	0	The dropped intranet packets received by the secondary ENI. Unit: packets.
DropPacketTx	String	0	The dropped intranet packets sent by the secondary ENI. Unit: packets.
EniId	String	eni-myENI	The ID of the secondary ENI.
IntranetRx	String	0	The intranet data traffic received by the secondary ENI. Unit: Kbit/s.
IntranetTx	String	0	The intranet data traffic sent by the secondary ENI. Unit: Kbit/s.
PacketRx	String	0	The intranet packets received by the secondary ENI. Unit: packets.
PacketTx	String	0	The intranet packets sent by the secondary ENI. Unit: packets.
TimeStamp	String	2018-05-21T03:22:00Z	The timestamp of the monitoring data. The time follows the ISO 8601 standard in the yyyy-MM-ddTHH:mm:ssZ format. The time is displayed in UTC.
RequestId	String	473469C7-AA6F-4DC5-B3DB-A3DC0DE3C83E	The ID of the request.

Parameter	Type	Example	Description
TotalCount	Integer	4	The total number of returned entries.

Examples

Sample requests

```
https://ecs.aliyuncs.com/?Action=DescribeEniMonitorData
&EndTime=2018-05-21T12:22:00Z
&InstanceId=myInstance
&RegionId=cn-hangzhou
&StartTime=2018-05-21T12:19:00Z
&EniId=eni-myENI
&Period=60
&<Common request parameters>
```

Sample success responses

XML format

```

<DescribeEniMonitorDataResponse>
  <RequestId>5A03C2BA-3BCE-4A87-8076-7DC1629</RequestId>
  <TotalCount>4</TotalCount>
  <MonitorData>
    <EniMonitorData>
      <PacketTx>0</PacketTx>
      <TimeStamp>2018-05-21T03:22:00Z</TimeStamp>
      <IntranetOut>0</IntranetOut>
      <DropPacketRx>0</DropPacketRx>
      <IntranetIn>0</IntranetIn>
      <EniId>eni-myENI</EniId>
      <DropPacketTx>0</DropPacketTx>
      <PacketRx>0</PacketRx>
    </EniMonitorData>
    <EniMonitorData>
      <PacketTx>0</PacketTx>
      <TimeStamp>2018-05-21T03:21:00Z</TimeStamp>
      <IntranetOut>0</IntranetOut>
      <DropPacketRx>0</DropPacketRx>
      <IntranetIn>0</IntranetIn>
      <EniId>eni-myENI</EniId>
      <DropPacketTx>0</DropPacketTx>
      <PacketRx>0</PacketRx>
    </EniMonitorData>
    <EniMonitorData>
      <PacketTx>52240</PacketTx>
      <TimeStamp>2018-05-21T03:19:00Z</TimeStamp>
      <IntranetOut>73344</IntranetOut>
      <DropPacketRx>0</DropPacketRx>
      <IntranetIn>467</IntranetIn>
      <EniId>eni-myENI</EniId>
      <DropPacketTx>0</DropPacketTx>
      <PacketRx>6603</PacketRx>
    </EniMonitorData>
    <EniMonitorData>
      <PacketTx>34925</PacketTx>
      <TimeStamp>2018-05-21T03:20:00Z</TimeStamp>
      <IntranetOut>48871</IntranetOut>
      <DropPacketRx>0</DropPacketRx>
      <IntranetIn>350</IntranetIn>
      <EniId>eni-myENI</EniId>
      <DropPacketTx>0</DropPacketTx>
      <PacketRx>4888</PacketRx>
    </EniMonitorData>
  </MonitorData>
</DescribeEniMonitorDataResponse>

```

JSON format

```
{
  "RequestId": "5A03C2BA-3BCE-4A87-8076-7DC1629",
  "MonitorData": {
    "EniMonitorData": [
      {
        "PacketTx": 0,
        "TimeStamp": "2018-05-21T03:22:00Z",
        "IntranetOut": 0,
        "DropPacketRx": 0,
        "IntranetIn": 0,
        "Enild": "eni-myENI",
        "DropPacketTx": 0,
        "PacketRx": 0
      },
      {
        "PacketTx": 0,
        "TimeStamp": "2018-05-21T03:21:00Z",
        "IntranetOut": 0,
        "DropPacketRx": 0,
        "IntranetIn": 0,
        "Enild": "eni-myENI",
        "DropPacketTx": 0,
        "PacketRx": 0
      },
      {
        "PacketTx": 52240,
        "TimeStamp": "2018-05-21T03:19:00Z",
        "IntranetOut": 73344,
        "DropPacketRx": 0,
        "IntranetIn": 467,
        "Enild": "eni-myENI",
        "DropPacketTx": 0,
        "PacketRx": 6603
      },
      {
        "PacketTx": 34925,
        "TimeStamp": "2018-05-21T03:20:00Z",
        "IntranetOut": 48871,
        "DropPacketRx": 0,
        "IntranetIn": 350,
        "Enild": "eni-myENI",
        "DropPacketTx": 0,
        "PacketRx": 4888
      }
    ]
  }
}
```

Error codes

HTTP status code	Error code	Error message	Description
404	InvalidDiskId.NotFound	The DiskId provided does not exist in our records.	The error message returned because the specified DiskId parameter does not exist. Check whether the disk ID is correct.
403	InvalidStartTime.Malformed	The specified parameter "StartTime" is not valid.	The error message returned because the specified StartTime parameter is invalid.
403	InvalidEndTime.Malformed	The specified parameter "EndTime" is not valid.	The error message returned because the specified EndTime parameter is invalid.
403	InvalidPeriod.ValueNotSupported	The specified parameter "Period" is not valid.	The error message returned because the specified Period parameter is invalid.
403	InvalidStartTime.TooEarly	The specified parameter "StartTime" is too early.	The error message returned because the specified StartTime value is earlier than the valid range of time.
403	InvalidParameter.TooManyDataQueried	Too many data queried.	The error message returned because the amount of queried monitoring data is out of range.
403	Throttling	Request was denied due to request throttling.	The error message returned because the system is busy. Try again later.
403	InvalidInstanceType.NotSupportCredit	The InstanceType of the specified instance does not support credit.	The error message returned because the instance type does not support burstable instances.
403	InvalidParameter.EndTime	The specified parameter EndTime is earlier than StartTime.	The error message returned because the end time is earlier than the start time.
4003	InvalidParam.Malformed	The specified parameter "Enild" and "InstanceId" are not valid	The error message returned because the specified Enild and InstanceId parameters are invalid.

19.4. DescribeDiskMonitorData

You can call this operation to query the monitoring data of a disk over a specified period of time.

Description

The monitoring data includes read IOPS, write IOPS, read bandwidth (byte/s), write bandwidth (byte/s), read latency (μs), and write latency (μs) of the disk.

When you call this operation, take note of the following points:

- You can only query the monitoring data of the disks that are in the In Use `In_Use` state. For more information, see [Basic disk status](#).

 **Note** Some portion of information may be missing from the monitoring data. This is because the system cannot obtain the relevant information, for example, when the disk is not in the In Use (`In_Use`) state.

- A maximum of 400 entries of data can be returned at a time. That means the value of the following formula cannot be greater than 400: $(EndTime - StartTime) / Period$.
- At most last 30 days of monitoring data can be queried at a time. That means the specified `StartTime` parameter cannot be 30 days later than the current time.

Debugging

OpenAPI Explorer automatically calculates the signature value. For your convenience, we recommend that you call this operation in OpenAPI Explorer. OpenAPI Explorer dynamically generates the sample code of the operation for different SDKs.

Request parameters

Parameter	Type	Required	Example	Description
Action	String	Yes	DescribeDiskMonitorData	The operation that you want to perform. Set the value to DescribeDiskMonitorData.
DiskId	String	Yes	d-bp1bq5g3dxxo1x4o** **	The ID of the disk.
EndTime	String	Yes	2014-07-23T12:09:00Z	The end time of the time range to query. Specify the time in the ISO 8601 standard in the yyyy-MM-ddTHH:mm:ssZ format. The time must be in UTC. If the specified number of seconds (ss) is not 00, the time will be automatically rounded up to the next minute.
StartTime	String	Yes	2014-07-23T12:07:00Z	The start time of the time range to query. Specify the time in the ISO 8601 standard in the yyyy-MM-ddTHH:mm:ssZ format. The time must be in UTC. If the specified number of seconds (ss) is not 00, the time will be automatically rounded up to the next minute.
Period	Integer	No	60	The granularity of the retrieved monitoring data. Unit: seconds. Valid values: • 60 • 600 • 3600 Default value: 60.

Response parameters

Parameter	Type	Example	Description
MonitorData	Array		An array consisting of disk monitoring data.
DiskMonitorData			
BPSRead	Integer	0	The read bandwidth of the system disk. Unit: byte/s.
BPSTotal	Integer	204	The total read and write bandwidth of the system disk. Unit: byte/s.
BPSWrite	Integer	204	The write bandwidth of the system disk. Unit: byte/s.
DiskId	String	d-bp1bq5g3dxxo1x4o****	The ID of the disk.

Parameter	Type	Example	Description
IOPSRead	Integer	0	The number of read I/O operations per second. Unit: time/s.
IOPSTotal	Integer	0	The total number of read and write I/O operations per second. Unit: time/s.
IOPSWrite	Integer	0	The number of write I/O operations per second. Unit: time/s.
LatencyRead	Integer	0	The read latency of the disk. Unit: μ s.
LatencyWrite	Integer	0	The write latency of the disk. Unit: μ s.
TimeStamp	String	2014-07-23T12:07:00Z	The timestamp of monitoring data query. The time follows the ISO 8601 standard in the yyyy-MM-ddTHH:mm:ssZ format. The time is displayed in UTC.
RequestId	String	473469C7-AA6F-4DC5-B3DB-A3DC0DE3C83E	The ID of the request.
TotalCount	Integer	3	The total number of disk monitoring data entries.

Examples

Sample requests

```
https://ecs.aliyuncs.com/?Action=DescribeDiskMonitorData
&DiskId=d-bp1bq5g3dxxo1x4o****
&EndTime=2014-07-23T12:09:00Z
&StartTime=2014-07-23T12:07:00Z
&Period=60
&<Common request parameters>
```

Sample success responses

XML format

```

<DescribeDiskMonitorDataResponse>
  <MonitorData>
    <DiskMonitorData>
      <BPSTotal>0</BPSTotal>
      <BPSTotal>0</BPSTotal>
      <BPSTotal>0</BPSTotal>
      <DiskId>d-bp1bq5g3dxo1x4o****</DiskId>
      <IOPSRead>0</IOPSRead>
      <IOPSTotal>0</IOPSTotal>
      <IOPSWrite>0</IOPSWrite>
      <TimeStamp>2014-07-23T12:07:00Z</TimeStamp>
    </DiskMonitorData>
    <DiskMonitorData>
      <BPSTotal>204</BPSTotal>
      <BPSTotal>204</BPSTotal>
      <BPSTotal>204</BPSTotal>
      <DiskId>d-bp1bq5g3dxo1x4o****</DiskId>
      <IOPSRead>0</IOPSRead>
      <IOPSTotal>0</IOPSTotal>
      <IOPSWrite>0</IOPSWrite>
      <TimeStamp>2014-07-23T12:08:00Z</TimeStamp>
    </DiskMonitorData>
    <DiskMonitorData>
      <BPSTotal>819</BPSTotal>
      <BPSTotal>819</BPSTotal>
      <BPSTotal>819</BPSTotal>
      <DiskId>d-bp1bq5g3dxo1x4o****</DiskId>
      <IOPSRead>0</IOPSRead>
      <IOPSTotal>0</IOPSTotal>
      <IOPSWrite>0</IOPSWrite>
      <TimeStamp>2014-07-23T12:09:00Z</TimeStamp>
    </DiskMonitorData>
  </MonitorData>
  <RequestId>BF666447-B171-4076-BCBA-48437C18FD76</RequestId>
  <TotalCount>3</TotalCount>
</DescribeDiskMonitorDataResponse>

```

JSON format

```

{
  "MonitorData": {
    "DiskMonitorData": [
      {
        "BPSRead": 0,
        "BPSTotal": 0,
        "BPSWrite": 0,
        "DiskId": "d-bp1bq5g3dxxo1x4o****",
        "IOPSRead": 0,
        "IOPSTotal": 0,
        "IOPSWrite": 0,
        "TimeStamp": "2014-07-23T12:07:00Z"
      },
      {
        "BPSRead": 0,
        "BPSTotal": 204,
        "BPSWrite": 204,
        "DiskId": "d-bp1bq5g3dxxo1x4o****",
        "IOPSRead": 0,
        "IOPSTotal": 0,
        "IOPSWrite": 0,
        "TimeStamp": "2014-07-23T12:08:00Z"
      },
      {
        "BPSRead": 0,
        "BPSTotal": 819,
        "BPSWrite": 819,
        "DiskId": "d-bp1bq5g3dxxo1x4o****",
        "IOPSRead": 0,
        "IOPSTotal": 0,
        "IOPSWrite": 0,
        "TimeStamp": "2014-07-23T12:09:00Z"
      }
    ]
  },
  "RequestId": "A48A0A77-34F5-4C33-9066-9E8D2DA0D8E2",
  "TotalCount": 3
}

```

Error codes

HTTP status code	Error code	Error message	Description
404	InvalidDiskId.NotFound	The DiskId provided does not exist in our records.	The error message returned because the specified DiskId parameter does not exist. Check whether the DiskId parameter is correct.
400	InvalidStartTime.Malformed	The specified parameter "StartTime" is not valid.	The error message returned because the specified StartTime parameter is invalid.

HTTP status code	Error code	Error message	Description
400	InvalidEndTime.Malformed	The specified parameter "EndTime" is not valid.	The error message returned because the specified EndTime parameter is invalid.
400	InvalidPeriod.ValueNotSupported	The specified parameter "Period" is not valid.	The error message returned because the specified Period parameter is invalid.
400	InvalidStartTime.TooEarly	The specified parameter "StartTime" is too early.	The error message returned because the specified StartTime parameter is earlier than the valid range of time.
400	InvalidParameter.TooManyDataQueried	Too many data queried.	The error message returned because the amount of queried monitoring data is out of range.
400	Throttling	Request was denied due to request throttling.	The error message returned because the system is busy. Try again later.
400	InvalidInstanceType.NotSupportCredit	The InstanceType of the specified instance does not support credit.	The error message returned because the instance type does not support burstable instances.
400	InvalidParameter.EndTime	The specified parameter EndTime is earlier than StartTime.	The error message returned because the end time is earlier than the start time.
500	InternalServerError	The request processing has failed due to some unknown error, exception or failure.	The error message returned because an internal error has occurred. Try again later. If the problem persists, submit a ticket.

19.5. DescribeInstanceMonitorData

You can call this operation to query the monitoring data about an ECS instance. The metrics that can be queried include vCPU utilization, credits of burstable instances, received data traffic, sent data traffic, and average bandwidth.

Description

When you call this operation, take note of the following items:

- Up to 400 monitored data entries can be returned per query. If the value of $(EndTime - StartTime)/Period$ is greater than 400, an error is returned.
- You can only query the monitoring data in the last 30 days. If the value of the StartTime parameter is earlier than 30 days, an error is returned.
- A portion of the information may be missing. This is because the system cannot obtain the relevant information, such as when the instance is in the Stopped state.

Debugging

OpenAPI Explorer automatically calculates the signature value. For your convenience, we recommend that you call this operation in OpenAPI Explorer. OpenAPI Explorer dynamically generates the sample code of the operation for different SDKs.

Request parameters

Parameter	Type	Required	Example	Description

Parameter	Type	Required	Example	Description
Action	String	Yes	DescribeInstanceMonitorData	The operation that you want to perform. If you use a custom HTTP URL or HTTPS URL to make an API request, you must specify the <code>Action</code> parameter. Set the value to <code>DescribeInstanceMonitorData</code> .
InstanceId	String	Yes	i-bp1a36962lrhj4ab****	The ID of the instance.
StartTime	String	Yes	2014-10-29T23:00:00Z	The beginning of the time range to query. Specify the time in the ISO 8601 standard in the yyyy-MM-ddTHH:mm:ssZ format. The time must be in UTC. If the specified value of seconds (<code>ss</code>) is not <code>00</code> , the time is rounded up to the next minute.
EndTime	String	Yes	2014-10-30T08:00:00Z	The end of the time range to query. Specify the time in the ISO 8601 standard in the yyyy-MM-ddTHH:mm:ssZ format. The time must be in UTC. If the specified value of seconds (<code>ss</code>) is not <code>00</code> , the time is rounded up to the next minute.
Period	Integer	No	60	The interval of querying monitoring data. Unit: seconds. Valid values: 60 600 3600 Default value: 60.

Response parameters

Parameter	Type	Example	Description
MonitorData	Array		The collection of monitoring data of the instance.
InstanceMonitorData			
BPSRead	Integer	1000	The read bandwidth of the system disk. Unit: Byte/s.
BPSWrite	Integer	13585	The write bandwidth of the system disk. Unit: Byte/s.
CPU	Integer	2	The vCPU utilization of the instance. Unit: percent (%).
CPUAdvanceCreditBalance	Float	0.4	The excess credits consumed by a burstable instance.

Parameter	Type	Example	Description
CPUCreditBalance	Float	120	The total credits of a burstable instance.
CPUCreditUsage	Float	30	The number of credits consumed by a burstable instance.
CPUNotpaidSurplusCreditUsage	Float	0.5	The unpaid excess credits.
IOPSRead	Integer	1000	The read I/O operations of the system disk. Unit: times/s.
IOPSWrite	Integer	200	The write I/O operations of the system disk. Unit: times/s.
InstanceId	String	i-bp1a36962lrhj4*****	The ID of the instance.
InternetBandwidth	Integer	10	The public bandwidth of the instance. Unit: Kbit/s.
InternetRX	Integer	122	The Internet traffic received by the instance at the time of monitoring data query. Unit: Kbit/s.
InternetTX	Integer	343	The Internet traffic sent by the instance at the time of monitoring data query. Unit: Kbit/s.
IntranetBandwidth	Integer	10	The intranet bandwidth of the instance. Unit: Kbit/s.
IntranetRX	Integer	122	The intranet traffic received by the instance at the time of monitoring data query. Unit: Kbit/s.
IntranetTX	Integer	343	The intranet traffic sent by the instance at the time of monitoring data query. Unit: Kbit/s.
TimeStamp	String	2014-10-30T05:00:00Z	The timestamp of monitoring data query.
RequestId	String	473469C7-AA6F-4DC5-B3DB-A3DC0DE3C83E	The ID of the request.

Examples

Sample requests

```
https://ecs.aliyuncs.com/?Action=DescribeInstanceMonitorData
&EndTime=2014-10-30T08:00:00Z
&InstanceId=i-bp1a36962lrhj4ab****
&StartTime=2014-10-29T23:00:00Z
&Period=3600
&<Common request parameters>
```

Sample success responses

XML format

```
<DescribeInstanceMonitorDataResponse>
  <RequestId>C8B26B44-0189-443E-9816-D951F59623A9</RequestId>
  <MonitorData>
    <InstanceMonitorData>
      <InstanceId>i-bp1a36962lrhj4ab****</InstanceId>
      <CPU>2</CPU>
      <IntranetRX>122</IntranetRX>
      <IntranetTX>343</IntranetTX>
      <IntranetFlow>675</IntranetFlow>
      <IntranetBandwidth>10</IntranetBandwidth>
      <InternetRX>122</InternetRX>
      <InternetTX>343</InternetTX>
      <InternetFlow>675</InternetFlow>
      <InternetBandwidth>10</InternetBandwidth>
      <IOPSRead>1000</IOPSRead>
      <IOPSWrite>200</IOPSWrite>
      <BPSRead>1000</BPSRead>
      <BPSWrite>13585</BPSWrite>
      <TimeStamp>2014-10-30T05:00:00Z</TimeStamp>
    </InstanceMonitorData>
  </MonitorData>
</DescribeInstanceMonitorDataResponse>
```

JSON format

```

{
  "RequestId": "C8B26B44-0189-443E-9816-D951F59623A9",
  "MonitorData": {
    "InstanceMonitorData": [
      {
        "InstanceId": "i-bp1a36962lrhj4ab****",
        "CPU": 0,
        "IntranetRX": 122,
        "IntranetTX": 343,
        "IntranetFlow": 675,
        "IntranetBandwidth": 10,
        "InternetRX": 122,
        "InternetTX": 343,
        "InternetFlow": 675,
        "InternetBandwidth": 10,
        "IOPSRead": 1000,
        "IOPSWrite": 13585,
        "BPSRead": 1000,
        "BPSWrite": 200,
        "TimeStamp": "2014-10-30T05:00:00Z"
      }
    ]
  }
}

```

Error codes

HttpCode	Error code	Error message	Description
404	InvalidInstanceId.NotFound	The specified InstanceId does not exist.	The error message returned because the specified value of the InstanceId parameter does not exist.
400	InvalidStartTime.Malformed	The specified parameter "StartTime" is not valid.	The error message returned because the format of the specified StartTime parameter is invalid.
400	InvalidEndTime.Malformed	The specified parameter "EndTime" is not valid.	The error message returned because the format of the specified EndTime parameter is invalid.
400	InvalidPeriod.ValueNotSupported	The specified parameter "Period" is not valid.	The error message returned because the specified Period parameter is invalid.
400	InvalidStartTime.TooEarly	The specified parameter "StartTime" is too early.	The error message returned because the specified StartTime parameter is earlier than the valid range of time.
400	InvalidParameter.TooManyDataQueried	Too many data queried.	The error message returned because the amount of queried monitoring data is out of range.
400	Throttling	Request was denied due to request throttling.	The error message returned because the system is busy. Try again later.

HttpCode	Error code	Error message	Description
400	InvalidStartTime.ValueNotSupported	The specified parameter StartTime is later than EndTime.	The error message returned because the end time is earlier than the start time.
500	InternalServerError	The request processing has failed due to some unknown error.	The error message returned because an internal error has occurred. Try again later. If the problem persists, submit a ticket.

19.6. GetInstanceScreenshot

You can call this operation to obtain screenshots of an instance.

Description

ECS returns an instance screenshot that is in the JPG format and encoded in Base64. You must decode the screenshot yourself. We recommend that you use this operation for troubleshooting and diagnosis, and take note of the following points:

- The instance must be in the Running state.
- For phased-out instance types, you cannot obtain screenshot information. For more information, see [Phased-out instance types](#).
- If you call this operation in the same instance for multiple times, the call interval must be at least 10 seconds. Otherwise, the `Throttling` error code is returned.

Debugging

OpenAPI Explorer automatically calculates the signature value. For your convenience, we recommend that you call this operation in OpenAPI Explorer. OpenAPI Explorer dynamically generates the sample code of the operation for different SDKs.

Request parameters

Parameter	Type	Required	Example	Description
Action	String	Yes	GetInstanceScreenshot	The operation that you want to perform. Set the value to GetInstanceScreenshot.
InstanceId	String	Yes	i-bp1gbz20g229bv5***	The ID of the instance.
RegionId	String	Yes	cn-shenzhen	The region ID of the instance. You can call the DescribeRegions operation to query the most recent region list.
WakeUp	Boolean	No	false	Specifies whether to wake up the instance that is in sleep mode. Default value: false.

Response parameters

Parameter	Type	Example	Description
InstanceId	String	i-bp1gbz20g229bv5****	The ID of the instance.
RequestId	String	473469C7-AA6F-4DC5-B3DB-A3DC0DE3C83E	The ID of the request.

Parameter	Type	Example	Description
Screenshot	String	iVBORw0KGgoA...AAABJR U5ErkJggg==	The JPG-formatted instance screenshot, which is encoded in Base64.

Examples

Sample requests

```
http://ecs-cn-hangzhou.example.com/?Action=GetInstanceScreenshot
&InstanceId=i-bp1gbz20g229bvu5****
&RegionId=cn-shenzhen
&WakeUp=false
&<Common request parameters>
```

Sample success responses

XML format

```
<GetInstanceScreenshotResponse>
  <RequestId>22A1933F-AD02-4560-A6A7-53CF2231D942</RequestId>
  <InstanceId>i-bp1gbz20g229bvu5****</InstanceId>
  <Screenshot>iVBORw0KGgoA...AAABJRU5ErkJggg==</Screenshot>
</GetInstanceScreenshotResponse>
```

JSON format

```
{
  "RequestId": "22A1933F-AD02-4560-A6A7-53CF2231D942",
  "InstanceId": "i-bp1gbz20g229bvu5****",
  "Screenshot": "iVBORw0KGgoA...AAABJRU5ErkJggg=="
}
```

Error codes

HTTP status code	Error code	Error message	Description
400	MissingParameter	%s	The error message returned because a required parameter is not specified.
404	InvalidParameter	%s	The error message returned because the specified parameter is invalid.
405	IncorrectInstanceState	%s	The error message returned because this operation is not supported while the instance is in the current state.
405	NotSupported	%s	The error message returned because the current operation is invalid.
429	Throttling	%s	The error message returned because the request is denied due to throttling.

19.7. GetInstanceConsoleOutput

You can call this operation to obtain the command output of an instance. The returned command output is encoded in Base64.

Description

- ECS is a virtualized cloud-based service that cannot be connected to display devices. However, the command output for the last start, restart, or shutdown of the instance is cached. You can call `GetInstanceConsoleOutput` to obtain this information.
- For instances of the **phased-out instance types**, you cannot obtain the command output.
- You cannot obtain the command output of Windows instances.

Debugging

OpenAPI Explorer automatically calculates the signature value. For your convenience, we recommend that you call this operation in OpenAPI Explorer. OpenAPI Explorer dynamically generates the sample code of the operation for different SDKs.

Request parameters

Parameter	Type	Required	Example	Description
Action	String	Yes	GetInstanceConsoleOutput	The operation that you want to perform. Set the value to <code>GetInstanceConsoleOutput</code> .
InstanceId	String	Yes	i-bp1c1xhsrac2coiw****	The ID of the instance.
RegionId	String	Yes	cn-hangzhou	The region ID of the instance. You can call the DescribeRegions operation to query the most recent region list.
RemoveSymbols	Boolean	No	false	Specifies whether to remove symbols from the returned command output. Valid values: • true: removes the symbols • false: does not remove the symbols Default value: false

Response parameters

Parameter	Type	Example	Description

Parameter	Type	Example	Description
ConsoleOutput	String	V2VsY29tZSB0byBDZW50 T1MgCgpDaGVja2luZyBm aWxlc3lzdGVtcwpDaGVja 2luZyBhbGwgZmlsZSBze XN0ZW1zLgpbL3NiaW4v ZnNjay5leHQ0ICgxKSA tLSAvXS BMC2NrLmV4dDQg LWEgL2Rldi92ZGEtIAovZ GV2L3ZkYTE6IGNsZWFuL CAzMjAxNi8yNjlxNDQwIG ZpbGVzLCA0NDc5NzQvM TA0ODU1MDQgYmxvY2t zCgpFbnRlcmLuZyBub24t aW50ZXJhY3RpdmUgc3R hcnR1cApDYWxs aW5nIH RoZSBzeXN0ZW0gYWN0 aXZpdHkgZGF0YSBjb2xs ZWN0b3lgKHhZGMpLi4 uIAoKQnJpbmdpbmcgdX AgaW50ZXJmYWNIIGV0a DA6lCAKRGV0Z XJtaW5pb mcgSVAgaw5mb3JtYXRp b24gZm9yIGV0aDAuLi4g ZG9uZS4KCmFsaXl1bi1z ZXJ2aWNlIHNOYXJ0L3J1b m5pbmcsIHByb2Nlc3MgM TczMwpmaW5pc2hlZAoK Q2VudE9tIHJlbGVhc2UgN i44lChGaW5hbCkKS2Vyb mVsIDluNi4zMj02OTYuMy 4yLmVsNi5pNjg2IG9uIGFu IGk2ODYKCmLaMnplZDk2 ZTQ2MmF5cXBxeioqKioqI GxvZ2luOg==	The command output of the instance, which is encoded in Base64.
InstanceId	String	i-bp1c1xhsrac2coiw****	The ID of the instance.
LastUpdateTime	String	2018-03-22 10:04:57	The time when the instance was last started, restarted, or shut down. Specify the time in the ISO 8601 standard in the yyyy-MM-ddTHH:mm:ssZ format. The time must be in UTC.
RequestId	String	473469C7-AA6F-4DC5-B3DB-A3DC0DE3C83E	The ID of the request.

Examples

Sample requests

```
http://ecs-cn-hangzhou.aliyuncs.com/?Action=GetInstanceConsoleOutput
&InstanceId=i-bp1c1xhsrac2coiw****
&RegionId=cn-hangzhou
<&Common request parameters>
```

Sample success responses

XML format

```
<GetInstanceConsoleOutputResponse>
  <RequestId>22A1933F-AD02-4560-A6A7-53CF2231D942</RequestId>
  <InstanceId>i-bp1c1xhsrac2coiw****</InstanceId>
  <LastUpdateTime>2018-03-22 10:04:57</LastUpdateTime>
  <ConsoleOutput>V2VsY29tZSB0byBDZW50T1MgCgpDaGVja2luZyBmaWxlczlzdGVtcwpDaGVja2luZyBhbGwgZmlsZSBzeXN0ZW1
zLgpbL3NiaW4vZnNjay5leHQ0IGxKSAtLSAvXS BMC2NrlmV4dDQgLWEgL2Rldi92ZGExIAovZGV2L3ZkYTE6IGNsZWFuLCAzMjAxNi8yNjI
xNDQwIGZpbGVzLCA0NDc5NzQvMTA0ODU1MDQgYmxvY2tzcGpFbnRlcmluZyBub24taW50ZXJhY3RpdmUgc3RhcnR1cApDYWxs aW5nI
HRoZSBzeXN0ZW0gYWN0aXZpdHkgZGF0YSBjb2xsZWNOB3IlgKHhZGMpLi4uIAoKQnJpbmdpbmcgdXAgaW50ZXJmYWNLIGV0aDA6ICA
KRGV0ZXJtaW5pbmcgSVAg aW5mb3JtYXRpb24gZm9yIGV0aDAuLi4gZG9uZS4KcmFs aXl1bi1zZXJ2aWNlIHNOYXJ0L3J1bm5pbmcsIHByb2
Nlc3MgMTczMwpmaW5pc2hlZAoKQ2VudE9TlHJlbGVhc2UgNi44IChGaW5hbCkKS2VybmVsIDIuNi4zMj02OTY uMy4yLmVsNi5pNjg2IG9uIG
FuIGk2ODYKCmlaMnplZDk2ZTQ2MmF5cjBxeioqKioqIGxvZ2luOg==</ConsoleOutput>
</GetInstanceConsoleOutputResponse>
```

JSON format

```
{
  "RequestId": "22A1933F-AD02-4560-A6A7-53CF2231D942",
  "InstanceId": "i-bp1c1xhsrac2coiw****",
  "LastUpdateTime": "2018-03-22 10:04:57",
  "ConsoleOutput": "V2VsY29tZSB0byBDZW50T1MgCgpDaGVja2luZyBmaWxlczlzdGVtcwpDaGVja2luZyBhbGwgZmlsZSBzeXN0ZW1
zLgpbL3NiaW4vZnNjay5leHQ0IGxKSAtLSAvXS BMC2NrlmV4dDQgLWEgL2Rldi92ZGExIAovZGV2L3ZkYTE6IGNsZWFuLCAzMjAxNi8yNjI
xNDQwIGZpbGVzLCA0NDc5NzQvMTA0ODU1MDQgYmxvY2tzcGpFbnRlcmluZyBub24taW50ZXJhY3RpdmUgc3RhcnR1cApDYWxs aW5nI
HRoZSBzeXN0ZW0gYWN0aXZpdHkgZGF0YSBjb2xsZWNOB3IlgKHhZGMpLi4uIAoKQnJpbmdpbmcgdXAgaW50ZXJmYWNLIGV0aDA6ICA
KRGV0ZXJtaW5pbmcgSVAg aW5mb3JtYXRpb24gZm9yIGV0aDAuLi4gZG9uZS4KcmFs aXl1bi1zZXJ2aWNlIHNOYXJ0L3J1bm5pbmcsIHByb2
Nlc3MgMTczMwpmaW5pc2hlZAoKQ2VudE9TlHJlbGVhc2UgNi44IChGaW5hbCkKS2VybmVsIDIuNi4zMj02OTY uMy4yLmVsNi5pNjg2IG9uIG
FuIGk2ODYKCmlaMnplZDk2ZTQ2MmF5cjBxeioqKioqIGxvZ2luOg=="
}
```

Error codes

HTTP status code	Error code	Error message	Description
400	MissingParameter	%s	The error message returned because a required parameter is not specified.
404	InvalidParameter	%s	The error message returned because the specified parameter is invalid.
405	IncorrectInstanceState	%s	The error message returned because this operation is not supported while the instance is in the current state.
405	NotSupported	%s	The error message returned because the operation is invalid.
429	Throttling	%s	The error message returned because the request is denied due to throttling.

19.8. DescribeInstanceMaintenanceAttributes

You can call this operation to query the maintenance attributes of an instance.

Description

The operation is used to query the specified maintenance policy of an instance, which contains the following two major maintenance attributes:

- **Maintenance window:** the time period that you specify for O&M.
- **Maintenance action:** the policy that you specify in response to instance shutdown.

Debugging

OpenAPI Explorer automatically calculates the signature value. For your convenience, we recommend that you call this operation in OpenAPI Explorer. OpenAPI Explorer dynamically generates the sample code of the operation for different SDKs.

Request parameters

Parameter	Type	Required	Example	Description
Action	String	Yes	DescribeInstanceMaintenanceAttributes	The operation that you want to perform. Set the value to DescribeInstanceMaintenanceAttributes.
RegionId	String	Yes	cn-hangzhou	The region ID of the instance. You can call the DescribeRegions operation to query the most recent region list.
InstanceId.N	RepeatList	No	i-bp67acfmxb4p****	The ID of instance N. Valid values of N: 1 to 100.
PageNumber	Long	No	1	The number of the page to return. Pages start from page 1. Default value: 1.
PageSize	Long	No	10	The number of entries to return on each page. Valid values: 1 to 100. Default value: 10.

