

Alibaba Cloud

Resource Orchestration Service API Reference

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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. List of API operations by function

The following tables list the API operations available for use in Resource Orchestration Service (ROS).

Stack operations

You can define a template for resources in a stack and their dependencies and use the template to create stacks. After the stacks are created, you can query, update, or delete the stacks.

API	Description
PreviewStack	Previews the stack to be created by using a specified template.
CreateStack	Creates a stack.
ContinueCreateStack	Creates another stack based on the template of the previous stack that failed.
SetDeletionProtection	Configures deletion protection on a stack.
UpdateStack	Updates a stack.
CancelUpdateStack	Cancels the update of a stack.
GetStack	Queries the information of a stack.
ListStacks	Queries the list of stacks.
ListStackEvents	Queries stacks and their resource events.
ListStackOperationRisks	Detects resources that may face high risks caused by a stack deletion operation, and queries the reason for each risk.
DeleteStack	Deletes a stack and all of its resources.

Resource operations

ROS allows you to manage a variety of resources. You can query resource templates by resource type or query details of resource types or resources in a specified stack to obtain the information of resources in ROS.

For more information about the resource types supported by ROS, see [资源类型索引](#).

API	Description
GetResourceTypeTemplate	Queries the template of a resource by resource type.
ListStackResources	Queries the resource list of a specified stack.
GetStackResource	Queries information about a resource in a specified stack.

API	Description
GetResourceType	Queries the details of resource types.
ListResourceTypes	Queries the list of supported resource types.
MoveResourceGroup	Moves a resource to a specific resource group.

Scenario operations

ROS provides the scenario feature to facilitate resource management. You can add resources to a scenario in the console and perform operations such as replication and centralized management on the resources.

API	Description
CreateTemplateScratch	Creates a scenario.
UpdateTemplateScratch	Updates a scenario.
ListTemplateScratches	Queries the list of scenarios.
GetTemplateScratch	Queries the information of a scenario.
DeleteTemplateScratch	Deletes a scenario.
GenerateTemplateByScratch	Generates a scenario template.

Template operations

A template is a JSON or YAML text file that defines resources in a stack and their dependencies and can be used to create stacks. For example, you can call the [CreateTemplate](#) operation to create a template that contains the ALYUN::ECS::VPC resource, and then call the [CreateStack](#) operation to create a stack. This way, you can create a virtual private cloud (VPC).

In addition, you can query the template ID, template content, or resource prices defined in the template. You can also share your template with other users. This way, one template can be used by multiple Alibaba Cloud accounts to allow stacks to be efficiently created.

API	Description
GenerateTemplatePolicy	Generates policy information for a template.
CreateTemplate	Creates a template.
ValidateTemplate	Validates a template that you want to use to create stacks.
UpdateTemplate	Updates a template.
GetTemplate	Queries the detailed information of a template, including the stacks and change sets that are associated with the template.

API	Description
GetTemplateEstimateCost	Queries the estimated prices of resources to be created based on a template.
GetTemplateSummary	Queries the information of a new or existing template.
GetTemplateParameterConstraints	Queries the values of template parameters.
ListTemplates	Queries the list of templates.
ListTemplateVersions	Queries one or more versions of a template.
SetTemplatePermission	Shares or unshares a template.
DeleteTemplate	Deletes a template.

Stack policy operations

A stack policy is a JSON or YAML text file that is used to define the update operations for a specified stack to prevent resources in the stack from being accidentally updated or deleted during the update of the stack. You can configure or query stack policies.

API	Description
SetStackPolicy	Configures a stack policy.
GetStackPolicy	Queries the information of a stack policy.

Change set operations

You can create and execute change sets to update running stacks.

API	Description
CreateChangeSet	Creates a change set.
ExecuteChangeSet	Executes a change set.
GetChangeSet	Queries the information of a change set.
ListChangeSets	Queries the list of change sets.
DeleteChangeSet	Deletes a change set.

Stack group operations

You can use a stack group as a unit to manage stacks in ROS. You can use templates to create stack groups. This way, you can create stacks within multiple Alibaba Cloud accounts across regions. You can also query the information of stack groups and stack group operations.

After you call the [CreateStackGroup](#) operation to create a stack group, you can call the [CreateStackInstances](#) operation to create a stack instance within a specified account in a specified region.

 **Note** Before you call the `DeleteStackGroup` operation to delete a stack group, you need to call the `DeleteStackInstances` operation to delete all stack instances from the stack group.

API	Description
<code>CreateStackGroup</code>	Creates a stack group.
<code>UpdateStackGroup</code>	Updates a stack group.
<code>GetStackGroup</code>	Queries the information of a stack group.
<code>ListStackGroups</code>	Queries the list of stack groups.
<code>GetStackGroupOperation</code>	Queries the information of a stack group operation.
<code>ListStackGroupOperations</code>	Queries the list of stack group operations.
<code>ListStackGroupOperationResults</code>	Queries the results of an operation on a stack group.
<code>StopStackGroupOperation</code>	Stops a stack group operation.
<code>CreateStackInstances</code>	Creates stack instances within a specified account in a specified region.
<code>UpdateStackInstances</code>	Updates stack instances within a specified account in a specified region.
<code>GetStackInstance</code>	Queries the detailed information about a stack instance associated with a stack group.
<code>ListStackInstances</code>	Queries the stack instances that are associated with a stack group.
<code>DeleteStackInstances</code>	Deletes stack instances within a specified account in a specified region.
<code>DeleteStackGroup</code>	Deletes a stack group.

Drift detection operations

When you change resource configurations by using a service that is beyond the control of ROS, the related stack or stack group may experience drift. You can perform drift detection to correct drift. For example, you can call the `DetectStackDrift` operation to perform drift detection on a stack. If the stack has drifted, you can call the `UpdateStackTemplateByResources` operation to modify the stack template to eliminate stack drift.

API	Description
<code>DetectStackResourceDrift</code>	Detects drift on individual resources in a stack.
<code>DetectStackDrift</code>	Detects drift on a stack.
<code>DetectStackGroupDrift</code>	Detects drift on a stack group.
<code>GetStackDriftDetectionStatus</code>	Queries the drift detection status of a stack.

API	Description
ListStackResourceDrifts	Queries the drift information of resources in a specified stack.
UpdateStackTemplateByResources	Corrects a template to eliminate stack drift.

Tag operations

You can add tags to stacks, stack groups, or templates for classification and management purposes.

API	Description
TagResources	Creates and adds tags to a specified ROS resource list.
ListTagResources	Queries tags that are added to one or more ROS resources.
ListTagKeys	Queries the list of tag keys.
ListTagValues	Queries one or more values of a specified tag key.
UntagResources	Removes and deletes tags from a specified ROS resource list.

Other operations

When you create a stack, stack group, or stack instance, you must specify the `RegionId` parameter. In this case, you can call the [DescribeRegions](#) operation to query the most recent region list.

When you create or update a stack, you can call the [SignalResource](#) operation to send signals. Failure signals can cause stack creation or update to fail.

In addition, you can call the [GetServiceProvisions](#) operation to query the activation status and the RAM role information of multiple cloud services at the same time, and call the [GetFeatureDetails](#) operation to query the details of specific features supported by ROS.

API	Description
DescribeRegions	Queries available regions.
SignalResource	Sends signals.
GetServiceProvisions	Queries the activation status and the RAM roles of an Alibaba Cloud service.
GetFeatureDetails	Queries the details of a feature that is supported by ROS.

2. Request method guidelines

To send a Resource Orchestration Service (ROS) API request, you must send an HTTPS GET or POST request to the ROS endpoint. You must add the request parameters that correspond to the API operation being called. After you call the API, the system returns a response. The request and response are encoded in UTF-8.

Request syntax

ROS API operations use the Remote Procedure Call (RPC) protocol. You can call ROS API operations by sending HTTPS GET or POST requests.

The request syntax is as follows:

```
https://Endpoint/?Action=xx&Parameters
```

where:

- **Endpoint**
 - **Public endpoint:** `ros.aliyuncs.com`. You can access this public endpoint in all regions.
 - **VPC endpoint:** `ros.vpc-proxy.aliyuncs.com`. The following table lists the supported regions.

Region	Region ID
China (Hangzhou)	cn-hangzhou
China (Shanghai)	cn-shanghai
China (Qingdao)	cn-qingdao
China (Beijing)	cn-beijing
China (Zhangjiakou)	cn-zhangjiakou
China (Hohhot)	cn-huhehaote
China (Ulanqab)	cn-wulanchabu
China (Shenzhen)	cn-shenzhen
China (Heyuan)	cn-heyuan
China (Guangzhou)	cn-guangzhou
China (Chengdu)	cn-chengdu
China (Hong Kong)	cn-hongkong
US (Silicon Valley)	us-west-1
US (Virginia)	us-east-1
Singapore (Singapore)	ap-southeast-1

Region	Region ID
Australia (Sydney)	ap-southeast-2
Malaysia (Kuala Lumpur)	ap-southeast-3
Indonesia (Jakarta)	ap-southeast-5
Philippines (Manila)	ap-southeast-6
Thailand (Bangkok)	ap-southeast-7
India (Mumbai)	ap-south-1
Japan (Tokyo)	ap-northeast-1
South Korea (Seoul)	ap-northeast-2
Germany (Frankfurt)	eu-central-1
UK (London)	eu-west-1
UAE (Dubai)	me-east-1
China East 1 Finance	cn-hangzhou-finance
China East 2 Finance	cn-shanghai-finance
China South 1 Finance	cn-shenzhen-finance
China North 2 Ali Gov 1	cn-north-2-gov-1

- Action

The operation that you want to perform. For example, you can call the [ListStacks](#) operation to query the list of stacks.

- Parameters

The request parameters for the operation. Separate multiple parameters with ampersands (&).

Request parameters include both common parameters and operation-specific parameters. Common parameters include the API version number and authentication information. For more information, see [Common parameters](#).

The following example shows how to query the list of stacks by calling the [ListStacks](#) operation.

```
https://ros.aliyuncs.com/?Action=ListStacks
&RegionId=cn-hangzhou
&Format=xml
&Version=2019-09-10
&Signature=Pc5WB8gokVn0xfeu%2FZV%2BiNM1dg****
&SignatureMethod=HMAC-SHA1
&SignatureNonce=1521552885****
&SignatureVersion=1.0
&AccessKeyId=LTAI4GENiH2u8MVj7Khh****
&Timestamp=2020-06-01T12:00:00Z
```

3. Signature method

You must sign all API requests to ensure security. Alibaba Cloud uses the request signature to verify the identity of the API caller. Each API request must contain the signature, regardless of whether it is sent over HTTP or HTTPS.

 **Note** Resource Orchestration Service (ROS) provides SDKs in multiple programming languages. You can use these SDKs to obtain a signature instead of manually calculating a signature value. For more information, see [SDK overview](#).

Overview

For an RPC API, you must add the signature to the API request in the following format:

```
https://Endpoint/?SignatureVersion=1.0&SignatureMethod=HMAC-SHA1&Signature=CT9X0VtwR86fNWSnsc6v8YGOjuE%3D&SignatureNonce=3ee8c1b8-83d3-44af-a94f-4e0ad82fd6cf
```

In the preceding format:

- **SignatureMethod**: the encryption algorithm used to calculate the signature. Set the value to HMAC-SHA1.
- **SignatureVersion**: the version of the signature encryption algorithm. Set the value to 1.0.
- **SignatureNonce**: a unique, random number used to prevent replay attacks. You must use different random numbers for different requests. We recommend that you use universally unique identifiers (UUIDs).
- **Signature**: the signature generated after the request has been symmetrically encrypted by using the AccessKey secret.

The signature encryption algorithm complies with RFC 2104 HMAC-SHA1 specifications. The AccessKey secret is used to calculate the hash-based message authentication code (HMAC) value of the encoded and sorted query string, and the HMAC value is used as the signature string. Request signatures include operation-specific parameters. Therefore, the signature of a request varies based on the request parameters. To calculate a signature, follow the steps in this topic.

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

Step 1: Compose and encode a string-to-sign

1. Use request parameters to construct a canonicalized query string.
 - i. by arranging the request parameters (including all common and operation-specific parameters except Signature) in alphabetical order.

 **Note** If you use the GET method to submit the request, these parameters are the part located after the question mark (?) and connected by the ampersands (&) in the request uniform resource identifier (URI).

- ii. Encode the names and values of the arranged request parameters in the request URL by using the unicode transformation format (UTF)-8 character set. The following table describes the encoding rules.

Character	Encoding rule
Uppercase letters, lowercase letters, digits, hyphens (-), underscores (_), periods (.), and tildes (~)	These characters do not need to be encoded.
Other characters	These characters must be percent encoded in <code>%XY</code> format. <code>XY</code> represents the ASCII code of the characters in hexadecimal notation. For example, double quotation marks (") are encoded as <code>%22</code> .
Extended UTF-8 characters	These characters are encoded in <code>%XY%ZA...</code> format.
Space characters	<p>Spaces must be encoded as <code>%20</code>. Do not encode spaces as plus signs (+).</p> <p>This encoding method is different from the <code>application/x-www-form-urlencoded</code> MIME encoding algorithm (such as the <code>java.net.URLEncoder</code> class provided by the Java standard library). However, you can apply the encoding algorithm and replace the plus sign (+) in the encoded string with <code>%20</code>, the asterisk (*) with <code>%2A</code>, and <code>%7E</code> with the tilde (~). To do this, you can use the following <code>percentEncode</code> method:</p> <pre>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; }</pre>

- iii. Connect the encoded parameter names and their values by using equal signs (=).
- iv. Sort the connected parameter name and value pairs in the order specified in step i and connect the pairs by using ampersands (&) to obtain the canonicalized query string.
2. Use the canonicalized query string to construct a string-to-sign in the following way:

```
StringToSign=
  HTTPMethod + "&" +
  percentEncode("/") + "&" +
  percentEncode(CanonicalizedQueryString)
```

In the preceding rules:

- o `HTTPMethod`: the HTTP method used to submit a request, such as GET.
- o `percentEncode("/")`: specifies the encoded value (%2F) of a forward slash (/). The encoding

follows the URL encoding rules.

- `percentEncode(CanonicalizedQueryString)`: specifies the encoded canonicalized query string based on the URL encoding rules.

Step 2: Calculate the signature string

1. Calculate the HMAC value of the string-to-sign based on RFC 2104.

Note Use the SHA1 algorithm to calculate the HMAC value of the string-to-sign. The combination of your AccessKey secret and an ampersand (&) (ASCII code 38) that follows the secret is used as the key for the HMAC calculation.

2. Encode the HMAC value in Base64 to obtain the signature string
3. Add the signature string to the request as the Signature parameter.

Note When the obtained signature value is submitted as the final request parameter value, the value must be URL-encoded like other parameters based on rules defined in [RFC 3986](#).

Example 1: Concatenate parameters

The following example shows how to call the [DescribeRegions](#) operation to query Alibaba Cloud regions. In this example, AccessKeyId is set to `testid`, and AccessKeySecret is set to `testsecret`. Perform the following operations to calculate the signature value:

1. Create a canonicalized query string.

```
https://ros.aliyuncs.com/?Timestamp=2019-08-23T12%3A46%3A24Z&Format=XML&AccessKeyId=testid&Action=DescribeRegions&SignatureMethod=HMAC-SHA1&SignatureNonce=3ee8c1b8-83d3-44af-a94f-4e0ad82fd6cf&Version=2019-09-10&SignatureVersion=1.0
```

2. Create a string-to-sign.

```
GET&%2F&AccessKeyId%3Dtestid%26Action%3DDescribeRegions%26Format%3DXML%26SignatureMethod%3DHMAC-SHA1%26SignatureNonce%3D3ee8c1b8-83d3-44af-a94f-4e0ad82fd6cf%26SignatureVersion%3D1.0%26Timestamp%3D2019-08-23T12%253A46%253A24Z%26Version%3D2019-09-10
```

3. Calculate the signature value.

The key value used for calculation is `testsecret&` because AccessKeySecret is set to `testsecret`. The calculated signature is `0LeaidS1JvxuMvnyHOwuJ+uX5qY=`. The Java Base64 encoding method is used in this example.

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

4. Add the `Signature=0LeaidS1JvxuMvnyHOwuJ%2BuX5qY%3D` string that is encoded based on [RFC 3986](#) to the URL in Step 1.

```
https://ros.aliyuncs.com/?SignatureVersion=1.0&Action=DescribeRegions&Format=XML&SignatureNonce=3ee8c1b8-83d3-44af-a94f-4e0ad82fd6cf&Version=2019-09-10&AccessKeyId=testid&Signature=0LeaidS1JvxuMvnyHOwuJ%2BuX5qY%3D&SignatureMethod=HMAC-SHA1&Timestamp=2019-08-23T12%253A46%253A24Z
```

5. Use browsers or tools such as cURL and Wget to send an HTTPS request. The HTTPS request calls

the `DescribeRegions` operation to query Alibaba Cloud regions.

Example 2: Use programming languages

The following example shows how to call the `DescribeRegions` operation to query Alibaba Cloud regions. In this example, `AccessKeyId` is set to `testid`, `AccessKeySecret` is set to `testsecret`, and all request parameters are included in a Java `Map<String, String>` object.

1. Predefine the encoding method.

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

2. Predefine the time format for the `Timestamp` parameter. The `Timestamp` value must be specified in the ISO 8601 standard. The time must be in UTC+0.

```
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. Create a request string.

```

final String HTTP_METHOD = "GET";
Map parameters = new HashMap();
// Specify request parameters.
parameters.put("Action", "DescribeRegions");
parameters.put("Version", "2019-09-10");
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 request parameters.
String[] sortedKeys = parameters.keySet().toArray(new String[]{});
Arrays.sort(sortedKeys);
final String SEPARATOR = "&";
// Create a string-to-sign.
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 value.
canonicalizedQueryString.append("&")
.append(percentEncode(key)).append("=")
.append(percentEncode(parameters.get(key)));
}
// Encode the canonicalized query string.
stringToSign.append(percentEncode(
canonicalizedQueryString.toString().substring(1)));

```

4. Calculate the signature value.

The key value used for calculation is `testsecret&` because `AccessKeySecret` is set to `testsecret`. The calculated signature is `0LeaidS1JvxuMvnyHOwuJ+uX5qY=`.

```

// The following sample code demonstrates how to calculate the signature value.
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));

```

5. Add the `Signature=0LeaidS1JvxuMvnyHOwuJ%2BuX5qY%3D` string that is encoded based on [RFC 3986](#) to the URL in Step 1.

```

https://ros.aliyuncs.com/?SignatureVersion=1.0&Action=DescribeRegions&Format=XML&SignatureNonce=3ee8c1b8-83d3-44af-a94f-4e0ad82fd6cf&Version=2019-09-10&AccessKeyId=testid&Signature=0LeaidS1JvxuMvnyHOwuJ%2BuX5qY%3D&SignatureMethod=HMAC-SHA1&Timestamp=2019-08-23T12%253A46%253A24Z

```

6. Use browsers or tools such as `cURL` and `Wget` to send an HTTPS request. The HTTPS request calls the `DescribeRegions` operation to query Alibaba Cloud regions.

4. RAM authorization

Before you call an Alibaba Cloud API as a Resource Access Management (RAM) user, you must use an Alibaba Cloud account to create an authorization policy to grant permissions to the RAM user.

Resource authorization

By default, a RAM user is not authorized to call Alibaba Cloud APIs to create or modify cloud resources. Before you call an API as a RAM user, you must grant the RAM user the permissions to call the API by creating an authorization policy and attaching the policy to the RAM user.

When you create the authorization policy, you can use an Alibaba Cloud Resource Name (ARN) to specify the resource that you are allowed to access. An ARN is a globally unique name used to identify a resource on Alibaba Cloud. The following format is used for ARNs:

```
acs:service-name:region:account-id:resource-relative-id
```

An ARN contains the following fields:

- **acs**: the abbreviation for Alibaba Cloud Service.
- **service-name**: the name of an Alibaba Cloud service, such as Elastic Compute Service (ECS), Object Storage Service (OSS), and Resource Orchestration Service (ROS).
- **region**: the region where the service resides. If this option is not supported, use the asterisk (`*`) instead.
- **account-id**: the ID of the Alibaba Cloud account, such as `123456789012****`.
- **resource-relative-id**: the specific description of a resource. The description varies by service. For more information, see the documentation of each service.

For example, `acs:oss:123456789012****:sample_bucket/file1.txt` indicates a resource named *sample_bucket/file1.txt* in OSS, and `123456789012****` indicates the ID of the user to which the resource belongs.

Types of ROS resources that can be authorized

Resource type	ARN format in the authorization policy
Stack	<code>acs:ros:\$regionid:\$accountid:stack/\$stackid</code>
	<code>acs:ros:\$regionid:\$accountid:stack/*</code>
Template	<code>acs:ros:\$regionid:\$accountid:template/\$templateid</code>
	<code>acs:ros:\$regionid:\$accountid:template/*</code>
StackGroup	<code>acs:ros:\$regionid:\$accountid:stack_group/*</code>

ROS API operations that can be authorized

- Stack operations

API operation	Action	ARN format
PreviewStack	ros:PreviewStack	acs:ros:cn-hangzhou:\$accountid:stack/*
CreateStack	ros:CreateStack	cs:ros:cn-hangzhou:\$accountid:stack/*
ContinueCreateStack	ros:ContinueCreateStack	acs:ros:cn-hangzhou:\$accountid:stack/\$stackid
SetDeletionProtection	ros:SetDeletionProtection	acs:ros:cn-hangzhou:\$accountid:stack/\$stackid
UpdateStack	ros:UpdateStack	acs:ros:cn-hangzhou:\$accountid:stack/\$stackid
CancelUpdateStack	ros:CancelUpdateStack	acs:ros:cn-hangzhou:\$accountid:stack/\$stackid
GetStack	ros:GetStack	acs:ros:cn-hangzhou:\$accountid:stack/\$stackid
ListStacks	ros:ListStacks	acs:ros:cn-hangzhou:\$accountid:stack/*
ListStackEvents	ros:ListStackEvents	acs:ros:cn-hangzhou:\$accountid:stack/\$stackid
ListStackOperationRisks	ros:ListStackOperationRisks	acs:ros:cn-hangzhou:\$accountid:stack/\$stackid
DeleteStack	ros>DeleteStack	acs:ros:cn-hangzhou:\$accountid:stack/\$stackid
CreateChangeSet	ros:CreateChangeSet	<ul style="list-style-type: none"> ◦ When ChangeSetType is set to CREATE: acs:ros:cn-hangzhou:\$accountid:stack/* ◦ When ChangeSetType is set to UPDATE: acs:ros:cn-hangzhou:\$accountid:stack/\$stackid ◦ When ChangeSetType is set to IMPORT: acs:ros:cn-hangzhou:\$accountid:stack/*
ExecuteChangeSet	ros:ExecuteChangeSet	acs:ros:cn-hangzhou:\$accountid:stack/\$stackid
GetChangeSet	ros:GetChangeSet	acs:ros:cn-hangzhou:\$accountid:stack/\$stackid
ListChangeSets	ros:ListChangeSets	acs:ros:cn-hangzhou:\$accountid:stack/\$stackid
DeleteChangeSet	ros>DeleteChangeSet	acs:ros:cn-hangzhou:\$accountid:stack/\$stackid

• Resource operations

API operation	Action	ARN format
GetResourceTypeTemplate	ros:GetResourceTypeTemplate	No authentication required
ListStackResources	ros:ListStackResources	acs:ros:cn-hangzhou:\$accountid:stack/\$stackid
GetStackResource	ros:GetStackResource	acs:ros:cn-hangzhou:\$accountid:stack/\$stackid

API operation	Action	ARN format
GetResourceType	ros:GetResourceType	No authentication required
ListResourceTypes	ros:ListResourceTypes	No authentication required
MoveResourceGroup	ros:MoveResourceGroup	<ul style="list-style-type: none"> ◦ When ResourceType is set to stack: acs:ros:cn-hangzhou:\$accountid:stack/* ◦ When ResourceType is set to stackgroup: acs:ros:cn-hangzhou:\$accountid:stack_group/* ◦ When ResourceType is set to template: acs:ros:cn-hangzhou:\$accountid:template/*

• Stack group operations

API operation	Action	ARN format
CreateStackGroup	ros:CreateStackGroup	acs:ros:cn-hangzhou:\$accountid:stack_group/*
UpdateStackGroup	ros:UpdateStackGroup	acs:ros:cn-hangzhou:\$accountid:stack_group/\$stackid
GetStackGroup	ros:GetStackGroup	acs:ros:cn-hangzhou:\$accountid:stack_group/\$stackid
ListStackGroups	ros:ListStackGroups	acs:ros:cn-hangzhou:\$accountid:stack_group/*
DeleteStackGroup	ros>DeleteStackGroup	acs:ros:cn-hangzhou:\$accountid:stack_group/\$stackid
CreateStackInstances	ros:CreateStackInstances	acs:ros:cn-hangzhou:\$accountid:stack_instance/*
UpdateStackInstances	ros:UpdateStackInstances	acs:ros:cn-hangzhou:\$accountid:stack_instance/*
GetStackInstance	ros:GetStackInstance	acs:ros:cn-hangzhou:\$accountid:stack/\$stackid
ListStackInstances	ros:ListStackInstances	acs:ros:cn-hangzhou:\$accountid:stack_instance/*
DeleteStackInstances	ros>DeleteStackInstances	acs:ros:cn-hangzhou:\$accountid:stack_instance/*
GetStackGroupOperation	ros:GetStackGroupOperation	acs:ros:cn-hangzhou:\$accountid:stack_group_operation/*
ListStackGroupOperations	ros:ListStackGroupOperations	acs:ros:cn-hangzhou:\$accountid:stack_group_operation/*
ListStackGroupOperationResults	ros:ListStackGroupOperationResults	acs:ros:cn-hangzhou:\$accountid:stack_group_operation/*

API operation	Action	ARN format
StopStackGroupOperation	ros:StopStackGroupOperation	acs:ros:cn-hangzhou:\$accountid:stack_group_operation/*

• Template operations

API operation	Action	ARN format
GenerateTemplatePolicy	ros:GenerateTemplatePolicy	acs:ros:cn-hangzhou:\$accountid:template/\$templateid Note If the TemplateId parameter is specified, authentication is required.
CreateTemplate	ros:CreateTemplate	acs:ros:cn-hangzhou:\$accountid:template/*
ValidateTemplate	ros:ValidateTemplate	No authentication required
UpdateTemplate	ros:UpdateTemplate	acs:ros:cn-hangzhou:\$accountid:template/\$templateid
GetTemplate	ros:GetTemplate	<ul style="list-style-type: none"> ◦ acs:ros:cn-hangzhou:\$accountid:stack/\$stackid ◦ acs:ros:\$regionid:\$accountid:stack_group/* ◦ acs:ros:cn-hangzhou:\$accountid:template/\$templateid
GetTemplateEstimateCost	ros:GetTemplateEstimateCost	acs:ros:cn-hangzhou:\$accountid:*
GetTemplateSummary	ros:GetTemplateSummary	acs:ros:cn-hangzhou:\$accountid:template/\$templateid Note If the TemplateId parameter is specified, authentication is required.
ListTemplates	ros:ListTemplates	acs:ros:cn-hangzhou:\$accountid:template/*
ListTemplateVersions	ros:ListTemplateVersions	acs:ros:cn-hangzhou:\$accountid:template/\$templateid
SetTemplatePermission	ros:SetTemplatePermission	acs:ros:cn-hangzhou:\$accountid:*
DeleteTemplate	ros>DeleteTemplate	acs:ros:cn-hangzhou:\$accountid:template/\$templateid

• Tag operations

API operation	Action	ARN format
ListTagResources	ros:ListTagResources	acs:ros:cn-hangzhou:\$accountid:tag/*
ListTagKeys	ros:ListTagKeys	acs:ros:cn-hangzhou:\$accountid:tag/*
ListTagValues	ros:ListTagValues	acs:ros:cn-hangzhou:\$accountid:tag/*
UntagResources	ros:UntagResources	acs:ros:cn-hangzhou:\$accountid:tag/*

- **Other operations**

API operation	Action	ARN format
DescribeRegions	ros:DescribeRegions	No authentication required
SignalResource	ros:SignalResource	acs:ros:cn-hangzhou:\$accountid:stack/\$stackid
GetStackPolicy	ros:GetStackPolicy	acs:ros:cn-hangzhou:\$accountid:stack/\$stackid
SetStackPolicy	ros:SetStackPolicy	acs:ros:cn-hangzhou:\$accountid:stack/\$stackid

5. Common parameters

This topic describes the common request and response parameters.

Common request parameters

Parameter	Type	Required	Description
Format	String	No	The format in which to return the response. Default value: XML. Valid values: <ul style="list-style-type: none">JSONXML
Version	String	Yes	The version number of the API. Specify the version number in the YYYY-MM-DD format. Set the value to 2019-09-10.
Signature	String	Yes	The signature string of the current request.
SignatureMethod	String	Yes	The encryption method of the signature string. Set the value to HMAC-SHA1.
SignatureNonce	String	Yes	A unique, random number used to prevent replay attacks. You must use different numbers for different requests.
SignatureVersion	String	Yes	The version of the signature encryption algorithm. Set the value to 1.0.
AccessKeyId	String	Yes	The AccessKey ID provided to you by Alibaba Cloud.

Parameter	Type	Required	Description
Timestamp	String	Yes	<p>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.</p> <p>For example, 2013-01-10T12:00:00Z indicates 20:00:00 on January 10, 2013 (UTC+8).</p>

Sample requests

```
http(s)://ros.aliyuncs.com/?Action=CreateStack
&Format=xml
&Version=2019-09-10
&Signature=Pc5WB8gokVn0xfeu%2FZV%2BiNMldg****
&SignatureMethod=HMAC-SHA1
&SignatureNonce=1521552885****
&SignatureVersion=1.0
&AccessKeyId=LTAI4GENiH2u8MVj7Khh****
&Timestamp=2020-06-01T12:00:00Z
```

Common response parameters

Responses can be returned in the JSON or XML format. You can specify the response format in the request. The default response format is JSON. Every response returns a unique RequestId value regardless of whether the call is successful.

- A `2xx` HTTP status code indicates a successful call.
- A `4xx` or `5xx` HTTP status code indicates a failed call.

Sample responses

- XML format

```
<?xml version="1.0" encoding="utf-8"?>
  ><!--Result root node-->
  <Operation name + Response>
    <!--Response request tag-->
    <RequestId>4C467B38-3910-447D-87BC-AC049166F216</RequestId>
    <!--Returned data-->
  </Operation name + Response>
```

- JSON format

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

6. Common error codes

Common error codes include client error codes and server error codes.

Client errors

Error code	Error message	HTTP status code	Description
UnknownError	The request processing has failed due to some unknown error.	400	The error message returned because an unknown error that is not caused by a server-side issue has occurred on the client.
MissingParameter	The input parameter {name} should be specified.	400	The error message returned because the input parameter is missing. name indicates the parameter name.
	One of the input parameters {names} should be specified.	400	The error message returned because the input parameter is missing. You must specify one of the input parameters. names indicates the names of all the related parameters.
	The input parameter {name} should be specified, {reason}.	400	The error message returned because the input parameter is missing. name indicates the parameter name, and reason indicates the specific reason.
InvalidParameter	The specified parameter {name} is invalid.	400	The error message returned because the specified parameter is invalid. name indicates the parameter name.
	The specified parameter {name} is invalid, {reason}.	400	The error message returned because the specified parameter is invalid. name indicates the parameter name, and reason indicates the specific reason.

Error code	Error message	HTTP status code	Description
MultipleParameter	Only one of the input parameters {names} can be specified.	400	The error message returned because the number of specified parameters exceeds the limit. You can specify only one of the parameters. names indicates the names of all the related parameters.
InvalidIdempotenceParameter	The specified parameters are different from before.	400	The error message returned because the idempotent token is the same, but the specified parameters are different from before.
LastTokenProcessing	The last token request is processing.	400	The error message returned because the previous token request is being processed. Try again later.
Invalid	Data supplied was not valid: {reason}.	400	The error message returned because the value is invalid. reason indicates the specific reason.
InvalidValue	{reason}.	400	The error message returned because the value is invalid. reason indicates the specific reason.
RequestLimitExceeded	Request limit exceeded: {reason}.	400	The error message returned because the request contains content that exceeds the limit. reason indicates the specific reason. You can change the part of content that exceeds the limit by adjusting the quota.
NotSupported	{feature} is not supported.	400	The error message returned because a specified feature is not supported. feature indicates the specific feature or operation.

Error code	Error message	HTTP status code	Description
MismatchNextToken	{name} mismatches next token.	400	The error message returned because the specified parameter does not match the next token. name indicates the parameter name.
AssumeRoleFailure	Fail to assume role {name}: {reason}	400	The error message returned because ROS has failed to obtain a temporary identity to assume the specified RAM role. name indicates the RAM role name, and reason indicates the specific reason for the failure.
Forbidden	You are not authorized to complete this action.	403	The error message returned because you are not authorized to complete this action.
	A required authorization for the specified action {api} is not supplied. Code: {code} RequestId: {request_id}	403	The error message returned because you have not authorized ROS to call the operation. api indicates the name of the operation. code indicates the error code. request_id indicates the ID of the request.
AccountTypeNotSupported	Account type not supported.	403	The error message returned because the specified account type is not supported.
NotFound	{reason}.	404	The error message returned because the request contains content that does not exist. reason indicates the specific reason.

Error code	Error message	HTTP status code	Description
TerraformStackNotSupported	Terraform stack does not support {feature}.	400	The error message returned because a feature is not supported by the Terraform stack. feature indicates the specific feature.
	Terraform stack template does not support {feature}.	400	The error message returned because a feature is not supported by the Terraform stack template. feature indicates the specific feature.
	Terraform stack is not supported.	400	The error message returned because a feature of the Terraform stack is not available to the user.

Server errors

Error code	Error message	HTTP status code	Description
InternalServerError	Server error.	500	The error message returned because an internal error has occurred.
ServiceUnavailable	The request has failed due to a temporary failure of the server.	503	The error message returned because a server error has occurred. Try again later. If the problem persists, submit a ticket.

7. Stack operations

7.1. PreviewStack

Generates a preview of a stack that is created from a template.

This topic provides an example on how to create and preview a stack named `MyStack` in the China (Hangzhou) region. The template body of the stack is `{"ROSTemplateFormatVersion":"2015-09-01"}`.

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	PreviewStack	The operation that you want to perform. Set the value to PreviewStack.
DisableRollback	Boolean	No	false	Specifies whether to disable rollback on stack creation failure. Default value: false. Valid values: <ul style="list-style-type: none"> true: Rollback is disabled on stack creation failure. false: Rollback is enabled on stack creation failure.
TimeoutInMinutes	Long	No	60	The timeout period for the stack creation request. Unit: minutes. Default value: 60.

Parameter	Type	Required	Example	Description
TemplateBody	String	No	null	<p>The structure that contains the template body. The template body must be 1 to 524,288 bytes in length. If the length of the template body exceeds the maximum length, we recommend that you add the parameters to the body of the HTTP POST request. This prevents request failures caused by extremely long URLs.</p> <p>Note You must specify only one of the TemplateBody, TemplateURL, TemplateId, and TemplateScratchId parameters.</p>
StackPolicyURL	String	No	oss://ros/stack-policy/demo	<p>The URL of the file that contains the stack policy. The URL must point to a policy located in an HTTP or HTTPS web server or an Alibaba Cloud Object Storage Service (OSS) bucket. Examples: oss://ros/stack-policy/demo and oss://ros/stack-policy/demo?RegionId=cn-hangzhou. The policy can be up to 16,384 bytes in length. If you do not specify the region of the OSS bucket, the value of the RegionId parameter is used.</p> <p>Note You can specify only one of the StackPolicyBody and StackPolicyURL parameters.</p> <p>The URL can be up to 1,350 bytes in length.</p>
RegionId	String	Yes	cn-hangzhou	<p>The region ID of the stack. You can call the DescribeRegions operation to query the most recent region list.</p>
StackPolicyBody	String	No	null	<p>The structure that contains the stack policy body. The stack policy body must be 1 to 16,384 bytes in length.</p> <p>Note You can specify only one of the StackPolicyBody and StackPolicyURL parameters.</p>

Parameter	Type	Required	Example	Description
StackName	String	Yes	MyStack	<p>The name of the stack.</p> <p>The name can be up to 255 characters in length, and can contain digits, letters, hyphens (-), and underscores (_). It must start with a digit or letter.</p>
ClientToken	String	No	123e4567-e89b-12d3-a456-42665544****	<p>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 token is globally unique.</p> <p>The token can be up to 64 characters in length, and can contain letters, digits, hyphens (-), and underscores (_).</p> <p>For more information, see Ensure idempotence.</p>
TemplateURL	String	No	oss://ros/templ ate/demo	<p>The URL of the file that contains the template body. The URL must point to a template located in an HTTP or HTTPS web server or an Alibaba Cloud OSS bucket. Examples: oss://ros/template/demo and oss://ros/template/demo?RegionId=cn-hangzhou. The template can be up to 524,288 bytes in length. If you do not specify the region of the OSS bucket, the value of the RegionId parameter is used.</p> <div style="background-color: #e6f2ff; padding: 5px; border: 1px solid #d9e1f2;"> <p> Note You must specify only one of the TemplateBody, TemplateURL, TemplateId, and TemplateScratchId parameters.</p> </div>
TemplateId	String	No	5ecd1e10-b0e9-4389-a565-e4c15efc****	<p>The ID of the template. This parameter applies to shared and private templates.</p> <div style="background-color: #e6f2ff; padding: 5px; border: 1px solid #d9e1f2;"> <p> Note You must specify only one of the TemplateBody, TemplateURL, TemplateId, and TemplateScratchId parameters.</p> </div>

Parameter	Type	Required	Example	Description
TemplateVersion	String	No	v1	The version of the template. This parameter takes effect only when the TemplateId parameter is specified.
Parallelism	Long	No	1	<p>The number of concurrent operations as Terraform walks the graph. This parameter only takes effect for Terraform stacks.</p> <p>This parameter is empty by default. You can set this parameter to an integer greater than or equal to 0.</p> <div style="border: 1px solid #add8e6; padding: 5px; background-color: #e0f2f7;"> <p> Note If you set this parameter to an integer greater than 0, the integer is used. If you do not set this parameter or set it to 0, the default value 10 is used.</p> </div>
TemplateScratchId	String	No	ts-aa9c62feab844a6b****	<p>The ID of the scenario.</p> <p>For more information about how to query the IDs of scenarios, see ListTemplateScratches.</p> <div style="border: 1px solid #add8e6; padding: 5px; background-color: #e0f2f7;"> <p> Note You must specify only one of the TemplateBody, TemplateURL, TemplateId, and TemplateScratchId parameters.</p> </div>
TemplateScratchRegionId	String	No	cn-hangzhou	<p>The region ID of the scenario. The default value is the value of the RegionId parameter.</p> <p>You can call the DescribeRegions operation to query the most recent region list.</p>

Parameter	Type	Required	Example	Description
Parameters.N.ParameterKey	String	Yes	ALYUN::AccountId	<p>The key of parameter N. If you do not specify the Parameters.N.ParameterKey and Parameters.N.ParameterValue parameters, Resource Orchestration Service (ROS) uses the default key and value in the template. Maximum value of N: 200.</p> <p>Note The Parameters parameter is optional. If you specify the Parameters parameter, you must specify the Parameters.N.ParameterKey parameter.</p>
Parameters.N.ParameterValue	String	Yes	151266687691***	<p>The value of parameter N. Maximum value of N: 200.</p> <p>Note The Parameters parameter is optional. If you specify the Parameters parameter, you must specify the Parameters.N.ParameterValue parameter.</p>

For more information about common request parameters, see [Common parameters](#).

Response parameters

Parameter	Type	Example	Description
RequestId	String	B288A0BE-D927-4888-B0F7-B35EF84B6E6F	The ID of the request.
Stack	Object		The stack information.
TemplateDescription	String	One ECS instance.	The description of the template.
Parameters	Array of Parameter		The parameters of the stack.
ParameterKey	String	ALYUN::AccountId	The key of parameter N.

Parameter	Type	Example	Description
ParameterValue	String	151266687691****	The value of parameter N.
Description	String	One ECS instance.	The description of the stack.
DisableRollback	Boolean	false	Indicates whether rollback is disabled.
StackName	String	MyStack	The name of the stack.
TimeoutInMinutes	Integer	60	The timeout period. Unit: minutes.
StackPolicyBody	Map		The stack policy.
Resources	Array of Resource		The list of resources in the stack.
LogicalResourceId	String	WebServer	The logical resource ID.
ResourceType	String	ALIYUN::ECS::Instance	The type of the resource.
Description	String	ECS instance.	The description of the resource.
Stack	Map		The information of the nested stacks. The data structure of this parameter is the same as that of the entire responses.
RequiredBy	Array of String	["Resource1", "Resource2"]	The list of resources in the stack.
Properties	Map		The properties of the resource.
RegionId	String	cn-hangzhou	The region ID of the stack.
Log	Object		The logs of the stack.

Parameter	Type	Example	Description
TerraformLogs	Array of TerraformLog		<p>The logs of the Terraform stack. This parameter is returned only when the stack is a Terraform stack.</p> <div style="background-color: #e0f2f1; padding: 5px; border: 1px solid #ccc;"> <p> Note This parameter contains the logs of previewing the stack.</p> </div>
Command	String	apply	<p>The name of the Terraform command. Valid values:</p> <ul style="list-style-type: none"> • apply • plan • destroy • version <p>For more information about the Terraform commands, see Basic CLI Features.</p>
Stream	String	stdout	<p>The output stream. Valid values:</p> <ul style="list-style-type: none"> • stdout: the standard output stream. • stderr: the standard error stream.
Content	String	Apply complete! Resources: 42 added, 0 changed, 0 destroyed.	The content of the output stream.

Examples

Sample requests

```
http(s)://ros.aliyuncs.com/?Action=PreviewStack
&TemplateBody={"ROSTemplateFormatVersion":"2015-09-01"}
&StackName=MyStack
&RegionId=cn-hangzhou
&<Common request parameters>
```

Sample success responses

`XML` format

```
HTTP/1.1 200 OK
Content-Type:application/xml
<PreviewStackResponse>
  <RequestId>B288A0BE-D927-4888-B0F7-B35EF84B6E6F</RequestId>
  <Stack>
    <Description>No description</Description>
    <Parameters>
      <ParameterValue>151266687691****</ParameterValue>
      <ParameterKey>ALIYUN::AccountId</ParameterKey>
    </Parameters>
    <Parameters>
      <ParameterValue>None</ParameterValue>
      <ParameterKey>ALIYUN::NoValue</ParameterKey>
    </Parameters>
    <Parameters>
      <ParameterValue>cn-hangzhou</ParameterValue>
      <ParameterKey>ALIYUN::Region</ParameterKey>
    </Parameters>
    <Parameters>
      <ParameterValue>df13add2-e8db-45f6-9600-c9090291****</ParameterValue>
      <ParameterKey>ALIYUN::StackId</ParameterKey>
    </Parameters>
    <Parameters>
      <ParameterValue>MyStack</ParameterValue>
      <ParameterKey>ALIYUN::StackName</ParameterKey>
    </Parameters>
    <Parameters>
      <ParameterValue>151266687691****</ParameterValue>
      <ParameterKey>ALIYUN::TenantId</ParameterKey>
    </Parameters>
    <TemplateDescription>One ECS instance</TemplateDescription>
    <RegionId>cn-hangzhou</RegionId>
    <DisableRollback>>false</DisableRollback>
    <StackName>MyStack</StackName>
    <TimeoutInMinutes>60</TimeoutInMinutes>
  </Stack>
</PreviewStackResponse>
```

JSON **format**

```

HTTP/1.1 200 OK
Content-Type:application/json
{
  "RequestId" : "B288A0BE-D927-4888-B0F7-B35EF84B6E6F",
  "Stack" : {
    "Description" : "No description",
    "Parameters" : [ {
      "ParameterValue" : "151266687691****",
      "ParameterKey" : "ALIYUN::AccountId"
    }, {
      "ParameterValue" : "None",
      "ParameterKey" : "ALIYUN::NoValue"
    }, {
      "ParameterValue" : "cn-hangzhou",
      "ParameterKey" : "ALIYUN::Region"
    }, {
      "ParameterValue" : "df13add2-e8db-45f6-9600-c9090291****",
      "ParameterKey" : "ALIYUN::StackId"
    }, {
      "ParameterValue" : "MyStack",
      "ParameterKey" : "ALIYUN::StackName"
    }, {
      "ParameterValue" : "151266687691****",
      "ParameterKey" : "ALIYUN::TenantId"
    } ],
    "TemplateDescription" : "One ECS instance",
    "RegionId" : "cn-hangzhou",
    "Resources" : [ ],
    "DisableRollback" : false,
    "StackName" : "MyStack",
    "TimeoutInMinutes" : 60
  }
}

```

Error codes

For a list of error codes, visit the [API Error Center](#).

For more information about errors common to all operations, see [Common error codes](#).

HttpCode	Error codes	Error message	Description
400	CircularDependency	Circular Dependency Found: {reason}.	The error message returned because the template contains a circular dependency. reason indicates the specific cause of the error.

HttpCode	Error codes	Error message	Description
400	InvalidSchema	{reason}.	The error message returned because the template format is invalid. reason indicates the specific cause of the error.
400	InvalidTemplateAttribute	The Referenced Attribute ({resource} {name}) is incorrect.	The error message returned because the resource property referenced in the Outputs section of the template is invalid. resource indicates the resource name. name indicates the property name.
400	InvalidTemplatePropertyType	The specified value type of ({resource} {section}) is incorrect.	The error message returned because the type of the resource property that is defined in a section of the template is invalid. resource indicates the resource name. section indicates the section name.
400	InvalidTemplateReference	The specified reference "{name}" (in {referencer}) is incorrect.	The error message returned because the template contains an invalid reference. name indicates the reference name. referencer indicates the referencer name.
400	InvalidTemplateSection	The template section is invalid: {section}.	The error message returned because the template contains an invalid section. section indicates the section name.

HttpCode	Error codes	Error message	Description
400	InvalidTemplateVersion	The template version is invalid: {reason}.	The error message returned because the template version is invalid. reason indicates the specific cause of the error.
400	StackValidationFailed	{reason}.	The error message returned because the stack fails to be validated. reason indicates the specific cause of the error.
400	UnknownUserParameter	The Parameter ({name}) was not defined in template.	The error message returned because the specified parameter is not defined in the template. name indicates the parameter name.
400	UserParameterMissing	The Parameter {name} was not provided.	The error message returned because no value is specified for the parameter that is defined in the template. name indicates the parameter name.
409	StackExists	The Stack ({name}) already exists.	The error message returned because a stack with the same name already exists. name indicates the stack name.
404	TemplateNotFound	The Template ({ ID }) could not be found.	The error message returned because the specified template does not exist. ID indicates the template ID.

HttpCode	Error codes	Error message	Description
404	TemplateNotFound	The Template { ID } with version { version } could not be found.	The error message returned because the template or the specified template version does not exist. ID indicates the template ID. version indicates the template version.

7.2. CreateStack

Creates a stack.

A stack is a collection of Resource Orchestration Service (ROS) resources that you can manage as a single unit. To create a collection of resources, you can create a stack. For more information about stacks, see [Overview](#).

Take note of the following limits:

- You can create up to 200 stacks within an Alibaba Cloud account.
- You can create up to 200 resources within a stack.

This topic provides an example on how to create a stack named `MyStack` in the China (Hangzhou) region. The template body of the stack is `{"ROSTemplateFormatVersion":"2015-09-01"}`.

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	CreateStack	The operation that you want to perform. Set the value to CreateStack.

Parameter	Type	Required	Example	Description
DisableRollback	Boolean	No	false	<p>Specifies whether to disable rollback of the stack when the stack fails to be created.</p> <p>Default value: false. Valid values:</p> <ul style="list-style-type: none"> true: disables rollback of the stack when the stack fails to be created. false: enables rollback of the stack when the stack fails to be created.
TemplateBody	String	No	<pre>{"ROSTemplateFormatVersion": "2015-09-01"}</pre>	<p>The structure that contains the template body. The template body must be 1 to 524,288 bytes in length. If the length of the template body exceeds the upper limit, we recommend that you add parameters to the HTTP POST request body to prevent request failures caused by excessively long URLs.</p> <div style="background-color: #e6f2ff; padding: 5px; border: 1px solid #d9e1f2;"> <p> Note You must specify only one of the following parameters: TemplateBody, TemplateURL, TemplateId, and TemplateScratchId.</p> </div>
StackPolicyURL	String	No	oss://ros-stack-policy/demo	<p>The URL of the file that contains the stack policy. The URL must point to a policy located in an HTTP or HTTPS web server or in an Alibaba Cloud OSS bucket, for example, oss://ros/stack-policy/demo and oss://ros/stack-policy/demo?RegionId=cn-hangzhou. The policy can be up to 16,384 bytes in length and the URL can be up to 1,350 bytes in length. If you do not specify RegionId in the URL, the region ID of the stack group is used.</p> <div style="background-color: #e6f2ff; padding: 5px; border: 1px solid #d9e1f2;"> <p> Note You can specify only one of the StackPolicyBody and StackPolicyURL parameters.</p> </div>

Parameter	Type	Required	Example	Description
TimeoutInMinutes	Long	No	10	<p>The timeout period that is specified for the stack creation request.</p> <ul style="list-style-type: none"> • Default value: 60. • Unit: minutes.
StackPolicyBody	String	No	<pre>{ "Statement": [{ "Action": "Update:*", "Resource": "*", "Effect": "Allow", "Principal": "*" }] }</pre>	<p>The structure that contains the stack policy body. The stack policy body must be 1 to 16,384 bytes in length.</p> <div style="border: 1px solid #add8e6; padding: 5px; background-color: #e6f2ff;"> <p> Note You can specify only one of the StackPolicyBody and StackPolicyURL parameters.</p> </div>
StackName	String	Yes	MyStack	<p>The name of the stack.</p> <p>The name can be up to 255 characters in length, and can contain digits, letters, hyphens (-), and underscores (_). It must start with a digit or letter.</p>
RegionId	String	Yes	cn-hangzhou	<p>The region ID of the stack. You can call the DescribeRegions operation to query the most recent region list.</p>
ClientToken	String	No	123e4567-e89b-12d3-a456-42665544****	<p>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 token can be up to 64 characters in length, and can contain letters, digits, hyphens (-), and underscores (_).</p> <p>For more information, see Ensure idempotence.</p>

Parameter	Type	Required	Example	Description
TemplateURL	String	No	oss://ros-template/demo	<p>The URL of the file that contains the template body. The URL must point to a template that is located on an HTTP or HTTPS web server or in an Alibaba Cloud OSS bucket, for examples, <code>oss://ros/stack-policy/demo</code> and <code>oss://ros/stack-policy/demo?RegionId=cn-hangzhou</code>. The template can be up to 524,288 bytes in length. If you do not specify <code>RegionId</code> in the URL, the region ID of the stack group is used.</p> <div style="background-color: #e6f2ff; padding: 5px; border: 1px solid #d9e1f2;"> <p> Note You must specify only one of the following parameters: <code>TemplateBody</code>, <code>TemplateURL</code>, <code>TemplateId</code>, and <code>TemplateScratchId</code>.</p> </div>
RamRoleName	String	No	test-role	<p>The name of the RAM role. ROS assumes the RAM role to create the stack and uses credentials of the role to call the APIs of Alibaba Cloud services.</p> <p>ROS assumes the RAM role to perform operations on the stack. If you have permissions to perform operations on the stack but you do not have permissions to use the RAM role, ROS still uses the RAM role. You must make sure that the least privileges are granted to the role.</p> <p>If you do not specify this parameter, ROS uses the existing role that is associated with the stack. If no roles are available for ROS to assume, ROS uses a temporary credential that is generated from the credentials of your account.</p> <p>The RAM role name can be up to 64 characters in length.</p>

Parameter	Type	Required	Example	Description
DeletionProtection	String	No	Enabled	<p>Specifies whether to enable deletion protection on the stack. Default value: Disabled. Valid values:</p> <ul style="list-style-type: none"> Enabled: enables deletion protection on the stack. Disabled: disables deletion protection on the stack. You can release the stack by using the ROS console or calling the DeleteStack operation. <p> Note The value of the DeletionProtection parameter of a nested stack must be the same as the value of the DeletionProtection parameter of its root stack.</p>
CreateOption	String	No	KeepStackOnCreationComplete	<p>Specifies whether to delete the stack after the stack is created. Default value: KeepStackOnCreationComplete. Valid values:</p> <ul style="list-style-type: none"> KeepStackOnCreationComplete: retains the stack and all of its resources after the stack is created. AbandonStackOnCreationComplete: deletes the stack but retains all of its resources after the stack is created. This ensures that the maximum number of stacks allowed to be created is not reached. If the stack fails to be created, the stack is retained. AbandonStackOnCreationRollbackComplete: deletes the stack after rollback on stack creation failure is complete. This ensures that the maximum number of stacks allowed to be created is not reached. If the stack is created or the rollback fails to complete, the stack is retained.

Parameter	Type	Required	Example	Description
TemplateId	String	No	5ecd1e10-b0e9-4389-a565-e4c15efc****	<p>The ID of the template. This parameter applies to shared and private templates.</p> <div style="border: 1px solid #add8e6; padding: 5px;"> <p> Note You must specify only one of the following parameters: TemplateBody, TemplateURL, TemplateId, and TemplateScratchId.</p> </div>
TemplateVersion	String	No	v1	The version of the template. This parameter only takes effect if the TemplateId parameter is specified.
ResourceGroupId	String	No	rg-acfmxazb4ph6aiy****	<p>The ID of the resource group. If you do not specify this parameter, the stack is added to the default resource group.</p> <p>For more information about resource groups, see What is Resource Management?</p>
Parallelism	Long	No	1	<p>The maximum number of concurrent operations that are performed on resources. This parameter only takes effect for Terraform stacks.</p> <p>This parameter is empty by default. You can set this parameter to an integer greater than or equal to 0.</p> <div style="border: 1px solid #add8e6; padding: 5px;"> <p> Note</p> <ul style="list-style-type: none"> If you set this parameter to an integer greater than 0, the integer is used. If you do not set this parameter or set it to 0, the default value 10 is used. If you set this parameter, ROS associates the value with the stack and the value can affect subsequent operations on the stack, such as updating a stack. </div>

Parameter	Type	Required	Example	Description
TemplateScratchId	String	No	ts-aa9c62feab844a6b****	<p>The ID of the scenario.</p> <p>For more information about how to query the IDs of scenarios, see ListTemplateScratches.</p> <p>Note You must specify only one of the following parameters: TemplateBody, TemplateURL, TemplateId, and TemplateScratchId.</p>
TemplateScratchRegionId	String	No	cn-hangzhou	<p>The region ID of the scenario. The default value is the same as the value of RegionId.</p> <p>You can call the DescribeRegions operation to query the most recent region list.</p>
Parameters.N.ParameterKey	String	Yes	InstanceId	<p>The key of parameter N that is defined in the template. If you do not specify the key and value of the parameter, ROS uses the default key and value in the template.</p> <p>Maximum value of N: 200.</p> <p>Note Parameters in Parameters.N.ParameterKey is optional. If you need to specify Parameters, you must specify both Parameters.N.ParameterKey and Parameters.N.ParameterValue.</p>
Parameters.N.ParameterValue	String	Yes	i-xxxxxx	<p>The value of parameter N that is defined in the template.</p> <p>Maximum value of N: 200.</p> <p>Note Parameters in Parameters.N.ParameterValue is optional. If you need to specify Parameters, you must specify both Parameters.N.ParameterKey and Parameters.N.ParameterValue.</p>

Parameter	Type	Required	Example	Description
NotificationURLs. N	String	No	http://my-site.com/ros-event	<p>The callback URL that is used to receive stack event N. Valid values:</p> <ul style="list-style-type: none"> • HTTP POST URL <p>Each URL can be up to 1,024 bytes in length.</p> <ul style="list-style-type: none"> • eventbridge <p>When the status of a stack changes, ROS sends event notifications to the EventBridge service. You can view the event information in the EventBridge console.</p> <div style="border: 1px solid #add8e6; padding: 5px; margin: 10px 0;"> <p> Note ROS supports the EventBridge service in the following regions: China (Hangzhou), China (Shanghai), China (Beijing), China (Hong Kong), and China (Zhangjiakou).</p> </div> <p>Maximum value of N: 5. ROS sends a notification to the specified URL when the stack status changes. If rollback is enabled on the stack, notifications are sent when the stack is in the CREATE_ROLLBACK or ROLLBACK state, but are not sent when the stack is in the CREATE_FAILED or UPDATE_FAILED state. ROS does not send notifications when the stack is in the IN_PROGRESS state.</p> <p>Notifications are sent regardless of whether the Outputs parameter is specified. The following sample code shows the content of an event notification:</p>

Parameter	Type	Required	Example	Description
				<pre> "Outputs": [{ "Description": "No description given", "OutputKey": "InstanceId", "OutputValue": "i-xxx" }], "StackId": "80bd6b6c- e888-4573-ac3b-93d20113****", "StackName": "test- notificationurl", "Status": "CREATE_COMPLETE" </pre>
Tags.N.Key	String	Yes	usage	The key of tag N of the stack. Valid values of N: 1 to 20. NOTE Tags.N.Key is optional. If you need to specify Tags, you must specify the Tags.N.Key parameter.
Tags.N.Value	String	No	test	The value of tag N of the stack. Valid values of N: 1 to 20.

For more information about common request parameters, see [Common parameters](#).

Response parameters

Parameter	Type	Example	Description
RequestId	String	B288A0BE-D927-4888-B0F7-B35EF84B6E6F	The ID of the request.
StackId	String	4a6c9851-3b0f-4f5f-b4ca-a14bf691****	The ID of the stack.

Examples

Sample requests

```

http(s)://ros.aliyuncs.com/?Action=CreateStack
&TemplateBody={"ROSTemplateFormatVersion":"2015-09-01"}
&StackName=MyStack
&RegionId=cn-hangzhou
&<Common request parameters>
    
```

Sample success responses

`XML` format

```

HTTP/1.1 200 OK
Content-Type:application/xml
<CreateStackResponse>
  <StackId>4a6c9851-3b0f-4f5f-b4ca-a14bf691****</StackId>
  <RequestId>B288A0BE-D927-4888-B0F7-B35EF84B6E6F</RequestId>
</CreateStackResponse>

```

JSON format

