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E-MapReduce

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 `cd /d C:/window` command to enter the Windows system folder.
Italic	Italic formatting is used for parameters and variables.	`bae log list --instanceid` *Instance_ID*
[] or [a|b]	This format is used for an optional value, where only one item can be selected.	`ipconfig [-all|-t]`
{} or {a|b}	This format is used for a required value, where only one item can be selected.	`switch {active|stand}`

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1.List of operations by function

The following tables list the API operations available for use in E-MapReduce (EMR).

Cluster management

Operation	Description
CreateClusterV2	Creates an EMR cluster.
ModifyClusterName	Modifies the name of a cluster.
DescribeClusterV2	Queries the basic information of a cluster, such as the billing method, Elastic Compute Service (ECS) instance overview, and EMR services.
ReleaseCluster	Releases all nodes in a cluster.
ResizeClusterV2	Scales a cluster.
ListClusters	Queries clusters. The query results are returned by page.
CreateClusterTemplate	Creates a cluster template. You can use this template to initialize new clusters during data development.
CreateClusterWithTemplate	Creates a cluster by using a cluster template.
DeleteClusterTemplate	Deletes a cluster template.
DescribeClusterTemplate	Queries the details of a cluster template.
ListClusterHost	Queries the information of hosts in an EMR cluster, such as the configurations of disks, CPUs, and memory.
ListClusterServiceQuickLink	Queries the links of services that are used in a cluster.
ListClusterTemplates	Queries cluster templates.
ListEmrAvailableConfig	Queries the available configurations that can be used to create an EMR cluster.
ListEmrAvailableResource	Queries available EMR resources.
ListEmrMainVersion	Queries EMR versions.
ModifyClusterTemplate	Modifies a cluster template.
DescribeClusterBasicInfo	Queries basic information of a created cluster.
ListClusterHostGroup	Queries host groups in a cluster.
Create and bind a tag	Creates and binds tags to specified EMR clusters.
Query tag list	Queries the tags that are bound to one or more EMR clusters.

Operation	Description
Unbind a tag	Unbinds tags from specified EMR clusters. If a tag is not bound to any other clusters after it is unbound from a cluster, the tag is automatically deleted.
Add to a resource group	Adds an EMR resource to a resource group.
Scale in a cluster	Removes host groups from a cluster.

Cluster service management

Operation	Description
AddClusterService	Adds a service that is supported by the current EMR version to a specified cluster.
CreateResourcePool	Creates a YARN resource pool.
CreateResourceQueue	Creates a resource queue.
DeleteResourcePool	Deletes a specified resource pool.
DeleteResourceQueue	Deletes a resource queue.
DescribeClusterOperationHostTaskLog	Queries the operations logs of a specified task on a specified host of a cluster.
DescribeClusterResourcePoolSchedulerType	Queries the scheduling policies of resource pools.
DescribeClusterService	Queries the details of a service in a cluster.
DescribeClusterServiceConfig	Queries the configuration details of a specified service in a cluster.
DescribeClusterServiceConfigTag	Queries the configuration tags and tag values of a specified service in a cluster. The responses that are returned can be used to filter configuration items.
ListClusterHostComponent	Queries the components that are installed on each host of a cluster.
ListClusterOperation	Queries the actions that are taken on a cluster.
View the task list for a specified host	Queries the tasks of the cluster on which a specific action is taken.
ListClusterOperationHost	Queries the hosts on which a specific action is taken.
ListClusterOperationHostTask	Queries the tasks of the host on which a specific action is taken.
Query the list of services installed on a cluster	Queries the services that are installed in a cluster.
ListClusterService	Queries services in a cluster.

Operation	Description
ListClusterServiceComponentHealthInfo	Queries the health information of the components of a specified service in a cluster.
ListClusterServiceConfigHistory	Queries the configuration change history of a specified service in a cluster.
ListResourcePool	Queries resource pools.
ModifyClusterServiceConfig	Modifies the configuration information of a specified service in a cluster.
ModifyResourcePool	Updates a resource pool.
ModifyResourcePoolSchedulerType	Modifies the scheduler type of a resource pool.
ModifyResourceQueue	Modifies a resource queue.
RefreshClusterResourcePool	Synchronizes the configuration of a resource pool to a cluster.
RunClusterServiceAction	Performs a specified action on a specified service in a cluster.

Tag management

Operation	Description
Create and bind a tag	Creates and binds tags to specified EMR clusters.
Query tag list	Queries the tags that are bound to one or more EMR clusters.
Unbind a tag	Unbinds tags from specified EMR clusters.

Auto scaling

Operation	Description
Create a scaling group	Creates a scaling group.
Create a Auto Scaling configuration items	Adds a scaling configuration item.
Modify a scaling group	Modifies the basic information of a scaling group.
View scaling groups	Queries scaling groups.
View scaling configuration items	Queries scaling configuration items.
View scaling activities	Queries scaling activities.

Operation	Description
Querying Scaling configuration items Details	Queries the details of a scaling configuration item.
View scaling group instance details	Queries the instance details of a running scaling group.
Query details about a scaling Group	Queries the details of a scaling group.
Perform operations on scaling Group instances	Performs a sample control action on a scaling group.
Delete Auto Scaling configuration items	Removes a scaling configuration item.