Response parameters

Parameter	Type	Example	Description
MaintenanceAttributes	Array of MaintenanceAttribute		Details about the maintenance attributes.
MaintenanceAttribute			
ActionOnMaintenance	Struct		The attribute of the maintenance action of the instance.
DefaultValue	String	AutoRecover	The default value of the maintenance action.
SupportedValues	List	"SupportedValue": ["Stop", "AutoRecover"]	Details about the supported maintenance actions.

Parameter	Type	Example	Description
Value	String	Stop	The current value of the maintenance action. Valid values: - Stop: The instance is shutdown. - AutoRecover: The instance is automatically recovered. - AutoRedeploy: Failover is performed, which may cause the damage of the data disk.
InstanceId	String	i-bp67acfmazb4p****	The ID of the instance.
MaintenanceWindows	Array of MaintenanceWindow		Details about the maintenance window.
MaintenanceWindow			
EndTime	String	18:00:00	The end time of the maintenance window.
StartTime	String	02:00:00	The start time of the maintenance window.
PageNumber	Integer	1	The page number of the returned page.
PageSize	Integer	10	The number of entries returned per page.
RequestId	String	473469C7-AA6F-4DC5-B3DB-A3DC0DE3C83E	The ID of the request.
TotalCount	Integer	100	The total number of queried maintenance attributes.

Examples

Sample requests

```
https://ecs.aliyuncs.com?Action=DescribeMaintenanceProperty
&InstanceId=i-bp67acfmazb4p****
&<Common request parameters>
```

Sample success responses

XML format

```
<DescribeInstanceMaintenanceAttributesResponse>
  <RequestId>473469C7-AA6F-4DC5-B3DB-A3DC0DE3C83E</RequestId>
  <PageNumber>1</PageNumber>
  <PageSize>10</PageSize>
  <TotalCount>100</TotalCount>
  <InstanceMaintenanceAttributes>
    <InstanceMaintenanceAttribute>
      <InstanceId>i-bp67acfmxazb4ph**</InstanceId>
      <MaintenanceWindows>
        <MaintenanceWindow>
          <StartTime>02:00:00</StartTime>
          <EndTime>18:00:00</EndTime>
        </MaintenanceWindow>
      </MaintenanceWindows>
      <ActionOnMaintenance>
        <Value>Stop</Value>
        <DefaultValue>AutoRecover</DefaultValue>
        <SupportedValues>
          <SupportedValue>Stop</SupportedValue>
          <SupportedValue>AutoRecover</SupportedValue>
        </SupportedValues>
      </ActionOnMaintenance>
    </InstanceMaintenanceAttribute>
  </InstanceMaintenanceAttributes>
</DescribeInstanceMaintenanceAttributesResponse>
```

JSON format


```
{
  "RequestId": "473469C7-AA6F-4DC5-B3DB-A3DC0DE3C83E",
  "PageNumber": 1,
  "PageSize": 10,
  "TotalCount": 100,
  "InstanceMaintenanceAttributes": {
    "InstanceMaintenanceAttribute": [{
      "InstanceId": "i-bp67acfmxyzb4ph***",
      "MaintenanceWindows": {
        "MaintenanceWindow": [{
          "StartTime": "02:00:00",
          "EndTime": "18:00:00"
        }]
      },
      "ActionOnMaintenance": {
        "Value": "Stop",
        "DefaultValue": "AutoRecover",
        "SupportedValues": {
          "SupportedValue": ["Stop", "AutoRecover"]
        }
      }
    }]
  }
}
```

Error codes

HTTP status code	Error code	Error message	Description
400	MissingParameter	%s	The error message returned because a required parameter is not specified.
403	InvalidParameter	%s	The error message returned because the specified parameter is invalid.
403	InstanceIdLimitExceeded	%s	The error message returned because the value set for N in the InstanceId.N parameter is more than 100.
403	OperationDenied.NotInWhitelist	%s	The error message returned because you are not authorized to perform this operation. Try again when you are in the whitelist.
404	InvalidInstanceId.NotFound	The specified InstanceId does not exist.	The error message returned because the specified instance does not exist. Check whether instance ID is correct.

19.9. ModifyInstanceMaintenanceAttributes

You can call this operation to modify the maintenance attributes of an instance.

Description

The operation is used to modify the maintenance policy of an instance, which contains the following two maintenance attributes:

 **Note** The maintenance window is a function to be extended and cannot be used for the moment.

- **Maintenance window:** the time period that you specify for O&M.
- **Maintenance action:** the policy that you specify in respond to instance shutdown.

Debugging

OpenAPI Explorer automatically calculates the signature value. For your convenience, we recommend that you call this operation in OpenAPI Explorer. OpenAPI Explorer dynamically generates the sample code of the operation for different SDKs.

Request parameters

Parameter	Type	Required	Example	Description
Action	String	Yes	ModifyInstanceMaintenanceAttributes	The operation that you want to perform. For API requests using the HTTP and HTTPS methods, this parameter is required. Set the value to <code>ModifyInstanceMaintenanceAttributes</code> .
RegionId	String	Yes	cn-hangzhou	The region ID of the instance. You can call the DescribeRegions operation to query the most recent region list.
InstanceId.N	RepeatList	No	i-bp67acfmazb4ph***	The IDs of N instances. Valid values of N: 1 to 100.
MaintenanceWindow.N.StartTime	String	No	02:00:00	The start time of the Nth maintenance window. The valid values of this parameter must be integer hours. Both minute and second must be set to 00. Valid values of N: 1.  Note This parameter is a function to be extended and cannot be used for the moment.
MaintenanceWindow.N.EndTime	String	No	18:00:00	The end time of the Nth maintenance window. The valid values of this parameter must be integer hours. Both minute and second must be set to 00. The parameters <code>MaintenanceWindow.N.StartTime</code> and <code>MaintenanceWindow.N.EndTime</code> must be specified at the same time, and the value of <code>MaintenanceWindow.N.EndTime</code> must be 1 to 23 hours later than the value of <code>MaintenanceWindow.N.StartTime</code> . Valid values of N: 1.  Note This parameter is a function to be extended and cannot be used for the moment.

Parameter	Type	Required	Example	Description
ActionOnMaintenance	String	No	AutoRecover	The maintenance action. Valid values: - Stop: shutdown. - AutoRecover: auto recovery. - AutoRedeploy: Data is migrated in case of shutdown, which may cause the damage of the data disk.

Response parameters

Parameter	Type	Example	Description
RequestId	String	473469C7-AA6F-4DC5-B3DB-A3DC0DE3C83E	The ID of the request.

Examples

Sample requests

```
https://ecs.aliyuncs.com?Action=ModifyInstanceMaintenanceAttributes
&InstanceId=i-bp67acfmazb4ph***
&ActionOnMaintenance=AutoRecover
&<Common request parameters>
```

Sample success responses

XML format

```
<ModifyInstanceMaintenanceAttributesResponse>
  <RequestId>E69FF3CC-94DD-42EF-8836-F33C45EDF9945ED</RequestId>
</ModifyInstanceMaintenanceAttributesResponse>
```

JSON format

```
{
  "RequestId": "E69FF3CC-94DD-42EF-8836-F33C45EDF9945ED"
}
```

Error codes

HTTP status code	Error code	Error message	Description
404	InvalidInstanceId.NotFound	%s	The error message returned because the specified instance does not exist. Check the value specified for the InstanceId parameter.
403	InvalidParameter	%s	The error message returned because the specified parameter value is invalid.
403	OperationDenied.NotInWhitelist	%s	The error message returned because no whitelist is specified, which cause the operation to be denied.

20.Cloud assistants

20.1. RunCommand

You can call this operation to run a shell, PowerShell, or bat command on one or more instances.

Description

Different from [CreateCommand](#) and [InvokeCommand](#), RunCommand can be used to create and run a command within a single request.

When you call this operation, take note of the following items:

- The instance on which you want to run a command must be a VPC-type instance.
- The instance must be in the Running (`Running`) state.
- The instance must be pre-installed with the Cloud Assistant client ([InstallCloudAssistant](#)).
- Before you run a PowerShell command, make sure that the Windows instance on which you want to run the command is installed with the PowerShell module.
- The period of recurring tasks is set based on UTC and the system time of the instance. The time or time zone of the ECS instance must meet your business needs. For more information about time zones, see [Time setting: Synchronize NTP servers and change time zone for Linux instances](#) or [Configure the NTP service for Windows instances](#).
- You can specify the `Timeout` parameter to set the maximum timeout period of a command execution on an instance. After a command execution times out, Cloud Assistant forcibly stops the process.
 - After a single command execution times out, the execution state ([InvokeRecordStatus](#)) of the command becomes Failed.
 - Each record of timeout period of recurring tasks is valid. The timeout of the previous task does not affect the next task. After an execution task times out, the execution state ([InvokeRecordStatus](#)) of the command becomes Failed.
- Commands may fail to be run because of the status exceptions of the instances on which commands are run, network exceptions, or the exceptions of the Cloud Assistant client. If an execution task fails, no execution information is generated.
- When `EnableParameter` is set to true, the custom parameter feature is enabled. When you set the `CommandContent` parameter, you can specify custom parameters in the `{{parameter}}` format. Then, you can pass in these custom parameters in the key-value pair format when you run the command.

Debugging

OpenAPI Explorer automatically calculates the signature value. For your convenience, we recommend that you call this operation in OpenAPI Explorer. OpenAPI Explorer dynamically generates the sample code of the operation for different SDKs.

Request parameters

Parameter	Type	Required	Example	Description
Action	String	Yes	RunCommand	The operation that you want to perform. Set the value to RunCommand.

Parameter	Type	Required	Example	Description
CommandContent	String	Yes	ZWNobyAxMjM=	The plaintext or Base64-encoded content of the command. The Base64-encoded command content cannot exceed 16 KB in size. When <code>EnableParameter</code> is set to true, the custom parameter feature is enabled: - Define custom parameters in the <code>{{}}</code> format. Within <code>{{}}</code>, the spaces and line breaks before and after the parameter names are ignored. - The number of custom parameters cannot exceed 20. - A custom parameter name can contain only letters, digits, underscores (<code>_</code>), and hyphens (<code>-</code>). The name is case-insensitive. Each custom parameter key cannot exceed 64 bytes.
InstanceId.N	RepeatList	Yes	i-bp185dy2o3o6neg****	The ID of instance N. Valid values of N: 1 to 50. If multiple instances are specified and one of them does not meet the execution conditions, you must re-specify the IDs of all the instances.
RegionId	String	Yes	cn-hangzhou	The region ID of the instance. You can call the DescribeRegions operation to query the most recent region list.
Type	String	Yes	RunShellScript	The language type of the O&M command. Valid values: - RunBatScript: batch commands for Windows instances - RunPowerShellScript: PowerShell commands for Windows instances - RunShellScript: shell commands for Linux instances
Name	String	No	testName	The name of the command. The name supports all character sets. It cannot exceed 128 characters in length.
Description	String	No	testDescription	The description of the command. The description supports all character sets. It cannot exceed 512 characters in length.
WorkingDir	String	No	/home/	The working directory of the command in the ECS instance. Default value: - Linux instances: the home directory of the administrator, which is <code>/root</code>. - Windows instances: the directory where the Cloud Assistant client process resides, such as <code>C:\Windows\System32\</code>.

Parameter	Type	Required	Example	Description
Timeout	Long	No	3600	The timeout period for command execution. Unit: seconds. A timeout error occurs when a command cannot be run because the process slows down, a specific module or the Cloud Assistant client does not exist. When the command times out, the command process is forcibly terminated. Default value: 60.
EnableParameter	Boolean	No	false	Specifies whether to contain custom parameters in the command. Default value: false.
Timed	Boolean	No	true	Specifies whether to periodically run the command. Valid values: • true: runs the command on a regular basis based on the value set for the <code>Frequency</code> parameter. The result of the previous execution task does not affect the next execution task. • false: runs once only. Default value: false.
Frequency	String	No	0 */20 * * * *	The execution period of recurring tasks. If the Timed parameter is set to true, you must specify the Frequency parameter. The interval between two recurring tasks cannot be less than 10 seconds. The parameter value follows the cron expression. For more information, see Cron expression.

Parameter	Type	Required	Example	Description
Parameters	Json	No	<pre>{"name":"Jack", "accessKey":"LTAlDy vdlQaRY****"}</pre>	The key-value pairs of custom parameters that are passed in when the command contains custom parameters. For example, if the command content is <code>echo {{name}}</code>, the <code>Parameters</code> parameter can be used to pass in the <code>{"name":"Jack"}</code> key-value pair. The <code>name</code> variable value of the custom parameter is automatically replaced to generate a new command. Therefore, the <code>echo Jack</code> command is actually run. Number of custom parameters: 0 to 10. - The key cannot be an empty string. It can be up to 64 characters in length. - The value can be an empty string. - After the custom parameters and the original command content are Base64 encoded, the total size cannot exceed 16 KB. - The set of custom parameter names must be a subset of the parameter set that is defined when you created the command. You can use an empty string to represent the parameters that are not passed in. This parameter is empty by default. This indicates that this parameter is canceled and customer parameters are disabled.
KeepCommand	Boolean	No	false	Specifies whether to retain the command after it is run. Valid values: - true: The command is retained. You can call the <code>InvokeCommand</code> operation to run the command again. The retained command takes up the quota of Cloud Assistant commands. - false: The command is not retained. The command is automatically deleted after it is run and it does not take up the quota of Cloud Assistant commands. Default value: false.
ContentEncoding	String	No	Base64	The encoding mode of command content (<code>CommandContent</code>). Valid values (case-insensitive): - PlainText: The command content is not encoded, and is transmitted in plaintext. - Base64: The command content is Base64-encoded. Default value: PlainText. If the specified value of this parameter is invalid, PlainText is used by default.

Response parameters

Parameter	Type	Example	Description
CommandId	String	c-7d2a745b412b4601b2d47f6a768d****	The ID of the command.
InvokeId	String	t-7d2a745b412b4601b2d47f6a768d****	The ID of command execution.
RequestId	String	473469C7-AA6F-4DC5-B3DB-A3DC0DE3C83E	The ID of the request.

Examples

Sample requests

```
http(s)://ecs.aliyuncs.com/? Action=RunCommand
&CommandContent='echo hello'
&InstanceId=i-bp185dy2o3o6neg****
&Name=test
&RegionId=cn-hangzhou
&Type=RunShellScript
&<Common request parameters>
```

Sample success responses

XML format

```
<RunCommandResponse>
  <RequestId>E69EF3CC-94CD-42E7-8926-F133B86387C0</RequestId>
  <CommandId>c-7d2a745b412b4601b2d47f6a768d****</CommandId>
  <InvokeId>t-7d2a745b412b4601b2d47f6a768d****</InvokeId>
</RunCommandResponse>
```

JSON format

```
{
  "RequestId": "E69EF3CC-94CD-42E7-8926-F133B86387C0",
  "CommandId": "c-7d2a745b412b4601b2d47f6a768d****",
  "InvokeId": "t-7d2a745b412b4601b2d47f6a768d****"
}
```

Error codes

HTTP status code	Error code	Error message	Description
500	InternalServerError.Dispatch	An error occurred when you dispatched the request.	The error message returned because an error occurred when the request was sent. Try again later.
403	InvalidCmdType.NotFound	The specified command type does not exist.	The error message returned because the specified Type parameter does not exist.
403	CmdName.ExceedLimit	The length of the command name exceeds the upper limit.	The error message returned because the maximum length of the command name has been reached.

HTTP status code	Error code	Error message	Description
403	CmdDesc.ExceedLimit	The length of the command description exceeds the upper limit.	The error message returned because the maximum length of the command description has been reached.
403	CmdCount.ExceedQuota	The total number of commands in the current region exceeds the quota.	The error message returned because the maximum number of Cloud Assistant commands in the current region has been reached.
404	InvalidInstance.NotFound	The specified instance does not exist.	The error message returned because the specified instance does not exist.
403	MissingParam.Frequency	The frequency must be specified when you create a timed task.	The error message returned because the Frequency parameter is not specified when you create a scheduled task.

20.2. CreateCommand

You can call this operation to create a Cloud Assistant command.

Description

- You can create commands of the following types:
 - Batch commands for Windows instances: `RunBatScript`
 - PowerShell commands for Windows instances: `RunPowerShellScript`
 - Shell commands for Linux instances: `RunShellScript`
- You can specify the `TimeOut` parameter to set the maximum timeout period for command invocations on ECS instances. When a command invocation times out, the **Cloud Assistant client** will force the command process to stop by canceling the PID (process ID) of the command.
 - For one-time invocation: After an invocation times out, the state of the command invocation (`InvokeRecordStatus`) on the specified ECS instance becomes `Failed`.
 - For periodic invocation:
 - The timeout period of periodic invocation is effective for every invocation record.
 - After an invocation times out, the status of the invocation record (`InvokeRecordStatus`) becomes `Failed`.
 - The timeout of previous invocation does not affect current invocation.
- You can create up to 100 Cloud Assistant commands in a region. You can also submit a ticket to increase the upper limit.
- You can use the `WorkingDir` parameter to specify the execution path of the command. For Linux instances, by default the invocation path of the command is the home directory of the root user, which is `/root`. For Windows instances, by default the invocation path of the command is the directory where the Cloud Assistant client process resides, such as `C:\Windows\System32\`.
- You can enable the custom parameter feature on a Cloud Assistant command by setting `EnableParameter=true` when you create the command. When you set the `CommandContent` parameter, you can use the `{{parameter}}` format to indicate a custom parameter. Then, when you call the `InvokeCommand` operation, you can enter the key-value pair of the custom parameter. For example, if you create a command named `echo {{name}}`, when you call the `InvokeCommand` operation, you must set `Parameters` to `{name: Jack}`. The custom parameter will automatically change the command to a new one. Therefore, the `echo Jack` command is actually executed on the instance.

Debugging

OpenAPI Explorer automatically calculates the signature value. For your convenience, we recommend that you call this operation in OpenAPI Explorer. OpenAPI Explorer dynamically generates the sample code of the operation for different SDKs.

Request Parameters

Parameter	Type	Required	Example	Description
Action	String	Yes	CreateCommand	The operation that you want to perform. Set the value to CreateCommand.
CommandContent	String	Yes	ZWNobyAxMjM=	The Base64-encoded content of the command. - The parameter value must be Base64-encoded and cannot exceed 16 KB in size after encoding. - Command content supports the custom parameter feature. You can enable the custom parameter feature by setting <code>EnableParameter=true</code>. - Custom parameters are defined in the <code>{}</code> format. Within <code>{}</code>, the spaces and line breaks before and after the parameter name are ignored. - The number of custom parameters cannot exceed 20. - A custom parameter name can contain only letters, digits, underscores (<code>_</code>), and hyphens (<code>-</code>). It is case insensitive. - Each custom parameter name cannot exceed 64 bytes.
Name	String	Yes	Test	The name of the command, which supports all character sets. It can be up to 128 characters in length.
RegionId	String	Yes	cn-hangzhou	The region ID of the Cloud Assistant command. You can call the DescribeRegions operation to query the most recent region list.
Type	String	Yes	RunShellScript	The type of the command. Valid values: - RunBatScript: creates a batch command for a Windows instance. - RunPowerShellScript: creates a PowerShell command for a Windows instance. - RunShellScript: creates a Shell command for a Linux instance.
Description	String	No	Test1	The description of the command, which supports all character sets. It can be up to 512 characters in length.
WorkingDir	String	No	/root/	The execution path of the command in the ECS instance. Default value: - Linux instance: the home directory of the root user, which is the <code>/root</code> directory. - Windows instance: the directory where the Cloud Assistant client process resides, such as <code>C:\Windows\System32\</code>.

Parameter	Type	Required	Example	Description
Timeout	Long	No	60	The timeout period that is specified for the command to invoke on ECS instances. Unit: seconds. When a command that you created cannot be invoked, the command times out. When a command invocation times out, the Cloud Assistant client will force the command process to stop by canceling the PID of the command. Default value: 60.
EnableParameter	Boolean	No	false	Specifies whether the created command uses custom parameters. Default value: false.

Response parameters

Parameter	Type	Example	Description
CommandId	String	c-7d2a745b412b4601b2d47f6a768d3***	The ID of the command.
RequestId	String	473469C7-AA6F-4DC5-B3DB-A3DC0DE3C83E	The ID of the request.

Examples

Sample requests

```
https://ecs.aliyuncs.com/?Action=CreateCommand
&CommandContent=ZWNobyB7e25hbWV9fSA=
&Name=Test
&RegionId=cn-hangzhou
&Type=RunShellScript
&Description=Test1
&WorkingDir=/root/
&Timeout=60
&EnableParameter=true
&<Common request parameters>
```

Sample success responses

XML format

```
<CreateCommandResponse>
  <RequestId>E69EF3CC-94CD-42E7-8926-F133B86387C0</RequestId>
  <CommandId>c-7d2a745b412b4601b2d47f6a768d3***</CommandId>
</CreateCommandResponse>
```

JSON format

```
{
  "RequestId": "E69EF3CC-94CD-42E7-8926-F133B86387C0",
  "CommandId": "c-7d2a745b412b4601b2d47f6a768d3****"
}
```

Error codes

HTTP status code	Error code	Error message	Description
500	InternalServerError.Dispatch	An error occurred when you dispatched the request.	The error message returned because an error occurred while the request is sent. Try again later.
403	InvalidCmdType.NotFound	The specified command type does not exist.	The error message returned because the specified command type does not exist.
403	CmdName.ExceedLimit	The length of the command name exceeds the upper limit.	The error message returned because the length of the command name exceeds the upper limit.
403	CmdDesc.ExceedLimit	The length of the command description exceeds the upper limit.	The error message returned because the length of the command description exceeds the upper limit.
403	CmdCount.ExceedQuota	The total number of commands in the current region exceeds the quota.	The error message returned because the maximum number of Cloud Assistant commands in the current region has been reached.
403	CmdParam.EmptyKey	You must specify the parameter names.	The error message returned because some required parameters are not specified.
403	CmdParam.InvalidParamName	Invalid parameter name. The name can contain only lowercase letters (a to z), uppercase letters (A to Z), numbers (0 to 9), hyphens (-), and underscores (_).	The error message returned because the custom parameter name is invalid. A custom parameter name can contain only letters, digits, underscores (_), and hyphens (-).
403	CmdParamName.ExceedLimit	The maximum length of a parameter name is exceeded.	The error message returned because the maximum length of the custom parameter name has been reached.

20.3. InstallCloudAssistant

You can call this operation to install the Cloud Assistant client on one or more instances. You must restart the instances for the installed Cloud Assistant client to take effect.

Debugging

OpenAPI Explorer automatically calculates the signature value. For your convenience, we recommend that you call this operation in OpenAPI Explorer. OpenAPI Explorer dynamically generates the sample code of the operation for different SDKs.

Request parameters

Parameter	Type	Required	Example	Description

Parameter	Type	Required	Example	Description
Action	String	Yes	InstallCloudAssistant	The operation that you want to perform. Set the value to InstallCloudAssistant.  Note After you call the InstallCloudAssistant and RebootInstance operations in sequence, the Cloud Assistant client takes effect.
InstanceId.N	RepeatList	Yes	i-bp1iudwa5b1tqa*****	The ID of instance N. Valid values of N: 1 to 50.
RegionId	String	Yes	cn-hangzhou	The region ID of the instance. You can call the DescribeRegions operation to query the most recent region list.

Response parameters

Parameter	Type	Example	Description
RequestId	String	473469C7-AA6F-4DC5-B3DB-A3DC0DE3C83E	The ID of the request.

Examples

Sample requests

```
https://ecs.aliyuncs.com/?Action=InstallCloudAssistant
&InstanceId.1=i-bp11f7trr4hbi1*****
&InstanceId.2=i-bp1iudwa5b1tqa*****
&RegionId=cn-hangzhou
&<Common request parameters>
```

Sample success responses

XML format

```
<InstallCloudAssistantResponse>
  <RequestId>928E2273-5715-46B9-A730-238DC996A533</RequestId>
</InstallCloudAssistantResponse>
```

JSON format

```
{
  "RequestId": "928E2273-5715-46B9-A730-238DC996A533"
}
```

Error codes

HTTP status code	Error code	Error message	Description

HTTP status code	Error code	Error message	Description
500	InternalServerError.Dispatch	An error occurred when you dispatched the request.	The error message returned because an error occurred while the request is sent. Try again later.
404	InvalidInstance.NotFound	The specified instance does not exist.	The error message returned because the specified InstanceId parameter does not exist.

20.4. InvokeCommand

You can call this operation to trigger a Cloud Assistant command on one or more ECS instances.

Description

- The target ECS instances have the following limits. After multiple ECS instances are selected, if one of the instances does not meet the invocation conditions, you must call the InvokeCommand operation again.
 - The network type must be VPC. For more information, see [Virtual Private Cloud](#).
 - The target instances must be in the Running (`Running`) state.
 - The target instances must be preinstalled with the Cloud Assistant client. For more information, see [The Cloud Assistant client](#).
 - Before you invoke PowerShell commands, make sure that the target instances have the PowerShell feature configured.
- One-time invocations (`Timed=false`): The Cloud Assistant client invokes commands only once.
- Periodic invocations (`Timed=true`):
 - The Cloud Assistant client invokes commands at the frequency specified by the `Frequency` parameter. The result of previous invocation does not affect the current invocation.
 - The period of periodic invocations is set based on UTC and the system time of the instance. If the system time of your ECS instances are not based on UTC, make sure that you have made adjustments to ensure that your commands are invoked at the correct time. For more information, see [Synchronize NTP servers and change the time zone for Linux instances](#) or [Synchronize NTP servers for Windows instances](#).
- Command invocations may fail because of target instance status exceptions, network exceptions, or Cloud Assistant client exceptions. If an invocation fails, no invocation information is generated.
- If you enable the custom parameter feature by setting `EnableParameter=true` when you create a command, you must specify the value of the custom parameter (`Parameters`) when you invoke the command.

Debugging

OpenAPI Explorer automatically calculates the signature value. For your convenience, we recommend that you call this operation in OpenAPI Explorer. OpenAPI Explorer dynamically generates the sample code of the operation for different SDKs.

Request Parameters

Parameter	Type	Required	Example	Description
CommandId	String	Yes	c-e996287206324975b5f be1d*****	The ID of the command. You can call the DescribeCommands operation to query all available command IDs.
InstanceId.N	RepeatList	Yes	i-bp185dy2o3o6n*****	The ID of instance N where the command need to be invoked. You can specify up to 50 instance IDs in each request. Valid values of N: 1 to 50.

Parameter	Type	Required	Example	Description
RegionId	String	Yes	cn-hangzhou	The region ID of the instance. You can call the DescribeRegions operation to query the most recent region list.
Action	String	Yes	InvokeCommand	The operation that you want to perform. Set the value to InvokeCommand.
Frequency	String	No	0 */20 * * * *	The interval at which a periodic task is invoked. The interval between two consecutive calls cannot be less than 10 seconds. When the <code>Timed</code> parameter is set to <code>true</code>, you must specify the <code>Frequency</code> parameter. The value of this parameter is expressed in cron. For more information, see Configure scheduled commands.
Parameters	Json	No	<pre>{"name":"Jack", "accessKey":"LTAldy v*****aRY"}</pre>	Specifies the values of the custom parameters when the custom parameter feature is enabled. The values are key-value pairs. Number of custom parameters: 0 to 10. - The key of Map cannot be an empty string. It can be up to 64 characters in length. - The value of Map can be an empty string. - After the custom parameters and the original command content are Base64 encoded, the total size cannot exceed 16 KB. - The set of custom parameter names must be a subset of the parameter set that is defined when you created the command. You can use empty strings to represent the parameters that are not passed in. You can leave the parameter empty to disable the custom parameter feature.
Timed	Boolean	No	true	Specifies whether to invoke the command on a periodic basis. Default value: false.

Response parameters

Parameter	Type	Example	Description
InvokeId	String	t-7d2a745b412b4601b2d47f6a768d3***	The ID of the command invocation.
RequestId	String	473469C7-AA6F-4DC5-B3DB-A3DC0DE3C83E	The ID of the request.

Examples

Sample requests

```
https://ecs.aliyuncs.com/?Action=InvokeCommand
&CommandId=c-e996287206324975b5fbd*****
&InstanceId=i-bp185dy2o3o6n*****
&RegionId=cn-hangzhou
&Timed=true
&Frequency=0*/20***
&Parameters={"name":"Jack","accessKey":"LTAldyv*****aRY"}
&<Common request parameters>
```

Sample success responses

XML format

```
<InvokeCommandResponse>
  <RequestId>E69EF3CC-94CD-42E7-8926-F133B86387C0</RequestId>
  <InvokeId>t-7d2a745b412b4601b2d47f6a768d3***</InvokeId>
</InvokeCommandResponse>
```

JSON format

```
{
  "RequestId": "E69EF3CC-94CD-42E7-8926-F133B86387C0",
  "InvokeId": "t-7d2a745b412b4601b2d47f6a768d3***"
}
```

Error codes

HTTP status code	Error code	Error message	Description
500	InternalServerError.Dispatch	An error occurred when you dispatched the request.	The error message returned because an unknown error has occurred.
404	InvalidInstance.NotFound	The specified instance does not exist.	The error message returned because the specified InstanceId parameter does not exist.
403	MissingParam.Frequency	The frequency must be specified when you create a timed task.	The error message returned because no frequency is set for the periodic invocation.
404	Parameter.Disabled	Parameters cannot be passed in when the command customization function is disabled.	The error message returned because you specify custom parameter values when you disable the custom parameter feature.
403	ParameterCount.ExceedLimit	The maximum number of parameters is exceeded.	The error message returned because the maximum number of custom parameters has been reached.
403	ParameterKey.ExceedLimit	The maximum length of a parameter name is exceeded.	The error message returned because the maximum length of the custom parameter name has been reached.
403	CmdContent.ExceedLimit	The maximum length of a command is exceeded.	The error message returned because the command length exceeds the upper limit. Simplify your command.

HTTP status code	Error code	Error message	Description
403	ParameterKey.Duplicate	Parameter names cannot be duplicated.	The error message returned because the parameter name already exists.
403	Parameter.NotMatched	The passed-in parameters do not match the parameters defined when you created the command.	The error message returned because the custom parameters passed in do not match those defined when the command was created.

20.5. StopInvocation

You can call this operation to stop a Cloud Assistant command that is running on one or more instances.

Description

- If you stop the process of a one-time execution command, the executions that have started are not interrupted. Executions that have not started are canceled.
- If you stop the process of a periodic execution command, the executions that have started are not interrupted. However, the execution does not start in the next period.

Debugging

OpenAPI Explorer automatically calculates the signature value. For your convenience, we recommend that you call this operation in OpenAPI Explorer. OpenAPI Explorer dynamically generates the sample code of the operation for different SDKs.

Request parameters

Parameter	Type	Required	Example	Description
Action	String	Yes	StopInvocation	The operation that you want to perform. Set the value to StopInvocation.
InvokeId	String	Yes	t-7d2a745b412b4601b2d47f6a768d****	The execution ID of the command process. You can call the DescribeInvocations operation to query all execution IDs.
RegionId	String	Yes	cn-hangzhou	The region ID of the instance. You can call the DescribeRegions operation to query the most recent region list.
InstanceId.N	RepeatList	No	i-bp67acfmxazb4p****	The ID of instance N where the command needs to be stopped. You can specify up to 50 instance IDs in each request. Valid values of N: 1 to 50.

Response parameters

Parameter	Type	Example	Description
RequestId	String	473469C7-AA6F-4DC5-B3DB-A3DC0DE3C83E	The ID of the request.

Examples

Sample requests

```
https://ecs.aliyuncs.com/?Action=StopInvocation
&InvokeId=t-7d2a745b412b4601b2d47f6a768d****
&RegionId=cn-hangzhou
&InstanceId.1=bp67acfmazb4p****
&<Common request parameters>
```

Sample success responses

XML format

```
<StopInvocationResponse>
  <RequestId>473469C7-AA6F-4DC5-B3DB-A3DC0DE3C83E</RequestId>
</StopInvocationResponse>
```

JSON format

```
{
  "RequestId": "473469C7-AA6F-4DC5-B3DB-A3DC0DE3C83E"
}
```

Error codes

HTTP status code	Error code	Error message	Description
500	InternalServerError.Dispatch	An error occurred when you dispatched the request.	The error message returned because an error occurred while the request is being sent. Try again later.
404	InvalidInvokeId.NotFound	The specified invoke ID does not exist.	The error message returned because the specified InvokeId parameter does not exist. Check whether the ID of the execution is correct.

20.6. SendFile

You can call this operation to send a remote file to one or more ECS instances.

Description:

- The ECS instances to which to send a remote file must be in the Running (`Running`) state.
- The Cloud Assistant client must be installed on the instances. For information about how to install the Cloud Assistant client, see [InstallCloudAssistant](#).
- The Cloud Assistant client can be used to send remote files only when its version is later than specific ones. If the `ClientNeedUpgrade` error code is returned, you must upgrade the Cloud Assistant client by following the instructions described in [Upgrade or disable upgrade of the Cloud Assistance client](#).
 - For Linux instances, the version of the Cloud Assistant client must be later than 1.0.2.569.
 - For Windows instances, the version of the Cloud Assistant client must be later than 1.0.0.149.
- The remote file to be sent must not exceed 32 KB in size after it is encoded in Base64.
- The file may fail to be sent because of instance failures, network exceptions, or Cloud Assistance client failures. Call the [DescribeSendFileResults](#) operation to find the failure causes.

Debugging

OpenAPI Explorer automatically calculates the signature value. For your convenience, we recommend that you call this operation in OpenAPI Explorer. OpenAPI Explorer dynamically generates the sample code of the operation for different SDKs.