```

HTTP/1.1 200 OK
Content-Type:application/json
{
  "StackId" : "4a6c9851-3b0f-4f5f-b4ca-a14bf691****",
  "RequestId" : "B288A0BE-D927-4888-B0F7-B35EF84B6E6F"
}

```

Error codes

For a list of error codes, visit the [API Error Center](#).

Error code	Error message	HTTPS status code	Description
CircularDependency	Circular Dependency Found: {reason}.	400	The error message returned because the template contains circular dependencies. reason indicates the cause of the error.
InvalidSchema	{reason}.	400	The error message returned because the template format is invalid. reason indicates the cause of the error.
InvalidTemplateAttribute	The Referenced Attribute ({resource} {name}) is incorrect.	400	The error message returned because the resource property that is referenced in the Outputs section of the template is invalid. resource indicates the resource name. name indicates the property name.

Error code	Error message	HTTPS status code	Description
InvalidTemplatePropertyType	The specified value type of ({resource} {section}) is incorrect.	400	The error message returned because the type of the specified resource property that is defined in the template is invalid. resource indicates the resource name. section indicates the section name.
InvalidTemplateReference	The specified reference "{name}" (in {referencer}) is incorrect.	400	The error message returned because the template contains an invalid reference. name indicates the reference name. referencer indicates the referencer name.
InvalidTemplateSection	The template section is invalid: {section}.	400	The error message returned because the template contains an invalid section. section indicates the section name.
InvalidTemplateVersion	The template version is invalid: {reason}.	400	The error message returned because the template version is invalid. reason indicates the cause of the error.
StackValidationFailed	{reason}.	400	The error message returned because the stack fails to be validated. reason indicates the cause of the error.

Error code	Error message	HTTPS status code	Description
UnknownUserParameter	The Parameter ({name}) was not defined in template.	400	The error message returned because the specified parameter is not defined in the template. name indicates the parameter name.
UserParameterMissing	The Parameter {name} was not provided.	400	The error message returned because no value is set for the specified parameter that is defined in the template. name indicates the parameter name.
ActionInProgress	Stack {name} already has an action ({action}) in progress.	409	The error message returned because the specified stack has a change operation in progress. name indicates the name or ID of the stack. action indicates the change operation.
StackExists	The Stack ({name}) already exists.	409	The error message returned because a stack with the same name already exists. name indicates the stack name.
TemplateNotFound	The Template ({ ID }) could not be found.	404	The error message returned because the specified template does not exist. ID indicates the template ID.

Error code	Error message	HTTPS status code	Description
TemplateNotFound	The Template { ID } with version { version } could not be found.	404	The error message returned because the specified template or template version does not exist. ID indicates the template ID. version indicates the template version.

7.3. ContinueCreateStack

Continues to create a stack after the stack fails to be created.

In this example, a stack that fails to be created is used. The stack is named `4a6c9851-3b0f-4f5f-b4ca-a14bf691****` and is deployed in the China (Hangzhou) 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
Action	String	Yes	ContinueCreateStack	The operation that you want to perform. Set the value to ContinueCreateStack.
StackId	String	Yes	4a6c9851-3b0f-4f5f-b4ca-a14bf691****	The ID of the stack.
RegionId	String	Yes	cn-hangzhou	The region ID of the stack. You can call the DescribeRegions operation to query the most recent region list.

Parameter	Type	Required	Example	Description
RamRoleName	String	No	test-role	<p>The name of the RAM role. Resource Orchestration Service (ROS) assumes the RAM role to create the stack and uses the credential of the role to call the APIs of Alibaba Cloud services.</p> <p>ROS assumes the role to perform operations on the stack. If you are authorized to perform operations on the stack but do not have permissions to use the role, ROS uses the role and you must make sure that least privileges are granted to this role.</p> <p>If you do not specify this parameter, ROS uses the existing role that is associated with the stack. If no roles are available for ROS to assume, ROS uses the temporary credential that is generated from the credentials of your account.</p> <p>The name can be up to 64 bytes in length.</p>

Parameter	Type	Required	Example	Description
Mode	String	No	Recreate	<p>The mode of the operation that continues to create the stack. Default value: Recreate. Valid values:</p> <ul style="list-style-type: none"> • Recreate <ul style="list-style-type: none"> If you set this parameter to Recreate, you need ROS to continue to create only the following types of resources: <ul style="list-style-type: none"> ◦ Resources that fail to be created ◦ Resources that you specify for the <code>RecreatingResources.N</code> parameter ◦ Resources that depend on the resources that you specify for the <code>RecreatingResources.N</code> parameter ◦ Resources that you have not created <div style="background-color: #e1f5fe; padding: 10px; margin: 10px 0;"> <p> Note <code>RecreatingResources.N</code>, <code>TemplateBody</code>, <code>TemplateURL</code>, and <code>Parameters</code> only take effect when the <code>Mode</code> parameter is set to <code>Recreate</code>.</p> </div> <ul style="list-style-type: none"> • Ignore <ul style="list-style-type: none"> ◦ ROS ignores and discards resources that fail to be created and you have not created. ROS marks the creation operation on the stack as successful. ◦ The content of the template that you use to create the stack is changed.

Parameter	Type	Required	Example	Description
TemplateBody	String	No	<pre>{"ROSTemplateFormatVersion": "2015-09-01"}</pre>	<p>The structure that contains the template body. The template body must be 1 to 524,288 bytes in length.</p> <p>If the length of the template body is longer than required, we recommend that you add parameters to the HTTP POST request body to prevent request failures caused by the excessively long URLs.</p> <p>The template is subject to the following limits:</p> <ul style="list-style-type: none"> You can modify only the Description, Metadata, Resources, and Outputs sections in the template. You cannot add sections to or remove sections from the template. The Resources section is subject to the following limits: <ul style="list-style-type: none"> You cannot delete the resources or modify the template content for the resources that you do not want to continue to create. You can delete the resources and modify the template content for the resources that you want to continue to create. You can add resources to this section. <div style="background-color: #e0f2f7; padding: 10px; margin-top: 10px;"> <p> Note</p> <ul style="list-style-type: none"> This parameter only takes effect when the Mode parameter is set to Recreate. You can specify only one of the following parameters: TemplateBody, TemplateURL, and TemplateId. If you do not specify the parameters, the existing template is used. </div>

Parameter	Type	Required	Example	Description
TemplateURL	String	No	oss://ros-template/demo	<p>The URL of the file that contains the template body. The URL must point to a template that is located on an HTTP or HTTPS web server or in an Object Storage Service (OSS) bucket. Examples: oss://ros/template/demo and oss://ros/template/demo?RegionId=cn-hangzhou. The template can be up to 524,288 bytes in length.</p> <p>If you do not specify RegionId in the URL, the region ID of the stack is used.</p> <div style="background-color: #e6f2ff; padding: 10px; border: 1px solid #d9e1f2;"> <p> Note</p> <ul style="list-style-type: none"> This parameter only takes effect when the Mode parameter is set to Recreate. The limits on the template that is specified for this parameter are the same as those described for the TemplateBody parameter. You can specify only one of the following parameters: TemplateBody, TemplateURL, and TemplateId. If you do not specify the parameters, the existing template is used. </div>
DryRun	Boolean	No	false	<p>Specifies whether only to validate the stack. Default value: false. Valid values:</p> <ul style="list-style-type: none"> true: only validates the stack. false: validates the stack and continues to create the stack that fails to be created.

Parameter	Type	Required	Example	Description
TemplateId	String	No	5ecd1e10-b0e9-4389-a565-e4c15efc****	<p>The ID of the template. This parameter applies to shared and private templates.</p> <p> Note You can specify only one of the following parameters: TemplateBody, TemplateURL, and TemplateId. If you do not specify the parameters, the existing template is used.</p>
TemplateVersion	String	No	v1	<p>The version of the template. This parameter only takes effect when the TemplateId parameter is specified.</p>

Parameter	Type	Required	Example	Description
Parallelism	Long	No	1	<p>The maximum number of operations that are concurrently performed on a resource. This parameter only takes effect for Terraform stacks.</p> <p>This parameter is empty by default. You can set this parameter to an integer greater than or equal to 0.</p> <div style="background-color: #e0f2f1; padding: 10px; border: 1px solid #ccc;"> <p> Note</p> <ul style="list-style-type: none"> • If you set this parameter to an integer greater than 0, the integer is used as the maximum number of operations. • If you set this parameter to 0, the default value of Terraform is used as the maximum number of resources. In most cases, the default value of Terraform is 10. • If you do not set this parameter, the value that you set for this parameter in the last operation is used. If you did not set this parameter in the last operation, the default value of Terraform is used. In most cases, the default value of Terraform is 10. • If you set this parameter, ROS associates the value with the stack and the value can affect subsequent operations on the stack. </div>
RecreatingResources.N	String	No	WebServer	<p>Resource N that ROS continues to create after the resource fails to be created. You can add other resources that you want ROS to continue to create. ROS continues to create all resources that depend on the resources.</p>

Parameter	Type	Required	Example	Description
Parameters.N.ParameterKey	String	Yes	Amount	<p>The key of template parameter N that you want to override. If you do not specify the key and value of the parameter, ROS uses the key and value that were used in the last operation performed to create the stack. Maximum value of N: 200.</p> <p>Note This parameter only takes effect when the Mode parameter is set to Recreate.</p>
Parameters.N.ParameterValue	String	Yes	12	<p>The value of template parameter N that you want to override. Maximum value of N: 200.</p> <p>The parameter that is overridden is subject to the following limits:</p> <ul style="list-style-type: none"> This parameter cannot change values of the Conditions section in the template from true to false or from false to true. The overridden parameter can be referenced only by resources that ROS continues to create. <p>Note This parameter only takes effect when the Mode parameter is set to Recreate.</p>

For more information about common request parameters, see [Common parameters](#).

Response parameters

Parameter	Type	Example	Description
RequestId	String	B288A0BE-D927-4888-B0F7-B35EF84B6E6	The ID of the request.
StackId	String	4a6c9851-3b0f-4f5f-b4ca-a14bf691****	The ID of the stack.

Examples

Sample requests

```
http(s)://ros.aliyuncs.com/?Action=ContinueCreateStack
&RegionId=cn-hangzhou
&StackId=4a6c9851-3b0f-4f5f-b4ca-a14bf691****
&<Common request parameters>
```

Sample success responses

XML format

```
HTTP/1.1 200 OK
Content-Type:application/xml
<ContinueCreateStackResponse>
  <RequestId>B288A0BE-D927-4888-B0F7-B35EF84B6E6</RequestId>
  <StackId>4a6c9851-3b0f-4f5f-b4ca-a14bf691****</StackId>
</ContinueCreateStackResponse>
```

JSON format

```
HTTP/1.1 200 OK
Content-Type:application/json
{
  "RequestId" : "B288A0BE-D927-4888-B0F7-B35EF84B6E6",
  "StackId" : "4a6c9851-3b0f-4f5f-b4ca-a14bf691****"
}
```

Error codes

For a list of error codes, visit the [API Error Center](#).

HttpCode	Error code	Error message	Description
400	CircularDependency	Circular Dependency Found: {reason}.	The error message returned because the template contains a circular dependency. reason indicates the specific reason.
400	InvalidSchema	{reason}.	The error message returned because the template format is invalid. reason indicates the specific reason.

HttpCode	Error code	Error message	Description
400	InvalidTemplateAttribute	The Referenced Attribute ({resource} {name}) is incorrect.	The error message returned because the resource property that is referenced in the Outputs section of the template is invalid. resource indicates the resource name. name indicates the property name.
400	InvalidTemplatePropertyType	The specified value type of ({resource} {section}) is incorrect.	The error message returned because the type of the specified resource property that is defined in the template is invalid. resource indicates the resource name. section indicates the section name.
400	InvalidTemplateReference	The specified reference "{name}" (in {referencer}) is incorrect.	The error message returned because the template contains an invalid reference. name indicates the reference name. referencer indicates the referencer name.
400	InvalidTemplateSection	The template section is invalid: {section}.	The error message returned because the template contains an invalid section. section indicates the section name.
400	InvalidTemplateVersion	The template version is invalid: {reason}.	The error message returned because the template version is invalid. reason indicates the specific cause.

HttpCode	Error code	Error message	Description
400	StackValidationFailed	{reason}.	The error message returned because the stack fails to be validated. reason indicates the specific cause.
400	UnknownUserParameter	The Parameter ({name}) was not defined in template.	The error message returned because the specified parameter is not defined in the template. name indicates the parameter name.
400	UserParameterMissing	The Parameter {name} was not provided.	The error message returned because no value is set for the parameter specified in the template. name indicates the parameter name.
400	ContinueCreateStackValidationFailed	{reason}.	The error message returned because the operation that continues to create the stack fails to be validated. reason indicates the specific reason.
404	ResourceNotFound	The Resource ({name}) could not be found in Stack {stack}.	The error message returned because the specified resource does not exist in the stack. name indicates the resource name. stack indicates the stack name or ID.

HttpCode	Error code	Error message	Description
404	StackNotFound	The Stack ({name}) could not be found.	The error message returned because the specified stack does not exist. name indicates the stack name or ID.
409	ActionInProgress	Stack {name} already has an action ({action}) in progress.	The error message returned because the specified stack is being changed. name indicates the stack name or ID. action indicates the change operation.
404	TemplateNotFound	The Template ({ ID }) could not be found.	The error message returned because the specified template does not exist. ID indicates the template ID.
404	TemplateNotFound	The Template { ID } with version { version } could not be found.	The error message returned because the specified template or template version does not exist. ID indicates the template ID. version indicates the template version.

7.4. SetDeletionProtection

You SetDeletionProtection call this operation to modify deletion protection for a stack.

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	SetDeletionProtection	The operation that you want to perform. Set the value to SetDeletionProtection.
DeletionProtection	String	Yes	Enabled	<p>Indicates whether stack deletion protection is enabled. Valid values:</p> <ul style="list-style-type: none"> Enabled: enables the stack deletion protection. Disabled (default): Resource stack deletion protection is Disabled. You can use the console or API(DeleteStack) to release the stack resources. <div style="border: 1px solid #add8e6; padding: 5px; margin-top: 10px;"> <p> Note The deletion of nested stacks is the same as the root stack.</p> </div>
RegionId	String	Yes	cn-hangzhou	The region ID of the stack. You can call the DescribeRegions operation to query the most recent region list.
StackId	String	Yes	4a6c9851-3b0f-4f5f-b4ca-a14bf691****	<p>The ID of the stack.</p> <p>The delete protection attribute of a nested stack is determined by the root stack and remains unchanged from the root stack.</p>

Response parameters

Parameter	Type	Example	Description
RequestId	String	B288A0BE-D927-4888-B0F7-B35EF84B6E6F	The ID of the request.

Examples

Sample requests

```
http(s)://ros.aliyuncs.com/? Action=SetDeletionProtection
&DeletionProtection=Enabled
&RegionId=cn-hangzhou
&StackId=4a6c9851-3b0f-4f5f-b4ca-a14bf691****
&<Common request parameters>
```

Sample success responses

XML format

```
<SetDeletionProtectionResponse>
  <RequestId>B288A0BE-D927-4888-B0F7-B35EF84B6E6F</RequestId>
</SetDeletionProtectionResponse>
```

JSON format

```
{
  "RequestId": "B288A0BE-D927-4888-B0F7-B35EF84B6E6F"
}
```

Error codes

For more information about error codes, visit [API Error Center](#).

HTTP status code	Error code	Error message	Description
400	InvalidOperation.SetDeletionProtection	Fail to set deletion protection for {type} {ID}, {reason}.	Failed to set deletion protection. type indicates the type of the operation object, ID indicates the ID of the operation object, and reason indicates the reason of the failure.
404	StackNotFound	The Stack ({name}) could not be found.	The error message returned because the specified stack does not exist. name indicates the name or ID of the stack.

7.5. CancelUpdateStack

You can call this operation to cancel the update of a stack.

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	CancelUpdateStack	The operation that you want to perform. Set the value to CancelUpdateStack.
RegionId	String	Yes	cn-hangzhou	The region ID of the stack. You can call the DescribeRegions operation to query the most recent region list.
StackId	String	Yes	4a6c9851-3b0f-4f5f-b4ca-a14bf691****	The ID of the stack.
CancelType	String	No	Safe	The method to cancel the update operation. Valid values: <ul style="list-style-type: none"> Quick: cancels the update of a stack as soon as possible. Safe: cancels the update of a stack as safely as possible.

Response parameters

Parameter	Type	Example	Description
RequestId	String	B288A0BE-D927-4888-B0F7-B35EF84B6E6F	The ID of the request.

Examples

Sample requests

```
http(s)://ros.aliyuncs.com/? Action=CancelUpdateStack
&RegionId=cn-hangzhou
&StackId=4a6c9851-3b0f-4f5f-b4ca-a14bf691****
&<Common request parameters>
```

Sample success responses

XML format

```
<CancelUpdateStackResponse>
  <RequestId type="string">B288A0BE-D927-4888-B0F7-B35EF84B6E6F</RequestId>
  <StackId type="string">4a6c9851-3b0f-4f5f-b4ca-a14bf691****</StackId>
</CancelUpdateStackResponse>
```

JSON format

```
{
  "RequestId": "B288A0BE-D927-4888-B0F7-B35EF84B6E6F",
  "StackId": "4a6c9851-3b0f-4f5f-b4ca-a14bf691****"
}
```

Error codes

For a list of error codes, visit the [API Error Center](#).

HTTP status code	Error code	Error message	Description
404	StackNotFound	The Stack ({name}) could not be found.	The error message returned because the specified stack does not exist. name indicates the name or ID of the stack.
409	ActionInProgress	Stack {name} already has an action ({action}) in progress.	The error message returned because the specified stack has a change operation in progress. name indicates the name or ID of the stack, and action indicates the change operation.

7.6. GetStack

Queries the information about a stack.

This topic describes how to query the information about a stack. In this example, the stack whose ID is `c754d2a4-28f1-46df-b557-9586173a****` and that is deployed in the China (Hangzhou) region is 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	GetStack	The operation that you want to perform. Set the value to GetStack.

Parameter	Type	Required	Example	Description
StackId	String	Yes	c754d2a4-28f1-46df-b557-9586173a****	The ID of the stack.
RegionId	String	Yes	cn-hangzhou	The ID of the region in which the stack is deployed. You can call the DescribeRegions operation to query the most recent region list.
ClientToken	String	No	123e4567-e89b-12d3-a456-42665544****	<p>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.</p> <p>The token can be up to 64 characters in length, and can contain letters, digits, hyphens (-), and underscores (_).</p> <p>For more information, see Ensure idempotence.</p>
OutputOption	String	No	Disabled	<p>Specifies whether to return output parameters. Default value: Enabled. Valid values:</p> <ul style="list-style-type: none"> Enabled: returns output parameters. Disabled: does not return output parameters. <div style="border: 1px solid #add8e6; padding: 10px; margin-top: 10px;"> <p> Note The system takes a long period of time to calculate output parameters. If you do not want to query the parameters, we recommend that you set the OutputOption parameter to Disabled. This increases the response speed of the GetStack operation.</p> </div>

Parameter	Type	Required	Example	Description
ShowResourceProgress	String	No	Disabled	<p>Specifies whether to return the ResourceProgress parameter. Default value: Disabled. Valid values:</p> <ul style="list-style-type: none"> Disabled: does not return the ResourceProgress parameter. EnabledIfCreateStack: returns the ResourceProgress parameter only when you create a stack. <div style="border: 1px solid #add8e6; padding: 5px; margin-top: 10px;"> <p>Note For a creation operation, the state of the stack can be CREATE_IN_PROGRESS, CREATE_COMPLETE, CREATE_FAILED, CREATE_ROLLBACK_IN_PROGRESS, CREATE_ROLLBACK_COMPLETE, or CREATE_ROLLBACK_FAILED.</p> </div>

For more information about common request parameters, see [Common parameters](#).

Response parameters

Parameter	Type	Example	Description
			<p>The status of the stack. Valid values:</p> <ul style="list-style-type: none"> CREATE_IN_PROGRESS: The stack is being created. CREATE_FAILED: The stack fails to be created. CREATE_COMPLETE: The stack is created. UPDATE_IN_PROGRESS: The stack is being updated. UPDATE_FAILED: The stack fails to be updated. UPDATE_COMPLETE: The stack is updated. DELETE_IN_PROGRESS: The stack is being deleted. DELETE_FAILED: The stack fails to be deleted. CREATE_ROLLBACK_IN_PROGRESS: The resources are being rolled back after the stack fails to be created. CREATE_ROLLBACK_FAILED: The resources fail to be rolled back after the stack fails to be created.

Parameter	Type	Example	Description
Status	String	CREATE_COMPLETE	<ul style="list-style-type: none"> • CREATE_ROLLBACK_COMPLETE: The resources are rolled back after the stack fails to be created. • ROLLBACK_IN_PROGRESS: The stack is being rolled back. • ROLLBACK_FAILED: The stack fails to be rolled back. • ROLLBACK_COMPLETE: The stack is rolled back. • CHECK_IN_PROGRESS: The stack is being validated. • CHECK_FAILED: The stack fails to be validated. • CHECK_COMPLETE: The stack is validated. • REVIEW_IN_PROGRESS: The stack is being reviewed. • IMPORT_CREATE_IN_PROGRESS: The stack is being created by importing resources. • IMPORT_CREATE_FAILED: The stack fails to be created by importing resources. • IMPORT_CREATE_COMPLETE: The stack is created by importing resources. • IMPORT_CREATE_ROLLBACK_IN_PROGRESS: The resources are being rolled back after the stack fails to be created by importing resources. • IMPORT_CREATE_ROLLBACK_FAILED: The resources fail to be rolled back after the stack fails to be created by importing resources. • IMPORT_CREATE_ROLLBACK_COMPLETE: The resources are rolled back after the stack fails to be created by importing resources. • IMPORT_UPDATE_IN_PROGRESS: The stack is being updated by importing resources. • IMPORT_UPDATE_FAILED: The stack fails to be updated by importing resources. • IMPORT_UPDATE_COMPLETE: The stack is updated by importing resources. • IMPORT_UPDATE_ROLLBACK_IN_PROGRESS: The resources are being rolled back after the stack fails to be updated by importing resources. • IMPORT_UPDATE_ROLLBACK_FAILED: The resources fail to be rolled back after the stack fails to be updated by importing resources. • IMPORT_UPDATE_ROLLBACK_COMPLETE: The resources are rolled back after the stack fails to be updated by importing resources.

Parameter	Type	Example	resources. Description
Description	String	Create a VPC.	The description of the stack.
Parameters	Array of Parameter		The parameters of the stack.
ParameterKey	String	ALIYUN::Region	The name of the parameter.
ParameterValue	String	cn-hangzhou	The value of the parameter.
RequestId	String	B288A0BE-D927-4888-B0F7-B35EF84B6E6F	The ID of the request.
StatusReason	String	Stack CREATE completed successfully	The reason why the stack is in a state.
ParentStackId	String	4a6c9851-3b0f-4f5f-b4ca-a14bf692****	The ID of the parent stack.
CreateTime	String	2020-09-16T08:21:40	The time when the stack was created. The time follows the ISO 8601 standard in the YYYY-MM-DDThh:mm:ss format. The time is displayed in UTC.
DeletionProtection	String	Disabled	<p>Specifies whether deletion protection is enabled for the stack. Valid values:</p> <ul style="list-style-type: none"> Enabled: Deletion protection is enabled for the stack. Disabled: Deletion protection is disabled for the stack. You can delete the stack by using the Resource Orchestration Service (ROS) console or by calling the DeleteStack operation. <div style="background-color: #e0f2f7; padding: 5px; border: 1px solid #ccc;"> <p> Note Deletion protection of a nested stack is the same as that of its root stack.</p> </div>
RootStackId	String	4a6c9851-3b0f-4f5f-b4ca-a14bf692****	The ID of the root stack. This parameter is returned when the specified stack is a nested stack.

Parameter	Type	Example	Description
TemplateDescription	String	Create a VPC.	The description of the template.
StackType	String	ROS	The stack type. Valid values: <ul style="list-style-type: none"> • ROS • Terraform
RamRoleName	String	test-role	<p>The name of the RAM role. ROS assumes the RAM role to create the stack, and uses the credential of the RAM role to call the APIs of Alibaba Cloud services.</p> <p>ROS assumes the RAM role to perform operations on the stack. If you have permissions to perform operations on the stack but do not have permissions to use the role, ROS still assumes the role. Therefore, you must make sure that the least privileges are granted to this role.</p> <p>If you do not specify this parameter, ROS assumes the existing role that is associated with the stack. If no roles are available for ROS to assume, ROS uses the temporary credential that is generated from the credentials of your account.</p> <p>The name can be up to 64 characters in length.</p>
UpdateTime	String	2020-09-17T08:21:40	The time when the stack was updated. The time follows the ISO 8601 standard in the YYYY-MM-DDThh:mm:ss format. The time is displayed in UTC.
Outputs	Array of Object	<pre>[{"Description": "VPC ID", "OutputKey": "VpcId", "OutputValue": "vpc-bp1m6fww66xbntjyc****"}]</pre>	<p>The output parameters of the stack.</p> <div style="background-color: #e6f2ff; padding: 5px;"> <p> Note This parameter is returned when the OutputOption parameter is set to Enabled.</p> </div>
DriftDetectionTime	String	2020-09-16T09:21:40	The time when the last successful drift detection was performed on the stack.

Parameter	Type	Example	Description
RegionId	String	cn-hangzhou	The ID of the region in which the stack is deployed. You can call the DescribeRegions operation to query the most recent region list.
StackDriftStatus	String	IN_SYNC	The status of the stack on which the last successful drift detection was performed. Valid values: <ul style="list-style-type: none"> DRIFTED: Drift detection is being performed on the stack. NOT_CHECKED: No successful drift detection is performed on the stack. IN_SYNC: The stack is being synchronized.
NotificationURLs	Array of String	["http://127.XX.XX.1:8080/x", "http://127.0.XX.XX:8080/y"]	The callback URLs that are used to receive stack events.
DisableRollback	Boolean	false	Indicates whether rollback is disabled when the stack fails to be created. Default value: false. Valid values: <ul style="list-style-type: none"> true: Rollback is disabled when the stack fails to be created. false: Rollback is enabled when the stack fails to be created.
StackName	String	MyStack	The name of the stack. The name can be up to 255 characters in length, and can contain digits, letters, hyphens (-), and underscores (_). The name must start with a digit or letter.
Tags	Array of Tag		The tags of the stack.
Key	String	usage	The tag key of the stack.
Value	String	test	The tag value of the stack.
TimeoutInMinutes	Integer	10	The timeout period within which you can create the stack. Unit: minutes.

Parameter	Type	Example	Description
StackId	String	c754d2a4-28f1-46df-b557-9586173a****	The ID of the stack.
ResourceGroupId	String	rg-acfmxazb4ph6aiy***	The ID of the resource group.
ResourceProgress	Object		The progress of resource creation.
TotalResourceCount	Integer	2	The total number of resources.
SuccessResourceCount	Integer	1	The number of resources that are created.
FailedResourceCount	Integer	0	The number of resources that fail to be created.
InProgressResourceCount	Integer	1	The number of resources that are being created.
PendingResourceCount	Integer	0	The number of resources that are pending to be created.
InProgressResourceDetails	Array of InProgressResourceDetail		The progress details of resource creation.
ResourceName	String	WaitCondition	The name of the resource.
ResourceType	String	ALIYUN::ROS::WaitCondition	The resource type.
ProgressValue	Float	5	The current progress value of the resource.
ProgressTargetValue	Float	10	The progress value that you specify for the resource.
Log	Object		The log of the stack.

Parameter	Type	Example	Description
TerraformLogs	Array of TerraformLog		<p>The logs of the Terraform stack. This parameter is returned only when the stack is a Terraform stack.</p> <div style="background-color: #e0f2f1; padding: 10px; border: 1px solid #ccc;"> <p> Note This parameter is not returned for a running stack. The logs are generated from the last creation, re-creation, update, or deletion operation that you perform on the stack.</p> </div>
Command	String	apply	<p>The name of the Terraform command. Valid values:</p> <ul style="list-style-type: none"> • apply • plan • destroy • version <p>For more information about Terraform commands, see Basic CLI Features.</p>
Stream	String	stdout	<p>The output stream. Valid values:</p> <ul style="list-style-type: none"> • stdout: a standard output stream • stderr: a standard error stream
Content	String	Apply complete! Resources: 42 added, 0 changed, 0 destroyed.	The content of the output stream that is returned after you run the command.
TemplateId	String	a52f81be-496f-4e1c-a286-8852ab54****	<p>The ID of the template. This parameter is returned only when the current template of the stack is a custom template or a shared template.</p> <p>If the template is a shared template, the value of this parameter is the same as the value of the TemplateARN parameter.</p>

Parameter	Type	Example	Description
TemplateVersion	String	v1	<p>The version of the template. This parameter is returned only when the current template of the stack is a custom template or a shared template.</p> <p>If the template is a shared template, this parameter is returned only when the VersionOption parameter is set to AllVersions.</p> <p>Valid values: v1 to v100.</p>
TemplateScratchId	String	ts-7f7a704cf71c49a6**	The ID of the scenario. This parameter is returned only when the current template of the stack is generated from a scenario.
TemplateURL	String	oss://ros/template/demo	The URL of the file that contains the template body. This parameter is returned only when the current template of the stack is from a URL. The URL must point to a template that is located on an HTTP or HTTPS web server or in an Alibaba Cloud Object Storage Service (OSS) bucket.
Interface	String	{}	The description of the web UI in the ROS console.
ServiceManaged	Boolean	false	<p>Indicates whether the stack is a managed stack. Valid values:</p> <ul style="list-style-type: none"> true false
ServiceName	String	ACVS	The name of the service to which the managed stack belongs.

Examples

Sample requests

```
http(s)://ros.aliyuncs.com/?Action=GetStack
&StackId=c754d2a4-28f1-46df-b557-9586173a****
&RegionId=cn-hangzhou
&<Common request parameters>
```

Sample success responses

`XML` format

```
HTTP/1.1 200 OK
Content-Type:application/xml
<GetStackResponse>
  <Description>Create a VPC.</Description>
  <ResourceGroupId>rg-acfmxazb4ph6aiy****</ResourceGroupId>
  <ServiceManaged>>false</ServiceManaged>
  <TemplateDescription>Create a VPC.</TemplateDescription>
  <DisableRollback>>true</DisableRollback>
  <Tags>
    <Key>usage</Key>
    <Value>test</Value>
  </Tags>
  <Status>CREATE_COMPLETE</Status>
  <Parameters>
    <ParameterValue>151266687691****</ParameterValue>
    <ParameterKey>ALIYUN::AccountId</ParameterKey>
  </Parameters>
  <Parameters>
    <ParameterValue>None</ParameterValue>
    <ParameterKey>ALIYUN::NoValue</ParameterKey>
  </Parameters>
  <Parameters>
    <ParameterValue>cn-hangzhou</ParameterValue>
    <ParameterKey>ALIYUN::Region</ParameterKey>
  </Parameters>
  <Parameters>
    <ParameterValue>c754d2a4-28f1-46df-b557-9586173a****</ParameterValue>
    <ParameterKey>ALIYUN::StackId</ParameterKey>
  </Parameters>
  <Parameters>
    <ParameterValue>MyStack</ParameterValue>
    <ParameterKey>ALIYUN::StackName</ParameterKey>
  </Parameters>
  <Parameters>
    <ParameterValue>151266687691****</ParameterValue>
    <ParameterKey>ALIYUN::TenantId</ParameterKey>
  </Parameters>
  <RequestId>B288A0BE-D927-4888-B0F7-B35EF84B6E6F</RequestId>
  <StatusReason>Stack CREATE completed successfully</StatusReason>
  <CreateTime>2020-09-16T08:21:40</CreateTime>
  <DeletionProtection>Disabled</DeletionProtection>
  <StackType>ROS</StackType>
  <RegionId>cn-hangzhou</RegionId>
  <StackName>MyStack</StackName>
  <StackId>c754d2a4-28f1-46df-b557-9586173a****</StackId>
</GetStackResponse>
```

JSON **format**

```

HTTP/1.1 200 OK
Content-Type:application/json
{
  "Description" : "Create a VPC.",
  "ResourceGroupId" : "rg-acfmxazb4ph6aiy****",
  "ServiceManaged" : false,
  "TemplateDescription" : "Create a VPC.",
  "DisableRollback" : true,
  "Tags" : [ {
    "Key" : "usage",
    "Value" : "test"
  } ],
  "Status" : "CREATE_COMPLETE",
  "Parameters" : [ {
    "ParameterValue" : "151266687691****",
    "ParameterKey" : "ALIYUN::AccountId"
  }, {
    "ParameterValue" : "None",
    "ParameterKey" : "ALIYUN::NoValue"
  }, {
    "ParameterValue" : "cn-hangzhou",
    "ParameterKey" : "ALIYUN::Region"
  }, {
    "ParameterValue" : "c754d2a4-28f1-46df-b557-9586173a****",
    "ParameterKey" : "ALIYUN::StackId"
  }, {
    "ParameterValue" : "MyStack",
    "ParameterKey" : "ALIYUN::StackName"
  }, {
    "ParameterValue" : "151266687691****",
    "ParameterKey" : "ALIYUN::TenantId"
  } ],
  "RequestId" : "B288A0BE-D927-4888-B0F7-B35EF84B6E6F",
  "StatusReason" : "Stack CREATE completed successfully",
  "CreateTime" : "2020-09-16T08:21:40",
  "DeletionProtection" : "Disabled",
  "StackType" : "ROS",
  "RegionId" : "cn-hangzhou",
  "StackName" : "MyStack",
  "StackId" : "c754d2a4-28f1-46df-b557-9586173a****"
}

```

Error codes

For a list of error codes, visit the [API Error Center](#).

HTTP status code	Error code	Error message	Description
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HTTP status code	Error code	Error message	Description
404	StackNotFound	The Stack ({name}) could not be found.	The error message returned because the specified stack does not exist. name indicates the name or ID of the stack.

7.7. ListStacks

Queries the list of stacks.

Description

This topic describes how to query the list of stacks. In this example, the stacks that are deployed in the China (Hangzhou) region 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	ListStacks	The operation that you want to perform. Set the value to ListStacks.
PageSize	Long	No	10	The number of entries to return on each page. Maximum value: 50. Default value: 10.
ParentStackId	String	No	4a6c9851-3b0f-4f5f-b4ca-a14bf691****	The ID of the parent stack.
RegionId	String	Yes	cn-hangzhou	The ID of the region to which the stack belongs. You can call the DescribeRegions operation to query the most recent region list.

Parameter	Type	Required	Example	Description
PageNumber	Long	No	1	The number of the page to return. Pages start from page 1. Default value: 1.
ShowNestedStack	Boolean	No	true	Specifies whether to return nested stacks. Default value: false. Valid values: <ul style="list-style-type: none"> true false <div style="border: 1px solid #add8e6; padding: 5px; margin-top: 10px;"> <p> Note If you specify the ParentStackId parameter, you must set the ShowNestedStack parameter to true.</p> </div>
StackId	String	No	4a6c9851-3b0f-4f5f-b4ca-a14bf691****	The ID of the stack. You can specify this parameter to query only the stack ID. If you need to query the detailed information about the stack, call the GetStack operation.
ResourceGroupId	String	No	rg-acfmxazb4ph6aiy****	The ID of the resource group. For more information about resource groups, see Resource groups .
				State N of the stack. Valid values: <ul style="list-style-type: none"> CREATE_IN_PROGRESS: The stack is being created. CREATE_FAILED: The stack fails to be created. CREATE_COMPLETE: The stack is created. UPDATE_IN_PROGRESS: The stack is being updated. UPDATE_FAILED: The stack fails to be updated. UPDATE_COMPLETE: The stack is updated. DELETE_IN_PROGRESS: The stack is being deleted. DELETE_FAILED: The stack fails to be deleted. CREATE_ROLLBACK_IN_PROGRESS:

Parameter	Type	Required	Example	Description
Status.N	String	No	CREATE_COMPLETE	<p>The resources are being rolled back after the stack fails to be created.</p> <ul style="list-style-type: none"> CREATE_ROLLBACK_FAILED: The resources fail to be rolled back after the stack fails to be created. CREATE_ROLLBACK_COMPLETE: The resources are rolled back after the stack fails to be created. ROLLBACK_IN_PROGRESS: The stack is being rolled back. ROLLBACK_FAILED: The stack fails to be rolled back. ROLLBACK_COMPLETE: The stack is rolled back. CHECK_IN_PROGRESS: The stack is being validated. CHECK_FAILED: The stack fails to be validated. CHECK_COMPLETE: The stack is validated. REVIEW_IN_PROGRESS: The stack is being reviewed. IMPORT_CREATE_IN_PROGRESS: The stack is being created by importing resources. IMPORT_CREATE_FAILED: The stack fails to be created by importing resources. IMPORT_CREATE_COMPLETE: The stack is created by importing resources. IMPORT_CREATE_ROLLBACK_IN_PROGRESS: The resources are being rolled back after the stack fails to be created by importing resources. IMPORT_CREATE_ROLLBACK_FAILED: The resources fail to be rolled back after the stack fails to be created by importing resources. IMPORT_CREATE_ROLLBACK_COMPLETE: The resources are rolled back after the stack fails to be created by importing resources. IMPORT_UPDATE_IN_PROGRESS: The stack is being updated by importing resources. IMPORT_UPDATE_FAILED: The stack fails to be updated by importing resources. IMPORT_UPDATE_COMPLETE: The stack is updated by importing

Parameter	Type	Required	Example	Description
				<p>resources.</p> <ul style="list-style-type: none"> • IMPORT_UPDATE_ROLLBACK_IN_PROGRESS: The resources are being rolled back after the stack fails to be updated by importing resources. • IMPORT_UPDATE_ROLLBACK_FAILED: The resources fail to be rolled back after the stack fails to be updated by importing resources. • IMPORT_UPDATE_ROLLBACK_COMPLETE: The resources are rolled back after the stack fails to be updated by importing resources.
StackName.N	String	No	MyStack	<p>The name of stack N.</p> <p>The name can be up to 255 characters in length, and can contain digits, letters, hyphens (-), and underscores (_). The name must start with a digit or letter. You can use the wildcard character (*) for fuzzy search.</p> <p>Valid values of N: 1 to 5.</p>
Tag.N.Key	String	No	usage	<p>The key of tag N of the stack.</p> <p>Valid values of N: 1 to 20.</p>
Tag.N.Value	String	No	test	<p>The value of tag N of the stack.</p> <p>Valid values of N: 1 to 20.</p>
StackIds.N	String	No	4a6c9851-3b0f-4f5f-b4ca-a14bf691****	<p>The ID of stack N.</p> <p>You can specify one or more IDs to query the detailed information about one or more stacks at the same time.</p> <p>Valid values of N: 1 to 10.</p>

For more information about common request parameters, see [Common parameters](#).

Response parameters

Parameter	Type	Example	Description
TotalCount	Integer	2	The total number of stacks.

Parameter	Type	Example	Description
PageSize	Integer	10	The number of entries returned per page. Maximum value: 50. Default value: 10.
RequestId	String	FBAC80B4-9C27-529D-BC9C-4155FA5CD7A7	The ID of the request.
PageNumber	Integer	1	The page number of the returned page.
Stacks	Array of Stack		The list of stacks.
Status	String	CREATE_COMPLETE	The status of the stack.
UpdateTime	String	2022-03-10T07:44:36	The time when the stack was updated. The time follows the ISO 8601 standard in the YYYY-MM-DDThh:mm:ss format. The time is displayed in UTC.
DriftDetectionTime	String	2022-03-10T06:46:36	The time when the last successful drift detection was performed on the stack.
StatusReason	String	Stack CREATE completed successfully	The reason why the stack is in a specific state.
CreateTime	String	2022-03-10T06:44:36	The time when the stack was created. The time follows the ISO 8601 standard in the YYYY-MM-DDThh:mm:ss format. The time is displayed in UTC.
DisableRollback	Boolean	false	Indicates whether rollback is disabled when the stack fails to be created. Default value: false. Valid values: <ul style="list-style-type: none"> true: Rollback is disabled when the stack fails to be created. false: Rollback is enabled when the stack fails to be created.
Tags	Array of Tag		The tags of the stack.

Parameter	Type	Example	Description
Key	String	acs:rm:rgId	The tag key of the stack.
Value	String	rg-aek2frunvw7****	The tag value of the stack.
StackName	String	MyStack	The name of the stack.
TimeoutInMinutes	Integer	60	The timeout period within which the stack can be created. Unit: minutes.
RegionId	String	cn-hangzhou	The ID of the region to which the stack belongs. You can call the DescribeRegions operation to query the most recent region list.
ParentStackId	String	4a6c9851-3b0f-4f5f-b4ca-a14bf692****	The ID of the parent stack.
StackId	String	67805444-a605-45ee-a57f-83908ff6****	The ID of the stack.
StackDriftStatus	String	IN_SYNC	The status of the stack on which the last successful drift detection was performed. Valid values: <ul style="list-style-type: none"> DRIFTED: Drift detection is being performed on the stack. NOT_CHECKED: No successful drift detection is performed on the stack. IN_SYNC: The stack is being synchronized.
StackType	String	ROS	The stack type. Valid values: <ul style="list-style-type: none"> ROS: The stack is created based on a Resource Orchestration Service (ROS) template. Terraform: The stack is created based on a Terraform template.
ResourceGroupId	String	rg-aek2frunvw7****	The ID of the resource group.

Parameter	Type	Example	Description
ServiceManaged	Boolean	false	Indicates whether the stack is a managed stack. Valid values: <ul style="list-style-type: none">• true• false
ServiceName	String	ACVS	The name of the service to which the managed stack belongs.

Examples

Sample requests

```
http(s)://ros.aliyuncs.com/?Action=ListStacks
&RegionId=cn-hangzhou
&<Common request parameters>
```

Sample success responses

`XML` format

```
HTTP/1.1 200 OK
Content-Type:application/xml
<ListStacksResponse>
  <TotalCount>2</TotalCount>
  <PageSize>10</PageSize>
  <RequestId>FBAC80B4-9C27-529D-BC9C-4155FA5CD7A7</RequestId>
  <PageNumber>1</PageNumber>
  <Stacks>
    <Status>CREATE_COMPLETE</Status>
    <StackType>ROS</StackType>
    <ResourceGroupId>rg-aek2frunvw7****</ResourceGroupId>
    <ServiceManaged>>false</ServiceManaged>
    <StatusReason>Stack CREATE completed successfully</StatusReason>
    <CreateTime>2022-03-10T06:44:36</CreateTime>
    <RegionId>cn-hangzhou</RegionId>
    <DisableRollback>>false</DisableRollback>
    <StackName>MyStack</StackName>
    <Tags>
      <Value>rg-aek2frunvw7****</Value>
      <Key>acs:rm:rgId</Key>
    </Tags>
    <TimeoutInMinutes>60</TimeoutInMinutes>
    <StackId>67805444-a605-45ee-a57f-83908ff6****</StackId>
  </Stacks>
  <Stacks>
    <Status>CREATE_COMPLETE</Status>
    <StackType>ROS</StackType>
    <ResourceGroupId>rg-acfmzawhxxc****</ResourceGroupId>
    <ServiceManaged>>false</ServiceManaged>
    <StatusReason>Stack CREATE completed successfully</StatusReason>
    <CreateTime>2020-10-22T05:53:32</CreateTime>
    <RegionId>cn-hangzhou</RegionId>
    <DisableRollback>>false</DisableRollback>
    <StackName>MyStack2</StackName>
    <TimeoutInMinutes>60</TimeoutInMinutes>
    <StackId>1ae37e7b-cdf0-4709-b53d-292260a0****</StackId>
  </Stacks>
</ListStacksResponse>
```

JSON **format**

```
HTTP/1.1 200 OK
Content-Type:application/json
{
  "TotalCount" : 2,
  "PageSize" : 10,
  "RequestId" : "FBAC80B4-9C27-529D-BC9C-4155FA5CD7A7",
  "PageNumber" : 1,
  "Stacks" : [ {
    "Status" : "CREATE_COMPLETE",
    "StackType" : "ROS",
    "ResourceGroupId" : "rg-aek2frunvw7****",
    "ServiceManaged" : false,
    "StatusReason" : "Stack CREATE completed successfully",
    "CreateTime" : "2022-03-10T06:44:36",
    "RegionId" : "cn-hangzhou",
    "DisableRollback" : false,
    "StackName" : "MyStack",
    "Tags" : [ {
      "Value" : "rg-aek2frunvw7****",
      "Key" : "acs:rm:rgId"
    } ],
    "TimeoutInMinutes" : 60,
    "StackId" : "67805444-a605-45ee-a57f-83908ff6****"
  }, {
    "Status" : "CREATE_COMPLETE",
    "StackType" : "ROS",
    "ResourceGroupId" : "rg-acfmzawhxxc****",
    "ServiceManaged" : false,
    "StatusReason" : "Stack CREATE completed successfully",
    "CreateTime" : "2020-10-22T05:53:32",
    "RegionId" : "cn-hangzhou",
    "DisableRollback" : false,
    "StackName" : "MyStack2",
    "Tags" : [ ],
    "TimeoutInMinutes" : 60,
    "StackId" : "1ae37e7b-cdf0-4709-b53d-292260a0****"
  } ]
}
```

Error codes

For a list of error codes, visit the [API Error Center](#).

7.8. ListStackEvents

You can call this operation to query stacks and their resource events.

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	ListStackEvents	The operation that you want to perform. Set the value to ListStackEvents.
RegionId	String	Yes	cn-hangzhou	The region ID of the stack. You can call the DescribeRegions operation to query the most recent region list.
StackId	String	Yes	4a6c9851-3b0f-4f5f-b4ca-a14bf691****	The ID of the stack.
Status.N	RepeatList	No	CREATE_IN_PROGRESS	The status of resource N. Valid values: <ul style="list-style-type: none"> CREATE_COMPLETE CREATE_FAILED CREATE_IN_PROGRESS UPDATE_IN_PROGRESS UPDATE_FAILED UPDATE_COMPLETE UPDATE_SKIPPED DELETE_IN_PROGRESS DELETE_FAILED CHECK_IN_PROGRESS CHECK_FAILED CHECK_COMPLETE IMPORT_IN_PROGRESS IMPORT_FAILED IMPORT_COMPLETE
ResourceType.N	RepeatList	No	ALIYUN::ECS::Instance	The type of resource N. Maximum value of N: 200.
LogicalResourceId.N	RepeatList	No	WebServer	The logical ID of the resource as defined in the template.
PageNumber	Long	No	1	The number of the page to return. Pages start from page 1. Default value: 1.

Parameter	Type	Required	Example	Description
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
Events	Array		The list of events.
CreateTime	String	2019-08-01T04:07:39	The time when the task was created. The time follows the ISO 8601 standard in the YYYY-MM-DDThh:mm:ssZ format. The time is displayed in UTC.
EventId	String	0086612d-77cf-4056-b0b5-ff8e94ad****	The ID of the event.
LogicalResourceid	String	WebServer	The logical ID of the resource as defined in the template.
PhysicalResourceid	String	i-m5e3tfdbinchexh**	The physical ID of the resource.
ResourceType	String	ALIYUN::ECS::Instance	The type of the resource.
StackId	String	4a6c9851-3b0f-4f5f-b4ca-a14bf691****	The ID of the stack.
StackName	String	StackName	The name of the stack.
Status	String	CREATE_COMPLETE	The status of the resource.
StatusReason	String	state changed	The reason that the resource is in its current state.

Parameter	Type	Example	Description
PageNumber	Integer	1	The page number of the returned page. Pages start from page 1. Default value: 1.
PageSize	Integer	10	The number of entries returned per page. Maximum value: 50. Default value: 10.
RequestId	String	B288A0BE-D927-4888-B0F7-B35EF84B6E6	The ID of the request.
TotalCount	Integer	20	The total number of returned events.

Examples

Sample requests

```
http(s)://ros.aliyuncs.com/? Action=ListStackEvents
&RegionId=cn-hangzhou
&StackId=4a6c9851-3b0f-4f5f-b4ca-a14bf691****
&<Common request parameters>
```

Sample success responses

XML format

```
<ListStackEventsResponse>
  <Events class="array">
    <Event class="object">
      <CreationTime type="string">2019-08-01T05:57:56</CreationTime>
      <EventId type="string">0086612d-77cf-4056-b0b5-ff8e94ad****</EventId>
      <LogicalResourceId type="string">test-describe-events</LogicalResource
Id>
      <PhysicalResourceId type="string">57d0946e-c7f4-4f4e-89ae-0d4301a2****
</PhysicalResourceId>
      <ResourceType type="string">ALIYUN::ROS::Stack</ResourceType>
      <StackId type="string">57d0946e-c7f4-4f4e-89ae-0d4301a2****</StackId>
      <StackName type="string">test-describe-events</StackName>
      <Status type="string">UPDATE_COMPLETE</Status>
      <StatusReason type="string">Stack successfully updated</StatusReason>
    </Event>
    <Event class="object">
      <CreationTime type="string">2019-08-01T05:57:55</CreationTime>
      <EventId type="string">2b900d01-959b-49a8-8cfe-f7de87aa****</EventId>
      <LogicalResourceId type="string">dummy</LogicalResourceId>
      <PhysicalResourceId type="string">a</PhysicalResourceId>
```

```

    <ResourceType type="string">ALIYUN::DEBUG::Dummy</ResourceType>
    <StackId type="string">57d0946e-c7f4-4f4e-89ae-0d4301a2****</StackId>
    <StackName type="string">test-describe-events</StackName>
    <Status type="string">UPDATE_COMPLETE</Status>
    <StatusReason type="string">state changed</StatusReason>
  </Event>
  <Event class="object">
    <CreationTime type="string">2019-08-01T05:57:55</CreationTime>
    <EventId type="string">30f721d4-8124-4fd4-8afd-7b21471f****</EventId>
    <LogicalResourceId type="string">dummy3</LogicalResourceId>
    <PhysicalResourceId type="string">a</PhysicalResourceId>
    <ResourceType type="string">ALIYUN::DEBUG::Dummy</ResourceType>
    <StackId type="string">57d0946e-c7f4-4f4e-89ae-0d4301a2****</StackId>
    <StackName type="string">test-describe-events</StackName>
    <Status type="string">CREATE_COMPLETE</Status>
    <StatusReason type="string">state changed</StatusReason>
  </Event>
  <Event class="object">
    <CreationTime type="string">2019-08-01T05:57:54</CreationTime>
    <EventId type="string">b5ecc0ac-f855-4503-945c-82d398a2****</EventId>
    <LogicalResourceId type="string">WaitConditionHandle</LogicalResourceI
d>
    <ResourceType type="string">ALIYUN::ROS::WaitConditionHandle</Resource
Type>
    <StackId type="string">57d0946e-c7f4-4f4e-89ae-0d4301a2****</StackId>
    <StackName type="string">test-describe-events</StackName>
    <Status type="string">UPDATE_COMPLETE</Status>
    <StatusReason type="string">state changed</StatusReason>
  </Event>
  <Event class="object">
    <CreationTime type="string">2019-08-01T05:57:53</CreationTime>
    <EventId type="string">a01e5730-7244-414e-b9ff-f97e3885****</EventId>
    <LogicalResourceId type="string">dummy3</LogicalResourceId>
    <ResourceType type="string">ALIYUN::DEBUG::Dummy</ResourceType>
    <StackId type="string">57d0946e-c7f4-4f4e-89ae-0d4301a2****</StackId>
    <StackName type="string">test-describe-events</StackName>
    <Status type="string">CREATE_IN_PROGRESS</Status>
    <StatusReason type="string">state changed</StatusReason>
  </Event>
  <Event class="object">
    <CreationTime type="string">2019-08-01T05:57:53</CreationTime>
    <EventId type="string">262b2f54-7ae7-4cf6-9c8a-eb4d0801****</EventId>
    <LogicalResourceId type="string">dummy</LogicalResourceId>
    <PhysicalResourceId type="string">a</PhysicalResourceId>
    <ResourceType type="string">ALIYUN::DEBUG::Dummy</ResourceType>
    <StackId type="string">57d0946e-c7f4-4f4e-89ae-0d4301a2****</StackId>
    <StackName type="string">test-describe-events</StackName>
    <Status type="string">UPDATE_IN_PROGRESS</Status>
    <StatusReason type="string">state changed</StatusReason>
  </Event>
  <Event class="object">
    <CreationTime type="string">2019-08-01T05:57:53</CreationTime>
    <EventId type="string">163c3965-1617-4787-ba08-1eed0e3a****</EventId>
    <LogicalResourceId type="string">nested</LogicalResourceId>
    <PhysicalResourceId type="string">4ed77b13-a912-4239-b064-8ccc7ccc****

```

```

    <PhysicalResourceId type="string">4ed7ab13-c912-4239-b064-8cea7caa
  </PhysicalResourceId>
    <ResourceType type="string">ALIYUN::ROS::Stack</ResourceType>
    <StackId type="string">57d0946e-c7f4-4f4e-89ae-0d4301a2****</StackId>
    <StackName type="string">test-describe-events</StackName>
    <Status type="string">UPDATE_COMPLETE</Status>
    <StatusReason type="string">state changed</StatusReason>
  </Event>
  <Event class="object">
    <CreationTime type="string">2019-08-01T05:57:53</CreationTime>
    <EventId type="string">71f7c25c-2ac7-4336-9934-85482111****</EventId>
    <LogicalResourceId type="string">nested</LogicalResourceId>
    <PhysicalResourceId type="string">4ed7ab13-c912-4239-b064-8cea7caa****
  </PhysicalResourceId>
    <ResourceType type="string">ALIYUN::ROS::Stack</ResourceType>
    <StackId type="string">57d0946e-c7f4-4f4e-89ae-0d4301a2****</StackId>
    <StackName type="string">test-describe-events</StackName>
    <Status type="string">UPDATE_IN_PROGRESS</Status>
    <StatusReason type="string">state changed</StatusReason>
  </Event>
  <Event class="object">
    <CreationTime type="string">2019-08-01T05:57:53</CreationTime>
    <EventId type="string">a5a0eb9e-7abe-44a1-a376-70955211****</EventId>
    <LogicalResourceId type="string">WaitConditionHandle</LogicalResourceI
d>
    <ResourceType type="string">ALIYUN::ROS::WaitConditionHandle</Resource
Type>
    <StackId type="string">57d0946e-c7f4-4f4e-89ae-0d4301a2****</StackId>
    <StackName type="string">test-describe-events</StackName>
    <Status type="string">UPDATE_IN_PROGRESS</Status>
    <StatusReason type="string">state changed</StatusReason>
  </Event>
  <Event class="object">
    <CreationTime type="string">2019-08-01T05:57:53</CreationTime>
    <EventId type="string">250f5003-f59d-46f9-8471-65d0c630****</EventId>
    <LogicalResourceId type="string">test-describe-events</LogicalResource
Id>
    <PhysicalResourceId type="string">57d0946e-c7f4-4f4e-89ae-0d4301a2****
  </PhysicalResourceId>
    <ResourceType type="string">ALIYUN::ROS::Stack</ResourceType>
    <StackId type="string">57d0946e-c7f4-4f4e-89ae-0d4301a2****</StackId>
    <StackName type="string">test-describe-events</StackName>
    <Status type="string">UPDATE_IN_PROGRESS</Status>
    <StatusReason type="string">Stack UPDATE started</StatusReason>
  </Event>
</Events>
<PageNumber type="number">1</PageNumber>
<PageSize type="number">10</PageSize>
<RequestId type="string">B288A0BE-D927-4888-B0F7-B35EF84B6E6F</RequestId>
<TotalCount type="number">20</TotalCount>
</ListStackEventsResponse>

```

JSON format

```

{
  "Events": [
    {
      "CreationTime": "2019-08-01T05:57:56",
      "EventId": "0086612d-77cf-4056-b0b5-ff8e94ad****",
      "LogicalResourceId": "test-describe-events",
      "PhysicalResourceId": "57d0946e-c7f4-4f4e-89ae-0d4301a2****",
      "ResourceType": "ALIYUN::ROS::Stack",
      "StackId": "57d0946e-c7f4-4f4e-89ae-0d4301a2****",
      "StackName": "test-describe-events",
      "Status": "UPDATE_COMPLETE",
      "StatusReason": "Stack successfully updated"
    },
    {
      "CreationTime": "2019-08-01T05:57:55",
      "EventId": "2b900d01-959b-49a8-8cfe-f7de87aa****",
      "LogicalResourceId": "dummy",
      "PhysicalResourceId": "a",
      "ResourceType": "ALIYUN::DEBUG::Dummy",
      "StackId": "57d0946e-c7f4-4f4e-89ae-0d4301a2****",
      "StackName": "test-describe-events",
      "Status": "UPDATE_COMPLETE",
      "StatusReason": "state changed"
    },
    {
      "CreationTime": "2019-08-01T05:57:55",
      "EventId": "30f721d4-8124-4fd4-8afd-7b21471f****",
      "LogicalResourceId": "dummy3",
      "PhysicalResourceId": "a",
      "ResourceType": "ALIYUN::DEBUG::Dummy",
      "StackId": "57d0946e-c7f4-4f4e-89ae-0d4301a2****",
      "StackName": "test-describe-events",
      "Status": "CREATE_COMPLETE",
      "StatusReason": "state changed"
    },
    {
      "CreationTime": "2019-08-01T05:57:54",
      "EventId": "b5ecc0ac-f855-4503-945c-82d398a2****",
      "LogicalResourceId": "WaitConditionHandle",
      "ResourceType": "ALIYUN::ROS::WaitConditionHandle",
      "StackId": "57d0946e-c7f4-4f4e-89ae-0d4301a2****",
      "StackName": "test-describe-events",
      "Status": "UPDATE_COMPLETE",
      "StatusReason": "state changed"
    },
    {
      "CreationTime": "2019-08-01T05:57:53",
      "EventId": "a01e5730-7244-414e-b9ff-f97e3885****",
      "LogicalResourceId": "dummy3",
      "ResourceType": "ALIYUN::DEBUG::Dummy",
      "StackId": "57d0946e-c7f4-4f4e-89ae-0d4301a2****",
      "StackName": "test-describe-events",
      "Status": "CREATE_IN_PROGRESS",
      "StatusReason": "state changed"
    }
  ]
}

```

```

},
{
  "CreationTime": "2019-08-01T05:57:53",
  "EventId": "262b2f54-7ae7-4cf6-9c8a-eb4d0801****",
  "LogicalResourceId": "dummy",
  "PhysicalResourceId": "a",
  "ResourceType": "ALIYUN::DEBUG::Dummy",
  "StackId": "57d0946e-c7f4-4f4e-89ae-0d4301a2****",
  "StackName": "test-describe-events",
  "Status": "UPDATE_IN_PROGRESS",
  "StatusReason": "state changed"
},
{
  "CreationTime": "2019-08-01T05:57:53",
  "EventId": "163c3965-1617-4787-ba08-1eed0e3a****",
  "LogicalResourceId": "nested",
  "PhysicalResourceId": "4ed7ab13-c912-4239-b064-8cea7caa****",
  "ResourceType": "ALIYUN::ROS::Stack",
  "StackId": "57d0946e-c7f4-4f4e-89ae-0d4301a2****",
  "StackName": "test-describe-events",
  "Status": "UPDATE_COMPLETE",
  "StatusReason": "state changed"
},
{
  "CreationTime": "2019-08-01T05:57:53",
  "EventId": "71f7c25c-2ac7-4336-9934-85482111****",
  "LogicalResourceId": "nested",
  "PhysicalResourceId": "4ed7ab13-c912-4239-b064-8cea7caa****",
  "ResourceType": "ALIYUN::ROS::Stack",
  "StackId": "57d0946e-c7f4-4f4e-89ae-0d4301a2****",
  "StackName": "test-describe-events",
  "Status": "UPDATE_IN_PROGRESS",
  "StatusReason": "state changed"
},
{
  "CreationTime": "2019-08-01T05:57:53",
  "EventId": "a5a0eb9e-7abe-44a1-a376-70955211****",
  "LogicalResourceId": "WaitConditionHandle",
  "ResourceType": "ALIYUN::ROS::WaitConditionHandle",
  "StackId": "57d0946e-c7f4-4f4e-89ae-0d4301a2****",
  "StackName": "test-describe-events",
  "Status": "UPDATE_IN_PROGRESS",
  "StatusReason": "state changed"
},
{
  "CreationTime": "2019-08-01T05:57:53",
  "EventId": "250f5003-f59d-46f9-8471-65d0c630****",
  "LogicalResourceId": "test-describe-events",
  "PhysicalResourceId": "57d0946e-c7f4-4f4e-89ae-0d4301a2****",
  "ResourceType": "ALIYUN::ROS::Stack",
  "StackId": "57d0946e-c7f4-4f4e-89ae-0d4301a2****",
  "StackName": "test-describe-events",
  "Status": "UPDATE_IN_PROGRESS",
  "StatusReason": "Stack UPDATE started"
}

```

```

    ],
    "PageNumber": 1,
    "PageSize": 10,
    "RequestId": "B288A0BE-D927-4888-B0F7-B35EF84B6E6F",
    "TotalCount": 20
  }

```

Error codes

For a list of error codes, visit the [API Error Center](#).

HTTP status code	Error code	Error message	Description
404	StackNotFound	The Stack ({name}) could not be found.	The error message returned because the specified stack does not exist. name indicates the name or ID of the stack.

7.9. ListStackOperationRisks

You can call this operation to detect the resources that may face high risks caused by a stack deletion operation, and query the reason for each risk.

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	ListStackOperationRisks	The operation that you want to perform. Set the value to ListStackOperationRisks.
OperationType	String	Yes	DeleteStack	The operation type to be detected. The DeleteStack value specifies to detect resources that may face high risks caused by a stack deletion operation.

Parameter	Type	Required	Example	Description
RegionId	String	Yes	cn-hangzhou	The region ID of the stack. You can call the DescribeRegions operation to query the most recent region list.
StackId	String	Yes	4a6c9851-3b0f-4f5f-b4ca-a14bf691****	The ID of the stack.
ClientToken	String	No	123e4567-e89b-12d3-a456-42665544****	<p>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.</p> <p>The token can be up to 64 characters in length and can contain letters, digits, hyphens (-), and underscores (_).</p> <p>For more information, see How to ensure idempotence.</p>
RamRoleName	String	No	test-role	<p>The name of the RAM role.</p> <ul style="list-style-type: none"> If you specify a RAM role, ROS creates stacks based on the permissions granted to the RAM role and uses the credentials of the RAM role to call API operations. If you do not specify a RAM role, ROS creates stacks based on the permissions of the current account. <p>A RAM role name can be up to 64 characters in length.</p>
RetainAllResources	Boolean	No	false	<p>Specifies whether to retain all resources in the stack. Default value: false. Valid values:</p> <ul style="list-style-type: none"> true: The resources in the stack are retained. false: The resources in the stack are not retained. <div style="border: 1px solid #add8e6; padding: 5px; background-color: #e0f0ff;"> <p> Note This parameter is valid only when the OperationType parameter is set to DeleteStack.</p> </div>

Parameter	Type	Required	Example	Description
RetainResources.N	RepeatList	No	WebServer	<p>The list of resources to retain.</p> <div style="border: 1px solid #add8e6; padding: 5px;"> <p> Note This parameter is valid only when the OperationType parameter is set to DeleteStack.</p> </div>

Response parameters

Parameter	Type	Example	Description
RequestId	String	72108E7A-E874-4A5E-B22C-A61E94AD12CD	The ID of the request.
RiskResources	Array		The resources that face high risks caused by the stack deletion operation.
Code	String	NoPermission	The error code that is returned when the risk detection fails. This parameter is not returned when the risk detection succeeds.
LogicalResourceid	String	MySG	The logical ID of the resource. It is the resource name defined in the template.
Message	String	You are not authorized to complete this action.	The error message that is returned when the risk detection fails. This parameter is not returned when the risk detection succeeds.
PhysicalResourceid	String	sg-bp1dpioafqphedg9***	The physical ID of the resource.
Reason	String	There are some ECS instances (i-bp18el96s4wq635e***) depending on the security group.	The reason for the risk.
RequestId	String	DF4296CF-F45F-4845-A72B-BE617601DB25	The request ID that is returned when the risk detection fails. This parameter is not returned when the risk detection succeeds.
ResourceType	String	ALIYUN::ECS::SecurityGroup	The type of the resource.

Parameter	Type	Example	Description
RiskType	String	Referenced	<p>The type of the risk. Valid values:</p> <ul style="list-style-type: none"> Referenced: The current resource is referenced by other resources. MaybeReferenced: The current resource may be referenced by other resources. AdditionalRiskCheckRequired: An additional risk detection is required for nested stacks.

Examples

Sample requests

```
http(s)://ros.aliyuncs.com/? Action=ListStackOperationRisks
&OperationType=DeleteStack
&RegionId=cn-hangzhou
&StackId=4a6c9851-3b0f-4f5f-b4ca-a14bf691****
&<Common request parameters>
```

Sample success responses

XML **format**

```
<ListStackOperationRisks>
  <RequestId>72108E7A-E874-4A5E-B22C-A61E94AD12CD</RequestId>
  <RiskResources>
    <LogicalResourceId>MySG</LogicalResourceId>
    <PhysicalResourceId>sg-bp1dpioafqphedg9****</PhysicalResourceId>
    <ResourceType>ALIYUN::ECS::SecurityGroup</ResourceType>
    <Reason>There are some ECS instances (i-bp18e196s4wq635e****) depending on the security group. </Reason>
    <RiskType>Referenced</RiskType>
  </RiskResources>
</ListStackOperationRisks>
```

JSON **format**

```
{
  "RequestId": "772108E7A-E874-4A5E-B22C-A61E94AD12CD",
  "RiskResources": [
    {
      "LogicalResourceId": "MySG",
      "PhysicalResourceId": "sg-bp1dpioafqphedg9****",
      "ResourceType": "ALIYUN::ECS::SecurityGroup",
      "Reason": "There are some ECS instances (i-bp18e196s4wq635e****) depending on the security group.",
      "RiskType": "Referenced"
    }
  ]
}
```

Error codes

For a list of error codes, visit the [API Error Center](#).

7.10. DeleteStack

You can call this operation to delete a stack and all of its 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	DeleteStack	The operation that you want to perform. Set the value to DeleteStack.
RegionId	String	Yes	cn-hangzhou	The region ID of the stack. You can call the DescribeRegions operation to query the most recent region list.
StackId	String	Yes	4a6c9851-3b0f-4f5f-b4ca-a14bf691****	The ID of the stack.
RetainAllResources	Boolean	No	false	Specifies whether to retain the resources in the stack.
RetainResources.N	RepeatList	No	WebServer	The list of resources to retain.

Parameter	Type	Required	Example	Description
RamRoleName	String	No	test-role	<p>The name of the RAM role. ROS assumes the specified RAM role to create the stack and call API operations by using the credentials of the role.</p> <p>All operations will be performed under this role. If a RAM user is authorized to perform operations on the stack but does not have the permission to use the role, ROS still uses the role and grants the role the least privilege.</p> <p>If you do not specify this parameter, ROS does not use the role previously associated with the stack. If you want to use a role, you must specify it in this parameter. If no roles are available, ROS uses the temporary credentials generated from the credentials of your account.</p> <p>The RAM role name can be up to 64 characters in length.</p>

Response parameters

Parameter	Type	Example	Description
RequestId	String	B288A0BE-D927-4888-B0F7-B35EF84B6E6F	The ID of the request.

Examples

Sample requests

```
http(s)://ros.aliyuncs.com/? Action=DeleteStack
&RegionId=cn-hangzhou
&StackId=4a6c9851-3b0f-4f5f-b4ca-a14bf691****
&<Common request parameters>
```

Sample success responses

XML format

```
<DeleteStackResponse>
  <RequestId>B288A0BE-D927-4888-B0F7-B35EF84B6E6F</RequestId>
</DeleteStackResponse>
```

JSON format

```
{
  "RequestId": "B288A0BE-D927-4888-B0F7-B35EF84B6E6F"
}
```

Error codes

For a list of error codes, visit the [API Error Center](#).

For more information about errors common to all operations, see [Common error codes](#).

HTTP status code	Error code	Error message	Description
400	InvalidOperation.DeletionProtection	Fail to delete stack {ID}, as deletion protection is enabled.	The error message returned because deletion protection prevented the stack from being deleted. ID indicates the stack ID.
404	StackNotFound	The Stack ({name}) could not be found.	The error message returned because the specified stack does not exist. name indicates the stack name or ID.
409	ActionInProgress	Stack {name} already has an action ({action}) in progress.	The error message returned because the specified stack has a change operation in progress. name indicates the stack name or ID, and action indicates the change operation.

8.Resource operations

8.1. GetResourceTypeTemplate

You can call this operation to query the template of a resource by resource 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	GetResourceTypeTemplate	Set the value to GetResourceTypeTemplate.
ResourceType	String	Yes	ALIYUN::ECS::VPC	The type of the resource.

Response parameters

Parameter	Type	Example	Description
RequestId	String	87F54B2B-AEF0-4C33-A72A-3F8856A575E9	The ID of the request.
TemplateBody	Map	{"ROSTemplateFormatVersion": "2015-09-01"}	The structure that contains the template body. The template body must be 1 to 51,200 bytes in length.

Examples

Sample requests

```
http(s)://ros.aliyuncs.com/? Action=GetResourceTypeTemplate
&ResourceType=ALIYUN::ECS::VPC
&<Common request parameters>
```

Sample success responses

XML format

```
<GetResourceTypeTemplateResponse>
  <RequestId type="string">87F54B2B-AEF0-4C33-A72A-3F8856A575E9</RequestId>
  <TemplateBody class="object">
    <Parameters class="object">
      <CidrBlock class="object">
        <Type type="string">String</Type>
      </CidrBlock>
      <Description class="object">
        <Type type="string">String</Type>
      </Description>
      <ResourceGroupId class="object">
        <Type type="string">String</Type>
      </ResourceGroupId>
      <VpcName class="object">
        <Type type="string">String</Type>
      </VpcName>
    </Parameters>
    <ROSTemplateFormatVersion type="string">2015-09-01</ROSTemplateFormatVersion>
    <Resources class="object">
      <Vpc class="object">
        <Properties class="object">
          <CidrBlock class="object">
            <Ref type="string">CidrBlock</Ref>
          </CidrBlock>
          <Description class="object">
            <Ref type="string">Description</Ref>
          </Description>
          <ResourceGroupId class="object">
            <Ref type="string">ResourceGroupId</Ref>
          </ResourceGroupId>
          <VpcName class="object">
            <Ref type="string">VpcName</Ref>
          </VpcName>
        </Properties>
        <Type type="string">ALIYUN::ECS::VPC</Type>
      </Vpc>
    </Resources>
  </TemplateBody>
</GetResourceTypeTemplateResponse>
```

JSON format

```
{
  "RequestId": "87F54B2B-AEF0-4C33-A72A-3F8856A575E9",
  "TemplateBody": {
    "Parameters": {
      "CidrBlock": {
        "Type": "String"
      },
      "Description": {
        "Type": "String"
      },
      "ResourceGroupId": {
        "Type": "String"
      },
      "VpcName": {
        "Type": "String"
      }
    },
    "ROSTemplateFormatVersion": "2015-09-01",
    "Resources": {
      "Vpc": {
        "Properties": {
          "CidrBlock": {
            "Ref": "CidrBlock"
          },
          "Description": {
            "Ref": "Description"
          },
          "ResourceGroupId": {
            "Ref": "ResourceGroupId"
          },
          "VpcName": {
            "Ref": "VpcName"
          }
        },
        "Type": "ALIYUN::ECS::VPC"
      }
    }
  }
}
```

Error codes

For a list of error codes, visit the [API Error Center](#).

HTTP status code	Error code	Error message	Description
------------------	------------	---------------	-------------

HTTP status code	Error code	Error message	Description
404	ResourceTypeNotFound	The Resource Type ({name}) could not be found.	The error message returned because the specified resource type does not exist. name indicates the name of the resource type.

8.2. ListStackResources

Queries the resources in a specified stack.

This topic provides an example on how to query the resources in a specified stack. In this example, the resources in the stack whose ID is `4a6c9851-3b0f-4f5f-b4ca-a14bf691****` in the China (Hangzhou) region 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	ListStackResources	The operation that you want to perform. Set the value to ListStackResources.
StackId	String	Yes	4a6c9851-3b0f-4f5f-b4ca-a14bf691****	The ID of the stack.
RegionId	String	Yes	cn-hangzhou	The ID of the region to which the stack belongs. You can call the DescribeRegions operation to query the most recent region list.

For more information about common request parameters, see [Common parameters](#).

Response parameters

Parameter	Type	Example	Description
RequestId	String	B288A0BE-D927-4888-B0F7-B35EF84B6E6	The ID of the request.

Parameter	Type	Example	Description
Resources	Array of Resource		Details about resources.
Status	String	UPDATE_COMPLETE	<p>The status of the resource. Valid values:</p> <ul style="list-style-type: none"> INIT_COMPLETE: The resource is in the pending creation state. CREATE_COMPLETE: The resource is created. CREATE_FAILED: The resource fails to be created. CREATE_IN_PROGRESS: The resource is being created. UPDATE_IN_PROGRESS: The resource is being updated. UPDATE_FAILED: The resource fails to be updated. UPDATE_COMPLETE: The resource is updated. DELETE_IN_PROGRESS: The resource is being deleted. DELETE_FAILED: The resource fails to be deleted. DELETE_COMPLETE: The resource is deleted. CHECK_IN_PROGRESS: The resource is being validated. CHECK_FAILED: The resource fails to be validated. CHECK_COMPLETE: The resource is validated. IMPORT_IN_PROGRESS: The resource is being imported. IMPORT_FAILED: The resource fails to be imported. IMPORT_COMPLETE: The resource is imported.
LogicalResourceid	String	dummy	The logical ID of the resource. The logical ID is the resource name that is defined in the template.
UpdateTime	String	2019-08-01T06:01:29	The time when the resource was updated. The time follows the ISO 8601 standard in the YYYY-MM-DDThh:mm:ssZ format. The time is displayed in UTC.

Parameter	Type	Example	Description
StackId	String	4a6c9851-3b0f-4f5f-b4ca-a14bf691****	The ID of the stack.
PhysicalResourceId	String	d04af923-e6b7-4272-aeaa-47ec9777****	The physical ID of the resource.
DriftDetectionTime	String	2020-02-27T07:47:47	The most recent point in time when a successful drift detection operation was performed.
ResourceType	String	ALIYUN::ROS::Stack	The type of the resource.
ResourceDriftStatus	String	IN_SYNC	<p>The drift status of the resource in the most recent successful drift detection. Valid values:</p> <ul style="list-style-type: none"> DELETED: The actual configuration of the resource differs from its expected template configuration because the resource is deleted. MODIFIED: The actual configuration of the resource differs from its expected template configuration. NOT_CHECKED: ROS did not check whether the actual configuration of the resource differs from its expected template configuration. IN_SYNC: The actual configuration of the resource matches its expected template configuration.
StatusReason	String	state changed	The reason why the resource is in a specific state.
CreateTime	String	2019-08-01T06:01:23	The time when the resource was created. The time follows the ISO 8601 standard in the YYYY-MM-DDThh:mm:ssZ format. The time is displayed in UTC.
StackName	String	test-describe-resource	<p>The name of the stack.</p> <p>The name can be up to 255 characters in length, and can contain digits, letters, hyphens (-), and underscores (_). The name must start with a digit or letter.</p>

Examples

Sample requests

```
https://ros.aliyuncs.com/?Action=ListStackResources
&RegionId=cn-hangzhou
&StackId=4a6c9851-3b0f-4f5f-b4ca-a14bf691****
&<Common request parameters>
```

Sample success responses

XML **format**

```
HTTP/1.1 200 OK
Content-Type:application/xml
<ListStackResourcesResponse>
  <RequestId>B288A0BE-D927-4888-B0F7-B35EF84B6E6F</RequestId>
  <Resources>
    <CreationTime>2019-08-01T06:01:23</CreationTime>
    <LogicalResourceId>WaitConditionHandle</LogicalResourceId>
    <PhysicalResourceId></PhysicalResourceId>
    <ResourceType>ALIYUN::ROS::WaitConditionHandle</ResourceType>
    <StackId>4a6c9851-3b0f-4f5f-b4ca-a14bf691****</StackId>
    <StackName>test-describe-resource</StackName>
    <Status>UPDATE_COMPLETE</Status>
    <StatusReason>state changed</StatusReason>
    <UpdatedTime>2019-08-01T06:01:29</UpdatedTime>
    <DriftDetectionTime>2020-02-27T07:47:47</DriftDetectionTime>
    <ResourceDriftStatus>IN_SYNC</ResourceDriftStatus>
  </Resources>
  <Resources>
    <CreationTime>2019-08-01T06:01:23</CreationTime>
    <LogicalResourceId>nested</LogicalResourceId>
    <PhysicalResourceId>d04af923-e6b7-4272-aaaa-47ec9777****</PhysicalResourceId>
    <ResourceType>ALIYUN::ROS::Stack</ResourceType>
    <StackId>4a6c9851-3b0f-4f5f-b4ca-a14bf691****</StackId>
    <StackName>test-describe-resource</StackName>
    <Status>UPDATE_COMPLETE</Status>
    <StatusReason>state changed</StatusReason>
    <UpdatedTime>2019-08-01T06:01:28</UpdatedTime>
    <DriftDetectionTime>2020-02-27T07:47:47</DriftDetectionTime>
    <ResourceDriftStatus>IN_SYNC</ResourceDriftStatus>
  </Resources>
</ListStackResourcesResponse>
```

JSON **format**

```

HTTP/1.1 200 OK
Content-Type:application/json
{
  "RequestId" : "B288A0BE-D927-4888-B0F7-B35EF84B6E6F",
  "Resources" : [ {
    "CreationTime" : "2019-08-01T06:01:23",
    "LogicalResourceId" : "WaitConditionHandle",
    "PhysicalResourceId" : "",
    "ResourceType" : "ALIYUN::ROS::WaitConditionHandle",
    "StackId" : "4a6c9851-3b0f-4f5f-b4ca-a14bf691****",
    "StackName" : "test-describe-resource",
    "Status" : "UPDATE_COMPLETE",
    "StatusReason" : "state changed",
    "UpdatedTime" : "2019-08-01T06:01:29",
    "DriftDetectionTime" : "2020-02-27T07:47:47",
    "ResourceDriftStatus" : "IN_SYNC"
  }, {
    "CreationTime" : "2019-08-01T06:01:23",
    "LogicalResourceId" : "nested",
    "PhysicalResourceId" : "d04af923-e6b7-4272-aeaa-47ec9777****",
    "ResourceType" : "ALIYUN::ROS::Stack",
    "StackId" : "4a6c9851-3b0f-4f5f-b4ca-a14bf691****",
    "StackName" : "test-describe-resource",
    "Status" : "UPDATE_COMPLETE",
    "StatusReason" : "state changed",
    "UpdatedTime" : "2019-08-01T06:01:28",
    "DriftDetectionTime" : "2020-02-27T07:47:47",
    "ResourceDriftStatus" : "IN_SYNC"
  } ]
}

```

Error codes

For a list of error codes, visit the [API Error Center](#).

Error code	Error message	HTTP status code	Description
StackNotFound	The Stack ({name}) could not be found.	404	The error message returned because the specified stack does not exist. name indicates the name or ID of the stack.

8.3. GetStackResource

Queries information about a resource in a specified stack.

In this topic, a resource named `WebServer` that belongs to a stack whose ID is `4a6c9851-3b0f-4f5f-b4ca-a14bf691****` is queried. The resource is deployed in the China (Hangzhou) 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
Action	String	Yes	GetStackResource	The operation that you want to perform. Set the value to GetStackResource.
StackId	String	Yes	4a6c9851-3b0f-4f5f-b4ca-a14bf691****	The ID of the stack.
ClientToken	String	No	123e4567-e89b-12d3-a456-42665544****	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 token can be up to 64 characters in length and can contain letters, digits, hyphens (-), and underscores (_). For more information, see How to ensure idempotence .
RegionId	String	Yes	cn-hangzhou	The region ID of the stack. You can call the DescribeRegions operation to query the most recent region list.
ShowResourceAttributes	Boolean	No	true	Specifies whether to query resource attributes. Valid values: <ul style="list-style-type: none"> true false
LogicalResourceId	String	Yes	WebServer	The logical ID of the resource as defined in the template.

For more information about common request parameters, see [Common parameters](#).

Response parameters

Parameter	Type	Example	Description
Status	String	CREATE_COMPLETE	<p>The status of the resource. Valid values:</p> <ul style="list-style-type: none"> • CREATE_COMPLETE • CREATE_FAILED • CREATE_IN_PROGRESS • UPDATE_IN_PROGRESS • UPDATE_FAILED • UPDATE_COMPLETE • DELETE_IN_PROGRESS • DELETE_FAILED • CHECK_IN_PROGRESS • CHECK_FAILED • CHECK_COMPLETE • IMPORT_IN_PROGRESS • IMPORT_FAILED • IMPORT_COMPLETE
Description	String	no description	The description of the resource.
RequestId	String	B288A0BE-D927-4888-B0F7-B35EF84B6E6	The ID of the request.
StatusReason	String	state changed	The reason why the resource is in its current state.
PhysicalResourceId	String	d04af923-e6b7-4272-aeaa-47ec9777****	The physical ID of the resource.
CreateTime	String	2019-08-01T06:01:23	<p>The time when the resource was created.</p> <p>The time follows the ISO 8601 standard in the YYYY-MM-DDThh:mm:ss format. The time is displayed in UTC.</p>
Metadata	Map		The metadata.
ResourceType	String	ALIYUN::ROS::WaitConditionHandle	The type of the resource.

Parameter	Type	Example	Description
ResourceAttributes	Array of Object	<pre>[{"ResourceAttributeKey": "CurlCli", "ResourceAttributeValue": "curl -i -X POST -H 'Content-Type: application/json' -H 'Accept: application/json' -H 'x-acs-region-id: cn-beijing' http://192.168.XX.XX/waitcondition?stackname=test-describe-resource\\&stackid=efd5c10-96a5-4fd7-ab89-68e7baa2****\\&resource=WaitConditionHandle\\&expire=156468****\\&signature=991d910a901a89db6580d74233119960c004****"}]</pre>	The list of resource attributes.
LogicalResourceId	String	WebServer	The logical ID of the resource as defined in the template.
ResourceDriftStatus	String	IN_SYNC	<p>The drift status of the resource in the latest successful drift detection. Valid values:</p> <ul style="list-style-type: none"> • DELETED: The actual configuration of the resource differs from its expected template configuration because the resource is deleted. • MODIFIED: The actual configuration of the resource differs from its expected template configuration. • NOT_CHECKED: ROS has not checked whether the actual configuration of the resource differs from its expected template configuration. • IN_SYNC: The actual configuration of the resource matches its expected template configuration.

Parameter	Type	Example	Description
UpdateTime	String	2019-08-01T06:01:29	The time when the stack was last updated. The time follows the ISO 8601 standard in the YYYY-MM-DDThh:mm:ss format. The time is displayed in UTC.
DriftDetectionTime	String	2020-02-27T07:47:47	The time when the last successful drift detection operation was initiated.
StackName	String	test-describe-resource	The name of the stack. The name can be up to 255 characters in length and can contain digits, letters, hyphens (-), and underscores (_). It must start with a digit or letter.
StackId	String	efdf5c10-96a5-4fd7-ab89-68e7baa2****	The ID of the stack.

Examples

Sample requests

```
http(s)://ros.aliyuncs.com/?Action=GetStackResource
&RegionId=cn-hangzhou
&StackId=4a6c9851-3b0f-4f5f-b4ca-a14bf691****
&LogicalResourceId=WebServer
&<Common request parameters>
```

Sample success responses

`XML` format

```

HTTP/1.1 200 OK
Content-Type:application/xml
<GetStackResourceResponse>
  <CreateTime>2019-08-01T06:01:23</CreateTime>
  <Description></Description>
  <LogicalResourceId>WaitConditionHandle</LogicalResourceId>
  <Metadata />
  <PhysicalResourceId></PhysicalResourceId>
  <RequestId>B288A0BE-D927-4888-B0F7-B35EF84B6E6F</RequestId>
  <ResourceAttributes>
    <ResourceAttributeKey>CurlCli</ResourceAttributeKey>
    <ResourceAttributeValue>curl -i -X POST -H 'Content-Type: application/json' -H 'Accept: application/json' -H 'x-acs-region-id: cn-beijing' http://192.168.XX.XX/waitcondition?stackname=test-describe-resource&stackid=efdf5c10-96a5-4fd7-ab89-68e7baa2****\&resource=WaitConditionHandle\&expire=156468****\&signature=991d910a901a89db6580d74233119960c004****</ResourceAttributeValue>
  </ResourceAttributes>
  <ResourceAttributes>
    <ResourceAttributeKey>WindowsCurlCli</ResourceAttributeKey>
    <ResourceAttributeValue>curl -i -X POST -H &quot;Content-Type: application/json&quot; -H &quot;Accept: application/json&quot; -H &quot;x-acs-region-id: cn-beijing&quot; &quot;http://192.168.XX.XX/waitcondition?stackname=test-describe-resource&stackid=efdf5c10-96a5-4fd7-ab89-68e7baa2****&resource=WaitConditionHandle&expire=156468****&signature=991d910a901a89db6580d74233119960c004****&quot;</ResourceAttributeValue>
  </ResourceAttributes>
  <ResourceAttributes>
    <ResourceAttributeKey>PowerShellCurlCli</ResourceAttributeKey>
    <ResourceAttributeValue>curl -Uri &quot;http://192.168.XX.XX/waitcondition?stackname=test-describe-resource&stackid=efdf5c10-96a5-4fd7-ab89-68e7baa2****&resource=WaitConditionHandle&expire=156468****&signature=991d910a901a89db6580d74233119960c004****&quot; -Method Post -Headers @{{&quot;Content-Type&quot;=&quot;application/json&quot;; &quot;Accept&quot;=&quot;application/json&quot;; &quot;x-acs-region-id&quot;=&quot;cn-beijing&quot;}}</ResourceAttributeValue>
  </ResourceAttributes>
  <ResourceType>ALIYUN::ROS::WaitConditionHandle</ResourceType>
  <StackId>efdf5c10-96a5-4fd7-ab89-68e7baa2****</StackId>
  <StackName>test-describe-resource</StackName>
  <Status>UPDATE_COMPLETE</Status>
  <StatusReason>state changed</StatusReason>
  <UpdateTime>2019-08-01T06:01:29</UpdateTime>
  <DriftDetectionTime>2020-02-27T07:47:47</DriftDetectionTime>
  <ResourceDriftStatus>IN_SYNC</ResourceDriftStatus>
</GetStackResourceResponse>

```

JSON **format**

```

HTTP/1.1 200 OK
Content-Type:application/json
{
  "CreateTime" : "2019-08-01T06:01:23",
  "Description" : "",
  "LogicalResourceId" : "WaitConditionHandle",
  "Metadata" : { },
  "PhysicalResourceId" : "",
  "RequestId" : "B288A0BE-D927-4888-B0F7-B35EF84B6E6F",
  "ResourceAttributes" : [ {
    "ResourceAttributeKey" : "CurlCli",
    "ResourceAttributeValue" : "curl -i -X POST -H 'Content-Type: application/json' -H 'Accept: application/json' -H 'x-acs-region-id: cn-beijing' http://192.168.XX.XX/waitcondition?stackname=test-describe-resource\&stackid=efdf5c10-96a5-4fd7-ab89-68e7baa2****\&resource=WaitConditionHandle\&expire=156468****\&signature=991d910a901a89db6580d74233119960c004****"
  }, {
    "ResourceAttributeKey" : "WindowsCurlCli",
    "ResourceAttributeValue" : "curl -i -X POST -H \"Content-Type: application/json\" -H \"Accept: application/json\" -H \"x-acs-region-id: cn-beijing\" \"http://192.168.XX.XX/waitcondition?stackname=test-describe-resource&stackid=efdf5c10-96a5-4fd7-ab89-68e7baa2****&resource=WaitConditionHandle&expire=156468****&signature=991d910a901a89db6580d74233119960c004****\""
  }, {
    "ResourceAttributeKey" : "PowerShellCurlCli",
    "ResourceAttributeValue" : "curl -Uri \"http://192.168.XX.XX/waitcondition?stackname=test-describe-resource&stackid=efdf5c10-96a5-4fd7-ab89-68e7baa2****&resource=WaitConditionHandle&expire=156468****&signature=991d910a901a89db6580d74233119960c004****\" -Method Post -Headers @{\"Content-Type\"=\"application/json\"; \"Accept\"=\"application/json\"; \"x-acs-region-id\"=\"cn-beijing\"}"
  } ],
  "ResourceType" : "ALIYUN::ROS::WaitConditionHandle",
  "StackId" : "efdf5c10-96a5-4fd7-ab89-68e7baa2****",
  "StackName" : "test-describe-resource",
  "Status" : "UPDATE_COMPLETE",
  "StatusReason" : "state changed",
  "UpdateTime" : "2019-08-01T06:01:29",
  "DriftDetectionTime" : "2020-02-27T07:47:47",
  "ResourceDriftStatus" : "IN_SYNC"
}

```

Error codes

For a list of error codes, visit the [API Error Center](#).

HTTP status code	Error code	Error message	Description

HTTP status code	Error code	Error message	Description
404	ResourceNotFound	The Resource ({name}) could not be found in Stack {stack}.	The error message returned because the specified resource does not exist in the specified stack. name indicates the resource name, and stack indicates the stack name or ID.
404	StackNotFound	The Stack ({name}) could not be found.	The error message returned because the specified stack does not exist. name indicates the name or ID of the stack.

8.4. GetResourceType

Queries the details of resource types.

This topic provides an example on how to query the details of `ALIYUN::ROS::WaitConditionHandle`.

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	GetResourceType	The operation that you want to perform. Set the value to GetResourceType.
ResourceType	String	Yes	ALIYUN::ROS::WaitConditionHandle	The type of the resource. For more information about resource types supported by Resource Orchestration Service (ROS), see List of resource types by service .

For more information about common request parameters, see [Common parameters](#).

Response parameters

Parameter	Type	Example	Description
RequestId	String	A28FBA2E-B6B3-5822-AA45-AB875EF23641	The ID of the request.
Attributes	Map		The attributes of the resource.
ResourceType	String	ALIYUN::ROS::WaitConditionHandle	The type of the resource.
Properties	Map		The properties of the resource.
SupportDriftDetection	Boolean	false	Indicates whether the resource supports drift detection. Default value: false. Valid values: <ul style="list-style-type: none"> true: Drift detection is supported. false: Drift detection is not supported.
SupportScratchDetection	Boolean	false	Indicates whether the resource supports scratch detection. Default value: false. Valid values: <ul style="list-style-type: none"> true: Scratch detection is supported. false: Scratch detection is not supported.
EntityType	String	Resource	The entity type. Valid values: <ul style="list-style-type: none"> All: all resource types. Resource: resources other than DataSource resources. For more information, see Resources. DataSource: DataSource resources.

Examples

Sample requests

```
https://[Endpoint]/?Action=GetResourceType
&ResourceType=ALIYUN::ROS::WaitConditionHandle
&<Common request parameters>
```

Sample success responses

XML format

```
HTTP/1.1 200 OK
Content-Type:application/xml
<GetResourceTypeResponse>
```

```

<SupportScratchDetection>>false</SupportScratchDetection>
<EntityType>Resource</EntityType>
<RequestId>A28FBA2E-B6B3-5822-AA45-AB875EF23641</RequestId>
<Attributes>
  <CurlCli>
    <Description>Convenience attribute, provides curl CLI command prefix, which can
    be used for signalling handle completion or failure. You can signal success by adding --da
    ta-binary '{"status": "SUCCESS"}' , or signal failure by adding --data-binary '{"status": "
    FAILURE"}'</Description>
  </CurlCli>
  <WindowsCurlCli>
    <Description>Convenience attribute, provides curl CLI command prefix for Window
    s, which can be used for signalling handle completion or failure. As Windows does not suppo
    rt curl command, you need to install curl.exe and add it to PATH first. You can signal succ
    ess by adding --data-binary "{\"status\": \"SUCCESS\"}" , or signal failure by adding --dat
    a-binary "{\"status\": \"FAILURE\"}" </Description>
  </WindowsCurlCli>
  <Headers>
    <Description>HTTP POST Headers used for signalling handle completion or failure
    .</Description>
  </Headers>
  <URL>
    <Description>HTTP POST URL used for signalling handle completion or failure.</D
    escription>
  </URL>
  <PowerShellCurlCli>
    <Description>Convenience attribute, provides curl CLI command prefix for PowerS
    hell, which can be used for signalling handle completion or failure. As this cmdlet was int
    roduced in PowerShell 3.0, ensure the version of PowerShell satisfies the constraint. (Show
    the version via $PSVersionTable.PSVersion.) You can signal success by adding -Body '{"statu
    s": "SUCCESS"}' , or signal failure by adding -Body '{"status": "FAILURE"}' </Description>
  </PowerShellCurlCli>
</Attributes>
<ResourceType>ALIYUN::ROS::WaitConditionHandle</ResourceType>
<Properties>
  <Mode>
    <SupportScratchDetection>>false</SupportScratchDetection>
    <Immutable>>false</Immutable>
    <Type>string</Type>
    <Description>If set to Increment, all old signals will be deleted before update
    . In this mode, WaitCondition.Count should reference an incremental value instead of a full
    value, such as ScalingGroupEnable.ScalingRuleArisExecuteResultNumberOfAddedInstances.
    If set to Full, no old signal will be deleted unless Count is set. In this mode, WaitCondit
    ion.Count should reference a full value, such as the same value with InstanceGroup.MaxAmoun
    t. It is recommended to use this mode with Count.
    Default to Full.</Description>
    <Constraints>
      <AllowedValues>Increment</AllowedValues>
      <AllowedValues>Full</AllowedValues>
    </Constraints>
    <Required>>false</Required>
    <Default>Full</Default>
    <UpdateAllowed>>true</UpdateAllowed>
  </Mode>

```

```

    <Count>
      <SupportScratchDetection>>false</SupportScratchDetection>
      <Immutable>>false</Immutable>
      <Type>integer</Type>
      <Description>There are 3 preconditions that make Count taking effect:
1.Mode is set to Full.
2.Count >= 0.
3.The id of signal is not specified. If so, it will be a self-increasing integer started from 1. For example, the id of the first signal is 1, the id of the second signal is 2, and so on.
If Count takes effect, signals with id > Count will be deleted before update.
The default value is -1, which means no effect.
It is recommended to quote the same value with WaitCondition.Count.</Description>
      <Required>>false</Required>
      <Default>-1</Default>
      <UpdateAllowed>>true</UpdateAllowed>
    </Count>
  </Properties>
  <SupportDriftDetection>>false</SupportDriftDetection>
</GetResourceTypeResponse>

```

JSON format

```

HTTP/1.1 200 OK
Content-Type:application/json
{
  "SupportScratchDetection" : false,
  "EntityType" : "Resource",
  "RequestId" : "A28FBA2E-B6B3-5822-AA45-AB875EF23641",
  "Attributes" : {
    "CurlCli" : {
      "Description" : "Convenience attribute, provides curl CLI command prefix, which can be used for signalling handle completion or failure. You can signal success by adding --data-binary '{"status": "SUCCESS"}' , or signal failure by adding --data-binary '{"status": "FAILURE"}'"
    },
    "WindowsCurlCli" : {
      "Description" : "Convenience attribute, provides curl CLI command prefix for Windows, which can be used for signalling handle completion or failure. As Windows does not support curl command, you need to install curl.exe and add it to PATH first. You can signal success by adding --data-binary '{"status": "SUCCESS"}' , or signal failure by adding --data-binary '{"status": "FAILURE"}' "
    },
    "Headers" : {
      "Description" : "HTTP POST Headers used for signalling handle completion or failure."
    },
    "URL" : {
      "Description" : "HTTP POST URL used for signalling handle completion or failure."
    },
    "PowerShellCurlCli" : {
      "Description" : "Convenience attribute, provides curl CLI command prefix for PowerShell, which can be used for signalling handle completion or failure. As this cmdlet was introduced in PowerShell 3.0, ensure the version of PowerShell satisfies the constraint. (Show the version via $PSVersionTable.PSVersion.) You can signal success by adding -Body '{"statu

```

```
s\": \"SUCCESS\"}' , or signal failure by adding -Body '{\"status\": \"FAILURE\"}' "
```

```

    }
  },
  "ResourceType" : "ALIYUN::ROS::WaitConditionHandle",
  "Properties" : {
    "Mode" : {
      "SupportScratchDetection" : false,
      "Immutable" : false,
      "Type" : "string",
      "Description" : "If set to Increment, all old signals will be deleted before update.
In this mode, WaitCondition.Count should reference an incremental value instead of a full v
alue, such as ScalingGroupEnable.ScalingRuleArisExecuteResultNumberOfAddedInstances.\n\nIf
set to Full, no old signal will be deleted unless Count is set. In this mode, WaitCondition
.Count should reference a full value, such as the same value with InstanceGroup.MaxAmount.
It is recommended to use this mode with Count.\n\nDefault to Full.",
      "Constraints" : [ {
        "AllowedValues" : [ "Increment", "Full" ]
      } ],
      "Required" : false,
      "Default" : "Full",
      "UpdateAllowed" : true
    },
    "Count" : {
      "SupportScratchDetection" : false,
      "Immutable" : false,
      "Type" : "integer",
      "Description" : "There are 3 preconditions that make Count taking effect:\n1.Mode is
set to Full.\n2.Count >= 0.\n3.The id of signal is not specified. If so, it will be a self-
increasing integer started from 1. For example, the id of the first signal is 1, the id of
the second signal is 2, and so on.\n\nIf Count takes effect, signals with id > Count will b
e deleted before update.\nThe default value is -1, which means no effect.\nIt is recommende
d to quote the same value with WaitCondition.Count.",
      "Required" : false,
      "Default" : -1,
      "UpdateAllowed" : true
    }
  },
  "SupportDriftDetection" : false
}

```

Error codes

For a list of error codes, visit the [API Error Center](#).

HttpCode	Error codes	Error message	Description
----------	-------------	---------------	-------------

HttpCode	Error codes	Error message	Description
404	ResourceTypeNotFound	The Resource Type ({name}) could not be found.	The error message returned because the specified resource type does not exist. name indicates the name of the resource type.

8.5. ListResourceTypes

Queries the list of supported resource types.

This topic provides an example on how to query the list of resource types supported by Resource Orchestration Service (ROS).

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	ListResourceTypes	The operation that you want to perform. Set the value to ListResourceTypes.
EntityType	String	No	Resource	The entity type. Valid values: <ul style="list-style-type: none"> All: all resource types. Resource: resources other than DataSource resources. For more information, see Resources. DataSource: DataSource resources.

Response parameters

Parameter	Type	Example	Description
ResourceTypes	Array of String	["ALIYUN::ECS::Instance","ALIYUN::RDS::Instance"]	The array of resource types.
RequestId	String	EA00860C-ECAF-5253-A1F9-8198695A7157	The ID of the request.

Examples

Sample requests

```
http(s)://ros.aliyuncs.com/?Action=ListResourceTypes
&<Common request parameters>
```

Sample success responses

XML **format**

```
HTTP/1.1 200 OK
Content-Type: application/xml
<ListResourceTypesResponse>
  <ResourceTypes>ALIYUN::ACM::Configuration</ResourceTypes>
  <ResourceTypes>ALIYUN::ACM::Namespace</ResourceTypes>
  <ResourceTypes>ALIYUN::ACTIONTRAIL::Trail</ResourceTypes>
  <ResourceTypes>ALIYUN::ACTIONTRAIL::TrailLogging</ResourceTypes>
  <ResourceTypes>ALIYUN::ADB::DBCluster</ResourceTypes>
  <ResourceTypes>ALIYUN::ALB::BackendServerAttachment</ResourceTypes>
  <ResourceTypes>ALIYUN::ALB::Listener</ResourceTypes>
  <ResourceTypes>ALIYUN::ALB::LoadBalancer</ResourceTypes>
  <ResourceTypes>ALIYUN::ALB::Rule</ResourceTypes>
  <ResourceTypes>ALIYUN::ALB::ServerGroup</ResourceTypes>
  <ResourceTypes>ALIYUN::ARMS::AlertContact</ResourceTypes>
  <ResourceTypes>ALIYUN::ARMS::AlertContactGroup</ResourceTypes>
  <ResourceTypes>ALIYUN::ARMS::RetcodeApp</ResourceTypes>
  <ResourceTypes>ALIYUN::ASM::ServiceMesh</ResourceTypes>
  <ResourceTypes>ALIYUN::ApiGateway::Api</ResourceTypes>
  <ResourceTypes>ALIYUN::ApiGateway::App</ResourceTypes>
  <ResourceTypes>ALIYUN::ApiGateway::Authorization</ResourceTypes>
  <ResourceTypes>ALIYUN::ApiGateway::CustomDomain</ResourceTypes>
  <ResourceTypes>ALIYUN::ApiGateway::Deployment</ResourceTypes>
  <ResourceTypes>ALIYUN::ApiGateway::Group</ResourceTypes>
  <ResourceTypes>ALIYUN::ApiGateway::Instance</ResourceTypes>
  <ResourceTypes>ALIYUN::ApiGateway::LogConfig</ResourceTypes>
  <ResourceTypes>ALIYUN::ApiGateway::Plugin</ResourceTypes>
  <ResourceTypes>ALIYUN::ApiGateway::PluginAttachment</ResourceTypes>
  <ResourceTypes>ALIYUN::ApiGateway::Signature</ResourceTypes>
  <ResourceTypes>ALIYUN::ApiGateway::SignatureBinding</ResourceTypes>
  <ResourceTypes>ALIYUN::ApiGateway::StageConfig</ResourceTypes>
  <ResourceTypes>ALIYUN::ApiGateway::TrafficControl</ResourceTypes>
  <ResourceTypes>ALIYUN::ApiGateway::TrafficControlBinding</ResourceTypes>
  <ResourceTypes>ALIYUN::ApiGateway::VpcAccessConfig</ResourceTypes>
  <ResourceTypes>ALIYUN::BSS::ResourcePackage</ResourceTypes>
  <ResourceTypes>ALIYUN::BSS::WaitOrder</ResourceTypes>
  <ResourceTypes>ALIYUN::BrainIndustrial::PidOrganization</ResourceTypes>
  <ResourceTypes>ALIYUN::BrainIndustrial::PidProject</ResourceTypes>
  <ResourceTypes>ALIYUN::CAS::Certificate</ResourceTypes>
  <ResourceTypes>ALIYUN::CDDC::DedicatedHost</ResourceTypes>
  <ResourceTypes>ALIYUN::CDDC::DedicatedHostGroup</ResourceTypes>
  <ResourceTypes>ALIYUN::CDN::Domain</ResourceTypes>
  <ResourceTypes>ALIYUN::CDN::DomainConfig</ResourceTypes>
  <ResourceTypes>ALIYUN::CEN::CenBandwidthLimit</ResourceTypes>
```

```
<ResourceTypes>ALIYUN::CEN::CenBandwidthPackage</ResourceTypes>
<ResourceTypes>ALIYUN::CEN::CenBandwidthPackageAssociation</ResourceTypes>
<ResourceTypes>ALIYUN::CEN::CenInstance</ResourceTypes>
<ResourceTypes>ALIYUN::CEN::CenInstanceAttachment</ResourceTypes>
<ResourceTypes>ALIYUN::CEN::CenRouteMap</ResourceTypes>
<ResourceTypes>ALIYUN::CEN::CenRouteService</ResourceTypes>
<ResourceTypes>ALIYUN::CEN::CenVbrHealthCheck</ResourceTypes>
<ResourceTypes>ALIYUN::CEN::RouteEntry</ResourceTypes>
<ResourceTypes>ALIYUN::CEN::TransitRouter</ResourceTypes>
<ResourceTypes>ALIYUN::CEN::TransitRouterPeerAttachment</ResourceTypes>
<ResourceTypes>ALIYUN::CEN::TransitRouterRouteEntry</ResourceTypes>
<ResourceTypes>ALIYUN::CEN::TransitRouterRouteTable</ResourceTypes>
<ResourceTypes>ALIYUN::CEN::TransitRouterRouteTableAssociation</ResourceTypes>
<ResourceTypes>ALIYUN::CEN::TransitRouterRouteTablePropagation</ResourceTypes>
<ResourceTypes>ALIYUN::CEN::TransitRouterVbrAttachment</ResourceTypes>
<ResourceTypes>ALIYUN::CEN::TransitRouterVpcAttachment</ResourceTypes>
<ResourceTypes>ALIYUN::CLOUDFW::AddressBook</ResourceTypes>
<ResourceTypes>ALIYUN::CLOUDFW::ControlPolicy</ResourceTypes>
<ResourceTypes>ALIYUN::CLOUDFW::VpcFirewallControlPolicy</ResourceTypes>
<ResourceTypes>ALIYUN::CMS::Contact</ResourceTypes>
<ResourceTypes>ALIYUN::CMS::ContactGroup</ResourceTypes>
<ResourceTypes>ALIYUN::CMS::DynamicTagGroup</ResourceTypes>
<ResourceTypes>ALIYUN::CMS::EventRule</ResourceTypes>
<ResourceTypes>ALIYUN::CMS::EventRuleTargets</ResourceTypes>
<ResourceTypes>ALIYUN::CMS::GroupMetricRule</ResourceTypes>
<ResourceTypes>ALIYUN::CMS::MetricRuleTargets</ResourceTypes>
<ResourceTypes>ALIYUN::CMS::MetricRuleTemplate</ResourceTypes>
<ResourceTypes>ALIYUN::CMS::MonitorGroup</ResourceTypes>
<ResourceTypes>ALIYUN::CMS::MonitorGroupInstances</ResourceTypes>
<ResourceTypes>ALIYUN::CMS::MonitoringAgentProcess</ResourceTypes>
<ResourceTypes>ALIYUN::CMS::SiteMonitor</ResourceTypes>
<ResourceTypes>ALIYUN::CR::InstanceEndpointAclPolicy</ResourceTypes>
<ResourceTypes>ALIYUN::CR::Namespace</ResourceTypes>
<ResourceTypes>ALIYUN::CR::Repository</ResourceTypes>
<ResourceTypes>ALIYUN::CR::UserInfo</ResourceTypes>
<ResourceTypes>ALIYUN::CS::AnyCluster</ResourceTypes>
<ResourceTypes>ALIYUN::CS::ClusterNodePool</ResourceTypes>
<ResourceTypes>ALIYUN::CS::KubernetesCluster</ResourceTypes>
<ResourceTypes>ALIYUN::CS::ManagedEdgeKubernetesCluster</ResourceTypes>
<ResourceTypes>ALIYUN::CS::ManagedKubernetesCluster</ResourceTypes>
<ResourceTypes>ALIYUN::CS::ServerlessKubernetesCluster</ResourceTypes>
<ResourceTypes>ALIYUN::ClickHouse::DBCluster</ResourceTypes>
<ResourceTypes>ALIYUN::Config::CompliancePack</ResourceTypes>
<ResourceTypes>ALIYUN::Config::DeliveryChannel</ResourceTypes>
<ResourceTypes>ALIYUN::Config::Rule</ResourceTypes>
<ResourceTypes>ALIYUN::DATAHUB::Project</ResourceTypes>
<ResourceTypes>ALIYUN::DATAHUB::Topic</ResourceTypes>
<ResourceTypes>ALIYUN::DBS::RestoreTask</ResourceTypes>
<ResourceTypes>ALIYUN::DMS::Instance</ResourceTypes>
<ResourceTypes>ALIYUN::DMS::User</ResourceTypes>
<ResourceTypes>ALIYUN::DNS::Domain</ResourceTypes>
<ResourceTypes>ALIYUN::DNS::DomainGroup</ResourceTypes>
<ResourceTypes>ALIYUN::DNS::DomainRecord</ResourceTypes>
<ResourceTypes>ALIYUN::DRDS::DrdsDB</ResourceTypes>
<ResourceTypes>ALIYUN::DRDS::DrdsInstance</ResourceTypes>
```

```
</ResourceTypes>ALIYUN::DRDS::DBInstance</ResourceTypes>
<ResourceTypes>ALIYUN::DTS::ConsumerGroup</ResourceTypes>
<ResourceTypes>ALIYUN::DTS::MigrationJob</ResourceTypes>
<ResourceTypes>ALIYUN::DTS::SubscriptionInstance</ResourceTypes>
<ResourceTypes>ALIYUN::DTS::SynchronizationJob</ResourceTypes>
<ResourceTypes>ALIYUN::ECI::ContainerGroup</ResourceTypes>
<ResourceTypes>ALIYUN::ECI::ImageCache</ResourceTypes>
<ResourceTypes>ALIYUN::ECS::AssignIpv6Addresses</ResourceTypes>
<ResourceTypes>ALIYUN::ECS::AssignPrivateIpAddresses</ResourceTypes>
<ResourceTypes>ALIYUN::ECS::AutoProvisioningGroup</ResourceTypes>
<ResourceTypes>ALIYUN::ECS::AutoSnapshotPolicy</ResourceTypes>
<ResourceTypes>ALIYUN::ECS::Command</ResourceTypes>
<ResourceTypes>ALIYUN::ECS::CopyImage</ResourceTypes>
<ResourceTypes>ALIYUN::ECS::CustomImage</ResourceTypes>
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<ResourceTypes>ALIYUN::ECS::Disk</ResourceTypes>
<ResourceTypes>ALIYUN::ECS::DiskAttachment</ResourceTypes>
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<ResourceTypes>ALIYUN::ECS::HpcCluster</ResourceTypes>
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<ResourceTypes>ALIYUN::ECS::SecurityGroupIngress</ResourceTypes>
<ResourceTypes>ALIYUN::ECS::Snapshot</ResourceTypes>
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<ResourceTypes>ALIYUN::ECS::VSwitch</ResourceTypes>
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<ResourceTypes>ALIYUN::EHPC::Cluster</ResourceTypes>
<ResourceTypes>ALIYUN::EMR::Cluster</ResourceTypes>
<ResourceTypes>ALIYUN::EMR::ClusterServiceConfigs</ResourceTypes>
<ResourceTypes>ALIYUN::ENS::Instance</ResourceTypes>
<ResourceTypes>ALIYUN::ESS::AlarmTask</ResourceTypes>
<ResourceTypes>ALIYUN::ESS::AlarmTaskEnable</ResourceTypes>
```

```
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<ResourceTypes>ALIYUN::FC::ProvisionConfig</ResourceTypes>
<ResourceTypes>ALIYUN::FC::Service</ResourceTypes>
<ResourceTypes>ALIYUN::FC::Trigger</ResourceTypes>
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<ResourceTypes>ALIYUN::FNF::Flow</ResourceTypes>
<ResourceTypes>ALIYUN::FNF::Schedule</ResourceTypes>
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<ResourceTypes>ALIYUN::GA::BandwidthPackage</ResourceTypes>
<ResourceTypes>ALIYUN::GA::BandwidthPackageAcceleratorAddition</ResourceTypes>
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<ResourceTypes>ALIYUN::GA::Listener</ResourceTypes>
<ResourceTypes>ALIYUN::GPDB::DBInstance</ResourceTypes>
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<ResourceTypes>ALIYUN::GPDB::InstancePublicConnection</ResourceTypes>
<ResourceTypes>ALIYUN::GWS::Cluster</ResourceTypes>
<ResourceTypes>ALIYUN::GWS::Instance</ResourceTypes>
<ResourceTypes>ALIYUN::HBR::BackupClients</ResourceTypes>
<ResourceTypes>ALIYUN::HBR::DbAgent</ResourceTypes>
<ResourceTypes>ALIYUN::HBR::DbPlan</ResourceTypes>
<ResourceTypes>ALIYUN::HBR::DbVault</ResourceTypes>
<ResourceTypes>ALIYUN::HBR::RestoreJob</ResourceTypes>
<ResourceTypes>ALIYUN::IOT::Device</ResourceTypes>
<ResourceTypes>ALIYUN::IOT::DeviceGroup</ResourceTypes>
<ResourceTypes>ALIYUN::IOT::Product</ResourceTypes>
<ResourceTypes>ALIYUN::IOT::ProductTopic</ResourceTypes>
<ResourceTypes>ALIYUN::IOT::Rule</ResourceTypes>
<ResourceTypes>ALIYUN::IOT::RuleAction</ResourceTypes>
<ResourceTypes>ALIYUN::KAFKA::Instance</ResourceTypes>
<ResourceTypes>ALIYUN::KAFKA::Topic</ResourceTypes>
<ResourceTypes>ALIYUN::KMS::Alias</ResourceTypes>
<ResourceTypes>ALIYUN::KMS::Key</ResourceTypes>
<ResourceTypes>ALIYUN::KMS::Secret</ResourceTypes>
<ResourceTypes>ALIYUN::MNS::Queue</ResourceTypes>
<ResourceTypes>ALIYUN::MNS::Subscription</ResourceTypes>
<ResourceTypes>ALIYUN::MNS::Topic</ResourceTypes>
<ResourceTypes>ALIYUN::MONGODB::Instance</ResourceTypes>
<ResourceTypes>ALIYUN::MONGODB::ServerlessInstance</ResourceTypes>
<ResourceTypes>ALIYUN::MONGODB::ShardingInstance</ResourceTypes>
<ResourceTypes>ALIYUN::MSE::Cluster</ResourceTypes>
```

```
<ResourceTypes>ALIYUN::MSE::Gateway</ResourceTypes>
<ResourceTypes>ALIYUN::MarketPlace::Order</ResourceTypes>
<ResourceTypes>ALIYUN::MaxCompute::Table</ResourceTypes>
<ResourceTypes>ALIYUN::Memcache::Instance</ResourceTypes>
<ResourceTypes>ALIYUN::Memcache::Whitelist</ResourceTypes>
<ResourceTypes>ALIYUN::NAS::AccessGroup</ResourceTypes>
<ResourceTypes>ALIYUN::NAS::AccessRule</ResourceTypes>
<ResourceTypes>ALIYUN::NAS::FileSystem</ResourceTypes>
<ResourceTypes>ALIYUN::NAS::MountTarget</ResourceTypes>
<ResourceTypes>ALIYUN::OOS::Execution</ResourceTypes>
<ResourceTypes>ALIYUN::OOS::Parameter</ResourceTypes>
<ResourceTypes>ALIYUN::OOS::Template</ResourceTypes>
<ResourceTypes>ALIYUN::OSS::Bucket</ResourceTypes>
<ResourceTypes>ALIYUN::OTS::Instance</ResourceTypes>
<ResourceTypes>ALIYUN::OTS::SearchIndex</ResourceTypes>
<ResourceTypes>ALIYUN::OTS::Table</ResourceTypes>
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JSON format

HTTP/1.1 200 OK

Content-Type:application/json

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Error codes

For a list of error codes, visit the [API Error Center](#).

For more information about errors common to all operations, see [Common error codes](#).

8.6. MoveResourceGroup

You can call this operation to move a resource to a specific resource group.

In this example, a stack deployed in the `China (Hangzhou)` region is moved to a specific resource group. The ID of the stack is `4e8611cb-251e-42b7-b9cb-3496362c****` and the ID of the resource group is `rg-acfm3peow3k****`.

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	MoveResourceGroup	The operation that you want to perform. Set the value to MoveResourceGroup.
NewResourceGroup	String	Yes	rg-acfm3peow3k****	The ID of the destination resource group. For more information about resource groups, see What is a resource group?
RegionId	String	Yes	cn-hangzhou	The region ID of the resource. You can call the DescribeRegions operation to query region IDs.

Parameter	Type	Required	Example	Description
ResourceId	String	Yes	4e8611cb-251e-42b7-b9cb-3496362c****	The ID of the resource.
ResourceType	String	Yes	stack	The type of the resource. Valid values: <ul style="list-style-type: none"> stack stackgroup template

For more information about common request parameters, see [Common parameters](#).

Response parameters

Parameter	Type	Example	Description
RequestId	String	F84A05B3-7275-4C8B-8AEE-9088C639C271	The ID of the request.

Examples

Sample requests

```
http(s)://ros.aliyuncs.com/?Action=MoveResourceGroup
&NewResourceGroupId=rg-acfm3peow3k****
&RegionId=cn-hangzhou
&ResourceId=4e8611cb-251e-42b7-b9cb-3496362c****
&ResourceType=stack
&<Common request parameters>
```

Sample success responses

XML format

```
<MoveResourceGroupResponse>
  <RequestId>F84A05B3-7275-4C8B-8AEE-9088C639C271</RequestId>
</MoveResourceGroupResponse>
```

JSON format

```
{
  "RequestId": "F84A05B3-7275-4C8B-8AEE-9088C639C271"
}
```

Error codes

For a list of error codes, visit the [API Error Center](#).

9. Template operations

9.1. CreateTemplateScratch

Creates a scenario.

Description

You can call this operation to create a scenario. You can specify a resource scope for the scenario on a visualized interface, and replicate and manage resources in the scenario.

In this topic, a scenario of the resource replication type is created in the China (Hangzhou) region. In this scenario, a virtual private cloud (VPC) named `vpc-bp1m6fww66xbntjyc****` is replicated.

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	CreateTemplateScratch	The operation that you want to perform. Set the value to CreateTemplateScratch.
RegionId	String	Yes	cn-hangzhou	The ID of the region in which the scenario is created. You can call the DescribeRegions operation to query the most recent region list.
TemplateScratchType	String	Yes	ArchitectureReplication	The type of the scenario. Valid values: <ul style="list-style-type: none"> ResourceImport: resource management ArchitectureReplication: resource replication
Description	String	No	Replicates a VPC.	The description of the scenario.
SourceResources	Array	No		The source resource.
ResourceId	String	Yes	vpc-bp1m6fww66xbntjyc****	The ID of the resource.

Parameter	Type	Required	Example	Description
ResourceType	String	Yes	ALIYUN::ECS::VPC	The type of the resource.
SourceTag	Object	No		The source tag.
ResourceTags	Map	Yes	{"a": "b"}	<p>The source tags that consist of key-value pairs.</p> <p>If you want to specify only the tag key, you must set the tag value to an empty string. Example: <code>{"TagKey": ""}</code>.</p> <p>You can configure up to 10 source tags.</p>
ResourceTypeFilter	Array of String	No	ALIYUN::ECS::VPC	<p>The filter for resource types. If you specify this parameter, only the resources of the specified types and have the specified tags are scanned. If you do not specify this parameter, all resources that have the specified tags are scanned.</p> <p>You can specify up to 20 resource types.</p>
SourceResourceGroup	Object	No		The source resource group.
ResourceGroupId	String	Yes	rg-acfmzawhxc****	The ID of the source resource group.
ResourceTypeFilter	Array of String	No	ALIYUN::ECS::VPC	<p>The filter for resource types. If you specify this parameter, only the resources of the specified types and in the specified resource groups are scanned. If you do not specify this parameter, all resources in the specified resource groups are scanned.</p> <p>You can specify up to 20 resource types.</p>
PreferenceParameters	Array	No		The parameters that are configured in the scenario.

Parameter	Type	Required	Example	Description
ParameterKey	String	Yes	DeletionPolicy	<p>The name of a request parameter.</p> <p>For more information about ParameterKey, see Additional description of request parameters.</p> <div style="background-color: #e0f2f7; padding: 10px;"> <p>Note</p> <ul style="list-style-type: none"> • PreferenceParameters is optional. If you want to set PreferenceParameters, you must specify both ParameterKey and ParameterValue. • If you set TemplateScratchType to ResourceImport, you must set ParameterKey to DeletionPolicy. </div>
ParameterValue	String	Yes	Retain	<p>The value of a request parameter. The value of ParameterValue varies based on the value of ParameterKey.</p> <p>For more information about ParameterValue, see Additional description of request parameters.</p> <div style="background-color: #e0f2f7; padding: 10px;"> <p>Note PreferenceParameters is optional. If you want to set PreferenceParameters, you must specify both ParameterKey and ParameterValue.</p> </div>
LogicalIdStrategy	String	No	LongTypePrefixAndIndexSuffix	<p>The generation policy of the logical ID. Default value: LongTypePrefixAndIndexSuffix. Valid values:</p> <ul style="list-style-type: none"> • LongTypePrefixAndIndexSuffix: long-type prefix + index-type suffix • LongTypePrefixAndHashSuffix: long-type prefix + hash-type suffix • ShortTypePrefixAndHashSuffix: short-type prefix + hash-type suffix

Parameter	Type	Required	Example	Description
ClientToken	String	No	123e4567-e89b-12d3-a456-42665544****	<p>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 the different requests. The token can be up to 64 characters in length and can contain letters, digits, hyphens (-), and underscores (_).</p> <p>For more information, see How to ensure idempotence.</p>
ExecutionMode	String	No	Sync	<p>The execution mode. Default value: Async. Valid values:</p> <ul style="list-style-type: none"> • Async: asynchronous mode • Sync: synchronous mode <div style="border: 1px solid #add8e6; padding: 5px; background-color: #e6f2ff;"> <p> Note If you have a wide scope of resources, Sync takes longer. If you set ExecutionMode to Sync, we recommend that you set ClientToken to prevent the execution from timing out.</p> </div>

Additional description of request parameters

For more information about common request parameters, see [Common parameters](#).

In request parameters, the values of ParameterKey and ParameterValue vary based on the scenario types.

- The following table describes the values of ParameterKey and ParameterValue in the resource replication scenario.

ParameterKey	ParameterValue
DeletionPolicy	<p>The resource deletion policy. Valid values:</p> <ul style="list-style-type: none"> ◦ Retain: retains resources. If you delete a stack after you replicate resources to the stack, the resources are retained. ◦ Delete: deletes resources. If you delete a stack after you replicate resources to the stack, all the resources are deleted by default. If you retain some resources when you delete the stack, the resources that you no longer need are deleted.

ParameterKey	ParameterValue
RegionId	<p>The destination region to which you want to replicate the resource. If you do not specify a destination region, the resource is replicated to the region where the source resource resides.</p> <p>Example: cn-shanghai.</p>
ZoneId	<p>The destination zone to which you want to replicate the resource. If you replicate the resource in the same region but you do not specify the destination zone, the resource is replicated to the zone where the source resource resides. If you replicate the resource across zones, the resource is replicated to the zone that all resources support.</p> <p>Example: cn-shanghai-b.</p>
VpcId	<p>The destination VPC to which you want to replicate the resource. If you replicate the resource in the same region but you do not specify the destination VPC, the resource is replicated to the VPC to which the source resource belongs. If you replicate the resource across regions, a new VPC is created in the destination region.</p> <p>Example: vpc-bp1hye0s8b69xokfu****.</p>
VSwitchId	<p>The destination vSwitch. If you replicate the resource in the same region but you do not specify the destination vSwitch, the vSwitch that is associated with the source resource is used. If you replicate the resource across regions, a new vSwitch is created in the destination region.</p> <p>Example: vsw-bp11ufkwqwggtm1cj****.</p>
InstanceDataReplication	<p>Specifies whether to replicate the Elastic Compute Service (ECS) instance data. Valid values:</p> <ul style="list-style-type: none"> ◦ true: replicates ECS instance data. If you replicate the resource in the same region, a custom image is created for the source instance and new instances are created based on the custom image. If you replicate the resource across regions, a custom image is created for the source instance and replicated to the destination region. New instances are created based on the custom image. ◦ false: does not replicate ECS instance data.

Note If you set `ParameterKey` to `InstanceDataReplication` and `ParameterValue` to `true`, you must stop the source instance before you replicate the resource to ensure data consistency.

- The following table describes the values of `ParameterKey` and `ParameterValue` in the resource management scenario.

Note In the resource management scenario, you must set `ParameterKey` to `DeletionPolicy`.

ParameterKey	ParameterValue
DeletionPolicy	<p>The resource deletion policy. Valid values:</p> <ul style="list-style-type: none"> Retain: retains resources. If you delete a stack that you use to manage resources, all the resources in the stack are automatically retained. Delete: deletes resources. If you delete a stack that you use to manage resources, all the resources in the stack are automatically deleted. If you retain some resources when you delete the stack, only the resources that you no longer need are deleted.

Response parameters

Parameter	Type	Example	Description
RequestId	String	84980977-22F0-5421-B30D-B201311D5DCF	The ID of the request.
TemplateScratchId	String	ts-7f7a704cf71c49a6**	The ID of the scenario.

Examples

Sample requests

```
http(s)://[Endpoint]/?Action=CreateTemplateScratch
&RegionId=cn-hangzhou
&TemplateScratchType=ArchitectureReplication
&SourceResources=[{"ResourceId":"vpc-bp1m6fw66xbntjyc****", "ResourceType":"ALIYUN::ECS::VPC"}]
&<Common request parameters>
```

Sample success responses

`XML` format

```
HTTP/1.1 200 OK
Content-Type:application/xml
<CreateTemplateScratchResponse>
  <RequestId>84980977-22F0-5421-B30D-B201311D5DCF</RequestId>
  <TemplateScratchId>ts-7f7a704cf71c49a6****</TemplateScratchId>
</CreateTemplateScratchResponse>
```

JSON format

```
HTTP/1.1 200 OK
Content-Type:application/json
{
  "RequestId" : "84980977-22F0-5421-B30D-B201311D5DCF",
  "TemplateScratchId" : "ts-7f7a704cf71c49a6****"
}
```

Error codes

For a list of error codes, visit the [API Error Center](#).

9.2. UpdateTemplateScratch

Updates a scenario.

In this topic, the `ts-7f7a704cf71c49a6****` scenario that is created in the China (Hangzhou) region is updated. In this scenario, the ID of the virtual private cloud (VPC) is updated to `ts-7f7a704cf71c49a6****`.

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	UpdateTemplateScratch	The operation that you want to perform. Set the value to UpdateTemplateScratch.
RegionId	String	Yes	cn-hangzhou	The ID of the region in which the scenario is created. You can call the DescribeRegions operation to query the most recent region list.