Request parameters

Parameter	Type	Required	Example	Description
Action	String	Yes	SendFile	The operation that you want to perform. Set the value to SendFile.
RegionId	String	Yes	cn-hangzhou	The region ID of the instance to which to send a remote file. You can call the DescribeRegions operation to query the most recent region list.
Name	String	Yes	file.txt	The name of the remote file to be sent. The name must be 1 to 255 characters in length and can contain any characters.
InstanceId.N	RepeatList	Yes	i-bp185dy2o3o6n****	The ID of instance N to which to send the remote file. A maximum of 50 instance IDs can be specified. Valid values of N: 1 to 50.
TargetDir	String	Yes	/home	The destination directory on the instance to which to send the remote file. If this parameter is not specified, the system automatically selects a directory on the instance.
Content	String	Yes	#!/bin/bash echo "Current User is :" echo \$(ps grep "\$\$" awk '{print \$2}') ----- --- oss://bucketName/objectName	The content of the remote file. The content must not exceed 32 KB in size after it is encoded in Base64. - If <code>ContentType</code> is set to <code>PlainText</code>, the Content value is a plaintext string. - If <code>ContentType</code> is set to <code>Base64</code>, the Content value is a Base64-encoded string.
Description	String	No	This is a test file.	The description of the remote file. The description must be 1 to 512 characters in length and can contain any characters.
ContentType	String	No	PlainText	The content type of the remote file. - PlainText - Base64 Default value: PlainText
Timeout	Long	No	60	The timeout period for sending the remote file. Unit: seconds. - A timeout error occurs if the file fails to be sent because of a process error, because a specific module does not exist, or because the Cloud Assistant client is not installed. - If the specified timeout period is less than 10 seconds, the system automatically sets the timeout period to 10 seconds to ensure that the file is sent to the instances. Default value: 60.

Parameter	Type	Required	Example	Description
FileOwner	String	No	root	The owner of the remote file. This parameter takes effect only on Linux instances. Default value: root.
FileGroup	String	No	root	The group of the remote file. This parameter takes effect only on Linux instances. Default value: root.
FileMode	String	No	0644	The permissions on the remote file. This parameter takes effect only on Linux instances. You can configure this parameter in the same way as you configure the chmod command. Default value: 0644. This value indicates that the owner of the file has the read and write permissions on the file and that the group of the file and other users have only the read permission on the file.
Overwrite	Boolean	No	true	Specifies whether to overwrite a file in the destination directory if the file has the same name as the sent file. • true: overwrites the file. • false: does not overwrite the file. Default value: false

Response parameters

Parameter	Type	Example	Description
InvokeId	String	f-7d2a745b412b46****	The ID of the command execution.
RequestId	String	473469C7-AA6F-4DC5-B3DB-A3DC0DE3C83E	The ID of the request.

Examples

Sample requests

```
https://ecs.aliyuncs.com/?Action=SendFile
&Content='echo hello'
&InstanceId=i-bp185dy2o3o6n****
&Name=file.txt
&RegionId=cn-hangzhou
&TargetDir=/home
&<Common request parameters>
```

Sample success responses

XML format

```
<SendFileResponse>
  <RequestId>E69EF3CC-94CD-42E7-8926-F133B86387C0</RequestId>
  <InvokeId>f-7d2a745b412b46****</InvokeId>
</SendFileResponse>
```

JSON format

```
{
  "RequestId": "E69EF3CC-94CD-42E7-8926-F133B86387C0",
  "InvokeId": "f-7d2a745b412b46****"
}
```

Error codes

HTTP status code	Error code	Error message	Description
500	InternalServerError.Dispatch	An error occurred when you dispatched the request.	The error message returned because an error occurred when the request was sent. Try again later.
403	FileSize.ExceedLimit	The length of file content exceeds limit.	The error message returned because the specified Content value exceeds 32 KB in size.
403	FileName.ExceedLimit	The length of file name exceeds limit.	The error message returned because the specified Name value exceeds 255 characters in length.
403	FileDesc.ExceedLimit	The length of file description exceeds limit.	The error message returned because the specified Description value exceeds 512 characters in length.
403	FileTargetDir.Invalid	The target directory of file is invalid.	The error message returned because the specified TargetDir parameter is invalid.
403	InstanceIds.ExceedLimit	The number of instance IDs exceeds the upper limit.	The error message returned because more than 50 instances are specified.
403	FileMode.Invalid	The mode of file is invalid.	The error message returned because the specified FileMode parameter is invalid.
403	FileContent.DecodeError	The Content can not be base64 decoded.	The error message returned because the file content cannot be decoded in Base64.
403	FileContentType.Invalid	The ContentType of file is invalid.	The error message returned because the specified ContentType parameter is invalid.

20.7. DescribeSendFileResults

You can call this operation to query the files sent by Cloud Assistant and their status.

Description

- When you send a file, the file may fail to be sent to specified instances. You must call this operation to check the file sending results.
- You can call this operation to query the file sending records of the last two weeks. A maximum of 100,000 file sending records can be retained.

Debugging

OpenAPI Explorer automatically calculates the signature value. For your convenience, we recommend that you call this operation in OpenAPI Explorer. OpenAPI Explorer dynamically generates the sample code of the operation for different SDKs.

Request parameters

Parameter	Type	Required	Example	Description
Action	String	Yes	DescribeSendFileResults	The operation that you want to perform. Set the value to DescribeSendFileResults.
RegionId	String	Yes	cn-hangzhou	The region ID of the instance. You can call the DescribeRegions operation to query the most recent region list.
InvokeId	String	No	f-hz0jdfwd9f****	The ID of the execution.
InstanceId	String	No	i-hz0jdfwd9f****	The ID of the instance for which you want to query file sending results.
Name	String	No	test.txt	The name of the file about which you want to query sending records.
PageNumber	Long	No	1	The number of the page to return. Pages start from page 1. Default: 1
PageSize	Long	No	10	The number of entries to return on each page. Valid values: 1 to 50. Default value: 10

Response parameters

Parameter	Type	Example	Description
Invocations	Array of Invocation		Details about the file sending records.
Invocation			
Content	String	<pre>#!/bin/bash echo "Current User is :" echo \$(ps grep "\$\$" awk '{print \$2})</pre>	The content of the file.
ContentType	String	PlainText	The content type of the file. Valid values: • PlainText • Base64
CreationTime	String	2019-12-20T06:15:54Z	The time when the file sending task was created.
Description	String	This is a test file.	The description of the file.

Parameter	Type	Example	Description
FileGroup	String	root	The group of the file.
FileMode	String	777	The permissions on the file.
FileOwner	String	root	The owner of the file.
InvocationStatus	String	Success	The overall sending status of the file. The overall sending status of the file depends on its sending status on all the destination instances. Valid values: • Pending: The system is verifying or sending the file. If the sending status of the file on at least one instance is Pending, the overall sending status of the file is Pending. • Running: The file creation task is running on the instances. If the sending status of the file on at least one instance is Running, the overall sending status of the file is Running. • Success: If the sending status of the file on all the instances is Success, the overall sending status of the file is Success. • Failed: If the sending status of the file on all the instances is Failed, the overall sending status of the file is Failed. If the sending status of the file on one or more instances is one of the following values, the overall sending status of the file is Failed: ◦ Invalid: The file is invalid. ◦ Aborted: The file failed to be sent. ◦ Failed: The file failed to be created. ◦ Timeout: The file sending task timed out. ◦ Error: An error occurred while the file is being sent. • PartialFailed: The file was sent to some of the specified instances and failed to be sent to the others. The overall sending status of the file is PartialFailed only when its sending status is Success on some instances and is Failed on the others.
Invokeld	String	f-hz0jdfwd9f****	The ID of the execution.
InvokeInstances	Array of InvokeInstance		Details about the destination instances.
InvokeInstance			
CreationTime	String	2019-12-20T06:15:54Z	The time when the file sending task was created.

Parameter	Type	Example	Description
ErrorCode	String	InstanceNotExists	The error code returned when the file failed to be sent to the instance. If this parameter is empty, the file was sent to the instance. Valid values: - InstanceNotExists: The instance does not exist or was released. - InstanceReleased: The instance is released while the file is being sent. - InstanceNotRunning: The instance is not running when the file sending task is being created. - AccountNotExists: The specified account does not exist. - ClientNotRunning: The Cloud Assistant client is not running. - ClientNotResponse: The Cloud Assistant client does not respond. - ClientIsUpgrading: The Cloud Assistant client is being upgraded. - ClientNeedUpgrade: The Cloud Assistant client needs to be upgraded. - DeliveryTimeout: The file sending task timed out. - FileCreateFail: The file failed to be created. - FileAlreadyExists: A file with the same name already exists in the specified directory. - FileContentInvalid: The file content is invalid. - FileNameInvalid: The file name is invalid. - FilePathInvalid: The specified directory is invalid. - FileAuthorityInvalid: The specified permissions on the file are invalid.
ErrorInfo	String	the instance is not running when create task	The error message returned when the file failed to be sent to the instance or the file sending task failed to be executed on the instance. If this parameter is empty, the file was sent to the instance. Valid values: - the specified instance does not exists - the instance has released when create task - the instance is not running when create task - the specified account does not exists - the aliyun service is not running on the instance - the aliyun service in the instance does not response - the aliyun service in the instance is upgrading now - the aliyun service in the instance need upgrade - the command delivery has been timeout - Unexpected error during creating - File already exists - File content error - File name is invalid - File path is invalid - Owner not exists - Group not exists - Mode is invalid

Parameter	Type	Example	Description
FinishTime	String	2019-12-20T06:15:54Z	The time when the file sending task finished being executed.
InstanceId	String	i-uf614fhehhz****	The ID of the instance.
InvocationStatus	String	Success	The status of the file sending task.
StartTime	String	2019-12-20T06:15:54Z	The time when the file sending task started to be executed on the instance.
UpdateTime	String	2019-12-20T06:15:54Z	The time when the task status was updated.
Name	String	test.txt	The name of the file.
Overwrite	String	false	Indicates whether a file in the destination directory is overwritten if the file has the same name as the sent file.
TargetDir	String	/root	The destination directory.
VmCount	Integer	1	The number of instances to which you attempted to send the file.
PageSize	Long	10	The number of entries returned on each page.
RequestId	String	473469C7-AA6F-4DC5-B3DB-A3DC0DE3C83E	The ID of the request.
TotalCount	Long	2	The total number of file sending tasks.
PageNumber	Long	1	The page number of the returned page.

Examples

Sample requests

```
https://ecs.aliyuncs.com/?Action=DescribeSendFileResults
&RegionId=cn-hangzhou
&InvokeId=f-hz0vk9****
&Name=test.txt
&InstanceId=i-bp1hsglsw****
&PageNumber=1
&PageSize=10
&<Common request parameters>
```

Sample success responses

XML format

```

<DescribeSendFileResultsResponse>
  <TotalCount>1</TotalCount>
  <RequestId>473469C7-AA6F-4DC5-B3DB-A3DC0DE3C83E</RequestId>
  <PageSize>10</PageSize>
  <PageNumber>1</PageNumber>
  <Invocations>
    <Invocation>
      <FileMode>0644</FileMode>
      <Overwrite>false</Overwrite>
      <InvocationStatus>Success</InvocationStatus>
      <Description>This is a test file. </Description>
      <ContentType>PlainText</ContentType>
      <VmCount>1</VmCount>
      <TargetDir>/root</TargetDir>
      <FileGroup>root</FileGroup>
      <FileOwner>root</FileOwner>
      <InvokeInstances>
        <InvokeInstance>
          <InvocationStatus>Success</InvocationStatus>
          <FinishTime>2020-09-11T08:30:55Z</FinishTime>
          <InstanceId>i-bp1hsglsw****</InstanceId>
          <ErrorInfo></ErrorInfo>
          <CreationTime>2020-09-11T08:30:55Z</CreationTime>
          <StartTime>2020-09-11T08:30:55Z</StartTime>
          <UpdateTime>2020-09-11T08:30:55Z</UpdateTime>
          <ErrorCode></ErrorCode>
        </InvokeInstance>
      </InvokeInstances>
      <Name>test.txt</Name>
      <Content>ZWNoByBoZWxsbw==</Content>
      <CreationTime>2020-09-11T08:30:55Z</CreationTime>
      <InvokeId>f-hz0vk9****</InvokeId>
    </Invocation>
  </Invocations>
</DescribeSendFileResultsResponse>

```

JSON format

```

{
  "TotalCount": 1,
  "RequestId": "473469C7-AA6F-4DC5-B3DB-A3DC0DE3C83E",
  "PageSize": 10,
  "PageNumber": 1,
  "Invocations": {
    "Invocation": [
      {
        "FileMode": "0644",
        "Overwrite": false,
        "InvocationStatus": "Success",
        "Description": "This is a test file.",
        "ContentType": "PlainText",
        "VmCount": 1,
        "TargetDir": "/root",
        "FileGroup": "root",
        "FileOwner": "root",
        "InvokeInstances": {
          "InvokeInstance": [
            {
              "InvocationStatus": "Success",
              "FinishTime": "2020-09-11T08:30:55Z",
              "InstanceId": "i-bp1hsglsw****",
              "ErrorInfo": "",
              "CreationTime": "2020-09-11T08:30:55Z",
              "StartTime": "2020-09-11T08:30:55Z",
              "UpdateTime": "2020-09-11T08:30:55Z",
              "ErrorCode": ""
            }
          ]
        },
        "Name": "test.txt",
        "Content": "ZWNobyBoZWxsbyBw==",
        "CreationTime": "2020-09-11T08:30:55Z",
        "InvokeId": "f-hz0vk9****"
      }
    ]
  }
}

```

Error codes

HTTP status code	Error code	Error message	Description
500	InternalServerError.Dispatch	An error occurred when you dispatched the request.	The error message returned because an error occurred when the request was sent. Try again later.
403	InvalidParam.PageNumber	The specified parameter is invalid.	The error message returned because the specified PageNumber parameter is invalid.

HTTP status code	Error code	Error message	Description
403	InvalidParam.PageSize	The specified parameter is invalid.	The error message returned because the specified PageSize parameter is invalid.

20.8. DeleteCommand

You can call this operation to delete a Cloud Assistant command.

Debugging

OpenAPI Explorer automatically calculates the signature value. For your convenience, we recommend that you call this operation in OpenAPI Explorer. OpenAPI Explorer dynamically generates the sample code of the operation for different SDKs.

Request parameters

Parameter	Type	Required	Example	Description
Action	String	Yes	DeleteCommand	The operation that you want to perform. Set the value to DeleteCommand.
CommandId	String	Yes	c-4d34302d02424c5c8e10281e3a31****	The ID of the command. You can call the DescribeCommands operation to query all available command IDs.
RegionId	String	Yes	cn-hangzhou	The region ID of the command. You can call the DescribeRegions operation to query the most recent region list.

Response parameters

Parameter	Type	Example	Description
RequestId	String	473469C7-AA6F-4DC5-B3DB-A3DC0DE3C83E	The ID of the request.

Examples

Sample requests

```
https://ecs.aliyuncs.com/?Action=DeleteCommand
&CommandId=c-4d34302d02424c5c8e10281e3a31****
&RegionId=cn-hangzhou
&<Common request parameters>
```

Sample success responses

XML format

```
<DeleteCommandResponse>
  <RequestId>E69EF3CC-94CD-42E7-8926-F133B86387C0</RequestId>
</DeleteCommandResponse>
```

JSON format

```
{
  "RequestId":"E69EF3CC-94CD-42E7-8926-F133B86387C0"
}
```

Error codes

HTTP status code	Error code	Error message	Description
500	InternalServerError.Dispatch	An error occurred when you dispatched the request.	The error message returned because an error occurred while the request is sent. Try again later.

20.9. DescribeCloudAssistantStatus

You can call this operation to query whether the Cloud Assistant client is installed on one or more instances.

Debugging

OpenAPI Explorer automatically calculates the signature value. For your convenience, we recommend that you call this operation in OpenAPI Explorer. OpenAPI Explorer dynamically generates the sample code of the operation for different SDKs.

Request parameters

Parameter	Type	Required	Example	Description
InstanceId.N	RepeatList	Yes	i-bp1iudwa5b1tqa***** *	The ID of instance N. You can query up to 50 instances in each request. Valid values of N: 1 to 50.
RegionId	String	Yes	cn-hangzhou	The region ID of the instance. You can call the DescribeRegions operation to query the most recent region list.
Action	String	Yes	DescribeCloudAssistantStatus	The operation that you want to perform. Set the value to DescribeCloudAssistantStatus.

Response parameters

Parameter	Type	Example	Description
InstanceCloudAssistantStatusSet	Array		An array consisting of InstanceCloudAssistantStatus data.
InstanceCloudAssistantStatus			The status of the Cloud Assistant client on the instance.
CloudAssistantStatus	String	true	Indicates whether the Cloud Assistant client is installed on the instance.
CloudAssistantVersion	String	1.0.1.395	The version number of the Cloud Assistant client.
InstanceId	String	i-bp1iudwa5b1tqa*****	The ID of the instance.

Parameter	Type	Example	Description
RequestId	String	473469C7-AA6F-4DC5-B3DB-A3DC0DE3C83E	The ID of the request.

Examples

Sample requests

```
https://ecs.aliyuncs.com/?Action=DescribeCloudAssistantStatus
&InstanceId=i-bp1iudwa5b1tqa*****
&RegionId=cn-hangzhou
&<Common request parameters>
```

Sample success responses

XML format

```
<DescribeCloudAssistantStatusResponse>
  <InstanceCloudAssistantStatusSet>
    <InstanceCloudAssitantStatus>
      <InstanceId>i-bp11f7trr4hbi1*****</InstanceId>
      <CloudAssistantVersion>1.0.1.395</CloudAssistantVersion>
      <CloudAssitantStatus>true</CloudAssitantStatus>
    </InstanceCloudAssitantStatus>
    <InstanceCloudAssitantStatus>
      <InstanceId>i-bp1iudwa5b1tqa*****</InstanceId>
      <CloudAssistantVersion>1.0.1.395</CloudAssistantVersion>
      <CloudAssitantStatus>true</CloudAssitantStatus>
    </InstanceCloudAssitantStatus>
  </InstanceCloudAssistantStatusSet>
</DescribeCloudAssistantStatusResponse>
```

JSON format

```
{
  "InstanceCloudAssistantStatusSet":{
    "InstanceCloudAssistantStatus":[
      {
        "InstanceId":"i-bp11f7trr4hbi1*****",
        "CloudAssitantStatus":"true",
        "CloudAssistantVersion":"1.0.1.395"
      },
      {
        "InstanceId":"i-bp1iudwa5b1tqa*****",
        "CloudAssitantStatus":"true",
        "CloudAssistantVersion":"1.0.1.395"
      }
    ]
  }
}
```

Error codes

HTTP status code	Error code	Error message	Description
500	InternalServerError.Dispatch	An error occurred when you dispatched the request.	The error message returned because an unknown error has occurred.
404	InvalidInstance.NotFound	The specified instance does not exist.	The error message returned because the specified InstanceId parameter does not exist.

20.10. DescribeCommands

You can call this operation to query the Cloud Assistant commands that you have created. If you only specify the Action and RegionId parameters, the system queries all available commands by default.

Debugging

OpenAPI Explorer automatically calculates the signature value. For your convenience, we recommend that you call this operation in OpenAPI Explorer. OpenAPI Explorer dynamically generates the sample code of the operation for different SDKs.

Request parameters

Parameter	Type	Required	Example	Description
Action	String	Yes	DescribeCommands	The operation that you want to perform. Set the value to DescribeCommands.
RegionId	String	Yes	cn-hangzhou	The region ID of the query. You can call the DescribeRegions operation to query the most recent region list.
CommandId	String	No	c-7d2a745b412b4601b2d47f6a768d3***	The ID of the command.
Name	String	No	Test1	The name of the command. Partial command names are not supported.
Description	String	No	test	The description of the command.
Type	String	No	RunShellScript	The type of the command. Valid values: - RunBatScript: a batch command for Windows instances. - RunPowerShellScript: a PowerShell command for Windows instances. - RunShellScript: a Shell command for Linux instances.
ContentEncoding	String	No	PlainText	Specifies the encoding method of the fields <code>CommandContent</code> and <code>Output</code> in the response parameters. Valid values: - PlainText: returns the original command content and command output. - Base64: returns Base64-encoded command content and command output. Default value: Base64.

Parameter	Type	Required	Example	Description
PageNumber	Long	No	1	The number of the page to return. Pages start from page 1. Default value: 1
PageSize	Long	No	10	The number of entries to return on each page. Maximum value: 50. Default value: 10.

Response parameters

Parameter	Type	Example	Description
RequestId	String	473469C7-AA6F-4DC5-B3DB-A3DC0DE3C83E	The ID of the request.
TotalCount	Long	5	The total number of commands.
PageNumber	Long	1	The page number of the command list.
PageSize	Long	10	The number of entries returned per page.
Commands	Array		An array consisting of the command data.
CommandId	String	c-7d2a745b412b4601b2d47f6a768d3***	The ID of the command.
Name	String	Test1	The name of the command.
Type	String	RunShellScript	The type of the command.
Description	String	test	The description of the command.
CommandContent	String	Y2QgL3Jvb3Q=	The Base64-encoded command content.
WorkingDir	String	/home/	The directory path for command invocation.
Timeout	Long	3600	The timeout period.
CreationTime	String	2018-01-05T15:45:02Z	The time when the command was created.
EnableParameter	Boolean	true	Indicates whether the custom parameter feature was enabled for the command.

Parameter	Type	Example	Description
ParameterNames	List	['parameter1','parameter2']	A List of custom parameter names which are parsed from the command content at the command creation. The values of this parameter are returned in the list form. If the custom parameter feature is not enabled, an empty list is returned.

Examples

Sample requests

```
https://ecs.aliyuncs.com/?Action=DescribeCommands
&RegionId=cn-hangzhou
&CommandId=c-7d2a745b412b4601b2d47f6a768d3***
&PageNumber=1
&PageSize=10
&<Common request parameters>
```

Sample success responses

XML format

```
<TotalCount>5</TotalCount>
<Commands>
  <Command>
    <Name>Test</Name>
    <WorkingDir/>
    <CommandContent>ZWNoByAxMjM=</CommandContent>
    <Timeout>3600</Timeout>
    <Type>RunShellScript</Type>
    <CommandId>c-7d2a745b412b4601b2d47f6a768d3***</CommandId>
    <Description>test</Description>
    <EnableParameter>>false</EnableParameter>
  </Command>
  <Command>
    <Name>Test1</Name>
    <WorkingDir/>
    <CommandContent>Y2QgL3Jvb3Q=</CommandContent>
    <Timeout>3600</Timeout>
    <Type>RunShellScript</Type>
    <CommandId>c-7d2a745b412b4601b2d47f6a768d3***</CommandId>
    <Description>test1</Description>
    <EnableParameter>>false</EnableParameter>
  </Command>
  <Command>
    <Name>Test2</Name>
    <WorkingDir/>
    <CommandContent>eXVtIHVwZGF0ZQ==</CommandContent>
    <Timeout>3600</Timeout>
    <Type>RunShellScript</Type>
    <CommandId>c-7d2a745b412b4601b2d47f6a768d3***</CommandId>
    <Description>test2</Description>
```

```

    <Description>test2</Description>
  </Command>
  <Command>
    <Name>Test3</Name>
    <WorkingDir/>
    <CommandContent>c2VydmljZSBuZ2lueCByZWxvYWQ= </CommandContent>
    <Timeout>3600</Timeout>
    <Type>RunShellScript</Type>
    <CommandId>c-7d2a745b412b4601b2d47f6a768d3***</CommandId>
    <Description>test3</Description>
    <EnableParameter>false</EnableParameter>
  </Command>
  <Command>
    <Name>Test4</Name>
    <WorkingDir/>
    <CommandContent>ZWNobyB7e25hbWV9fSA= </CommandContent>
    <Timeout>3600</Timeout>
    <Type>RunShellScript</Type>
    <CommandId>c-7d2a745b412b4601b2d47f6a768d3***</CommandId>
    <Description>test4</Description>
    <EnableParameter>true</EnableParameter>
    <ParameterNames>name</ParameterNames>
  </Command>
</Commands>
<PageNumber>1</PageNumber>
<RequestId>E69EF3CC-94CD-42E7-8926-F133B86387C0</RequestId>
<PageSize>10</PageSize>

```

JSON format

```

{
  "TotalCount": 5,
  "Commands": {
    "Command": [
      {
        "Name": "Test",
        "WorkingDir": "",
        "CommandContent": "ZWNobyAxMjM=",
        "Timeout": 3600,
        "Type": "RunShellScript",
        "CommandId": "c-7d2a745b412b4601b2d47f6a768d3***",
        "Description": "test",
        "EnableParameter": false,
        "ParameterNames": []
      },
      {
        "Name": "Test1",
        "WorkingDir": "",
        "CommandContent": "Y2QgL3Jvb3Q=",
        "Timeout": 3600,
        "Type": "RunShellScript",

```

```

    "CommandId": "c-7d2a745b412b4601b2d47f6a768d3***",
    "Description": "test1",
    "EnableParameter": false,
    "ParameterNames": [],
  },
  {
    "Name": "Test2",
    "WorkingDir": "",
    "CommandContent": "eXVtIHVwZGF0ZQ==",
    "Timeout": 3600,
    "Type": "RunShellScript",
    "CommandId": "c-7d2a745b412b4601b2d47f6a768d3***",
    "Description": "test2"
  },
  {
    "Name": "Test3",
    "WorkingDir": "",
    "CommandContent": "c2VydmljZSBuZ2lueCBvZWxvYWQ=",
    "Timeout": 3600,
    "Type": "RunShellScript",
    "CommandId": "c-7d2a745b412b4601b2d47f6a768d3***",
    "Description": "test3",
    "EnableParameter": false,
    "ParameterNames": []
  },
  {
    "Name": "Test4",
    "WorkingDir": "",
    "CommandContent": "ZWNoYm97e25hbWV9fSA=",
    "Timeout": 3600,
    "Type": "RunShellScript",
    "CommandId": "c-7d2a745b412b4601b2d47f6a768d3***",
    "Description": "test4",
    "EnableParameter": true,
    "ParameterNames": [
      "name"
    ]
  }
],
"PageNumber": 1,
"RequestId": "E69EF3CC-94CD-42E7-8926-F133B86387C0",
"PageSize": 10
}

```

Error codes

HTTP status code	Error code	Error message	Description
500	InternalServerError.Dispatch	An error occurred when you dispatched the request.	The error message returned because an unknown error has occurred.
403	InvalidParam.PageNumber	The specified parameter is invalid.	The error message returned because the specified PageNumber parameter is invalid.
403	InvalidParam.PageSize	The specified parameter is invalid.	The error message returned because the specified PageSize parameter is invalid.

20.11. DescribeInvocations

You can call this operation to query the execution list and status of Cloud Assistant commands.

Description

- After you run a task, it may not succeed. You must call the operation to query the actual execution result.
- You can query the execution information from the last two weeks, and a maximum of 100,000 pieces of execution information can be retained.

Debugging

OpenAPI Explorer automatically calculates the signature value. For your convenience, we recommend that you call this operation in OpenAPI Explorer. OpenAPI Explorer dynamically generates the sample code of the operation for different SDKs.

Request parameters

Parameter	Type	Required	Example	Description
Action	String	Yes	DescribeInvocations	The operation that you want to perform. Set the value to DescribeInvocations.
RegionId	String	Yes	cn-hangzhou	The ID of the region. You can call the DescribeRegions operation to query the most recent region list.
InvokeId	String	No	t-hz0jdfwd9f****	The ID of the task.
CommandId	String	No	c-hz0jdfwcsr****	The ID of the command. You can call the DescribeCommands operation to query all available command IDs.
CommandName	String	No	CommandTestName	The name of the command.
CommandType	String	No	RunShellScript	The type of the command.
Timed	Boolean	No	true	Specifies whether the task is periodically executed. Default value: false.

Parameter	Type	Required	Example	Description
InvokeStatus	String	No	Finished	The overall execution status of the task. The value of this parameter depends on the overall execution status of the task on all the involved instances (<code>InstanceInvokeStatus</code>). Valid values: - Running: - Scheduled execution: Before you manually stop the task, the execution status is always Running. - One-time execution: As long as the task is being executed on one instance, the overall execution status is Running. - Finished: - Scheduled execution: The task execution status can never be Finished. - One-time execution: The execution of the task on all instances is complete, or the task execution on some instances is manually stopped and that on the other instances is complete. - Failed: - Scheduled execution: The task execution status can never be Failed. - One-time execution: The execution of the task fails on all instances. - PartialFailed: - Scheduled execution: The task execution status can never be PartialFailed. - One-time execution: The execution of the task fails on some instances. - Stopped: The task is stopped. Default value: Running.
InstanceId	String	No	i-bp1i7gg30r52z2em***	The ID of the instance. When you specify this parameter, the system queries all the task execution records of the instance.
ContentEncoding	String	No	PlainText	The encoding method of the <code>CommandContent</code> and <code>Output</code> response parameters. Valid values: - PlainText: returns the original command content and output information. - Base64: returns Base64-encoded command content and output information. Default value: Base64.

Parameter	Type	Required	Example	Description
IncludeOutput	Boolean	No	false	Specifies whether to return the execution output information in the result. • true: The execution output information is returned in the result. When this parameter is set to true, you must specify at least one of the following parameters: <code>InvokeId</code> and <code>InstanceId</code>. • false: The execution output information is not returned in the result. Default value: false.
PageNumber	Long	No	1	The number of the page to return. Pages start from page 1. Default value: 1.
PageSize	Long	No	10	The number of entries to return on each page. Maximum value: 50. Default value: 10.

Response parameters

Parameter	Type	Example	Description
Invocations	Array		An array consisting of Invocation data.
Invocation			
CommandContent	String	cnBtIC1xYSB8IGdyZXAgdnNm****	The Base64-encoded command content.
CommandId	String	c-hz0jdfwcsr****	The ID of the command.
CommandName	String	CommandTestName	The name of the command.
CommandType	String	RunShellScript	The type of the command.
CreationTime	String	2020-01-19T09:15:46Z	The time when the task was created.
Frequency	String	0 */20 * * * *	The execution cycle of the recurring task. For more information about the value specifications, see Cron expression .

Parameter	Type	Example	Description
InvocationStatus	String	Pending	The overall execution status of the task. The value of this parameter depends on the overall execution status on all the involved instances. Valid values: • Pending: The system is verifying or sending the task. When the execution status on at least one instance is Pending, the overall execution status is Pending. • Scheduled: The recurring task is sent and waiting to be executed. When the execution status on at least one instance is Scheduled, the overall execution status is Scheduled. • Running: The task is running on the instances. When the execution status on at least one instance is Running, the overall execution status is Running. • Success: When the execution status on all instances is Stopped or Success and the execution status on at least one instance is Success, the overall execution status is Success. ◦ Execute-now task: The task execution is complete and the exit code is 0. ◦ Recurring tasks: The last execution succeeds, the exit code is 0, and the specified cycle has ended. • Failed: When the execution status on all instances is Stopped or Failed and the execution status on at least one instance is Failed, the overall execution status is Failed. When the execution status on the instance is one of the following values, Failed is returned: ◦ Invalid: The task is invalid. ◦ Aborted: The task fails to be sent. ◦ Failed: The task execution is complete but the exit code is not 0. ◦ Timeout: The task execution is timeout. ◦ Error: An error occurs during the task execution. • Stopping: The task is being stopped. When the execution status on at least one instance is Stopping, the overall execution status is Stopping. • Stopped: The task is stopped. When the execution status on all instances is Stopped, the overall execution status is Stopped. When the execution status on the instances is one of the following values, Stopped is returned: ◦ Cancelled: The task is canceled. ◦ Terminated: The task is terminated. • PartialFailed: The execution succeeds on some instances and fails on some other instances. If the execution status on all instances is Success, Failed, or Stopped, the overall execution status is PartialFailed.  Note The <code>InvokeStatus</code> parameter is similar to this parameter, but we recommend that you check this parameter.

Parameter	Type	Example	Description
InvokeId	String	t-hz0jdfwd9f****	The ID of the task.
InvokeInstances	Array		An array consisting of InvokeInstance data.
InvokeInstance			
CreationTime	String	2019-12-20T06:15:54Z	The time when the task was created.
Dropped	Integer	0	The size of truncated and discarded text when the size of text in the Output field is larger than 24 KB.
ErrorCode	String	InstanceNotExists	The code for the cause why a task failed to be issued or executed. Valid values: • Null: The task runs normally. • InstanceNotExists: The specified instance does not exist or has been released. • InstanceReleased: The instance is released while the task is running. • InstanceNotRunning: The instance is not running when the task is being created. • CommandNotApplicable: The task is not applicable to the specified instance. • AccountNotExists: The specified account does not exist. • DirectoryNotExists: The specified directory does not exist. • BadCronExpression: The specified Cron expression for the execution cycle is invalid. • ClientNotRunning: The Cloud Assistant client is not running. • ClientNotResponse: The Cloud Assistant client does not respond. • ClientIsUpgrading: The Cloud Assistant client is being upgraded. • ClientNeedUpgrade: The Cloud Assistant client needs to be upgraded. • DeliveryTimeout: The request times out. • ExecutionTimeout: The task execution times out. • ExecutionException: An exception occurs when the task is running. • ExecutionInterrupted: The task is interrupted. • ExitCodeNonzero: The task execution is complete and the exit code is not 0.

Parameter	Type	Example	Description
ErrorInfo	String	the specified instance does not exists	The detailed cause why a task failed to be issued or executed. Valid values: • Null: The task runs normally. • the specified instance does not exists • the instance has released when create task • the instance is not running when create task • the command is not applicable • the specified account does not exists • the specified directory does not exists • the cron job expression is invalid • the aliyun service is not running on the instance • the aliyun service in the instance does not response • the aliyun service in the instance is upgrading now • the aliyun service in the instance need upgrade • the command delivery has been timeout • the command execution has been timeout • the command execution got an exception • the command execution has been interrupted • the command execution exit code is not zero
ExitCode	Long	0	The exit code of the task execution. Valid values: • For Linux instances, the exit code is the exit code of the shell process. • For Windows instances, the exit code is the exit code of the batch or PowerShell process.
FinishTime	String	2019-12-20T06:15:56Z	The end time of the task execution.
InstanceId	String	i-bp1i7gg30r52z2em****	The ID of the instance.