Parameter	Type	Required	Example	Description
TemplateScratchId	String	Yes	ts-7f7a704cf71c49a6****	The ID of the scenario.
Description	String	No	Replicates a VPC.	The description of the scenario.
SourceResources	Array	No		The source resource.
ResourceId	String	Yes	vpc-bp1m6fww66xbntjyc****	The ID of the resource.
ResourceType	String	Yes	ALYUN::ECS::VPC	The type of the resource.
SourceTag	Object	No		The source tag.
ResourceTags	Map	Yes	{"a": "b"}	<p>The source tags that consist of key-value pairs.</p> <p>If you want to specify only the tag key, you must set the tag value to an empty string. Example: {"TagKey": ""}.</p> <p>You can configure up to 10 source tags.</p>
ResourceTypeFilter	Array of String	No	ALYUN::ECS::VPC	<p>The filter for resource types. If you specify this parameter, only the resources of the specified types and have the specified tags are scanned. If you do not specify this parameter, all resources that have the specified tags are scanned.</p> <p>You can specify up to 20 resource types.</p>
SourceResourceGroup	Object	No		The source resource group.
ResourceGroupId	String	Yes	rg-acfmzawhxc****	The ID of the source resource group.

Parameter	Type	Required	Example	Description
ResourceTypeFilter	Array of String	No	ALIYUN::ECS::VPC	The filter for resource types. If you specify this parameter, only the resources of the specified types and in the specified resource groups are scanned. If you do not specify this parameter, all the resources in the specified resource groups are scanned. You can specify up to 20 resource types.
PreferenceParameters	Array	No		The parameters that are configured in the scenario.
ParameterKey	String	Yes	DeletionPolicy	The name of a request parameter. For more information about ParameterKey, see Additional description of request parameters . <div style="background-color: #e1f5fe; padding: 10px; border: 1px solid #cfcfcf;"> <p> Note</p> <ul style="list-style-type: none"> • PreferenceParameters is optional. If you set PreferenceParameters, you must specify both ParameterKey and ParameterValue. • If you set TemplateScratchType to ResourceImport, you must set ParameterKey to DeletionPolicy. </div>

Parameter	Type	Required	Example	Description
ParameterValue	String	Yes	Retain	<p>The value of a request parameter. The value of ParameterValue varies based on the value of ParameterKey.</p> <p>For more information about ParameterValue, see Additional description of request parameters.</p> <div style="background-color: #e1f5fe; padding: 10px; border: 1px solid #cfe2f3;"> <p> Note PreferenceParameters is optional. If you set PreferenceParameters, you must specify both ParameterKey and ParameterValue.</p> </div>
LogicalIdStrategy	String	No	LongTypePrefixAndIndexSuffix	<p>The generation policy of the logical ID. Default value: LongTypePrefixAndIndexSuffix. Valid values:</p> <ul style="list-style-type: none"> LongTypePrefixAndIndexSuffix: long-type prefix + index-type suffix LongTypePrefixAndHashSuffix: long-type prefix + hash-type suffix ShortTypePrefixAndHashSuffix: short-type prefix + hash-type suffix
ClientToken	String	No	123e4567-e89b-12d3-a456-42665544****	<p>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 the different requests. The token can be up to 64 characters in length and can contain letters, digits, hyphens (-), and underscores (_).</p> <p>For more information, see How to ensure idempotence.</p>

Parameter	Type	Required	Example	Description
ExecutionMode	String	No	Sync	<p>The execution mode. Default value: Async. Valid values:</p> <ul style="list-style-type: none"> • Async: asynchronous mode • Sync: synchronous mode <p> Note If you have a wide scope of resources, Sync takes longer. If you set ExecutionMode to Sync, we recommend that you set ClientToken to prevent the execution from timing out.</p>

Additional description of request parameters

For more information about common request parameters, see [Common parameters](#).

In request parameters, the values of ParameterKey and ParameterValue vary based on the scenario types.

- The following table describes the values of ParameterKey and ParameterValue in the resource replication scenario.

ParameterKey	ParameterValue
DeletionPolicy	<p>The resource deletion policy. Valid values:</p> <ul style="list-style-type: none"> ◦ Retain: retains resources. If you delete a stack after you replicate resources to the stack, the resources are retained. ◦ Delete: deletes resources. If you delete a stack after you replicate resources to the stack, all the resources are deleted by default. If you retain some resources when you delete the stack, the resources that you no longer need are deleted.
RegionId	<p>The destination region to which you want to replicate the resource. If you do not specify a destination region, the resource is replicated to the region where the source resource resides.</p> <p>Example: cn-shanghai.</p>

ParameterKey	ParameterValue
Zoneld	<p>The destination zone to which you want to replicate the resource. If you replicate the resource in the same region but you do not specify the destination zone, the resource is replicated to the zone where the source resource resides. If you replicate the resource across zones, the resource is replicated to the zone that all resources support.</p> <p>Example: cn-shanghai-b.</p>
VpcId	<p>The destination VPC to which you want to replicate the resource. If you replicate the resource in the same region but you do not specify the destination VPC, the resource is replicated to the VPC to which the source resource belongs. If you replicate the resource across regions, a new VPC is created in the destination region.</p> <p>Example: vpc-bp1hye0s8b69xokfu****.</p>
VSwitchId	<p>The destination vSwitch. If you replicate the resource in the same region but you do not specify the destination vSwitch, the vSwitch that is associated with the source resource is used. If you replicate the resource across regions, a new vSwitch is created in the destination region.</p> <p>Example: vsw-bp11ufkwqwggtm1cj****.</p>
InstanceDataReplication	<p>Specifies whether to replicate the Elastic Compute Service (ECS) instance data. Valid values:</p> <ul style="list-style-type: none"> ◦ true: replicates ECS instance data. If you replicate the resource in the same region, a custom image is created for the source instance and new instances are created based on the custom image. If you replicate the resource across regions, a custom image is created for the source instance and replicated to the destination region. New instances are created based on the custom image. ◦ false: does not replicate ECS instance data.

 **Note** If you set ParameterKey to InstanceDataReplication and ParameterValue to true, you must stop the source instance before you replicate the resource to ensure data consistency.

- The following table describes the values of ParameterKey and ParameterValue in the resource management scenario.

 **Note** In the resource management scenario, you must set ParameterKey to DeletionPolicy.

ParameterKey	ParameterValue
DeletionPolicy	<p>The resource deletion policy. Valid values:</p> <ul style="list-style-type: none"> Retain: retains resources. If you delete a stack that you use to manage resources, all the resources in the stack are automatically retained. Delete: deletes resources. If you delete a stack that you use to manage resources, all the resources in the stack are automatically deleted. If you want to retain some resources when you delete the stack, only the resources that you no longer need are deleted.

Response parameters

Parameter	Type	Example	Description
RequestId	String	221DA822-B8CF-50DF-A9D2-BA197BF97BD5	The ID of the request.
TemplateScratchId	String	ts-7f7a704cf71c49a6**	The ID of the scenario.

Examples

Sample requests

```
http(s)://[Endpoint]/?Action=UpdateTemplateScratch
&RegionId=cn-hangzhou
&TemplateScratchId=ts-7f7a704cf71c49a6****
&SourceResources=[{"ResourceId":"vpc-bp1m6fww66xbntjyc****", "ResourceType":"ALIYUN::ECS::VPC"}]
&<Common request parameters>
```

Sample success responses

XML format

```
HTTP/1.1 200 OK
Content-Type:application/xml
<UpdateTemplateScratchResponse>
  <RequestId>221DA822-B8CF-50DF-A9D2-BA197BF97BD5</RequestId>
  <TemplateScratchId>ts-7f7a704cf71c49a6****</TemplateScratchId>
</UpdateTemplateScratchResponse>
```

JSON **format**

```

HTTP/1.1 200 OK
Content-Type:application/json
{
  "RequestId" : "221DA822-B8CF-50DF-A9D2-BA197BF97BD5",
  "TemplateScratchId" : "ts-7f7a704cf71c49a6****"
}

```

Error codes

For a list of error codes, visit the [API Error Center](#).

9.3. ListTemplateScratches

Queries a list of scenarios.

In this topic, the scenarios in the China (Hangzhou) region are queried. The following scenarios are returned: resource management and resource replication.

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	ListTemplateScratches	The operation that you want to perform. Set the value to ListTemplateScratches.
RegionId	String	Yes	cn-hangzhou	The ID of the region in which the scenario is created. You can call the DescribeRegions operation to query the most recent region list.
TemplateScratchId	String	No	ts-7f7a704cf71c49a6****	The ID of the scenario.

Parameter	Type	Required	Example	Description
TemplateScratchType	String	No	ArchitectureReplication	The type of the scenario. Valid values: <ul style="list-style-type: none"> ResourceImport: resource management ArchitectureReplication: resource replication
Status	String	No	GENERATE_COMPLETE	The status of the scenario. Valid values: <ul style="list-style-type: none"> GENERATE_IN_PROGRESS: The scenario is being created. GENERATE_COMPLETE: The scenario is created. GENERATE_FAILED: The scenario fails to be created.
PageSize	Integer	No	10	The number of entries to return on each page. Maximum value: 50. Default value: 10.
PageNumber	Integer	No	1	The number of the page to return. Pages start from page 1. Default value: 1.

For more information about common request parameters, see [Common parameters](#).

Response parameters

Parameter	Type	Example	Description
RequestId	String	D1C09606-C58B-558F-9B4E-5BF263D17D09	The ID of the request.
TotalCount	Integer	2	The total number of scenarios.
PageNumber	Integer	1	The page number of the returned page.
PageSize	Integer	10	The number of entries returned per page.

Parameter	Type	Example	Description
TemplateScratches	Array of TemplateScratch		The list of scenarios.
TemplateScratchId	String	ts-48ad85d66cca4620***	The ID of the scenario.
TemplateScratchType	String	ResourceImport	The type of the scenario. Valid values: <ul style="list-style-type: none"> ResourceImport: resource management ArchitectureReplication: resource replication
Status	String	GENERATE_COMPLETE	The status of the scenario.
StatusReason	String	Resource ALIYUN::ECS::VPC vpc-m5eauuq80anx59v28**** could not be found for template scratch.	The reason why the scenario fails to be created. <div style="background-color: #e6f2ff; padding: 5px; margin-top: 10px;"> <p> Note This parameter is returned only if you set the Status parameter to GENERATE_FAILED.</p> </div>
FailedCode	String	InvalidZoneId	The status code of the scenario that fails to be created. <div style="background-color: #e6f2ff; padding: 5px; margin-top: 10px;"> <p> Note This parameter is returned only if you set the Status parameter to GENERATE_FAILED.</p> </div>
PreferenceParameters	Array of PreferenceParameter		The parameters that are configured for the scenario.
ParameterKey	String	DeletionPolicy	The parameter key.
ParameterValue	String	Retain	The parameter value.
Description	String	Manages the virtual private cloud (VPC) resource.	The description of the scenario.
SourceResources	Array of SourceResource		The source resource.

Parameter	Type	Example	Description
ResourceId	String	vpc-m5eauuq80anx59v2g****	The ID of the resource.
ResourceType	String	ALIYUN::ECS::VPC	The type of the resource.
SourceTag	Object		The source tag.
ResourceTags	Map		The source tags.
ResourceTypeFilter	Array of String	ALIYUN::ECS::VPC	The filter for resource types.
SourceResourceGroup	Object		The source resource group.
ResourceGroupId	String	rg-acfmzawhxc****	The ID of the source resource group.
ResourceTypeFilter	Array of String	ALIYUN::ECS::VPC	The filter for resource types.
LogicalIdStrategy	String	LongTypePrefixAndIndexSuffix	<p>The policy based on which the logical ID is generated. Default value: LongTypePrefixAndIndexSuffix. Valid values:</p> <ul style="list-style-type: none"> LongTypePrefixAndIndexSuffix: long-type prefix + index-type suffix LongTypePrefixAndHashSuffix: long-type prefix + hash-type suffix ShortTypePrefixAndHashSuffix: short-type prefix + hash-type suffix
CreateTime	String	2021-12-07T08:06:44	<p>The time at which the scenario was created.</p> <p>The time follows the ISO 8601 standard in the YYYY-MM-DDThh:mm:ss format. The time is displayed in UTC.</p>
UpdateTime	String	2021-12-07T08:06:44	<p>The time at which the scenario was updated.</p> <p>The time follows the ISO 8601 standard in the YYYY-MM-DDThh:mm:ss format. The time is displayed in UTC.</p>

Examples

Sample requests

```
http(s)://[Endpoint]/?Action=ListTemplateScratches
&RegionId=cn-hangzhou
&<Common request parameters>
```

Sample success responses

`XML` format

```

HTTP/1.1 200 OK
Content-Type:application/xml
<ListTemplateScratchesResponse>
  <TotalCount>2</TotalCount>
  <RequestId>D1C09606-C58B-558F-9B4E-5BF263D17D09</RequestId>
  <PageSize>10</PageSize>
  <PageNumber>1</PageNumber>
  <TemplateScratches>
    <Status>GENERATE_COMPLETE</Status>
    <PreferenceParameters>
      <ParameterValue>Retain</ParameterValue>
      <ParameterKey>DeletionPolicy</ParameterKey>
    </PreferenceParameters>
    <SourceResourceGroup/>
    <CreateTime>2021-12-07T08:06:44</CreateTime>
    <UpdateTime>2021-12-07T08:06:44</UpdateTime>
    <SourceTag/>
    <TemplateScratchId>ts-48ad85d66cca4620****</TemplateScratchId>
    <TemplateScratchType>ResourceImport</TemplateScratchType>
    <LogicalIdStrategy>LongTypePrefixAndIndexSuffix</LogicalIdStrategy>
    <SourceResources>
      <ResourceId>vpc-m5eauuq80anx59v28****</ResourceId>
      <ResourceType>ALIYUN::ECS::VPC</ResourceType>
    </SourceResources>
  </TemplateScratches>
  <TemplateScratches>
    <Status>GENERATE_FAILED</Status>
    <StatusReason>Resource ALIYUN::ECS::VPC vpc-m5eauuq80anx59v28**** could not be found for template scratch.</StatusReason>
    <SourceResourceGroup/>
    <CreateTime>2021-11-26T08:48:50</CreateTime>
    <UpdateTime>2021-11-26T08:48:50</UpdateTime>
    <SourceTag/>
    <TemplateScratchId>ts-9f6537c657a54739****</TemplateScratchId>
    <TemplateScratchType>ArchitectureReplication</TemplateScratchType>
    <LogicalIdStrategy>LongTypePrefixAndIndexSuffix</LogicalIdStrategy>
    <SourceResources>
      <ResourceId>vpc-m5eauuq80anx59v28****</ResourceId>
      <ResourceType>ALIYUN::ECS::VPC</ResourceType>
    </SourceResources>
  </TemplateScratches>
</ListTemplateScratchesResponse>

```

JSON **format**

```
HTTP/1.1 200 OK
Content-Type:application/json
{
  "TotalCount" : 2,
  "RequestId" : "D1C09606-C58B-558F-9B4E-5BF263D17D09",
  "PageSize" : 10,
  "PageNumber" : 1,
  "TemplateScratches" : [ {
    "Status" : "GENERATE_COMPLETE",
    "PreferenceParameters" : [ {
      "ParameterValue" : "Retain",
      "ParameterKey" : "DeletionPolicy"
    } ],
    "SourceResourceGroup" : { },
    "CreateTime" : "2021-12-07T08:06:44",
    "UpdateTime" : "2021-12-07T08:06:44",
    "SourceTag" : { },
    "TemplateScratchId" : "ts-48ad85d66cca4620****",
    "TemplateScratchType" : "ResourceImport",
    "LogicalIdStrategy" : "LongTypePrefixAndIndexSuffix",
    "SourceResources" : [ {
      "ResourceId" : "vpc-m5eauuq80anx59v28****",
      "ResourceType" : "ALIYUN::ECS::VPC"
    } ]
  } ], {
    "Status" : "GENERATE_FAILED",
    "StatusReason" : "Resource ALIYUN::ECS::VPC vpc-m5eauuq80anx59v28**** could not be found for template scratch.",
    "SourceResourceGroup" : { },
    "CreateTime" : "2021-11-26T08:48:50",
    "UpdateTime" : "2021-11-26T08:48:50",
    "SourceTag" : { },
    "TemplateScratchId" : "ts-9f6537c657a54739****",
    "TemplateScratchType" : "ArchitectureReplication",
    "LogicalIdStrategy" : "LongTypePrefixAndIndexSuffix",
    "SourceResources" : [ {
      "ResourceId" : "vpc-m5eauuq80anx59v28****",
      "ResourceType" : "ALIYUN::ECS::VPC"
    } ]
  } ]
}
```

Error codes

For a list of error codes, visit the [API Error Center](#).

9.4. GetTemplateScratch

Queries the details about a scenario.

In this topic, the details about the `ts-7f7a704cf71c49a6****` scenario in the China (Hangzhou) region are queried. The source node data is displayed.

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	GetTemplateScratch	The operation that you want to perform. Set the value to GetTemplateScratch.
RegionId	String	Yes	cn-hangzhou	The ID of the region where the scenario is created. You can call the DescribeRegions operation to query the most recent region list.
TemplateScratchId	String	Yes	ts-7f7a704cf71c49a6****	The ID of the scenario.
ShowDataOption	String	No	Source	The data display option. Valid values: <ul style="list-style-type: none"> Source: displays only the data of source nodes. Provisions: displays only the data of new nodes. All: displays all data. For more information about source nodes and new nodes, see Overview . <div style="border: 1px solid #ccc; background-color: #e6f2ff; padding: 5px; margin-top: 10px;"> <p> Note If you do not set this parameter, the node data is not displayed.</p> </div>

For more information about common request parameters, see [Common parameters](#).

Response parameters

Parameter	Type	Example	Description
RequestId	String	A8E0EF98-6FBD-5656-8298-FC8194F0F7B7	The ID of the request.

Parameter	Type	Example	Description
TemplateScratch	Object		The scenario.
TemplateScratchId	String	ts-7f7a704cf71c49a6**	The ID of the scenario.
TemplateScratchType	String	ArchitectureReplication	The type of the scenario. Valid values: <ul style="list-style-type: none"> ResourceImport: resource management ArchitectureReplication: resource replication
Status	String	GENERATE_COMPLETE	The status of the scenario. Valid values: <ul style="list-style-type: none"> GENERATE_IN_PROGRESS: The scenario is being created. GENERATE_COMPLETE: The scenario is created. GENERATE_FAILED: The scenario fails to be created.
StatusReason	String	Resource ALIYUN::ECS::VPC vpc-m5eauuq80anx59v2g**** could not be found for template scratch.	The reason why the scenario fails to be created. <div style="background-color: #e6f2ff; padding: 5px; border: 1px solid #d9e1f2;"> <p> Note This parameter is returned only if you set the Status parameter to GENERATE_FAILED.</p> </div>
FailedCode	String	InvalidZoneld	The status code of the scenario that fails to be created. <div style="background-color: #e6f2ff; padding: 5px; border: 1px solid #d9e1f2;"> <p> Note This parameter is returned only if you set the Status parameter to GENERATE_FAILED.</p> </div>
TemplateScratchData	Map		The scenario data.
PreferenceParameters	Array of PreferenceParameter		The parameters that are configured for the scenario.
ParameterKey	String	DeletionPolicy	The parameter name.

Parameter	Type	Example	Description
ParameterValue	String	Retain	The parameter value.
Description	String	Replicates a virtual private cloud (VPC) resource.	The description of the scenario.
SourceResources	Array of SourceResource		The source resource.
ResourceId	String	vpc-m5e7cv7e9mz69sszb****	The ID of the resource.
ResourceType	String	ALIYUN::ECS::VPC	The type of the resource.
SourceTag	Object		The source tag.
ResourceTags	Map		The resource tags.
ResourceTypeFilter	Array of String	ALIYUN::ECS::VPC	The filter for resource types.
SourceResourceGroup	Object		The source resource group.
ResourceGroupId	String	rg-acfmzawhxc****	The ID of the source resource group.
ResourceTypeFilter	Array of String	ALIYUN::ECS::VPC	The filter for resource types.
LogicalIdStrategy	String	LongTypePrefixAndIndexSuffix	<p>The policy based on which the logical ID is generated. Default value: LongTypePrefixAndIndexSuffix. Valid values:</p> <ul style="list-style-type: none"> LongTypePrefixAndIndexSuffix: long-type prefix + index-type suffix LongTypePrefixAndHashSuffix: long-type prefix + hash-type suffix ShortTypePrefixAndHashSuffix: short-type prefix + hash-type suffix
CreateTime	String	2021-12-22T01:49:22	<p>The time at which the scenario was created.</p> <p>The time follows the ISO 8601 standard in the YYYY-MM-DDThh:mm:ss format. The time is displayed in UTC.</p>

Parameter	Type	Example	Description
UpdateTime	String	2021-12-22T01:49:23	The time at which the scenario was updated. The time follows the ISO 8601 standard in the YYYY-MM-DDThh:mm:ss format. The time is displayed in UTC.
Stacks	Array of Stack		The list of stacks that are associated with the scenario.
StackId	String	3708bf6a-3a67-44d4-9eb1-c56704b9****	The ID of the stack.
RegionId	String	cn-hangzhou	The ID of the region to which the stack belongs.
UsageType	String	ArchitectureReplication	The purpose of the stack. Valid values: <ul style="list-style-type: none"> ResourceImport: resource management ArchitectureReplication: resource replication
StackProvision	Object		The preset information about the stack.
Creatable	Boolean	true	Indicates whether the resource is replicated by calling the CreateStack operation. Valid values: <ul style="list-style-type: none"> true false
Importable	Boolean	false	Indicates whether the resource is managed by calling the CreateChangeSet operation. Valid values: <ul style="list-style-type: none"> true false

Examples

Sample requests

```
http(s)://[Endpoint]/?Action=GetTemplateScratch
&RegionId=cn-hangzhou
&TemplateScratchId=ts-7f7a704cf71c49a6****
&ShowDataOption=Source
&<Common request parameters>
```

Sample success responses

XML format

```

HTTP/1.1 200 OK
Content-Type:application/xml
<GetTemplateScratchResponse>
  <TemplateScratch>
    <Status>GENERATE_COMPLETE</Status>
    <Description>Replicates the VPC. </Description>
    <CreateTime>2021-12-22T01:49:22</CreateTime>
    <TemplateScratchId>ts-7f7a704cf71c49a6****</TemplateScratchId>
    <LogicalIdStrategy>LongTypePrefixAndIndexSuffix</LogicalIdStrategy>
    <PreferenceParameters>
      <ParameterValue>vpc-bp1xuanwmphrpcfim****</ParameterValue>
      <ParameterKey>VpcId</ParameterKey>
    </PreferenceParameters>
    <PreferenceParameters>
      <ParameterValue>Retain</ParameterValue>
      <ParameterKey>DeletionPolicy</ParameterKey>
    </PreferenceParameters>
    <PreferenceParameters>
      <ParameterValue>cn-hangzhou</ParameterValue>
      <ParameterKey>RegionId</ParameterKey>
    </PreferenceParameters>
    <PreferenceParameters>
      <ParameterKey>ZoneId</ParameterKey>
    </PreferenceParameters>
    <PreferenceParameters>
      <ParameterKey>VSwitchId</ParameterKey>
    </PreferenceParameters>
    <PreferenceParameters>
      <ParameterKey>InstanceDataReplication</ParameterKey>
    </PreferenceParameters>
    <TemplateScratchData>
      <Source>
        <RegionId>cn-hangzhou</RegionId>
        <Nodes>
          <ECSVPC_001>
            <ResourceId>vpc-m5e7cv7e9mz69sszb****</ResourceId>
            <NodeType>SourceNode</NodeType>
            <ResourceType>ALIYUN::ECS::VPC</ResourceType>
            <Properties>
              <Description>
                <Type>String</Type>
              </Description>
              <SecondaryCidrBlock>
                <Type>String</Type>
              </SecondaryCidrBlock>
              <CidrBlock>
                <Type>String</Type>
                <Value>172.16.0.0/12</Value>
              </CidrBlock>
              <VpcName>
                <Type>String</Type>

```

```

        <Value>tf_test</Value>
    </VpcName>
    <Ipv6CidrBlock>
        <Type>String</Type>
    </Ipv6CidrBlock>
    <Tags>
        <Type>List</Type>
    </Tags>
    <EnableIpv6>
        <Type>Boolean</Type>
        <Value>>false</Value>
    </EnableIpv6>
    <UserCidr>
        <Type>String</Type>
    </UserCidr>
</Properties>
<ResourceIdentifiers>VpcId</ResourceIdentifiers>
</ECSVPC_001>
</Nodes>
</Source>
</TemplateScratchData>
<UpdateTime>2021-12-22T01:49:23</UpdateTime>
<Stacks>
    <RegionId>cn-hangzhou</RegionId>
    <UsageType>ArchitectureReplication</UsageType>
    <StackId>3708bf6a-3a67-44d4-9eb1-c56704b9****</StackId>
</Stacks>
<TemplateScratchType>ArchitectureReplication</TemplateScratchType>
<StackProvision>
    <Creatable>>true</Creatable>
    <Importable>>false</Importable>
</StackProvision>
<SourceResources>
    <ResourceId>vpc-m5e7cv7e9mz69sszb****</ResourceId>
    <ResourceType>ALIYUN::ECS::VPC</ResourceType>
</SourceResources>
</TemplateScratch>
<RequestId>A8E0EF98-6FBD-5656-8298-FC8194F0F7B7</RequestId>
</GetTemplateScratchResponse>

```

JSON format

```

HTTP/1.1 200 OK
Content-Type:application/json
{
  "TemplateScratch" : {
    "Status" : "GENERATE_COMPLETE",
    "Description": "Replicates a VPC resource.",
    "CreateTime" : "2021-12-22T01:49:22",
    "TemplateScratchId" : "ts-7f7a704cf71c49a6****",
    "LogicalIdStrategy" : "LongTypePrefixAndIndexSuffix",
    "PreferenceParameters" : [ {
      "ParameterValue" : "vpc-bp1xuamwmphrpcfim****",

```

```
    "ParameterKey" : "VpcId"
  }, {
    "ParameterValue" : "Retain",
    "ParameterKey" : "DeletionPolicy"
  }, {
    "ParameterValue" : "cn-hangzhou",
    "ParameterKey" : "RegionId"
  }, {
    "ParameterKey" : "ZoneId"
  }, {
    "ParameterKey" : "VSwitchId"
  }, {
    "ParameterKey" : "InstanceDataReplication"
  } ],
"TemplateScratchData" : {
  "Source" : {
    "RegionId" : "cn-hangzhou",
    "Nodes" : {
      "ECSVPC_001" : {
        "ResourceId" : "vpc-m5e7cv7e9mz69sszb*****",
        "NodeType" : "SourceNode",
        "ResourceType" : "ALIYUN::ECS::VPC",
        "Properties" : {
          "Description" : {
            "Type" : "String"
          },
          "SecondaryCidrBlock" : {
            "Type" : "String"
          },
          "CidrBlock" : {
            "Type" : "String",
            "Value" : "172.16.0.0/12"
          },
          "VpcName" : {
            "Type" : "String",
            "Value" : "tf_test"
          },
          "Ipv6CidrBlock" : {
            "Type" : "String"
          },
          "Tags" : {
            "Type" : "List"
          },
          "EnableIpv6" : {
            "Type" : "Boolean",
            "Value" : false
          },
          "UserCidr" : {
            "Type" : "String"
          }
        }
      },
      "ResourceIdentifiers" : [ "VpcId" ]
    }
  }
}
```

```
    },
    "UpdateTime" : "2021-12-22T01:49:23",
    "Stacks" : [ {
        "RegionId" : "cn-hangzhou",
        "UsageType" : "ArchitectureReplication",
        "StackId" : "3708bf6a-3a67-44d4-9eb1-c56704b9****"
    } ],
    "TemplateScratchType" : "ArchitectureReplication",
    "StackProvision" : {
        "Creatable" : true,
        "Importable" : false
    },
    },
    "SourceResources" : [ {
        "ResourceId" : "vpc-m5e7cv7e9mz69sszb****",
        "ResourceType" : "ALIYUN::ECS::VPC"
    } ]
    },
    "RequestId" : "A8E0EF98-6FBD-5656-8298-FC8194F0F7B7"
}
```

Error codes

For a list of error codes, visit the [API Error Center](#).

9.5. DeleteTemplateScratch

Deletes a scenario.

This topic describes how to delete a scenario. In this topic, the `ts-4f83704400994409****` scenario in the China (Hangzhou) region is 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	DeleteTemplateScratch	The operation that you want to perform. Set the value to DeleteTemplateScratch.

Parameter	Type	Required	Example	Description
RegionId	String	Yes	cn-hangzhou	The ID of the region in which the scenario is created. You can call the DescribeRegions operation to query the most recent region list.
TemplateScratchId	String	Yes	ts-4f8370440099440g****	The ID of the scenario.

For more information about common request parameters, see [Common parameters](#).

Response parameters

Parameter	Type	Example	Description
RequestId	String	1B9C6333-5904-5A1E-9845-CB17A369AFDC	The ID of the request.

Examples

Sample requests

```
http(s)://[Endpoint]/?Action=DeleteTemplateScratch
&RegionId=cn-hangzhou
&TemplateScratchId=ts-4f8370440099440g****
&<Common request parameters>
```

Sample success responses

XML format

```
HTTP/1.1 200 OK
Content-Type:application/xml
<DeleteTemplateScratchResponse>
  <RequestId>1B9C6333-5904-5A1E-9845-CB17A369AFDC</RequestId>
</DeleteTemplateScratchResponse>
```

JSON format

```
HTTP/1.1 200 OK
Content-Type:application/json
{
  "RequestId" : "1B9C6333-5904-5A1E-9845-CB17A369AFDC"
}
```

Error codes

For a list of error codes, visit the [API Error Center](#).

9.6. GenerateTemplateByScratch

Creates a template for a scenario.

This topic describes how to create a template for a scenario. In this topic, the `ts-aa9c62feab844a6b****` scenario of the Resource Management type in the China (Hangzhou) region 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	GenerateTemplateByScratch	The operation that you want to perform. Set the value to GenerateTemplateByScratch.
RegionId	String	Yes	cn-hangzhou	The ID of the region in which the scenario is created. You can call the DescribeRegions operation to query the most recent region list.
TemplateScratchId	String	Yes	ts-aa9c62feab844a6b****	The ID of the scenario. For more information about how to query the IDs of scenarios, see ListTemplateScratches .
ProvisionRegionId	String	No	cn-hangzhou	The ID of the region to which the new node belongs.

For more information about common request parameters, see [Common parameters](#).

Response parameters

Parameter	Type	Example	Description
RequestId	String	D22C1D13-D74E-558C-AF68-1B4C05FA6F1A	The ID of the request.

Parameter	Type	Example	Description
TemplateBody	String	<pre>{\"ROSTemplateFormatVersion\": \"2015-09-01\", \"Resources\": {\"ECSVPC_001\": {\"DeletionPolicy\": \"Retain\", \"Type\": \"ALIYUN::ECS::VPC\", \"Properties\": {\"CidrBlock\": \"172.16.0.0/12\", \"VpcName\": \"MyTestVpc\", \"EnableIpv6\": false}}}}</pre>	The content of the template that is created for the scenario.
ResourcesToImport	Array of ResourceToImport		<p>The resources that you want to import to a stack in the scenario of the Resource Management type.</p> <div style="background-color: #e0f2f1; padding: 5px; border: 1px solid #ccc;"> <p> Note This parameter is returned only for scenarios of the Resource Management type.</p> </div>
ResourceType	String	ALIYUN::ECS::VPC	The type of the resource.
LogicalResourceId	String	ECSVPC_001	The ID of the logical resource.
ResourceIdentifier	Map		<p>The key-value mappings from string to string. The parameter value is a JSON string that identifies the resource that is imported.</p> <p>A key is an identifier for a resource, and a value is an assignment of data to the key. For example, VpcId is a key that indicates the ID of a virtual private cloud (VPC), and <code>vpc-bp1m6fww66xbntjyc****</code> is a value that is assigned to VpcId.</p>

Examples

Sample requests

```
http(s)://[Endpoint]/?Action=GenerateTemplateByScratch
&RegionId=cn-hangzhou
&TemplateScratchId=ts-aa9c62feab844a6b****
&<Common request parameters>
```

Sample success responses

XML format

```
HTTP/1.1 200 OK
Content-Type:application/xml
<GenerateTemplateByScratchResponse>
  <RequestId>D22C1D13-D74E-558C-AF68-1B4C05FA6F1A</RequestId>
  <ResourcesToImport>
    <ResourceIdentifier>
      <VpcId>vpc-bp1m6fww66xbntjyc****</VpcId>
    </ResourceIdentifier>
    <LogicalResourceId>ECSVPC_001</LogicalResourceId>
    <ResourceType>ALIYUN::ECS::VPC</ResourceType>
  </ResourcesToImport>
  <TemplateBody>{"ROSTemplateFormatVersion": "2015-09-01", "Resources": {"ECSVPC_001": {"
DeletionPolicy": "Retain", "Type": "ALIYUN::ECS::VPC", "Properties": {"CidrBlock": "172.16.
0.0/12", "VpcName": "MyTestVpc", "EnableIpv6": false}}}}</TemplateBody>
</GenerateTemplateByScratchResponse>
```

JSON format

```
HTTP/1.1 200 OK
Content-Type:application/json
{
  "RequestId" : "D22C1D13-D74E-558C-AF68-1B4C05FA6F1A",
  "ResourcesToImport" : [ {
    "ResourceIdentifier" : {
      "VpcId" : "vpc-bp1m6fww66xbntjyc****"
    },
    "LogicalResourceId" : "ECSVPC_001",
    "ResourceType" : "ALIYUN::ECS::VPC"
  } ],
  "TemplateBody" : "{\"ROSTemplateFormatVersion\": \"2015-09-01\", \"Resources\": {\"ECSVPC
_001\": {\"DeletionPolicy\": \"Retain\", \"Type\": \"ALIYUN::ECS::VPC\", \"Properties\": {\"
CidrBlock\": \"172.16.0.0/12\", \"VpcName\": \"MyTestVpc\", \"EnableIpv6\": false}}}}"
```

Error codes

For a list of error codes, visit the [API Error Center](#).

10.Template operations

10.1. GenerateTemplatePolicy

You can call this operation to generate the policy information for a template.

If the policy information involves Enterprise Distributed Application Service (EDAS), you must log on to your Alibaba Cloud account and grant corresponding permissions to the involved RAM user.

In this example, a policy is generated for a template whose ID is `5ecd1e10-b0e9-4389-a565-e4c15efc****`.

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	GenerateTemplatePolicy	The operation that you want to perform. Set the value to GenerateTemplatePolicy.

Parameter	Type	Required	Example	Description
TemplateURL	String	No	oss://ros/templ ate/demo	<p>The URL of the file that contains the template body. The URL must point to a template located in an HTTP or HTTPS web server or an Alibaba Cloud OSS bucket. Examples: oss://ros/template/demo and oss://ros/template/demo? RegionId=cn-hangzhou. The template can be up to 524,288 bytes in length, and the URL can be up to 1,024 bytes in length.</p> <div style="border: 1px solid #ccc; background-color: #e6f2ff; padding: 5px; margin: 10px 0;"> <p> Note If the region of the OSS bucket is not specified, the RegionId value is used.</p> </div> <p>You can specify only one of TemplateBody, TemplateURL, and TemplateId.</p>
TemplateBody	String	No	{"ROSTemplateFo rmatVersion": "20 15-09-01"}	<p>The structure that contains the template body. The template body must be 1 to 524,288 bytes in length.</p> <p>If the length of the template body is longer than required, we recommend that you add parameters to the HTTP POST request body to avoid request failures due to excessive length of URLs.</p> <p>You can specify only one of TemplateBody, TemplateURL, and TemplateId.</p>
TemplateId	String	No	5ecd1e10-b0e9- 4389-a565- e4c15efc****	<p>The ID of the template. This parameter applies to shared and private templates.</p> <p>You can specify only one of TemplateBody, TemplateURL, and TemplateId.</p>

Parameter	Type	Required	Example	Description
TemplateVersion	String	No	v1	The version of the template. This parameter takes effect only when the TemplateId parameter is specified.

For more information about common parameters, see [Common parameters](#).

Response parameters

Parameter	Type	Example	Description
Policy	Struct		The information of the policy.
Statement	Array of Statement		Details about the policy information.
Action	List	["apigateway:Create Api", "apigateway:Delete Api","apigateway:D escribeApi","apigate way:ModifyApi"]	The operation on the specified resource.
Effect	String	Allow	The permission effect. Valid values: <ul style="list-style-type: none"> Allow Deny
Resource	String	*	The authorization object. An asterisk (*) indicates all resources.
Version	String	1	The version number.
RequestId	String	B288A0BE-D927- 4888-B0F7- B35EF84B6E6	The ID of the request.

Examples

Sample requests

```
http(s)://[Endpoint]/?Action=GenerateTemplatePolicy
&TemplateId=5ecd1e10-b0e9-4389-a565-e4c15efc***
&<Common request parameters>
```

Sample success responses

XML format

```
<Policy>
  <Version>1</Version>
  <Statement>
    <Action>ecs:DescribeVpcs</Action>
    <Action>ecs>DeleteVpc</Action>
    <Resource>*</Resource>
    <Effect>Allow</Effect>
  </Statement>
  <Statement>
    <Action>vpc:CreateVpc</Action>
    <Action>vpc:DescribeVpcs</Action>
    <Action>vpc:ModifyVpcAttribute</Action>
    <Action>vpc:TagResources</Action>
    <Resource>*</Resource>
    <Effect>Allow</Effect>
  </Statement>
</Policy>
<RequestId>16AAEDEB-6273-405E-97D3-023EFD95DE03</RequestId>
```

JSON format

```
{
  "Policy": {
    "Version": 1,
    "Statement": [
      {
        "Action": [
          "ecs:DescribeVpcs",
          "ecs>DeleteVpc"
        ],
        "Resource": "*",
        "Effect": "Allow"
      },
      {
        "Action": [
          "vpc:CreateVpc",
          "vpc:DescribeVpcs",
          "vpc:ModifyVpcAttribute",
          "vpc:TagResources"
        ],
        "Resource": "*",
        "Effect": "Allow"
      }
    ]
  },
  "RequestId": "16AAEDEB-6273-405E-97D3-023EFD95DE03"
}
```

Error codes

For a list of error codes, visit the [API Error Center](#).

HTTP status code	Error code	Error message	Description
400	StackValidationFailed	{reason}.	The error message returned because the stack validation failed. reason indicates the specific reason.
404	TemplateNotFound	The Tempalte ({ ID }) could not be found.	The error message returned because the specified template does not exist. ID indicates the template ID.
404	TemplateNotFound	The Template { ID } with version { version } could not be found.	The error message returned because the specified template or template version does not exist. ID indicates the template ID, and version indicates the template version.

10.2. CreateTemplate

Creates a template.

In this example, a template named `MyTemplate` is created in the `China (Hangzhou)` region. The `template body` is set to `{"ROSTemplateFormatVersion": "2015-09-01"}`.

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	CreateTemplate	The operation that you want to perform. Set the value to CreateTemplate.

Parameter	Type	Required	Example	Description
TemplateURL	String	No	oss://ros/template/demo	<p>The URL of the file that contains the template body. The URL must point to a template located in an HTTP or HTTPS web server or an Alibaba Cloud OSS bucket. Examples: oss://ros/template/demo and oss://ros/template/demo?RegionId=cn-hangzhou. The template can be up to 524,288 bytes in length. If the region of the OSS bucket is not specified, the RegionId value is used.</p> <div style="background-color: #e1f5fe; padding: 5px;"><p> Note You must specify only one of the TemplateBody and TemplateURL parameters.</p></div>
Description	String	No	It is a demo.	<p>The description of the template. The description can be up to 256 characters in length.</p>

Parameter	Type	Required	Example	Description
TemplateBody	String	No	<code>{"ROSTemplateFormatVersion": "2015-09-01"}</code>	<p>The template body. The template body must be 1 to 524,288 bytes in length. If the length of the template body exceeds the maximum length, we recommend that you add the extra parameters to the body of the HTTP POST request. This prevents request failures caused by extremely long URLs.</p> <div style="border: 1px solid #add8e6; padding: 5px; margin: 10px 0;"> <p> Note You must specify only one of the TemplateBody and TemplateURL parameters.</p> </div> <p>You can create a Terraform template based on your needs. Example:</p> <pre style="background-color: #f0f0f0; padding: 10px; margin: 10px 0;">{ "ROSTemplateFormatVersion": "2015-09-01", "Transform": "Aliyun::Terraform-v1.0", "Workspace": { "main.tf": "variable \"name\" { default = \"auto_provisioning_group\"}" }, "Outputs": {} }</pre> <p>For more information about how to use Terraform, see Terraform template structure.</p>
TemplateName	String	Yes	MyTemplate	<p>The name of the parameter template.</p> <p>The name can be up to 255 characters in length, and can contain digits, letters, hyphens (-), and underscores (_). It must start with a digit or letter.</p>
ResourceGroupId	String	No	rg-acfmxazb4ph6aiy****	<p>The ID of the resource group.</p> <p>For more information about resource groups, see What is a resource group?</p>

For more information about common request parameters, see [Common parameters](#).

Response parameters

Parameter	Type	Example	Description
RequestId	String	8C5D90E1-66B6-496C-9371-3807F8DA80A8	The ID of the request.
TemplateId	String	5ecd1e10-b0e9-4389-a565-e4c15efc****	The ID of the template.

Examples

Sample requests

```
http(s)://ros.aliyuncs.com/?Action=CreateTemplate
&TemplateName=MyTemplate
&TemplateBody={"ROSTemplateFormatVersion":"2015-09-01"}
&<Common request parameters>
```

Sample success responses

XML **format**

```
HTTP/1.1 200 OK
Content-Type:application/xml
<CreateTemplateResponse>
  <RequestId>8C5D90E1-66B6-496C-9371-3807F8DA80A8</RequestId>
  <TemplateId>5ecd1e10-b0e9-4389-a565-e4c15efc****</TemplateId>
</CreateTemplateResponse>
```

JSON **format**

```
HTTP/1.1 200 OK
Content-Type:application/json
{
  "RequestId" : "8C5D90E1-66B6-496C-9371-3807F8DA80A8",
  "TemplateId" : "5ecd1e10-b0e9-4389-a565-e4c15efc****"
}
```

Error codes

For a list of error codes, visit the [API Error Center](#).

HttpCode	Error code	Error message	Description
400	InvalidSchema	{reason}.	The error message returned because the template format is invalid. reason indicates the specific reason.

HttpCode	Error code	Error message	Description
400	InvalidTemplateAttribute	The Referenced Attribute ({resource} {name}) is incorrect.	The error message returned because the resource property referenced in the Outputs section of the template is invalid. resource indicates the resource name. name indicates the property name.
400	InvalidTemplatePropertyType	The specified value type of ({resource} {section}) is incorrect.	The error message returned because the type of the resource property that is defined in a section of the template is invalid. resource indicates the resource name. section indicates the section name.
400	InvalidTemplateReference	The specified reference "{name}" (in {referencer}) is incorrect.	The error message returned because the template contains an invalid reference. name indicates the reference name. referencer indicates the referencer name.
400	InvalidTemplateSection	The template section is invalid: {section}.	The error message returned because the template contains an invalid section. section indicates the section name.
400	InvalidTemplateVersion	The template version is invalid: {reason}.	The error message returned because the template version is invalid. reason indicates the specific reason.

10.3. ValidateTemplate

Validates a template.

In this example, a template that is used to create stacks is validated. The `TemplateURL` parameter is set to `oss://ros/template/demo`.

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	ValidateTemplate	The operation that you want to perform. Set the value to <code>ValidateTemplate</code> .
TemplateURL	String	No	<code>oss://ros/template/demo</code>	<p>The URL of the file that contains the template body. The URL must point to a template that is stored on an HTTP web server or in an Object Storage Service (OSS) bucket, for example, <code>oss://ros/template/demo</code> and <code>oss://ros/template/demo?RegionId=cn-hangzhou</code>. The template body can be up to 524,288 bytes in length.</p> <div style="border: 1px solid #ccc; background-color: #e6f2ff; padding: 5px; margin: 5px 0;"> <p> Note If you do not specify the region of the OSS bucket, the region ID of the stack is used.</p> </div> <p>You can specify the <code>TemplateBody</code> or <code>TemplateURL</code> parameter, but not both parameters.</p> <p>The URL can be up to 1,024 bytes in length.</p>
RegionId	String	No	<code>cn-hangzhou</code>	The region ID of the template. You can call the DescribeRegions operation to query the most recent region list.

Parameter	Type	Required	Example	Description
TemplateBody	String	No	<pre>{"ROSTemplateFormatVersion": "2015-09-01"}</pre>	<p>The structure of the template body. The template body must be 1 to 524,288 bytes in length.</p> <p>If the length of the template body exceeds the upper limit, we recommend that you add parameters to the HTTP POST request body to prevent request failures caused by excessively long URLs.</p> <p>You can specify the TemplateBody or TemplateURL parameter, but not both parameters.</p>
ClientToken	String	No	123e4567-e89b-12d3-a456-42665544****	<p>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.</p> <p>The token can be up to 64 characters in length, and can contain letters, digits, hyphens (-), and underscores (_).</p> <p>For more information, see Ensure idempotence.</p>
ValidationOption	String	No	None	<p>Specifies whether to enable additional validation for the template. Default value: None. Valid values:</p> <ul style="list-style-type: none"> None: does not enable additional validation. EnableTerraformValidation: runs the <code>terraform validate</code> command in the Terraform CLI to enable additional validation for a Terraform template.

For more information about common request parameters, see [Common parameters](#).

Response parameters

Parameter	Type	Example	Description
Description	String	No description	The description of the template.

Parameter	Type	Example	Description
Parameters	Array of Object	<pre>[{"Description": "", "Label": "param_integer", "NoEcho": "false", "ParameterKey": "param_integer", "Type": "Number"},{ "Description": "", "Label": "param_float", "NoEcho": "false", "ParameterKey": "param_float", "Type": "Number"}]</pre>	<p>The input parameters of the template.</p> <p>The input parameters define the parameters that you must specify when you use the template to create stacks. These parameters specify the stack details, such as the username, password, and Elastic Compute Service (ECS) instance type that you can use based on the region of the stack.</p>
RequestId	String	B288A0BE-D927-4888-B0F7-B35EF84B6E6F	The ID of the request.
Outputs	Array of Output		The template outputs.
OutputKey	String	instance_id	The name of the template output.
Description	String	The instance ID of my ECS.	The description of the template output.

Examples

Sample requests

```
http(s)://ros.aliyuncs.com/?Action=ValidateTemplate
&TemplateURL=oss://ros/template/demo
&<Common request parameters>
```

Sample success responses

XML format

```
HTTP/1.1 200 OK
Content-Type:application/xml
<ValidateTemplateResponse>
  <Description type="string">No description</Description>
  <Parameters class="array">
    <Parameter class="object">
      <Description type="string"></Description>
      <Label type="string">param_integer</Label>
      <NoEcho type="string">>false</NoEcho>
      <ParameterKey type="string">param_integer</ParameterKey>
      <Type type="string">Number</Type>
    </Parameter>
  </Parameters>
```

```

        <Description type="string"></Description>
        <Label type="string">param_float</Label>
        <NoEcho type="string">>false</NoEcho>
        <ParameterKey type="string">param_float</ParameterKey>
        <Type type="string">Number</Type>
    </Parameter>
    <Parameter class="object">
        <Description type="string"></Description>
        <Label type="string">param_bool</Label>
        <NoEcho type="string">>false</NoEcho>
        <ParameterKey type="string">param_bool</ParameterKey>
        <Type type="string">Boolean</Type>
    </Parameter>
    <Parameter class="object">
        <Description type="string"></Description>
        <Label type="string">param_json_list</Label>
        <NoEcho type="string">>false</NoEcho>
        <ParameterKey type="string">param_json_list</ParameterKey>
        <Type type="string">Json</Type>
    </Parameter>
    <Parameter class="object">
        <Default class="object">
            <c class="array"></c>
        </Default>
        <Description type="string"></Description>
        <Label type="string">param_has_default</Label>
        <NoEcho type="string">>false</NoEcho>
        <ParameterKey type="string">param_has_default</ParameterKey>
        <Type type="string">Json</Type>
    </Parameter>
    <Parameter class="object">
        <Description type="string"></Description>
        <Label type="string">UpdateVersion</Label>
        <NoEcho type="string">>false</NoEcho>
        <ParameterKey type="string">UpdateVersion</ParameterKey>
        <Type type="string">Number</Type>
    </Parameter>
    <Parameter class="object">
        <Description type="string"></Description>
        <Label type="string">param_str</Label>
        <NoEcho type="string">>false</NoEcho>
        <ParameterKey type="string">param_str</ParameterKey>
        <Type type="string">String</Type>
    </Parameter>
    <Parameter class="object">
        <Description type="string"></Description>
        <Label type="string">param_list</Label>
        <NoEcho type="string">>false</NoEcho>
        <ParameterKey type="string">param_list</ParameterKey>
        <Type type="string">CommaDelimitedList</Type>
    </Parameter>
    <Parameter class="object">
        <Description type="string"></Description>
        <Label type="string">param_json_dict</Label>

```

```

        <NoEcho type="string">false</NoEcho>
        <ParameterKey type="string">param_json_dict</ParameterKey>
        <Type type="string">Json</Type>
    </Parameter>
</Parameters>
<Outputs class="array">
    <Output class="object">
        <Description type="string">The instance ID of my ECS.</Description>
        <ParameterKey type="string">instance_id</ParameterKey>
    </Output>
</Outputs>
<RequestId type="string">B288A0BE-D927-4888-B0F7-B35EF84B6E6F</RequestId>
</ValidateTemplateResponse>

```

JSON format

```

HTTP/1.1 200 OK
Content-Type:application/json
{
  "Description" : "No description",
  "Parameters" : [ {
    "Description" : "",
    "Label" : "param_integer",
    "NoEcho" : "false",
    "ParameterKey" : "param_integer",
    "Type" : "Number"
  }, {
    "Description" : "",
    "Label" : "param_float",
    "NoEcho" : "false",
    "ParameterKey" : "param_float",
    "Type" : "Number"
  }, {
    "Description" : "",
    "Label" : "param_bool",
    "NoEcho" : "false",
    "ParameterKey" : "param_bool",
    "Type" : "Boolean"
  }, {
    "Description" : "",
    "Label" : "param_json_list",
    "NoEcho" : "false",
    "ParameterKey" : "param_json_list",
    "Type" : "Json"
  }, {
    "Default" : {
      "c" : [ ]
    },
    "Description" : "",
    "Label" : "param_has_default",
    "NoEcho" : "false",
    "ParameterKey" : "param_has_default",
    "Type" : "Json"
  }
}

```

```

    }, {
      "Description" : "",
      "Label" : "UpdateVersion",
      "NoEcho" : "false",
      "ParameterKey" : "UpdateVersion",
      "Type" : "Number"
    }, {
      "Description" : "",
      "Label" : "param_str",
      "NoEcho" : "false",
      "ParameterKey" : "param_str",
      "Type" : "String"
    }, {
      "Description" : "",
      "Label" : "param_list",
      "NoEcho" : "false",
      "ParameterKey" : "param_list",
      "Type" : "CommaDelimitedList"
    }, {
      "Description" : "",
      "Label" : "param_json_dict",
      "NoEcho" : "false",
      "ParameterKey" : "param_json_dict",
      "Type" : "Json"
    } ],
    "Outputs" : [ {
      "Description" : "The instance ID of my ECS.",
      "OutputKey" : "instance_id"
    } ],
    "RequestId" : "B288A0BE-D927-4888-B0F7-B35EF84B6E6F"
  }
}

```

Error codes

For a list of error codes, visit the [API Error Center](#).

Error code	Error message	HTTP status code	Description
InvalidTemplate	{reason}.	400	The error message returned because the specified template is invalid. reason indicates the specific reason.

Error code	Error message	HTTP status code	Description
InvalidParameter	{reason}.	400	The error message returned because the specified parameter in the template is invalid. reason indicates the specific reason.

10.4. UpdateTemplate

You can call this operation to update a template.

Take note of the following items:

- If you specify the `TemplateBody` or `TemplateURL` parameter, the existing version number is automatically incremented by 1 after the template is updated. For example, the version is changed from v1 to v2.
- If you do not specify the `TemplateBody` or `TemplateURL` parameter, the version number remains unchanged.
- A template can have up to 100 versions. If the number of templates reaches the upper limit, the template fails to be updated. You must create another 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	UpdateTemplate	The operation that you want to perform. Set the value to UpdateTemplate.
TemplateId	String	Yes	5ecd1e10-b0e9-4389-a565-e4c15efc****	The ID of the template. This parameter applies to shared and private templates.

Parameter	Type	Required	Example	Description
TemplateURL	String	No	oss://ros/template/demo	<p>The URL of the file that contains the template body. The URL must point to a template located in an HTTP or HTTPS web server or an Alibaba Cloud OSS bucket. Examples: oss://ros/template/demo and oss://ros/template/demo?RegionId=cn-hangzhou. The template can be up to 524,288 bytes in length, and the URL can be up to 1,024 bytes in length.</p> <div style="border: 1px solid #ccc; background-color: #e6f2ff; padding: 5px; margin: 5px 0;"> <p> Note If the region of the OSS bucket is not specified, the RegionId value is used.</p> </div> <p>You can specify only one of the TemplateBody and TemplateURL parameters.</p>
TemplateName	String	No	MyTemplate	<p>The name of the template.</p> <p>The name can be up to 255 characters in length and can contain digits, letters, hyphens (-), and underscores (_). It must start with a digit or letter.</p>
Description	String	No	It is a demo.	<p>The description of the template. It can be up to 256 characters in length.</p>
TemplateBody	String	No	<pre>{"ROSTemplateFormatVersion": "2015-09-01"}</pre>	<p>The structure that contains the template body. The template body must be 1 to 524,288 bytes in length.</p> <p>If the length of the template body is longer than required, we recommend that you add parameters to the HTTP POST request body to avoid request failures due to excessive length of URLs.</p> <p>You can specify only one of the TemplateBody and TemplateURL parameters.</p>

For more information about common request parameters, see [Common parameters](#).

Response parameters

Parameter	Type	Example	Description
RequestId	String	8C5D90E1-66B6-496C-9371-3807F8DA80A8	The ID of the request.
TemplateId	String	5ecd1e10-b0e9-4389-a565-e4c15efc****	The ID of the template.

Examples

Sample requests

```
http(s)://ros.aliyuncs.com/? Action=UpdateTemplate
&TemplateId=5ecd1e10-b0e9-4389-a565-e4c15efc****
&<Common request parameters>
```

Sample success responses

XML **format**

```
<UpdateTemplateResponse>
  <RequestId>8C5D90E1-66B6-496C-9371-3807F8DA80A8</RequestId>
  <TemplateId>5ecd1e10-b0e9-4389-a565-e4c15efc****</TemplateId>
</UpdateTemplateResponse>
```

JSON **format**

```
{
  "RequestId": "8C5D90E1-66B6-496C-9371-3807F8DA80A8",
  "TemplateId": "5ecd1e10-b0e9-4389-a565-e4c15efc****"
}
```

Error codes

For a list of error codes, visit the [API Error Center](#).

HttpCode	Error code	Error message	Description
404	TemplateNotFound	The Tempalte ({ ID }) could not be found.	The error message returned because the specified template does not exist.

HttpCode	Error code	Error message	Description
400	InvalidSchema	{reason}.	The error message returned because the specified template format is invalid. reason indicates the specific reason.
400	InvalidTemplateAttribute	The Referenced Attribute ({resource} {name}) is incorrect.	The error message returned because the resource attribute referenced in the template is incorrect. resource indicates the resource name, and name indicates the attribute name.
400	InvalidTemplatePropertyType	The specified value type of ({resource} {section}) is incorrect.	The error message returned because the type of the specified resource section defined in the template is incorrect. resource indicates the resource name, and section indicates the section name.
400	InvalidTemplateReference	The specified reference "{name}" (in {referencer}) is incorrect.	The error message returned because the template contains an invalid reference. name indicates the reference name, and referencer indicates the referencer name.

HttpCode	Error code	Error message	Description
400	InvalidTemplateSection	The template section is invalid: {section}.	The error message returned because the template contains an invalid section. section indicates the section name.
400	InvalidTemplateVersion	The template version is invalid: {reason}.	The error message returned because the template version is incorrect. reason indicates the specific reason.
400	TemplateBeingProcessed	Template { ID } is being processed, retry later.	The error message returned because the specified template has an action in progress. Try again later. ID indicates the template ID.

10.5. GetTemplate

Queries the details of a template, for example, a custom template. The details include the information about the stack, stack group, and change set that are specified in the template.

In this example, the details of a template whose ID is `5ecd1e10-b0e9-4389-a565-e4c15efc****` and region ID is `cn-hangzhou` 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	GetTemplate	The operation that you want to perform. Set the value to GetTemplate.

Parameter	Type	Required	Example	Description
StackId	String	No	4a6c9851-3b0f-4f5f-b4ca-a14bf691****	<p>The ID of the stack.</p> <p>Note You must specify only one of the following parameters: StackId, ChangeSetId, StackGroupName, and TemplateId.</p>
RegionId	String	Yes	cn-hangzhou	<p>The region ID of the stack or stack group that you specify in the template. You can call the DescribeRegions operation to query the most recent region list.</p>
ChangeSetId	String	No	1f6521a4-05af-4975-afe9-bc4b45ad****	<p>The ID of the change set.</p> <p>Note You must specify only one of the following parameters: StackId, ChangeSetId, StackGroupName, and TemplateId.</p>
TemplateId	String	No	5ecd1e10-b0e9-4389-a565-e4c15efc****	<p>The ID of the template.</p> <p>This parameter applies to shared and private templates. If the template is a shared template, the value of the TemplateId parameter is the same as the value of the TemplateARN parameter. You can use the template ID to query a shared template.</p> <p>Note You must specify only one of the following parameters: StackId, ChangeSetId, StackGroupName, and TemplateId.</p>
TemplateVersion	String	No	v1	<p>The version of the template. This parameter only takes effect when you specify the TemplateId parameter.</p> <p>If the template is a shared template, you can specify this parameter only if you set the VersionOption parameter to AllVersions.</p> <p>Valid values: v1 to v100.</p>

Parameter	Type	Required	Example	Description
TemplateStage	String	No	Processed	<p>The stage of the template that is returned by Resource Orchestration Service (ROS). This parameter only takes effect when you specify the StackId, ChangeSetId, or StackGroupName parameter.</p> <p>Default value: Processed. Valid values:</p> <ul style="list-style-type: none"> Processed: returns the processed template that contains transforms. Original: returns the template that you specify.
IncludePermission	String	No	Enabled	<p>Specifies whether to query the shared information about the template.</p> <p>Default value: Disabled. Valid values:</p> <ul style="list-style-type: none"> Enabled: queries the shared information about the template. Disabled: does not query the shared information about the template. <div style="border: 1px solid #add8e6; padding: 5px; margin-top: 10px;"> <p> Note Only the template owner can query the shared information about the template.</p> </div>
StackGroupName	String	No	MyStackGroup	<p>The name of the stack group.</p> <div style="border: 1px solid #add8e6; padding: 5px; margin-top: 10px;"> <p> Note You must specify only one of the following parameters: StackId, ChangeSetId, StackGroupName, and TemplatedId.</p> </div>

For more information about common request parameters, see [Common parameters](#).

Response parameters

Parameter	Type	Example	Description
TemplateARN	String	acs:ros:*:151266687691****:template/a52f81be-496f-4e1c-a286-8852ab54****	The Alibaba Cloud Resource Name (ARN) of the template. This parameter is returned only when the TemplatedId parameter is specified.

Parameter	Type	Example	Description
Description	String	ROS template for create ECS instance.	The description of the template. This parameter is returned only when the TemplateId parameter is specified.
RequestId	String	B288A0BE-D927-4888-B0F7-B35EF84****	The ID of the request.
CreateTime	String	2020-11-18T08:49:26.000000	<p>The time when the template was created. This parameter is returned only when the TemplateId parameter is specified.</p> <div style="background-color: #e6f2ff; padding: 10px; border: 1px solid #d9e1f2;"> <p>Note</p> <ul style="list-style-type: none"> If the TemplateVersion parameter is specified, the creation time of the template whose version is specified by the TemplateVersion parameter is returned. If the TemplateVersion parameter is not specified, the creation time of the template whose version is the default version is returned. </div>
StackGroupName	String	MyStackGroup	The name of the stack group. This parameter is returned only when the StackGroupName parameter is specified.
TemplateVersion	String	v1	<p>The version of the template. This parameter is returned only when the TemplateId parameter is specified.</p> <p>If the TemplateVersion parameter is not specified or does not take effect, the value of this parameter is the default version of the template.</p> <p>If the template is a shared template, this parameter is returned only when the VersionOption parameter is set to AllVersions.</p>
TemplateBody	String	{"ROSTemplateFormatVersion": "2015-09-01"}	The body of the template.