Parameter	Type	Example	Description
InstanceInvokeStatus	String	Finished	The task execution status on a single instance. Valid values: • Running: ◦ Scheduled execution: Before you manually stop the task, the task execution status is always Running. ◦ One-time execution: The task is running. • Finished: ◦ Scheduled execution: The task execution status cannot be Finished. ◦ One-time execution: The task execution is complete. • Failed: ◦ Scheduled execution: The task execution status cannot be Failed. ◦ One-time execution: The task execution fails. • Stopped: The task execution is stopped. • PartialFailed: ◦ Scheduled execution: The task execution status cannot be PartialFailed. ◦ One-time execution: The execution of the task fails on some instances.

Parameter	Type	Example	Description
InvocationStatus	String	success	The task execution process on a single instance. Valid values: • Pending: The system is verifying or sending a task. • Invalid: The specified task type or parameter is invalid. • Aborted: The task fails to be sent. The instance must be in the Running state and the task can be sent within one minute. • Running: The task is running on the instance. • Success: ◦ Execute-now tasks: The task execution is complete and the exit code is 0. ◦ Recurring tasks: The last execution succeeds, the exit code is 0, and the specified cycle has ended. • Failed: ◦ Execute-now tasks: The task execution is complete and the exit code is not 0. ◦ Recurring tasks: The last execution is complete, the exit code is not 0, and the specified cycle will end. • Error: The task cannot proceed due to an exception during execution. • Timeout: The task execution times out. • Cancelled: The task has been canceled and the command has not been started. • Stopping: The task is being stopped. • Terminated: The task is terminated when it is running. • Scheduled: ◦ Execute-now tasks: not applicable. ◦ Recurring tasks: The task is waiting to be run.
Output	String	OutPutTestmsg	The output of the task execution.
Repeats	Integer	0	The number of executions on this instance. • If the execution mode is immediate execution, the value is 0 or 1. • If the execution mode is scheduled execution, the value is the number of executions that have occurred.
StartTime	String	2019-12-20T06:15:55Z	The time when the task started to be executed on the instance.
StopTime	String	2020-01-19T09:15:47Z	The time when you called the <code>StopInvocation</code> operation to manually stop the task execution.
UpdateTime	String	2020-01-19T09:15:47Z	The time when the task status was updated.

Parameter	Type	Example	Description
InvokeStatus	String	Finished	The overall execution status of the task.  Note We recommend that you ignore this parameter and check the returned values of the <code>InvocationStatus</code> parameter.
Parameters	String	{}	The custom parameters in the command.
Timed	Boolean	false	Indicates whether the task execution was periodic.
PageNumber	Long	1	The page number of the returned page.
PageSize	Long	10	The number of entries returned per page.
RequestId	String	473469C7-AA6F-4DC5-B3DB-A3DC0DE3C83E	The ID of the request.
TotalCount	Long	2	The total number of commands.

Examples

Sample requests

```
https://ecs.aliyuncs.com/?Action=DescribeInvocations
&RegionId=cn-hangzhou
&InvokeId=t-hz0jdfwd9f****
&CommandId=c-hz0jdfwcsr****
&CommandName=CommandTestName
&CommandType=RunShellScrip
&Timed=true
&InvokeStatus=Finished
&InstanceId=i-bp1i7gg30r52z2em****
&PageNumber=1
&PageSize=10
&<Common request parameters>
```

Sample success responses

`XML` format

```

<DescribeInvocationsResponse>
  <TotalCount>5</TotalCount>
  <RequestId>634562E9-F291-4289-B60B-FC511A43CD34</RequestId>
  <PageSize>1</PageSize>
  <PageNumber>1</PageNumber>
  <Invocations>
    <Invocation>
      <CommandContent>cnBtIC1xYSB8IGdyZXAgdnNm****</CommandContent>
      <InvocationStatus>Failed</InvocationStatus>
      <InvokeStatus>Finished</InvokeStatus>
      <Parameters>{}</Parameters>
      <CommandType>RunShellScript</CommandType>
      <Timed>>false</Timed>
      <CreationTime>2020-05-11T09:01:39Z</CreationTime>
      <Frequency></Frequency>
      <CommandId>c-hz0jdfwcsr****</CommandId>
      <CommandName>AutoTest</CommandName>
      <InvokeId>t-hz0jdfwd9f****</InvokeId>
      <InvokeInstances>
        <InvokeInstance>
          <Dropped>0</Dropped>
          <InvocationStatus>Failed</InvocationStatus>
          <InstanceId>i-bp1i7gg30r52z2em****</InstanceId>
          <InstanceInvokeStatus>Finished</InstanceInvokeStatus>
          <ExitCode>1</ExitCode>
          <ErrorInfo>the command execution exit code is not zero. </ErrorInfo>
          <StartTime>2020-05-11T09:01:40Z</StartTime>
          <Repeats>1</Repeats>
          <FinishTime>2020-05-11T09:01:41Z</FinishTime>
          <Output></Output>
          <CreationTime>2020-05-11T09:01:39Z</CreationTime>
          <UpdateTime>2020-05-11T09:01:41Z</UpdateTime>
          <ErrorCode>ExitCodeNonzero</ErrorCode>
          <StopTime></StopTime>
        </InvokeInstance>
      </InvokeInstances>
    </Invocation>
  </Invocations>
</DescribeInvocationsResponse>

```

JSON format

```

{
  "TotalCount": 5,
  "RequestId": "634562E9-F291-4289-B60B-FC511A43CD34",
  "PageSize": 1,
  "PageNumber": 1,
  "Invocations": {
    "Invocation": [
      {
        "CommandContent": "cnBtIC1xYSB8IGdyZXAgdnNm****",
        "InvocationStatus": "Failed",
        "InvokeStatus": "Finished",
        "Parameters": "{}",
        "CommandType": "RunShellScript",
        "Timed": false,
        "CreationTime": "2020-05-11T09:01:39Z",
        "Frequency": "",
        "CommandId": "c-hz0jdfwcsr****",
        "CommandName": "AutoTest",
        "InvokeId": "t-hz0jdfwd9f****",
        "InvokeInstances": {
          "InvokeInstance": [
            {
              "Dropped": 0,
              "InvocationStatus": "Failed",
              "InstanceId": "i-bp1i7gg30r52z2em****",
              "InstanceInvokeStatus": "Finished",
              "ExitCode": 1,
              "ErrorInfo": "the command execution exit code is not zero.",
              "StartTime": "2020-05-11T09:01:40Z",
              "Repeats": 1,
              "FinishTime": "2020-05-11T09:01:41Z",
              "Output": "",
              "CreationTime": "2020-05-11T09:01:39Z",
              "UpdateTime": "2020-05-11T09:01:41Z",
              "ErrorCode": "ExitCodeNonzero",
              "StopTime": ""
            }
          ]
        }
      }
    ]
  }
}

```

Error codes

HTTP status code	Error code	Error message	Description

HTTP status code	Error code	Error message	Description
500	InternalServerError.Dispatch	An error occurred when you dispatched the request.	The error message returned because an error occurred while the request is being sent. Try again later.
403	InvalidParam.PageNumber	The specified parameter is invalid.	The error message returned because the specified PageNumber parameter is invalid.
403	InvalidParam.PageSize	The specified parameter is invalid.	The error message returned because the specified PageSize parameter is invalid.

20.12. DescribeInvocationResults

You can call this operation to query the execution results of one or more Cloud Assistant tasks on ECS instances.

Description

- After you run a task, it may not succeed. You can call this operation to query the actual execution results.
- You can query the execution information from the last two weeks, and a maximum of 100,000 pieces of execution information can be retained.

Debugging

OpenAPI Explorer automatically calculates the signature value. For your convenience, we recommend that you call this operation in OpenAPI Explorer. OpenAPI Explorer dynamically generates the sample code of the operation for different SDKs.

Request parameters

Parameter	Type	Required	Example	Description
Action	String	Yes	DescribeInvocationResults	The operation that you want to perform. Set the value to DescribeInvocationResults.
RegionId	String	Yes	cn-hangzhou	The ID of the region. You can call the DescribeRegions operation to query the most recent region list.
InvokeId	String	No	t-hz0jdfwd9f****	The ID of the task. You can call the DescribeInvocations operation to query the task IDs.
InstanceId	String	No	i-bp1i7gg30r52z2em***	The ID of the instance.
CommandId	String	No	c-hz0jdfwcsr****	The ID of the command.
InvokeRecordStatus	String	No	Finished	The execution status of the task. Valid values: • Running • Finished • Failed • Stopped

Parameter	Type	Required	Example	Description
IncludeHistory	Boolean	No	false	Specifies whether to return the historical records of the recurring task. Valid values: - true: The execution results of the recurring task are returned. When this parameter is set to true, the <code>Invokeld</code> parameter must be set to the ID of the recurring task. - false: No execution results of the recurring task are returned. Default value: false.
ContentEncoding	String	No	PlainText	Specifies the encoding method of the <code>Output</code> field in the response parameters. Valid values: - PlainText: returns the original command content and output information. - Base64: returns Base64-encoded command content and output information. Default value: Base64.
PageNumber	Long	No	1	The number of the page to return. Pages start from page 1. Default value: 1
PageSize	Long	No	1	The number of entries to return on each page. Maximum value: 50. Default value: 10.

Response parameters

Parameter	Type	Example	Description
Invocation	Struct		The collection of task execution results.
InvocationResults	Array		An array consisting of InvocationResult data.
InvocationResult			
CommandId	String	c-hz0jdfwcsr****	The ID of the command.
Dropped	Integer	0	The size of truncated and discarded text when the size of text in the <code>Output</code> field is larger than 24 KB.

Parameter	Type	Example	Description
ErrorCode	String	InstanceNotExists	The code for the cause why the task failed to be issued or executed. Valid values: • Null: The task runs normally. • InstanceNotExists: The specified instance does not exist or has been released. • InstanceReleased: The instance is released while the task is running. • InstanceNotRunning: The instance is not running when the task is created. • CommandNotApplicable: The command is not applicable to the specified instance. • AccountNotExists: The specified account does not exist. • DirectoryNotExists: The specified directory does not exist. • BadCronExpression: The specified Cron expression for the execution cycle is invalid. • ClientNotRunning: The Cloud Assistant client is not running. • ClientNotResponse: The Cloud Assistant client does not respond. • ClientIsUpgrading: The Cloud Assistant client is being upgraded. • ClientNeedUpgrade: The Cloud Assistant client needs to be upgraded. • DeliveryTimeout: The request times out. • ExecutionTimeout: The task execution times out. • ExecutionException: An exception occurs when the command is running. • ExecutionInterrupted: The task is interrupted. • ExitCodeNonzero: The task execution is complete and the exit code is not 0.

Parameter	Type	Example	Description
ErrorInfo	String	the specified instance does not exists	The detailed cause why a task failed to be issued or executed. Valid values: • Null: The task runs normally. • the specified instance does not exists • the instance has released when create task • the instance is not running when create task • the command is not applicable • the specified account does not exists • the specified directory does not exists • the cron job expression is invalid • the aliyun service is not running on the instance • the aliyun service in the instance does not response • the aliyun service in the instance is upgrading now • the aliyun service in the instance need upgrade • the command delivery has been timeout • the command execution has been timeout • the command execution got an exception • the command execution has been interrupted • the command execution exit code is not zero
ExitCode	Long	0	The exit code of the task execution. • For Linux instances, the exit code is the exit code of the shell process. • For Windows instances, the exit code is the exit code of the batch or PowerShell process.
FinishedTime	String	2019-12-20T06:15:56Z	The time when the execution was complete. If an execution times out, the completion time of the execution is subject to the value of the TimedOut parameter specified in the CreateCommand operation.
InstanceId	String	i-bp1i7gg30r52z2em****	The ID of the instance.

Parameter	Type	Example	Description
InvocationStatus	String	success	The task execution status on a single instance. Valid values: • Pending: The system is verifying or sending a task. • Invalid: The specified task type or parameter is invalid. • Aborted: The system failed to send the task to the instance. The instance must be in the Running state and the task can be sent within one minute. • Running: The task is running on the instance. • Success: ◦ Execute-now tasks: The task execution is complete and the exit code is 0. ◦ Recurring tasks: The last execution succeeds, the exit code is 0, and the specified cycle has ended. • Failed: ◦ Execute-now tasks: The task execution is complete and the exit code is not 0. ◦ Recurring tasks: The last execution is complete, the exit code is not 0, and the specified cycle will end. • Error: The task cannot proceed due to an exception during execution. • Timeout: The task execution times out. • Cancelled: The task has been canceled and the command has not been started. • Stopping: The task is being stopped. • Terminated: The task is terminated when it is running. • Scheduled: ◦ Execute-now tasks: not applicable. ◦ Recurring tasks: The task is waiting to be run.
InvokeId	String	t-hz0jdfwd9f****	The ID of the task.
InvokeRecordStatus	String	Finished	The execution status of the task.
Output	String	MTU6MzA6MDEK	The output of the task execution.
Repeats	Integer	0	The number of executions on the instance. • If the execution mode is immediate execution, the value is 0 or 1. • If the execution mode is scheduled execution, the value is the number of executions that have occurred.
StartTime	String	2019-12-20T06:15:55Z	The time when the task started to be executed on the instance.

Parameter	Type	Example	Description
StopTime	String	2020-01-19T09:15:47Z	The time when you called the <code>StopInvocation</code> operation to manually stop the task execution.
PageNumber	Long	1	The page number of the returned page.
PageSize	Long	1	The number of entries returned per page.
TotalCount	Long	1	The total number of commands.
RequestId	String	473469C7-AA6F-4DC5-B3DB-A3DC0DE3C83E	The ID of the request.

Examples

Sample requests

```
https://ecs.aliyuncs.com/?Action=DescribeInvocationResults
&RegionId=cn-hangzhou
&InstanceId=i-bp1i7gg30r52z2em****
&PageNumber=1
&PageSize=1
&<Common request parameters>
```

Sample success responses

`XML` format

```
<DescribeInvocationResultsResponse>
  <RequestId>F416C43A-6581-4138-9503-4FBBC4EA1BB7</RequestId>
  <Invocation>
    <InvocationResults>
      <InvocationResult>
        <Dropped>0</Dropped>
        <InvocationStatus>Failed</InvocationStatus>
        <InstanceId>i-bp1i7gg30r52z2em****</InstanceId>
        <ExitCode>1</ExitCode>
        <ErrorInfo>the command execution exit code is not zero. </ErrorInfo>
        <StartTime>2020-05-11T09:01:40Z</StartTime>
        <Repeats>1</Repeats>
        <InvokeRecordStatus>Finished</InvokeRecordStatus>
        <FinishedTime>2020-05-11T09:01:41Z</FinishedTime>
        <Output></Output>
        <CommandId>c-hz0jdfwcsr****</CommandId>
        <ErrorCode>ExitCodeNonzero</ErrorCode>
        <InvokeId>t-hz0jdfwd9f****</InvokeId>
        <StopTime></StopTime>
      </InvocationResult>
    </InvocationResults>
    <TotalCount>5</TotalCount>
    <PageSize>1</PageSize>
    <PageNumber>1</PageNumber>
  </Invocation>
</DescribeInvocationResultsResponse>
```

JSON format

```
{
  "RequestId": "F416C43A-6581-4138-9503-4FBBC4EA1BB7",
  "Invocation": {
    "InvocationResults": {
      "InvocationResult": [
        {
          "Dropped": 0,
          "InvocationStatus": "Failed",
          "InstanceId": "i-bp1i7gg30r52z2em****",
          "ExitCode": 1,
          "ErrorInfo": "the command execution exit code is not zero.",
          "StartTime": "2020-05-11T09:01:40Z",
          "Repeats": 1,
          "InvokeRecordStatus": "Finished",
          "FinishedTime": "2020-05-11T09:01:41Z",
          "Output": "",
          "CommandId": "c-hz0jdfwcsr****",
          "ErrorCode": "ExitCodeNonzero",
          "InvokeId": "t-hz0jdfwd9f****",
          "StopTime": ""
        }
      ]
    },
    "TotalCount": 5,
    "PageSize": 1,
    "PageNumber": 1
  }
}
```

Error codes

HTTP status code	Error code	Error message	Description
500	InternalServerError.Dispatch	An error occurred when you dispatched the request.	The error message returned because an error occurred while the request is being sent. Try again later.
403	InvalidParam.PageNumber	The specified parameter is invalid.	The error message returned because the specified PageNumber parameter is invalid.
403	InvalidParam.PageSize	The specified parameter is invalid.	The error message returned because the specified PageSize parameter is invalid.

21.HPC clusters

21.1. CreateHpcCluster

You can call this operation to create an HPC cluster.

Debugging

OpenAPI Explorer automatically calculates the signature value. For your convenience, we recommend that you call this operation in OpenAPI Explorer. OpenAPI Explorer dynamically generates the sample code of the operation for different SDKs.

Request parameters

Parameter	Type	Required	Example	Description
Name	String	Yes	FinanceJoshua	The name of the HPC cluster. The name must be 2 to 128 characters in length. It must start with a letter but cannot start with http:// or https://. It can contain letters, digits, colons (:), underscores (_), and hyphens (-).
RegionId	String	Yes	cn-hangzhou	The region ID of the HPC cluster. You can call the DescribeRegions operation to query the latest region list.
Action	String	Yes	CreateHpcCluster	The operation that you want to perform. Set the value to CreateHpcCluster.
ClientToken	String	No	123e4567-e89b-12d3-a456-426655440000	A client token. It is used to ensure the idempotency of requests. The value of this parameter is generated by the client and is unique among different requests. The value can only contain ASCII characters and cannot exceed 64 characters in length. For more information, see How to ensure idempotency .
Description	String	No	FinanceJoshua	The description of the HPC cluster. The description must be 2 to 256 characters in length. It cannot start with http:// or https://. Default value: empty string.
OwnerAccount	String	No	ECSforCloud@Alibaba.com	The logon name of the RAM user.

Response parameters

Parameter	Type	Example	Description
HpcClusterId	String	hpc-hpcclusterid1	The ID of the HPC cluster.
RequestId	String	473469C7-AA6F-4DC5-B3DB-A3DC0DE3C83E	The ID of the request.

Examples

Sample requests

```
https://ecs.aliyuncs.com/?Action=CreateHpcCluster
&RegionId=cn-hangzhou
&Name=hpc-Cluster-01
&<Common request parameters>
```

Sample success responses

XML format

```
<CreateHpcClusterResponse>
  <RequestId>04F0F334-1335-436C-A1D7-6C044FE73368</RequestId>
  <HpcClusterId>hpc-hpccluster1</HpcClusterId>
</CreateHpcClusterResponse>
```

JSON format

```
{
  "HpcClusterId": "hpc-hpccluster1",
  "RequestId": "04F0F334-1335-436C-A1D7-6C044FE73368"
}
```

Error codes

HTTP status code	Error code	Error message	Description
400	MissingParameter	The input parameter RegionId that is mandatory for processing this request is not supplied.	The error message returned because the RegionId parameter is not specified.
400	InvalidHpcClusterName.Malformed	Specified hpc cluster name is not valid.	The error message returned because the specified name of the HPC cluster is not valid.
400	InvalidHpcClusterDescription.Malformed	The specified parameter Description is not valid.	The error message returned because the specified description of the HPC cluster is not valid.
404	InvalidRegionId.NotFound	The specified parameter "RegionId" is not valid.	The error message returned because the specified region ID does not exist. Check whether ECS is available in the region.
404	InternalServerError	Failed to create hpc cluster	The error message returned because an error occurs while the HPC cluster is created.
400	Invalid.Parameter	Invalid parameters	The error message returned because the specified parameter is not valid.

21.2. DeleteHpcCluster

You can call this operation to delete an HPC cluster.

Debugging

OpenAPI Explorer automatically calculates the signature value. For your convenience, we recommend that you call this operation in OpenAPI Explorer. OpenAPI Explorer dynamically generates the sample code of the operation for different SDKs.

Request parameters

Parameter	Type	Required	Example	Description
HpcClusterId	String	Yes	hpc-cluster1	The ID of the HPC cluster.
RegionId	String	Yes	cn-hangzhou	The region ID of the HPC cluster. You can call the DescribeRegions operation to query the latest region list.
Action	String	Yes	DeleteHpcCluster	The operation that you want to perform. Set the value to DeleteHpcCluster.
ClientToken	String	No	123e4567-e89b-12d3-a456-426655440000	A client token. It is used to ensure the idempotency of requests. The value of this parameter is generated by the client and is unique among different requests. The value can only contain ASCII characters and cannot exceed 64 characters in length. For more information, see How to ensure idempotency .

Response parameters

Parameter	Type	Example	Description
RequestId	String	473469C7-AA6F-4DC5-B3DB-A3DC0DE3C83E	The ID of the request.

Examples

Sample requests

```
https://ecs.aliyuncs.com/?Action=DeleteHpcCluster
&RegionId=cn-hangzhou
&HpcClusterId=hpc-cluster1
&<Common request parameters>
```

Sample success responses

XML format

```
<DeleteHpcClusterResponse>
  <RequestId>04F0F334-1335-436C-A1D7-6C044FE73368</RequestId>
</DeleteHpcClusterResponse>
```

JSON format

```
{
  "RequestId": "04F0F334-1335-436C-A1D7-6C044FE73368"
}
```

Error codes

HTTP status code	Error code	Error message	Description

HTTP status code	Error code	Error message	Description
400	MissingParameter.RegionId	The input parameter RegionId that is mandatory for processing this request is not supplied.	The error message returned because the required RegionId parameter is not specified.
404	InvalidRegionId.NotFound	The specified parameter "RegionId" is not valid.	The error message returned because the specified region ID does not exist. Check whether ECS is available in the region.
400	MissingParameter.HpcClusterId	The input parameter HpcClusterId that is mandatory for processing this request is not supplied.	The error message returned because the required HpcClusterId parameter is not specified.
400	Invalid.Parameter	Invalid parameters.	The error message returned because the specified parameter is not valid.
400	NotExists.HpcCluster	The specified hpc cluster does not exist.	The error message returned because the specified HPC cluster does not exist.
400	NotEmpty.HpcCluster	The specified hpc cluster is not empty, still contains instances.	The error message returned because the HPC cluster contains instances and therefore cannot be deleted.

21.3. DescribeHpcClusters

You can call this operation to query the available HPC clusters. Specified request parameters are used as filters with logical AND (&&) relations. The request parameters are not dependent on each other.

Debugging

OpenAPI Explorer automatically calculates the signature value. For your convenience, we recommend that you call this operation in OpenAPI Explorer. OpenAPI Explorer dynamically generates the sample code of the operation for different SDKs.

Request parameters

Parameter	Type	Required	Example	Description
RegionId	String	Yes	cn-hangzhou	The region ID of the HPC cluster. You can call the DescribeRegions operation to query the latest region list.
Action	String	Yes	DescribeHpcClusters	The operation that you want to perform. Set the value to DescribeHpcClusters.
ClientToken	String	No	123e4567-e89b-12d3-a456-426655440000	A client token. It is used to ensure the idempotency of requests. The value of this parameter is generated by the client and is unique among different requests. The value can only contain ASCII characters and cannot exceed 64 characters in length. For more information, see How to ensure idempotency .
HpcClusterIds	String	No	["hpc-xxxxxxx", "hpc-yyyyyyy", ... "hpc-zzzzzzz"]	The IDs of HPC clusters. You can specify a JSON array containing up to 100 HPC cluster IDs. Separate multiple HPC cluster IDs with commas (,).

Parameter	Type	Required	Example	Description
PageNumber	Integer	No	1	The number of the page to return. Pages start from page 1. Default value: 1.
PageSize	Integer	No	10	The number of entries to return per page. Maximum value: 100. Default value: 10.

Response parameters

Parameter	Type	Example	Description
HpcClusters			The list of all available HPC clusters. The value is an array consisting of the information of each HPC cluster.
Description	String	FinanceDept	The description of a queried HPC cluster.
HpcClusterId	String	hpc-hpclusterid1	The ID of a queried HPC cluster.
Name	String	FinanceJoshua	The name of a queried HPC cluster.
PageNumber	Integer	1	The page number of the returned page.
PageSize	Integer	10	The number of entries returned per page.
RequestId	String	473469C7-AA6F-4DC5-B3DB-A3DC0DE3C83E	The ID of the request.
TotalCount	Integer	2	The total number of queried HPC clusters.

Examples

Sample requests

```
https://ecs.aliyuncs.com/?Action=DescribeHpcClusters
&RegionId=cn-hangzhou
&<Common request parameters>
```

Sample success responses

XML format

```
<DescribeHpcClustersResponse>
  <PageNumber>1</PageNumber>
  <TotalCount>2</TotalCount>
  <HpcClusters>
    <HpcCluster>
      <Name>chuatest1</Name>
      <Description>desc</Description>
      <HpcClusterId>hpc-l6ack54lcr2g17563***</HpcClusterId>
    </HpcCluster>
    <HpcCluster>
      <Name>chuatest2</Name>
      <Description>desc</Description>
      <HpcClusterId>hpc-l6aam7fivcfd21fun***</HpcClusterId>
    </HpcCluster>
  </HpcClusters>
  <PageSize>10</PageSize>
  <RequestId>168D82CE-F8A0-4200-AC5C-26FD94438423</RequestId>
</DescribeHpcClustersResponse>
```

JSON format

```
{
  "PageNumber": 1,
  "TotalCount": 2,
  "PageSize": 10,
  "HpcClusters": {
    "HpcCluster": [
      {
        "Name": "chuatest1",
        "Description": "desc",
        "HpcClusterId": "hpc-l6ack54lcr2g17563***"
      },
      {
        "Name": "chuatest2",
        "Description": "desc",
        "HpcClusterId": "hpc-l6aam7fivcfd21fun***"
      }
    ]
  },
  "RequestId": "382960A6-C535-4705-B6EA-8338466270C4"
}
```

Error codes

HTTP status code	Error code	Error message	Description
400	InvalidRegionId.NotFound	The specified parameter "RegionId" is not valid.	The error message returned because the specified region ID does not exist. Check whether ECS is available in the region.

HTTP status code	Error code	Error message	Description
400	MissingParameter.HpcClusterId	The input parameter HpcClusterId that is mandatory for processing this request is not supplied.	The error message returned because the required HpcClusterId parameter is not specified.
400	InvalidHpcClusterIds.ExceedLimit	The amount of specified specified hpc cluster ids exceeds the limit.	The error message returned because the number of HPC cluster IDs exceeds the limit.
400	InvalidHpcClusterIds.Malformed	The amount of specified specified hpc cluster ids is invalid.	The error message returned because the HpcClusterIds parameter is not valid.
400	Invalid.Parameter	Invalid parameters.	The error message returned because the specified parameter is not valid.

21.4. ModifyHpcClusterAttribute

You can call this operation to modify the description of an Alibaba Cloud HPC (HPC) cluster.

Debugging

OpenAPI Explorer automatically calculates the signature value. For your convenience, we recommend that you call this operation in OpenAPI Explorer. OpenAPI Explorer dynamically generates the sample code of the operation for different SDKs.

Request parameters

Parameter	Type	Required	Example	Description
Action	String	Yes	ModifyHpcClusterAttribute	The operation that you want to perform. Set the value to ModifyHpcClusterAttribute.
HpcClusterId	String	Yes	hpc-b8bq705cvx1****	The ID of the HPC cluster.
RegionId	String	Yes	cn-hangzhou	The region ID of the HPC cluster. You can call the DescribeRegions operation to query the most recent region list.
ClientToken	String	No	123e4567-e89b-12d3-a456-426655440000	The client token that is used to ensure the idempotence of the request. You can use the client to generate the value, but you must ensure that it is unique among different requests. The ClientToken value must contain only ASCII characters and cannot exceed 64 characters in length. For more information, see How to ensure idempotency .
Description	String	No	testDescription	The description of the HPC cluster. The description must be 2 to 256 characters in length and cannot start with http:// or https://. This parameter is empty by default.

Parameter	Type	Required	Example	Description
Name	String	No	testName	The name of the HPC cluster. The name must be 2 to 128 characters in length. It must start with a letter but cannot start with http:// or https://. It can contain letters, digits, underscores (_), and hyphens (-). This parameter is empty by default.

Response parameters

Parameter	Type	Example	Description
RequestId	String	473469C7-AA6F-4DC5-B3DB-A3DC0DE3C83E	The ID of the request.

Examples

Sample requests

```
https://ecs.aliyuncs.com/?Action=ModifyHpcClusterAttribute
&HpcClusterId=hpc-b8bq705cvx1****
&RegionId=cn-hangzhou
&<Common request parameters>
```

Sample success responses

XML format

```
<ModifyHpcClusterAttributeResponse>
  <RequestId>04F0F334-1335-436C-A1D7-6C044FE73368</RequestId>
</ModifyHpcClusterAttributeResponse>
```

JSON format

```
{
  "RequestId": "04F0F334-1335-436C-A1D7-6C044FE73368"
}
```

Error codes

HTTP status code	Error code	Error message	Description
400	MissingParameter	The input parameter RegionId that is mandatory for processing this request is not supplied.	The error message returned because the RegionId parameter is not specified.
400	InvalidHpcClusterName.Malformed	Specified hpc cluster name is not valid.	The error message returned because the specified Name parameter is invalid.
400	InvalidHpcClusterDescription.Malformed	The specified parameter Description is not valid.	The error message returned because the specified Description parameter is invalid.

HTTP status code	Error code	Error message	Description
400	InvalidRegionId.NotFound	The specified parameter "RegionId" is not valid.	The error message returned because the specified RegionId parameter does not exist. Check whether the HPC cluster service is available in the region.
400	InvalidModifyInfo	Modify info is invalid, name/description must not null at the same time	The error message returned because the specified parameter is invalid. You must specify at least one of the Name and Description parameters.
400	HPC_CLUSTER_MODIFY_FAILED	Modify failed, possibly this hpc cluster does not exist	The error message returned because the specified HPC cluster failed to be modified. Check whether the HPC cluster exists.
400	Invalid.Parameter	Invalid parameters	The error message returned because the specified parameter is invalid.
400	HpcClusterNotExists	The specified hpc cluster does not exist	The error message returned because the specified HPC cluster does not exist.

22.Tags

22.1. TagResources

You can call this operation to create and bind tags to a specified ECS resource list.

Description

Before you bind tags, Alibaba Cloud checks the number of existing tags of the resource. An error message is returned if the maximum number is reached. For more information, see [Limits](#).

Debugging

OpenAPI Explorer automatically calculates the signature value. For your convenience, we recommend that you call this operation in OpenAPI Explorer. OpenAPI Explorer dynamically generates the sample code of the operation for different SDKs.

Request parameters

Parameter	Type	Required	Example	Description
Action	String	Yes	TagResources	The operation that you want to perform. Set the value to TagResources.
RegionId	String	Yes	cn-hangzhou	The region ID of the instance. You can call the DescribeRegions operation to query the most recent region list.
ResourceId.N	RepeatList	Yes	i-bp67acfmxazb4ph***	The IDs of N resources. Valid values of N: 1 to 50.
ResourceType	String	Yes	instance	The type of the resource. Valid values: - instance: ECS instances - disk: disks - snapshot: snapshots - image: images - securitygroup: security groups - volume: storage volumes - eni: Elastic Network Interfaces - ddh: dedicated hosts - keypair: SSH key pairs - launchtemplate: launch templates
Tag.N.Key	String	No	FinanceDept	The key of the Nth tag of the resource. Valid values of N: 1 to 20. This parameter cannot be an empty string. The tag key can be up to 128 characters in length and cannot start with acs: or aliyun. It cannot contain http:// or https://.
Tag.N.Value	String	No	FinanceJoshua	The value of the Nth tag of the resource. Valid values of N: 1 to 20. This parameter can be an empty string. The tag key can be up to 128 characters in length and cannot start with acs: or aliyun. It cannot contain http:// or https://.

Response parameters

Parameter	Type	Example	Description
RequestId	String	473469C7-AA6F-4DC5-B3DB-A3DC0DE3C83E	The ID of the request.

Examples

Sample requests

```
https://ecs.aliyuncs.com/?Action=TagResources
&RegionId=cn-hangzhou
&ResourceId.1=i-bp1j6qtdm8w0z1o0***
&ResourceType=instance
&Tag.1.Key=FinanceDept
&<Common request parameters>
```

Sample success responses

XML format

```
<TagResourcesResponse>
  <RequestId>C46FF5A8-C5F0-4024-8262-B16B639225A0</RequestId>
</TagResourcesResponse>
```

JSON format

```
{
  "RequestId": "C46FF5A8-C5F0-4024-8262-B16B639225A0"
}
```

Error codes

HTTP status code	Error code	Error message	Description
404	InvalidRegionId.NotFound	%s	The error message returned because the specified region ID does not exist.
404	MissingParameter.TagOwnerId	The parameter - TagOwnerId should not be null	The error message returned because the TagOwnerId parameter is not specified.
404	MissingParameter.TagOwnerId	The parameter - TagOwnerBid should not be null	The error message returned because the TagOwnerBid parameter is not specified.
404	MissingParameter.ResourceType	The parameter - ResourceType should not be null	The error message returned because the ResourceType parameter is not specified.
404	MissingParameter.Tags	The parameter - Tags should not be null	The error message returned because the Tags parameter is not specified.
404	MissingParameter.RegionId	The parameter - RegionId should not be null	The error message returned because the RegionId parameter is not specified.
403	PermissionDenied.TagOwnerId	The specified operator not have permission to set TagOwnerId value.	The error message returned because the specified operator is not authorized to set the owner of the tag.