Parameter	Type	Example	Description
ChangeSetId	String	e85abe0c-6528-43fb-ae93-fdf8de22****	The ID of the change set. This parameter is returned only when the ChangeSetId parameter is specified.
OwnerId	String	151266687691****	The ID of the Alibaba Cloud account to which the template belongs. This parameter is returned only when the TemplateId parameter is specified.
UpdateTime	String	2020-12-07T06:11:48.000000	<p>The time when the template was last updated. This parameter is returned only when the TemplateId parameter is specified.</p> <div data-bbox="896 779 1385 1240" style="background-color: #e6f2ff; padding: 10px;"><p> Note</p><ul style="list-style-type: none">• If the TemplateVersion parameter is specified, the last update time of the template whose version is specified by the TemplateVersion parameter is returned.• If the TemplateVersion parameter is not specified, the last update time of the template whose version is the default version is returned.</div>

Parameter	Type	Example	Description
Permissions	Array of Permission		<p>The shared information about the template. This parameter is returned only when the <code>TemplateId</code> parameter is specified and the <code>IncludePermission</code> parameter is set to <code>Enabled</code>.</p> <div data-bbox="900 488 1385 1014"><p> Note</p><ul style="list-style-type: none">• If the <code>TemplateVersion</code> parameter is not specified or does not take effect, the shared information about the template whose version is the default version is returned.• If the <code>TemplateVersion</code> parameter is specified and takes effect, the shared information about the template whose version is specified by the <code>TemplateVersion</code> parameter is returned.</div>

Parameter	Type	Example	Description
VersionOption	String	AllVersions	<p>The version option for the shared template. This parameter is returned only when the ShareOption parameter is set to ShareToAccounts.</p> <p>Valid values:</p> <ul style="list-style-type: none"> AllVersions: All versions are shared. Latest: Only the latest version is shared. When the version of the template is updated, ROS updates the shared version to the latest version. Current: Only the default template version when you configure template sharing is shared. When the version of the template is updated, ROS does not update the shared version. Specified: Only the specified template version is shared.
AccountId	String	142437958638****	The ID of the Alibaba Cloud account with which the template is shared.
ShareOption	String	ShareToAccounts	<p>The sharing option.</p> <p>The value is set to ShareToAccounts, which indicates that the template is shared with one or more Alibaba Cloud accounts.</p>
TemplateVersion	String	v1	<p>The version of the shared template. This parameter is returned only when the ShareOption parameter is set to ShareToAccounts and the VersionOption parameter is set to Specified or Current.</p> <p>Valid values: v1 to v100.</p>

Parameter	Type	Example	Description
ShareSource	String	ROS	<p>The service that is used for resource sharing.</p> <p>Valid values:</p> <ul style="list-style-type: none">• ROS: Resources are shared from ROS by using the ROS console or calling the ROS API.• ResourceDirectory: Resources are shared with accounts in a resource directory from Resource Management by using the resource sharing feature. <div data-bbox="898 656 1385 1193" style="background-color: #e1f5fe; padding: 10px;"><p> Note</p><ul style="list-style-type: none">• The number of accounts with which resources are shared from ROS is independent of the number of accounts with which resources are shared from the resource directory.• The shared resources from ROS cannot override or overwrite the shared resources from the resource directory.• The shared resources from the resource directory can overwrite the shared resources from ROS.</div>

Parameter	Type	Example	Description
TemplateName	String	MyTemplate	<p>The name of the template. This parameter is returned only when the TemplateId parameter is specified.</p> <div style="background-color: #e0f2f1; padding: 10px; border: 1px solid #ccc;"> <p> Note</p> <ul style="list-style-type: none"> • If the TemplateVersion parameter is specified, the name of the template whose version is specified by the TemplateVersion parameter is returned. • If the TemplateVersion parameter is not specified, the name of the template whose version is the default version is returned. </div>
RegionId	String	cn-hangzhou	<p>The region ID of the stack or stack group that is specified in the template. This parameter is returned only when the StackId, ChangeSetId, or StackGroupName parameter is specified.</p>
TemplateId	String	a52f81be-496f-4e1c-a286-8852ab54****	<p>The ID of the template. This parameter is returned only when the TemplateId parameter is specified.</p> <p>If the template is a shared template, the value of the TemplateId parameter is the same as the value of the TemplateARN parameter.</p>
StackId	String	4a6c9851-3b0f-4f5f-b4ca-a14bf691****	<p>The ID of the stack. This parameter is returned only when the StackId parameter is specified.</p>
ShareType	String	Private	<p>The sharing type of the template. This parameter is returned only when the TemplateId parameter is specified.</p> <p>Valid values:</p> <ul style="list-style-type: none"> • Private: The template can be used only by the template owner. • Shared: The template can be shared with other users.

Parameter	Type	Example	Description
ResourceGroupId	String	rg-acfmxazb4ph6aiy*** *	The ID of the resource group.
Interface	String	{}	The description of the web UI.

Examples

Sample requests

```
http(s)://ros.aliyuncs.com/?Action=GetTemplate
&RegionId=cn-hangzhou
&TemplateId=5ecd1e10-b0e9-4389-a565-e4c15efc***
&IncludePermission=Enabled
&<Common request parameters>
```

Sample success responses

XML **format**

```
HTTP/1.1 200 OK
Content-Type:application/xml
<GetTemplateResponse>
  <TemplateARN>acs:ros:*:151266687691****:template/a52f81be-496f-4e1c-a286-8852ab54****</
TemplateARN>
  <ResourceGroupId>rg-acfmxazb4ph6aiy****</ResourceGroupId>
  <Description>ROS template for create ECS instance.</Description>
  <RequestId>B288A0BE-D927-4888-B0F7-B35EF84****</RequestId>
  <CreateTime>2020-11-18T08:49:26.000000</CreateTime>
  <TemplateVersion>v1</TemplateVersion>
  <TemplateBody>{"ROSTemplateFormatVersion": "2015-09-01"}</TemplateBody>
  <OwnerId>151266687691****</OwnerId>
  <UpdateTime>2020-12-07T06:11:48.000000</UpdateTime>
  <Permissions>
    <ShareOption>ShareToAccounts</ShareOption>
    <TemplateVersion>v1</TemplateVersion>
    <AccountId>142437958638****</AccountId>
    <VersionOption>AllVersions</VersionOption>
  </Permissions>
  <TemplateName>MyTemplate</TemplateName>
  <TemplateId>a52f81be-496f-4e1c-a286-8852ab54****</TemplateId>
  <ShareType>Private</ShareType>
</GetTemplateResponse>
```

JSON **format**

```

HTTP/1.1 200 OK
Content-Type:application/json
{
  "TemplateARN" : "acs:ros:*:151266687691****:template/a52f81be-496f-4e1c-a286-8852ab54****",
  "ResourceGroupId" : "rg-acfmxazb4ph6aiy****",
  "Description" : "ROS template for create ECS instance.",
  "RequestId" : "B288A0BE-D927-4888-B0F7-B35EF84****",
  "CreateTime" : "2020-11-18T08:49:26.000000",
  "TemplateVersion" : "v1",
  "TemplateBody" : "{\"ROSTemplateFormatVersion\": \"2015-09-01\"}",
  "OwnerId" : "151266687691****",
  "UpdateTime" : "2020-12-07T06:11:48.000000",
  "Permissions" : [ {
    "ShareOption" : "ShareToAccounts",
    "TemplateVersion" : "v1",
    "AccountId" : "142437958638****",
    "VersionOption" : "AllVersions"
  } ],
  "TemplateName" : "MyTemplate",
  "TemplateId" : "a52f81be-496f-4e1c-a286-8852ab54****",
  "ShareType" : "Private"
}

```

Error codes

For a list of error codes, visit the [API Error Center](#).

HTTP status code	Error code	Error message	Description
404	ChangeSetNotFound	The ChangeSet ({name}) of Stack ({stack}) could not be found.	The error message returned because the specified change set does not exist. name indicates the name or ID of the change set. stack indicates the name or ID of the stack.
404	ChangeSetNotFound	The ChangeSet {ID} could not be found.	The error message returned because the specified change set does not exist. ID indicates the ID of the change set.

HTTP status code	Error code	Error message	Description
404	StackNotFound	The Stack ({name}) could not be found.	The error message returned because the specified stack does not exist. name indicates the name or ID of the stack.
404	TemplateNotFound	The Template { ID } could not be found.	The error message returned because the specified template does not exist. ID indicates the template ID.
404	TemplateNotFound	The Template { ID } with version { version } could not be found.	The error message returned because the specified template or template version does not exist. ID indicates the template ID. version indicates the template version.
404	StackGroupNotFound	The StackGroup ({name}) could not be found.	The error message returned because the specified stack group does not exist. name indicates the name of the stack group.

10.6. GetTemplateEstimateCost

Queries the estimated prices of the resources in a template.

Description

- For information about the resources that support price inquiry in Resource Orchestration Service (ROS) templates, see the **Supported resource types** section in the [Estimate resource prices](#) topic.
- For information about the resources that support price inquiry in Terraform templates, see the "ROS resources that are supported by Terraform" section in the [ROS features and resources that are supported by Terraform](#) topic.

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	GetTemplateEstimateCost	The operation that you want to perform. Set the value to GetTemplateEstimateCost.
TemplateURL	String	No	oss://ros-template/demo	<p>The URL of the file that contains the template body. The URL must point to a policy that is located on an HTTP or HTTPS web server or in an Alibaba Cloud OSS bucket, for example, <code>oss://ros/stack-policy/demo</code> and <code>oss://ros/stack-policy/demo?RegionId=cn-hangzhou</code>. If you do not specify RegionId in the URL, the region ID of the stack is used.</p> <div style="background-color: #e6f2ff; padding: 5px;"><p> Note You must specify only one of the following parameters: TemplateBody, TemplateURL, TemplateId, and TemplateScratchId.</p></div>
RegionId	String	Yes	cn-hangzhou	The ID of the region to which the stack belongs. You can call the DescribeRegions operation to query the most recent region list.

Parameter	Type	Required	Example	Description
TemplateBody	String	No	<pre> {"ROSTemplateFormatVersion": "2015-09-01","Description": "Creates VPC ECS instance","Parameters": {"VSwitchId": {"Type": "String","Default": "vsw- ****"},"VpcId": {"Type": "String","Default": "vpc- ****"},"SecurityGroup": {"Type": "String","Default": "sg- ****"},"Resources": {"EcsInstance": {"Type": "ALIYUN::ECS::Instance","Properties": {"VpcId": {"Ref": "VpcId"},"VSwitchId": {"Ref": "VSwitchId"},"SecurityGroupId": {"Ref": "SecurityGroupId"},"IoOptimized": "optimized","PrivateIpAddress": "172.16.0.1","ImageId": "centos_7","AllocatePublicIP": false,"InstanceType": "ecs.g6e.large","SystemDiskSize": "40","SystemDiskCategory": "cloud_essd","Password": "*****"}}}} </pre>	<p>The structure that contains the template body. The template body must be 1 to 524,288 bytes in length. If the length of the template body exceeds the maximum length, we recommend that you add the parameters to the body of the HTTP POST request. This prevents request failures caused by extremely long URLs.</p> <div style="border: 1px solid #ccc; background-color: #e6f2ff; padding: 10px; margin-top: 10px;"> <p> Note You must specify only one of the following parameters: TemplateBody, TemplateURL, TemplateId, and TemplateScratchId.</p> </div>

Parameter	Type	Required	Example	Description
ClientToken	String	No	123e4567-e89b-12d3-a456-42665544****	<p>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.</p> <p>The token can be up to 64 characters in length, and can contain letters, digits, hyphens (-), and underscores (_).</p> <p>For more information, see Ensure idempotence.</p>
TemplateId	String	No	5ecd1e10-b0e9-4389-a565-e4c15efc****	<p>The ID of the template. This parameter applies to shared and private templates.</p> <div style="background-color: #e6f2ff; padding: 5px; border: 1px solid #d9e1f2;"> <p> Note You must specify only one of the following parameters: TemplateBody, TemplateURL, TemplateId, and TemplateScratchId.</p> </div>
TemplateVersion	String	No	v1	<p>The version of the template. This parameter only takes effect if the TemplateId parameter is specified.</p>
TemplateScratchId	String	No	ts-aa9c62feab844a6b****	<p>The ID of the scenario.</p> <p>For more information about how to query the IDs of scenarios, see ListTemplateScratches.</p> <div style="background-color: #e6f2ff; padding: 5px; border: 1px solid #d9e1f2;"> <p> Note You must specify only one of the following parameters: TemplateBody, TemplateURL, TemplateId, and TemplateScratchId.</p> </div>
TemplateScratchRegionId	String	No	cn-hangzhou	<p>The region ID of the scenario. The default value is the same as the value of RegionId.</p> <p>You can call the DescribeRegions operation to query the most recent region list.</p>

Parameter	Type	Required	Example	Description
Parameters.N.ParameterKey	String	Yes	VSwitchId	<p>The name of parameter N. If the name and value of parameter N are not specified, the name and value specified in the template are used.</p> <p>Maximum value of N: 200.</p> <p>Examples:</p> <ul style="list-style-type: none"> Parameters.1.ParameterKey: vSwitchId Parameters.2.ParameterKey: VpcId Parameters.3.ParameterKey: SecurityGroupId <p>Note Parameters in Parameters.N.ParameterKey is optional. If you need to specify Parameters, you must specify both Parameters.N.ParameterKey and Parameters.N.ParameterValue.</p>
Parameters.N.ParameterValue	String	Yes	vsw-****	<p>The value of parameter N.</p> <p>Maximum value of N: 200.</p> <p>Examples:</p> <ul style="list-style-type: none"> Parameters.1.ParameterValue: vsw-**** Parameters.2.ParameterValue: vpc-**** Parameters.3.ParameterValue: sg-**** <p>Note Parameters in Parameters.N.ParameterValue is optional. If you need to specify Parameters, you must specify both Parameters.N.ParameterKey and Parameters.N.ParameterValue.</p>

For more information about common request parameters, see [Common parameters](#).

Response parameters

Parameter	Type	Example	Description
RequestId	String	08ABBB67-39C9-5EE7-98E5-80486F75CE8D	The ID of the request.
Resources	Map		The information about the resource.

The following table describes the parameters in the Resources section.

Parameter	Type	Example	Description
Order			Details about the order.
Currency	String	USD	The currency unit.
DiscountAmount	Long	0.287	The discount.
HandlingFeeAmount	Long	0	The service fee.
OptionalMixPromotions	Array	[]	The available mixed discounts.
OptionalPromotions	Array	[]	The available discounts.
OrderLines	String		Details about the order lines.
OriginalPrice	Long	0.055555	The original price of the service.
DiscountPrice	Long	0.037729	The deducted amount of money.
RuleIds	Array	[102111101338****]	The list of one or more IDs of the discount rules.
TaxAmount	Long	0	The amount of tax.

Parameter	Type	Example	Description
TradePrice	Long	0.017826	The final price that you need to pay. The final price is equal to the original price minus the discount.
Rules			Details about the discount rules.
Name	String	Contract discount_multi-billing item discount_3.208750 discount	The name of the discount rule.
RuleDescId	Long	102111101338****	The ID of the discount rule.

Examples

Sample requests

```
http(s)://ros.aliyuncs.com/?Action=GetTemplateEstimateCost
&RegionId=cn-hangzhou
&TemplateBody="{\"ROSTemplateFormatVersion\": \"2015-09-01\", \"Description\": \"Creates VPC ECS in
instance\", \"Parameters\": {\"VSwitchId\": {\"Type\": \"String\", \"Default\": \"vsw-****\"}, \"VpcId\": {\"Typ
e\": \"String\", \"Default\": \"vpc-****\"}, \"SecurityGroupId\": {\"Type\": \"String\", \"Default\": \"sg-***
*\"}}, \"Resources\": {\"EcsInstance\": {\"Type\": \"ALIYUN::ECS::Instance\", \"Properties\": {\"VpcId\":
{\"Ref\": \"VpcId\"}, \"VSwitchId\": {\"Ref\": \"VSwitchId\"}, \"SecurityGroupId\": {\"Ref\": \"SecurityGrou
pId\"}, \"IoOptimized\": \"optimized\", \"PrivateIpAddress\": \"172.16.0.1\", \"ImageId\": \"centos_7\", \"Al
locatePublicIP\": false, \"InstanceType\": \"ecs.g6e.large\", \"SystemDiskSize\": \"40\", \"SystemDiskCa
tegory\": \"cloud_essd\", \"Password\": \"*****\"}}}}\"
&<Common request parameters>
```

Sample success responses

XML **format**

```
HTTP/1.1 200 OK
Content-Type:application/xml
<GetTemplateEstimateCostResponse>
  <RequestId>08ABBB67-39C9-5EE7-98E5-80486F75CE8D</RequestId>
  <Resources>
    <EcsInstance>
      <Type>ALIYUN::ECS::Instance</Type>
      <Success>>true</Success>
      <Result>
        <Order>
          <Successor>USD</Successor>
```

```

<Currency>USD</Currency>
<RuleIds>1021111101338****</RuleIds>
<DetailInfos>
  <ResourcePriceModel>
    <OriginalPrice>0</OriginalPrice>
    <DiscountPrice>0</DiscountPrice>
    <SubRules>
    </SubRules>
    <Resource>bandwidth</Resource>
    <TradePrice>0</TradePrice>
  </ResourcePriceModel>
  <ResourcePriceModel>
    <OriginalPrice>0</OriginalPrice>
    <DiscountPrice>0</DiscountPrice>
    <SubRules>
    </SubRules>
    <Resource>image</Resource>
    <TradePrice>0</TradePrice>
  </ResourcePriceModel>
  <ResourcePriceModel>
    <OriginalPrice>0.366666</OriginalPrice>
    <DiscountPrice>0.249012</DiscountPrice>
    <SubRules>
    </SubRules>
    <Resource>instanceType</Resource>
    <TradePrice>0.117654</TradePrice>
  </ResourcePriceModel>
  <ResourcePriceModel>
    <OriginalPrice>0.055555</OriginalPrice>
    <DiscountPrice>0.037729</DiscountPrice>
    <SubRules>
    </SubRules>
    <Resource>systemDisk</Resource>
    <TradePrice>0.017826</TradePrice>
  </ResourcePriceModel>
</DetailInfos>
<TradeAmount>0.135</TradeAmount>
<OriginalAmount>0.422</OriginalAmount>
<Coupons>
</Coupons>
<DiscountAmount>0.287</DiscountAmount>
</Order>
<OrderSupplement>
  <PriceUnit>/Hour</PriceUnit>
  <ChargeType>PostPaid</ChargeType>
  <Quantity>1</Quantity>
  <PriceType>Total</PriceType>
</OrderSupplement>
<Rules>
  <Rule>
    <RuleDescId>1021111101338****</RuleDescId>
    <Name> contract discount_multi-billing item discount_3.208750 disco
unt </Name>
  </Rule>
</Rules>

```

```
</Result>
</EcsInstance>
</Resources>
</GetTemplateEstimateCostResponse>
```

JSON format

```
HTTP/1.1 200 OK
Content-Type:application/json
{
  "RequestId" : "08ABBB67-39C9-5EE7-98E5-80486F75CE8D",
  "Resources" : {
    "EcsInstance" : {
      "Type" : "ALIYUN::ECS::Instance",
      "Success" : true,
      "Result" : {
        "Order" : {
          "Currency" : "USD",
          "RuleIds" : [ "102111101338****" ],
          "DetailInfos" : {
            "ResourcePriceModel" : [ {
              "OriginalPrice" : 0,
              "DiscountPrice" : 0,
              "SubRules" : {
                "Rule" : [ ]
              },
              "Resource" : "bandwidth",
              "TradePrice" : 0
            }, {
              "OriginalPrice" : 0,
              "DiscountPrice" : 0,
              "SubRules" : {
                "Rule" : [ ]
              },
              "Resource" : "image",
              "TradePrice" : 0
            }, {
              "OriginalPrice" : 0.366666,
              "DiscountPrice" : 0.249012,
              "SubRules" : {
                "Rule" : [ ]
              },
              "Resource" : "instanceType",
              "TradePrice" : 0.117654
            }, {
              "OriginalPrice" : 0.055555,
              "DiscountPrice" : 0.037729,
              "SubRules" : {
                "Rule" : [ ]
              },
              "Resource" : "systemDisk",
              "TradePrice" : 0.017826
            }
          ]
        }
      }
    }
  }
}
```


HTTP status code	Error code	Error message	Description
400	InvalidTemplateAttribute	The Referenced Attribute ({resource} {name}) is incorrect.	The error message returned because the resource property that is referenced in the Outputs section of the template is invalid. resource indicates the resource name. name indicates the property name.
400	InvalidTemplatePropertyType	The specified value type of ({resource} {section}) is incorrect.	The error message returned because the type of the resource property that is defined in a section of the template is invalid. resource indicates the resource name. section indicates the section name.
400	InvalidTemplateReference	The specified reference "{name}" (in {referencer}) is incorrect.	The error message returned because the template contains an invalid reference. name indicates the reference name. referencer indicates the referencer name.
400	InvalidTemplateSection	The template section is invalid: {section}.	The error message returned because the template contains an invalid section. section indicates the section name.
400	InvalidTemplateVersion	The template version is invalid: {reason}.	The error message returned because the template version is invalid. reason indicates the specific cause of the error.

HTTP status code	Error code	Error message	Description
400	StackValidationFailed	{reason}.	The error message returned because the stack fails to be validated. reason indicates the specific cause of the error.
400	UnknownUserParameter	The Parameter ({name}) was not defined in template.	The error message returned because the specified parameter is not defined in the template. name indicates the parameter name.
400	UserParameterMissing	The Parameter {name} was not provided.	The error message returned because no value is specified for the parameter that is defined in the template. name indicates the parameter name.
404	TemplateNotFound	The Template ({ ID }) could not be found.	The error message returned because the specified template does not exist. ID indicates the template ID.
404	TemplateNotFound	The Template { ID } with version { version } could not be found.	The error message returned because the template or the specified template version does not exist. ID indicates the template ID. version indicates the template version.

10.7. GetTemplateSummary

You can call this operation to query information about a new or existing 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	GetTemplateSummary	The operation that you want to perform. Set the value to GetTemplateSummary.
StackId	String	No	4a6c9851-3b0f-4f5f-b4ca-a14bf691****	The ID of the stack. You can specify only one of the TemplateBody, TemplateURL, TemplateId, StackId, ChangeSetId, and StackGroupName parameters.
TemplateBody	String	No	{"ROSTemplateFormatVersion": "2015-09-01"}	The structure that contains the template body. The template body must be 1 to 524,288 bytes in length. If the length of the template body is longer than required, we recommend that you add parameters to the HTTP POST request body to avoid request failures due to excessive length of URLs. You can specify only one of the TemplateBody, TemplateURL, TemplateId, StackId, ChangeSetId, and StackGroupName parameters.
RegionId	String	No	cn-hangzhou	The region ID of the stack or stack group. You can call the DescribeRegions operation to query the most recent region list. This parameter takes effect only when the StackId, ChangeSetId, or StackGroupName parameter is specified.

Parameter	Type	Required	Example	Description
TemplateId	String	No	5ecd1e10-b0e9-4389-a565-e4c15efc****	<p>The ID of the template. This parameter applies to shared and private templates.</p> <p>You can specify only one of the TemplateBody, TemplateURL, TemplateId, StackId, ChangeSetId, and StackGroupName parameters.</p>
TemplateURL	String	No	oss://ros/template/demo	<p>The URL of the file that contains the template body. The URL must point to a template located in an HTTP or HTTPS web server or an Alibaba Cloud OSS bucket. Examples: oss://ros/template/demo and oss://ros/template/demo?RegionId=cn-hangzhou. The template can be up to 524,288 bytes in length, and the URL can be up to 1,024 bytes in length.</p> <div style="border: 1px solid #ccc; background-color: #e6f2ff; padding: 5px; margin: 10px 0;"> <p> Note If the region of the OSS bucket is not specified, the RegionId value is used.</p> </div> <p>You can specify only one of the TemplateBody, TemplateURL, TemplateId, StackId, ChangeSetId, and StackGroupName parameters.</p>
ChangeSetId	String	No	1f6521a4-05af-4975-afe9-bc4b45ad****	<p>The ID of the change set.</p> <p>You can specify only one of the TemplateBody, TemplateURL, TemplateId, StackId, ChangeSetId, and StackGroupName parameters.</p>
TemplateVersion	String	No	v1	<p>The version of the template. This parameter takes effect only when the TemplateId parameter is specified.</p>
StackGroupName	String	No	my-stack-group	<p>The name of the stack group.</p> <p>You can specify only one of the TemplateBody, TemplateURL, TemplateId, StackId, ChangeSetId, and StackGroupName parameters.</p>

For more information about common request parameters, see [Common parameters](#).

Response parameters

Parameter	Type	Example	Description
Description	String	No description	The description of the stack template.
Metadata	Map	{"key": "value"}	The metadata that is specified in the template.
Parameters	List	[{"Description": "", "Label": "Name", "NoEcho": "false", "ParameterKey": "Name", "Type": "String"}]	Details about the parameter declarations that describe the attributes of parameters.
RequestId	String	B288A0BE-D927-4888-B0F7-B35EF84B6E6	The ID of the request.
ResourceIdentifierSummaries	Array of ResourceIdentifierSummary		<p>Details about the resource identifier summaries.</p> <p>A summary describes the resource into which you want to import other resources and the attributes that can be used to identify the resource. For example, VpcId is the identifier of the ALIYUN::ECS::VPC resource.</p>
LogicalResourceIds	List	["Vpc"]	The logical IDs of all resources that are of the type that is specified by the ResourceType parameter.
ResourceIdentifiers	List	["VpcId"]	The attributes of the resource. The attributes are used to identify the resource into which you want to import other resources. For example, VpcId is the identifier of the ALIYUN::ECS::VPC resource.
ResourceType	String	ALIYUN::ECS::VPC	<p>The type of the resource.</p> <div style="background-color: #e0f2f1; padding: 5px; border: 1px solid #ccc;"> <p> Note You can import resources into the ALIYUN::ECS::VPC resource type.</p> </div>
ResourceTypes	List	["ALIYUN::ECS::VPC"]	All the resource types that are used in the template.

Parameter	Type	Example	Description
Version	String	2015-09-01	The version of the template.

Examples

Sample requests

```
http(s)://ros.aliyuncs.com/? Action=GetTemplateSummary
&StackId=4a6c9851-3b0f-4f5f-b4ca-a14bf691****
&RegionId=cn-hangzhou
&<Common request parameters>
```

Sample success responses

XML **format**

```
<GetTemplateSummary>
  <Description>No description</Description>
  <Metadata></Metadata>
  <Parameters>
    <Description>Description of the vpc, [2, 256] characters. Do not fill or empty, the
    default is empty. </Description>
    <Label>Description</Label>
    <NoEcho>>false</NoEcho>
    <ParameterKey>Description</ParameterKey>
    <Type>String</Type>
  </Parameters>
  <Parameters>
    <Description>Tags to attach to vpc. Max support 20 tags to add during create vpc. Ea
    ch tag with two properties Key and Value, and Key is required. </Description>
    <Label>Tags</Label>
    <MaxLength>20</MaxLength>
    <NoEcho>>false</NoEcho>
    <ParameterKey>Tags</ParameterKey>
    <Type>Json</Type>
  </Parameters>
  <Parameters>
    <Description>IPv6 network cidr of the VPC. </Description>
    <Label>Ipv6CidrBlock</Label>
    <MinLength>1</MinLength>
    <NoEcho>>false</NoEcho>
    <ParameterKey>Ipv6CidrBlock</ParameterKey>
    <Type>String</Type>
  </Parameters>
  <Parameters>
    <AllowedValues>True</AllowedValues>
    <AllowedValues>>true</AllowedValues>
    <AllowedValues>False</AllowedValues>
    <AllowedValues>>false</AllowedValues>
    <Default>>false</Default>
    <Description>Whether to enable an IPv6 network cidr, the value is:False (default): n
    ot turned on.True: On. </Description>
```

```

    <Label>EnableIpv6</Label>
    <NoEcho>>false</NoEcho>
    <ParameterKey>EnableIpv6</ParameterKey>
    <Type>Boolean</Type>
  </Parameters>
  <Parameters>
    <Description>Resource group id. </Description>
    <Label>ResourceGroupId</Label>
    <NoEcho>>false</NoEcho>
    <ParameterKey>ResourceGroupId</ParameterKey>
    <Type>String</Type>
  </Parameters>
  <Parameters>
    <Description>Display name of the vpc instance, [2, 128] English or Chinese characters, must start with a letter or Chinese in size, can contain numbers, '_' or '.', '-</Description>
    <Label>VpcName</Label>
    <NoEcho>>false</NoEcho>
    <ParameterKey>VpcName</ParameterKey>
    <Type>String</Type>
  </Parameters>
  <Parameters>
    <Description>
      The IP address range of the VPC in the CIDR block form. You can use the following IP address ranges and their subnets:
      10.0.0.0/8
      172.16.0.0/12 (Default)
      192.168.0.0/16</Description>
    <Label>CidrBlock</Label>
    <NoEcho>>false</NoEcho>
    <ParameterKey>CidrBlock</ParameterKey>
    <Type>String</Type>
  </Parameters>
  <RequestId>FD70598C-3F4B-4E66-9A76-67F2E2D36938</RequestId>
  <ResourceIdentifierSummaries>
    <LogicalResourceIds>Vpc</LogicalResourceIds>
    <ResourceIdentifiers>VpcId</ResourceIdentifiers>
    <ResourceType>ALIYUN::ECS::VPC</ResourceType>
  </ResourceIdentifierSummaries>
  <ResourceTypes>ALIYUN::ECS::VPC</ResourceTypes>
  <Version>2015-09-01</Version>
</GetTemplateSummary>

```

JSON format

```

{
  "Description": "No description",
  "Metadata": {},
  "Parameters": [
    {
      "Description": "Description of the vpc, [2, 256] characters. Do not fill or empty, the default is empty.",
      "Label": "Description",
      "NoEcho": false,
      "ParameterKey": "Description",
      "Type": "String"
    }
  ]
}

```

```

        "NoEcho": "false",
        "ParameterKey": "Description",
        "Type": "String"
    },
    {
        "Description": "Tags to attach to vpc. Max support 20 tags to add during create vpc. Each tag with two properties Key and Value, and Key is required.",
        "Label": "Tags",
        "MaxLength": 20,
        "NoEcho": "false",
        "ParameterKey": "Tags",
        "Type": "Json"
    },
    {
        "Description": "IPv6 network cidr of the VPC.",
        "Label": "Ipv6CidrBlock",
        "MinLength": 1,
        "NoEcho": "false",
        "ParameterKey": "Ipv6CidrBlock",
        "Type": "String"
    },
    {
        "AllowedValues": [
            "True",
            "true",
            "False",
            "false"
        ],
        "Default": false,
        "Description": "Whether to enable an IPv6 network cidr, the value is:False (default): not turned on.True: On.",
        "Label": "EnableIpv6",
        "NoEcho": "false",
        "ParameterKey": "EnableIpv6",
        "Type": "Boolean"
    },
    {
        "Description": "Resource group id.",
        "Label": "ResourceGroupId",
        "NoEcho": "false",
        "ParameterKey": "ResourceGroupId",
        "Type": "String"
    },
    {
        "Description": "Display name of the vpc instance, [2, 128] English or Chinese characters, must start with a letter or Chinese in size, can contain numbers, '_' or '.', '-',
        "Label": "VpcName",
        "NoEcho": "false",
        "ParameterKey": "VpcName",
        "Type": "String"
    },
    {
        "Description": "The IP address range of the VPC in the CIDR block form. You can use the following IP address ranges and their subnets:\n10.0.0.0/8\n172.16.0.0/12 (Default)

```

```

use the following IP address ranges and their subnets. (192.168.0.0/16 (Default)
\n192.168.0.0/16",
    "Label": "CidrBlock",
    "NoEcho": "false",
    "ParameterKey": "CidrBlock",
    "Type": "String"
  }
],
"RequestId": "FD70598C-3F4B-4E66-9A76-67F2E2D36938",
"ResourceIdentifierSummaries": [
  {
    "LogicalResourceIds": [
      "Vpc"
    ],
    "ResourceIdentifiers": [
      "VpcId"
    ],
    "ResourceType": "ALIYUN::ECS::VPC"
  }
],
"ResourceTypes": [
  "ALIYUN::ECS::VPC"
],
"Version": "2015-09-01"
}

```

Error codes

For a list of error codes, visit the [API Error Center](#).

HttpCode	Error code	Error message	Description
400	StackValidationFailed	{reason}.	The error message returned because the stack validation failed. reason indicates the specific reason.
404	ChangeSetNotFound	The ChangeSet ({name}) of Stack ({stack}) could not be found.	The error message returned because the specified change set does not exist. name indicates the name or ID of the change set, and stack indicates the name or ID of the stack.

HttpCode	Error code	Error message	Description
404	ChangeSetNotFound	The ChangeSet {ID} could not be found.	The error message returned because the specified change set does not exist. ID indicates the ID of the change set.
404	StackNotFound	The Stack ({name}) could not be found.	The error message returned because the specified stack does not exist. name indicates the name or ID of the stack.
404	TemplateNotFound	The Tempalte ({ ID }) could not be found.	The error message returned because the specified template does not exist. ID indicates the template ID.
404	TemplateNotFound	The Template { ID } with version { version } could not be found.	The error message returned because the specified template or version does not exist. ID indicates the template ID, and version indicates the template version.

10.8. GetTemplateParameterConstraints

Queries the values of one or more template parameters.

Usage notes

In this example, the value of the `ZoneInfo` parameter of a template in the China (Hangzhou) region is queried. The template contains the following information: `{"Parameters":{"ZoneInfo":{"Type":"String"},"InstanceType":{"Type":"String"},"ROSTemplateFormatVersion":"2015-09-01","Resources":{"ECS":{"Properties":{"ZoneId":{"Ref":"ZoneInfo"},"InstanceType":{"Ref":"InstanceType"}},"Type":"ALIYUN::ECS::Instance"}}` .

The following section describes the requirements of parameters and template content that can be queried by calling the `GetTemplateParameterConstraints` operation.

- The following table lists the parameters that can be queried.

Resource type	Parameter
ALIYUN::CS::KubernetesCluster	MasterInstanceTypes, MasterSystemDiskCategory, WorkerInstanceTypes, WorkerSystemDiskCategory, WorkerVSwitchIds, PodVSwitchIds, and the Category fields in the MasterDataDisks and WorkerDataDisks parameters
ALIYUN::CS::ManagedKubernetesCluster	WorkerInstanceTypes, WorkerSystemDiskCategory, VSwitchIds, PodVSwitchIds, and the Category field in the WorkerDataDisks parameter
ALIYUN::CS::ManagedEdgeKubernetesCluster	WorkerInstanceTypes, WorkerSystemDiskCategory, WorkerDataDiskCategory, VSwitchIds, and the Category field in the WorkerDataDisks parameter
ALIYUN::ECS::Instance	ZoneId, SystemDiskCategory, InstanceType, and the Category field in the DiskMappings parameter
ALIYUN::ECS::InstanceGroup	ZoneId, SystemDiskCategory, InstanceType, and the Category field in the DiskMappings parameter
ALIYUN::ECS::VSwitch	ZoneId
ALIYUN::RDS::DBInstance	ZoneId, EngineVersion, Category, DBInstanceStorageType, and DBInstanceClass
ALIYUN::RDS::PrepayDBInstance	ZoneId, EngineVersion, Category, DBInstanceStorageType, and DBInstanceClass
ALIYUN::POLARDB::DBCluster	ZoneId and DBNodeClass
ALIYUN::REDIS::Instance	ZoneId, EngineVersion, and InstanceClass

Resource type	Parameter
ALIYUN::REDIS::PrepayInstance	Zoneld, EngineVersion, and InstanceClass
ALIYUN::VPC::NatGateway	Zoneld
ALIYUN::ADB::DBCluster	Zoneld

- The template whose parameters you want to query must contain the Parameters section.

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	GetTemplateParameterConstraints	The operation that you want to perform. Set the value to GetTemplateParameterConstraints.
TemplateBody	String	No	null	<p>The structure that contains the template body.</p> <p>The template body must be 1 to 524,288 bytes in length. If the template body exceeds the maximum length, we recommend that you add parameters to the HTTP POST request body to prevent request failures caused by extremely long URLs.</p> <div style="border: 1px solid #ccc; background-color: #e6f2ff; padding: 5px; margin-top: 10px;"> <p> Note You must specify only one of the TemplateBody, TemplateURL, and TemplateId parameters.</p> </div>
RegionId	String	Yes	cn-hangzhou	<p>The region ID of the instance.</p> <p>You can call the DescribeRegions operation to query the most recent region list.</p>

Parameter	Type	Required	Example	Description
TemplateURL	String	No	oss://ros-template/demo	<p>The URL of the file that contains the template body. The URL must point to a template located in an HTTP or HTTPS web server or an Alibaba Cloud OSS bucket. Examples: oss://ros/stack-policy/demo and oss://ros/stack-policy/demo?RegionId=cn-hangzhou. The template can be up to 524,288 bytes in length. If you do not specify RegionId in the URL, the value of the RegionId parameter is used.</p> <p>Note You must specify only one of the TemplateBody, TemplateURL, and TemplateId parameters.</p>
TemplateId	String	No	5ecd1e10-b0e9-4389-a565-e4c15efc****	<p>The ID of the template. This parameter applies to shared and private templates.</p> <p>Note You must specify only one of the TemplateBody, TemplateURL, and TemplateId parameters.</p>
TemplateVersion	String	No	v1	<p>The version of the template. If you do not specify a version, the latest version is used.</p> <p>Note This parameter takes effect only when the TemplateId parameter is specified.</p>
ParametersKeyFilter	Array of String	No	ZoneInfo	<p>The array of the keys of the parameters that you want to query.</p>

Parameter	Type	Required	Example	Description
ClientToken	String	No	123e4567-e89b-12d3-a456-42665544****	<p>The client token that is used to ensure the idempotence of the request.</p> <p>You can use the client to generate the value, but you must make sure that the token is globally unique. The token can be up to 64 characters in length, and can contain letters, digits, hyphens (-), and underscores (_).</p> <p>For more information, see How to ensure idempotence.</p>
Parameters.N.ParameterKey	String	Yes	ZoneInfo	<p>The key of parameter N that is defined in the template.</p> <div style="background-color: #e6f2ff; padding: 5px;"> <p> Note The Parameters parameter is optional. If you specify the Parameters parameter, you must specify the Parameters.N.ParameterKey parameter.</p> </div>
Parameters.N.ParameterValue	String	Yes	cn-hangzhou-h	<p>The value of parameter N that is defined in the template.</p> <div style="background-color: #e6f2ff; padding: 5px;"> <p> Note The Parameters parameter is optional. If you specify the Parameters parameter, you must specify the Parameters.N.ParameterValue parameter.</p> </div>

Response parameters

Parameter	Type	Example	Description
RequestId	String	9816785B-BCF8-514D-8B76-C1EC2BC954FC	The ID of the request.
ParameterConstraints	Array of ParameterConstraint		The array of the constraints of the template parameters.
ParameterKey	String	ZoneInfo	The name of the parameter.

Parameter	Type	Example	Description
Type	String	String	The type of the parameter.
AllowedValues	Array of String	cn-hangzhou-h	The values of the parameter.
Behavior	String	NoLimit	<p>The reason why AllowedValues is not returned. Valid values:</p> <ul style="list-style-type: none"> NoLimit: The value of this parameter is not limited. NotSupport: The value of this parameter cannot be queried. QueryError: The query failed. <div style="background-color: #e0f2f7; padding: 5px; border: 1px solid #ccc;"> <p> Note If the AllowedValues parameter is not returned, the Behavior and BehaviorReason parameters are returned.</p> </div>
BehaviorReason	String	No resource property refer to the parameter	Details about the reason why AllowedValues is not returned.
AssociationParameterNames	Array of String	InstanceType	The list of the associated parameters.

Examples

Sample requests

```

http(s)://ros.aliyuncs.com/?Action=GetTemplateParameterConstraints
&TemplateBody={"Parameters":{"ZoneInfo":{"Type": "String"},"InstanceType": {"Type": "String"}}, "ROSTemplateFormatVersion": "2015-09-01", "Resources":{"ECS":{"Properties":{"ZoneId":{"Ref": "ZoneInfo"},"InstanceType": {"Ref": "InstanceType"}}, "Type": "ALIYUN::ECS::Instance"}}}
&RegionId=cn-hangzhou
&ParametersKeyFilter=["ZoneInfo"]
&<Common request parameters>

```

Sample success responses

`XML` `format`

```
HTTP/1.1 200 OK
Content-Type:application/xml
<GetTemplateParameterConstraintsResponse>
  <RequestId>9816785B-BCF8-514D-8B76-C1EC2BC954FC</RequestId>
  <ParameterConstraints>
    <Type>String</Type>
    <AllowedValues>cn-hangzhou-h</AllowedValues>
    <AllowedValues>cn-hangzhou-i</AllowedValues>
    <AllowedValues>cn-hangzhou-j</AllowedValues>
    <AllowedValues>cn-hangzhou-k</AllowedValues>
    <AllowedValues>cn-hangzhou-e</AllowedValues>
    <AllowedValues>cn-hangzhou-f</AllowedValues>
    <AllowedValues>cn-hangzhou-g</AllowedValues>
    <AllowedValues>cn-hangzhou-b</AllowedValues>
    <AssociationParameterNames>InstanceType</AssociationParameterNames>
    <ParameterKey>ZoneInfo</ParameterKey>
  </ParameterConstraints>
</GetTemplateParameterConstraintsResponse>
```

JSON format

```
HTTP/1.1 200 OK
Content-Type:application/json
{
  "RequestId" : "9816785B-BCF8-514D-8B76-C1EC2BC954FC",
  "ParameterConstraints" : [ {
    "Type" : "String",
    "AllowedValues" : [ "cn-hangzhou-h", "cn-hangzhou-i", "cn-hangzhou-j", "cn-hangzhou-k",
"cn-hangzhou-e", "cn-hangzhou-f", "cn-hangzhou-g", "cn-hangzhou-b" ],
    "AssociationParameterNames" : [ "InstanceType" ],
    "ParameterKey" : "ZoneInfo"
  } ]
}
```

Error codes

For a list of error codes, visit the [API Error Center](#).

10.9. ListTemplates

You can call this operation to query the list of one or more 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	ListTemplates	The operation that you want to perform. Set the value to ListTemplates.
TemplateName	String	No	MyTemplate	The name of the template. This parameter takes effect only when the ShareType parameter is set to Private. The name can be up to 255 characters in length and can contain digits, letters, hyphens (-), and underscores (_). It must start with a digit or letter.
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 50. Default value: 10.
ShareType	String	No	Private	The sharing type of the template. Default value: Private. Valid values: <ul style="list-style-type: none"> Private: The template belongs only to you. Shared: The template is shared with other users.
ResourceGroupId	String	No	rg-acfmxazb4ph6aiy****	The ID of the resource group. For more information about resource groups, see What is a resource group? .
Tag.N.Key	String	No	usage	The key of tag N. This parameter takes effect only when the ShareType parameter is set to Private. Valid values of N: 1 to 20.

Parameter	Type	Required	Example	Description
Tag.N.Value	String	No	deploy	The value of tag N. This parameter takes effect only when the ShareType parameter is set to Private. Valid values of N: 1 to 20.

For more information about common request parameters, see [Common parameters](#).

Response parameters

Parameter	Type	Example	Description
RequestId	String	C3A8413B-1F16-4DED-AC3E-61A00718DE8A	The ID of the request.
PageSize	Integer	10	The number of entries returned per page.
PageNumber	Integer	1	The page number of the returned page. Pages start from page 1.
TotalCount	Integer	1	The total number of templates.
Templates	Array of Template		Details about the templates.
CreateTime	String	2019-10-15T08:17:14.000000	The time when the template was created.
Description	String	test-description	The description of the template.
OwnerId	String	123456789	The ID of the Alibaba Cloud account to which the template belongs.
ResourceGroupId	String	rg-acfmxazb4ph6aiy*** *	The ID of the resource group.
ShareType	String	Private	The sharing type of the template. Valid values: <ul style="list-style-type: none"> Private: The template belongs only to the user. Shared: The template is shared with other users.

Parameter	Type	Example	Description
TemplateARN	String	acs:ros:*:123456789:template/4d4f5aa2-3260-4e47-863b-763fbb12****	The Alibaba Cloud Resource Name (ARN) of the template.
TemplateId	String	4d4f5aa2-3260-4e47-863b-763fbb12****	The ID of the template.
TemplateName	String	demo	The name of the template.
TemplateVersion	String	v1	The latest version of the template.
UpdateTime	String	2019-10-15T08:17:14.000000	The last time when the template was modified.

Examples

Sample requests

```
http(s)://ros.aliyuncs.com/?Action=ListTemplates
&<Common request parameters>
```

Sample success responses

XML **format**

```
<ListTemplatesResponse>
  <TotalCount>1</TotalCount>
  <RequestId>C3A8413B-1F16-4DED-AC3E-61A00718DE8A</RequestId>
  <PageSize>10</PageSize>
  <PageNumber>1</PageNumber>
  <Templates>
    <TemplateARN>acs:ros:*:123456789:template/4d4f5aa2-3260-4e47-863b-763fbb12****</TemplateARN>
    <ResourceGroupId>rg-acfmxazb4ph6aiy****</ResourceGroupId>
    <Description>test-description</Description>
    <OwnerId>123456789</OwnerId>
    <CreateTime>2019-10-15T08:17:14.000000</CreateTime>
    <UpdateTime>2019-10-15T08:17:14.000000</UpdateTime>
    <TemplateVersion>v1</TemplateVersion>
    <TemplateName>demo</TemplateName>
    <TemplateId>4d4f5aa2-3260-4e47-863b-763fbb12****</TemplateId>
    <ShareType>Private</ShareType>
  </Templates>
</ListTemplatesResponse>
```

JSON **format**

```

{
  "TotalCount": "1",
  "RequestId": "C3A8413B-1F16-4DED-AC3E-61A00718DE8A",
  "PageSize": "10",
  "PageNumber": "1",
  "Templates": [
    {
      "TemplateARN": "acs:ros:*:123456789:template/4d4f5aa2-3260-4e47-863b-763fbb12****",
      "ResourceGroupId": "rg-acfmxazb4ph6aiy****",
      "Description": "test-description",
      "OwnerId": "123456789",
      "CreateTime": "2019-10-15T08:17:14.000000",
      "UpdateTime": "2019-10-15T08:17:14.000000",
      "TemplateVersion": "v1",
      "TemplateName": "demo",
      "TemplateId": "4d4f5aa2-3260-4e47-863b-763fbb12****",
      "ShareType": "Private"
    }
  ]
}

```

Error codes

For a list of error codes, visit the [API Error Center](#).

10.10. ListTemplateVersions

You can call this operation to query one or more versions of a 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	ListTemplateVersions	The operation that you want to perform. Set the value to ListTemplateVersions.
TemplateId	String	Yes	5ecd1e10-b0e9-4389-a565-e4c15efc****	The ID of the template. This parameter applies to shared and private templates.
NextToken	String	No	caeba0bbb2be03f84eb48b699f0**	The token that is used to start the next query.

Parameter	Type	Required	Example	Description
MaxResults	Long	No	50	<p>The maximum number of results to be returned with a single call when the NextToken parameter is used for the query.</p> <p>Valid values: 1 to 100.</p> <p>Default value: 50.</p>

For more information about common request parameters, see [Common parameters](#).

Response parameters

Parameter	Type	Example	Description
NextToken	String	caeba0bbb2be03f84eb48b699f0****	The query token that is returned in this call.
RequestId	String	B288A0BE-D927-4888-B0F7-B35EF84B6E6F	The ID of the request.
Versions	Array of Version		Details about the versions.
CreateTime	String	2020-02-27T07:47:47	The time when the version was created.
Description	String	test	The description of the version.
TemplateId	String	5ecd1e10-b0e9-4389-a565-e4c15efc****	The ID of the template. This parameter applies to shared and private templates. For a shared template, the template ID is the same as the Alibaba Cloud Resource Name (ARN) of the template.
TemplateName	String	test	The template name corresponding to the version.
TemplateVersion	String	v1	<p>The version number.</p> <p>For a shared template, this parameter is returned only when the VersionOption parameter is set to AllVersions.</p> <p>Valid values: v1 to v100.</p>
UpdateTime	String	2020-02-27T07:47:47	The time when the version was last updated.

Examples

Sample requests

```
http(s)://ros.aliyuncs.com/? Action=ListTemplateVersions
&TemplateId=5ecd1e10-b0e9-4389-a565-e4c15efc****
&<Common request parameters>
```

Sample success responses

XML **format**

```
<ListTemplateVersionsResponse>
  <Versions>
    <Description>test</Description>
    <CreateTime>2020-02-27T07:47:47</CreateTime>
    <UpdateTime>2020-02-27T07:47:47</UpdateTime>
    <TemplateVersion>v1</TemplateVersion>
    <TemplateName>test</TemplateName>
    <TemplateId>5ecd1e10-b0e9-4389-a565-e4c15efc****</TemplateId>
  </Versions>
  <NextToken>caeba0bbb2be03f84eb48b699f0****</NextToken>
  <RequestId>B288A0BE-D927-4888-B0F7-B35EF84B6E6F</RequestId>
</ListTemplateVersionsResponse>
```

JSON **format**

```
{
  "Versions": [
    {
      "Description": "test",
      "CreateTime": "2020-02-27T07:47:47",
      "UpdateTime": "2020-02-27T07:47:47",
      "TemplateVersion": "v1",
      "TemplateName": "test",
      "TemplateId": "5ecd1e10-b0e9-4389-a565-e4c15efc****"
    }
  ],
  "NextToken": "caeba0bbb2be03f84eb48b699f0****",
  "RequestId": "B288A0BE-D927-4888-B0F7-B35EF84B6E6F"
}
```

Error codes

For a list of error codes, visit the [API Error Center](#).

HttpCode	Error code	Error message	Description
----------	------------	---------------	-------------

HttpCode	Error code	Error message	Description
404	TemplateNotFound	The Template ({ ID }) could not be found.	The error message returned because the specified template does not exist. ID indicates the template ID.
404	TemplateNotFound	The Template { ID } with version { version } could not be found.	The error message returned because the specified template or version does not exist. ID indicates the template ID, and version indicates the template version.

10.11. SetTemplatePermission

You can call this operation to share or unshare a template.

In this example, a template whose ID is `5ecd1e10-b0e9-4389-a565-e4c15efc****` is shared with an Alibaba Cloud account whose ID is `151266687691****`.

 **Note** The account can authorize a RAM user to use the shared 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	SetTemplatePermission	The operation that you want to perform. Set the value to SetTemplatePermission.

Parameter	Type	Required	Example	Description
AccountIds.N	RepeatList	Yes	151266687691*** *	<p>The list of one or more Alibaba Cloud accounts with which you want to share or unshare the template.</p> <p>Valid values of N: 1 to 5.</p> <div style="background-color: #e1f5fe; padding: 10px; border: 1px solid #cfcfcf;"> <p> Note</p> <ul style="list-style-type: none"> This parameter cannot be set to the ID of the Alibaba Cloud account that owns the template, or the RAM users of this Alibaba Cloud account. When the ShareOption parameter is set to CancelSharing, you can unshare the template with all specified Alibaba Cloud accounts by using the asterisk (*). </div>
ShareOption	String	Yes	ShareToAccounts	<p>The sharing option.</p> <p>Valid values:</p> <ul style="list-style-type: none"> ShareToAccounts: shares the template with other Alibaba Cloud accounts. CancelSharing: unshares the template.
TemplateId	String	Yes	5ecd1e10-b0e9-4389-a565-e4c15efc****	The ID of the template.

Parameter	Type	Required	Example	Description
VersionOption	String	No	Specified	<p>The version option for template sharing. This parameter takes effect when the ShareOption parameter is set to ShareToAccounts.</p> <p>Default value: AllVersions. Valid values:</p> <ul style="list-style-type: none"> AllVersions: shares all versions of the template. Latest: shares only the latest version of the template. If the shared template is updated, the latest version of the template is shared with the destination account. Current: shares only the current version of the template. The current version of the template is shared with the destination account even if the template is updated. Specified: shares only one specific version of the template.
TemplateVersion	String	No	v1	<p>The version of the template that you want to share. This parameter takes effect when the ShareOption parameter is set to ShareToAccounts and the VersionOption parameter is set to Specified.</p> <p>Valid values: v1 to v100.</p>

For more information about common parameters, see [Common parameters](#).

Response parameters

Parameter	Type	Example	Description
RequestId	String	B288A0BE-D927-4888-B0F7-B35EF84B6E6F	The ID of the request.

Examples

Sample requests

```
http(s)://ros.aliyuncs.com/? Action=SetTemplatePermission
&AccountIds.1=151266687691****
&ShareOption=ShareToAccounts
&TemplateId=5ecd1e10-b0e9-4389-a565-e4c15efc****
&<Common request parameters>
```

Sample success responses

XML format

```
<SetTemplatePermissionResponse>
  <RequestId>B288A0BE-D927-4888-B0F7-B35EF84B6E6F</RequestId>
</SetTemplatePermissionResponse>
```

JSON format

```
{
  "RequestId": "B288A0BE-D927-4888-B0F7-B35EF84B6E6F"
}
```

Error codes

For a list of error codes, visit the [API Error Center](#).

HTTP status code	Error code	Error message	Description
400	TemplateBeingProcessed	Template { ID } is being processed, retry later.	The error message returned because the specified template has an action in progress. Try again later. ID indicates the template ID.
404	TemplateNotFound	The Template ({ ID }) could not be found.	The error message returned because the specified template does not exist. ID indicates the template ID.
404	TemplateNotFound	The Template { ID } with version { version } could not be found.	The error message returned because the specified template or version does not exist. ID indicates the template ID, and version indicates the template version.

10.12. DeleteTemplate

You can call this operation to delete a template.

If the template is shared with other Alibaba Cloud accounts, you must unshare the template before you delete it.

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	DeleteTemplate	The operation that you want to perform. Set the value to DeleteTemplate.
TemplateId	String	Yes	5ecd1e10-b0e9-4389-a565-e4c15efc****	The ID of the template. This parameter applies to only private templates.

For more information about common request parameters, see [Common parameters](#).

Response parameters

Parameter	Type	Example	Description
RequestId	String	8C5D90E1-66B6-496C-9371-3807F8DA80A8	The ID of the request.

Examples

Sample requests

```
http(s)://ros.aliyuncs.com/? Action=DeleteTemplate
&TemplateId=5ecd1e10-b0e9-4389-a565-e4c15efc****
&<Common request parameters>
```

Sample success responses

XML format

```
<DeleteTemplateResponse>
  <RequestId>8C5D90E1-66B6-496C-9371-3807F8DA80A8</RequestId>
</DeleteTemplateResponse>
```

JSON format

```
{
  "RequestId": "8C5D90E1-66B6-496C-9371-3807F8DA80A8"
}
```

Error codes

For a list of error codes, visit the [API Error Center](#).

HttpCode	Error code	Error message	Description
404	TemplateNotFound	The Tempalte ({ ID }) could not be found.	The error message returned because the specified template does not exist.
400	TemplateBeingProcessed	Template { ID } is being processed, retry later.	The error message returned because the specified template has an action in progress. Try again later. ID indicates the template ID.

11. Stack policy operations

11.1. SetStackPolicy

You can call this operation to configure a stack policy.

In this example, a stack policy is configured for a stack deployed in the `China (Hangzhou)` region whose ID is `4a6c9851-3b0f-4f5f-b4ca-a14bf691****`. The URL to the stack policy body is `oss://ros/stack-policy/demo`.

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	SetStackPolicy	The operation that you want to perform. Set the value to SetStackPolicy.
RegionId	String	Yes	cn-hangzhou	The region ID of the stack. You can call the DescribeRegions operation to query the most recent region list.
StackId	String	Yes	4a6c9851-3b0f-4f5f-b4ca-a14bf691****	The ID of the stack.
StackPolicyBody	String	No	<pre>{"Statement": [{"Effect": "Allow", "Action": "Update:*", "Principal": "*", "Resource": "*"}]}</pre>	The structure that contains the stack policy body. The stack policy body must be 1 to 16,384 bytes in length. You can specify one of the StackPolicyBody and StackPolicyURL parameters, but you cannot specify both of them.

Parameter	Type	Required	Example	Description
StackPolicyURL	String	No	oss://ros/stack-policy/demo	<p>The URL for the file that contains the stack policy. The URL must point to a template located in an HTTP or HTTPS web server or an Alibaba Cloud OSS bucket. Examples: oss://ros/template/demo and oss://ros/template/demo?RegionId=cn-hangzhou. The template can be up to 16,384 bytes in length, and the URL can be up to 1,350 bytes in length.</p> <div style="border: 1px solid #ccc; background-color: #e6f2ff; padding: 5px; margin: 5px 0;"> <p> Note If the region of the OSS bucket is not specified, the RegionId value is used.</p> </div> <p>You can specify one of the StackPolicyBody and StackPolicyURL parameters, but you cannot specify both of them.</p>

For more information about common parameters, see [Common parameters](#).

Response parameters

Parameter	Type	Example	Description
RequestId	String	B288A0BE-D927-4888-B0F7-B35EF84B6E6F	The ID of the request.

Examples

Sample requests

```
http(s)://ros.aliyuncs.com/?Action=SetStackPolicy
&StackId=4a6c9851-3b0f-4f5f-b4ca-a14bf691****
&StackPolicyURL=oss://ros/stack-policy/demo
&RegionId=cn-hangzhou
&<Common request parameters>
```

Sample success responses

XML format

```
<SetStackPolicyResponse>
  <RequestId>B288A0BE-D927-4888-B0F7-B35EF84B6E6F</RequestId>
</SetStackPolicyResponse>
```

JSON format

```
{
  "RequestId": "B288A0BE-D927-4888-B0F7-B35EF84B6E6F"
}
```

Error codes

For a list of error codes, visit the [API Error Center](#).

Error code	Error message	HTTP status code	Description
StackValidationFailed	{reason}.	400	The error message returned because the stack validation failed. reason indicates the specific reason.
StackNotFound	The Stack ({name}) could not be found.	404	The error message returned because the specified stack does not exist. name indicates the name or ID of the stack.

11.2. GetStackPolicy

You can call this operation to query information about a stack policy.

In this example, the stack policy of a stack whose ID is `4a6c9851-3b0f-4f5f-b4ca-a14bf691****` is queried. The stack is deployed in the China (Hangzhou) 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
Action	String	Yes	GetStackPolicy	The operation that you want to perform. Set the value to GetStackPolicy.
RegionId	String	Yes	cn-hangzhou	The region ID of the stack. You can call the DescribeRegions operation to query the most recent region list.

Parameter	Type	Required	Example	Description
StackId	String	Yes	4a6c9851-3b0f-4f5f-b4ca-a14bf691****	The ID of the stack.

For more information about common parameters, see [Common parameters](#).

Response parameters

Parameter	Type	Example	Description
StackPolicyBody	Map	{ "Statement": [{"Action": "Update:*", "Effect": "Allow", "Principal": "*", "Resource": "*"}]}	The structure that contains the stack policy body. The stack policy body must be 1 to 16,384 bytes in length.
RequestId	String	B288A0BE-D927-4888-B0F7-B35EF84B6E6F	The ID of the request.

Examples

Sample requests

```
http(s)://ros.aliyuncs.com/?Action=GetStackPolicy
&StackId=4a6c9851-3b0f-4f5f-b4ca-a14bf691****
&RegionId=cn-hangzhou
&<Common request parameters>
```

Sample success responses

`XML` format

```

<GetStackPolicyResponse>
  <StackPolicyBody>
    <Statement>
      <Statement>
        <Resource>*/</Resource>
        <Principal>*/</Principal>
        <Action>Update:*/</Action>
        <Effect>Allow</Effect>
      </Statement>
      <Statement>
        <Resource>LogicalResourceId/WebServer</Resource>
        <Principal>*/</Principal>
        <Action>Update:*/</Action>
        <Effect>Deny</Effect>
      </Statement>
    </Statement>
  </StackPolicyBody>
  <RequestId>B288A0BE-D927-4888-B0F7-B35EF84B6E6F</RequestId>
</GetStackPolicyResponse>

```

JSON **format**

```

{
  "StackPolicyBody": {
    "Statement": [
      {
        "Action": "Update:*",
        "Effect": "Allow",
        "Principal": "*",
        "Resource": "*"
      },
      {
        "Action": "Update:*",
        "Effect": "Deny",
        "Principal": "*",
        "Resource": "LogicalResourceId/WebServer"
      }
    ]
  },
  "RequestId": "B288A0BE-D927-4888-B0F7-B35EF84B6E6F"
}

```

Error codes

For a list of error codes, visit the [API Error Center](#).

Error code	Error message	HTTP status code	Description
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Error code	Error message	HTTP status code	Description
StackNotFound	The Stack ({name}) could not be found.	404	The error message returned because the specified stack does not exist. name indicates the name or ID of the stack.

12. Change set operations

12.1. CreateChangeSet

Creates a change set.

Description

You can create and execute change sets to update running stacks. For more information about change sets, see [Overview](#).

Limits

- A stack can contain up to 20 change sets.
- Change sets reflect only changes on stacks. Change sets do not reflect whether stacks are updated.
- You cannot use change sets to check the following items: whether the upper limit of your account is reached, whether resources that cannot be updated are updated, and whether your account has permissions to modify resources. These items may cause stack updates to fail. If stacks fail to be updated, Resource Orchestration Service (ROS) attempts to roll back your resources to the original status.

In this example, a change set named `MyChangeSet` is created in the `China (Hangzhou)` region. The change set is used to change the template of a stack to `{"ROSTemplateFormatVersion": "2015-09-01"}`. The ID of the stack is `4a6c9851-3b0f-4f5f-b4ca-a14bf691****`.

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	CreateChangeSet	The operation that you want to perform. Set the value to CreateChangeSet.