HTTP status code	Error code	Error message	Description
403	PermissionDenied.Scope	The specified operator not have permission to set Scope value.	The error message returned because the specified operator is not authorized to specify the Scope parameter.
400	NumberExceed.ResourceIds	The ResourceIds parameter's number is exceed , Valid : 50	The error message returned because the number of resource IDs exceeds the maximum value of the ResourceIds parameter. Maximum value: 50.
400	NumberExceed.Tags	The Tags parameter's number is exceed , Valid : 20	The error message returned because the number of tags exceeds the maximum value of the Tags parameter. Maximum value:20.
400	Duplicate.TagKey	The Tag.N.Key contain duplicate key.	The error message returned because a key with the identical name already exists.
404	InvalidResourceId.NotFound	The specified ResourceIds are not found in our records.	The error message returned because the specified value of the ResourceId parameter does not exist.
404	InvalidResourceType.NotFound	The ResourceType provided does not exist in our records.	The error message returned because the specified value of the ResourceType parameter does not exist.
400	InvalidTagKey.Malformed	The specified Tag.n.Key is not valid.	The error message returned because the specified value of the Tag.N.Key parameter is invalid.
400	InvalidTagValue.Malformed	The specified Tag.n.Value is not valid.	The error message returned because the specified value of the Tag.N.Value parameter is invalid.
400	OperationDenied.QuotaExceed	The quota of tags on resource is beyond permitted range.	The error message returned because the number of resource tags has reached the upper limit.
403	InvalidResourceId.NotSupported	The specified ResourceId does not support tagging.	The error message returned because the specified resource does not support tagging.
400	InvalidTag.Mismatch	The specified Tag.n.Key and Tag.n.Value are not match.	The error message returned because the specified Tag.N.Key parameter does not correspond to the specified Tag.N.Value parameter.
400	InvalidTagCount	The specified tags are beyond the permitted range.	The error message returned because the number of specified tags has reached the upper limit.
404	InvalidRegionId.NotFound	The specified RegionId does not exist.	The error message returned because the specified region ID does not exist.
400	Invalid.Scope	The specified scope is invalid.	The error message returned because the specified value of the Scope parameter is invalid.
403	NoPermission.Tag	The operator is not permission for the tag.	The error message returned because you are not authorized to operate the resource tag.

HTTP status code	Error code	Error message	Description
403	QuotaExceed.Tags	%s	The error message returned because the number of tags has reached the quota.

22.2. ListTagResources

You can call this operation to query the tags that have been bound to one or more ECS resources.

Description

- Specify at least one parameter in the request to determine the query object: `ResourceId.N` , `Tag.N` (`Tag.N.Key` and `Tag.N.Value`), or `TagFilter.N` .
- When you specify the following parameters, the returned results contain only ECS resources that meet both of the following conditions.
 - `Tag.N` and `ResourceId.N`
 - `TagFilter.N` and `ResourceId.N`

Debugging

OpenAPI Explorer automatically calculates the signature value. For your convenience, we recommend that you call this operation in OpenAPI Explorer. OpenAPI Explorer dynamically generates the sample code of the operation for different SDKs.

Request parameters

Parameter	Type	Required	Example	Description
RegionId	String	Yes	cn-hangzhou	The region ID of the resource. You can call the DescribeRegions operation to query the most recent region list.
ResourceType	String	Yes	instance	The type of the resource. Valid values: - instance - disk - snapshot - image - securitygroup - volume - eni - ddh - keypair - launchtemplate

Parameter	Type	Required	Example	Description
TagFilter.N.TagKey	String	Yes	env	The tag key that is used for fuzzy match of ECS resources. A tag key must be 1 to 128 characters in length. Valid values of N: 1 to 5. <code>TagFilter.N</code> is used for fuzzy match of ECS resources that are bound to specified tags. It consists of one key and one or more values. Fuzzy match may have a latency of two seconds. Only the fuzzy match that has less than or equal to 5,000 resources is supported. - When the tag key (<code>TagFilter.N.TagKey</code>) is used for fuzzy match of ECS resources, the tag value (<code>TagFilter.N.TagValues.N</code>) must be empty. For example, when you use the tag key <code>environment</code> for fuzzy match of ECS resources, you can set <code>TagFilter.1.TagKey</code> to <code>env</code> and <code>TagFilter.1.TagValues</code> must be empty. - When the tag value (<code>TagFilter.N.TagValues.N</code>) is used for fuzzy match of ECS resources, the tag key (<code>TagFilter.N.TagKey</code>) must be set to an exact value. For example, when you use the tag key <code>env</code> and tag value <code>product</code> for fuzzy match of ECS resources, you must set <code>TagFilter.1.TagKey</code> exactly to <code>env</code>, and set <code>TagFilter.1.TagValues.1</code> to <code>proc</code>. - Only the ECS resources that belong to the intersection of the tag keys are returned. - The ECS resources that belong to the union of the tag keys are returned.  Note <code>TagFilter.N</code> and <code>Tag.N</code> cannot be used at the same time. Otherwise, an error message is returned.
Action	String	Yes	ListTagResources	The operation that you want to perform. Set the value to ListTagResources.
NextToken	String	No	caeba0bbb2be03f84eb48b699f0a4883	The token for the next query.
ResourceId.N	RepeatList	No	i-bp1j6qtvdm8w0z1o0**	The ID of the ECS resource. Valid values of N: 1 to 50.

Parameter	Type	Required	Example	Description
Tag.N.Key	String	No	FinanceDept	The tag key that is used for exact match of ECS resources. A tag key must be 1 to 128 characters in length. Valid values of N: 1 to 20. <code>Tag.N</code> is used for exact match of ECS resources that are bound to specified tags. It consists of one key-value pair. - When you specify only <code>Tag.N.Key</code>, all resources that are associated with this tag key are returned. - When you specify only <code>Tag.N.Value</code>, the error <code>InvalidParameter.TagValue</code> is returned. - When you specify multiple tag key-value pairs at the same time, only ECS resources that match all tag key-value pairs can be found.
Tag.N.Value	String	No	FinanceJoshua	The tag value that is used for exact match of ECS resources. A tag value must be 1 to 128 characters in length. Valid values of N: 1 to 20.
TagFilter.N.TagValues.N	RepeatList	No	product	The tag value that is used for fuzzy match of ECS resources. A tag value must be 1 to 128 characters in length. Valid values of N: 1 to 5.

Response parameters

Parameter	Type	Example	Description
NextToken	String	caeba0bbb2be03f84eb48b699f0a4883	The token for the next query.
RequestId	String	DE65F6B7-7566-4802-9007-96F2494AC5XX	The ID of the request.
TagResources	Array		A collection of resources and tags, including the resource ID, type, and tag key-value pair.
TagResource			A collection of resources and tags, including the resource ID, type, and tag key-value pair.
ResourceId	String	i-bp1j6qtdm8w0z1o0***	The ID of the resource.
ResourceType	String	instance	The type of the resource.
TagKey	String	FinanceDept	The key of the tag.
TagValue	String	FinanceJoshua	The value of the tag.

Examples

Sample requests

```
https://ecs.aliyuncs.com/?Action=ListTagResources
&RegionId=cn-hangzhou
&ResourceType=instance
&ResourceId.1=i-bp1j6qtdm8w0z1o0***
&<Common request parameters>
```

Sample success responses

XML format

```
<ListTagResourcesResponse>
  <TagResources>
    <TagResource>
      <ResourceType>instance</ResourceType>
      <TagValue>FinanceJoshua</TagValue>
      <ResourceId>i-bp1j6qtdm8w0z1o0***</ResourceId>
      <TagKey>binary</TagKey>
    </TagResource>
  </TagResources>
  <RequestId>DE65F6B7-7566-4802-9007-96F2494AC5XX</RequestId>
</ListTagResourcesResponse>
```

JSON format

```
{
  "TagResources":{
    "TagResource":[
      {
        "ResourceType":"instance",
        "TagValue":"FinanceJoshua",
        "ResourceId":"i-bp1j6qtdm8w0z1o0***",
        "TagKey":"FinanceDept"
      }
    ]
  },
  "RequestId":"DE65F6B7-7566-4802-9007-96F2494AC512"
}
```

Error codes

HTTP status code	Error code	Error message	Description
404	InvalidRegionId.NotFound	%s	The error message returned because the specified region ID does not exist.
404	MissingParameter.TagOwnerId	The parameter - TagOwnerId should not be null	The error message returned because the user who owns the tag does not exist.
404	MissingParameter.TagOwnerId	The parameter - TagOwnerId should not be null	The error message returned because the channel to which the tag belongs does not exist.

HTTP status code	Error code	Error message	Description
404	MissingParameter.ResourceType	The parameter - ResourceType should not be null	The error message returned because the specified resource type does not exist.
404	MissingParameter.Tags	The parameter - Tags should not be null	The error message returned because the specified tag parameter does not exist.
404	MissingParameter.RegionId	The parameter - RegionId should not be null	The error message returned because the specified region parameter does not exist.
403	PermissionDenied.TagOwnerId	The specified operator not have permission to set TagOwnerId value.	The error message returned because you are not authorized to set the owner of the tag.
403	PermissionDenied.Scope	The specified operator not have permission to set Scope value.	The error message returned because you are not authorized to modify the value of the Scope parameter.
400	NumberExceed.ResourceIds	The ResourceIds parameter's number is exceed , Valid : 50	The error message returned because the number of resource IDs has exceeded 50.
400	NumberExceed.Tags	The Tags parameter's number is exceed , Valid : 20	The error message returned because the number of tags has exceeded 20.
400	Duplicate.TagKey	The Tag.N.Key contain duplicate key.	The error message returned because the specified tag key already exists.
404	InvalidResourceId.NotFound	The specified ResourceIds are not found in our records.	The error message returned because the specified resource does not exist.
404	InvalidResourceType.NotFound	The ResourceType provided does not exist in our records.	The error message returned because the specified resource type does not exist.
400	InvalidTagKey.Malformed	The specified Tag.n.Key is not valid.	The error message returned because the specified value of the Tag.N.Key parameter is invalid.
400	InvalidTagValue.Malformed	The specified Tag.n.Value is not valid.	The error message returned because the specified Tag.n.Value is invalid.
400	OperationDenied.QuotaExceed	The quota of tags on resource is beyond permitted range.	The error message returned because the maximum number of tags on the resource has been reached.
403	InvalidResourceId.NotSupported	The specified ResourceId does not support tagging.	The error message returned because the specified resource does not support tagging.
400	InvalidTag.Mismatch	The specified Tag.n.Key and Tag.n.Value are not match.	The error message returned because the specified value of the Tag.N.Key parameter does not correspond to that of the Tag.N.Value parameter.
400	InvalidTagCount	The specified tags are beyond the permitted range.	The error message returned because the number of specified tags exceeds the upper limit.
404	InvalidRegionId.NotFound	The specified RegionId does not exist.	The error message returned because the specified region ID does not exist.

HTTP status code	Error code	Error message	Description
400	Invalid.Scope	The specified scope is invalid.	The error message returned because the specified scope value is invalid.
403	NoPermission.Tag	The operator is not permission for the tag.	The error message returned because you are not authorized to manage the tag.

22.3. UntagResources

You can call this operation to unbind tags from specified ECS resources. After a tag is unbound from a resource, it is automatically deleted if it is not bound to any other resources.

Debugging

OpenAPI Explorer automatically calculates the signature value. For your convenience, we recommend that you call this operation in OpenAPI Explorer. OpenAPI Explorer dynamically generates a sample code of the operation for different SDKs.

Request parameters

Parameter	Type	Required	Example	Description
Action	String	Yes	UntagResources	The operation that you want to perform. Set the value to UntagResources.
RegionId	String	Yes	cn-hangzhou	The region ID of the resource. You can call the DescribeRegions operation to query the most recent region list.
ResourceId.N	RepeatList	Yes	i-bp67acfmazb4ph****	The ID of resource N. Valid values of N: 1 to 50.
ResourceType	String	Yes	instance	The type of the resource. Valid values: - instance: ECS instance - disk: disk - snapshot: snapshot - image: image - securitygroup: security group - volume: storage volume - eni: elastic network interface (ENI) - ddh: dedicated host - ddhcluster: dedicated host cluster - keypair: SSH key pair - launchtemplate: launch template - reservedinstance: reserved instance - snapshotpolicy: automatic snapshot policy
TagKey.N	RepeatList	No	TestKey	The key of tag N bound to the resource. Valid values of N: 1 to 20.

Parameter	Type	Required	Example	Description
All	Boolean	No	false	Specifies whether to unbind all tags from the resource. This parameter takes effect only when the TagKey.N parameter is not specified. Valid values: • true • false Default value: false

Response parameters

Parameter	Type	Example	Description
RequestId	String	C46FF5A8-C5F0-4024-8262-B16B639225A0	The ID of the request.

Examples

Sample requests

```
https://ecs.aliyuncs.com/?Action=UntagResources
&RegionId=cn-hangzhou
&ResourceType=instance
&ResourceId.1=i-bp1j6qtvdm8w0z1o0****
&TagKey.1=TestKey
&<Common request parameters>
```

Sample success responses

XML format

```
<UntagResourcesResponse>
  <RequestId>C46FF5A8-C5F0-4024-8262-B16B639225A0</RequestId>
</UntagResourcesResponse>
```

JSON format

```
{
  "RequestId": "C46FF5A8-C5F0-4024-8262-B16B639225A0"
}
```

Error codes

HTTP status code	Error code	Error message	Description
404	InvalidRegionId.NotFound	%s	The error message returned because the specified RegionId parameter does not exist.
404	MissingParameter.TagOwnerId	The parameter - TagOwnerId should not be null	The error message returned because the TagOwnerId parameter is not specified.
404	MissingParameter.TagOwnerId	The parameter - TagOwnerId should not be null	The error message returned because the TagOwnerId parameter is not specified.

HTTP status code	Error code	Error message	Description
404	MissingParameter.ResourceType	The parameter - ResourceType should not be null	The error message returned because the ResourceType parameter is not specified.
404	MissingParameter.Tags	The parameter - Tags should not be null	The error message returned because the TagKey.N parameter is not specified.
404	MissingParameter.RegionId	The parameter - RegionId should not be null	The error message returned because the RegionId parameter is not specified.
403	PermissionDenied.TagOwnerId	The specified operator not have permission to set TagOwnerId value.	The error message returned because you are not authorized to set the owner of the tag.
403	PermissionDenied.Scope	The specified operator not have permission to set Scope value.	The error message returned because the specified operator is not authorized to specify the Scope parameter.
400	NumberExceed.ResourceIds	The ResourceIds parameter's number is exceed , Valid : 50	The error message returned because more than 50 resource IDs are specified.
400	NumberExceed.Tags	The Tags parameter's number is exceed , Valid : 20	The error message returned because more than 20 tags are specified.
400	Duplicate.TagKey	The Tag.N.Key contain duplicate key.	The error message returned because the specified tag key already exists. Tag keys must be unique.
404	InvalidResourceId.NotFound	The specified ResourceIds are not found in our records.	The error message returned because the specified resource does not exist. Check whether the resource ID is correct.
404	InvalidResourceType.NotFound	The ResourceType provided does not exist in our records.	The error message returned because the specified ResourceType parameter does not exist.
400	InvalidTagKey.Malformed	The specified Tag.n.Key is not valid.	The error message returned because the specified Tag.N.Key parameter is invalid.
400	InvalidTagValue.Malformed	The specified Tag.n.Value is not valid.	The error message returned because the specified Tag.N.Value parameter is invalid.
400	OperationDenied.QuotaExceed	The quota of tags on resource is beyond permitted range.	The error message returned because the number of specified tags has reached the upper limit.
403	InvalidResourceId.NotSupported	The specified ResourceId does not support tagging.	The error message returned because the specified resource does not support tagging.
400	InvalidTag.Mismatch	The specified Tag.n.Key and Tag.n.Value are not match.	The error message returned because the specified Tag.N.Key and Tag.N.Value parameters do not match.
400	InvalidTagCount	The specified tags are beyond the permitted range.	The error message returned because the number of specified tags exceeds the upper limit.

HTTP status code	Error code	Error message	Description
404	InvalidRegionId.NotFound	The specified RegionId does not exist.	The error message returned because the specified RegionId parameter does not exist.
400	Invalid.Scope	The specified scope is invalid.	The error message returned because the specified scope is invalid.
403	NoPermission.Tag	The operator is not permission for the tag.	The error message returned because you are not authorized to manage the tag.

23.Regions

23.1. DescribeRegions

You can call this operation to query available Alibaba Cloud regions.

Debugging

OpenAPI Explorer automatically calculates the signature value. For your convenience, we recommend that you call this operation in OpenAPI Explorer. OpenAPI Explorer dynamically generates the sample code of the operation for different SDKs.

Request parameters

Parameter	Type	Required	Example	Description
Action	String	Yes	DescribeRegions	The operation that you want to perform. Set the value to DescribeRegions.
InstanceChargeType	String	No	PrePaid	The billing method of the instance. For more information, see Pricing overview . Valid values: - PrePaid: subscription. If this parameter is set to PrePaid, ensure that your payment account has sufficient balance or credit. Otherwise, the InvalidPayMethod error code will be returned. - PostPaid: pay-as-you-go. Default value: PostPaid.
ResourceType	String	No	instance	The type of the resource. Valid values: - instance - disk - reservedinstance - scu Default value: instance.
AcceptLanguage	String	No	zh-CN	The natural language that is used to filter responses. For more information, see RFC 7231 . Valid values: - zh-CN: Chinese - en-US: English - ja: Japanese Default value: zh-CN.

Response parameters

Parameter	Type	Example	Description
RequestId	String	473469C7-AA6F-4DC5-B3DB-A3DC0DE3C83E	The ID of the request.
Regions	Array		An array consisting of region data.
RegionId	String	cn-qingdao-et2-bo1	The ID of the region.

Parameter	Type	Example	Description
LocalName	String	China (Qingdao)	The name of the region.
RegionEndpoint	String	ecs.aliyuncs.com	The endpoint of the region.
Status	String	available	Indicates whether the cluster was out of sale. Valid values: • available • soldOut

Examples

Sample requests

```
https://ecs.aliyuncs.com/?Action=DescribeRegions
&RegionId=cn-qingdao
&InstanceChargeType=PrePaid
&ResourceType=Instance
&AcceptLanguage=en-US
&<Common request parameters>
```

Sample success responses

XML format

```
<DescribeRegionsResponse>
  <RequestId>38EC7366-F5A9-46B1-BDB1-0FDC2E296397</RequestId>
  <Regions>
    <Region>
      <RegionId>cn-qingdao-et2-bo1</RegionId>
      <RegionEndpoint>ecs.aliyuncs.com</RegionEndpoint>
      <LocalName>China (Qingdao)</LocalName>
    </Region>
    <Region>
      <RegionId>cn-qingdao-nebula</RegionId>
      <RegionEndpoint>ecs.cn-qingdao-nebula.aliyuncs.com</RegionEndpoint>
      <LocalName>cn-qingdao-nebula</LocalName>
    </Region>
  </Regions>
</DescribeRegionsResponse>
```

JSON format

```
{
  "RequestId": "38EC7366-F5A9-46B1-BDB1-0FDC2E296397",
  "Regions": {
    "Region": [
      {
        "RegionId": "cn-qingdao-et2-b01",
        "RegionEndpoint": "ecs.aliyuncs.com",
        "LocalName": "China (Qingdao)"
      },
      {
        "RegionId": "cn-qingdao-nebula",
        "RegionEndpoint": "ecs.cn-qingdao-nebula.aliyuncs.com",
        "LocalName": "cn-qingdao-nebula"
      }
    ]
  }
}
```

Error codes

HTTP status code	Error code	Error message	Description
403	Unauthorized.EmptyRegion	The specified account has no access authority to any region.	The error message returned because you have no access to any regions. Apply for permissions and try again.
404	InvalidAcceptLanguage.NotFound	Only Chinese (zh-CN), English (en-US), and Japanese (ja) are allowed.	The error message returned because the selected language is not supported. Only Chinese, English, and Japanese are supported.

23.2. DescribeZones

You can call this operation to query zones in a specified region.

Description

Calling this operation only returns a list of zones and some resource inventory information related to each zone. If you want to query instance types and disk categories that are available for purchase in a specified zone, we recommend that you call the [DescribeAvailableResource](#) operation.

Debugging

OpenAPI Explorer automatically calculates the signature value. For your convenience, we recommend that you call this operation in OpenAPI Explorer. OpenAPI Explorer dynamically generates the sample code of the operation for different SDKs.

Request parameters

Parameter	Type	Required	Example	Description
Action	String	Yes	DescribeZones	The operation that you want to perform. Set the value to DescribeZones.

Parameter	Type	Required	Example	Description
RegionId	String	Yes	cn-hangzhou	The ID of the region for which to query zones. You can call the DescribeRegions operation to query the most recent region list.
InstanceChargeType	String	No	PostPaid	The billing method supported in the zone. For more information, see Billing overview . Default value: PostPaid. Valid values: - PrePaid: subscription - PostPaid: pay-as-you-go
SpotStrategy	String	No	NoSpot	The bidding policy for pay-as-you-go instances. Specify this parameter when the InstanceChargeType parameter is set to PostPaid. For more information, see Preemptible instances . Default value: NoSpot. Valid values: - NoSpot: applies to regular pay-as-you-go instances. - SpotWithPriceLimit: applies to preemptible instances that have maximum hourly prices. - SpotAsPriceGo: applies to pay-as-you-go instances priced at the market price at the time of purchase.
AcceptLanguage	String	No	zh-CN	The natural language that is used to filter responses. For more information, visit RFC 7231 . Valid values: - zh-CN - en-US - ja Default value: zh-CN.

Response parameters

Parameter	Type	Example	Description
RequestId	String	473469C7-AA6F-4DC5-B3DB-A3DC0DE3C83E	The ID of the request.
Zones	Array		An array consisting of Zone data.
Zone			
AvailableDedicatedHostTypes	List	Compute type	The supported types of dedicated hosts. The data type of this parameter is List.
AvailableDiskCategories	List	cloud	The supported disk categories. The data type of this parameter is List.
AvailableInstanceTypes	List	c5	The instance types of instances that can be created. The data type of this parameter is List.

Parameter	Type	Example	Description
AvailableResourceCreation	List	DedicatedHost	The types of the resources that can be created. The data type of this parameter is List.
AvailableResources	Array		An array consisting of ResourcesInfo data.
ResourcesInfo			
DataDiskCategories	List	cloud_ssd	The categories of data disks. The data type of this parameter is List. Valid values: - cloud: basic disk - cloud_efficiency: ultra disk - cloud_ssd: standard SSD - cloud_essd: enhanced SSD (ESSD) - ephemeral_ssd: local SSD
InstanceGenerations	List	IV	The generation numbers of instance families. The data type of this parameter is List.
InstanceTypeFamilies	List	["d1", "d1ne"]	The set of supported instance families. The data type of this parameter is List.
InstanceTypes	List	["ecs.g5.large"]	The instance types of the instances. The data type of this parameter is List.
IoOptimized	Boolean	True	Indicates whether the instance is I/O optimized.
NetworkTypes	List	VPC	The types of the network. The data type of this parameter is List. Valid values: - VPC - Classic
SystemDiskCategories	List	cloud_ssd	The categories of system disks. The data type of this parameter is List. Valid values: - cloud: basic disk - cloud_efficiency: ultra disk - cloud_ssd: standard SSD
AvailableVolumeCategories	List	san_ssd	The categories of available shared storage. The data type of this parameter is List.
DedicatedHostGenerations	List	I	The generation numbers of dedicated hosts. The data type of this parameter is List.
LocalName	String	Hangzhou Zone G	The name of the zone in the local language.
ZoneId	String	cn-hangzhou-b	The ID of the zone.

Examples

Sample requests


```
https://ecs.aliyuncs.com/?Action=DescribeZones
&RegionId=cn-hangzhou
&InstanceChargeType=PostPaid
&SpotStrategy=NoSpot
&<Common request parameters>
```

Sample success responses

XML format

```
<DescribeZonesResponse>
  <Zones>
    <Zone>
      <AvailableResourceCreation>
        <ResourceTypes>Instance</ResourceTypes>
        <ResourceTypes>Disk</ResourceTypes>
      </AvailableResourceCreation>
      <LocalName></LocalName>
      <ZoneId>cn-hangzhou-d</ZoneId>
      <AvailableDiskCategories>
        <DiskCategories>cloud</DiskCategories>
      </AvailableDiskCategories>
    </Zone>
    <Zone>
      <AvailableResourceCreation>
        <ResourceTypes>Instance</ResourceTypes>
        <ResourceTypes>Disk</ResourceTypes>
      </AvailableResourceCreation>
      <LocalName></LocalName>
      <ZoneId>cn-hangzhou-b</ZoneId>
      <AvailableDiskCategories>
        <DiskCategories>cloud</DiskCategories>
      </AvailableDiskCategories>
    </Zone>
  </Zones>
  <RequestId>6DB97BCC-92BA-424D-A7C8-3F6486612BAE</RequestId>
</DescribeZonesResponse>
```

JSON format

```

{
  "RequestId": "A347EF0E-BBCC-4EFA-BD79-27AA3ACFD1BF",
  "Zones": {
    "Zone": [
      {
        "AvailableDiskCategories": {
          "DiskCategories": [
            "cloud"
          ]
        },
        "AvailableResourceCreation": {
          "ResourceTypes": [
            "Instance",
            "Disk"
          ]
        },
        "LocalName": "",
        "ZoneId": "cn-hangzhou-d"
      },
      {
        "AvailableDiskCategories": {
          "DiskCategories": [
            "cloud"
          ]
        },
        "AvailableResourceCreation": {
          "ResourceTypes": [
            "Instance",
            "Disk"
          ]
        },
        "LocalName": "",
        "ZoneId": "cn-hangzhou-b"
      }
    ]
  }
}

```

Error codes

HTTP status code	Error code	Error message	Description
404	InvalidRegionId.NotFound	The specified RegionId does not exist.	The error message returned because the specified RegionId parameter does not exist.
404	InvalidInstanceChargeType.NotFound	The InstanceChargeType does not exist in our records	The error message returned because the specified InstanceChargeType parameter does not exist.

HTTP status code	Error code	Error message	Description
400	InvalidSpotStrategy	The specified SpotStrategy is not valid.	The error message returned because the specified SpotStrategy parameter is invalid.
404	InvalidAcceptLanguage.NotFound	Only Chinese (zh-CN), English (en-US), and Japanese (ja) are allowed.	The error message returned because the selected language is not supported. Only Chinese, English, and Japanese are supported.

23.3. DescribeResourcesModification

You can call this operation to query available resources in a specific zone when you upgrade or downgrade instance types or system disks.

Debugging

OpenAPI Explorer automatically calculates the signature value. For your convenience, we recommend that you call this operation in OpenAPI Explorer. OpenAPI Explorer dynamically generates the sample code of the operation for different SDKs.

Request parameters

Parameter	Type	Required	Example	Description
Action	String	Yes	DescribeResourcesModification	The operation that you want to perform. If you use a custom HTTP URL or HTTPS URL to make an API request, you must specify the <code>Action</code> parameter. Set the value to <code>DescribeResourcesModification</code> .
DestinationResource	String	Yes	InstanceType	The type of the target resource. Valid values: - InstanceType - SystemDisk
RegionId	String	Yes	cn-hangzhou	The ID of the target region. You can call the DescribeRegions operation to query the most recent region list.
ResourceId	String	Yes	i-bp67acfmxazb4ph***	The ID of the resource. For example, when the retrieved resources are instances, this parameter can be interpreted as InstanceId.
OperationType	String	No	Upgrade	The operation to modify resource configurations. - Valid values for subscription resources: - Upgrade - Downgrade - RenewDowngrade - RenewModify - Valid values for pay-as-you-go resources: - Upgrade Default value: Upgrade.

Parameter	Type	Required	Example	Description
MigrateAcrossZone	Boolean	No	true	Specifies whether instance types can be upgraded across clusters. Valid values: • true • false Default value: false. When the MigrateAcrossZone parameter is set to true and you upgrade the ECS instance based on the returned information, take note of the following points: • Instances in the classic network: ◦ For phased-out instance types, when a non-I/O optimized instance is upgraded to an I/O optimized instance, the private IP address, driver name, and software authorization code are modified. For more information, see Phased-out instance types. For Linux instances, basic disks (cloud) are identified as xvda or xvdb. Ultra disks (cloud_efficiency) and standard SSDs (cloud_ssd) are identified as vda or vdb. ◦ For instance families available on the Alibaba Cloud market, the private IP address is modified. • Instances in VPCs: For phased-out instance types, when a non-I/O optimized instance is upgraded to an I/O optimized instance, the driver name and software authorization code are modified. For more information, see Phased-out instance types. For Linux instances, basic disks (cloud) are identified as xvda or xvdb. Ultra disks (cloud_efficiency) and standard SSDs (cloud_ssd) are identified as vda or vdb.
InstanceType	String	No	ecs.g5.large	The instance type. For more information, see Instance type families or call the DescribeInstanceTypes operation to query the most recent instance type list. When the DestinationResource parameter is set to SystemDisk, you must specify the InstanceType parameter.
Cores	Integer	No	2	The number of vCPUs of the instance type. For more information, see Instance type families. This parameter is valid only when the DestinationResource parameter is set to InstanceType.
Memory	Float	No	8.0	The memory size of the instance type. Unit: GiB. For more information, see Instance type families. This parameter is valid only when the DestinationResource parameter is set to InstanceType.

Response parameters

Parameter	Type	Example	Description
RequestId	String	473469C7-AA6F-4DC5-B3DB-A3DC0DE3C83E	The ID of the request.
AvailableZones	Array		An array consisting of AvailableZone data.
RegionId	String	cn-hangzhou-dg-a01	The ID of the region.
ZoneId	String	cn-hangzhou-e	The ID of the zone.
Status	String	Available	The status of the resource. Valid values: - Available - SoldOut
StatusCategory	String	WithStock	The category of resources based on stock status. Valid values: - WithStock: sufficient stock - ClosedWithStock: insufficient stock - WithoutStock: running out of stock
AvailableResources	Array		An array consisting of AvailableResource data.
Type	String	InstanceType	The type of the resource. Valid values: - Zone - IoOptimized - InstanceType - SystemDisk - DataDisk - Network
SupportedResources	Array		An array consisting of SupportedResource data.
Value	String	ecs.sn1ne.xlarge	The value of the resource.
Status	String	Available	The status of the resource. Valid values: - Available - SoldOut
StatusCategory	String	WithStock	The category of resources based on stock status. Valid values: - WithStock: sufficient stock - ClosedWithStock: insufficient stock - WithoutStock: running out of stock
Min	Integer	1	The minimum value of a specific resource type that can be created. No value is returned when the parameter value is null.

Parameter	Type	Example	Description
Max	Integer	2	The maximum value of a specific resource type that can be created. No value is returned when the parameter value is null.
Unit	String	null	The unit of the resource type. No value is returned when the parameter value is null.

Examples

Sample requests

```
https://ecs.aliyuncs.com/?Action=DescribeResourcesModification
&DestinationResource=InstanceType
&RegionId=cn-hangzhou
&ResourceId=i-bp67acfmazb4ph***
&MigrateAcrossZone=true
&OperationType=Upgrade
&InstanceType=ecs.g5.large
&<Common request parameters>
```

Sample success responses

XML format

```
<DescribeResourcesModificationResponse>
  <RequestId>994F2B60-B050-49E3-9283-44655FAC7A4X</RequestId>
  <AvailableZones>
    <AvailableZone>
      <Status>Available</Status>
      <RegionId>cn-hangzhou</RegionId>
      <AvailableResources>
        <AvailableResource>
          <Type>InstanceType</Type>
          <SupportedResources>
            <SupportedResource>
              <Status>Available</Status>
              <Value>ecs.g5.xlarge</Value>
            </SupportedResource>
            <SupportedResource>
              <Status>Available</Status>
              <Value>ecs.t5-lc1m2.large</Value>
            </SupportedResource>
            <SupportedResource>
              <Status>Available</Status>
              <Value>ecs.t5-c1m4.2xlarge</Value>
            </SupportedResource>
            <SupportedResource>
              <Status>Available</Status>
              <Value>ecs.c5.xlarge</Value>
            </SupportedResource>
          </SupportedResources>
        </AvailableResource>
      </AvailableResources>
      <ZoneId>cn-hangzhou-e</ZoneId>
    </AvailableZone>
  </AvailableZones>
</DescribeResourcesModificationResponse>
```

JSON format

```
{
  "RequestId": "994F2B60-B050-49E3-9283-44655FAC7A4X",
  "AvailableZones": {
    "AvailableZone": [
      {
        "Status": "Available",
        "RegionId": "cn-hangzhou",
        "AvailableResources": {
          "AvailableResource": [
            {
              "Type": "InstanceType",
              "SupportedResources": {
                "SupportedResource": [
                  {
                    "Status": "Available",
                    "Value": "ecs.g5.xlarge"
                  },
                  {
                    "Status": "Available",
                    "Value": "ecs.t5-lc1m2.large"
                  },
                  {
                    "Status": "Available",
                    "Value": "ecs.t5-c1m4.2xlarge"
                  },
                  {
                    "Status": "Available",
                    "Value": "ecs.c5.xlarge"
                  }
                ]
              }
            }
          ]
        }
      }
    ]
  },
  "ZoneId": "cn-hangzhou-e"
}
```

Error codes

HTTP status code	Error code	Error message	Description
404	Invalid.RegionId	The specified RegionId does not exist.	The error message returned because the specified RegionId parameter is invalid.
404	Unavailable.Regions	The available regions does not exists	The error message returned because the specified region is unavailable.