Parameter	Type	Required	Example	Description
StackId	String	No	4a6c9851-3b0f-4f5f-b4ca-a14bf691****	<p>The ID of the stack for which you want to create the change set. ROS compares the stack information with the information that you specify, such as a modified template or different values of input parameters, to generate the change set.</p> <p>Note This parameter only takes effect when the ChangeSetType parameter is set to UPDATE or IMPORT.</p>
StackPolicyURL	String	No	oss://ros/stack-policy/demo	<p>The URL of the file that contains the stack policy. The URL must point to a policy that is located on an HTTP or HTTPS web server or in an Alibaba Cloud Object Storage Service (OSS) bucket, for example, oss://ros/stack-policy/demo and oss://ros/stack-policy/demo?RegionId=cn-hangzhou. The policy file can be up to 16,384 bytes in length.</p> <p>Note If you do not specify the region of the OSS bucket, the value of the RegionId parameter is used.</p> <p>You can specify the StackPolicyBody or StackPolicyURL parameter.</p> <p>The URL can be up to 1,350 bytes in length.</p> <p>If you set the ChangeSetType parameter to CREATE, you can specify the StackPolicyBody or StackPolicyURL parameter. If you set the ChangeSetType parameter to UPDATE, you can specify only one of the following parameters:</p> <ul style="list-style-type: none"> StackPolicyBody StackPolicyURL StackPolicyDuringUpdateBody StackPolicyDuringUpdateURL

Parameter	Type	Required	Example	Description
StackPolicyBody	String	No	<pre>{"Statement": [{"Effect": "Allow", "Action": "Update:*", "Principal": "*", "Resource": "*"}]}</pre>	<p>The structure that contains the stack policy body. The policy body must be 1 to 16,384 bytes in length. If you set the ChangeSetType parameter to CREATE, you can specify the StackPolicyBody or StackPolicyURL parameter. If you set the ChangeSetType parameter to UPDATE, you can specify only one of the following parameters:</p> <ul style="list-style-type: none"> StackPolicyBody StackPolicyURL StackPolicyDuringUpdateBody StackPolicyDuringUpdateURL
StackName	String	No	MyStack	<p>The name of the stack for which you want to create the change set.</p> <p>The name can be up to 255 characters in length, and can contain digits, letters, hyphens (-), and underscores (_). The name must start with a digit or letter.</p> <div style="background-color: #e0f2f1; padding: 10px; border: 1px solid #ccc;"> <p> Note This parameter only takes effect when the ChangeSetType parameter is set to CREATE or IMPORT.</p> </div>
UsePreviousParameters	Boolean	No	true	<p>Specifies whether to use the values that you specified last time for the parameters that you do not specify in the request. Default value: false. Valid values:</p> <ul style="list-style-type: none"> true false <div style="background-color: #e0f2f1; padding: 10px; border: 1px solid #ccc;"> <p> Note This parameter only takes effect when the ChangeSetType parameter is set to UPDATE or IMPORT.</p> </div>

Parameter	Type	Required	Example	Description
ChangeSetType	String	No	UPDATE	<p>The type of the change set. Default value: UPDATE. Valid values:</p> <ul style="list-style-type: none"> • CREATE: creates a change set for a new stack. • UPDATE: creates a change set for an existing stack. • IMPORT: creates a change set for a new stack or an existing stack to import resources that are not managed by ROS. <p>If you create a change set for a new stack, ROS generates a unique stack ID for the stack. The stack is in the REVIEW_IN_PROGRESS state until you execute the change set.</p> <p>If you want to create a change set for a new stack, do not set the ChangeSetType parameter to UPDATE. If you want to create a change set for an existing stack, do not set the ChangeSetType parameter to CREATE.</p>
Description	String	No	It is a demo.	The description of the change set. The description can be up to 1,024 bytes in length.
RegionId	String	Yes	cn-hangzhou	The region ID of the change set. You can call the DescribeRegions operation to query the most recent region list.
ClientToken	String	No	123e4567-e89b-12d3-a456-42665544****	<p>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.</p> <p>The token can be up to 64 characters in length, and can contain letters, digits, hyphens (-), and underscores (_).</p> <p>For more information, see Ensure idempotence.</p>

Parameter	Type	Required	Example	Description
TemplateURL	String	No	oss://ros/template/demo	<p>The URL of the file that contains the template body. The URL must point to a template that is located on an HTTP or HTTPS web server or in an Alibaba Cloud OSS bucket, for example, <code>oss://ros/template/demo</code> and <code>oss://ros/template/demo?RegionId=cn-hangzhou</code>. The template body can be up to 524,288 bytes in length.</p> <p> Note If you do not specify the region of the OSS bucket, the value of the <code>RegionId</code> parameter is used.</p> <p>You can specify only one of the following parameters: <code>TemplateBody</code>, <code>TemplateURL</code>, and <code>TemplateId</code>.</p> <p>The URL can be up to 1,024 bytes in length.</p>

Parameter	Type	Required	Example	Description
StackPolicyDuringUpdateURL	String	No	oss://ros/stack-policy/demo	<p>The URL of the file that contains the stack policy based on which the stack is updated. The URL must point to a policy that is located on an HTTP or HTTPS web server or in an Alibaba Cloud OSS bucket, for example, <code>oss://ros/stack-policy/demo</code> and <code>oss://ros/stack-policy/demo?RegionId=cn-hangzhou</code>. The policy file can be up to 16,384 bytes in length.</p> <div data-bbox="959 645 1385 824"><p> Note If you do not specify the region of the OSS bucket, the value of the RegionId parameter is used.</p></div> <p>The URL can be up to 1,350 bytes in length.</p> <p>If you need to update protected resources, specify a temporary overriding stack policy for the resources during the update. If you do not specify a stack policy, the existing policy that is associated with the stack is used. This parameter only takes effect when the ChangeSetType parameter is set to UPDATE. You can specify only one of the following parameters:</p> <ul style="list-style-type: none">StackPolicyBodyStackPolicyURLStackPolicyDuringUpdateBodyStackPolicyDuringUpdateURL

Parameter	Type	Required	Example	Description
TemplateBody	String	No	<pre>{"ROSTemplateFormatVersion": "2015-09-01"}</pre>	<p>The structure that contains the template body. The template body must be 1 to 524,288 bytes in length.</p> <p>If the length of the template body exceeds the upper limit, we recommend that you add parameters to the HTTP POST request body to prevent request failures caused by excessively long URLs.</p> <p>You can specify only one of the following parameters: TemplateBody, TemplateURL, and TemplateId.</p>
TimeoutInMinutes	Long	No	12	<p>The amount of time that can elapse before the stack enters the CREATE_FAILED or UPDATE_FAILED state.</p> <p>If you set the ChangeSetType parameter to CREATE, this parameter is required. If you set the ChangeSetType parameter to UPDATE, this parameter is optional.</p> <ul style="list-style-type: none"> • Unit: minutes. • Valid values: 10 to 1440. • Default value: 60.
DisableRollback	Boolean	No	false	<p>Specifies whether to disable rollback for the stack when the stack fails to be created.</p> <p>Default value: false. Valid values:</p> <ul style="list-style-type: none"> • true: disables rollback for the stack when the stack fails to be created. • false: enables rollback for the stack when the stack fails to be created. <div style="background-color: #e0f2f1; padding: 5px; border: 1px solid #ccc;"> <p> Note This parameter only takes effect when the ChangeSetType parameter is set to CREATE or IMPORT.</p> </div>

Parameter	Type	Required	Example	Description
ChangeSetName	String	Yes	MyChangeSet	<p>The name of the change set.</p> <p>The name can be up to 255 characters in length, and can contain digits, letters, hyphens (-), and underscores (_). The name must start with a digit or letter.</p> <div style="border: 1px solid #add8e6; padding: 5px; background-color: #e0f0ff;"> <p> Note Make sure that the name is unique among all names of change sets that are associated with the specified stack.</p> </div>
StackPolicyDuringUpdateBody	String	No	<pre>{ "Statement": [{ "Effect": "Allow", "Action": "Update*", "Principal": "*", "Resource": "*" }] }</pre>	<p>The structure that contains the body of the temporary overriding stack policy. The policy body must be 1 to 16,384 bytes in length.</p> <p>If you need to update protected resources, specify a temporary overriding stack policy for the resources during the update. If you do not specify a temporary overriding stack policy, the existing stack policy that is associated with the stack is used.</p> <p>This parameter only takes effect when the <code>ChangeSetType</code> parameter is set to <code>UPDATE</code>. You can specify only one of the following parameters:</p> <ul style="list-style-type: none"> StackPolicyBody StackPolicyURL StackPolicyDuringUpdateBody StackPolicyDuringUpdateURL

Parameter	Type	Required	Example	Description
RamRoleName	String	No	test-role	<p>The name of the RAM role. ROS assumes the RAM role to create the stack and uses credentials of the role to call the APIs of Alibaba Cloud services.</p> <p>ROS assumes the RAM role to perform operations on the stack. If you have permissions to perform operations on the stack but you do not have permissions to use the RAM role, ROS still uses the RAM role. You must make sure that the least privileges are granted to the role.</p> <p>If you do not specify this parameter, ROS uses the existing role that is associated with the stack. If no roles are available for ROS to assume, ROS uses a temporary credential that is generated from the credentials of your account.</p> <p>The name of the RAM role can be up to 64 bytes in length.</p>
ReplacementOption	String	No	Disabled	<p>Specifies whether to enable replacement update if a resource property is changed but you cannot change the resource property. For a change, the physical ID of the resource remains unchanged. For a replacement update, the existing resource is deleted, a new resource is created, and the physical ID of the resource is changed. Default value: Disabled. Valid values:</p> <ul style="list-style-type: none"> Enabled: enables replacement update. Disabled: disables replacement update. <div style="background-color: #e1f5fe; padding: 10px; border: 1px solid #cfcfcf;"> <p> Note Changes have higher priorities than replacement updates. This parameter only takes effect when the ChangeSetType parameter is set to UPDATE.</p> </div>

Parameter	Type	Required	Example	Description
TemplateId	String	No	5ecd1e10-b0e9-4389-a565-e4c15efc****	<p>The ID of the template. This parameter applies to shared and private templates.</p> <p>You can specify only one of the following parameters: TemplateBody, TemplateURL, and TemplateId.</p>
TemplateVersion	String	No	v1	<p>The version of the template.</p> <p>Note This parameter only takes effect when the TemplateId parameter is specified.</p>
TemplateScratchId	String	No	4a6c9851-3b0f-4f5f-b4ca-a14bf691****	<p>The ID of the template that is created for a scenario.</p>

Parameter	Type	Required	Example	Description
Parallelism	Long	No	1	<p>The maximum number of concurrent operations that are performed on resources in a Terraform stack. By default, this parameter is empty. You can set this parameter to an integer greater than or equal to 0. If you specify this parameter, ROS associates the value with the stack. The value can affect subsequent operations on the stack.</p> <p>This parameter only takes effect when the ChangeSetType parameter is set to CREATE or UPDATE.</p> <ul style="list-style-type: none"> • Valid values if you set the ChangeSetType parameter to CREATE: <ul style="list-style-type: none"> ◦ If you set the Parallelism parameter to an integer that is greater than 0, the integer is used. ◦ If you set the Parallelism parameter to 0 or do not specify the Parallelism parameter, the default value of Terraform is used. In most cases, the default value of Terraform is 10. • Valid values if you set the ChangeSetType parameter to UPDATE: <ul style="list-style-type: none"> ◦ If you set the Parallelism parameter to an integer that is greater than 0, the integer is used. ◦ If you set the Parallelism parameter to 0, the default value of Terraform is used. In most cases, the default value of Terraform is 10. ◦ If you do not specify the Parallelism parameter, the value that you specified for this parameter in the last operation is used. If you did not specify this parameter in the last operation, the default value of Terraform is used. In most cases, the default value of Terraform is 10.

Parameter	Type	Required	Example	Description
Parameters.N.ParameterKey	String	Yes	Amount	<p>The name of parameter N that is defined in the template. If you do not specify a name and a value for a parameter, ROS uses the default name and value that are specified in the template. Maximum value of N: 200.</p> <p>Note The Parameters parameter is optional. If you specify the Parameters parameter, you must specify the Parameters.N.ParameterKey parameter.</p>
Parameters.N.ParameterValue	String	Yes	12	<p>The value of parameter N that is defined in the template. Maximum value of N: 200.</p> <p>Note The Parameters parameter is optional. If you specify the Parameters parameter, you must specify the Parameters.N.ParameterValue parameter.</p>
				<p>The callback URL that is used to receive event N for the stack. Valid values:</p> <ul style="list-style-type: none"> HTTP POST URL <p>Each URL can be up to 1,024 bytes in length.</p> <ul style="list-style-type: none"> eventbridge <p>When the status of a stack changes, ROS sends event notifications to the EventBridge service. To view the event information, perform the following operations: Log on to the EventBridge console. In the left-side navigation pane, click Event Buses.</p>

Parameter	Type	Required	Example	Description
NotificationURLs.N	String	No	http://my-site.com/ros-notify	<p>Note ROS supports the EventBridge service in the following regions: China (Hangzhou), China (Shanghai), China (Beijing), China (Hong Kong), and China (Zhangjiakou).</p> <p>Maximum value of N: 5. When the status of a stack changes, ROS sends event notifications. If rollback is enabled for the stack and the stack is in the CREATE_ROLLBACK or ROLLBACK state, ROS sends event notifications. If rollback is enabled for the stack and the stack is in the CREATE_FAILED, UPDATE_FAILED, or IN_PROGRESS state, ROS does not send event notifications.</p> <p>ROS sends event notifications regardless of whether you specify the parameters in the Outputs section. The following sample code shows the content of an event notification:</p> <pre> { "Outputs": [{ "Description": "No description given", "OutputKey": "InstanceId", "OutputValue": "i-xxx" }], "StackId": "80bd6b6c- e888-4573-ae3b-93d29113****", "StackName": "test- notification-url", "Status": "CREATE_COMPLETE" } </pre>

Parameter	Type	Required	Example	Description
ResourcesToImport.N.ResourceIdentifier	String	Yes	<code>{"VpcId": "vpc-2zevx9ios*****"}</code>	<p>The key-value mapping between strings. The mapping is used to identify resource N that you want to import. Set the value of this parameter to a JSON string.</p> <p>A key is an identifier for a resource and a value is an assignment of data to the key. For example, VpcId is a key that indicates the ID of a virtual private cloud (VPC), and <code>vpc-2zevx9ios*****</code> is a value that is assigned to VpcId. You can call the GetTemplateSummary operation to obtain the key of a resource.</p> <div style="background-color: #e1f5fe; padding: 10px; border: 1px solid #cfcfcf;"> <p> Note This parameter only takes effect when the <code>ChangeSetType</code> parameter is set to <code>IMPORT</code>. The <code>ResourcesToImport</code> parameter is optional. If you specify the <code>ResourcesToImport</code> parameter, you must specify the <code>ResourcesToImport.N.ResourceIdentifier</code> parameter.</p> </div>
ResourcesToImport.N.LogicalResourceID	String	Yes	Vpc	<p>The logical ID of resource N. The logical ID specifies the name of the resource.</p> <div style="background-color: #e1f5fe; padding: 10px; border: 1px solid #cfcfcf;"> <p> Note This parameter only takes effect when the <code>ChangeSetType</code> parameter is set to <code>IMPORT</code>. The <code>ResourcesToImport</code> parameter is optional. If you specify the <code>ResourcesToImport</code> parameter, you must specify the <code>ResourcesToImport.N.LogicalResourceID</code> parameter.</p> </div>

Parameter	Type	Required	Example	Description
ResourcesToImport.N.ResourceType	String	Yes	ALYUN::ECS::VPC	<p>The type of resource N. The type must be the same as the type that is defined in the template.</p> <div style="border: 1px solid #add8e6; padding: 5px;"> <p>Note This parameter only takes effect when the ChangeSetType parameter is set to IMPORT. The ResourcesToImport parameter is optional. If you specify the ResourcesToImport parameter, you must specify the ResourcesToImport.N.ResourceType parameter.</p> </div>

For more information about common request parameters, see [Common parameters](#).

Response parameters

Parameter	Type	Example	Description
ChangeSetId	String	e85abe0c-6528-43fb-ae93-fdf8de22****	The ID of the change set.
RequestId	String	B288A0BE-D927-4888-B0F7-B35EF84B6E6F	The ID of the request.
StackId	String	4a6c9851-3b0f-4f5f-b4ca-a14bf691****	The ID of the stack.

Examples

Sample requests

```
http(s)://ros.aliyuncs.com/?Action=CreateChangeSet
&ChangeSetName=MyChangeSet
&StackId=4a6c9851-3b0f-4f5f-b4ca-a14bf691****
&TemplateBody={"ROSTemplateFormatVersion":"2015-09-01"}
&RegionId=cn-hangzhou
&<Common request parameters>
```

Sample success responses

`XML` format

```
HTTP/1.1 200 OK
Content-Type:application/xml
<CreateChangeSetResponse>
  <ChangeSetId>e85abe0c-6528-43fb-ae93-fdf8de22****</ChangeSetId>
  <StackId>4a6c9851-3b0f-4f5f-b4ca-a14bf691****</StackId>
  <RequestId>B288A0BE-D927-4888-B0F7-B35EF84B6E6F</RequestId>
</CreateChangeSetResponse>
```

JSON **format**

```
HTTP/1.1 200 OK
Content-Type:application/json
{
  "ChangeSetId" : "e85abe0c-6528-43fb-ae93-fdf8de22****",
  "StackId" : "4a6c9851-3b0f-4f5f-b4ca-a14bf691****",
  "RequestId" : "B288A0BE-D927-4888-B0F7-B35EF84B6E6F"
}
```

Error codes

For a list of error codes, visit the [API Error Center](#).

HttpCode	Error code	Error message	Description
400	CircularDependency	Circular Dependency Found: {reason}.	The error message returned because the template contains a circular dependency. reason indicates the specific cause of the error.
400	InvalidSchema	{reason}.	The error message returned because the template format is invalid. reason indicates the specific cause of the error.
400	InvalidTemplateAttribute	The Referenced Attribute ({resource} {name}) is incorrect.	The error message returned because the resource property that is referenced in the Outputs section of the template is invalid. resource indicates the resource name. name indicates the property name.

HttpCode	Error code	Error message	Description
400	InvalidTemplatePropertyType	The specified value type of ({resource} {section}) is incorrect.	The error message returned because the type of the resource property that is defined in a section of the template is invalid. resource indicates the resource name. section indicates the section name.
400	InvalidTemplateReference	The specified reference "{name}" (in {referencer}) is incorrect.	The error message returned because the template contains an invalid reference. name indicates the reference name. referencer indicates the referencer name.
400	InvalidTemplateSection	The template section is invalid: {section}.	The error message returned because the template contains an invalid section. section indicates the section name.
400	InvalidTemplateVersion	The template version is invalid: {reason}.	The error message returned because the template version is invalid. reason indicates the specific cause of the error.
400	StackPolicyValidationFailed	Action denied by stack policy: {reason}.	The error message returned because the stack policy fails to be validated. reason indicates the specific cause of the error.

HttpCode	Error code	Error message	Description
400	StackValidationFailed	{reason}.	The error message returned because the stack fails to be validated. reason indicates the specific cause of the error.
400	UnknownUserParameter	The Parameter ({name}) was not defined in template.	The error message returned because the specified parameter is not defined in the template. name indicates the parameter name.
400	UserParameterMissing	The Parameter {name} was not provided.	The error message returned because no value is specified for the parameter that is defined in the template. name indicates the parameter name.
404	StackNotFound	The Stack ({name}) could not be found.	The error message returned because the stack does not exist. name indicates the stack name or ID.
409	ActionInProgress	Stack {name} already has an action ({action}) in progress.	The error message returned because the stack is being changed. name indicates the stack name or ID. action indicates the change operation.

HttpCode	Error code	Error message	Description
409	ChangeSetExists	The ChangeSet ({name}) of Stack ({stack}) already exists.	The error message returned because the change set name already exists. name indicates the change set name. stack indicates the name or ID of the stack with which the change set is associated.
409	StackExists	The Stack ({name}) already exists.	The error message returned because the stack name already exists. name indicates the stack name.
404	TemplateNotFound	The Template ({ ID }) could not be found.	The error message returned because the template does not exist. ID indicates the template ID.
404	TemplateNotFound	The Template { ID } with version { version } could not be found.	The error message returned because the template or the specified template version does not exist. ID indicates the template ID. version indicates the template version.

12.2. ExecuteChangeSet

You can call this operation to execute a change set.

In this example, a change set in the `China (Hangzhou)` region whose ID is `1f6521a4-05af-4975-afe9-bc4b45ad****` is executed.

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	ExecuteChangeSet	The operation that you want to perform. Set the value to ExecuteChangeSet.
RegionId	String	Yes	cn-hangzhou	The region ID of the change set. You can call the DescribeRegions operation to query the most recent region list.
ChangeSetId	String	Yes	1f6521a4-05af-4975-afe9-bc4b45ad****	The ID of the change set.
ClientToken	String	No	123e4567-e89b-12d3-a456-42665544****	<p>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.</p> <p>The token can be up to 64 characters in length and can contain letters, digits, hyphens (-), and underscores (_).</p> <p>For more information, see How to ensure idempotence.</p>

For more information about common parameters, see [Common parameters](#).

Response parameters

Parameter	Type	Example	Description
RequestId	String	B288A0BE-D927-4888-B0F7-B35EF84B6E6F	The ID of the request.

Examples

Sample requests

```
http(s)://ros.aliyuncs.com/?Action=ExecuteChangeSet
&ChangeSetId=1f6521a4-05af-4975-afe9-bc4b45ad****
&RegionId=cn-hangzhou
&<Common request parameters>
```

Sample success responses

`XML` format

```
<ExecuteChangeSetResponse>
  <RequestId>B288A0BE-D927-4888-B0F7-B35EF84B6E6F</RequestId>
</ExecuteChangeSetResponse>
```

JSON format

```
{
  "RequestId": "B288A0BE-D927-4888-B0F7-B35EF84B6E6F"
}
```

Error codes

For a list of error codes, visit the [API Error Center](#).

Error code	Error message	HTTP status code	Description
ChangeSetNotFound	The ChangeSet ({name}) of Stack ({stack}) could not be found.	404	The error message returned because the specified change set does not exist. name indicates the name or ID of the change set, and stack indicates the name or ID of the stack.
ChangeSetNotFound	The ChangeSet {ID} could not be found.	404	The error message returned because the specified change set does not exist. ID indicates the ID of the change set.
StackNotFound	The Stack ({name}) could not be found.	404	The error message returned because the specified stack does not exist. name indicates the name or ID of the stack.
ActionInProgress	Stack {name} already has an action ({action}) in progress.	409	The error message returned because the specified stack has a change operation in progress. name indicates the name or ID of the stack, and action indicates the change operation.

12.3. GetChangeSet

Queries the information of a change set.

In this example, the information of the change set whose ID is `4c11658d-bd47-4dd0-ba64-727edc62****` is 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	GetChangeSet	The operation that you want to perform. Set the value to GetChangeSet.
ShowTemplate	Boolean	No	false	Specifies whether to show the template. Default value: false. Valid values: <ul style="list-style-type: none">true: shows the template.false: does not show the template.
RegionId	String	Yes	cn-hangzhou	The region ID of the change set. You can call the DescribeRegions operation to query the most recent region list.
ChangeSetId	String	Yes	4c11658d-bd47-4dd0-ba64-727edc62****	The ID of the change set.

For more information about common request parameters, see [Common parameters](#).

Response parameters

Parameter	Type	Example	Description
Status	String	CREATE_COMPLETE	The status of the change set.
Changes	Array of Object	See sample success responses.	The changes of the change set. For more information, see Data structure .
Description	String	It is a demo.	The description of the change set.

Parameter	Type	Example	Description
Parameters	Array of Parameter		The parameters of the stack.
ParameterKey	String	ALIYUN::Region	The name of the parameter.
ParameterValue	String	cn-hangzhou	The value of the parameter.
RequestId	String	3766EE04-76DD-50F9-9C23-3AF136CD5708	The ID of the request.
StatusReason	String	too many changes.	The reason why the change set is in its current state.
CreateTime	String	2021-12-01T02:20:56	The time when the resource was created. The time is displayed in UTC.
TemplateBody	String	<pre>{"ROSTemplateFormatVersion": "2015-09-01"}</pre>	<p>The template body of the change set.</p> <div style="background-color: #e0f2f1; padding: 5px; border: 1px solid #ccc;"> <p> Note This parameter takes effect only when the ShowTemplate parameter is set to true.</p> </div>
ChangeSetName	String	ChangeSet_template	The name of the change set.
ChangeSetId	String	4c11658d-bd47-4dd0-ba64-727edc62****	The ID of the change set.
ExecutionStatus	String	AVAILABLE	The execution status of the change set.
ChangeSetType	String	UPDATE	The type of the change set.
RegionId	String	cn-hangzhou	The ID of the region.
DisableRollback	Boolean	false	Indicates whether rollback was performed.
StackName	String	stack_2021-10-13	The name of the stack with which the change set is associated.

Parameter	Type	Example	Description
TimeoutInMinutes	Integer	60	The timeout period that is specified for the stack creation or update request.
StackId	String	a486fc19-ebb7-4ce9-a70b-554a7c3d****	The ID of the stack with which the change set is associated.
Log	Object		The logs of the change set.
TerraformLogs	Array of TerraformLog		<p>The logs of the Terraform stack. This parameter is returned only for the change set of a Terraform stack.</p> <div style="background-color: #e0f2f1; padding: 10px; border: 1px solid #ccc;"> <p> Note This parameter is not returned for change sets that are in the creating state. This parameter indicates the change set creation logs of the Terraform stack.</p> </div>
Command	String	apply	<p>The name of the Terraform command. Valid values:</p> <ul style="list-style-type: none"> • apply • plan • destroy • version <p>For more information about the Terraform commands, see Provisioning Infrastructure with Terraform.</p>
Stream	String	stdout	<p>The output stream. Valid values:</p> <ul style="list-style-type: none"> • stdout: the standard output stream. • stderr: the standard error stream.
Content	String	Apply complete! Resources: 42 added, 0 changed, 0 destroyed.	The content of the output stream.

Examples

Sample requests

```

http(s)://ros.aliyuncs.com/?Action=GetChangeSet
&ShowTemplate=false
&RegionId=cn-hangzhou
&ChangeSetId=4c11658d-bd47-4dd0-ba64-727edc62****
&Common request parameters

```

Sample success responses

XML **format**

```

HTTP/1.1 200 OK
Content-Type:application/xml
<GetChangeSetResponse>
  <Status>CREATE_COMPLETE</Status>
  <Changes>
    <Type>Resource</Type>
    <ResourceChange>
      <Action>Remove</Action>
      <LogicalResourceId>WaitCondition</LogicalResourceId>
      <PhysicalResourceId>WaitCondition</PhysicalResourceId>
      <ResourceType>ALIYUN::ROS::WaitCondition</ResourceType>
    </ResourceChange>
  </Changes>
  <Changes>
    <Type>Resource</Type>
    <ResourceChange>
      <Action>Remove</Action>
      <LogicalResourceId>WaitConHandle</LogicalResourceId>
      <PhysicalResourceId>WaitConHandle</PhysicalResourceId>
      <ResourceType>ALIYUN::ROS::WaitConditionHandle</ResourceType>
    </ResourceChange>
  </Changes>
  <Parameters>
    <ParameterValue>151266687691****</ParameterValue>
    <ParameterKey>ALIYUN::AccountId</ParameterKey>
  </Parameters>
  <Parameters>
    <ParameterValue>None</ParameterValue>
    <ParameterKey>ALIYUN::NoValue</ParameterKey>
  </Parameters>
  <Parameters>
    <ParameterValue>cn-hangzhou</ParameterValue>
    <ParameterKey>ALIYUN::Region</ParameterKey>
  </Parameters>
  <Parameters>
    <ParameterValue>a486fc19-ebb7-4ce9-a70b-554a7c3d****</ParameterValue>
    <ParameterKey>ALIYUN::StackId</ParameterKey>
  </Parameters>
  <Parameters>
    <ParameterValue>stack_2021-10-13</ParameterValue>
    <ParameterKey>ALIYUN::StackName</ParameterKey>
  </Parameters>
  <Parameters>
    <ParameterValue>151266687691****</ParameterValue>

```

```

    <ParameterKey>ALIYUN::TenantId</ParameterKey>
  </Parameters>
  <RequestId>3766EE04-76DD-50F9-9C23-3AF136CD5708</RequestId>
  <CreateTime>2021-12-01T02:20:56</CreateTime>
  <ChangeSetName>ChangeSet_template</ChangeSetName>
  <ChangeSetId>4c11658d-bd47-4dd0-ba64-727edc62****</ChangeSetId>
  <ExecutionStatus>AVAILABLE</ExecutionStatus>
  <ChangeSetType>UPDATE</ChangeSetType>
  <RegionId>cn-hangzhou</RegionId>
  <DisableRollback>>false</DisableRollback>
  <StackName>stack_2021-10-13</StackName>
  <TimeoutInMinutes>60</TimeoutInMinutes>
  <StackId>a486fc19-ebb7-4ce9-a70b-554a7c3d****</StackId>
</GetChangeSetResponse>

```

JSON format

```

HTTP/1.1 200 OK
Content-Type:application/json
{
  "Status" : "CREATE_COMPLETE",
  "Changes" : [ {
    "Type" : "Resource",
    "ResourceChange" : {
      "Action" : "Remove",
      "LogicalResourceId" : "WaitCondition",
      "Details" : [ ],
      "Scope" : [ ],
      "PhysicalResourceId" : "WaitCondition",
      "ResourceType" : "ALIYUN::ROS::WaitCondition"
    }
  }, {
    "Type" : "Resource",
    "ResourceChange" : {
      "Action" : "Remove",
      "LogicalResourceId" : "WaitConHandle",
      "Details" : [ ],
      "Scope" : [ ],
      "PhysicalResourceId" : "WaitConHandle",
      "ResourceType" : "ALIYUN::ROS::WaitConditionHandle"
    }
  } ],
  "Parameters" : [ {
    "ParameterValue" : "151266687691****",
    "ParameterKey" : "ALIYUN::AccountId"
  }, {
    "ParameterValue" : "None",
    "ParameterKey" : "ALIYUN::NoValue"
  }, {
    "ParameterValue" : "cn-hangzhou",
    "ParameterKey" : "ALIYUN::Region"
  }, {
    "ParameterValue" : "a486fc19-ebb7-4ce9-a70b-554a7c3d****",
    "ParameterKey" : "ALIYUN::StackId"
  } ]
}

```

```

    "ParameterKey" : "ALIYUN::StackId"
  }, {
    "ParameterValue" : "stack_2021-10-13",
    "ParameterKey" : "ALIYUN::StackName"
  }, {
    "ParameterValue" : "151266687691****",
    "ParameterKey" : "ALIYUN::TenantId"
  } ],
  "RequestId" : "3766EE04-76DD-50F9-9C23-3AF136CD5708",
  "CreateTime" : "2021-12-01T02:20:56",
  "ChangeSetName" : "ChangeSet_template",
  "ChangeSetId" : "4c11658d-bd47-4dd0-ba64-727edc62****",
  "ExecutionStatus" : "AVAILABLE",
  "ChangeSetType" : "UPDATE",
  "RegionId" : "cn-hangzhou",
  "DisableRollback" : false,
  "StackName" : "stack_2021-10-13",
  "TimeoutInMinutes" : 60,
  "StackId" : "a486fc19-ebb7-4ce9-a70b-554a7c3d****"
}

```

Error codes

For a list of error codes, visit the [API Error Center](#).

Error code	Error message	HTTP status code	Description
ChangeSetNotFound	The ChangeSet ({name}) of Stack ({stack}) could not be found.	404	The error message returned because the specified change set does not exist. "name" indicates the name or ID of the change set, and "stack" indicates the name or ID of the stack.
ChangeSetNotFound	The ChangeSet {ID} could not be found.	404	The error message returned because the specified change set does not exist. "ID" indicates the ID of the change set.
StackNotFound	The Stack ({name}) could not be found.	404	The error message returned because the specified stack does not exist. "name" indicates the name or ID of the stack.

12.4. ListChangeSets

You can call this operation to query the list of change 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
Action	String	Yes	ListChangeSets	The operation that you want to perform. Set the value to ListChangeSets.
RegionId	String	Yes	cn-hangzhou	The region ID of the change set. You can call the DescribeRegions operation to query the most recent region list.
StackId	String	Yes	4a6c9851-3b0f-4f5f-b4ca-a14bf691****	The ID of the stack.
Status.N	RepeatList	No	CREATE_COMPLETE	The status of change set N. Maximum value of N: 5. Valid values: <ul style="list-style-type: none">CREATE_PENDINGCREATE_IN_PROGRESSCREATE_COMPLETECREATE_FAILEDDELETE_FAILEDDELETE_COMPLETE
ChangeSetName.N	RepeatList	No	MyChangeSet	The name of change set N. Maximum value of N: 5. Fuzzy search with an asterisk (*) is supported.
PageSize	Long	No	10	The number of entries to return on each page. Valid values: 1 to 50. Default value: 10.

Parameter	Type	Required	Example	Description
PageNumber	Long	No	1	The number of the page to return. Pages start from page 1. Default value: 1.
ExecutionStatus.N	RepeatList	No	AVAILABLE	The execution status of change set N. Maximum value of N: 5. Valid values: <ul style="list-style-type: none"> UNAVAILABLE AVAILABLE EXECUTE_IN_PROGRESS EXECUTE_COMPLETE EXECUTE_FAILED OBSOLETE
ChangeSetId	String	No	1f6521a4-05af-4975-afe9-bc4b45ad****	The ID of the change set. If detailed information about the change set is not required, you can use this parameter to replace the GetChangeSet operation.

Response parameters

Parameter	Type	Example	Description
ChangeSets	Array		The list of change sets.
ChangeSetId	String	1f6521a4-05af-4975-afe9-bc4b45ad****	The ID of the change set.
ChangeSetName	String	MyChangeSet	The name of the change set.
ChangeSetType	String	UPDATE	The type of the change set.
CreateTime	String	2019-08-01T05:16:31	The time when the change set 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	It is a demo.	The description of the change set.

Parameter	Type	Example	Description
ExecutionStatus	String	AVAILABLE	The execution status of the change set.
RegionId	String	cn-hangzhou	The region ID.
StackId	String	4a6c9851-3b0f-4f5f-b4ca-a14bf691****	The ID of the stack with which the change set is associated.
StackName	String	MyStack	The name of the stack with which the change set is associated.
Status	String	CREATE_COMPLETE	The status of the change set.
StatusReason	String	too many changes	The reason why the change set is in its current status.
PageNumber	Integer	1	The page number of the returned page.
PageSize	Integer	10	The number of entries returned per page.
RequestId	String	B288A0BE-D927-4888-B0F7-B35EF84B6E6F	The ID of the request.
TotalCount	Integer	1	The total number of queried entries.

Examples

Sample requests

```
http(s)://ros.aliyuncs.com/? Action=ListChangeSets
&StackId=4a6c9851-3b0f-4f5f-b4ca-a14bf691****
&PageNumber=1
&PageSize=10
&RegionId=cn-hangzhou
&<Common request parameters>
```

Sample success responses

XML format

```
<ListChangeSetsResponse>
  <ChangeSets>
    <ChangeSet>
      <ChangeSetId>1f6521a4-05af-4975-afe9-bc4b45ad****</ChangeSetId>
      <ChangeSetName>MyChangeSet</ChangeSetName>
      <ChangeSetType>UPDATE</ChangeSetType>
      <Description>It is a demo. </Description>
      <CreateTime>2019-08-01T05:16:31</CreateTime>
      <Status>CREATE_COMPLETE</Status>
      <ExecutionStatus>AVAILABLE</ExecutionStatus>
      <StackId>4a6c9851-3b0f-4f5f-b4ca-a14bf691****</StackId>
      <StackName>MyStack</StackName>
      <RegionId>cn-hangzhou</RegionId>
    </ChangeSet>
  </ChangeSets>
  <PageNumber>1</PageNumber>
  <PageSize>10</PageSize>
  <TotalCount>1</TotalCount>
  <RequestId>B288A0BE-D927-4888-B0F7-B35EF84B6E6F</RequestId>
</ListChangeSetsResponse>
```

JSON **format**

```
{
  "ChangeSets": [
    {
      "ChangeSetId": "1f6521a4-05af-4975-afe9-bc4b45ad****",
      "ChangeSetName": "MyChangeSet",
      "ChangeSetType": "UPDATE",
      "Description": "It is a demo.",
      "CreateTime": "2019-08-01T05:16:31",
      "Status": "CREATE_COMPLETE",
      "ExecutionStatus": "AVAILABLE",
      "StackId": "4a6c9851-3b0f-4f5f-b4ca-a14bf691****",
      "StackName": "MyStack",
      "RegionId": "cn-hangzhou"
    }
  ],
  "PageNumber": 1,
  "PageSize": 10,
  "TotalCount": 1,
  "RequestId": "B288A0BE-D927-4888-B0F7-B35EF84B6E6F"
}
```

Error codes

For a list of error codes, visit the [API Error Center](#).

HTTP status code	Error code	Error message	Description
404	StackNotFound	The Stack ({name}) could not be found.	The error message returned because the specified stack does not exist. name indicates the name or ID of the stack.

12.5. DeleteChangeSet

You can call this operation to delete a change set.

Limits:

- Before you call this operation, make sure that the following requirements are met:
 - The status of the change set is CREATE_COMPLETE, CREATE_FAILED, or DELETE_FAILED.
 - The execution status is UNAVAILABLE or AVAILABLE.
- After a change set is executed, other change sets associated with the same stack as this change set are deleted.
- After a stack is deleted, change sets associated with the stack are deleted.
- If a change set of the CREATE type is deleted, you must delete stacks associated with the change set.

In this example, a change set in the China (Hangzhou) region whose ID is `1f6521a4-05af-4975-afe9-bc4b45ad****` is 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	DeleteChangeSet	The operation that you want to perform. Set the value to DeleteChangeSet.
RegionId	String	Yes	cn-hangzhou	The region ID of the change set. You can call the DescribeRegions operation to query the most recent region list.

Parameter	Type	Required	Example	Description
ChangeSetId	String	Yes	1f6521a4-05af-4975-afe9-bc4b45ad****	The ID of the change set.

For more information about common parameters, see [Common parameters](#).

Response parameters

Parameter	Type	Example	Description
RequestId	String	B288A0BE-D927-4888-B0F7-B35EF84B6E6F	The ID of the request.

Examples

Sample requests

```
http(s)://ros.aliyuncs.com/? Action=DeleteChangeSet
&ChangeSetId=1f6521a4-05af-4975-afe9-bc4b45ad****
&RegionId=cn-hangzhou
&<Common request parameters>
```

Sample success responses

XML format

```
<DeleteChangeSetResponse>
  <RequestId>B288A0BE-D927-4888-B0F7-B35EF84B6E6F</RequestId>
</DeleteChangeSetResponse>
```

JSON format

```
{
  "RequestId": "B288A0BE-D927-4888-B0F7-B35EF84B6E6F"
}
```

Error codes

For a list of error codes, visit the [API Error Center](#).

Error code	Error message	HTTP status code	Description
------------	---------------	------------------	-------------

Error code	Error message	HTTP status code	Description
ChangeSetNotFound	The ChangeSet ({name}) of Stack ({stack}) could not be found.	404	The error message returned because the specified change set does not exist. name indicates the name or ID of the change set, and stack indicates the name or ID of the stack.
ChangeSetNotFound	The ChangeSet {ID} could not be found.	404	The error message returned because the specified change set does not exist. ID indicates the ID of the change set.
StackNotFound	The Stack ({name}) could not be found.	404	The error message returned because the specified stack does not exist. name indicates the name or ID of the stack.
ActionInProgress	Stack {name} already has an action ({action}) in progress.	409	The error message returned because the specified stack has a change operation in progress. name indicates the name or ID of the stack, and action indicates the change operation.

13. Stack group operations

13.1. CreateStackGroup

Creates a stack group.

You can use a stack group as a unit to manage stacks in Resource Orchestration Service (ROS). You can use an ROS template of a stack group to create stacks within Alibaba Cloud accounts in multiple regions.

You can create a stack group that is granted self-managed or service-managed permissions:

- If you use an Alibaba Cloud account to create a self-managed stack group, the administrator account and the execution account are Alibaba Cloud accounts.
- If you use a management account or delegated administrator account in a resource directory to create a service-managed stack group, the administrator account is the management account or delegated administrator account, and the execution account is the member account in the resource directory.

For more information about stack groups, see [Overview](#).

In this example, the template ID `5ecd1e10-b0e9-4389-a565-e4c15efc****` is specified to create a stack group named `MyStackGroup`. The stack group is granted self-managed permissions and created in the `cn-hangzhou` 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
Action	String	Yes	CreateStackGroup	The operation that you want to perform. Set the value to CreateStackGroup.
RegionId	String	Yes	cn-hangzhou	The region ID of the stack group. You can call the DescribeRegions operation to query the most recent region list.
StackGroupName	String	Yes	MyStackGroup	The name of the stack group. The name must be unique within a region. The name can be up to 255 characters in length, and can contain digits, letters, hyphens (-), and underscores (_). It must start with a digit or letter.

Parameter	Type	Required	Example	Description
Description	String	No	StackGroupDescription	<p>The description of the stack group.</p> <p>The description must be 1 to 256 characters in length.</p>
TemplateBody	String	No	<code>{"ROSTemplateFormatVersion": "2015-09-01"}</code>	<p>The template body. The template body must be 1 to 524,288 bytes in length. If the required length exceeds the maximum value, we recommend that you specify parameters in the HTTP POST request body to prevent request failures due to excessive length of URLs.</p> <div style="border: 1px solid #add8e6; padding: 5px; background-color: #e0f0ff;"> <p> Note You must specify one of the TemplateBody, TemplateURL, and TemplateId parameters.</p> </div>
TemplateURL	String	No	oss://ros-template/demo	<p>The URL of the file that contains the template body. The URL must point to a template that is located in an HTTP or HTTPS web server or an Alibaba Cloud Object Storage Service (OSS) bucket. The template must be 1 to 524,288 bytes in length. Sample value for a template that is located in an OSS bucket: oss://ros/template/demo or oss://ros/template/demo?RegionId=cn-hangzhou. If you do not specify RegionId in the URL, the region ID of the stack group is used.</p> <div style="border: 1px solid #add8e6; padding: 5px; background-color: #e0f0ff;"> <p> Note You must specify one of the TemplateBody, TemplateURL, and TemplateId parameters.</p> </div>

Parameter	Type	Required	Example	Description
ClientToken	String	No	123e4567-e89b-12d3-a456-42665544****	<p>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.</p> <p>The token can be up to 64 characters in length, and can contain letters, digits, hyphens (-), and underscores (_).</p> <p>For more information, see Ensure idempotence.</p>
AdministrationRoleName	String	No	AliyunROSStackGroupAdministrationRole	<p>The name of the RAM role that you specify for the administrator account in ROS when you create the self-managed stack group. If you do not specify this parameter, the default value <code>AliyunROSStackGroupAdministrationRole</code> is used. You can use the administrator role in ROS to assume the execution role <code>AliyunROSStackGroupExecutionRole</code> to perform operations on the stacks that correspond to stack instances in the stack group.</p> <p>The name must be 1 to 64 characters in length, and can contain letters, digits, and hyphens (-).</p>
ExecutionRoleName	String	No	AliyunROSStackGroupExecutionRole	<p>The name of the RAM role that you specify for the execution account when you create the self-managed stack group. You can use the administrator role <code>AliyunROSStackGroupAdministrationRole</code> to assume the execution role. If you do not specify this parameter, the default value <code>AliyunROSStackGroupExecutionRole</code> is used. You can use this role in ROS to perform operations on the stacks that correspond to stack instances in the stack group.</p> <p>The name must be 1 to 64 characters in length, and can contain letters, digits, and hyphens (-).</p>

Parameter	Type	Required	Example	Description
TemplateId	String	No	5ecd1e10-b0e9-4389-a565-e4c15efc****	<p>The ID of the template. This parameter applies to shared and private templates.</p> <p>Note You must specify one of the TemplateBody, TemplateURL, and TemplateId parameters.</p>
TemplateVersion	String	No	v1	<p>The version of the template. If you do not specify a version, the latest version is used.</p> <p>Note This parameter takes effect only when the TemplateId parameter is specified.</p>
ResourceGroupId	String	No	rg-acfmxazb4ph6aiy****	<p>The ID of the resource group. If you do not specify this parameter, the stack group is added to the default resource group.</p> <p>For more information about resource groups, see What is Resource Management?</p>

Parameter	Type	Required	Example	Description
PermissionModel	String	No	SELF_MANAGED	<p>The permission model.</p> <p>Valid values:</p> <ul style="list-style-type: none"> SELF_MANAGED: the self-managed permission model. If you create a self-managed stack group, you must create RAM roles for the administrator and execution accounts, and establish a trust relationship between the accounts to deploy stacks within the execution account. SERVICE_MANAGED: the service-managed permission model. If you create a service-managed stack group, ROS creates service-linked roles for the administrator and execution accounts, and the administrator account uses its role to deploy stacks within the execution account. <div style="background-color: #e0f2f1; padding: 10px; border: 1px solid #ccc;"> <p> Note When you use the service-managed permission model to deploy stacks, your account must be a management account or delegated administrator account in the resource directory and the trusted access feature is enabled for the account.</p> </div>
AutoDeployment	Object	No		<p>The information about automatic deployment settings.</p> <div style="background-color: #e0f2f1; padding: 10px; border: 1px solid #ccc;"> <p> Note You must specify this parameter only when the PermissionModel parameter is set to SERVICE_MANAGED.</p> </div>

Parameter	Type	Required	Example	Description
Enabled	Boolean	Yes	true	<p>Specifies whether to enable automatic deployment.</p> <p>Valid values:</p> <ul style="list-style-type: none"> • true: enables automatic deployment. If you add a member account to the folder to which the stack group belongs after you enable automatic deployment, the stack group deploys its stack instances within the account. If you delete the account from the folder, the stack instances are deleted from the stack group within the account. • false: disables automatic deployment. After you disable automatic deployment, the stack instances remain unchanged when you change the member account in the folder.
RetainStacksOnAccountRemoval	Boolean	No	true	<p>Specifies whether to retain stacks in a member account when you delete the member account from the folder.</p> <p>Valid values:</p> <ul style="list-style-type: none"> • true: retains the stacks. • false: deletes the stacks. <div style="background-color: #e0f2f7; padding: 5px; border: 1px solid #ccc;"> <p> Note You must specify this parameter when the Enabled parameter is set to true.</p> </div>
Parameters.N.ParameterKey	String	Yes	Amount	<p>The key of parameter N. If you do not specify the key and value of the parameter, ROS uses the default key and value in the template.</p> <p>Maximum value of N: 200.</p> <div style="background-color: #e0f2f7; padding: 5px; border: 1px solid #ccc;"> <p> Note Parameters in Parameters.N.ParameterKey is optional. You must specify Parameters.N.ParameterKey if you specify Parameters.</p> </div>

Parameter	Type	Required	Example	Description
Parameters.N.ParameterValue	String	Yes	12	<p>The value of parameter N.</p> <p>Maximum value of N: 200.</p> <div style="border: 1px solid #add8e6; padding: 5px; background-color: #e0f0ff;"> <p> Note Parameters in Parameters.N.ParameterValue is optional. You must specify Parameters.N.ParameterValue if you specify Parameters.</p> </div>

For more information about common request parameters, see [Common parameters](#).

Response parameters

Parameter	Type	Example	Description
RequestId	String	14A07460-EBE7-47CA-9757-12CC4761D47A	The ID of the request.
StackGroupId	String	2c036e78-9e82-428e-afd6-177f5d04****	The ID of the stack group.

Examples

Sample requests

```
http(s)://ros.aliyuncs.com/?Action=CreateStackGroup
&RegionId=cn-hangzhou
&StackGroupName=MyStackGroup
&TemplateId=5ecd1e10-b0e9-4389-a565-e4c15efc****
&PermissionModel=SELF_MANAGED
&<Common request parameters>
```

Sample success responses

`XML` format

```

HTTP/1.1 200 OK
Content-Type:application/xml
<CreateStackGroupResponse>
  <RequestId>14A07460-EBE7-47CA-9757-12CC4761D47A</RequestId>
  <StackGroupId>2c036e78-9e82-428e-afd6-177f5d04****</StackGroupId>
</CreateStackGroupResponse>

```

JSON format

```

HTTP/1.1 200 OK
Content-Type:application/json
{
  "RequestId" : "14A07460-EBE7-47CA-9757-12CC4761D47A",
  "StackGroupId" : "2c036e78-9e82-428e-afd6-177f5d04****"
}

```

Error codes

For a list of error codes, visit the [API Error Center](#).

Error code	Error message	HTTP status code	Description
CircularDependency	Circular Dependency Found: {reason}.	400	The error message returned because the template contains circular dependencies. reason indicates the specific reason.
InvalidSchema	{reason}.	400	The error message returned because the template format is invalid. reason indicates the specific reason.
InvalidTemplateAttribute	The Referenced Attribute ({resource} {name}) is incorrect.	400	The error message returned because the resource attribute referenced in the template is invalid. resource indicates the resource name. name indicates the attribute name.

Error code	Error message	HTTP status code	Description
InvalidTemplatePropertyType	The specified value type of ({resource} {section}) is incorrect.	400	The error message returned because the type of the specified resource section that is defined in the template is invalid. resource indicates the resource name. section indicates the section name.
InvalidTemplateReference	The specified reference "{name}" (in {referencer}) is incorrect.	400	The error message returned because the template contains an invalid reference. name indicates the reference name. referencer indicates the referencer name.
InvalidTemplateSection	The template section is invalid: {section}.	400	The error message returned because the template contains an invalid section. section indicates the section name.
InvalidTemplateVersion	The template version is invalid: {reason}.	400	The error message returned because the template version is invalid. reason indicates the specific reason.
UnknownUserParameter	The Parameter ({name}) was not defined in template.	400	The error message returned because the specified parameter is not defined in the template. name indicates the parameter name.

Error code	Error message	HTTP status code	Description
UserParameterMissing	The Parameter {name} was not provided.	400	The error message returned because no value is set for the specified parameter that is defined in the template. name indicates the parameter name.
StackGroupExists	The StackGroup ({name}) already exists.	409	The error message returned because a stack group whose name is the same as the specified stack group exists. name indicates the name of the stack group.
TemplateNotFound	The Template ({ ID }) could not be found.	404	The error message returned because the specified template does not exist. ID indicates the template ID.
TemplateNotFound	The Template { ID } with version { version } could not be found.	404	The error message returned because the specified template or template version does not exist. ID indicates the template ID. version indicates the template version.

13.2. GetStackGroup

Queries the information about a stack group.

In this example, the information about a stack group named `MyStackGroup` is queried. The stack group is granted self-managed permissions and created in the China (Hangzhou) 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
Action	String	Yes	GetStackGroup	The operation that you want to perform. Set the value to GetStackGroup.
RegionId	String	Yes	cn-hangzhou	The region ID of the stack group. You can call the DescribeRegions operation to query the most recent region list.
StackGroupName	String	No	MyStackGroup	<p>The name of the stack group. The name must be unique within a region.</p> <p>The name can be up to 255 characters in length, and can contain digits, letters, hyphens (-), and underscores (_). It must start with a digit or letter.</p> <div style="border: 1px solid #add8e6; padding: 5px; background-color: #e0f0ff;"> <p> Note You must specify one of the StackGroupName and StackGroupId parameters.</p> </div>
StackGroupId	String	No	fd0ddef9-9540-4b42-a464-94f77835****	<p>The ID of the stack group.</p> <div style="border: 1px solid #add8e6; padding: 5px; background-color: #e0f0ff;"> <p> Note You must specify one of the StackGroupName and StackGroupId parameters.</p> </div>

For more information about common request parameters, see [Common parameters](#).

Response parameters

Parameter	Type	Example	Description
RequestId	String	14A07460-EBE7-47CA-9757-12CC4761D47A	The ID of the request.
StackGroup	Object		The details of the stack group.
StackGroupId	String	fd0ddef9-9540-4b42-a464-94f77835****	The ID of the stack group.

Parameter	Type	Example	Description
Status	String	ACTIVE	The status of the stack group. Valid values: <ul style="list-style-type: none"> ACTIVE DELETED
AdministrationRoleName	String	AliyunROSStackGroupAdministrationRole	The name of the RAM role that is specified for the administrator account in Resource Orchestration Service (ROS) when you create the self-managed stack group. If this parameter is not specified, the default value AliyunROSStackGroupAdministrationRole is returned.
Parameters	Array of Parameter		The parameters of the stack group.
ParameterKey	String	Amount	The key of the parameter.
ParameterValue	String	12	The value of the parameter.
Description	String	StackGroupDescription	The description of the stack group.
StackGroupName	String	MyStackGroup	The name of the stack group.
ExecutionRoleName	String	AliyunROSStackGroupExecutionRole	The name of the RAM role that is specified for the execution account when you create the self-managed stack group. The administrator role AliyunROSStackGroupAdministrationRole assumes the execution role. If this parameter is not specified, the default value AliyunROSStackGroupExecutionRole is returned.
TemplateBody	String	{"ROSTemplateFormatVersion": "2015-09-01"}	The template body.
StackGroupDriftDetectionDetail	Object		The details of the last drift detection that was performed on the stack group.
DriftDetectionTime	String	2020-02-27T07:47:47	The time when drift detection was performed on the stack group.

Parameter	Type	Example	Description
TotalStackInstancesCount	Integer	2	The number of stack instances.
FailedStackInstancesCount	Integer	0	The number of stack instances that failed drift detection.
DriftDetectionStatus	String	COMPLETED	<p>The status of drift detection on the stack group.</p> <p>Valid values:</p> <ul style="list-style-type: none"> • COMPLETED: Drift detection is performed and completed on all stack instances. • FAILED: Drift detection is performed. The number of stack instances that failed the drift detection exceeds the specified threshold. • PARTIAL_SUCCESS: Drift detection is performed. The number of stack instances that failed the drift detection does not exceed the specified threshold. • IN_PROGRESS: Drift detection is being performed on the stack group. • STOPPED: Drift detection is canceled for the stack group.
StackGroupDriftStatus	String	DRIFTED	<p>The drift status of the stack group.</p> <p>Valid values:</p> <ul style="list-style-type: none"> • DRIFTED: At least one stack instance in the stack group has drifted. • NOT_CHECKED: No drift detection is completed on the stack group. • IN_SYNC: All the stack instances in the stack group are being synchronized.
InProgressStackInstancesCount	Integer	0	The number of stack instances on which drift detection was being performed.
InSyncStackInstancesCount	Integer	1	The number of stack instances that were being synchronized.
CancelledStackInstancesCount	Integer	0	The number of stack instances for which drift detection was canceled.

Parameter	Type	Example	Description
DriftedStackInstancesCount	Integer	1	The number of stack instances that have drifted.
ResourceGroupId	String	rg-acfmxazb4ph6aiy*** *	The ID of the resource group. This parameter is specified when you create the stack group.
PermissionModel	String	SELF_MANAGED	<p>The permission model.</p> <p>Valid values:</p> <ul style="list-style-type: none"> SELF_MANAGED: the self-managed permission model SERVICE_MANAGED: the service-managed permission model <p> Note For more information about the permission models of stack groups, see Overview.</p>
AutoDeployment	Object		<p>The information about automatic deployment settings.</p> <p> Note This parameter is returned only when the PermissionModel parameter is set to SERVICE_MANAGED.</p>
Enabled	Boolean	true	<p>Indicates whether automatic deployment is enabled.</p> <p>Valid values:</p> <ul style="list-style-type: none"> true: Automatic deployment is enabled. If a member account is added to the folder to which the stack group belongs after automatic deployment is enabled, the stack group deploys its stack instances in the specified region where the added account is deployed. If the account is deleted from the folder, the stack instances in the specified region are deleted from the stack group. false: Automatic deployment is disabled. After automatic deployment is disabled, the stack instances remain unchanged when the member account in the folder is changed.

Parameter	Type	Example	Description
RetainStacksOnAccountRemoval	Boolean	true	<p>Indicates whether stacks in the member account are retained when the member account is deleted from the folder.</p> <p>Valid values:</p> <ul style="list-style-type: none"> • true: The stacks are retained. • false: The stacks are deleted. <p> Note This parameter is returned only when the Enabled parameter is set to true.</p>
RdFolderIds	Array of String	["fd-4Pv(VL0L8v)"]	<p>The folder IDs of the resource directory. This parameter is used to deploy stack instances within all the accounts in the folders.</p> <p> Note This parameter is returned only when the PermissionModel parameter is set to SERVICE_MANAGED.</p>

Examples

Sample requests

```
http(s)://ros.aliyuncs.com/?Action=GetStackGroup
&RegionId=cn-hangzhou
&StackGroupName=MyStackGroup
&<Common request parameters>
```

Sample success responses

`XML` format

```

HTTP/1.1 200 OK
Content-Type:application/xml
<GetStackGroupResponse>
  <RequestId>14A07460-EBE7-47CA-9757-12CC4761D47A</RequestId>
  <StackGroup>
    <Status>ACTIVE</Status>
    <ResourceGroupId>rg-acfmxazb4ph6aiy****</ResourceGroupId>
    <StackGroupName>MyStackGroup</StackGroupName>
    <StackGroupId>fd0ddef9-9540-4b42-a464-94f77835****</StackGroupId>
    <AdministrationRoleName>AliyunROSStackGroupAdministrationRole</AdministrationRoleName>
  <TemplateBody>
    <ROSTemplateFormatVersion>2015-09-01</ROSTemplateFormatVersion>
  </TemplateBody>
  <PermissionModel>SELF_MANAGED</PermissionModel>
  <ExecutionRoleName>AliyunROSStackGroupExecutionRole</ExecutionRoleName>
</StackGroup>
</GetStackGroupResponse>

```

JSON format

```

HTTP/1.1 200 OK
Content-Type:application/json
{
  "RequestId" : "14A07460-EBE7-47CA-9757-12CC4761D47A",
  "StackGroup" : {
    "Status" : "ACTIVE",
    "Parameters" : [ ],
    "ResourceGroupId" : "rg-acfmxazb4ph6aiy****",
    "StackGroupName" : "MyStackGroup",
    "StackGroupId" : "fd0ddef9-9540-4b42-a464-94f77835****",
    "AdministrationRoleName" : "AliyunROSStackGroupAdministrationRole",
    "TemplateBody" : {
      "ROSTemplateFormatVersion" : "2015-09-01"
    },
    "PermissionModel" : "SELF_MANAGED",
    "ExecutionRoleName" : "AliyunROSStackGroupExecutionRole"
  }
}

```

Error codes

For a list of error codes, visit the [API Error Center](#).

Error code	Error message	HTTP status code	Description
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Error code	Error message	HTTP status code	Description
StackGroupNotFound	The StackGroup ({name}) could not be found.	404	The error message returned because the specified stack group does not exist. name indicates the name of the stack group.

13.3. ListStackGroups

Queries the stack groups.

In this example, the stack groups that are in the active state and created in the China (Hangzhou) region 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	ListStackGroups	The operation that you want to perform. Set the value to ListStackGroups.
RegionId	String	Yes	cn-hangzhou	The region ID of the stack group. You can call the DescribeRegions operation to query the most recent region list.
Status	String	No	ACTIVE	The status of the stack group. If you do not specify this parameter, stack groups in all states in the specified region are queried. Valid values: <ul style="list-style-type: none"> ACTIVE DELETED

Parameter	Type	Required	Example	Description
PageSize	Long	No	10	The number of entries to return on each page. <ul style="list-style-type: none"> Valid values: 1 to 50. Default value: 10.
PageNumber	Long	No	1	The number of the page to return. <ul style="list-style-type: none"> Pages start from page 1. Default value: 1.
ResourceGroupId	String	No	rg-acfmzawhxcj****	The ID of the resource group. If you do not specify this parameter, the stack groups in all the resource groups are queried. <div style="border: 1px solid #add8e6; padding: 5px; margin-top: 10px;"> <p> Note To obtain the resource group ID, go to the Resource Group page in the Resource Management console. For more information, see View basic information about a resource group.</p> </div>

For more information about common request parameters, see [Common parameters](#).

Response parameters

Parameter	Type	Example	Description
StackGroups	Array of StackGroup		The details of the stack groups.
StackGroupId	String	fd0ddef9-9540-4b42-a464-94f77835****	The ID of the stack group.
Status	String	ACTIVE	The status of the stack group. Valid values: <ul style="list-style-type: none"> ACTIVE DELETED
DriftDetectionTime	String	2020-02-27T07:47:47	The time when the last drift detection was performed on the stack group.

Parameter	Type	Example	Description
Description	String	My Stack Group	The description of the stack group.
StackGroupDriftStatus	String	IN_SYNC	<p>The drift status of the stack group on which the last drift detection was performed.</p> <p>Valid values:</p> <ul style="list-style-type: none"> • DRIFTED: The stack group has drifted. • NOT_CHECKED: No drift detection is completed on the stack group. • IN_SYNC: No drifts are detected on the stack group.
StackGroupName	String	MyStackGroup	The name of the stack group.
ResourceGroupId	String	rg-acfmzawhxcj****	The ID of the resource group.
PermissionModel	String	SELF_MANAGED	<p>The permission model.</p> <p>Valid values:</p> <ul style="list-style-type: none"> • SELF_MANAGED: the self-managed permission model • SERVICE_MANAGED: the service-managed permission model <div style="background-color: #e0f2f7; padding: 5px; margin-top: 10px;"> <p> Note For more information about the permission models of stack groups, see Overview.</p> </div>
AutoDeployment	Object		The information about automatic deployment settings.