HTTP status code	Error code	Error message	Description
400	Invalid.OperationType	The specified operationType is not valid.	The error message returned because the specified OperationType parameter is invalid.
400	Invalid.Param	The input parameter DestinationResource that is mandatory for processing this request is not supplied.	The error message returned because the DestinationResource parameter is not specified.
404	Invalid.ResourceType	The ResourceType provided does not exist in our records.	The error message returned because the specified ResourceType parameter is invalid.
404	Invalid.DestinationResource	The specified DestinationResource is not valid.	The error message returned because the specified DestinationResource parameter is invalid.
404	Invalid.IoOptimized	The specified IoOptimized is not valid.	The error message returned because the specified IoOptimized parameter is invalid.
404	Invalid.NetworkCategory	The specified NetworkCategory is not valid.	The error message returned because the specified NetworkCategory parameter is invalid.
404	Invalid.SpotStrategy	The specified SpotStrategy is not valid.	The error message returned because the specified SpotStrategy parameter is invalid.
400	Invalid.InstanceChargeType	The specified InstanceChargeType is not valid.	The error message returned because the specified InstanceChargeType parameter is invalid.
404	Invalid.ResourceId	The specified ResourceId is not valid.	The error message returned because the specified ResourceId parameter is invalid.
404	Invalid.InstancePayType	The specified InstancePayType is not valid.	The error message returned because the specified InstanceChargeType parameter is invalid.
404	OperationDenied	The specified operation is denied as this instanceType is not support.	The error message returned because the instance type does not support the current operation.
403	InvalidDedicatedHostId.NotFound	The specified DedicatedHostId does not exist in our records.	The error message returned because the specified dedicated host does not exist in the current region.
404	InvalidInstanceId.NotFound	The specified InstanceId provided does not exist in our records.	The error message returned because the specified InstanceId parameter does not exist. Check whether the instance ID is correct.
404	InvalidResourceId.NotFound	The specified ResourceId is not found in our records	The error message returned because the specified ResourceId parameter does not exist.
403	InvalidParam.TypeAndCpuMem.Conflict	The specified 'InstanceType' and 'Cores','Memory' are not blank at the same time.	The error message returned because none of the InstanceType, Cores, or Memory parameters is specified.
403	InvalidParam.Cores	The specified parameter 'Cores' should be empty	The error message returned because the Cores parameter is specified.

HTTP status code	Error code	Error message	Description
403	InvalidParam.Memory	The specified parameter 'Memory' should be empty	The error message returned because the Memory parameter is specified.

23.4. DescribeAvailableResource

You can call this operation to query resources in a zone. For example, you can query the most recent resource list before creating an ECS instance (RunInstances) or modifying instance specifications (ModifyInstanceSpec) in a zone.

Description

Values for the `DestinationResource` parameter have dependencies. When you select a value in the following chain for the `DestinationResource` parameter, the more to the right the selected value is ordered, the more parameters you must specify.

- Sequence: `Zone > IoOptimized > InstanceType = Network = ddh > SystemDisk > DataDisk`
- For example:
 - If you set `DestinationResource` to `DataDisk`, you must specify the `IoOptimized`, `InstanceType`, `SystemDiskCategory`, and `DataDiskCategory` parameters.
 - If you set `DestinationResource` to `InstanceType`, you must specify the `IoOptimized` and `InstanceType` parameters.
 - Query the `ecs.g5.large` resources in all zones of the China (Hangzhou) region: `RegionId=cn-hangzhou & DestinationResource=InstanceType & IoOptimized=optimized & InstanceType=ecs.g5.large`
 - Query the zones where `ecs.g5.large` resources are available within the China (Hangzhou) region: `RegionId=cn-hangzhou & DestinationResource=Zone & IoOptimized=optimized & InstanceType=ecs.g5.large`

Debugging

OpenAPI Explorer automatically calculates the signature value. For your convenience, we recommend that you call this operation in OpenAPI Explorer. OpenAPI Explorer dynamically generates the sample code of the operation for different SDKs.

Request parameters

Parameter	Type	Required	Example	Description
Action	String	Yes	DescribeAvailableResource	The operation that you want to perform. If you use a custom HTTP URL or HTTPS URL to make an API request, you must specify the <code>Action</code> parameter. Set the value to <code>DescribeAvailableResource</code> .
DestinationResource	String	Yes	InstanceType	The resource types to be queried. Valid values: - Zone - IoOptimized - InstanceType - SystemDisk - DataDisk - Network - ddh For more information about how to set the <code>DestinationResource</code> parameter, see the preceding Description section.

Parameter	Type	Required	Example	Description
RegionId	String	Yes	cn-hangzhou	The ID of the region for which to query resources. You can call the DescribeRegions operation to query the most recent region list.
ZoneId	String	No	cn-hangzhou-e	The ID of the zone for which to query resources. Default value: null, indicating that the system returns resources which match the other criteria of all zones within the region specified by <code>RegionId</code> .
InstanceChargeType	String	No	PrePaid	The billing method of resources. For more information, see Billing overview . Valid values: - PrePaid: subscription - PostPaid: pay-as-you-go Default value: PostPaid.
SpotStrategy	String	No	NoSpot	The preemption policy for the preemptible or pay-as-you-go instance. Valid values: - NoSpot: the regular pay-as-you-go instance - SpotWithPriceLimit: the preemptible instance with a user-defined maximum hourly price - SpotAsPriceGo: the preemptible instance priced at the market price at the time of purchase Default value: NoSpot. The SpotStrategy parameter takes effect only when the InstanceChargeType parameter is set to PostPaid.
IoOptimized	String	No	optimized	Specifies whether the instance is I/O optimized. Valid values: - none - optimized Default value: optimized.
DedicatedHostId	String	No	dh-dedicatedhostid	The ID of the dedicated host.
InstanceType	String	No	ecs.g5.large	The instance type. For more information, see Instance type families or call the DescribeInstanceTypes operation to query the most recent instance type list. When the DestinationResource parameter is set to SystemDisk or DataDisk, the InstanceType parameter is required.

Parameter	Type	Required	Example	Description
SystemDiskCategory	String	No	cloud_ssd	The category of the system disk. Valid values: - cloud: basic disk - cloud_efficiency: ultra disk - cloud_ssd: standard SSD - ephemeral_ssd: local SSD - cloud_essd: enhanced SSD (ESSD) When the DestinationResource parameter is set to SystemDisk, InstanceType, or DataDisk, the SystemDiskCategory parameter is optional. Default value: cloud_efficiency.
DataDiskCategory	String	No	cloud_ssd	The category of the data disk. Valid values: - cloud: basic disk - cloud_efficiency: ultra disk - cloud_ssd: standard SSD - ephemeral_ssd: local SSD - cloud_essd: enhanced SSD (ESSD)
NetworkCategory	String	No	vpc	The type of the network. Valid values: - vpc: VPC - classic: classic network
Cores	Integer	No	2	The number of vCPU cores of the instance type. For more information, see Instance type families. The Cores parameter takes effect only when the DestinationResource parameter is set to InstanceType.
Memory	Float	No	8.0	The memory size of the instance type. Unit: GiB. For more information, see Instance type families. The Memory parameter takes effect only when the DestinationResource parameter is set to InstanceType.
ResourceType	String	No	Instance	The type of the resource. Valid values: - instance - disk - reservedinstance - ddh

Response parameters

Parameter	Type	Example	Description
AvailableZones	Array		An array of zones.
AvailableZone			

Parameter	Type	Example	Description
AvailableResources	Array		An array of available resource types.
AvailableResource			
SupportedResources	Array		An array of supported resource types.
SupportedResource			
Max	Integer	2	The maximum number of resources of a specific type that can be created. No value is returned when this parameter is null.
Min	Integer	1	The minimum value of resources of a specific type that can be created. No value is returned when the parameter is null.
Status	String	Available	The status of the resource. Valid values: - Available - SoldOut
StatusCategory	String	WithStock	The resource category based on the stock. Valid values: - WithStock: The resource is in sufficient stock. - ClosedWithStock: The resource is in low stock. We recommend that you use resources in sufficient stock. - WithoutStock: There is no stock of the resource, and the resource will be replenished. We recommend that you use resources in sufficient stock. - ClosedWithoutStock: There is no stock of the resource, and the resource will not be replenished. We recommend that you use resources in sufficient stock.
Unit	String	null	The unit of the resource type. No value is returned when the parameter is null.
Value	String	ecs.d1ne.xlarge	The value of the resource.
Type	String	InstanceType	The type of the resource. Valid values: - Zone - IoOptimized - InstanceType - SystemDisk - DataDisk - Network - ddh
RegionId	String	cn-hangzhou	The ID of the region.

Parameter	Type	Example	Description
Status	String	Available	The status of the resource. Valid values: - Available - SoldOut
StatusCategory	String	WithStock	The resource category based on the stock. Valid values: - WithStock: The resource is in sufficient stock. - ClosedWithStock: The resource is in low stock. We recommend that you use resources in sufficient stock. - WithoutStock: There is no stock of the resource, and the resource will be replenished. We recommend that you use resources in sufficient stock. - ClosedWithoutStock: There is no stock of the resource, and the resource will not be replenished. We recommend that you use resources in sufficient stock.
ZoneId	String	cn-hangzhou-e	The ID of the zone.
RequestId	String	473469C7-AA6F-4DC5-B3DB-A3DC0DE3C83E	The ID of the request.

Examples

Sample requests

```
https://ecs.aliyuncs.com/?Action=DescribeAvailableResource
&RegionId=cn-hangzhou
&DestinationResource=InstanceType
&IoOptimized=optimized
&InstanceType=ecs.g5.large
&<Common request parameters>
```

Sample success responses

XML format

```
<DescribeAvailableResourceResponse>
  <RequestId>0041D94C-FB92-4C49-B115-259DA1CE1923</RequestId>
  <AvailableZones>
    <AvailableZone>
      <Status>Available</Status>
      <RegionId>cn-hangzhou</RegionId>
      <AvailableResources>
        <AvailableResource>
          <Type>InstanceType</Type>
          <SupportedResources>
            <SupportedResource>
              <Status>Available</Status>
              <Value>ecs.g5.large</Value>
              <StatusCategory>WithStock</StatusCategory>
            </SupportedResource>
          </SupportedResources>
        </AvailableResource>
      </AvailableResources>
      <ZoneId>cn-hangzhou-i</ZoneId>
      <StatusCategory>WithStock</StatusCategory>
    </AvailableZone>
  </AvailableZones>
</DescribeAvailableResourceResponse>
```

JSON format

```

{
  "RequestId": "0041D94C-FB92-4C49-B115-259DA1CE1923",
  "AvailableZones": {
    "AvailableZone": [
      {
        "Status": "Available",
        "RegionId": "cn-hangzhou",
        "AvailableResources": {
          "AvailableResource": [
            {
              "Type": "InstanceType",
              "SupportedResources": {
                "SupportedResource": [
                  {
                    "Status": "Available",
                    "Value": "ecs.g5.large",
                    "StatusCategory": "WithStock"
                  }
                ]
              }
            }
          ]
        }
      }
    ],
    "ZoneId": "cn-hangzhou-i",
    "StatusCategory": "WithStock"
  }
}

```

Error codes

HTTP status code	Error code	Error message	Description
404	Invalid.RegionId	The specified RegionId does not exist.	The error message returned because the specified RegionId parameter does not exist.
404	Unavailable.Regions	The available regions does not exists	The error message returned because the specified RegionId parameter is invalid.
400	Invalid.InstanceChargeType	The specified InstanceChargeType is not valid.	The error message returned because the specified InstanceChargeType parameter is invalid.
400	Invalid.Param	The input parameter DestinationResource that is mandatory for processing this request is not supplied.	The error message returned because the required DestinationResource parameter is not specified.
404	Invalid.ResourceType	The ResourceType provided does not exist in our records.	The error message returned because the specified ResourceType parameter is invalid.

HTTP status code	Error code	Error message	Description
404	Invalid.DestinationResource	The specified DestinationResource is not valid.	The error message returned because the specified DestinationResource parameter is invalid.
404	Invalid.IoOptimized	The specified IoOptimized is not valid.	The error message returned because the specified IoOptimized parameter is invalid.
404	Invalid.NetworkCategory	The specified NetworkCategory is not valid.	The error message returned because the specified NetworkCategory parameter is invalid.
404	Invalid.SpotStrategy	The specified SpotStrategy is not valid.	The error message returned because the specified SpotStrategy parameter is invalid.
403	InvalidDedicatedHostId.NotFound	The specified DedicatedHostId does not exist.	The error message returned because the specified dedicated host ID does not exist.
404	Invalid.NetworkType	The specified NetworkType is not valid.	The error message returned because the specified NetworkType parameter is invalid.
404	InvalidResourceId.NotFound	The specified ResourceId is not found in our records	The error message returned because the specified ResourceId parameter does not exist.
403	InvalidParam.TypeAndCpuMem.Conflict	The specified 'InstanceType' and 'Cores','Memory' are not blank at the same time.	The error message returned because none of the InstanceType, Cores, and Memory parameters are specified.
403	InvalidParam.Cores	The specified parameter 'Cores' should be empty	The error message returned because the Cores parameter is specified.
403	InvalidParam.Memory	The specified parameter 'Memory' should be empty	The error message returned because the Memory parameter is specified.
400	InvalidRegionId.Malformed	The specified parameter RegionId is not valid.	The error message returned because the specified RegionId parameter is invalid.

24.Others

24.1. JoinResourceGroup

You can call this operation to add an ECS resource or service to a resource group.

Description

A resource is a cloud service entity that you create in Alibaba Cloud, such as an ECS instance, elastic network interface (ENI), or image. A resource group is a collection of infrastructure for projects, environments, or stacks. In a resource group, you can manage resources and monitor and run tasks in a centralized manner without switching between Alibaba Cloud services.

Debugging

OpenAPI Explorer automatically calculates the signature value. For your convenience, we recommend that you call this operation in OpenAPI Explorer. OpenAPI Explorer dynamically generates the sample code of the operation for different SDKs.

Request parameters

Parameter	Type	Required	Example	Description
Action	String	Yes	JoinResourceGroup	The operation that you want to perform. Set the value to JoinResourceGroup.
ResourceType	String	No	securitygroup	The type of the ECS resource. Valid values: - instance: instance - disk: Elastic Block Storage device - snapshot: snapshot - image: image - securitygroup: security group - ddh: dedicated host - ddhcluster: dedicated host cluster - eni: ENI - keypair: SSH key pair - launchtemplate: launch template These values are case-sensitive.
ResourceId	String	No	sg-bp67acfmazb4p****	The ID of the resource. This parameter depends on the ResourceType value. For example, when ResourceType is set to instance, ResourceId can be interpreted as InstanceId.
RegionId	String	No	cn-hangzhou	The region ID of the resource. You can call the DescribeRegions operation to query the most recent region list.
ResourceGroupId	String	No	rg-bp67acfmazb4p****	The ID of the resource group to which to add the resource.

Response parameters

Parameter	Type	Example	Description
RequestId	String	473469C7-AA6F-4DC5-B3DB-A3DC0DE3C83E	The ID of the request.

Examples

Sample requests

```
https://ecs.aliyuncs.com/?Action=JoinResourceGroup
&RegionId=cn-hangzhou
&ResourceType=securitygroup
&ResourceId=sg-bp67acfmazb4p****
&ResourceGroupId=rg-bp67acfmazb4p****
&<Common request parameters>
```

Sample success responses

XML format

```
<JoinResourceGroupResponse>
  <RequestId>473469C7-AA6F-4DC5-B3DB-A3DC0DE3C83E</RequestId>
</JoinResourceGroupResponse>
```

JSON format

```
{
  "RequestId": "473469C7-AA6F-4DC5-B3DB-A3DC0DE3C83E"
}
```

Error codes

HTTP status code	Error code	Error message	Description
403	MissingParameter	The input parameter "ResourceId" that is mandatory for processing this request is not supplied.	The error message returned because the ResourceId parameter is not specified.
403	MissingParameter	The input parameter "ResourceGroupId" that is mandatory for processing this request is not supplied.	The error message returned because the ResourceGroupId parameter is not specified.
403	MissingParameter	The input parameter "RegionId" that is mandatory for processing this request is not supplied.	The error message returned because the RegionId parameter is not specified.
404	InvalidResourceType.NotFound	The ResourceType provided does not exist in our records.	The error message returned because the specified ResourceType parameter does not exist.
404	InvalidResourceGroup.NotFound	The ResourceGroup provided does not exist in our records.	The error message returned because the specified ResourceGroupId parameter does not exist.
404	InvalidResourceId.NotFound	The ResourceId provided does not exist in our records.	The error message returned because the specified ResourceId parameter does not exist.

HTTP status code	Error code	Error message	Description
403	InvalidResourceGroup.Duplicate	The ResourceId provided has a ResourceGroup in our records.	The error message returned because the specified resource has already been added to another resource group.

24.2. DescribeDemands

You can call this operation to query the delivery and usage status of resources filed by the account manager, including the types, delivery status, and consumption status of the resources.

Description

Only I/O optimized instances and instances in VPCs can be filed. By default, the filing tickets of I/O optimized instances and instances in VPCs are queried.

 **Note** This operation is under internal preview and has not been officially released. We recommend that you avoid using this operation.

Debugging

OpenAPI Explorer automatically calculates the signature value. For your convenience, we recommend that you call this operation in OpenAPI Explorer. OpenAPI Explorer dynamically generates the sample code of the operation for different SDKs.

Request parameters

Parameter	Type	Required	Example	Description
RegionId	String	Yes	cn-hangzhou	The region ID of the instance. You can call the DescribeRegions operation to query the most recent region list.
Action	String	Yes	DescribeDemands	The operation that you want to perform. Set the value to DescribeDemands.
DemandStatus.N	RepeatList	No	Active	The status of the filing ticket. Valid values: - Creating: The filing ticket is being created. - Active: The filed resources are being supplied. - Expired: The expected purchase time of the filed resources specified in the filing ticket has expired. - Finished: The filed resources have been consumed. - Cancelled: The filed resources have been canceled.

Parameter	Type	Required	Example	Description
DryRun	Boolean	No	false	Specifies whether to check this request only. Valid values: - true: sends a check request, without querying the status of the filing ticket. The system checks whether your AccessKey is valid, whether RAM users are authorized, and whether the required parameters are set. If the check fails, the corresponding error message is returned. If the check succeeds, the DryRunOperation error code is returned. - false: sends an API request. After the request succeeds, the 2XX HTTP status code is returned and the status of the filing ticket is queried. Default value: false.
InstanceChargeType	String	No	PostPaid	The billing methods of the instances. Valid values: - PostPaid: pay-as-you-go - PrePaid: subscription
InstanceType	String	No	ecs.g5.large	The types of the filed instances.
InstanceTypeFamily	String	No	ecs.g5	The instance families of the filed instances.
PageNumber	Integer	No	1	The number of the page to return. Pages start from page 1. Default value: 1.
PageSize	Integer	No	10	The number of entries to return on each page. Maximum value: 100. Default value: 10.
ZoneId	String	No	cn-hangzhou-g	The ID of the zone.

Response parameters

Parameter	Type	Example	Description
Demands			Indicates the filing tickets whose regions meet the filter criteria.
AvailableAmount	Integer	10	The number of instances currently available for the filed resources.
DeliveringAmount	Integer	20	The number of instances to be delivered in the filed resources.

Parameter	Type	Example	Description
DemandStatus	String	Active	The status of the filing ticket. Valid values: • Creating: The filed resources are being created. • Active: The filed resources are being supplied. • Finished: The filed resources have been consumed. • Expired: The expected purchase time of the filed resources specified in the filing ticket has expired. After the expected purchase time expires, the filed resources are released and the delivery status of the resources becomes invalid. • Cancelled: The filed resources have been canceled. The delivery status of the resources becomes invalid.
DemandTime	String	2019-02-26T12:00Z	The time when the filing ticket was created. The time follows the ISO 8601 standard in the yyyy-MM-ddTHH:mm:ssZ format. The time is displayed in UTC.
EndTime	String	2019-03-03T15:00Z	The expected end time for the purchase of the filed resources. The time follows the ISO 8601 standard in the yyyy-MM-ddTHH:mm:ssZ format. The time is displayed in UTC.
InstanceChargeType	String	Prepaid: subscription	The billing methods of the filed resources. Valid values: • Prepaid: subscription • Postpaid: pay-as-you-go
InstanceType	String	ecs.g5.xlarge	The types of the filed instances.
InstanceTypeFamily	String	ecs.g5	The instance families of the filed instances.
Period	Integer	3	The use duration of the filed resources.
PeriodUnit	String	Month	The unit of the use duration of the filed resources. • Hour • Day • Month
StartTime	String	2019-02-27T12:00Z	The expected start time for the purchase of the filed resources. The time follows the ISO 8601 standard in the yyyy-MM-ddTHH:mm:ssZ format. The time is displayed in UTC.
SupplyInfos			The delivery status of the filed resources.
Amount	Integer	30	The number of instances delivered this time.

Parameter	Type	Example	Description
SupplyEndTime	String	2019-03-03T15:00Z	The end time when the filed resources are delivered and available. The time follows the ISO 8601 standard in the yyyy-MM-ddTHH:mm:ssZ format. The time is displayed in UTC.
SupplyStartTime	String	2019-03-01T14:00Z	The start time when the filed resources are delivered and available. The time follows the ISO 8601 standard in the yyyy-MM-ddTHH:mm:ssZ format. The time is displayed in UTC.
SupplyStatus	String	Delivering	The delivery status of the filed resources. - Delivered: The filed resources have been delivered. - Delivering: The filed resources are being delivered.
TotalAmount	Integer	50	The number of the filed instances.
UsedAmount	Integer	20	The number of consumed instances.
ZoneId	String	cn-hangzhou-g	The zones of the filed resources.
PageNumber	Integer	1	The page number of the returned page.
PageSize	Integer	10	The number of entries returned per page.
RegionId	String	cn-hangzhou	The region ID of the query.
RequestId	String	473469C7-AA6F-4DC5-B3DB-A3DC0DE3C83E	The ID of the request.
TotalCount	Integer	6	The number of queried filing tickets.

Examples

Sample requests

```
https://ecs.aliyuncs.com/?Action=DescribeDemands
&RegionId=cn-hangzhou
&<Common request parameters>
```

Sample success responses

XML format

```
<DescribeDemandsResponse>
  <Demands>
    <AvailableAmount>0</AvailableAmount>
    <DeliveringAmount>50</DeliveringAmount>
    <DemandStatus>Expired</DemandStatus>
    <DemandTime>2019-02-26T12:00Z</DemandTime>
    <EndTime>2019-03-03T15:00Z</EndTime>
    <InstanceChargeType>PrePaid</InstanceChargeType>
    <InstanceType>ecs.g5.4xlarge</InstanceType>
    <InstanceTypeFamily>ecs.g5</InstanceTypeFamily>
    <Period>3</Period>
    <PeriodUnit>Month</PeriodUnit>
    <StartTime>2019-02-27T12:00Z</StartTime>
    <SupplyInfos>
      <Amount>50</Amount>
      <SupplyEndTime>2019-03-03T15:00Z</SupplyEndTime>
      <SupplyStartTime>2019-03-01T14:00Z</SupplyStartTime>
      <SupplyStatus>Delivering</SupplyStatus>
    </SupplyInfos>
    <TotalAmount>50</TotalAmount>
    <UsedAmount>0</UsedAmount>
    <ZoneId>cn-hangzhou-g</ZoneId>
  </Demands>
  <PageNumber>1</PageNumber>
  <PageSize>10</PageSize>
  <RegionId>cn-hangzhou</RegionId>
  <RequestId>04066112-BF3A-4FCD-ABBD-B4B5EDAE9DXX</RequestId>
  <TotalCount>1</TotalCount>
</DescribeDemandsResponse>
```

JSON format


```
{
  "PageNumber": 1,
  "TotalCount": 1,
  "PageSize": 10,
  "Demands": [
    {
      "Period": 3,
      "DemandTime": "2019-02-26T12:00Z",
      "InstanceTypeFamily": "ecs.g5",
      "AvailableAmount": 0,
      "ZoneId": "cn-hangzhou-g",
      "UsedAmount": 0,
      "DeliveringAmount": 50,
      "InstanceType": "ecs.g5.4xlarge",
      "DemandStatus": "Expired",
      "EndTime": "2019-03-03T15:00Z",
      "TotalAmount": 50,
      "StartTime": "2019-02-27T12:00Z",
      "SupplyInfos": [
        {
          "Amount": "50",
          "SupplyStartTime": "2019-03-01T14:00Z",
          "SupplyEndTime": "2019-03-03T15:00Z",
          "SupplyStatus": "Delivering"
        }
      ],
      "InstanceChargeType": "PrePaid",
      "PeriodUnit": "Month"
    }
  ],
  "RequestId": "04066112-BF3A-4FCD-ABBD-B4B5EDAE9DXX",
  "RegionId": "cn-hangzhou"
}
```

Error codes

HTTP status code	Error code	Error message	Description
400	MissingParamter.RegionId	The regionId should not be null.	The error message returned because the RegionId parameter is not specified.
404	InvalidInstanceChargeType.NotFound	The InstanceChargeType does not exist in our records	The error message returned because the specified instance type does not exist.

24.3. CancelTask

You can call this operation to cancel a running task. You can cancel the running tasks generated by calling the ImportImage and ExportImage operations.

Debugging

OpenAPI Explorer automatically calculates the signature value. For your convenience, we recommend that you call this operation in OpenAPI Explorer. OpenAPI Explorer dynamically generates the sample code of the operation for different SDKs.

Request parameters

Parameter	Type	Required	Example	Description
Action	String	Yes	CancelTask	The operation that you want to perform. Set the value to CancelTask.
RegionId	String	Yes	cn-hangzhou	The region ID of the task. You can call the DescribeRegions operation to query the most recent region list.
TaskId	String	Yes	t-bp198jigq7l0h5ac****	The ID of the task. You can call the DescribeTasks operation to query the list of task IDs.

Response parameters

Parameter	Type	Example	Description
RequestId	String	473469C7-AA6F-4DC5-B3DB-A3DC0DE3C83E	The ID of the request.

Examples

Sample requests

```
https://ecs.aliyuncs.com/?Action=CancelTask
&RegionId=cn-hangzhou
&TaskId=t-bp198jigq7l0h5ac****
&<Common request parameters>
```

Sample success responses

XML format

```
<CancelTaskResponse>
  <RequestId>4BE2C7FE-C7A4-4675-A153-174E032AABFB</RequestId>
</CancelTaskResponse>
```

JSON format

```
{
  "RequestId": "4BE2C7FE-C7A4-4675-A153-174E032AABFB"
}
```

Error codes

HTTP status code	Error code	Error message	Description
400	MissingParameter	An input parameter "RegionId" that is mandatory for processing the request is not supplied.	The error message returned because the RegionId parameter is not specified.

HTTP status code	Error code	Error message	Description
400	MissingParameter	An input parameter "TaskId" that is mandatory for processing the request is not supplied.	The error message returned because the TaskId parameter is not specified.
400	InvalidRegionId.NotFound	The specified RegionId does not exist.	The error message returned because the specified RegionId parameter does not exist.
400	InvalidTaskId.NotFound	The specified "TaskId" is not found.	The error message returned because the specified TaskId parameter does not exist.
403	InvalidTaskId.TaskActionNotSupport	The specified task action not support.	The error message returned because the specified task is not supported.
403	InvalidTaskId.IncorrectTaskStatus	The specified task status is not invalid.	The error message returned because the specified task status is invalid.
403	CancelTaskFailed	The task is failed to cancel, Please contact the administrator.	The error message returned because the task cannot be canceled. Contact the administrator.

24.4. DescribeTasks

You can call this operation to query the progress of one or more asynchronous requests.

Debugging

OpenAPI Explorer automatically calculates the signature value. For your convenience, we recommend that you call this operation in OpenAPI Explorer. OpenAPI Explorer dynamically generates the sample code of the operation for different SDKs.

Request parameters

Parameter	Type	Required	Example	Description
Action	String	Yes	DescribeTasks	The operation that you want to perform. If you use a custom HTTP URL or HTTPS URL to make an API request, you must specify the <code>Action</code> parameter. Set the value to DescribeTasks.
RegionId	String	Yes	cn-hangzhou	The ID of the region. You can call the DescribeRegions operation to query the most recent region list.
PageNumber	Integer	No	1	The number of the page to return. Pages start from page 1. Default value: 1.
PageSize	Integer	No	2	The number of entries to return on each page. Maximum value: 100. Default value: 10.
TaskIds	String	No	t-bp1hvgwromzv32iq** **,t-bp179lofu2pv768w*** *	The IDs of the tasks. You can specify up to 100 tasks at a time. Separate multiple tasks IDs with commas (.).

Parameter	Type	Required	Example	Description
TaskAction	String	No	ImportImage	The name of the operation that generates the task. Valid values: - ImportImage - ExportImage - RedeployInstance
TaskStatus	String	No	Finished	The status of the task. Valid values: - Finished - Processing - Failed This parameter is empty by default.  Note The system only retrieves tasks in the Finished, Processing, and Failed states and ignores other values.
StartTime	String	No	2015-11-23T15:10:00Z	The beginning of the creation time range to be queried. Specify the time in the ISO 8601 standard in the yyyy-MM-ddTHH:mm:ssZ format. The time must be in UTC.
EndTime	String	No	2015-11-23T15:16:00Z	The end of the creation time range to be queried. Specify the time in the ISO 8601 standard in the yyyy-MM-ddTHH:mm:ssZ format. The time must be in UTC.

Response parameters

Parameter	Type	Example	Description
PageNumber	Integer	1	The page number of the returned page.
PageSize	Integer	2	The number of entries returned per page.
RegionId	String	cn-hangzhou	The ID of the region.
RequestId	String	473469C7-AA6F-4DC5-B3DB-A3DC0DE3C83E	The ID of the request.
TaskSet	Array		An array consisting of Task data.
Task			
CreationTime	String	2015-11-24T12:50Z	The time when the task was created.
FinishedTime	String	2015-11-24T12:50Z	The time when the task was completed.
SupportCancel	String	true	Indicates whether the task can be canceled.
TaskAction	String	IMPORT_IMAGE	The name of the task.

Parameter	Type	Example	Description
TaskId	String	t-bp1hvgwromzv32iq****	The ID of the task.
TaskStatus	String	Finished	The status of the task.
TotalCount	Integer	2	The total number of entries returned.

Examples

Sample requests

```
https://ecs.aliyuncs.com/?Action=DescribeTasks
&RegionId=cn-hangzhou
&PageNumber=1
&PageSize=2
&TaskIds=t-bp1hvgwromzv32iq****
&TaskAction=ImportImage
&TaskStatus=Finished
&StartTime=2015-11-23T15:10:00Z
&EndTime=2015-11-23T15:16:00Z
&<Common request parameters>
```

Sample success responses

XML format

```
<DescribeTasksResponse>
  <PageNumber>1</PageNumber>
  <TotalCount>2</TotalCount>
  <PageSize>2</PageSize>
  <RegionId>cn-hangzhou</RegionId>
  <RequestId>E5C82807-5588-4661-9A96-350B206A7623</RequestId>
  <TaskSet>
    <Task>
      <CreationTime>2015-11-24T12:50Z</CreationTime>
      <FinishedTime>2015-11-24T12:50Z</FinishedTime>
      <SupportCancel>true</SupportCancel>
      <TaskAction>IMPORT_IMAGE</TaskAction>
      <TaskStatus>Finished</TaskStatus>
      <TaskId>t-bp1hvgwromzv32iq****</TaskId>
    </Task>
    <Task>
      <CreationTime>2015-11-23T15:10Z</CreationTime>
      <FinishedTime>2015-11-23T15:16Z</FinishedTime>
      <SupportCancel>true</SupportCancel>
      <TaskAction>IMPORT_IMAGE</TaskAction>
      <TaskStatus>Finished</TaskStatus>
      <TaskId>t-bp179lofu2pv768w****</TaskId>
    </Task>
  </TaskSet>
</DescribeTasksResponse>
```

JSON format

```
{
  "PageNumber": 1,
  "TotalCount": 2,
  "PageSize": 2,
  "RegionId": "cn-hangzhou",
  "TaskSet": [
    {
      "Task": [
        {
          "CreationTime": "2015-11-24T12:50Z",
          "FinishedTime": "2015-11-24T12:50Z",
          "SupportCancel": true,
          "TaskAction": "ImportImage",
          "TaskStatus": "Finished",
          "TaskId": "t-bp1hvgwromzv32iq****"
        },
        {
          "CreationTime": "2015-11-23T15:10Z",
          "FinishedTime": "2015-11-23T15:16Z",
          "SupportCancel": true,
          "TaskAction": "ImportImage",
          "TaskStatus": "Finished",
          "TaskId": "t-bp179lofu2pv768w****"
        }
      ]
    }
  ],
  "RequestId": "F746C690-D9EA-4F87-AF31-8E1910FAB541"
}
```

Error codes

HTTP status code	Error code	Error message	Description
400	MissingParameter	An input parameter "RegionId" that is mandatory for processing the request is not supplied.	The error message returned because the required RegionId parameter is not specified.
400	InvalidRegionId.NotFound	The specified RegionId does not exist.	The error message returned because the specified RegionId parameter does not exist.

24.5. DescribeTaskAttribute

You can call this operation to query the details of an asynchronous task. You can query the asynchronous tasks generated by calling the ImportImage and ExportImage operations.

Debugging

OpenAPI Explorer automatically calculates the signature value. For your convenience, we recommend that you call this operation in OpenAPI Explorer. OpenAPI Explorer dynamically generates the sample code of the operation for different SDKs.

Request parameters

Parameter	Type	Required	Example	Description
Action	String	Yes	DescribeTaskAttribute	The operation that you want to perform. Set the value to DescribeTaskAttribute.
RegionId	String	Yes	cn-hangzhou	The ID of the region. You can call the DescribeRegions operation to query the most recent region list.
TaskId	String	Yes	t-ce946ntx4wr****	The ID of the task. You can call the DescribeTasks operation to query the list of task IDs.

Response parameters

Parameter	Type	Example	Description
CreationTime	String	2015-11-23T02:13Z	The time when the task was created.
FailedCount	Integer	0	The number of failed tasks.
FinishedTime	String	2015-11-23T02:19Z	The time when the task was completed.
OperationProgressSet	Array of OperationProgress		An array consisting of OperationProgress data of each subtask.
OperationProgress			
ErrorCode	String	ParameterInvalid	The error code.
ErrorMsg	String	The specified RegionId parameter is invalid.	The error message.
OperationStatus	String	Success	The status of the operation.
RelatedItemSet	Array of RelatedItem		An array consisting of RelatedItem data.
RelatedItem			
Name	String	OSSObject	The name of the related item.
Value	String	MYOSSPRE_m-23f8tcp***_t-23ym6mv***.vhd	The value of the related item.
RegionId	String	cn-hangzhou	The region ID of the image.
RequestId	String	473469C7-AA6F-4DC5-B3DB-A3DC0DE3C83E	The ID of the request.
SuccessCount	Integer	1	The number of completed tasks.

Parameter	Type	Example	Description
SupportCancel	String	true	Indicates whether the task can be canceled (CancelTask). Valid values: - true: The task can be canceled. - false: The task cannot be canceled.
TaskAction	String	ExportImage	The operation name of the task.
TaskId	String	t-ce946ntx4wr****	The ID of the task.
TaskProcess	String	100%	The progress of the task.
TaskStatus	String	Finished	The status of the task.
TotalCount	Integer	1	The total number of tasks.

Examples

Sample requests

```
https://ecs.aliyuncs.com/?Action=DescribeTaskAttribute
&RegionId=cn-hangzhou
&TaskId=t-ce946ntx4wr****
&<Common request parameters>
```

Sample success responses

XML format

```
<DescribeTaskAttributeResponse>
  <CreationTime>2015-11-23T02:13Z</CreationTime>
  <OperationProgressSet>
    <OperationProgress>
      <RelatedItemSet>
        <RelatedItem>
          <Name>OSSBucket</Name>
          <Value>image-temp</Value>
        </RelatedItem>
        <RelatedItem>
          <Name>OSSObject</Name>
          <Value>MYOSSPRE_m-23f8tcp***_t-23ym6mv***.vhd</Value>
        </RelatedItem>
        <RelatedItem>
          <Name>ImageFormat</Name>
          <Value>vhd</Value>
        </RelatedItem>
      </RelatedItemSet>
      <ErrorMsg></ErrorMsg>
      <ErrorCode></ErrorCode>
      <OperationStatus>Success</OperationStatus>
    </OperationProgress>
  </OperationProgressSet>
  <FinishedTime>2015-11-23T02:19Z</FinishedTime>
  <FailedCount>0</FailedCount>
  <SupportCancel>true</SupportCancel>
  <TotalCount>1</TotalCount>
  <SuccessCount>1</SuccessCount>
  <RequestId>EF0C5969-279B-49C8-AD83-BACCC74DD38C</RequestId>
  <RegionId>cn-hangzhou</RegionId>
  <TaskAction>ExportImage</TaskAction>
  <TaskStatus>Finished</TaskStatus>
  <TaskProcess>100%</TaskProcess>
  <TaskId>t-ce946ntx4wr****</TaskId>
</DescribeTaskAttributeResponse>
```

JSON format

```

{
  "CreationTime": "2015-11-23T02:13Z",
  "OperationProgressSet": {
    "OperationProgress": [
      {
        "RelatedItemSet": {
          "RelatedItem": [
            {
              "Name": "OSSBucket",
              "Value": "image-temp"
            },
            {
              "Name": "OSSObject",
              "Value": "MYOSSPRE_m-23f8tcp***_t-23ym6mv***.vhd"
            },
            {
              "Name": "ImageFormat",
              "Value": "vhd"
            }
          ]
        }
      }
    ],
    "ErrorMsg": "",
    "ErrorCode": "",
    "OperationStatus": "Success"
  }
},
"FinishedTime": "2015-11-23T02:19Z",
"FailedCount": 0,
"SupportCancel": true,
"TotalCount": 1,
"SuccessCount": 1,
"RequestId": "4BE2C7FE-C7A4-4675-A153-174E032AABFB",
"RegionId": "cn-hangzhou",
"TaskAction": "ExportImage",
"TaskStatus": "Finished",
"TaskProcess": "100%",
"TaskId": "t-ce946ntx4wr*****"
}

```

Error codes

HTTP status code	Error code	Error message	Description
400	InvalidRegionId.NotFound	The specified RegionId does not exist.	The error message returned because the specified RegionId parameter does not exist.
400	MissingParameter	An input parameter "RegionId" that is mandatory for processing the request is not supplied.	The error message returned because the required RegionId parameter is not specified.

HTTP status code	Error code	Error message	Description
400	MissingParameter	An input parameter "TaskId" that is mandatory for processing the request is not supplied.	The error message returned because the required TaskId parameter is not specified.
400	InvalidTaskId.NotFound	The specified "TaskId" is not found.	The error message returned because the specified TaskId parameter does not exist.

24.6. DescribeAccountAttributes

You can call this operation to query the quotas of ECS resources that you can create in an Alibaba Cloud region. The resources you can query include the numbers of security groups, ENIs, pay-as-you-go instance vCPUs, preemptible instance vCPUs, dedicated hosts, and capacity quotas of all pay-as-you-go disks. You can also query the information such as the network type or whether an account has passed the real-name verification.

Description

After you register for an Alibaba Cloud account, you can create a certain number of ECS resources in different regions. For more information, see [Limits](#).

You can also submit a ticket to raise the resource usage quota.

Debugging

OpenAPI Explorer automatically calculates the signature value. For your convenience, we recommend that you call this operation in OpenAPI Explorer. OpenAPI Explorer dynamically generates the sample code of the operation for different SDKs.

Request parameters

Parameter	Type	Required	Example	Description
Action	String	Yes	DescribeAccountAttributes	The operation that you want to perform. If you use a custom HTTP URL or HTTPS URL to make an API request, you must specify the parameter. Set the value to DescribeAccountAttributes.
RegionId	String	Yes	cn-hangzhou	The ID of the region. You can call the DescribeRegions operation to query the most recent region list.
ZoneId	String	No	cn-hangzhou-b	The ID of the zone.

Parameter	Type	Required	Example	Description
AttributeName.N	RepeatList	No	max-security-groups	The type of resource quota N to be queried in a specified region. Valid values of N: 1 to 8. Valid values: - instance-network-type: available network types - max-security-groups: the maximum number of security groups - max-elastic-network-interfaces: the maximum number of ENIs - max-postpaid-instance-vcpu-count: the maximum number of pay-as-you-go instance vCPUs - max-spot-instance-vcpu-count: the maximum number of preemptible instance vCPUs - used-postpaid-instance-vcpu-count: the number of pay-as-you-go instance vCPUs that have been used - used-spot-instance-vcpu-count: the number of preemptible instance vCPUs that have been used - max-postpaid-yundisk-capacity: the maximum capacity of pay-as-you-go data disks - used-postpaid-yundisk-capacity: the capacity of pay-as-you-go data disks that have been used - max-dedicated-hosts: the maximum number of dedicated hosts - supported-postpaid-instance-types: the instance types of pay-as-you-go I/O optimized instances - max-axt-command-count: the maximum number of Cloud Assistant scripts - max-axt-invocation-daily: the maximum number of Cloud Assistant scripts that can be run each day - real-name-authentication: whether the account has passed the real-name verification  Note You must pass the real-name verification before you create an ECS instance in mainland China regions. This parameter is empty by default.

Response parameters

Parameter	Type	Example	Description
AccountAttributeItems	Array		The collection of AccountAttributeItem information in the specified region.
AccountAttributeItem			

Parameter	Type	Example	Description
AttributeName	String	max-security-groups	The type of the resource quota in a specified region. Valid values: - instance-network-type: available network types - max-security-groups: the maximum number of security groups - max-elastic-network-interfaces: the maximum number of ENIs - max-postpaid-instance-vcpu-count: the maximum number of pay-as-you-go instance vCPUs - max-spot-instance-vcpu-count: the maximum number of preemptible instance vCPUs - used-postpaid-instance-vcpu-count: the number of pay-as-you-go instance vCPUs that have been used - used-spot-instance-vcpu-count: the number of preemptible instance vCPUs that have been used - max-postpaid-yundisk-capacity: the maximum capacity of pay-as-you-go data disks - used-postpaid-yundisk-capacity: the capacity of pay-as-you-go data disks that have been used - max-dedicated-hosts: the maximum number of dedicated hosts - supported-postpaid-instance-types: the instance types of pay-as-you-go I/O optimized instances - max-axt-command-count: the maximum number of Cloud Assistant scripts - max-axt-invocation-daily: the maximum number of Cloud Assistant scripts that can be run each day - real-name-authentication: whether the account has passed the real-name verification
AttributeValues	Array		The specific values of resource quotas.
ValueItem			
Count	Integer	3	The number of privilege attribute types.
DiskCategory	String	cloud_ssd	The category of the data disk. Valid values: - cloud_efficiency: ultra disks - cloud_ssd: standard SSDs - cloud_essd: enhanced SSDs
ExpiredTime	String	2019-01-01T12:30:00Z	The expiration time of a privilege. This parameter is only returned when an account privilege has an expiration time. The time follows the ISO 8601 standard in the yyyy-MM-ddTHH:mm:ssZ format. The time must be in UTC.
InstanceChargeType	String	PrePaid	The billing method of the instance.
InstanceType	String	ecs.g5.large	The instance type.

Parameter	Type	Example	Description
Value	String	800	The specific quota of the specified resource in the current region or all regions. Valid values: The returned values of the following parameters are 0 or positive integers: - max-security-groups - max-elastic-network-interfaces - max-postpaid-instance-vcpu-count - max-spot-instance-vcpu-count - used-postpaid-instance-vcpu-count - used-spot-instance-vcpu-count - max-postpaid-yundisk-capacity - used-postpaid-yundisk-capacity - max-dedicated-hosts - max-axt-command-count - max-axt-invocation-daily When the value of the AttributeName parameter is supported-postpaid-instance-types, an instance type is returned. For more information, see Instance families. When the value of the AttributeName parameter is real-name-authentication, yes, none, or unnecessary is returned. When the value of the AttributeName parameter is instance-network-type, vpc or classic is returned.
ZoneId	String	cn-hangzhou-b	The ID of the zone.
RequestId	String	473469C7-AA6F-4DC5-B3DB-A3DC0DE3C83E	The ID of the request.

Examples

Sample requests

```
https://ecs.aliyuncs.com/?Action=DescribeAccountAttributes
&RegionId=cn-hangzhou
&ZoneId=cn-hangzhou-b
&AttributeName.1=max-security-groups
&<Common request parameters>
```

Sample success responses

XML format

```
<DescribeAccountAttributesResponse>
  <AccountAttributeItems>
    <AccountAttributeItem>
      <AttributeValues>
        <ValueItem>
          <Value>100</Value>
        </ValueItem>
      </AttributeValues>
      <AttributeName>max-security-groups</AttributeName>
    </AccountAttributeItem>
```

```
<AccountAttributeItem>
  <AttributeValues>
    <ValueItem>
      <Value>2</Value>
    </ValueItem>
  </AttributeValues>
  <AttributeName>max-dedicated-hosts</AttributeName>
</AccountAttributeItem>
<AccountAttributeItem>
  <AttributeValues>
    <ValueItem>
      <Value>1000</Value>
    </ValueItem>
  </AttributeValues>
  <AttributeName>max-postpaid-instance-vcpu-count</AttributeName>
</AccountAttributeItem>
<AccountAttributeItem>
  <AttributeValues>
    <ValueItem>
      <Value>1000</Value>
    </ValueItem>
  </AttributeValues>
  <AttributeName>max-spot-instance-vcpu-count</AttributeName>
</AccountAttributeItem>
<AccountAttributeItem>
  <AttributeValues>
    <ValueItem>
      <Value>5000</Value>
    </ValueItem>
  </AttributeValues>
  <AttributeName>max-elastic-network-interfaces</AttributeName>
</AccountAttributeItem>
<AccountAttributeItem>
  <AttributeValues>
    <ValueItem>
      <Value>yes</Value>
    </ValueItem>
  </AttributeValues>
  <AttributeName>real-name-authentication</AttributeName>
</AccountAttributeItem>
<AccountAttributeItem>
  <AttributeValues>
    <ValueItem>
      <Value>vpc</Value>
    </ValueItem>
  </AttributeValues>
  <AttributeName>instance-network-type</AttributeName>
</AccountAttributeItem>
<AccountAttributeItem>
  <AttributeValues>
```



```

        <ValueItem>
            <Value>229376</Value>
            <DiskCategory>cloud_efficiency</DiskCategory>
        </ValueItem>
        <ValueItem>
            <Value>204800</Value>
            <DiskCategory>cloud_ssd</DiskCategory>
        </ValueItem>
        <ValueItem>
            <Value>204800</Value>
            <DiskCategory>cloud_essd</DiskCategory>
        </ValueItem>
    </AttributeValues>
    <AttributeName>max-postpaid-yundisk-capacity</AttributeName>
</AccountAttributeItem>
<AccountAttributeItem>
    <AttributeValues>
        <ValueItem>
            <Value>ecs.f3-c16f1.4xlarge</Value>
        </ValueItem>
        <ValueItem>
            <Value>ecs.g5.2xlarge</Value>
        </ValueItem>
    </AttributeValues>
    <AttributeName>supported-postpaid-instance-types</AttributeName>
</AccountAttributeItem>
</AccountAttributeItems>
<RequestId>8CE45CD5-31FB-47C2-959D-CA8144CE9F42</RequestId>
</DescribeAccountAttributesResponse>

```

JSON format

```

{
  "AccountAttributeItems": {
    "AccountAttributeItem": [
      {
        "AttributeValues": {
          "ValueItem": [
            {
              "Value": "100"
            }
          ]
        },
        "AttributeName": "max-security-groups"
      },
      {
        "AttributeValues": {
          "ValueItem": [
            {
              "Value": "2"
            }
          ]
        }
      }
    ]
  }
}

```

```
    }
  ]
},
"AttributeName": "max-dedicated-hosts"
},
{
  "AttributeValues": {
    "ValueItem": [
      {
        "Value": "1000"
      }
    ]
  },
  "AttributeName": "max-postpaid-instance-vcpu-count"
},
{
  "AttributeValues": {
    "ValueItem": [
      {
        "Value": "1000"
      }
    ]
  },
  "AttributeName": "max-spot-instance-vcpu-count"
},
{
  "AttributeValues": {
    "ValueItem": [
      {
        "Value": "5000"
      }
    ]
  },
  "AttributeName": "max-elastic-network-interfaces"
},
{
  "AttributeValues": {
    "ValueItem": [
      {
        "Value": "yes"
      }
    ]
  },
  "AttributeName": "real-name-authentication"
},
{
  "AttributeValues": {
    "ValueItem": [
      {
        "Value": "vpc"
      }
    ]
  }
}
```

```

    ],
    "AttributeName": "instance-network-type"
  },
  {
    "AttributeValues": {
      "ValueItem": [
        {
          "Value": "229376",
          "DiskCategory": "cloud_efficiency"
        },
        {
          "Value": "204800",
          "DiskCategory": "cloud_ssd"
        },
        {
          "Value": "204800",
          "DiskCategory": "cloud_essd"
        }
      ]
    }
  },
  {
    "AttributeName": "max-postpaid-yundisk-capacity"
  },
  {
    "AttributeValues": {
      "ValueItem": [
        {
          "Value": "ecs.f3-c16f1.4xlarge"
        },
        {
          "Value": "ecs.g5.2xlarge"
        }
      ]
    }
  },
  {
    "AttributeName": "supported-postpaid-instance-types"
  }
]
},
"RequestId": "8CE45CD5-31FB-47C2-959D-CA8144CE9F42"
}

```

Error codes

HTTP status code	Error code	Error message	Description
403	Invalid.Parameter	The required parameter regionId must be not null.	The error message returned because the RegionId parameter is not specified.

24.7. DescribePrice

You can call this operation to query the most recent prices of ECS resources. This operation is in internal preview.

Description

- The required parameters vary depending on the resource types whose prices you are querying.
 - When the `ResourceType` parameter is set to `instance`, you must specify the `InstanceType` parameter.
 - When the `ResourceType` parameter is set to `disk`, you must specify both the `DataDisk.1.Category` and `DataDisk.1.Size` parameters. When the `ResourceType` parameter is set to `disk`, only the pay-as-you-go price of the disk is returned. This means that the `PriceUnit` parameter can only be set to `Hour`.
 - When the `ResourceType` parameter is set to `bandwidth`, only the pay-by-traffic (`PayByTraffic`) price of the bandwidth is returned.
- When the `ResourceType` parameter is set to `instance`, you can query the prices of up to four data disks.

Debugging

OpenAPI Explorer automatically calculates the signature value. For your convenience, we recommend that you call this operation in OpenAPI Explorer. OpenAPI Explorer dynamically generates the sample code of the operation for different SDKs.

Request parameters

Parameter	Type	Required	Example	Description
Action	String	Yes	DescribePrice	The operation that you want to perform. Set the value to <code>DescribePrice</code> .
RegionId	String	Yes	cn-hangzhou	The ID of the region. You can call the DescribeRegions operation to query the most recent region list.
ResourceType	String	No	instance	The type of the resource. Valid values: <code>instance</code>: queries the most recent prices of ECS instances. When this parameter is set to <code>instance</code>, the <code>InstanceType</code> parameter must be specified. <code>disk</code>: queries the most recent prices of disks. When this parameter is set to <code>disk</code>, both the <code>DataDisk.1.Category</code> and <code>DataDisk.1.Size</code> parameters must be specified. <code>bandwidth</code>: queries the most recent price of the bandwidth. Default value: <code>instance</code>.
ImageId	String	No	centos_7_05_64_20G_alibase_20181212.vhd	The ID of the image used to create the instance. You can call the DescribeImages operation to view the available images. If you do not specify this parameter, the system queries the prices of Linux-based images by default.

Parameter	Type	Required	Example	Description
InstanceType	String	No	ecs.n1.tiny	The instance type. When the <code>ResourceType</code> parameter is set to <code>instance</code> , you must specify the <code>InstanceType</code> parameter. For more information, see Instance families or call the DescribeInstanceTypes operation to query the most recent instance type list.
IoOptimized	String	No	optimized	Specifies whether the instance is I/O optimized. Valid values: - none: The instance is not I/O optimized. - optimized: The instance is I/O optimized. If the instance type specified by the <code>InstanceType</code> parameter belongs to Generation I instance families , the default value is none. If the instance type specified by the <code>InstanceType</code> parameter does not belong to Generation I instance families , the default value is optimized.
InstanceNetworkType	String	No	vpc	The network type of the instance. Valid values: - classic - vpc Default value: vpc.
InternetChargeType	String	No	PayByTraffic	The billing method for network usage. Valid values: - PayByBandwidth - PayByTraffic Default value: PayByTraffic.
InternetMaxBandwidthOut	Integer	No	5	The maximum outbound bandwidth to the Internet. Unit: Mbit/s. Valid values: 0 to 100. Default value: 0.
SystemDisk.Category	String	No	cloud_ssd	The category of the system disk. Valid values: - cloud: basic disk - cloud_efficiency: ultra disk - cloud_ssd: standard SSD - ephemeral_ssd: local SSD - cloud_essd: enhanced SSD (ESSD) When the <code>InstanceType</code> parameter is set to one of the phased-out instance types and the <code>IoOptimized</code> parameter is set to none, the default value is cloud. For more information, see Phased-out instance types . In other cases, the default value is cloud_efficiency.

Parameter	Type	Required	Example	Description
SystemDisk.Size	Integer	No	80	The size of the system disk. Unit: GiB. Valid values: 20 to 500. The value of this parameter must be at least 20 and greater than or equal to the size of the image. The default value is 40 or the size of the image, depending on whichever is greater.
SystemDisk.PerformanceLevel	String	No	PL1	The performance level of the system disk when it is an ESSD. This parameter is valid only when the <code>SystemDiskCategory=cloud_essd</code> condition is met. Default value: PL1. Valid values: • PL1 • PL2 • PL3
DataDisk.1.Size	Integer	No	2000	The size of the first data disk. Unit: GiB. Valid values: • Valid values when DataDisk.1.Category is set to cloud: 5 to 2000 • Valid values when DataDisk.1.Category is set to cloud_efficiency: 20 to 32768 • Valid values when DataDisk.1.Category is set to cloud_ssd: 20 to 32768 • Valid values when DataDisk.1.Category is set to cloud_essd: 20 to 32768 • Valid values when DataDisk.1.Category is set to ephemeral_ssd: 5 to 800
DataDisk.1.Category	String	No	cloud_ssd	The category of the first data disk. Valid values: • cloud: basic disk • cloud_efficiency: ultra disk • cloud_ssd: standard SSD • ephemeral_ssd: local SSD • cloud_essd: ESSD
DataDisk.1.PerformanceLevel	String	No	PL1	The performance level of the first data disk when it is an ESSD. This parameter is valid only when the <code>DataDisk.1.Category=cloud_essd</code> condition is met. Default value: PL1. Valid values: • PL1 • PL2 • PL3

Parameter	Type	Required	Example	Description
DataDisk.2.Size	Integer	No	200	The size of the second data disk. Unit: GiB. Valid values: - Valid values when DataDisk.2.Category is set to cloud: 5 to 2000 - Valid values when DataDisk.2.Category is set to cloud_efficiency: 20 to 32768 - Valid values when DataDisk.2.Category is set to cloud_ssd: 20 to 32768 - Valid values when DataDisk.2.Category is set to cloud_essd: 20 to 32768 - Valid values when DataDisk.2.Category is set to ephemeral_ssd: 5 to 800
DataDisk.2.Category	String	No	cloud_ssd	The category of the second data disk. Valid values: - cloud: basic disk - cloud_efficiency: ultra disk - cloud_ssd: standard SSD - ephemeral_ssd: local SSD - cloud_essd: ESSD
DataDisk.2.PerformanceLevel	String	No	PL1	The performance level of the second data disk when it is an ESSD. This parameter is valid only when the <code>DataDisk.2.Category=cloud_essd</code> condition is met. Default value: PL1. Valid values: - PL1 - PL2 - PL3
DataDisk.3.Size	Integer	No	2000	The size of the third data disk. Unit: GiB. Valid values: - Valid values when DataDisk.3.Category is set to cloud: 5 to 2000 - Valid values when DataDisk.3.Category is set to cloud_efficiency: 20 to 32768 - Valid values when DataDisk.3.Category is set to cloud_ssd: 20 to 32768 - Valid values when DataDisk.3.Category is set to cloud_essd: 20 to 32768 - Valid values when DataDisk.3.Category is set to ephemeral_ssd: 5 to 800
DataDisk.3.Category	String	No	cloud_ssd	The category of the third data disk. Valid values: - cloud: basic disk - cloud_efficiency: ultra disk - cloud_ssd: standard SSD - ephemeral_ssd: local SSD - cloud_essd: ESSD

Parameter	Type	Required	Example	Description
DataDisk.3.PerformanceLevel	String	No	PL1	The performance level of the third data disk when it is an ESSD. This parameter is valid only when the <code>DataDisk.3.Category=cloud_essd</code> condition is met. Default value: PL1. Valid values: • PL1 • PL2 • PL3
DataDisk.4.Size	Integer	No	2000	The size of the fourth data disk. Unit: GiB. Valid values: • Valid values when DataDisk.4.Category is set to cloud: 5 to 2000 • Valid values when DataDisk.4.Category is set to cloud_efficiency: 20 to 32768 • Valid values when DataDisk.4.Category is set to cloud_essd: 20 to 32768 • Valid values when DataDisk.4.Category is set to cloud_essd: 20 to 32768 • Valid values when DataDisk.4.Category is set to ephemeral_essd: 5 to 800
DataDisk.4.Category	String	No	cloud_essd	The category of the fourth data disk. Valid values: • cloud: basic disk • cloud_efficiency: ultra disk • cloud_essd: standard SSD • ephemeral_essd: local SSD • cloud_essd: ESSD
DataDisk.4.PerformanceLevel	String	No	PL1	The performance level of the fourth data disk when it is an ESSD. This parameter is valid only when the <code>DataDisk.4.Category=cloud_essd</code> condition is met. Default value: PL1. Valid values: • PL1 • PL2 • PL3
Period	Integer	No	1	The billing duration of the ECS resource. The valid values for this parameter depend on the value specified by the PriceUnit parameter. Valid values: • Valid values when PriceUnit is set to Month: 1, 2, 3, 4, 5, 6, 7, 8, and 9. • Valid values when PriceUnit is set to Year: 1, 2, and 3. • Set the value to 1 when PriceUnit is set to Hour. Default value: 1.

Parameter	Type	Required	Example	Description
PriceUnit	String	No	Year	The pricing unit of the ECS resource. Default value: Hour. Valid values: - Month - Year - Hour
Amount	Integer	No	1	The number of ECS resources that you want to purchase. You can specify this parameter when you want to query the prices of multiple resources with certain specifications. Valid values: 1 to 1000. Default value: 1.

Response parameters

Parameter	Type	Example	Description
PriceInfo	Struct		The information about the price and discount rules.
Price	Struct		The price.
Currency	String	CNY	The currency unit.
DetailInfos	Array		The details about the price.
ResourcePriceModel			
DiscountPrice	Float	655.2	The discount.
OriginalPrice	Float	4368	The original price.
Resource	String	instance	The name of the resource.
SubRules	Array		A subset of pricing rules.
Rule			
Description	String	Receive a 15% discount on a 1-year subscription	The description of the rule subset.
RuleId	Long	587	The ID of the rule.
TradePrice	Float	3712.8	The transaction price.
DiscountPrice	Float	655.2	The discount.
OriginalPrice	Float	4368	The original price.

Parameter	Type	Example	Description
ReservedInstanceHourPrice	Float	111	
TradePrice	Float	3712.8	The transaction price, which is equal to the original price minus the discount.
Rules	Array		The promotion rules.
Rule			
Description	String	Receive a 15% discount on a 1-year subscription	The description of the promotion rule.
RuleId	Long	587	The ID of the rule.
RequestId	String	473469C7-AA6F-4DC5-B3DB-A3DC0DE3C83E	The ID of the request.

Examples

Sample requests

```
https://ecs.aliyuncs.com/?Action=DescribePrice
&RegionId=cn-hangzhou
&ResourceType=instance
&InstanceType=ecs.g5.large
&ImageId=centos_7_05_64_20G_alibase_20181212.vhd
&InstanceNetworkType=vpc
&InternetChargeType=PayByTraffic
&InternetMaxBandwidthOut=5
&<Common request parameters>
```

Sample success responses

XML format

```
<DescribePriceResponse>
  <RequestId>04F0F334-1335-436C-A1D7-6C044FE73368</RequestId>
  <PriceInfo>
    <Price>
      <Currency>CNY</Currency>
      <DiscountPrice>655.2</DiscountPrice>
      <OriginalPrice>4368</OriginalPrice>
      <TradePrice>3712.8</TradePrice>
    </Price>
    <Rules>
      <Rule>
        <Description> Receive a 15% discount on 1-year subscription</Description>
        <RuleId>ONE_YEAR_85_PERCENT</RuleId>
      </Rule>
    </Rules>
  </PriceInfo>
</DescribePriceResponse>
```

JSON format

```
{
  "RequestId": "04F0F334-1335-436C-A1D7-6C044FE73368",
  "PriceInfo": {
    "Price": {
      "Currency": "CNY",
      "DiscountPrice": 655.2,
      "OriginalPrice": 4368,
      "TradePrice": 3712.8
    },
    "Rules": {
      "Rule": [
        {
          "Description": "Receive a 15% discount on 1-year subscription",
          "RuleId": "ONE_YEAR_85_PERCENT"
        }
      ]
    }
  }
}
```

Error codes

HTTP status code	Error code	Error message	Description
400	InvalidInstanceType.ValueUnauthorized	The specified InstanceType is not authorized.	The error message returned because you are not authorized to use the specified instance type.

HTTP status code	Error code	Error message	Description
400	InvalidInstanceType.ValueNotSupported	The specified InstanceType does not exist or beyond the permitted range.	The error message returned because the specified InstanceType parameter does not exist or you are not authorized to manage instances of this instance type.
400	InvalidInternetChargeType.ValueNotSupported	The specified InternetChargeType is not valid.	The error message returned because the specified InternetChargeType parameter is invalid.
400	InvalidInternetMaxBandwidthOut.ValueNotSupported	The specified parameter "InternetMaxBandwidthOut" is not valid.	The error message returned because the specified InternetMaxBandwidthOut parameter is invalid.
400	InvalidSystemDiskCategory.ValueNotSupported	The specified parameter "SystemDisk.Category" is not valid.	The error message returned because the specified SystemDisk.Category parameter is invalid.
400	InvalidDataDiskSize.ValueNotSupported	The specified DataDisk.n.Size beyond the permitted range, or the capacity of snapshot exceeds the size limit of the specified disk category.	The error message returned because the specified value of the DataDisk.N.Size parameter or the snapshot capacity exceeds the maximum capacity that is allowed for the specified disk category.
400	InvalidDataDiskCategory.ValueNotSupported	The specified parameter "DataDisk.n.Category" is not valid.	The error message returned because the specified DataDisk.N.Category parameter is invalid.
400	InvalidParameter.Conflict	The specified image does not support the specified instance type.	The error message returned because the specified image cannot be used for the specified instance type.
403	ImageNotSubscribed	The specified image has not been subscribed.	The error message returned because you have not subscribed to the specified Alibaba Cloud Marketplace image.
403	OperationDenied	The specified image is disabled or is deleted.	The error message returned because the specified image is disabled or deleted.
403	InvalidSystemDiskCategory.ValueUnauthorized	The disk category is not authorized.	The error message returned because you are not authorized to use the specified disk category.
403	InstanceDiskCategoryLimitExceed	The total size of specified disk category in an instance exceeds.	The error message returned because the total size of the specified disks exceeds the maximum capacity that is allowed for the instance type.
403	ImageRemovedInMarket	The specified market image is not available, Or the specified user defined image includes product code because it is based on an image subscribed from marketplace, and that image in marketplace including exact the same product code has been removed.	The error message returned because the specified Alibaba Cloud Marketplace image is unavailable, or the specified custom image contains the product code of the Alibaba Cloud Marketplace image from which the custom image was created and the Alibaba Cloud Marketplace image has been removed from Alibaba Cloud Marketplace.

HTTP status code	Error code	Error message	Description
403	QuotaExceed.PortableCloudDisk	The quota of portable cloud disk exceeds.	The error message returned because the maximum number of removable disks has been reached.
500	InternalServerError	The request processing has failed due to some unknown error.	The error message returned because an internal error has occurred. Try again later. If the problem persists, submit a ticket.
400	InvalidNetworkType.Mismatch	Specified parameter "InternetChargeType" conflict with instance network type.	The error message returned because the network type of the instance does not support the specified billing method for network usage.
400	InvalidDiskCategory.Mismatch	The specified disk categories' combination is not supported.	The error message returned because the combination of specified disk categories is not supported.
403	Forbidden	User not authorized to operate on the specified resource.	The error message returned because you are not authorized to perform operations on the specified resource.
404	InvalidImageId.NotFound	The specified ImageId does not exist.	The error message returned because the specified image does not exist under this account. Check whether the image ID is correct.
403	InstanceDiskNumLimitExceed	The number of specified disk in an instance exceeds.	The error message returned because the maximum number of disks that can be attached to the instance has been reached.
403	IoOptimized.NotSupported	The specified image is not support IoOptimized Instance.	The error message returned because the specified image does not support I/O optimized instances.
403	ImageNotSupportInstanceType	The specified image don't support the InstanceType instance.	The error message returned because the specified image does not support this instance type.
400	InvalidIoOptimizedValue.ValueNotSupported	IoOptimized value not supported.	The error message returned because the specified IoOptimized parameter is invalid.
404	IoOptimized.NotSupported	The specified instancetype is not support IoOptimized instance	The error message returned because the specified instance type does not support I/O optimization.
403	InvalidDiskSize.TooSmall	Specified disk size is less than the size of snapshot	The error message returned because the specified disk size is less than the snapshot size.
403	OperationDenied	The type of the disk does not support the operation	The error message returned because the disk category does not support the specified operation.
404	InvalidInstanceChargeType.NotFound	The InstanceChargeType does not exist in our records	The error message returned because the specified InstanceChargeType parameter does not exist.
400	InvalidPeriod	The specified period is not valid.	The error message returned because the specified period is invalid.

HTTP status code	Error code	Error message	Description
403	InvalidDiskCategory.Mismatch	The specified disk categories combination is not supported.	The error message returned because the combination of specified disk categories is not supported.
400	InvalidDataDiskCategory.ValueNotSupported	The specified parameter "DataDisk.n.Category" is not valid.	The error message returned because the specified disk category is invalid.
400	InvalidSystemDiskCategory.ValueNotSupported	The specified parameter "SystemDisk.Category" is not valid.	The error message returned because the specified system disk category is invalid.
403	InvalidDiskCategory.NotSupported	The specified disk category is not support the specified instance type.	The error message returned because the specified disk category does not support the instance type.
403	InvalidDiskCategory.NotSupported	The upgrade operation of instance does not support this category of disk.	The error message returned because disks of the specified disk category cannot be upgraded when you upgrade the instance.
400	InstanceDiskCategoryLimitExceed	The specified DataDisk.n.Size beyond the permitted range, or the capacity of snapshot exceeds the size limit of the specified disk category.	The error message returned because the specified value of the DataDisk.N.Size parameter or the snapshot capacity exceeds the maximum capacity that is allowed for the specified disk category.
404	DependencyViolation.IoOptimized	The specified instancetype must be IoOptimized instance.	The error message returned because the specified instance type is not I/O optimized.
404	InvalidSystemDiskSize.LessThanImageSize	The specified parameter SystemDisk.Size is less than the image size.	The error message returned because the specified system disk size is less than that of the image.
404	InvalidSystemDiskSize.LessThanMinSize	The specified parameter SystemDisk.Size is less than the minimum size.	The error message returned because the specified system disk size is less than the lower limit.
404	InvalidSystemDiskSize.MoreThanMaxSize	The specified parameter SystemDisk.Size is more than the maximum size	The error message returned because the specified system disk size exceeds the upper limit.
400	InvalidInternetMaxBandwidthOut.ValueNotSupported	The specified vm bandwidth is not valid.	The error message returned because the specified virtual machine bandwidth is invalid.
400	InvalidSystemDiskCategory.ValueNotSupported	The specified parameter SystemDisk.Category is not valid.	The error message returned because the specified SystemDisk.Category parameter is invalid.
403	InvalidParameter.ResourceOwnerAccount	ResourceOwnerAccount is Invalid.	The error message returned because the specified ResourceOwnerAccount parameter is invalid.
403	RegionUnauthorized	There is no authority to create instance in the specified region.	The error message returned because you are not authorized to create instances in the specified region.
404	InvalidSystemDiskSize.ValueNotSupported	The specified parameter SystemDisk.Size is invalid.	The error message returned because the specified SystemDisk.Size parameter is invalid.