Parameter	Type	Example	Description
Enabled	Boolean	true	<p>Indicates whether automatic deployment is enabled.</p> <p>Valid values:</p> <ul style="list-style-type: none"> • true: Automatic deployment is enabled. If a member account is added to the folder to which the stack group belongs after automatic deployment is enabled, the stack group deploys its stack instances in the specified region where the added account is deployed. If the account is deleted from the folder, the stack instances in the specified region are deleted from the stack group. • false: Automatic deployment is disabled. After automatic deployment is disabled, the stack instances remain unchanged when the member account in the folder is changed.
RetainStacksOnAccountRemoval	Boolean	true	<p>Indicates whether stacks in the member account are retained when the member account is deleted from the folder.</p> <p>Valid values:</p> <ul style="list-style-type: none"> • true: The stacks are retained. • false: The stacks are deleted. <div style="background-color: #e1f5fe; padding: 5px; border: 1px solid #cfe2f3;"> <p> Note This parameter is returned only when the Enabled parameter is set to true.</p> </div>
TotalCount	Integer	1	The total number of stack groups.
RequestId	String	14A07460-EBE7-47CA-9757-12CC4761D47A	The ID of the request.
PageSize	Integer	10	The number of entries returned per page.
PageNumber	Integer	1	The page number of the returned page.

Examples

Sample requests

```
http(s)://ros.aliyuncs.com/?Action=ListStackGroups
&RegionId=cn-hangzhou
&Status=ACTIVE
&<Common request parameters>
```

Sample success responses

XML format

```
HTTP/1.1 200 OK
Content-Type:application/xml
<ListStackGroupsResponse>
  <StackGroups>
    <Status>ACTIVE</Status>
    <StackGroupDriftStatus>NOT_CHECKED</StackGroupDriftStatus>
    <AutoDeployment/>
    <ResourceGroupId>rg-acfmzawhxxcj****</ResourceGroupId>
    <PermissionModel>SELF_MANAGED</PermissionModel>
    <StackGroupName>MyStackGroup</StackGroupName>
    <StackGroupId>fd0ddef9-9540-4b42-a464-94f77835****</StackGroupId>
  </StackGroups>
  <TotalCount>1</TotalCount>
  <RequestId>14A07460-EBE7-47CA-9757-12CC4761D47A</RequestId>
  <PageSize>10</PageSize>
  <PageNumber>1</PageNumber>
</ListStackGroupsResponse>
```

JSON format

```
HTTP/1.1 200 OK
Content-Type:application/json
{
  "StackGroups" : [ {
    "Status" : "ACTIVE",
    "StackGroupDriftStatus" : "NOT_CHECKED",
    "AutoDeployment" : { },
    "ResourceGroupId" : "rg-acfmzawhxxcj****",
    "PermissionModel" : "SELF_MANAGED",
    "StackGroupName" : "MyStackGroup",
    "StackGroupId" : "fd0ddef9-9540-4b42-a464-94f77835****"
  } ],
  "TotalCount" : 1,
  "RequestId" : "14A07460-EBE7-47CA-9757-12CC4761D47A",
  "PageSize" : 10,
  "PageNumber" : 1
}
```

Error codes

For a list of error codes, visit the [API Error Center](#).

Error code	Error message	HTTP status code	Description
InvalidParameter	The specified parameter {name} is invalid, {reason}.	400	The error message returned because the specified parameter is invalid. name indicates the parameter name. reason indicates the reason for the error.

13.4. GetStackGroupOperation

Queries the details of an operation that you perform on a stack group.

In this example, the operation ID `6da106ca-1784-4a6f-a7e1-e723863d****` is set to query the details of an operation that you perform on a stack group named `MyStackGroup`. The stack group is granted self-managed permissions and deployed in the China (Hangzhou) 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
Action	String	Yes	GetStackGroupOperation	The operation that you want to perform. Set the value to GetStackGroupOperation.
RegionId	String	Yes	cn-hangzhou	The region ID of the stack group. You can call the DescribeRegions operation to query the most recent region list.
OperationId	String	Yes	6da106ca-1784-4a6f-a7e1-e723863d****	The ID of the operation that you want to query. You can call the ListStackGroupOperations operation to query the operation.

For more information about common request parameters, see [Common parameters](#).

Response parameters

Parameter	Type	Example	Description
-----------	------	---------	-------------

Parameter	Type	Example	Description
RequestId	String	14A07460-EBE7-47CA-9757-12CC4761D47A	The ID of the request.
StackGroupOperation	Object		The details of the operation on the stack group.
Status	String	SUCCEEDED	<p>The status of the operation.</p> <p>Valid values:</p> <ul style="list-style-type: none"> • RUNNING: The operation is being performed. • SUCCEEDED: The operation succeeded. • FAILED: The operation failed. • STOPPING: The operation is being stopped. • STOPPED: The operation is stopped.
StackGroupId	String	fd0ddef9-9540-4b42-a464-94f77835****	The ID of the stack group.
Action	String	DELETE	<p>The operation that was performed.</p> <p>Valid values:</p> <ul style="list-style-type: none"> • CREATE • UPDATE • DELETE • DETECT_DRIFT
CreateTime	String	2020-01-20T09:22:3	The time when the operation was initiated.
RetainStacks	Boolean	true	<p>Indicates whether the relevant stacks are retained when stack instances are deleted in the stack group.</p> <p>Valid values:</p> <ul style="list-style-type: none"> • true: The stacks are retained. • false: The stacks are deleted. Proceed with caution. <div style="background-color: #e0f2f7; padding: 5px; margin-top: 10px;"> <p> Note This parameter is returned only when the stack instances are deleted.</p> </div>

Parameter	Type	Example	Description
StackGroupName	String	MyStackGroup	The name of the stack group.
OperationId	String	6da106ca-1784-4a6f-a7e1-e723863d****	The ID of the operation that was performed on the stack group.
OperationDescription	String	Create stack instance in hangzhou	The description of the operation. Note This parameter is returned only if the OperationDescription request parameter is specified in the CreateStackInstances operation to create stack instances.
StackGroupDriftDetectionDetail	Object		The details of the drift detection. Note This parameter is returned only when the drift detection is performed on the stack group.
DriftDetectionTime	String	2020-02-27T07:47:47	The time when the drift detection was initiated.
TotalStackInstancesCount	Integer	2	The number of stack instances.
FailedStackInstancesCount	Integer	0	The number of stack instances that failed the drift detection.

Parameter	Type	Example	Description
DriftDetectionStatus	String	COMPLETED	<p>The status of the drift detection.</p> <p>Valid values:</p> <ul style="list-style-type: none"> • COMPLETED: The drift detection is performed and completed on all stack instances. • FAILED: The drift detection is performed. The number of stack instances that failed the drift detection exceeds the specified threshold. • PARTIAL_SUCCESS: The drift detection is performed. The number of stack instances that failed the drift detection does not exceed the specified threshold. • IN_PROGRESS: The drift detection is being performed on the stack group. • STOPPED: The drift detection is canceled for the stack group.
StackGroupDriftStatus	String	DRIFTED	<p>The drift status of the stack group.</p> <p>Valid values:</p> <ul style="list-style-type: none"> • DRIFTED: At least one stack instance in the stack group is drifted. • NOT_CHECKED: No drift detection is completed in the stack group. • IN_SYNC: All the stack instances in the stack group are being synchronized.
InProgressStackInstancesCount	Integer	0	The number of stack instances on which the drift detection was being performed.
InSyncStackInstancesCount	Integer	1	The number of stack instances that were being synchronized.
CancelledStackInstancesCount	Integer	0	The number of stack instances for which the drift detection was canceled.
DriftedStackInstancesCount	Integer	1	The number of stack instances that were drifted.
OperationPreferences	Object		The operation preferences.

Parameter	Type	Example	Description
MaxConcurrentCount	Integer	1	<p>The maximum number of accounts within which operations are performed on stacks concurrently in each region.</p> <p>Valid values: 1 to 20.</p> <p>Note Only one of the MaxConcurrentCount and MaxConcurrentPercentage parameters is returned.</p>
FailureToleranceCount	Integer	1	<p>The maximum number of stack operation failures that can occur within the accounts in each region. When the value is exceeded, the operation fails to be performed in the region. If the operation fails to be performed in one region, the operation fails to be performed in other regions.</p> <p>Valid values: 0 to 20.</p> <p>Note Only one of the FailureToleranceCount and FailureTolerancePercentage parameters is returned.</p>
MaxConcurrentPercentage	Integer	10	<p>The percentage of the total number of accounts within which operations are performed on stacks concurrently to the total number of accounts in each region.</p> <p>Valid values: 1 to 100.</p> <p>Note Only one of the MaxConcurrentCount and MaxConcurrentPercentage parameters is returned.</p>
RegionIdsOrder	Array of String	["cn-hangzhou","cn-beijing"]	The regions in the order of which the operation is performed.

Parameter	Type	Example	Description
FailureTolerancePercentage	Integer	10	<p>The percentage of the total number of accounts within which stack operation failures can occur to the total number of accounts in each region. When the value is exceeded, the operation fails to be performed in the region.</p> <p>Valid values: 0 to 100.</p> <div style="background-color: #e0f2f7; padding: 5px; border: 1px solid #ccc;"> <p> Note Only one of the FailureToleranceCount and FailureTolerancePercentage parameters is returned.</p> </div>
EndTime	String	2020-01-20T09:22:4	The time when the operation ended.
ExecutionRoleName	String	AliyunROSStackGroupExecutionRole	The name of the RAM role that is specified for the execution account when you create the stack group that is granted self-managed permissions. The administrator account whose RAM role is AliyunROSStackGroupAdministrationRole assumes this RAM role. If this parameter is not specified, the default value AliyunROSStackGroupExecutionRole is returned.
AdministrationRoleName	String	AliyunROSStackGroupAdministrationRole	The name of the RAM role that is specified for the administrator account in Resource Orchestration Service (ROS) when you create the stack group that is granted self-managed permissions. If this parameter is not specified, the default value AliyunROSStackGroupAdministrationRole is returned.
DeploymentTargets	Object		The folders in which you want to deploy the stack instances that are granted service-managed permissions.
RdFolderIds	Array of String	["fd-4Pv(VL0L8v)"]	The folder IDs of the resource directory.

Parameter	Type	Example	Description
AccountIds	Array of String	["151266687691****", "141261387191****"]	<p>The IDs of the member accounts in the resource directory.</p> <div style="border: 1px solid #add8e6; padding: 5px; background-color: #e0f0ff;"> <p> Note This parameter is returned only if the AccountIds request parameter is specified in the UpdateStackInstances operation to update stack instances.</p> </div>

Examples

Sample requests

```
http(s)://ros.aliyuncs.com/?Action=GetStackGroupOperation
&OperationId=6da106ca-1784-4a6f-a7e1-e723863d****
&RegionId=cn-hangzhou
&<Common request parameters>
```

Sample success responses

XML format

```
HTTP/1.1 200 OK
Content-Type: application/xml
<GetStackGroupOperationResponse>
  <RequestId>14A07460-EBE7-47CA-9757-12CC4761D47A</RequestId>
  <StackGroupOperation>
    <Status>SUCCEEDED</Status>
    <Action>DELETE</Action>
    <RetainStacks>>false</RetainStacks>
    <EndTime>2020-01-20T09:22:4</EndTime>
    <OperationId>645d0eed-f1e6-40b0-8e8f-0e1eaa34da6f</OperationId>
    <CreateTime>2020-01-20T09:22:3</CreateTime>
    <StackGroupName>MyStackGroup</StackGroupName>
    <StackGroupId>fd0ddef9-9540-4b42-a464-94f77835****</StackGroupId>
    <AdministrationRoleName>AliyunROSStackGroupAdministrationRole</AdministrationRoleName>
    <OperationPreferences>
      <MaxConcurrentCount>1</MaxConcurrentCount>
      <RegionIdsOrder>cn-hangzhou</RegionIdsOrder>
      <RegionIdsOrder>cn-beijing</RegionIdsOrder>
      <FailureToleranceCount>0</FailureToleranceCount>
    </OperationPreferences>
    <ExecutionRoleName>AliyunROSStackGroupExecutionRole</ExecutionRoleName>
  </StackGroupOperation>
</GetStackGroupOperationResponse>
```

JSON format

```

HTTP/1.1 200 OK
Content-Type:application/json
{
  "RequestId" : "14A07460-EBE7-47CA-9757-12CC4761D47A",
  "StackGroupOperation" : {
    "Status" : "SUCCEEDED",
    "Action" : "DELETE",
    "RetainStacks" : false,
    "EndTime" : "2020-01-20T09:22:4",
    "OperationId" : "645d0eed-f1e6-40b0-8e8f-0e1eaa34da6f",
    "CreateTime" : "2020-01-20T09:22:3",
    "StackGroupName" : "MyStackGroup",
    "StackGroupId" : "fd0ddef9-9540-4b42-a464-94f77835****",
    "AdministrationRoleName" : "AliyunROSStackGroupAdministrationRole",
    "OperationPreferences" : {
      "MaxConcurrentCount" : 1,
      "RegionIdsOrder" : [ "cn-hangzhou", "cn-beijing" ],
      "FailureToleranceCount" : 0
    },
    "ExecutionRoleName" : "AliyunROSStackGroupExecutionRole"
  }
}

```

Error codes

For a list of error codes, visit the [API Error Center](#).

Error code	Error message	HTTP status code	Description
InvalidParameter	The specified parameter {name} is invalid, {reason}.	400	The error message returned because the specified parameter is invalid. name indicates the parameter name. reason indicates the reason for the error.
StackGroupOperationNotFound	The StackGroupOperation ({OperationId}) could not be found.	404	The error message returned because the specified operation is not performed on the stack group. OperationId indicates the ID of the operation.

13.5. ListStackGroupOperations

You can call this operation to query the list of stack group 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	ListStackGroupOperations	The operation that you want to perform. Set the value to ListStackGroupOperations.
RegionId	String	Yes	cn-hangzhou	The region ID of the stack. You can call the DescribeRegions operation to query the most recent region list.
StackGroupName	String	Yes	MyStackGroup	The name of the stack group. The name must be unique within a region. The name can be up to 255 characters in length and can contain digits, letters, hyphens (-), and underscores (_). It must start with a digit or letter.
PageSize	Long	No	10	The number of entries to return on each page. Valid values: 1 to 50. Default value: 10.
PageNumber	Long	No	1	The number of the page to return. Pages start from page 1. Default value: 1.

For more information about common parameters, see [Common parameters](#).

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.

Parameter	Type	Example	Description
RequestId	String	14A07460-EBE7-47CA-9757-12CC4761D47A	The ID of the request.
StackGroupOperations	Array of StackGroupOperation		The list of stack group operations.
Action	String	CREATE	The operation that was performed. Valid values: <ul style="list-style-type: none"> • CREATE • UPDATE • DELETE • DETECT_DRIFT
CreateTime	String	2020-01-20T09:22:36.000000	The time when the operation was initiated.
EndTime	String	2020-01-20T09:22:41.000000	The time when the operation ended.
OperationDescription	String	Create stack instance in hangzhou	The description of the operation.
OperationId	String	14A07460-EBE7-47CA-9757-12CC4761****	The ID of the operation.
StackGroupId	String	fd0ddef9-9540-4b42-a464-94f77835****	The ID of the stack group.
StackGroupName	String	MyStackGroup	The name of the stack group.
Status	String	SUCCEEDED	The status of the operation. Valid values: <ul style="list-style-type: none"> • RUNNING • SUCCEEDED • FAILED • STOPPING • STOPPED
TotalCount	Integer	1	The total number of stack group operations.

Examples

Sample requests

```
http(s)://ros.aliyuncs.com/? Action=ListStackGroupOperations
&RegionId=cn-hangzhou
&StackGroupName=MyStackGroup
&<Common request parameters>
```

Sample success responses

XML format

```
<ListStackGroupOperationsResponse>
  <PageNumber>1</PageNumber>
  <TotalCount>1</TotalCount>
  <PageSize>10</PageSize>
  <RequestId>4D838E26-B457-4871-B6DE-18814050D13D</RequestId>
  <StackGroupOperations>
    <Status>SUCCEEDED</Status>
    <StackGroupId>fd0ddef9-9540-4b42-a464-94f77835****</StackGroupId>
    <Action>CREATE</Action>
    <StackGroupName>MyStackGroup</StackGroupName>
    <CreateTime>2020-01-20T09:22:36.000000</CreateTime>
    <OperationId>6da106ca-1784-4a6f-a7e1-e723863d****</OperationId>
    <EndTime>2020-01-20T09:22:41.000000</EndTime>
  </StackGroupOperations>
</ListStackGroupOperationsResponse>
```

JSON format

```
{
  "PageNumber": 1,
  "TotalCount": 1,
  "PageSize": 10,
  "RequestId": "4D838E26-B457-4871-B6DE-18814050D13D",
  "StackGroupOperations": [
    {
      "Status": "SUCCEEDED",
      "StackGroupId": "fd0ddef9-9540-4b42-a464-94f77835****",
      "Action": "CREATE",
      "StackGroupName": "MyStackGroup",
      "CreateTime": "2020-01-20T09:22:36.000000",
      "OperationId": "6da106ca-1784-4a6f-a7e1-e723863d****",
      "EndTime": "2020-01-20T09:22:41.000000"
    }
  ]
}
```

Error codes

For a list of error codes, visit the [API Error Center](#).

Error code	Error message	HTTP status code	Description
InvalidParameter	The specified parameter {name} is invalid, {reason}.	400	The error message returned because the specified parameter is invalid. name indicates the parameter name, and reason indicates the reason for the error.
StackGroupNotFound	The StackGroup ({name}) could not be found.	404	The error message returned because the specified stack group does not exist. name indicates the stack group name.

13.6. ListStackGroupOperationResults

Queries the results of an operation on a stack group.

In this example, the operation ID `6da106ca-1784-4a6f-a7e1-e723863d****` is set to query the results of an operation on a stack group named `MyStackGroup`. The stack group is granted self-managed permissions and created in the China (Hangzhou) 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
Action	String	Yes	ListStackGroupOperationResults	The operation that you want to perform. Set the value to ListStackGroupOperationResults.
RegionId	String	Yes	cn-hangzhou	The region ID of the stack group. You can call the DescribeRegions operation to query the most recent region list.

Parameter	Type	Required	Example	Description
OperationId	String	Yes	6da106ca-1784-4a6f-a7e1-e723863d****	The ID of the operation. You can call the ListStackGroupOperations operation to query the operation ID.
PageSize	Long	No	10	The number of entries to return on each page. <ul style="list-style-type: none">Valid values: 1 to 50.Default value: 10.
PageNumber	Long	No	1	The number of the page to return. <ul style="list-style-type: none">Pages start from page 1.Default value: 1.

For more information about common request parameters, see [Common parameters](#).

Response parameters

Parameter	Type	Example	Description
TotalCount	Integer	1	The total number of results.
RequestId	String	14A07460-EBE7-47CA-9757-12CC4761D47A	The ID of the request.
PageSize	Integer	1	The number of entries returned per page.
PageNumber	Integer	1	The page number of the returned page.
StackGroupOperationResults	Array of StackGroupOperationResult		The details of the results of the operation.

Parameter	Type	Example	Description
Status	String	SUCCEEDED	<p>The status of the operation.</p> <p>Valid values:</p> <ul style="list-style-type: none"> • RUNNING: The operation is being performed. • SUCCEEDED: The operation succeeded. • FAILED: The operation failed. • STOPPING: The operation is being stopped. • STOPPED: The operation is stopped.
StatusReason	String	User initiated operation	<p>The reason why the operation is in a specific state.</p> <div style="background-color: #e6f2ff; padding: 5px;"> <p> Note This parameter is returned only when stack instances are in the OUTDATED state.</p> </div>
AccountId	String	175458090349****	<p>The ID of the account to which the stack instance belongs.</p> <ul style="list-style-type: none"> • If the stack group has self-managed permissions, the stack instance belongs to an Alibaba Cloud account. • If the stack group has service-managed permissions, the stack instance belongs to a member account in the resource directory. <div style="background-color: #e6f2ff; padding: 5px;"> <p> Note For more information about the account, see Overview.</p> </div>
RegionId	String	cn-beijing	The region ID of the stack instance.
RdFolderId	String	"fd-4PvLVLOL8v"	<p>The folder ID of the resource directory.</p> <div style="background-color: #e6f2ff; padding: 5px;"> <p> Note This parameter is returned only when the stack group is granted service-managed permissions.</p> </div>

Examples

Sample requests

```
http(s)://ros.aliyuncs.com/?Action=ListStackGroupOperationResults
&OperationId=6da106ca-1784-4a6f-a7e1-e723863d****
&RegionId=cn-hangzhou
&<Common request parameters>
```

Sample success responses

XML format

```
HTTP/1.1 200 OK
Content-Type:application/xml
<ListStackGroupOperationResultsResponse>
  <TotalCount>1</TotalCount>
  <RequestId>14A07460-EBE7-47CA-9757-12CC4761D47A</RequestId>
  <PageSize>10</PageSize>
  <PageNumber>1</PageNumber>
  <StackGroupOperationResults>
    <Status>SUCCEEDED</Status>
    <AccountId>175458090349****</AccountId>
    <RegionId>cn-beijing</RegionId>
  </StackGroupOperationResults>
</ListStackGroupOperationResultsResponse>
```

JSON format

```
HTTP/1.1 200 OK
Content-Type:application/json
{
  "TotalCount" : 1,
  "RequestId" : "14A07460-EBE7-47CA-9757-12CC4761D47A",
  "PageSize" : 10,
  "PageNumber" : 1,
  "StackGroupOperationResults" : [ {
    "Status" : "SUCCEEDED",
    "AccountId" : "175458090349****",
    "RegionId" : "cn-beijing"
  } ]
}
```

Error codes

For a list of error codes, visit the [API Error Center](#).

Error code	Error message	HTTP status code	Description
------------	---------------	------------------	-------------

Error code	Error message	HTTP status code	Description
InvalidParameter	The specified parameter {name} is invalid, {reason}.	400	The error message returned because the specified parameter is invalid. name indicates the parameter name. reason indicates the reason for the error.

13.7. StopStackGroupOperation

Stops a stack group operation.

This topic provides an example on how to stop a stack group operation whose ID is `6da106ca-1784-4a6f-a7e1-e723863****` in the China (Hangzhou) 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
Action	String	Yes	StopStackGroupOperation	The operation that you want to perform. Set the value to StopStackGroupOperation.
RegionId	String	Yes	cn-hangzhou	The region ID of the stack. You can call the DescribeRegions operation to query the most recent region list.
OperationId	String	Yes	6da106ca-1784-4a6f-a7e1-e723863d****	The ID of the operation. You can call the ListStackGroupOperations operation to obtain the operation ID.

For more information about common request parameters, see [Common parameters](#).

Response parameters

Parameter	Type	Example	Description
-----------	------	---------	-------------

Parameter	Type	Example	Description
RequestId	String	14A07460-EBE7-47CA-9757-12CC4761D47A	The ID of the request.

Examples

Sample requests

```
https://ros.aliyuncs.com/?Action=StopStackGroupOperation
&OperationId=6da106ca-1784-4a6f-a7e1-e723863****
&RegionId=cn-hangzhou
&<Common request parameters>
```

Sample success responses

XML format

```
HTTP/1.1 200 OK
Content-Type:application/xml
<StopStackGroupOperationResponse>
  <RequestId>14A07460-EBE7-47CA-9757-12CC4761D47A</RequestId>
</StopStackGroupOperationResponse>
```

JSON format

```
HTTP/1.1 200 OK
Content-Type:application/json
{
  "RequestId" : "14A07460-EBE7-47CA-9757-12CC4761D47A"
}
```

Error codes

For a list of error codes, visit the [API Error Center](#).

Error code	Error message	HTTP status code	Description
InvalidParameter	The specified parameter {name} is invalid, {reason}.	400	The error message returned because the specified parameter is invalid. The name parameter indicates the parameter name, and the reason parameter indicates the reason for the error.

Error code	Error message	HTTP status code	Description
StackGroupOperationNotFound	The StackGroupOperation ({OperationId}) could not be found.	404	The error message returned because the specified stack group operation does not exist. The OperationId parameter indicates the ID of the operation.

13.8. CreateStackInstances

Creates stack instances within a specified account in a specified region.

Before you call this operation, make sure that a stack group is created. For more information, see [CreateStackGroup](#).

In this example, stack instances are created in a stack group named `MyStackGroup`. The stack instances are created within the `151266687691****` and `141261387191****` Alibaba Cloud accounts in the China (Hangzhou) and China (Beijing) regions. The stack group is granted self-managed permissions and created in the China (Hangzhou) 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
Action	String	Yes	CreateStackInstances	The operation that you want to perform. Set the value to CreateStackInstances.
RegionId	String	Yes	cn-hangzhou	The region ID of the stack group. You can call the DescribeRegions operation to query the most recent region list.
StackGroupName	String	Yes	MyStackGroup	The name of the stack group. The name must be unique within a region. The name can be up to 255 characters in length, and can contain digits, letters, hyphens (-), and underscores (_). It must start with a digit or letter.

Parameter	Type	Required	Example	Description
AccountIds	Array of String	No	<pre>["151266687691**", "141261387191**"]</pre>	The IDs of the accounts within which you use the self-managed permission model to deploy stacks. You can specify a maximum of 20 account IDs.
RegionIds	Array of String	Yes	<pre>["cn-hangzhou", "cn-beijing"]</pre>	The region IDs of the stack instances. You can specify a maximum of 20 region IDs.
ClientToken	String	No	123e4567-e89b-12d3-a456-42665544****	<p>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.</p> <p>The token can be up to 64 characters in length, and can contain letters, digits, hyphens (-), and underscores (_).</p> <p>For more information, see Ensure idempotence.</p>
OperationDescription	String	No	Create stack instances in hangzhou and beijing	<p>The description of the operation to create the stack instances.</p> <p>The description must be 1 to 256 characters in length.</p>
				<p>The preferences of the operation to create the stack instances.</p> <p>Available parameters for the operation preferences:</p> <ul style="list-style-type: none"> {"FailureToleranceCount": N} <p>The maximum number of stack operation failures that can occur within the accounts in each region. When the value is exceeded, Resource Orchestration Service (ROS) stops the operation in the region. If ROS stops the operation in one region, ROS stops the operation in other regions.</p> <p>Valid values of N: 0 to 20.</p> <p>If you do not specify the FailureToleranceCount parameter, the default value 0 is used.</p>

Parameter	Type	Required	Example	Description
OperationPreferences	Map	No	<code>{"FailureToleranceCount": 1, "MaxConcurrentCount": 2}</code>	<ul style="list-style-type: none"> {"FailureTolerancePercentage": N} The percentage of the total number of accounts within which stack operation failures can occur to the total number of accounts in each region. When the value is exceeded, ROS stops the operation in the region. Valid values of N: 0 to 100. If the numeric value in the percentage is not an integer, ROS rounds the number down to the nearest integer. If you do not specify the FailureTolerancePercentage parameter, the default value 0 is used. {"MaxConcurrentCount": N} The maximum number of accounts within which operations are concurrently performed on stacks in each region. Valid values of N: 1 to 20. If you do not specify the MaxConcurrentCount parameter, the default value 1 is used. {"MaxConcurrentPercentage": N} The percentage of the total number of accounts within which operations are concurrently performed on stacks to the total number of accounts in each region. Valid values of N: 1 to 100. If the numeric value in the percentage is not an integer, ROS rounds the number down to the nearest integer. If you do not specify the MaxConcurrentPercentage parameter, the default value 1 is used. <p>Separate multiple parameters with commas (,).</p>

Parameter	Type	Required	Example	Description
				<ul style="list-style-type: none"> You can specify one of the <code>MaxConcurrentCount</code> and <code>MaxConcurrentPercentage</code> parameters.
<code>TimeoutInMinutes</code>	Long	No	10	<p>The timeout period to create the stack instances.</p> <ul style="list-style-type: none"> You can specify one of the <code>FailureToleranceCount</code> and <code>FailureTolerancePercentage</code> parameters. Default value: 60. Unit: minutes.
<code>DisableRollback</code>	Boolean	No	false	<p>Specifies whether to enable rollback when the stack instances fail to be created.</p> <p>Default value: false. Valid values:</p> <ul style="list-style-type: none"> true: disables rollback when the stack instances fail to be created. false: enables rollback when the stack instances fail to be created.
<code>DeploymentTargets</code>	Object	No		<p>The folders in which you use the service-managed permission model to deploy stacks.</p>
<code>RdFolderIds</code>	Array of String	Yes	["fd-4PvIVL0L8v"]	<p>The folder IDs of the resource directory. You can add a maximum of five folder IDs.</p> <p>You can create stack instances in all the member accounts that are contained in the specified folders. If you create stack instances in the Root folder, the stack instances are created in all the member accounts in the resource directory.</p> <div style="background-color: #e1f5fe; padding: 10px; border: 1px solid #cfcfcf;"> <p> Note To view the folder IDs, go to the overview page in the Resource Management console. For more information, see View the basic information about a folder.</p> </div>

Parameter	Type	Required	Example	Description
ParameterOverrides.N.ParameterKey	String	Yes	Amount	<p>The key of override parameter N. If you do not specify the key of this parameter, ROS uses the key that you specify when you create the stack group.</p> <p>Maximum value of N: 200.</p> <div style="background-color: #e1f5fe; padding: 10px;"> <p>Note</p> <ul style="list-style-type: none"> ParameterOverrides in ParameterOverrides.N.ParameterKey is optional. If you specify ParameterOverrides, you must specify the ParameterOverrides.N.ParameterKey and ParameterOverrides.N.ParameterValue parameters. </div>
ParameterOverrides.N.ParameterValue	String	Yes	1	<p>The value of override parameter N. If you do not specify the value of this parameter, ROS uses the value that you specify when you create the stack group.</p> <p>Maximum value of N: 200.</p> <div style="background-color: #e1f5fe; padding: 10px;"> <p>Note</p> <ul style="list-style-type: none"> ParameterOverrides in ParameterOverrides.N.ParameterValue is optional. If you specify ParameterOverrides, you must specify the ParameterOverrides.N.ParameterKey and ParameterOverrides.N.ParameterValue parameters. </div>

For more information about common request parameters, see [Common parameters](#).

Response parameters

Parameter	Type	Example	Description
-----------	------	---------	-------------

Parameter	Type	Example	Description
RequestId	String	14A07460-EBE7-47CA-9757-12CC4761D47A	The ID of the request.
OperationId	String	6da106ca-1784-4a6f-a7e1-e723863d****	The ID of the operation.

Examples

Sample requests

```
http(s)://ros.aliyuncs.com/?Action=CreateStackInstances
&AccountIds=["151266687691****","141261387191****"]
&RegionId=cn-hangzhou
&RegionIds=["cn-hangzhou","cn-beijing"]
&StackGroupName=MyStackGroup
&<Common request parameters>
```

Sample success responses

XML format

```
HTTP/1.1 200 OK
Content-Type:application/xml
<CreateStackInstancesResponse>
  <RequestId>14A07460-EBE7-47CA-9757-12CC4761D47A</RequestId>
  <OperationId>6da106ca-1784-4a6f-a7e1-e723863d****</OperationId>
</CreateStackInstancesResponse>
```

JSON format

```
HTTP/1.1 200 OK
Content-Type:application/json
{
  "RequestId" : "14A07460-EBE7-47CA-9757-12CC4761D47A",
  "OperationId" : "6da106ca-1784-4a6f-a7e1-e723863d****"
}
```

Error codes

For a list of error codes, visit the [API Error Center](#).

Error code	Error message	HTTP status code	Description
------------	---------------	------------------	-------------

Error code	Error message	HTTP status code	Description
StackInstanceExists	The StackInstance ({instance}) already exists.	409	The error message returned because a stack instance whose name is the same as the specified stack instance exists within the specified account in the specified region. instance indicates the name of the stack instance.
StackGroupOperationInProgress	Another Operation on StackGroup ({name}) is in progress.	409	The error message returned because an operation is being performed on the stack group. name indicates the name of the stack group.

13.9. UpdateStackInstances

Updates the stack instances that are created within a specified account in a specified region.

In this example, the stack instances that are created in a stack group named `MyStackGroup` are updated. The stack instances are created within the `151266687691****` and `141261387191****` accounts in the China (Hangzhou) and China (Beijing) regions. The stack group is granted self-managed permissions and created in the China (Hangzhou) 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
Action	String	Yes	UpdateStackInstances	The operation that you want to perform. Set the value to UpdateStackInstances.
RegionId	String	Yes	cn-hangzhou	The region ID of the stack group. You can call the DescribeRegions operation to query the most recent region list.

Parameter	Type	Required	Example	Description
StackGroupName	String	Yes	MyStackGroup	<p>The name of the stack group. The name must be unique within a region.</p> <p>The name can be up to 255 characters in length, and can contain digits, letters, hyphens (-), and underscores (_). It must start with a digit or letter.</p>
AccountIds	Array of String	No	["151266687691**", "141261387191****"]	<p>The IDs of the accounts within which you use the self-managed permission model to deploy stacks. You can specify a maximum of 20 account IDs.</p> <div style="border: 1px solid #add8e6; padding: 5px; background-color: #e6f2ff;"> <p> Note You must specify this parameter when you use the self-managed permission model to update the stack instances.</p> </div>
RegionIds	Array of String	Yes	["cn-hangzhou", "cn-beijing"]	<p>The region IDs of the stack instances. You can specify a maximum of 20 region IDs.</p>
ClientToken	String	No	123e4567-e89b-12d3-a456-42665544****	<p>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.</p> <p>The token can be up to 64 characters in length, and can contain letters, digits, hyphens (-), and underscores (_).</p> <p>For more information, see Ensure idempotence.</p>
OperationDescription	String	No	Update stack instances in hangzhou and beijing	<p>The description of the operation to update the stack instances.</p> <p>The description must be 1 to 256 characters in length.</p>
				<p>The preferences of the operation to update the stack instances.</p> <p>Available parameters for the operation preferences:</p> <ul style="list-style-type: none"> • {"FailureToleranceCount": N}

Parameter	Type	Required	Example	Description
OperationPreferences	Map	No	<code>{"FailureToleranceCount": 1, "MaxConcurrentCount": 2}</code>	<p>The maximum number of stack operation failures that can occur within the accounts in each region. When the value is exceeded, ROS stops the operation in the region. If ROS stops the operation in one region, ROS stops the operation in other regions.</p> <p>Valid values of N: 0 to 20.</p> <p>If you do not specify the FailureToleranceCount parameter, the default value 0 is used.</p> <ul style="list-style-type: none"> • {"FailureTolerancePercentage": N} <p>The percentage of the total number of accounts within which stack operation failures can occur to the total number of accounts in each region. When the value is exceeded, ROS stops the operation in the region.</p> <p>Valid values of N: 0 to 100. If the numeric value in the percentage is not an integer, Resource Orchestration Service (ROS) rounds the number down to the nearest integer.</p> <p>If you do not specify the FailureTolerancePercentage parameter, the default value 0 is used.</p> <ul style="list-style-type: none"> • {"MaxConcurrentCount": N} <p>The maximum number of accounts within which operations are concurrently performed on stacks in each region.</p> <p>Valid values of N: 1 to 20.</p> <p>If you do not specify the MaxConcurrentCount parameter, the default value 1 is used.</p> <ul style="list-style-type: none"> • {"MaxConcurrentPercentage": N} <p>The percentage of the total number of accounts within which operations are concurrently performed on stacks to the total number of accounts in each region.</p> <p>Valid values of N: 1 to 100. If the numeric value in the percentage is not an integer, ROS rounds the number down to the nearest integer.</p>

Parameter	Type	Required	Example	Description
				<p>If you do not specify the <code>MaxConcurrentPercentage</code> parameter, the default value 1 is used.</p> <p>Separate multiple parameters with commas (,).</p> <div style="background-color: #e1f5fe; padding: 10px; border: 1px solid #cfcfcf;"> <p>Note</p> <ul style="list-style-type: none"> You can specify one of the <code>MaxConcurrentCount</code> and <code>MaxConcurrentPercentage</code> parameters. You can specify one of the <code>FailureToleranceCount</code> and <code>FailureTolerancePercentage</code> parameters. </div>
<code>TimeoutInMinutes</code>	Long	No	10	<p>The timeout period to update the stack group.</p> <ul style="list-style-type: none"> Default value: 60. Unit: minutes.
<code>DeploymentTargets</code>	Object	No		<p>The folders in which you use the service-managed permission model to deploy stacks.</p> <div style="background-color: #e1f5fe; padding: 10px; border: 1px solid #cfcfcf;"> <p>Note You must specify this parameter when you use the service-managed permission model to update the stack instances.</p> </div>

Parameter	Type	Required	Example	Description
RdFolderIds	Array of String	No	["fd-4PvLVLOL8v"]	<p>The folder IDs of the resource directory. You can specify a maximum of five folder IDs.</p> <p>You must specify at least one of the RdFolderIds and AccountIds parameters. The parameters are subject to the following items:</p> <ul style="list-style-type: none"> If you specify only the RdFolderIds parameter, stacks are deployed within all the member accounts in the specified folders. If you deploy the stacks in the Root folder, the stacks are deployed within all the member accounts in the resource directory. If you specify only the AccountIds parameter, stacks are deployed within the specified member accounts. If you specify both parameters, the accounts specified by AccountIds must be contained in the folders specified by RdFolderIds. <div style="background-color: #e1f5fe; padding: 10px; border: 1px solid #ccc;"> <p> Note To view the folder IDs, go to the overview page in the Resource Management console. For more information, see View the basic information about a folder.</p> </div>
AccountIds	Array of String	No	["151266687691**", "141261387191****"]	<p>The IDs of the member accounts in the resource directory. You can specify a maximum of 20 member account IDs.</p> <div style="background-color: #e1f5fe; padding: 10px; border: 1px solid #ccc;"> <p> Note To view the member account IDs, go to the overview page in the Resource Management console. For more information, see View the detailed information about a member.</p> </div>

Parameter	Type	Required	Example	Description
ParameterOverrides.N.ParameterKey	String	Yes	Amount	<p>The key of override parameter N. If you do not specify the key of this parameter, ROS uses the key that you specify when you create the stack group.</p> <p>Maximum value of N: 200.</p> <div style="background-color: #e0f2f1; padding: 10px;"> <p> Note</p> <ul style="list-style-type: none"> ParameterOverrides in ParameterOverrides.N.ParameterKey is optional. If you specify ParameterOverrides, you must specify the ParameterOverrides.N.ParameterKey and ParameterOverrides.N.ParameterValue parameters. </div>
ParameterOverrides.N.ParameterValue	String	Yes	1	<p>The value of override parameter N. If you do not specify the key and value of this parameter, ROS uses the key and the value that you specify when you create the stack group.</p> <p>Maximum value of N: 200.</p> <div style="background-color: #e0f2f1; padding: 10px;"> <p> Note</p> <ul style="list-style-type: none"> ParameterOverrides in ParameterOverrides.N.ParameterValue is optional. If you specify ParameterOverrides, you must specify the ParameterOverrides.N.ParameterKey and ParameterOverrides.N.ParameterValue parameters. </div>

For more information about common request parameters, see [Common parameters](#).

Response parameters

Parameter	Type	Example	Description
-----------	------	---------	-------------

Parameter	Type	Example	Description
RequestId	String	14A07460-EBE7-47CA-9757-12CC4761D47A	The ID of the request.
OperationId	String	6da106ca-1784-4a6f-a7e1-e723863d****	The ID of the operation.

Examples

Sample requests

```
http(s)://ros.aliyuncs.com/?Action=UpdateStackInstances
&AccountIds=["151266687691****","141261387191****"]
&RegionId=cn-hangzhou
&RegionIds=["cn-hangzhou","cn-beijing"]
&StackGroupName=MyStackGroup
&<Common request parameters>
```

Sample success responses

XML format

```
HTTP/1.1 200 OK
Content-Type:application/xml
<UpdateStackInstancesResponse>
  <OperationId>6da106ca-1784-4a6f-a7e1-e723863d****</OperationId>
  <RequestId>14A07460-EBE7-47CA-9757-12CC4761D47A</RequestId>
</UpdateStackInstancesResponse>
```

JSON format

```
HTTP/1.1 200 OK
Content-Type:application/json
{
  "OperationId" : "6da106ca-1784-4a6f-a7e1-e723863d****",
  "RequestId" : "14A07460-EBE7-47CA-9757-12CC4761D47A"
}
```

Error codes

For a list of error codes, visit the [API Error Center](#).

Error code	Error message	HTTP status code	Description
------------	---------------	------------------	-------------

Error code	Error message	HTTP status code	Description
InvalidParameter	The specified parameter {name} is invalid, {reason}.	400	The error message returned because the specified parameter is invalid. name indicates the parameter name. reason indicates the reason for the error.
StackGroupNotFound	The StackGroup ({name}) could not be found.	404	The error message returned because the specified stack group does not exist. name indicates the name of the stack group.
StackGroupOperationInProgress	Another Operation on StackGroup ({name}) is in progress.	409	The error message returned because an operation is being performed on the stack group. name indicates the name of the stack group.

13.10. GetStackInstance

Queries the details of a stack instance that is deployed in a stack group within a specified account in a specified region.

In this example, the details of a stack instance that is deployed in the China (Beijing) region within the `151266687691****` account is queried. The stack instance is deployed in a stack group named `MyStackGroup` that is granted self-managed permissions and deployed in the China (Hangzhou) 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
Action	String	Yes	GetStackInstance	The operation that you want to perform. Set the value to GetStackInstance.

Parameter	Type	Required	Example	Description
RegionId	String	Yes	cn-hangzhou	The region ID of the stack group. You can call the DescribeRegions operation to query the most recent region list.
StackGroupName	String	Yes	MyStackGroup	The name of the stack group. The name must be unique within a region. The name can be up to 255 characters in length, and can contain digits, letters, hyphens (-), and underscores (_). It must start with a digit or letter.
StackInstanceAccountId	String	Yes	151266687691*** *	The ID of the account to which the stack instance belongs. <ul style="list-style-type: none"> If the stack group is granted self-managed permissions, the stack instance belongs to an Alibaba Cloud account. If the stack group is granted service-managed permissions, the stack instance belongs to a member account in the resource directory. <div style="border: 1px solid #ccc; background-color: #e6f2ff; padding: 5px; margin-top: 10px;"> <p> Note For more information about the account, see Overview.</p> </div>
StackInstanceRegionId	String	Yes	cn-beijing	The region ID of the stack instance.

For more information about common request parameters, see [Common parameters](#).

Response parameters

Parameter	Type	Example	Description
RequestId	String	B8A6B693-82C8-419D-8796-DE99EC33CFF9	The ID of the request.
StackInstance	Object		The details of the stack instance.

Parameter	Type	Example	Description
Status	String	CURRENT	<p>The status of the stack instance.</p> <p>Valid values:</p> <ul style="list-style-type: none"> • CURRENT: The stack that corresponds to the stack instance is up to date in the stack group. • OUTDATED: The stack that corresponds to the stack instance is not up to date in the stack group. A stack instance may be in the OUTDATED state due to the following reasons: <ul style="list-style-type: none"> ◦ When the CreateStackInstances operation is called to create stack instances, the relevant stacks fail to be created. ◦ When the UpdateStackInstances or UpdateStackGroup operation is called to update stack instances, the relevant stacks fail to be updated, or only some stack instances are updated. ◦ The creation or update operation is not completed.
StackGroupId	String	fd0ddef9-9540-4b42-a464-94f77835****	The ID of the stack group.
StackId	String	35ad60e3-6a92-42d8-8812-f0700d45****	<p>The ID of the stack that corresponds to the stack instance.</p> <div style="background-color: #e0f2f1; padding: 5px;"> <p> Note This parameter is returned only when the stack instance is in the CURRENT state.</p> </div>
DriftDetectionTime	String	2020-02-27T07:47:47	<p>The time when the last drift detection is performed on the stack group.</p> <div style="background-color: #e0f2f1; padding: 5px;"> <p> Note This parameter is returned only when the drift detection is performed on the stack group.</p> </div>

Parameter	Type	Example	Description
StackDriftStatus	String	IN_SYNC	<p>The status of the last drift detection that is performed on the stack group.</p> <p>Valid values:</p> <ul style="list-style-type: none"> DRIFTED: The stack has drifted. NOT_CHECKED: No drift detection is completed on the stack. IN_SYNC: The stack is being synchronized. <p> Note This parameter is returned only when the drift detection is performed on the stack group.</p>
StatusReason	String	User initiated stop	<p>The reason why the stack instance is in the OUTDATED state.</p> <p> Note This parameter is returned only when the stack instance is in the OUTDATED state.</p>
ParameterOverrides	Array of ParameterOverride		The list of the override parameters.
ParameterKey	String	Amount	The key of override parameter N.
ParameterValue	String	1	The value of override parameter N.
StackGroupName	String	MyStackGroup	The name of the stack group.
AccountId	String	151266687691****	The ID of the account to which the stack instance belongs.
RegionId	String	cn-beijing	The region ID of the stack instance.
RdFolderId	String	fd-4PvLVLOL8v	<p>The folder ID of the resource directory.</p> <p> Note This parameter is returned only when the stack group is granted service-managed permissions.</p>

Examples

Sample requests

```
http(s)://ros.aliyuncs.com/?Action=GetStackInstance
&RegionId=cn-hangzhou
&StackGroupName=MyStackGroup
&StackInstanceAccountId=151266687691****
&StackInstanceRegionId=cn-beijing
&<Common request parameters>
```

Sample success responses

XML format

```
HTTP/1.1 200 OK
Content-Type:application/xml
<GetStackInstanceResponse>
  <RequestId>B8A6B693-82C8-419D-8796-DE99EC33CFF9</RequestId>
  <StackInstance>
    <Status>OUTDATED</Status>
    <AccountId>151266687691****</AccountId>
    <StatusReason>Cancelled since failure tolerance has exceeded</StatusReason>
    <StackGroupName>MyStackGroup</StackGroupName>
    <StackGroupId>fd0ddef9-9540-4b42-a464-94f77835****</StackGroupId>
    <RegionId>cn-beijing</RegionId>
  </StackInstance>
</GetStackInstanceResponse>
```

JSON format

```
HTTP/1.1 200 OK
Content-Type:application/json
{
  "RequestId" : "B8A6B693-82C8-419D-8796-DE99EC33CFF9",
  "StackInstance" : {
    "Status" : "OUTDATED",
    "AccountId" : "151266687691****",
    "StatusReason" : "Cancelled since failure tolerance has exceeded",
    "ParameterOverrides" : [ ],
    "StackGroupName" : "MyStackGroup",
    "StackGroupId" : "fd0ddef9-9540-4b42-a464-94f77835****",
    "RegionId" : "cn-beijing"
  }
}
```

Error codes

For a list of error codes, visit the [API Error Center](#).

Error code	Error message	HTTP status code	Description
InvalidParameter	The specified parameter {name} is invalid, {reason}.	400	The error message returned because the specified parameter is invalid. name indicates the parameter key. reason indicates the reason for the error.
StackGroupNotFound	The StackGroup ({name}) could not be found.	404	The error message returned because the specified stack group does not exist. name indicates the name of the stack group.
StackInstanceNotFound	The StackInstance could not be found.	404	The error message returned because the specified stack instance does not exist.

13.11. ListStackInstances

Queries the stack instances that are associated with a stack group.

In this example, the stack instances that are associated with a stack group named `MyStackGroup` are queried. The stack group is granted self-managed permissions and deployed in the China (Hangzhou) 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
Action	String	Yes	ListStackInstances	The operation that you want to perform. Set the value to ListStackInstances.
RegionId	String	Yes	cn-hangzhou	The region ID of the stack group. You can call the DescribeRegions operation to query the most recent region list.

Parameter	Type	Required	Example	Description
StackGroupName	String	Yes	MyStackGroup	<p>The name of the stack group. The name must be unique within a region.</p> <p>The name can be up to 255 characters in length, and can contain digits, letters, hyphens (-), and underscores (_). It must start with a digit or letter.</p>
StackInstanceAccountId	String	No	156552876021*** *	<p>The ID of the account to which the stack instance belongs.</p> <ul style="list-style-type: none"> If the stack group is granted self-managed permissions, the stack instance belongs to an Alibaba Cloud account. If the stack group is granted service-managed permissions, the stack instance belongs to a member account in the resource directory. <div style="border: 1px solid #ccc; background-color: #e6f2ff; padding: 5px; margin-top: 10px;"> <p> Note For more information about the account, see Overview.</p> </div>
StackInstanceRegionId	String	No	cn-beijing	The region ID of the stack instance.
PageSize	Long	No	10	<p>The number of entries to return on each page.</p> <ul style="list-style-type: none"> Valid values: 1 to 50. Default value: 10.
PageNumber	Long	No	1	<p>The number of the page to return.</p> <ul style="list-style-type: none"> Pages start from page 1. Default value: 1.

For more information about common request parameters, see [Common parameters](#).

Response parameters

Parameter	Type	Example	Description
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Parameter	Type	Example	Description
TotalCount	Integer	1	The number of stack instances.
RequestId	String	85DE34BD-7FF9-480F-8C21-556E9DA93ACD	The ID of the request.
PageSize	Integer	1	The number of entries returned per page.
PageNumber	Integer	1	The page number of the returned page.
StackInstances	Array of StackInstance		The details of the stack instances.
Status	String	CURRENT	<p>The status of the stack instance.</p> <p>Valid values:</p> <ul style="list-style-type: none"> • CURRENT: The stack that corresponds to the stack instance is up to date in the stack group. • OUTDATED: The stack that corresponds to the stack instance is not up to date in the stack group. Stack instances are in the OUTDATED state due to the following possible reasons: <ul style="list-style-type: none"> ◦ When the CreateStackInstances operation is called to create stack instances, the relevant stacks fail to be created. ◦ When the UpdateStackInstances or UpdateStackGroup operation is called to update stack instances, the relevant stacks fail to be updated, or only some stack instances are updated. ◦ The creation or update operation is not completed.
StackGroupId	String	fd0ddef9-9540-4b42-a464-94f77835****	The ID of the stack group.

Parameter	Type	Example	Description
StackId	String	35ad60e3-6a92-42d8-8812-f0700d45****	The ID of the stack that corresponds to the stack instance. Note This parameter is returned only when the stack instance is in the CURRENT state.
DriftDetectionTime	String	2020-02-27T07:47:47	The time when the last drift detection was performed on the stack. Note This parameter is returned only when the drift detection is performed on the stack group.
StackDriftStatus	String	IN_SYNC	The drift status of the stack on which the last drift detection was performed. Valid values: <ul style="list-style-type: none"> DRIFTED: The stack has drifted. NOT_CHECKED: No drift detection is completed on the stack. IN_SYNC: The stack is being synchronized. Note This parameter is returned only when the drift detection is performed on the stack group.
StatusReason	String	User initiated stop	The reason why the operation is in a specific state. Note This parameter is returned only when the stack instance is in the OUTDATED state.
StackGroupName	String	MyStackGroup	The name of the stack group.
AccountId	String	156552876021****	The ID of the account to which the stack instance belongs.

Parameter	Type	Example	Description
RegionId	String	cn-beijing	The region ID of the stack instance.
RdFolderId	String	fd-4PvVL0L8v	The folder ID of the resource directory. <div style="border: 1px solid #ccc; background-color: #e0f2f1; padding: 5px; margin-top: 5px;"> <p> Note This parameter is returned only when the stack group is granted service-managed permissions.</p> </div>

Examples

Sample requests

```
http(s)://ros.aliyuncs.com/?Action=ListStackInstances
&RegionId=cn-hangzhou
&StackGroupName=MyStackGroup
&<Common request parameters>
```

Sample success responses

XML format

```
HTTP/1.1 200 OK
Content-Type:application/xml
<ListStackInstancesResponse>
  <TotalCount>1</TotalCount>
  <RequestId>85DE34BD-7FF9-480F-8C21-556E9DA93ACD</RequestId>
  <PageSize>10</PageSize>
  <PageNumber>1</PageNumber>
  <StackInstances>
    <Status>OUTDATED</Status>
    <AccountId>156552876021****</AccountId>
    <StatusReason>User initiated stop.</StatusReason>
    <StackGroupName>MyStackGroup</StackGroupName>
    <StackGroupId>fd0ddef9-9540-4b42-a464-94f77835****</StackGroupId>
    <RegionId>cn-beijing</RegionId>
  </StackInstances>
</ListStackInstancesResponse>
```

JSON format

```
HTTP/1.1 200 OK
Content-Type:application/json
{
  "TotalCount" : 1,
  "RequestId" : "85DE34BD-7FF9-480F-8C21-556E9DA93ACD",
  "PageSize" : 10,
  "PageNumber" : 1,
  "StackInstances" : [ {
    "Status" : "OUTDATED",
    "AccountId" : "156552876021****",
    "StatusReason" : "User initiated stop.",
    "StackGroupName" : "MyStackGroup",
    "StackGroupId" : "fd0ddef9-9540-4b42-a464-94f77835****",
    "RegionId" : "cn-beijing"
  } ]
}
```

Error codes

For a list of error codes, visit the [API Error Center](#).

Error code	Error message	HTTP status code	Description
InvalidParameter	The specified parameter {name} is invalid, {reason}.	400	The error message returned because the specified parameter is invalid. name indicates the parameter name. reason indicates the reason for the error.
StackGroupNotFound	The StackGroup ({name}) could not be found.	404	The error message returned because the specified stack group does not exist. name indicates the name of the stack group.

13.12. DeleteStackGroup

Deletes a stack group.

A stack group can be deleted only when the stack group does not contain stack instances. You can call the [DeleteStackInstances](#) operation to delete stack instances.

In this example, a stack group named `MyStackGroup` in the China (Hangzhou) region is 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	DeleteStackGroup	The operation that you want to perform. Set the value to DeleteStackGroup.
RegionId	String	Yes	cn-hangzhou	The region ID of the stack group. You can call the DescribeRegions operation to query the most recent region list.
StackGroupName	String	Yes	MyStackGroup	The name of the stack group. The name must be unique within a region. The name can be up to 255 characters in length and can contain digits, letters, hyphens (-), and underscores (_). It must start with a digit or letter.

For more information about common request parameters, see [Common parameters](#).

Response parameters

Parameter	Type	Example	Description
RequestId	String	14A07460-EBE7-47CA-9757-12CC4761D47A	The ID of the request.

Examples

Sample requests

```
http(s)://ros.aliyuncs.com/?Action=DeleteStackGroup
&RegionId=cn-hangzhou
&StackGroupName=MyStackGroup
&<Common request parameters>
```

Sample success responses

`XML` format

```
HTTP/1.1 200 OK
Content-Type: application/xml
<DeleteStackGroupResponse>
  <RequestId>14A07460-EBE7-47CA-9757-12CC4761D47A</RequestId>
</DeleteStackGroupResponse>
```

JSON format

```
HTTP/1.1 200 OK
Content-Type: application/json
{
  "RequestId" : "14A07460-EBE7-47CA-9757-12CC4761D47A"
}
```

Error codes

For a list of error codes, visit the [API Error Center](#).

Error code	Error message	HTTP status code	Description
StackGroupNotEmpty	The StackGroup ({name}) is not empty.	400	The error message returned because the stack group contains stack instances. name indicates the name of the stack group.
StackGroupNotFound	The StackGroup ({name}) could not be found.	404	The error message returned because the specified stack group does not exist. name indicates the name of the stack group.

14. Drift detection operations

14.1. DetectStackResourceDrift

You can call this operation to detect drift on individual resources in a stack.

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	DetectStackResourceDrift	The operation that you want to perform. Set the value to DetectStackResourceDrift.
LogicalResourceId	String	Yes	ScalingRuleName	The name of the resource.
RegionId	String	Yes	cn-hangzhou	The region ID of the stack. You can call the DescribeRegions operation to query the most recent region list.
StackId	String	Yes	4a6c9851-3b0f-4f5f-b4ca-a14bf691****	The ID of the stack.
ClientToken	String	No	123e4567-e89b-12d3-a456-42665544****	<p>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.</p> <p>The value can be up to 64 characters in length and can contain letters, digits, hyphens (-), and underscores (_).</p> <p>For more information, see How to ensure idempotence.</p>

Response parameters

Parameter	Type	Example	Description
-----------	------	---------	-------------

Parameter	Type	Example	Description
ActualProperties	String	<code>{"ScalingRuleName": "test1"}</code>	The actual resource properties in JSON format.
DriftDetectionTime	String	2020-02-27T07:47:47	The time at which the resource drift detection operation was initiated.
ExpectedProperties	String	<code>{"ScalingRuleName": "test2"}</code>	The resource properties as defined in the template, in JSON format.
LogicalResourceId	String	ScalingRule	The logical ID of the resource as defined in the template.
PhysicalResourceId	String	asr-2ze4zzc3kf9yz1kd**	The physical ID of the resource.
PropertyDifferences	Array		The property differences of the resource.
ActualValue	String	test1	The actual value of the resource property.
DifferenceType	String	NOT_EQUAL	The drift type of the resource property. Valid values: <ul style="list-style-type: none"> • ADD: The value has been added to a resource property whose data type is Array or List. • REMOVE: The property has been deleted from the current resource configuration. • NOT_EQUAL: The current property value differs from the expected value defined in the stack template.
ExpectedValue	String	test2	The expected value of the resource property as defined in the template.
PropertyPath	String	/ScalingRuleName	The path of the resource property.
RequestId	String	B288A0BE-D927-4888-B0F7-B35EF84B6E6F	The ID of the request.

Parameter	Type	Example	Description
ResourceDriftStatus	String	MODIFIED	<p>The resource drift status. Valid values:</p> <ul style="list-style-type: none"> DELETED: The actual configuration of the resource differs from its expected template configuration because the resource has been deleted. MODIFIED: The actual configuration of the resource differs from its expected template configuration. NOT_CHECKED: Resource Orchestration Service (ROS) has not checked whether the actual configuration of the resource differs from its expected template configuration. IN_SYNC: The actual configuration of the resource matches its expected template configuration.
ResourceType	String	ALYUN::ESS::ScalingRule	The resource type.
StackId	String	4a6c9851-3b0f-4f5f-b4ca-a14bf691****	The ID of the stack.

Examples

Sample requests

```
http(s)://ros.aliyuncs.com/? Action=DetectStackResourceDrift
&LogicalResourceId=ScalingRuleName
&RegionId=cn-hangzhou
&StackId=4a6c9851-3b0f-4f5f-b4ca-a14bf691****
&<Common request parameters>
```

Sample success responses

`XML` format

```

<DetectStackResourceDriftResponse>
  <ActualProperties>{"ScalingRuleName": "test1"}</ActualProperties>
  <DriftDetectionTime>2020-02-27T07:47:47</DriftDetectionTime>
  <ExpectedProperties>{"ScalingRuleName": "test2"}</ExpectedProperties>
  <LogicalResourceId>ScalingRule</LogicalResourceId>
  <PhysicalResourceId>asr-2ze4zzc3kf9yz1kd****</PhysicalResourceId>
  <PropertyDifferences>
    <ActualValue>test1</ActualValue>
    <DifferenceType>NOT_EQUAL</DifferenceType>
    <ExpectedValue>test2</ExpectedValue>
    <PropertyPath>/ScalingRuleName</PropertyPath>
  </PropertyDifferences>
  <ResourceDriftStatus>MODIFIED</ResourceDriftStatus>
  <ResourceType>ALIYUN::ESS::ScalingRule</ResourceType>
  <StackId>4a6c9851-3b0f-4f5f-b4ca-a14bf691****</StackId>
</DetectStackResourceDriftResponse>

```

JSON **format**

```

{
  "ActualProperties": "{\"ScalingRuleName\": \"test1\"}",
  "DriftDetectionTime": "2020-02-27T07:47:47",
  "ExpectedProperties": "{\"ScalingRuleName\": \"test2\"}",
  "LogicalResourceId": "ScalingRule",
  "PhysicalResourceId": "asr-2ze4zzc3kf9yz1kd****",
  "PropertyDifferences": [
    {
      "ActualValue": "test1",
      "DifferenceType": "NOT_EQUAL",
      "ExpectedValue": "test2",
      "PropertyPath": "/ScalingRuleName"
    }
  ],
  "ResourceDriftStatus": "MODIFIED",
  "ResourceType": "ALIYUN::ESS::ScalingRule",
  "StackId": "4a6c9851-3b0f-4f5f-b4ca-a14bf691****"
}

```

Error codes

For a list of error codes, visit the [API Error Center](#).

HttpCode	Error code	Error message	Description
400	ResourceDriftDetectionProcessing	Drift detection of resource {name} is processing.	The error message returned because the resource drift detection is already in progress. name indicates the resource name.

HttpCode	Error code	Error message	Description
400	ResourceDriftDetectionFailure	Fail to detect resource {name} drift: {reason}	The error message returned because the resource drift detection failed. name indicates the resource name, and reason indicates the reason of failure.
404	StackNotFound	The Stack ({name}) could not be found.	The error message returned because the specified stack does not exist. name indicates the name or ID of the stack.
404	ResourceNotFound	The Resource ({name}) could not be found in Stack {stack}.	The error message returned because the specified resource does not exist in the specified stack. name indicates the resource name, and stack indicates the stack name or ID.

14.2. DetectStackDrift

You can call this operation to detect drift on a stack.

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	DetectStackDrift	The operation that you want to perform. Set the value to DetectStackDrift.
RegionId	String	Yes	cn-hangzhou	The region ID of the stack. You can call the DescribeRegions operation to query the most recent region list.
StackId	String	Yes	4a6c9851-3b0f-4f5f-b4ca-a14bf691****	The ID of the stack.
LogicalResourceId.N	RepeatList	No	ScalingRule	The logical ID of resource N, which is used to filter resources.
ClientToken	String	No	123e4567-e89b-12d3-a456-42665544****	<p>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.</p> <p>The value can be up to 64 characters in length and can contain letters, digits, hyphens (-), and underscores (_).</p> <p>For more information, see How to ensure idempotence.</p>

Response parameters

Parameter	Type	Example	Description
DriftDetectionId	String	a7044f0d-6f2e-4128-a307-4524ef88****	The ID of the drift detection.
RequestId	String	B288A0BE-D927-4888-B0F7-B35EF84B6E6	The ID of the request.

Examples

Sample requests

```
http(s)://ros.aliyuncs.com/? Action=DetectStackDrift
&RegionId=cn-hangzhou
&StackId=4a6c9851-3b0f-4f5f-b4ca-a14bf691****
&<Common request parameters>
```

Sample success responses

XML format

```
<DetectStackDriftResponse>
  <DriftDetectionId>a7044f0d-6f2e-4128-a307-4524ef88****</DriftDetectionId>
  <RequestId>B288A0BE-D927-4888-B0F7-B35EF84B6E6</RequestId>
</DetectStackDriftResponse>
```

JSON format

```
{
  "DriftDetectionId": "a7044f0d-6f2e-4128-a307-4524ef88****",
  "RequestId": "B288A0BE-D927-4888-B0F7-B35EF84B6E6"
}
```

Error codes

For a list of error codes, visit the [API Error Center](#).

HttpCode	Error code	Error message	Description
404	StackNotFound	The Stack ({name}) could not be found.	The error message returned because the specified stack does not exist. name indicates the name or ID of the stack.
404	ResourceNotFound	The Resource ({name}) could not be found in Stack {stack}.	The error message returned because the specified resource does not exist in the specified stack. name indicates the resource name, and stack indicates the stack name or ID.

HttpCode	Error code	Error message	Description
409	ActionInProgress	Stack {name} already has an action ({action}) in progress.	The error message returned because the specified stack has a change operation in progress. name indicates the name or ID of the stack, and action indicates the change operation.

14.3. DetectStackGroupDrift

You can call this operation to detect drift on a stack 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	DetectStackGroupDrift	The operation that you want to perform. Set the value to DetectStackGroupDrift.
RegionId	String	Yes	cn-hangzhou	The region ID of the stack group. You can call the DescribeRegions operation to query the most recent region list.
StackGroupName	String	Yes	MyStackGroup	The name of the stack group. The name must be unique in a region. The name can be up to 255 characters in length and can contain digits, letters, hyphens (-), and underscores (_). It must start with a digit or letter.

Parameter	Type	Required	Example	Description
ClientToken	String	No	123e4567-e89b-12d3-a456-42665544****	<p>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.</p> <p>The value can be up to 64 characters in length and can contain letters, digits, hyphens (-), and underscores (_).</p> <p>For more information, see How to ensure idempotence.</p>
OperationPreferences	Json	No	{"FailureToleranceCount": 1, "MaxConcurrentCount": 2}	<p>The operation settings, in JSON format. The following fields are supported:</p> <ul style="list-style-type: none"> • FailureToleranceCount <p>The maximum number of stack group operation failures that can occur. In a stack group operation, if the total number of failures does not exceed the FailureToleranceCount value, the operation succeeds. Otherwise, the operation fails.</p> <p>If FailureToleranceCount is not specified, the default value 0 is used. You can specify one of FailureToleranceCount or FailureTolerancePercentage parameters, but you cannot specify both of them.</p> <p>Valid values: 0 to 20.</p> <ul style="list-style-type: none"> • FailureTolerancePercentage <p>The percentage of stack group operation failures that can occur. In a stack group operation, if the percentage of failures does not exceed the FailureTolerancePercentage value, the operation succeeds. Otherwise, the operation fails.</p> <p>You can specify one of FailureToleranceCount or FailureTolerancePercentage parameters, but you cannot specify both of them.</p> <p>Valid values: 0 to 100.</p> <ul style="list-style-type: none"> • MaxConcurrentCount

Parameter	Type	Required	Example	Description
				<p>The maximum number of target accounts in which a drift detection operation can be performed at a time.</p> <p>You can specify one of <code>MaxConcurrentCount</code> or <code>MaxConcurrentPercentage</code> parameters, but you cannot specify both of them.</p> <p>Valid values: 1 to 20.</p> <ul style="list-style-type: none"> <code>MaxConcurrentPercentage</code> <p>The maximum percentage of target accounts in which a drift detection operation can be performed at a time.</p> <p>You can specify one of <code>MaxConcurrentCount</code> or <code>MaxConcurrentPercentage</code> parameters, but you cannot specify both of them.</p>

Response parameters

Valid values: 1 to 100.

Parameter	Type	Example	Description
<code>OperationId</code>	String	6da106ca-1784-4a6f-a7e1-e723863d****	The ID of the operation.
<code>RequestId</code>	String	B288A0BE-D927-4888-B0F7-B35EF84B6E6	The ID of the request.

Examples

Sample requests

```
http(s)://ros.aliyuncs.com/? Action=DetectStackGroupDrift
&RegionId=cn-hangzhou
&StackGroupName=MyStackGroup
&<Common request parameters>
```

Sample success responses

`XML` format

```
<DetectStackGroupDriftResponse>
  <RequestId>B288A0BE-D927-4888-B0F7-B35EF84B6E6</RequestId>
  <OperationId>6da106ca-1784-4a6f-a7e1-e723863d****</OperationId>
</DetectStackGroupDriftResponse>
```

`JSON` format

```
{
  "RequestId": "B288A0BE-D927-4888-B0F7-B35EF84B6E6",
  "OperationId": "6da106ca-1784-4a6f-a7e1-e723863d****"
}
```

Error codes

For a list of error codes, visit the [API Error Center](#).

HttpCode	Error code	Error message	Description
404	StackGroupNotFound	The StackGroup ({name}) could not be found.	The error message returned because the specified stack group does not exist. name indicates the stack group name.

14.4. GetStackDriftDetectionStatus

Queries the drift detection status of a stack.

In this topic, the status of a drift detection operation whose ID is `a7044f0d-6f2e-4128-a307-4524ef88****` is queried. The operation is performed in the China (Hangzhou) 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
Action	String	Yes	GetStackDriftDetectionStatus	The operation that you want to perform. Set the value to GetStackDriftDetectionStatus.
RegionId	String	Yes	cn-hangzhou	The region ID of the stack to be detected for drift. You can call the DescribeRegions operation to query the most recent region list.

Parameter	Type	Required	Example	Description
DriftDetectionId	String	Yes	a7044f0d-6f2e-4128-a307-4524ef88****	The ID of the drift detection operation. You can call the ListStackResourceDrifts operation to obtain the ID of the drift detection operation.

For more information about common request parameters, see [Common parameters](#).

Response parameters

Parameter	Type	Example	Description
RequestId	String	B288A0BE-D927-4888-B0F7-B35EF84B6E6F	The ID of the request.
DriftDetectionTime	String	2020-02-27T07:47:47	The time when the stack drift detection operation was initiated.
DriftDetectionStatusReason	String	Detect stack drift successfully	The reason why the stack drift detection operation has its current status.
DriftedStackResourceCount	Integer	1	The total number of stack resources that have drifted.
StackDriftStatus	String	DRIFTED	The drift status of the stack. Valid values: <ul style="list-style-type: none"> DRIFTED: The actual configuration of the stack differs, or has drifted, from its expected template configuration. A stack is considered to have drifted if one or more of its resources have drifted. NOT_CHECKED: Resource Orchestration Service (ROS) has not checked whether the actual configuration of the resource differs from its expected template configuration. IN_SYNC: The current configuration of each supported resource matches its expected template configuration. A stack with no resources that support drift detection also has a status of IN_SYNC.

Parameter	Type	Example	Description
DriftDetectionStatus	String	DETECTION_COMPLETE	<p>The drift detection status. Valid values:</p> <ul style="list-style-type: none"> DETECTION_COMPLETE: The drift detection operation has been completed for all resources that support drift detection in the stack. DETECTION_FAILED: The stack drift detection operation has failed for at least one resource in the stack. DETECTION_IN_PROGRESS: The stack drift detection operation is in progress.
StackId	String	4a6c9851-3b0f-4f5f-b4ca-a14bf691****	The ID of the stack.
DriftDetectionId	String	a7044f0d-6f2e-4128-a307-4524ef88****	The ID of the drift detection operation.

Examples

Sample requests

```
http(s)://ros.aliyuncs.com/?Action=GetStackDriftDetectionStatus
&DriftDetectionId=a7044f0d-6f2e-4128-a307-4524ef88****
&RegionId=cn-hangzhou
&<Common request parameters>
```

Sample success responses

XML format

```
HTTP/1.1 200 OK
Content-Type:application/xml
<GetStackDriftDetectionStatusResponse>
  <DriftDetectionId>a7044f0d-6f2e-4128-a307-4524ef88****</DriftDetectionId>
  <DriftDetectionStatus>DETECTION_COMPLETE</DriftDetectionStatus>
  <DriftDetectionStatusReason>Detect stack drift successfully</DriftDetectionStatusReason>
  >
  <DriftDetectionTime>2020-02-27T07:47:47</DriftDetectionTime>
  <DriftedStackResourceCount>1</DriftedStackResourceCount>
  <StackDriftStatus>DRIFTED</StackDriftStatus>
  <StackId>4a6c9851-3b0f-4f5f-b4ca-a14bf691****</StackId>
</GetStackDriftDetectionStatusResponse>
```

JSON format

```
HTTP/1.1 200 OK
Content-Type:application/json
{
  "DriftDetectionId" : "a7044f0d-6f2e-4128-a307-4524ef88****",
  "DriftDetectionStatus" : "DETECTION_COMPLETE",
  "DriftDetectionStatusReason" : "Detect stack drift successfully",
  "DriftDetectionTime" : "2020-02-27T07:47:47",
  "DriftedStackResourceCount" : 1,
  "StackDriftStatus" : "DRIFTED",
  "StackId" : "4a6c9851-3b0f-4f5f-b4ca-a14bf691****"
}
```

Error codes

For a list of error codes, visit the [API Error Center](#).

HTTP status code	Error code	Error message	Description
404	StackDriftDetectionNotFound	The stack drift detection ({ID}) could not be found.	The error message returned because the drift detection does not exist. ID indicates the ID of the drift detection operation.

14.5. ListStackResourceDrifts

You can call this operation to query the drift information of resources in a specified stack.

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	ListStackResourceDrifts	The operation that you want to perform. Set the value to ListStackResourceDrifts.
RegionId	String	Yes	cn-hangzhou	The region ID of the stack. You can call the DescribeRegions operation to query the most recent region list.

Parameter	Type	Required	Example	Description
StackId	String	Yes	4a6c9851-3b0f-4f5f-b4ca-a14bf691****	The ID of the stack.
MaxResults	Long	No	50	The maximum number of results to be returned with a single call when the NextToken parameter is used for the query. Valid values: 1 to 100. Default value: 50.
ResourceDriftStatus.N	RepeatList	No	MODIFIED	The drift status of the resource. Valid values: <ul style="list-style-type: none"> DELETED: The actual configuration of the resource differs from its expected template configuration because the resource has been deleted. MODIFIED: The actual configuration of the resource differs from its expected template configuration. NOT_CHECKED: ROS has not checked whether the actual configuration of the resource differs from its expected template configuration. IN_SYNC: The actual configuration of the resource matches its expected template configuration.
NextToken	String	No	AAAAAdDWBf2***w==	The query token. Set this parameter to the NextToken value returned in the last API call.

Response parameters

Parameter	Type	Example	Description
NextToken	String	AAAAAdDWBf2***w==	The query token value returned in this call.
RequestId	String	B288A0BE-D927-4888-B0F7-B35EF84B6E6F	The ID of the request.
ResourceDrifts	Array		An array of resource drifts.

Parameter	Type	Example	Description
ActualProperties	String	<code>{"ScalingRuleName": "test1"}</code>	The actual resource properties in JSON format.
DriftDetectionTime	String	2020-02-27T07:47:47	The time when the resource drift detection operation was initiated.
ExpectedProperties	String	<code>{"ScalingRuleName": "test2"}</code>	The resource properties as defined in the template, in JSON format.
LogicalResourceId	String	ScalingRule	The logical ID of the resource as defined in the template.
PhysicalResourceId	String	asr-2ze4zzc3kf9yz1kd**	The physical ID of the resource.
PropertyDifferences	Array		The property differences of the resource.
ActualValue	String	test1	The actual value of the resource property.
DifferenceType	String	NOT_EQUAL	The drift type of the resource property. Valid values: <ul style="list-style-type: none"> • ADD: The value has been added to a resource property whose data type was Array or List. • REMOVE: The property has been deleted from the current resource configuration. • NOT_EQUAL: The current property value differs from the expected value defined in the stack template.
ExpectedValue	String	test2	The expected value of the resource property as defined in the template.
PropertyPath	String	/ScalingRuleName	The path of the resource property.

Parameter	Type	Example	Description
ResourceDriftStatus	String	MODIFIED	<p>The drift status of the resource. Valid values:</p> <ul style="list-style-type: none"> DELETED: The actual configuration of the resource differs from its expected template configuration because the resource had been deleted. MODIFIED: The actual configuration of the resource differs from its expected template configuration. NOT_CHECKED: ROS has not checked whether the actual configuration of the resource differs from its expected template configuration. IN_SYNC: The actual configuration of the resource matches its expected template configuration.
ResourceType	String	ALYUN::ESS::ScalingRule	The type of the resource.
StackId	String	4a6c9851-3b0f-4f5f-b4ca-a14bf691****	The ID of the stack.

Examples

Sample requests

```
http(s)://ros.aliyuncs.com/? Action=ListStackResourceDrifts
&RegionId=cn-hangzhou
&StackId=4a6c9851-3b0f-4f5f-b4ca-a14bf691****
&<Common request parameters>
```

Sample success responses

`XML` format

```
<ListStackResourceDriftsResponse>
  <NextToken>AAAAAdDWBf2****w==</NextToken>
  <ResourceDrifts>
    <ActualProperties>{"ScalingRuleName": "test1"}</ActualProperties>
    <DriftDetectionTime>2020-02-27T07:47:47</DriftDetectionTime>
    <ExpectedProperties>{"ScalingRuleName": "test2"}</ExpectedProperties>
    <LogicalResourceId>ScalingRule</LogicalResourceId>
    <PhysicalResourceId>asr-2ze4zzc3kf9yz1kd****</PhysicalResourceId>
    <PropertyDifferences>
      <ActualValue>test1</ActualValue>
      <DifferenceType>NOT_EQUAL</DifferenceType>
      <ExpectedValue>test2</ExpectedValue>
      <PropertyPath>/ScalingRuleName</PropertyPath>
    </PropertyDifferences>
    <ResourceDriftStatus>MODIFIED</ResourceDriftStatus>
    <ResourceType>ALIYUN::ESS::ScalingRule</ResourceType>
    <StackId>4a6c9851-3b0f-4f5f-b4ca-a14bf691****</StackId>
  </ResourceDrifts>
  <RequestId>8625BB3E-2950-4F3E-A713-5458DB5CD874</RequestId>
</ListStackResourceDriftsResponse>
```

JSON format

```
{
  "NextToken": "AAAAAdDWBf2****w==",
  "ResourceDrifts": [
    {
      "ActualProperties": "{\"ScalingRuleName\": \"test1\"}",
      "DriftDetectionTime": "2020-02-27T07:47:47",
      "ExpectedProperties": "{\"ScalingRuleName\": \"test2\"}",
      "LogicalResourceId": "ScalingRule",
      "PhysicalResourceId": "asr-2ze4zzc3kf9yz1kd****",
      "PropertyDifferences": [
        {
          "ActualValue": "test1",
          "DifferenceType": "NOT_EQUAL",
          "ExpectedValue": "test2",
          "PropertyPath": "/ScalingRuleName"
        }
      ],
      "ResourceDriftStatus": "MODIFIED",
      "ResourceType": "ALIYUN::ESS::ScalingRule",
      "StackId": "4a6c9851-3b0f-4f5f-b4ca-a14bf691****"
    }
  ],
  "RequestId": "8625BB3E-2950-4F3E-A713-5458DB5CD874"
}
```

Error codes

For more information about error codes, visit [API Error Center](#).

HttpCode	Error code	Error message	Description
400	StackDriftDetectionExpired	The stack drift detection of next token is expired, a new stack drift detection ({ID}) has already completed, please query from the very beginning again.	The error message returned because a new drift detection has been completed. Perform another query. ID indicates the drift detection ID.
400	StackDriftDetectionNotAvailable	There is no complete drift detection for stack ({ID}).	The error message returned because no drift detection has been completed on the stack. ID indicates the stack ID.
404	StackNotFound	The Stack ({name}) could not be found.	The error message returned because the specified stack does not exist. name indicates the name or ID of the stack.

14.6.

UpdateStackTemplateByResources

Corrects a template to eliminate stack drift.

Limits: You can eliminate only drift on stacks that have drifted. You must call the [DetectStackDrift](#) operation to perform drift detection on a stack, call the [GetStackDriftDetectionStatus](#) operation to query the drift status of the stack to make sure that the stack has drifted, and then call the [UpdateStackTemplateByResources](#) operation to eliminate drift.

In this topic, drift is eliminated for a stack whose ID is `4a6c9851-3b0f-4f5f-b4ca-a14bf691****`. The stack is deployed in the China (Hangzhou) 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
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Parameter	Type	Required	Example	Description
Action	String	Yes	UpdateStackTemplateByResources	The operation that you want to perform. Set the value to UpdateStackTemplateByResources.
StackId	String	Yes	4a6c9851-3b0f-4f5f-b4ca-a14bf691****	The ID of the stack.
DryRun	Boolean	No	false	<p>Specifies whether to only preview the corrected template in this request. Default value: false. Valid values:</p> <ul style="list-style-type: none"> true: returns the content of the corrected template and does not correct the template. After Resource Orchestration Service (ROS) compares the corrected template with the original template, ROS determines whether to execute the correction. false: corrects the template to eliminate drift. <div style="background-color: #e6f2ff; padding: 10px; border: 1px solid #d9e1f2;"> <p> Note We recommend that you set the DryRun parameter to true to preview the corrected template. If the template content meets expectations, set the DryRun parameter to false to execute the correction.</p> </div>
RegionId	String	Yes	cn-hangzhou	The region ID of the stack. You can call the DescribeRegions operation to query the most recent region list.
ClientToken	String	No	123e4567-e89b-12d3-a456-42665544****	<p>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.</p> <p>The token can be up to 64 characters in length and can contain letters, digits, hyphens (-), and underscores (_).</p> <p>For more information, see How to ensure idempotence.</p>

Parameter	Type	Required	Example	Description
TemplateFormat	String	No	JSON	<p>The format of the returned template. Default value: JSON. Valid values:</p> <ul style="list-style-type: none"> JSON YAML
LogicalResourceId.N	String	No	WebServer	<p>The logical ID of resource N, which is used to filter resources. Template correction takes effect only for resources in the list. By default, all resources that have drifted are corrected.</p> <p>If the list of corrected resources contains resources in the DELETED state, ROS may adjust the resources that are not in the list but reference the deleted resources in the list to ensure the correctness of the new template.</p>

For more information about common request parameters, see [Common parameters](#).

Response parameters

Parameter	Type	Example	Description
RequestId	String	B288A0BE-D927-4888-B0F7-B35EF84B6E6F	The ID of the request.
NewTemplateBody	String	<pre>{ "ROSTemplateFormatVersion": "2015-09-01", "Resources": { "Vpc": { "Type": "ALIYUN::ECS::VPC", "Properties": { "VpcName": "test", "CidrBlock": "192.168.0.0/16", "Description": "test2"} } } }, "Outputs": { "VpcId": { "Value": {"Fn::GetAtt": ["Vpc", "VpcId"]} } } }</pre>	The template content after correction.

Parameter	Type	Example	Description
OldTemplateBody	String	<pre>{ "ROSTemplateFormatVersion": "2015-09-01", "Resources": { "Vpc": { "Type": "ALIYUN::ECS::VPC", "Properties": { "VpcName": "test", "CidrBlock": "192.168.0.0/16", "Description": "test1"} } } } "Outputs": { "VpcId": { "Value": { "Fn::GetAtt": ["Vpc", "VpcId"] } } } }</pre>	The template content before correction.

Examples

Sample requests

```
http(s)://ros.aliyuncs.com/?Action=UpdateStackTemplateByResources
&RegionId=cn-hangzhou
&StackId=4a6c9851-3b0f-4f5f-b4ca-a14bf691****
&<Common request parameters>
```

Sample success responses

XML **format**

```
HTTP/1.1 200 OK
Content-Type:application/xml
<UpdateStackTemplateByResourcesResponse>
  <RequestId>B288A0BE-D927-4888-B0F7-B35EF84B6E6F</RequestId>
  <NewTemplateBody>{"ROSTemplateFormatVersion": "2015-09-01", "Resources": {"Vpc": {"Type": "ALIYUN::ECS::VPC", "Properties": {"VpcName": "test", "CidrBlock": "192.168.0.0/16", "Description": "test2"}}, "Outputs": {"VpcId": {"Value": {"Fn::GetAtt": ["Vpc", "VpcId"]}}}}</NewTemplateBody>
  <OldTemplateBody>{"ROSTemplateFormatVersion": "2015-09-01", "Resources": {"Vpc": {"Type": "ALIYUN::ECS::VPC", "Properties": {"VpcName": "test", "CidrBlock": "192.168.0.0/16", "Description": "test1"}}, "Outputs": {"VpcId": {"Value": {"Fn::GetAtt": ["Vpc", "VpcId"]}}}}</OldTemplateBody>
</UpdateStackTemplateByResourcesResponse>
```

JSON **format**

```

HTTP/1.1 200 OK
Content-Type:application/json
{
  "RequestId" : "B288A0BE-D927-4888-B0F7-B35EF84B6E6F",
  "NewTemplateBody" : "{\"ROSTemplateFormatVersion\": \"2015-09-01\", \"Resources\": {\"Vpc\": {\"Type\": \"ALIYUN::ECS::VPC\", \"Properties\": {\"VpcName\": \"test\", \"CidrBlock\": \"192.168.0.0/16\", \"Description\": \"test2\"}}}, \"Outputs\": {\"VpcId\": {\"Value\": {\"Fn::GetAtt\": [\"Vpc\", \"VpcId\"]}}}}\",
  "OldTemplateBody" : "{\"ROSTemplateFormatVersion\": \"2015-09-01\", \"Resources\": {\"Vpc\": {\"Type\": \"ALIYUN::ECS::VPC\", \"Properties\": {\"VpcName\": \"test\", \"CidrBlock\": \"192.168.0.0/16\", \"Description\": \"test1\"}}}, \"Outputs\": {\"VpcId\": {\"Value\": {\"Fn::GetAtt\": [\"Vpc\", \"VpcId\"]}}}}\"
}

```

Error codes

For a list of error codes, visit the [API Error Center](#).

HTTP status code	Error code	Error message	Description
400	StackDriftDetectionNotAvailable	There is no complete drift detection for stack ({ID}).	The error message returned because no drift detection has been completed on the stack. ID indicates the stack ID.
400	StackAlreadyInSync	This is not need to correct stack drifts, stack ({ID}) is already in sync.	The error message returned because no drift exists and the template correction is not needed. ID indicates the stack ID.
400	CorrectStackDriftsFailure	{reason}	The error message returned because the stack cannot be corrected. reason indicates the specific reason.
404	StackNotFound	The Stack ({name}) could not be found.	The error message returned because the specified stack does not exist. name indicates the name or ID of the stack.

HTTP status code	Error code	Error message	Description
404	ResourceNotFound	The Resource ({name}) could not be found in Stack {stack}.	The error message returned because the specified resource does not exist in the specified stack. name indicates the resource name, and stack indicates the stack name or ID.

15.Tag operations

15.1. TagResources

You can call this operation to create and bind tags to a specific ROS resource list.

In this example, a tag is created and bound to a stack in the China (Hangzhou) region whose ID is `7fee80e1-8c48-4c2f-8300-0f6dc40b****`. The tag key is `FinanceDept`, and the tag value is `FinanceJoshua`.

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 tag. You can call the DescribeRegions operation to query the most recent region list.
ResourceId.N	RepeatList	Yes	7fee80e1-8c48-4c2f-8300-0f6dc40b****	The ID of resource N. Valid values of N: 1 to 50. Note If you set the ResourceType parameter to stackgroup, you must set the ResourceId.N parameter to the name of the stack group.
ResourceType	String	Yes	stack	The type of the resource. Valid values: <ul style="list-style-type: none"> stack stackgroup template

Parameter	Type	Required	Example	Description
Tag.N.Key	String	Yes	FinanceDept	The key of tag N. Valid values of N: 1 to 20 The tag key can be up to 128 characters in length. It cannot contain <code>http://</code> or <code>https://</code> , or start with <code>acs:</code> or <code>aliyun</code> .
Tag.N.Value	String	Yes	FinanceJoshua	The value of tag N. Valid values of N: 1 to 20. The tag value can be up to 128 characters in length. It cannot contain <code>http://</code> or <code>https://</code> , or start with <code>acs:</code> or <code>aliyun</code> .

For more information about common parameters, see [Common parameters](#).

Response parameters

Parameter	Type	Example	Description
RequestId	String	C46FF5A8-C5F0-4024-8262-B16B639225A0	The ID of the request.

Examples

Sample request

```
http(s)://ros.aliyuncs.com/?Action=TagResources
&RegionId=cn-hangzhou
&ResourceId.1=7fee80e1-8c48-4c2f-8300-0f6dc40b****
&ResourceType=stack
&Tag.1.Key=FinanceDept
&Tag.1.Value=FinanceJoshua
&<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

For a list of error codes, visit the [API Error Center](#).

HTTP status code	Error code	Error message	Description
400	InvalidParameter	The specified parameter ResourceType is invalid, {reason}.	The error message returned because the specified resource type parameter is invalid. reason indicates the specific reason.
400	InvalidParameter	The specified parameter ResourceIds is invalid, {reason}.	The error message returned because the specified resource ID does not exist, or the verification failed. reason indicates the specific reason.
400	InvalidParameter	The specified parameter Tags is invalid, {reason}.	The error message returned because the specified Tags parameter is invalid. reason indicates the specific reason.
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.

15.2. ListTagResources

You can call this operation to query the tags that are bound to one or more ROS resources.

To specify the query object, you must specify ResourceId.N or Tag.N that consists of Tag.N.Key and Tag.N.Value in the request.

If you specify the Tag.N and ResourceId.N parameters at the same time, ROS resources that match both the parameters are returned.

In this example, the bound tags of the stack whose ID is `6bc589b5-9c02-4944-8fc3-f3624234****` are queried. The stack is deployed in the China (Hangzhou) 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
Action	String	Yes	ListTagResources	The operation that you want to perform. Set the value to ListTagResources.
RegionId	String	Yes	cn-hangzhou	The region ID of the tag. You can call the DescribeRegions operation to query the most recent region list.
ResourceType	String	Yes	stack	The type of the resource. Valid values: <ul style="list-style-type: none"> stack stackgroup template
ResourceId.N	RepeatList	No	6bc589b5-9c02-4944-8fc3-f3624234****	The ID of resource N. Valid values of N: 1 to 50. <div style="border: 1px solid #add8e6; padding: 5px; margin-top: 10px;"> <p> Note If you set the ResourceType parameter to stackgroup, you must set the ResourceId.N parameter to the name of the stack group.</p> </div>
Tag.N.Key	String	No	FinanceDept	The key of tag N. Valid values of N: 1 to 20. The tag key cannot be an empty string. <p>The tag key can be up to 128 characters in length. It cannot contain <code>http://</code> or <code>https://</code>, or start with <code>acs:</code> or <code>aliyun</code>.</p>

Parameter	Type	Required	Example	Description
Tag.N.Value	String	No	FinanceJoshua	The value of tag N. 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. It cannot contain <code>http://</code> or <code>https://</code> , or start with <code>acs:</code> or <code>aliyun</code> .
NextToken	String	No	caeba0bbb2be03f84eb48b699f0***	The token that is used to start the next query.

For more information about common parameters, see [Common parameters](#).

Response parameters

Parameter	Type	Example	Description
NextToken	String	caeba0bbb2be03f84eb48b699f0*****	The token that is returned for the next query.
RequestId	String	C429473A-5C66-4661-B5F8-4F900CD4330A	The ID of the request.
TagResources	Array of TagResource		A collection of resources and tags, including the resource ID, resource type, and tag key-value pair.
ResourceId	String	c754d2a4-28f1-46df-b557-9586173a****	The ID of the resource.
ResourceType	String	stack	The type of the resource.
TagKey	String	TagKey1	The tag key of the resource.
TagValue	String	TayValue1	The tag value of the resource.

Examples

Sample request

```

http(s)://ros.aliyuncs.com/?Action=ListTagResources
&RegionId=cn-hangzhou
&ResourceType=stack
&ResourceId.N=6bc589b5-9c02-4944-8fc3-f3624234****
&<Common request parameters>

```

Sample success responses

XML **format**

```

<ListTagResourcesResponse>
  <RequestId>FFBB9725-261D-4321-B627-C98304200065</RequestId>
  <NextToken></NextToken>
  <TagResources>
    <ResourceId>c754d2a4-28f1-46df-b557-9586173a****</ResourceId>
    <TagKey>TagKey1</TagKey>
    <ResourceType>stack</ResourceType>
    <TagValue>TayValue1</TagValue>
  </TagResources>
</ListTagResourcesResponse>

```

JSON **format**

```

{
  "RequestId": "FFBB9725-261D-4321-B627-C98304200065",
  "NextToken": "",
  "TagResources": [
    {
      "ResourceId": "c754d2a4-28f1-46df-b557-9586173a****",
      "TagKey": "TagKey1",
      "ResourceType": "stack",
      "TagValue": "TayValue1"
    }
  ]
}

```

Error codes

For a list of error codes, visit the [API Error Center](#).

HTTP status code	Error code	Error message	Description
400	MissingParameter	One of the input parameters ResourceIds,Tags should be specified.	The error message returned because the ResourceIds or Tags parameter is not specified. You must specify at least one of them.

HTTP status code	Error code	Error message	Description
400	InvalidParameter	The specified parameter ResourceType is invalid, {reason}.	The error message returned because the specified resource type parameter is invalid. reason indicates the specific reason.
400	InvalidParameter	The specified parameter Tags is invalid, {reason}.	The error message returned because the specified Tags parameter is invalid. reason indicates the specific reason.
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.

15.3. ListTagKeys

Queries the list of tag keys.

In this example, the tag keys of the tags that are bound to a stack that resides in the China (Hangzhou) region 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	ListTagKeys	The operation that you want to perform. Set the value to ListTagKeys.

Parameter	Type	Required	Example	Description
RegionId	String	Yes	cn-hangzhou	The region ID of the tag key. You can call the DescribeRegions operation to query the most recent region list.
ResourceType	String	Yes	stack	The type of the resource. Valid values: <ul style="list-style-type: none"> stack stackgroup template
NextToken	String	No	caeba0bbb2be03f84eb48b699f0***	The token that is used to start the next query.

For more information about common request parameters, see [Common parameters](#).

Response parameters

Parameter	Type	Example	Description
NextToken	String	caeba0bbb2be03f84eb48b699f0*****	The token that is returned for the next query.
RequestId	String	C429473A-5C66-4661-B5F8-4F900CD4330A	The ID of the request.
Keys	Array of String	["TagKey1","TagKey2"]	The list of tag keys. Separate multiple tag keys with commas (,).

Examples

Sample requests

```
http(s)://ros.aliyuncs.com/?Action=ListTagKeys
&RegionId=cn-hangzhou
&ResourceType=stack
&<Common request parameters>
```

Sample success responses

`XML` format

```

HTTP/1.1 200 OK
Content-Type:application/xml
<ListTagKeysResponse>
  <Keys>TagKey1</Keys>
  <Keys>TagKey2</Keys>
  <NextToken>caeba0bbb2be03f84eb48b699f0*****</NextToken>
  <RequestId>FAD755D7-F21E-449A-932D-2C59DAF86B14</RequestId>
</ListTagKeysResponse>

```

JSON format

```

HTTP/1.1 200 OK
Content-Type:application/json
{
  "Keys" : [ "TagKey1", "TagKey2" ],
  "NextToken" : "caeba0bbb2be03f84eb48b699f0*****",
  "RequestId" : "FAD755D7-F21E-449A-932D-2C59DAF86B14"
}

```

Error codes

For a list of error codes, visit the [API Error Center](#).

15.4. ListTagValues

You can call this operation to query the value of a specified tag key.

In this example, the tag value corresponding to `TagKey1` of a stack that has tags bound is queried. The stack is deployed in the China (Hangzhou) 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
Action	String	Yes	ListTagValues	The operation that you want to perform. Set the value to ListTagValues.
Key	String	Yes	TagKey1	The key of the tag.
RegionId	String	Yes	cn-hangzhou	The region ID of the tag value. You can call the DescribeRegions operation to query the most recent region list.

Parameter	Type	Required	Example	Description
ResourceType	String	Yes	stack	The type of the resource. Valid values: <ul style="list-style-type: none"> stack stackgroup template
NextToken	String	No	caeba0bbb2be03f84eb48b699f0***	The token that is used to start the next query.

For more information about common parameters, see [Common parameters](#).

Response parameters

Parameter	Type	Example	Description
NextToken	String	caeba0bbb2be03f84eb48b699f0****	The token that is returned for the next query.
RequestId	String	C429473A-5C66-4661-B5F8-4F900CD4330A	The ID of the request.
Values	List	TagValue1	The value of the tag.

Examples

Sample request

```
http(s)://ros.aliyuncs.com/?Action=ListTagValues
&Key=TagKey1
&RegionId=cn-hangzhou
&ResourceType=stack
&<Common request parameters>
```

Sample success responses

XML format

```
<ListTagValuesResponse>
  <NextToken></NextToken>
  <RequestId>BD1EB89F-F2CD-4663-B602-26868A49EAFD</RequestId>
  <Values>TagValue1</Values>
</ListTagValuesResponse>
```

JSON format

```
{
  "NextToken": "",
  "RequestId": "BD1EB89F-F2CD-4663-B602-26868A49EAFD",
  "Values": [
    "TagValue1"
  ]
}
```

Error codes

For a list of error codes, visit the [API Error Center](#).

15.5. UntagResources

You can call this operation to unbind and delete tags from a specific ROS resource list.

In this example, all tags are unbound from the stack whose ID is `46ec7b78-9d5e-4b21-ae fd-448c90aa****`. The stack is deployed in the China (Hangzhou) 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
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 tag. You can call the DescribeRegions operation to query the most recent region list.
ResourceId.N	RepeatList	Yes	46ec7b78-9d5e-4b21-ae fd-448c90aa****	The ID of resource N. Valid values of N: 1 to 50. Note If you set the ResourceType parameter to stackgroup, you must set the ResourceId.N parameter to the name of the stack group.

Parameter	Type	Required	Example	Description
ResourceType	String	Yes	stack	The type of the resource. Valid values: <ul style="list-style-type: none"> stack stackgroup template
TagKey.N	RepeatList	No	FinanceDept	The value of tag N. Valid values of N: 1 to 20.
All	Boolean	No	true	Specifies whether to unbound all the tags from the resource. This parameter takes effect only when the TagKey.N parameter is not specified in the request. Default value: false. Valid values: <ul style="list-style-type: none"> true: All tags are unbound from the resource list. false: Specified tags are unbound from the resource list.

For more information about common parameters, see [Common parameters](#).

Response parameters

Parameter	Type	Example	Description
RequestId	String	C46FF5A8-C5F0-4024-8262-B16B639225A0	The ID of the request.

Examples

Sample request

```
http(s)://ros.aliyuncs.com/?Action=UntagResources
&RegionId=cn-hangzhou
&ResourceId.1=46ec7b78-9d5e-4b21-ae4d-448c90aa****
&ResourceType=stack
&All=true
&<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

For a list of error codes, visit the [API Error Center](#).

HTTP status code	Error code	Error message	Description
400	InvalidParameter	The specified parameter ResourceType is invalid, {reason}.	The error message returned because the specified resource type parameter is invalid. reason indicates the specific reason.
400	InvalidParameter	The specified parameter ResourceIds is invalid, {reason}.	The error message returned because the specified resource ID does not exist, or the verification failed. reason indicates the specific reason.
400	InvalidParameter	The specified parameter Tags is invalid, {reason}.	The error message returned because the specified Tags parameter is invalid. reason indicates the specific reason.
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.

16. Other operations

16.1. DescribeRegions

Queries the list of available 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.
AcceptLanguage	String	No	zh-CN	The language in which the returned results are displayed. Default value: zh-CN. Valid values: <ul style="list-style-type: none">zh-CN: Chineseen-US: Englishja: Japanese

Response parameters

Parameter	Type	Example	Description
RequestId	String	59F0F0A0-A637-4292-9B91-251EF5010913	The ID of the request.
Regions	Array of Region		The list of regions.
LocalName	String	China (Hangzhou)	The name of the region.
RegionEndpoint	String	ros.aliyuncs.com	The endpoint of the region.
RegionId	String	cn-hangzhou	The ID of the region.

Examples

Sample requests

```
http(s)://[Endpoint]/?Action=DescribeRegions
&AcceptLanguage=zh-CN
&<Common request parameters>
```

Sample success responses

XML **format**

```
HTTP/1.1 200 OK
Content-Type:application/xml
<DescribeRegionsResponse>
  <RequestId>59F0F0A0-A637-4292-9B91-251EF5010913</RequestId>
  <Regions>
    <RegionId>cn-qingdao</RegionId>
    <RegionEndpoint>ros.aliyuncs.com</RegionEndpoint>
    <LocalName>China (Qingdao)</LocalName>
  </Regions>
  <Regions>
    <RegionId>cn-beijing</RegionId>
    <RegionEndpoint>ros.aliyuncs.com</RegionEndpoint>
    <LocalName>China (Beijing)</LocalName>
  </Regions>
  <Regions>
    <RegionId>cn-zhangjiakou</RegionId>
    <RegionEndpoint>ros.aliyuncs.com</RegionEndpoint>
    <LocalName>China (Zhangjiakou)</LocalName>
  </Regions>
  <Regions>
    <RegionId>cn-huhehaote</RegionId>
    <RegionEndpoint>ros.aliyuncs.com</RegionEndpoint>
    <LocalName>China (Hohhot)</LocalName>
  </Regions>
  <Regions>
    <RegionId>cn-wulanchabu</RegionId>
    <RegionEndpoint>ros.aliyuncs.com</RegionEndpoint>
    <LocalName>China (Ulanqab)</LocalName>
  </Regions>
  <Regions>
    <RegionId>cn-hangzhou</RegionId>
    <RegionEndpoint>ros.aliyuncs.com</RegionEndpoint>
    <LocalName>China (Hangzhou)</LocalName>
  </Regions>
  <Regions>
    <RegionId>cn-shanghai</RegionId>
    <RegionEndpoint>ros.aliyuncs.com</RegionEndpoint>
    <LocalName>China (Shanghai)</LocalName>
  </Regions>
  <Regions>
    <RegionId>cn-shenzhen</RegionId>
    <RegionEndpoint>ros.aliyuncs.com</RegionEndpoint>
    <LocalName>China (Shenzhen)</LocalName>
  </Regions>
```

```
<Regions>
  <RegionId>cn-heyuan</RegionId>
  <RegionEndpoint>ros.aliyuncs.com</RegionEndpoint>
  <LocalName>China (Heyuan)</LocalName>
</Regions>
<Regions>
  <RegionId>cn-guangzhou</RegionId>
  <RegionEndpoint>ros.aliyuncs.com</RegionEndpoint>
  <LocalName>China (Guangzhou)</LocalName>
</Regions>
<Regions>
  <RegionId>cn-chengdu</RegionId>
  <RegionEndpoint>ros.aliyuncs.com</RegionEndpoint>
  <LocalName>China (Chengdu)</LocalName>
</Regions>
<Regions>
  <RegionId>cn-hongkong</RegionId>
  <RegionEndpoint>ros.aliyuncs.com</RegionEndpoint>
  <LocalName>China (Hong Kong)</LocalName>
</Regions>
<Regions>
  <RegionId>ap-northeast-1</RegionId>
  <RegionEndpoint>ros.aliyuncs.com</RegionEndpoint>
  <LocalName>Japan (Tokyo)</LocalName>
</Regions>
<Regions>
  <RegionId>ap-northeast-2</RegionId>
  <RegionEndpoint>ros.aliyuncs.com</RegionEndpoint>
  <LocalName>South Korea (Seoul)</LocalName>
</Regions>
<Regions>
  <RegionId>ap-southeast-1</RegionId>
  <RegionEndpoint>ros.aliyuncs.com</RegionEndpoint>
  <LocalName>Singapore (Singapore)</LocalName>
</Regions>
<Regions>
  <RegionId>ap-southeast-2</RegionId>
  <RegionEndpoint>ros.aliyuncs.com</RegionEndpoint>
  <LocalName>Australia (Sydney)</LocalName>
</Regions>
<Regions>
  <RegionId>ap-southeast-3</RegionId>
  <RegionEndpoint>ros.aliyuncs.com</RegionEndpoint>
  <LocalName>Malaysia (Kuala Lumpur)</LocalName>
</Regions>
<Regions>
  <RegionId>ap-southeast-6</RegionId>
  <RegionEndpoint>ros.aliyuncs.com</RegionEndpoint>
  <LocalName>Philippines (Manila)</LocalName>
</Regions>
<Regions>
  <RegionId>ap-southeast-5</RegionId>
  <RegionEndpoint>ros.aliyuncs.com</RegionEndpoint>
  <LocalName>Indonesia (Jakarta)</LocalName>
</Regions>
```

```

</Regions>
<Regions>
  <RegionId>ap-south-1</RegionId>
  <RegionEndpoint>ros.aliyuncs.com</RegionEndpoint>
  <LocalName>India (Mumbai)</LocalName>
</Regions>
<Regions>
  <RegionId>ap-southeast-7</RegionId>
  <RegionEndpoint>ros.aliyuncs.com</RegionEndpoint>
  <LocalName>Thailand (Bangkok)</LocalName>
</Regions>
<Regions>
  <RegionId>us-east-1</RegionId>
  <RegionEndpoint>ros.aliyuncs.com</RegionEndpoint>
  <LocalName>US (Virginia)</LocalName>
</Regions>
<Regions>
  <RegionId>us-west-1</RegionId>
  <RegionEndpoint>ros.aliyuncs.com</RegionEndpoint>
  <LocalName>US (Silicon Valley)</LocalName>
</Regions>
<Regions>
  <RegionId>eu-west-1</RegionId>
  <RegionEndpoint>ros.aliyuncs.com</RegionEndpoint>
  <LocalName>UK (London)</LocalName>
</Regions>
<Regions>
  <RegionId>me-east-1</RegionId>
  <RegionEndpoint>ros.aliyuncs.com</RegionEndpoint>
  <LocalName>UAE (Dubai)</LocalName>
</Regions>
<Regions>
  <RegionId>eu-central-1</RegionId>
  <RegionEndpoint>ros.aliyuncs.com</RegionEndpoint>
  <LocalName>Germany (Frankfurt)</LocalName>
</Regions>
</DescribeRegionsResponse>

```

JSON format

```

HTTP/1.1 200 OK
Content-Type:application/json
{
  "RequestId" : "59F0F0A0-A637-4292-9B91-251EF5010913",
  "Regions" : [ {
    "RegionId" : "cn-qingdao",
    "RegionEndpoint" : "ros.aliyuncs.com",
    "LocalName": "China (Qingdao)"
  }, {
    "RegionId" : "cn-beijing",
    "RegionEndpoint" : "ros.aliyuncs.com",
    "LocalName": "China (Beijing)"
  }, {
    "RegionId" : "cn-zhangjiakou",

```

```
"RegionEndpoint" : "ros.aliyuncs.com",
"LocalName": "China (Zhangjiakou)"
}, {
  "RegionId" : "cn-huhehaote",
  "RegionEndpoint" : "ros.aliyuncs.com",
  "LocalName": "China (Hohhot)"
}, {
  "RegionId" : "cn-wulanchabu",
  "RegionEndpoint" : "ros.aliyuncs.com",
  "LocalName": "China (Ulanqab)"
}, {
  "RegionId" : "cn-hangzhou",
  "RegionEndpoint" : "ros.aliyuncs.com",
  "LocalName": "China (Hangzhou)",
}, {
  "RegionId" : "cn-shanghai",
  "RegionEndpoint" : "ros.aliyuncs.com",
  "LocalName": "China (Shanghai)"
}, {
  "RegionId" : "cn-shenzhen",
  "RegionEndpoint" : "ros.aliyuncs.com",
  "LocalName": "China (Shenzhen)"
}, {
  "RegionId" : "cn-heyuan",
  "RegionEndpoint" : "ros.aliyuncs.com",
  "LocalName": "China (Heyuan)"
}, {
  "RegionId" : "cn-guangzhou",
  "RegionEndpoint" : "ros.aliyuncs.com",
  "LocalName": "China (Guangzhou)"
}, {
  "RegionId" : "cn-chengdu",
  "RegionEndpoint" : "ros.aliyuncs.com",
  "LocalName": "China (Chengdu)"
}, {
  "RegionId" : "cn-hongkong",
  "RegionEndpoint" : "ros.aliyuncs.com",
  "LocalName": "China (Hong Kong)"
}, {
  "RegionId" : "ap-northeast-1",
  "RegionEndpoint" : "ros.aliyuncs.com",
  "LocalName": "Japan (Tokyo)"
}, {
  "RegionId" : "ap-northeast-2",
  "RegionEndpoint" : "ros.aliyuncs.com",
  "LocalName": "South Korea (Seoul)"
}, {
  "RegionId" : "ap-southeast-1",
  "RegionEndpoint" : "ros.aliyuncs.com",
  "LocalName": "Singapore (Singapore)"
}, {
  "RegionId" : "ap-southeast-2",
  "RegionEndpoint" : "ros.aliyuncs.com",
  "LocalName": "Australia (Sydney)"
```

```
}, {
  "RegionId" : "ap-southeast-3",
  "RegionEndpoint" : "ros.aliyuncs.com",
  "LocalName": "Malaysia (Kuala Lumpur)"
}, {
  "RegionId" : "ap-southeast-6",
  "RegionEndpoint" : "ros.aliyuncs.com",
  "LocalName": "Philippines (Manila)"
}, {
  "RegionId" : "ap-southeast-5",
  "RegionEndpoint" : "ros.aliyuncs.com",
  "LocalName": "Indonesia (Jakarta)"
}, {
  "RegionId" : "ap-south-1",
  "RegionEndpoint" : "ros.aliyuncs.com",
  "LocalName": "India (Mumbai)"
}, {
  "RegionId" : "ap-southeast-7",
  "RegionEndpoint" : "ros.aliyuncs.com",
  "LocalName": "Thailand (Bangkok)"
}, {
  "RegionId" : "us-east-1",
  "RegionEndpoint" : "ros.aliyuncs.com",
  "LocalName": "US (Virginia)"
}, {
  "RegionId" : "us-west-1",
  "RegionEndpoint" : "ros.aliyuncs.com",
  "LocalName": "US (Silicon Valley)"
}, {
  "RegionId" : "eu-west-1",
  "RegionEndpoint" : "ros.aliyuncs.com",
  "LocalName": "UK (London)"
}, {
  "RegionId" : "me-east-1",
  "RegionEndpoint" : "ros.aliyuncs.com",
  "LocalName": "UAE (Dubai)"
}, {
  "RegionId" : "eu-central-1",
  "RegionEndpoint" : "ros.aliyuncs.com",
  "LocalName": "Germany (Frankfurt)"
} ]
}
```

Error codes

For a list of error codes, visit the [API Error Center](#).

16.2. SignalResource

You can call this operation to send signals.

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	SignalResource	The operation that you want to perform. Set the value to SignalResource.
RegionId	String	Yes	cn-hangzhou	The region ID of the stack. You can call the DescribeRegions operation to query the most recent region list.
StackId	String	Yes	4a6c9851-3b0f-4f5f-b4ca-a14bf691****	The ID of the stack.
LogicalResourceId	String	Yes	WebServer	The logical ID of the resource as defined in the template.
Status	String	Yes	SUCCESS	The status of the signal. Failure signals can cause stack creation or update to fail. If all signals are warnings, the stack cannot be created or updated. Valid values: <ul style="list-style-type: none"> SUCCESS FAILURE WARNING
UniqueId	String	Yes	27c7347b-352a-4377-accf-63d361c1****	The unique ID of the signal. The ID must be 1 to 64 characters in length. If multiple signals are sent to a single resource, each signal must have a unique ID.

Parameter	Type	Required	Example	Description
ClientToken	String	No	123e4567-e89b-12d3-a456-42665544****	<p>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.</p> <p>The token can be up to 64 characters in length and can contain letters, digits, hyphens (-) and underscores (_).</p> <p>For more information, see How to ensure idempotence.</p>

Response parameters

Parameter	Type	Example	Description
RequestId	String	B288A0BE-D927-4888-B0F7-B35EF84B6E6	The ID of the request.

Examples

Sample requests

```
http(s)://ros.aliyuncs.com/? Action=SignalResource
&RegionId=cn-hangzhou
&StackId=4a6c9851-3b0f-4f5f-b4ca-a14bf691****
&LogicalResourceId=WebServer
&Status=SUCCESS
&UniqueId=27c7347b-352a-4377-accf-63d361c1****
&<Common request parameters>
```

Sample success responses

XML format

```
<SignalResourceResponse>
  <RequestId>B288A0BE-D927-4888-B0F7-B35EF84B6E6F</RequestId>
</SignalResourceResponse>
```

JSON format

```
{
  "RequestId": "B288A0BE-D927-4888-B0F7-B35EF84B6E6F"
}
```

Error codes

For a list of error codes, visit the [API Error Center](#).

HttpCode	Error code	Error message	Description
404	ResourceNotAvailable	The Resource ({name}) is not available.	The error message returned because the specified resource is unavailable. name indicates the resource name.
404	ResourceNotFound	The Resource ({name}) could not be found in Stack {stack}.	The error message returned because the specified resource does not exist in the specified stack. name indicates the resource name, and stack indicates the stack name or ID.
404	StackNotFound	The Stack ({name}) could not be found.	The error message returned because the specified stack does not exist. name indicates the name or ID of the stack.

16.3. GetServiceProvisions

Queries the activation status and the RAM roles of an Alibaba Cloud service.

Description

This topic describes how to query the activation status and the RAM roles of an Alibaba Cloud service. In this example, Elastic High Performance Computing (E-HPC) that is deployed in the China (Hangzhou) region is 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	GetServiceProvisions	The operation that you want to perform. Set the value to GetServiceProvisions.
RegionId	String	Yes	cn-hangzhou	The ID of the region. You can call the DescribeRegions operation to query the most recent region list.
TemplateBody	String	No	<pre>{"ROSTemplateFormatVersion": "2015-09-01", "Resources": {"ApiGateway": {"Type": "ALIYUN::ApiGateway::Group", "Properties": {"GroupName": "ros_example"}}, "FC": {"Type": "ALIYUN::FC::Service", "Properties": {"ServiceName": "ros_example"}}}}</pre>	The structure that contains the template body. The template body must be 1 to 524,288 bytes in length. If the length of the template body exceeds the upper limit, we recommend that you add parameters to the HTTP POST request body to prevent request failures caused by excessively long URLs. You must specify only one of the following parameters: TemplateBody, TemplateURL, TemplateId, and Services.N.ServiceName.
TemplateURL	String	No	oss://ros-template/demo	The URL of the file that contains the template body. The URL must point to a template that is located on an HTTP or HTTPS web server or in an Object Storage Service (OSS) bucket. Example: oss://ros/template/demo or oss://ros/template/demo?RegionId=cn-hangzhou. The template body can be 1 to 524,288 bytes in length. If you do not specify the region of the OSS bucket, the value of the RegionId parameter is used. You must specify only one of the following parameters: TemplateBody, TemplateURL, TemplateId, and Services.N.ServiceName.

Parameter	Type	Required	Example	Description
TemplateId	String	No	5ecd1e10-b0e9-4389-a565-e4c15efc****	<p>The ID of the template. This parameter applies to shared and private templates.</p> <p>You must specify only one of the following parameters: TemplateBody, TemplateURL, TemplateId, and Services.N.ServiceName.</p>
TemplateVersion	String	No	v1	<p>The version of the template. If you do not specify this parameter, the latest version is used.</p> <p>This parameter takes effect only when the TemplateId parameter is specified.</p>
Parameters.N.ParameterKey	String	Yes	Amount	<p>The name of parameter N. If you do not specify the name and value of a parameter, Resource Orchestration Service (ROS) uses the default name and value that are specified in the template.</p> <div style="background-color: #e0f2f1; padding: 10px; border: 1px solid #ccc;"> <p> Note Parameters in Parameters.N.ParameterKey is optional. If you specify Parameters, you must specify the Parameters.N.ParameterKey parameter.</p> </div>
Parameters.N.ParameterValue	String	Yes	12	<p>The value of parameter N.</p> <div style="background-color: #e0f2f1; padding: 10px; border: 1px solid #ccc;"> <p> Note Parameters in Parameters.N.ParameterValue is optional. If you specify Parameters, you must specify the Parameters.N.ParameterValue parameter.</p> </div>
				<p>The name of service N or feature N. Valid values:</p>

Parameter	Type	Required	Example	Description
Services.N.Service Name	String	Yes	EHPC	<ul style="list-style-type: none"> AHAS: Application High Availability Service ARMS: Application Real-Time Monitoring Service (ARMS) ApiGateway: API Gateway BatchCompute: Batch Compute BrainIndustrial: Industrial Brain CloudStorageGateway: Cloud Storage Gateway (CSG) CMS: CloudMonitor CR: Container Registry CS: Container Service for Kubernetes (ACK) DCDN: Dynamic Route for CDN (DCDN) DataHub: DataHub DataWorks: DataWorks EDAS: Enterprise Distributed Application Service (EDAS) E-HPC: Elastic High Performance Computing (E-HPC) EMAS: Enterprise Mobile Application Studio (EMAS) FC: Function Compute FNF: Serverless Workflow (SWF) MaxCompute: MaxCompute MNS: Message Service (MNS) HBR: Hybrid Backup Recovery (HBR) IMM: Intelligent Media Management IOT: IoT Platform KMS: Key Management Service (KMS) NAS: Apsara File Storage NAS (NAS) NLP: Natural Language Processing (NLP) OSS: OSS OTS: Tablestore PrivateLink: PrivateLink PrivateZone: Alibaba Cloud DNS (DNS) RocketMQ: Message Queue for Apache RocketMQ SAE: Serverless App Engine (SAE) SLS: Log Service TrafficMirror: the traffic mirroring feature VS: Video Surveillance System

Parameter	Type	Required	Example	Description
				<ul style="list-style-type: none"> Xtrace: Tracing Analysis

For more information about common request parameters, see [Common parameters](#).

Response parameters

Parameter	Type	Example	Description
RequestId	String	A9938C04-26AD-5EFA-B394-EA7866842DFF	The ID of the request.
ServiceProvisions	Array of ServiceProvisions		The information about the service.
ServiceName	String	EHPC	The name of the service.
Status	String	Enabled	<p>The activation status of the service. Valid values:</p> <ul style="list-style-type: none"> Enabled: The service is activated. Disabled: The service is not activated. Unknown: The activation status of the service is unknown.
StatusReason	String	No permission.	<p>The reason why the activation state of the service is Disabled or Unknown.</p> <div style="background-color: #e0f2f1; padding: 5px;"> <p> Note This parameter is returned when the Status parameter is set to Disabled or Unknown.</p> </div>
AutoEnableService	Boolean	false	<p>Indicates whether automatic activation for the service is defined in the template. Valid values:</p> <ul style="list-style-type: none"> true: Automatic activation for the service is defined in the template. false: Manual activation for the service is defined in the template.

Parameter	Type	Example	Description
EnableURL	String	<code>https://common-buy.aliyun.com/?commodityCode=na s</code>	<p>The URL that points to the activation page of the service.</p> <p>Note This parameter is returned when the Status parameter is set to Disabled.</p>
RoleProvision	Object		The information about the RAM role of the service. If this parameter is empty, no RAM role is associated with the service.
Roles	Array of Role		The RAM roles of the service.
RoleName	String	<code>AliyunServiceRoleFor EHPC</code>	The name of the RAM role.
Created	Boolean	<code>true</code>	<p>Indicates whether the RAM role is created. Valid values:</p> <ul style="list-style-type: none"> <code>true</code>: The RAM role is created. <code>false</code>: The RAM role is not created.
Function	String	<code>Default</code>	<p>The purpose for which the RAM role is used.</p> <p>Default value: <code>Default</code>. This value indicates that the RAM role is the default role of the service.</p>
AuthorizationURL	String	<code>https://ehpc.console.aliyun.com/</code>	<p>The authorization URL of the RAM role.</p> <p>Note This parameter is returned when the Created parameter is set to false.</p>
DependentServiceNames	Array of String	<code>NAS</code>	The names of Alibaba Cloud services on which the service that you want to query depends.

Examples

Sample requests

```
http(s)://ros.aliyuncs.com/?Action=GetServiceProvisions
&RegionId=cn-hangzhou
&ServiceName=EHPC
&<Common request parameters>
```

Sample success responses

XML **format**

```
HTTP/1.1 200 OK
Content-Type:application/xml
<GetServiceProvisionsResponse>
  <RequestId>A9938C04-26AD-5EFA-B394-EA7866842DFF</RequestId>
  <ServiceProvisions>
    <Status>Enabled</Status>
    <DependentServiceNames>NAS</DependentServiceNames>
    <ServiceName>EHPC</ServiceName>
    <RoleProvision>
      <Roles>
        <Function>Default</Function>
        <RoleName>AliyunServiceRoleForEHPC</RoleName>
        <Created>>true</Created>
      </Roles>
    </RoleProvision>
    <AutoEnableService>>false</AutoEnableService>
  </ServiceProvisions>
  <ServiceProvisions>
    <Status>Enabled</Status>
    <ServiceName>NAS</ServiceName>
    <RoleProvision>
    </RoleProvision>
    <AutoEnableService>>false</AutoEnableService>
  </ServiceProvisions>
</GetServiceProvisionsResponse>
```

JSON **format**

```
HTTP/1.1 200 OK
Content-Type:application/json
{
  "RequestId" : "A9938C04-26AD-5EFA-B394-EA7866842DFF",
  "ServiceProvisions" : [ {
    "Status" : "Enabled",
    "DependentServiceNames" : [ "NAS" ],
    "ServiceName" : "EHPC",
    "RoleProvision" : {
      "Roles" : [ {
        "Function" : "Default",
        "RoleName" : "AliyunServiceRoleForEHPC",
        "Created" : true
      } ]
    }
  }, {
    "AutoEnableService" : false
  }, {
    "Status" : "Enabled",
    "DependentServiceNames" : [ ],
    "ServiceName" : "NAS",
    "RoleProvision" : {
      "Roles" : [ ]
    }
  }, {
    "AutoEnableService" : false
  } ]
}
```

Error codes

For a list of error codes, visit the [API Error Center](#).

17. Appendix

17.1. Ensure idempotence

If a request times out or an internal error occurs on the server when you call the Resource Orchestration Service (ROS) API, the client may attempt to send a retry request. In this case, you can specify the `ClientToken` parameter in the request to prevent the client from repeatedly sending the request.

What is idempotence?

Idempotence is a property of some operations and resources in mathematics or computer science. Idempotence allows you to obtain the result of the initial request after you perform operations or apply resources multiple times. Idempotence is important to the design of distributed systems.

Ensure idempotence

In most cases, a client sends a retry request when the returned HTTP status code is `500 Internal Server Error` or `503 Service Unavailable`, or when no result is returned. When you call the ROS API, you can specify a parameter so that your client can generate a string that contains up to 64 ASCII characters in length, and specify the string as the value of the `ClientToken` parameter to ensure the idempotence of the retry request.

ClientToken

The following information describes the `ClientToken` request parameter:

- The value of the `ClientToken` parameter is a unique and case-sensitive string that is generated by a client and can contain up to 64 ASCII characters in length. Example: `ClientToken=123e4567-e89b-12d3-a456-42665544****`.
- If a retry request contains the same `ClientToken` value as the initial request but contains different values of some other parameters, ROS returns the `InvalidIdempotenceParameter` error code.

 **Note** The values of the `SignatureNonce`, `Timestamp`, and `Signature` parameters in a retry request must be changed. In the ROS API, the `SignatureNonce` parameter prevents replay attacks and the `Timestamp` parameter records the time of each request. Therefore, the values of the `SignatureNonce` and `Timestamp` parameters in each retry request must be different from the values in the initial request. By default, the value of the `Signature` parameter is changed when you change the values of the `SignatureNonce` and `Timestamp` parameters.

- After you specify the `ClientToken` parameter in a retry request, the following results may be returned:
 - The HTTP status code `200 OK` that indicates a successful call is returned. In this case, the client can obtain the same result as the initial request. The server is not affected.
 - The HTTP status code that indicates a failed call such as `400 Bad Request` is returned. In this case, the retry request fails if an error message such as `try it later` appears. You can identify the causes of the errors based on the error messages and send another retry request.

Sample requests

In this example, the CreateStack operation is called to create a stack in a retry request. If you set the ClientToken request parameter to the ClientToken value contained in the initial request and do not change the values of other request parameters, the StackId value returned by the server is the same as that in the initial request. If you set the ClientToken parameter to a value that is different from the one in the initial request, the server may return different values for the StackId parameter and create multiple stacks.

Sample requests

```
http(s)://ros.aliyuncs.com/?Action=CreateStack
&RegionId=cn-hangzhou
&StackName=MyStack
&TemplateBody={"ROSTemplateFormatVersion": "2015-09-01"}
&ClientToken=123e4567-e89b-12d3-a456-42665544****
&<Common request parameters>
```

Sample responses

```
{
  "StackId": "4a6c9851-3b0f-4f5f-b4ca-a14bf691****",
  "RequestId": "B288A0BE-D927-4888-B0F7-B35EF84B6E6F"
}
```