HTTP status code	Error code	Error message	Description
400	InvalidInternetMaxBandwidthOut.ValueNotSupported	The specified parameter Bandwidth is not valid.	The error message returned because the specified Bandwidth parameter is invalid.
400	InstanceDiskNumber.LimitExceed	The total number of specified disk in an instance exceeds.	The error message returned because the maximum number of disks that can be attached to the instance has been reached.
400	InvalidDiskCategory.ValueNotSupported	The specified parameter "DiskCategory" is not valid.	The error message returned because the specified disk category is invalid.
403	OperationDenied	The resource is out of usage.	The error message returned because the instance is not in the running state. Start the instance or check whether the operation is proper.
400	InvalidInternetMaxBandwidthOut.ValueNotSupported	%s	The error message returned because the specified InternetMaxBandwidthOut parameter is invalid.
400	InvalidDataDiskCategory.ValueNotSupported	%s	The error message returned because the specified data disk category is invalid.
400	InvalidSystemDiskCategory.ValueNotSupported	%s	The error message returned because the operation is not applicable to the specified system disk category.
400	InvalidParameter.Conflict	%s	The error message returned because the specified parameter is invalid. Check whether the parameter conflicts with another parameter.
400	InvalidInternetChargeType.ValueNotSupported	%s	The error message returned because the specified billing method for network usage is not supported. Check whether the parameter value is correct.
400	InvalidInstanceType.ValueNotSupported	%s	The error message returned because the operation is not applicable to the specified instance type.
403	InstanceType.Offline	%s	The error message returned because the instance type is phased out or instances of this instance type are insufficient.
400	RegionUnauthorized	%s	The error message returned because you are not authorized to create instances in the specified region.
500	InternalServerError	%s	The error message returned because an internal error has occurred.
400	InvalidSystemDiskSize.ValueNotSupported	%s	The error message returned because the operation is not applicable to the specified system disk size.
400	InvalidDataDiskSize.ValueNotSupported	%s	The error message returned because the specified data disk size is invalid.

HTTP status code	Error code	Error message	Description
404	InvalidInstanceType.Missing	The InstanceType parameter that is mandatory for processing the request is not provided.	The error message returned because the InstanceType parameter is not specified
404	InvalidNetworkType.ValueNotSupported	The specified parameter NetworkType is not valid.	The error message returned because the specified network type is invalid.
404	InvalidDiskCategory.Missing	The DataDisk.1.Category parameter that is mandatory for processing the request is not provided.	The error message returned because the DataDisk.1.Category parameter is not specified.
400	InvalidSystemDiskCategory.ValueNotSupported	The specified parameter "SystemDisk.Size" is not valid.	The error message returned because the specified SystemDisk.Size parameter is invalid.
400	InvalidSystemDiskSize.LessThanImageSize	The specified parameter "SystemDisk.Size" is less than the image size.	The error message returned because the specified system disk size is less than the image size.
400	InvalidDataDiskCategory.ValueNotSupported	The specified parameter "DataDisk.Category" is not valid.	The error message returned because the specified data disk category is invalid.
400	InvalidDataDiskSize.ValueNotSupported	The specified parameter "DataDisk.Size" is not valid.	The error message returned because the specified data disk size is invalid.
400	Throttling	Request was denied due to request throttling.	The error message returned because the request is denied due to throttling. Try again later.
400	PriceNotFound	The price of your queried resource is not available now, please try other resources.	The error message returned because the price of the resource cannot be queried. Try again later.
400	InvalidResourceType.ValueNotSupported	The specified parameter ResourceType is not valid.	The error message returned because the specified ResourceType parameter is invalid.
400	InvalidPriceUnit.ValueNotSupported	The specified parameter PriceUnit is not valid.	The error message returned because the specified PriceUnit parameter is invalid.
403	OperationDenied	The specified parameter InstanceNetworkType is not authorized.	The error message returned because you are not authorized to use the specified network type.
400	InvalidInternetMaxBandwidthOut.ValueNotSupported	The specified parameter InternetMaxBandwidthOut is not valid.	The error message returned because the specified InternetMaxBandwidthOut parameter is invalid.
403	InvalidAmount.Malformed	The specified parameter Amount is not valid.	The error message returned because the specified Amount parameter is invalid.
400	EncryptedOption.Conflict	%s	The error message returned because the parameter does not support encrypted disks.
404	Invalid.InstanceId.NotFound	The Instance provided does not exist.	The error message returned because the specified instance does not exist.
403	InvalidDiskSize.TooSmall	Specified system disk size is less than the size of image	The error message returned because the size of the specified system disk is less than that of this image.

HTTP status code	Error code	Error message	Description
404	InvalidMarketImage.NotFound	The specified marketplace image does not exist, please change the imageId and try again.	The error message returned because the specified Alibaba Cloud Marketplace image does not exist. Modify the parameter value and try again later.
400	IncorrectImageStatus	The specified marketplace image is not available.	The error message returned because the specified Alibaba Cloud Marketplace image is unavailable.
403	InvalidChargeType.MarketImage	The specified chargeType of marketplace image is invalid	The error message returned because the billing method for the Alibaba Cloud Marketplace image is not supported.
403	InvalidDiskIds.NotFound	Some of the specified disks do not exist.	The error message returned because the specified DiskId parameter does not exist.
403	InvalidDiskCategory.NotSupported	The specified disk category is not supported.	The error message returned because the specified disk category does not support the current operation.
403	PrePaidInstance.Expired	The prePaid instance has expired.	The error message returned because the subscription instance has expired.
404	InvalidDiskIds.NotPortable	The specified DiskId is not portable.	The error message returned because the specified disk is not removable.
404	InvalidSystemDisk.NotFound	The specified system disk does not exist.	The error message returned because the specified system disk does not exist.
404	InvalidResourceGroup.NotFound	The ResourceGroup provided does not exist in our records.	The error message returned because the specified resource group does not exist.

25. Appendix

25.1. Error code table

Client errors

For the remaining client errors, see the interface-specific error codes.

Server errors

Error code	Description	HTTP status code	Meaning
ServiceUnavailable	The request has failed due to a temporary failure of the server.	503	The service is unavailable.
InternalError	The request processing has failed due to some unknown error, exception or failure.	500	Internal error.

25.2. Instance states

This topic describes the possible states of ECS instances.

State	Description
Pending	The initial state of an ECS instance when you create the ECS instance through the ECS console or by calling RunInstances. Instances are only in the <i>pending</i> state during the creation process, and this state only lasts for a few seconds.  Note If the instance is being created by calling CreateInstance, you must then call StartInstance to manually change the instance state from <i>pending</i> to <i>starting</i>. If the instance is being created by calling RunInstances, the instance automatically enters the <i>starting</i> state.
Starting	The transient state when an instance is enabled through the ECS console or by calling StartInstance .
Running	The stable state after an instance is enabled through the ECS console or by calling StartInstance . The instance owner can use, manage, and modify business and applications on an instance when the instance is in this state.
Stopping	The transient state when an instance is stopped through the ECS console or by calling StopInstance .
Stopped	The stable state after an instance has been stopped.

25.3. Instance status chart

□

25.4. Basic cloud disk status table

Code	Description
In_use	In use
Available	Available to be attached
Attaching	Attaching
Detaching	Detaching
Creating	Creating

Code	Description
Deleting	Deleting
Deleted	Deleted
ReIniting	Initializing

The disks in `Deleting` or `Deleted` status cannot be queried using `DescribeDisks`. These two statuses are internal statuses.

25.5. Cloud disk status chart

□

25.6. ISO 8601 Time Format

ISO 8601 Data elements and interchange formats - Information interchange - Representation of dates and times is an international standard covering the exchange of date and time-related data. It was issued by the International Organization for Standardization (ISO). For more information, see [ISO8601](#).

25.7. Disk category

See the following table for the disks provided by ECS.

Name	Code	Maximum capacity per disk (GiB)	Volume limit per instance	Maximum capacity of disks allowed per instance (GiB)
Basic disk	cloud	2000	17	2000 * 17
Ultra disk	cloud_efficiency	32768	17	32768 * 17
Standard SSD	cloud_ssd	32768	17	32768 * 17
Enhanced SSD (ESSD)	essd	32768	17	32768 * 17

For more information, see [Block storage performance](#).

25.8. API behavior for accounts with overdue payment

When payment is overdue, the `OperationLocks` in the outgoing parameters returned by the `DescribeInstances` or `DescribeDisks` will include `LockReason: financial`.

API request consequence with overdue payment

In the following tables, "Normal Logic" indicates that the interface is executed and result returned based on the normal logic of the interface.

Instance with overdue payment

Actions	Disk Payment Overdue	Disk Normal
<code>AllocatePublicIpAddress</code>	Error	Error
<code>AttachDisk</code>	Error	Normal logic
<code>AuthorizeSecurityGroup</code>	Normal logic	Normal logic
<code>CreateDisk</code>	Error	Normal logic

Actions	Disk Payment Overdue	Disk Normal
CreateImage	Normal logic	Normal logic
CreateInstance	Error	Error
CreateSecurityGroup	Normal logic	Normal logic
CreateSnapshot	Normal logic	Normal logic
DeleteDisk	Normal logic	Normal logic
DeleteImage	Normal logic	Normal logic
DeleteInstance	Normal logic	Normal logic
DeleteSecurityGroup	Normal logic	Normal logic
DeleteSnapshot	Normal logic	Normal logic
DescribeAutoSnapshotPolicy	Normal logic	Normal logic
DescribeDisks	Normal logic	Normal logic
DescribeImages	Normal logic	Normal logic
DescribeInstanceStatus	Normal logic	Normal logic
DescribeInstanceTypes	Normal logic	Normal logic
DescribeInstanceMonitorData	Normal logic	Normal logic
DescribeRegions	Normal logic	Normal logic
DescribeSecurityGroupAttribute	Normal logic	Normal logic
DescribeSecurityGroups	Normal logic	Normal logic
DescribeSnapshotAttribute	Normal logic	Normal logic
DescribeSnapshots	Normal logic	Normal logic
DescribeZones	Normal logic	Normal logic
DetachDisk	Normal logic	Normal logic
JoinSecurityGroup	Normal logic	Normal logic
LeaveSecurityGroup	Normal logic	Normal logic
ModifyAutoSnapshotPolicy	Normal logic	Normal logic
ModifyDiskAttribute	Normal logic	Normal logic
ModifyInstanceAttribute	Normal logic	Normal logic
RebootInstance	-	-
ReInitDisk	Error	Error
ReplaceSystemDisk	Error	Error
ResetDisk	Error	Error
RevokeSecurityGroup	Normal logic	Normal logic
StartInstance	Error	Error

Actions	Disk Payment Overdue	Disk Normal
StopInstance	-	-

Disk with overdue payment

Actions	Instance Payment Overdue	Instance Normal
AllocatePublicIpAddress	Error	Normal logic
AttachDisk	Error	Error
AuthorizeSecurityGroup	Normal logic	Normal logic
CreateDisk	Error	Error
CreateImage	Normal logic	Normal logic
CreateInstance	Error	Normal logic
CreateSecurityGroup	Normal logic	Normal logic
CreateSnapshot	Normal logic	Normal logic
DeleteDisk	Normal logic	Normal logic
DeleteImage	Normal logic	Normal logic
DeleteInstance	Normal logic	Normal logic
DeleteSecurityGroup	Normal logic	Normal logic
DeleteSnapshot	Normal logic	Normal logic
DescribeAutoSnapshotPolicy	Normal logic	Normal logic
DescribeDisks	Normal logic	Normal logic
DescribeImages	Normal logic	Normal logic
DescribeInstanceStatus	Normal logic	Normal logic
DescribeInstanceMonitorData	Normal logic	Normal logic
DescribeRegions	Normal logic	Normal logic
DescribeSecurityGroupAttribute	Normal logic	Normal logic
DescribeSecurityGroups	Normal logic	Normal logic
DescribeSnapshotAttribute	Normal logic	Normal logic
DescribeSnapshots	Normal logic	Normal logic
DescribeZones	Normal logic	Normal logic
DetachDisk	Normal logic	Normal logic
JoinSecurityGroup	Normal logic	Normal logic
LeaveSecurityGroup	Normal logic	Normal logic
ModifyAutoSnapshotPolicy	Normal logic	Normal logic
ModifyDiskAttribute	Normal logic	Normal logic

Actions	Instance Payment Overdue	Instance Normal
ModifyInstanceAttribute	Error	Normal logic
ModifyInstanceSpec	Error	Normal logic
RebootInstance	-	-
ReInitDisk	Error	Normal logic
ReplaceSystemDisk	Error	Normal logic
ResetDisk	Error	Error
RevokeSecurityGroup	Normal logic	Normal logic
StartInstance	Error	Normal logic
StopInstance	-	-

25.9. API behavior when an instance is locked for security reasons

This topic provides the API request consequence when your resource is frozen due to security concerns.

API request consequence

When a security lock is indicated, the `OperationLocks` in the outgoing parameters returned by the `DescribeInstances` will include `LockReason:security`.

 **Note** Disk-related activities in the `In_use` status reference the instance `OperationLocks`. Otherwise, the instance `OperationLocks` may be ignored.

In the following table, "Normal Logic" indicates that the interface is executed and result returned based on the normal logic of the interface.

Interface	Behavior
AllocatePublicIpAddress	Error
AttachDisk	Error
AuthorizeSecurityGroup	Normal logic
CreateDisk	Normal logic
CreateImage	Normal logic
CreateInstance	Normal logic
CreateSecurityGroup	Normal logic
CreateSnapshot	Error (Only for disks attached on this instance in the <code>In_use</code> status)
DeleteDisk	Normal logic
DeleteImage	Normal logic
DeleteInstance	Normal logic
DeleteSecurityGroup	Normal logic

Interface	Behavior
DeleteSnapshot	Normal logic
DescribeAutoSnapshotPolicy	Normal logic
DescribeDisks	Normal logic
DescribeImages	Normal logic
DescribeInstanceStatus	Normal logic
DescribeInstanceTypes	Normal logic
DescribeInstanceMonitorData	Normal logic
DescribeRegions	Normal logic
DescribeSecurityGroupAttribute	Normal logic
DescribeSecurityGroups	Normal logic
DescribeSnapshotAttribute	Normal logic
DescribeSnapshots	Normal logic
DescribeZones	Normal logic
DetachDisk	Error
JoinSecurityGroup	Error
LeaveSecurityGroup	Error
ModifyAutoSnapshotPolicy	Normal logic
ModifyDiskAttribute	Normal logic
ModifyInstanceAttribute	Error
RebootInstance	Error
ReInitDisk	- When the disk is in the <code>In_use</code> : - When the disk is in the other status: Normal Logic
ReplaceSystemDisk	Normal logic
ResetDisk	Error
RevokeSecurityGroup	Normal logic
StartInstance	Error
StopInstance	Error

25.10. How to ensure idempotence

If a request timeout or internal server error is encountered when calling the `CreateInstance` interface to create an ECS in the ECS, the client might try to resend the request. At this time, the client can prevent the server from creating more instances than expected by providing the optional `ClientToken` parameter. Providing the `ClientToken` parameter will also ensure the idempotence of the request. `ClientToken` is a unique, case sensitive string generated by the client that cannot exceed 64 ASCII characters.

If a user uses the same `ClientToken` value to call the `CreateInstance` interface, the server will return identical request results, including the same `InstanceId`. Therefore, when the user encounters an error and tries again, providing the same `ClientToken` value can ensure that the ECS creates only one instance and obtains this `InstanceId`.

If the user provides a `ClientToken` that has already been used, but with different request parameters, the ECS will return the `IdempotentParameterMismatch` error code. However, you must note that the `SignatureNonce`, `Timestamp`, and `Signature` parameters must be changed when trying to submit the request again. Because the ECS uses `SignatureNonce` to prevent replay attacks and `Timestamp` to mark the time of each request, the duplicate request must provide different `SignatureNonce` and `Timestamp` parameter values. This will also produce a different `Signature` value.

Generally, clients will only need to retry an operation if they encounter a 500 (`InternalServerError`) or (`ServiceUnavailable`) error or cannot receive a response. When 200 is returned, retrying the operation will give you the same results as the last time, but will not have any effect on the server status. When a 4xx error code is returned, unless the message explicitly indicates "try it later", retrying the operation will usually not be successful.

25.11. Call API operations over the internal network

You cannot call API operations on VPC-type ECS instances that do not have public IP addresses. This topic describes how to call API operations on VPC-type ECS instances over the Alibaba Cloud internal network.

Background information

ECS provides public endpoints. If your ECS instance does not have a public bandwidth or a public IP address, you cannot make API requests for the instance by using tools such as Alibaba Cloud CLI or SDKs. You can use one of the following methods to call API operations over the Alibaba Cloud internal network:

- Use the SDK core library version 4.5.3 or later to call API operations over the internal network in a VPC.
- Configure `PrivateZone` to associate the VPC with the region where your ECS instance is deployed to call API operations over the Alibaba Cloud internal network.

Take note of the following items:

- These methods are applicable only in regions where VPC-type ECS instances are deployed. The endpoint of a region can be used to manage only resources within that region. Cross-region operations are not supported.
- We recommend that you use custom images that have Alibaba Cloud CLI or SDKs deployed to create ECS instances. Otherwise, the ECS instances cannot load related dependencies without public network access.

Method 1 (recommended): Use SDKs to call API operations over the internal network

The following table describes the endpoints over which you can use SDKs to call API operations. Make sure that you use an endpoint listed in the table.

Alibaba Cloud region	Region ID	Endpoint
China (Hangzhou)	cn-hangzhou	ecs-vpc.cn-hangzhou.aliyuncs.com
China (Shanghai)	cn-shanghai	ecs-vpc.cn-shanghai.aliyuncs.com
China (Qingdao)	cn-qingdao	ecs-vpc.cn-qingdao.aliyuncs.com
China (Beijing)	cn-beijing	ecs-vpc.cn-beijing.aliyuncs.com
China (Zhangjiakou-Beijing Winter Olympics)	cn-zhangjiakou	ecs-vpc.cn-zhangjiakou.aliyuncs.com
China (Hohhot)	cn-huhehaote	ecs-vpc.cn-huhehaote.aliyuncs.com
China (Ulanqab)	cn-wulanchabu	ecs-vpc.cn-wulanchabu.aliyuncs.com
China (Shenzhen)	cn-shenzhen	ecs-vpc.cn-shenzhen.aliyuncs.com
China (Heyuan)	cn-heyuan	ecs-vpc.cn-heyuan.aliyuncs.com
China (Chengdu)	cn-chengdu	ecs-vpc.cn-chengdu.aliyuncs.com

Alibaba Cloud region	Region ID	Endpoint
China (Hong Kong)	cn-hongkong	ecs-vpc.cn-hongkong.aliyuncs.com
Singapore (Singapore)	ap-southeast-1	ecs-vpc.ap-southeast-1.aliyuncs.com
Australia (Sydney)	ap-southeast-2	ecs-vpc.ap-southeast-2.aliyuncs.com
Malaysia (Kuala Lumpur)	ap-southeast-3	ecs-vpc.ap-southeast-3.aliyuncs.com
Indonesia (Jakarta)	ap-southeast-5	ecs-vpc.ap-southeast-5.aliyuncs.com
Japan (Tokyo)	ap-northeast-1	ecs-vpc.ap-northeast-1.aliyuncs.com
Germany (Frankfurt)	eu-central-1	ecs-vpc.eu-central-1.aliyuncs.com
UK (London)	eu-west-1	ecs-vpc.eu-west-1.aliyuncs.com
US (Silicon Valley)	us-west-1	ecs-vpc.us-west-1.aliyuncs.com
US (Virginia)	us-east-1	ecs-vpc.us-east-1.aliyuncs.com
India (Mumbai)	ap-south-1	ecs-vpc.ap-south-1.aliyuncs.com
UAE (Dubai)	me-east-1	ecs-vpc.me-east-1.aliyuncs.com

Simple configurations are required when you use SDKs to call API operations over the internal network. The following code provides an example on how to use SDK for Java to call an API operation over the internal network.

```
DefaultProfile profile = DefaultProfile.getProfile("<RegionId>", "<AccessKeyId>", "<AccessKeySecret>");
IAcsClient client = new DefaultAcsClient(profile);

// Make global configurations. <product> refers to the service. For example, you can enter Ecs for ECS.
DefaultProfile.addEndpoint("<RegionId>", "<product>", "<Endpoint>");

// Make configurations for the request. For example, when you call the DescribeRegions operation, you can make the following configurations:
DescribeRegionsRequest regionsRequest = new DescribeRegionsRequest();
// If you set the productNetwork parameter, you do not need to set SysEndpoint.
regionsRequest.setSysEndpoint("<Endpoint>");
// Configure the network. Valid values of productNetwork: vpc and public.
// Set the parameter to vpc when you call the operation over the internal network. Set the parameter to public when you call the operation over the Internet. public is the default value.
regionsRequest.productNetwork = "vpc";
DescribeRegionsResponse regionsResponse = client.getAcsResponse(regionsRequest);
```

Method 2: Configure PrivateZone

The following table describes the endpoints that support PrivateZone. Make sure that you use an endpoint listed in the table.

Alibaba Cloud region	Region ID	CNAME record value	Internet endpoint
China (Beijing)	cn-beijing	popunify-vpc.cn-beijing.aliyuncs.com	ecs.cn-beijing.aliyuncs.com
China (Hangzhou)	cn-hangzhou	popunify-vpc.cn-hangzhou.aliyuncs.com	ecs.cn-hangzhou.aliyuncs.com
China (Shanghai)	cn-shanghai	popunify-vpc.cn-shanghai.aliyuncs.com	ecs.cn-shanghai.aliyuncs.com

Alibaba Cloud region	Region ID	CNAME record value	Internet endpoint
China (Shenzhen)	cn-shenzhen	popunify-vpc.cn-shenzhen.aliyuncs.com	ecs.cn-shenzhen.aliyuncs.com
China (Hohhot)	cn-huhehaote	popunify-vpc.cn-huhehaote.aliyuncs.com	ecs.cn-huhehaote.aliyuncs.com
China (Zhangjiakou-Beijing Winter Olympics)	cn-zhangjiakou	popunify-vpc.cn-zhangjiakou.aliyuncs.com	ecs.cn-zhangjiakou.aliyuncs.com
China (Hong Kong)	cn-hongkong	popunify-vpc.cn-hongkong.aliyuncs.com	ecs.cn-hongkong.aliyuncs.com
Singapore (Singapore)	ap-southeast-1	popunify-vpc.ap-southeast-1.aliyuncs.com	ecs.ap-southeast-1.aliyuncs.com
Germany (Frankfurt)	eu-central-1	popunify-vpc.eu-central-1.aliyuncs.com	ecs.eu-central-1.aliyuncs.com

Procedure:

1. Log on to the [Alibaba Cloud DNS console](#).
2. In the left-side navigation pane, click **PrivateZone**.
3. On the PrivateZone page, click **Add Zone**.
4. In the **Add PrivateZone** dialog box, set the following parameters, and then click **OK**.
 - **Zone Name:** Enter an ECS endpoint that supports PrivateZone. In this example, enter *ecs.cn-hangzhou.aliyuncs.com*.
 - **Subdomain recursive resolution proxy:** If you select this option, the name resolved on the Internet is used when DNS detects a domain name suffixed by Zone that is not included in the Zone file.
5. Find the created private zone, and click **Configure** in the **Actions** column.
6. On the **Resolution Settings** page, click **Add Record**.
7. In the **Add Record** dialog box, configure the following parameters, and then click **OK**.
 - **Record Type:** Select **CNAME**.
 - **Resource Records:** Enter **@** to resolve the **@.example.com** domain name.
 - **Record Value:** Enter the CNAME record value of the corresponding region. For more information, see the table in the "Method 2: Configure PrivateZone" section of this topic.
 - **TTL Value:** The time to live value. In this example, select **1 minute(s)**.
8. Go back to the **PrivateZone** page. Find the created private zone, and click **Bind VPC** in the **Actions** column.
9. In the **Bind VPC** pane, select the same region as the created private zone. Select one or more VPCs to which your ECS instance belongs. Then, click **Confirm**.

 **Note** Select the VPC to which your ECS instance belongs.

After you associate the VPC with the created private zone, you can log on to your ECS instance to check whether the instance can access the endpoint of the corresponding region. For more information, see [Connect to a Linux instance by using VNC](#). For example, if the endpoint is *ecs.cn-hangzhou.aliyuncs.com*, you can:

- Run a ping command to check whether data packets can be properly transmitted and received.

```
ping ecs.cn-hangzhou.aliyuncs.com
```

- Use Alibaba Cloud CLI to call the [DescribeRegions](#) operation, and set the value of **--endpoint** to the example endpoint.

```
aliyun ecs DescribeRegions --endpoint ecs.cn-hangzhou.aliyuncs.com
```

25.12. Why only ten entries are returned for query request by using APIs or SDK

For some APIs query request, where returns a large amount of information, the returned data is usually displayed in pages for readability. Take the `DescribeImages` as an example, if 39 entries are returned, the result is displayed on four pages by default, with 10 entries on each page. Thus, the returned data looks incomplete.

Cause analysis

For example, when you query the available official public images in the region of Asia Pacific SE 1 (Singapore) by `DescribeImages`, if 39 entries of data is returned, the result in `TotalCount` is split into four pages by default. You can add the parameter `PageSize` in your request, and set it to a value greater than 39. If Java SDK is used, `PageSize` can be set to a value greater than 39 by the `setPageSize` method in the Request object. Then the data about 39 images is returned once.

To display more data, you can add the `PageSize` and `PageNumber` parameters in your query request according to the following table.

Parameter	Type	Required	Description
PageNumber	Integer	No	Page number of the resource status list. Initial value: 1. Default value: 1.
PageSize	Integer	No	Number of query entries on each page, configured during pagination query. Maximum value: 100. Default value: 10.

Default display setting sample in Java SDK

By default, the value of `PageSize` is 10. If the value of `PageSize` is not added in a request, null is returned by `getPageSize`. The API server sets `PageSize` to 10 by default.

See the following Java SDK snippet for example:

```
DescribeImagesRequest describe = new DescribeImagesRequest();
//describe.setPageSize();//By default value of PageSize is 10.
describe.setRegionId("cn-hangzhou");
describe.setImageOwnerAlias("system");
System.out.println("PageSize of the current request:"+describe.getPageSize());
DescribeImagesResponse response
    = client.getAcsResponse(describe);

System.out.println("Total number of images:"+response.getTotalCount());
System.out.println("Number of images in the returned response="+response.getImages().size());
```

Customize the display setting in Java SDK

In this sample, we use the `setPageSize()` method in Java SDK to `PageSize` to 50. Then, all images are returned at a time.

See the following Java SDK snippet for example:

```
DescribeImagesRequest describe = new DescribeImagesRequest();
describe.setPageSize(50); // Here in the Request, the value of PageSize is set to 50 by the setPageSize() method.
describe.setRegionId("cn-hangzhou");
describe.setImageOwnerAlias("system");
System.out.println("PageSize of the current request:" + describe.getPageSize());
try {
    DescribeImagesResponse response
        = client.getAcsResponse(describe);

    System.out.println("Total number of images:" + response.getTotalCount());
    System.out.println("Number of images in the returned response=" + response.getImages().size());
}
```

 **Note** The maximum value of `PageSize` is `100`. If the query result includes more than 100 entries of data, the data on the last few pages must be obtained by `PageNumber`, namely, multiple requests are submitted to obtain all the returned data, with `PageNumber` setting to 1, 2, 3...respectively. You can also specify the value of `PageNumber` in your request by `setPageNumber()`.

26.API FAQ

- [What is ECS API?](#)
- [Error code InvalidDataDiskCategory.NotSupported is returned when I try to create an ECS instance. What can I do?](#)
- [How can I create an ECS instance that is assigned a public IP address?](#)
- [I have created an ECS instance by using an ECS API operation. Why can't the public IP address of the instance be pinged?](#)
- [The error message "The specified IP is already in use." is returned when I use an ECS API operation to bind a public IP address to my instance. What can I do?](#)
- [When I modify the public bandwidth configurations of my instance by using an ECS API operation, can I specify an effective period of time for the new bandwidth configurations?](#)
- [Why can't all the security group rules in a security group be displayed when I use an ECS API operation or ECS SDK to query the details of the security group?](#)
- [Why does a query made by using the ECS API, ECS SDK, or Alibaba Cloud CLI return only ten entries?](#)

What is ECS API?

ECS API is an open-source remote procedure call (RPC) API that provides API services to Alibaba Cloud users. You can use this API to manage and use ECS instances. The following figure shows the path along which a request is forwarded to call an API. For more information about how to use the ECS API, see [Quick start](#).

Error code InvalidDataDiskCategory.NotSupported is returned when I try to create an ECS instance. What can I do?

- Problem description: After you call the [RunInstances](#) operation to create an ECS instance, the following error information is returned:

```
{
  "Code": "InvalidDataDiskCategory.NotSupported",
  "Message": "Specified disk category is not supported."
}
```

- Cause: The error occurred because disks of the specified category cannot be created in the specified zone.
- Solution: We recommend that you call the [DescribeAvailableResource](#) operation to view the resources available in the zone where you want to create the ECS instance and ensure that there are sufficient resources in that zone. You can also change the value of ZoneId and try again.

```
aliyun ecs RunInstances --ImageId win2008_64_ent_r2_cn_40G_alibase_20150429.vhd --InstanceType ecs.g5.large --SecurityGroupIds <TheSecurityGroupId> --SystemDiskCategory cloud_efficiency --ZoneId cn-hangzhou-c
```

How can I create an ECS instance that is assigned a public IP address?

- Method 1: Call the [RunInstances](#) operation with InternetMaxBandwidthOut set to a value greater than 0 to create an ECS instance. The new ECS instance is automatically assigned a public IP address.
- Method 2: Call the [CreateInstance](#) operation to create an ECS instance. Then call the [AllocatePublicIpAddress](#) operation to assign a public IP address to the instance.

I have created an ECS instance by using an ECS API operation. Why can't the public IP address of the instance be pinged?

- Problem description: The new ECS instance that you created by using an ECS API operation cannot connect to the public network, and the public IP address of the instance cannot be pinged.
- Cause: You have not added a security group rule to allow the public network to access the instance.
- Solution: Call the [AuthorizeSecurityGroup](#) operation to add an inbound rule to the security group to which the instance belongs to allow the public network to access the instance. For example, you can send the following request where IpProtocol is set to ICMP to call the AuthorizeSecurityGroup operation and add an inbound rule that allows the public IP address of this instance to be pinged from any other IP addresses:

```
https://ecs.aliyuncs.com/?Action=AuthorizeSecurityGroup
&SecurityGroupId=sg-bp15ed6xe1yxeycg7***
&SourceCidrIp=0.0.0.0/0
&IpProtocol=ICMP
&PortRange=-1/-1
&<Common request parameters>
```

The error message "The specified IP is already in use." is returned when I use an ECS API operation to bind a public IP address to my instance. What can I do?

- Problem description: When you call the [AllocatePublicIpAddress](#) operation to assign the public IP address specified by `IpAddress` to your ECS instance, the following error information is returned:

```
{
  "Code": "IpInUse",
  "Message": "The specified IP is already in use."
}
```

- Cause: The specified IP address is already in use.
- Solution: Check whether the IP address is already in use. If yes, try another IP address.

When I modify the public bandwidth configurations of my instance by using an ECS API operation, can I specify an effective period of time for the new bandwidth configurations?

You can call the [ModifyInstanceNetworkSpec](#) operation to modify the public bandwidth configurations of your ECS instance. The new bandwidth configurations take effect on the instance immediately after the modification is completed. If you only want to temporarily modify the bandwidth configurations of your instance, set `StartTime` and `EndTime` to define an effective period of time.

If you are using an Elastic IP Address, you can call the [ModifyEipAddressAttribute](#) operation to make the modification but you cannot specify an effective period of time.

Why can't all the security group rules in a security group be displayed when I use an ECS API operation or ECS SDK to query the details of the security group?

Security group rules can be distinguished by their NIC types, public NIC (*internet*) and internal NIC (*intranet*). When you call the [DescribeSecurityGroupAttribute](#) operation to query the details of a security group, the `NicType` parameter is not required. However, if this parameter is not specified, the default value *internet* is used. Therefore, when you run the following CLI command to call the [DescribeSecurityGroupAttribute](#) operation, only the public security group rules, not all security group rules, in the queried security group are displayed:

```
aliyun ecs DescribeSecurityGroupAttribute --SecurityGroupId <TheSecurityGroupId> --RegionId <TheRegionId>
```

If you want to view the internal security group rules in a security group (such as internal security group rules that allow access across internal networks or that are configured for the VPN firewall of Finance Cloud), run the following command with `NicType` set to *intranet*:

```
aliyun ecs DescribeSecurityGroupAttribute --SecurityGroupId <TheSecurityGroupId> --RegionId <TheRegionId> --NicType intranet
```

Why does a query made by using the ECS API, ECS SDK, or Alibaba Cloud CLI return only ten entries?

For details, see [Why only ten entries are returned for query request by using APIs or SDK](#).