Data development

Operation	Description
CloneFlow	Clones a workflow.
CloneFlowJob	Clones a job.
CreateFlowCategory	Creates a directory.
CreateFlowForWeb	Creates a custom graphical workflow.
CreateFlowJob	Creates a data development job.
CreateFlowProject	Creates a data development project.
CreateFlowProjectClusterSetting	Creates cluster settings for a project.
CreateFlowProjectUser	Adds a RAM user for a project.
DeleteFlow	Deletes a workflow.
DeleteFlowCategory	Deletes a workflow directory.
DeleteFlowJob	Deletes a job.
DeleteFlowProject	Deletes a data development project.
DeleteFlowProjectClusterSetting	Deletes cluster settings from a project.
DeleteFlowProjectUser	Deletes a RAM user from a project.
DescribeFlow	Queries the information of a workflow.
DescribeFlowCategory	Queries the information of a directory.
DescribeFlowCategoryTree	Queries the information of a directory tree.
DescribeFlowInstance	Queries the information of a workflow instance.

Operation	Description
DescribeFlowJob	Queries the information of a job.
DescribeFlowNodeInstance	Queries the details of the instance on which a workflow node or a job node runs.
DescribeFlowNodeInstanceContainerLog	Queries the log of a container that runs on a node instance.
DescribeFlowNodeInstanceLauncherLog	Queries the log of a launcher that runs on a node instance.
DescribeFlowProject	Queries the details of a project.
DescribeFlowProjectClusterSetting	Queries the cluster settings for a project.
KillFlowJob	Terminates a job instance.
ListFlow	Queries workflows.
ListFlowCluster	Queries the clusters that are available for a project.
ListFlowClusterAll	Queries all the clusters that are available in a specified region for data development.
ListFlowClusterAllHosts	Queries the member hosts that you can add to the whitelist of a project. Only master nodes and the nodes in a gateway cluster are supported.
ListFlowInstance	Queries workflow instances.
ListFlowJob	Queries jobs.
ListFlowJobHistory	Queries job instances.
Query the list of workflow node instances	Queries the instances on which workflow nodes run.
ListFlowNodeInstanceContainerStatus	Queries the status of containers that run on a node instance.
ListFlowNodeSqlResult	Queries the SQL results of a node instance.
ListFlowProject	Queries projects.
ListFlowProjectClusterSetting	Queries the cluster settings for a project.
ListFlowProjectUser	Queries the users of a project.
Modify workflows	Modifies a workflow.

Operation	Description
Query the directory of a workflow	Queries workflow directories.
Modify project cluster settings	Modifies the cluster settings for a project.
Rename a directory	Renames a directory.
ModifyFlowForWeb	Modifies a custom graphical workflow.
ModifyFlowJob	Modifies a data development job.
RerunFlow	Reruns a workflow instance. Before you rerun a workflow instance, make sure that the previous execution of the workflow instance is completed.
ResumeFlow	Resumes a workflow.
SubmitFlow	Submits a workflow.
SubmitFlowJob	Submits a job. You can run only one job instance at a time.
SuspendFlow	Suspends a workflow.
ModifyFlowProject	Modifies a data development project.
ListFlowClusterHost	Queries the hosts that can submit jobs in a cluster.

2.Description of calls

2.1. Request structure

Endpoint

The API service access address is as follows:

Region	Endpoint
cn-hangzhou: China East 1 (Hangzhou)	emr.aliyuncs.com
cn-beijing: China North 2 (Beijing)	emr.aliyuncs.com
cn-shanghai: China East 2 (Shanghai)	emr.aliyuncs.com
cn-shenzhen: China South 1 (Shenzhen)	emr.aliyuncs.com
ap-southeast-1: Asia Pacific SE 1 (Singapore)	emr.aliyuncs.com
us-west-1: US West 1 (Silicon Valley)	emr.aliyuncs.com
others: other regions	emr.[RegionId].aliyuncs.com

Protocols

We recommend that you send requests using the HTTPS channel for enhanced security.

Request methods

You can send requests using the HTTP GET method. In an HTTP GET request, parameters are included as part of the URL.

Request parameters

Each request must specify the operation to be executed, namely, the action parameter (for example, CreateDatabase), and each operation must contain the common request parameters and the specific request parameters of the specified operation.

Encoding

Both requests and responses use UTF-8 for encoding.

2.2. Common parameters

A common request parameter refers to a request parameter that is used by each API.

Common request parameters

Common request parameters are listed in the following table.

Name	Type	Required	Description
Format	String	No	The format of the return value. Valid values: JSON and XML. Default value: XML.
Version	String	Yes	The version of the API in the date format of YYYY-MM-DD.
AccessKeyId	String	Yes	The Access Key ID that is issued by Alibaba Cloud for user access.
Signature	String	Yes	The signature result string. For more information, see Sign signatures.
SignatureMethod	string	Yes	The signature method. Currently, HMAC-SHA1 is supported.
Timestamp	String	Yes	The request timestamp. The format of the date follows the ISO8601 standard and uses UTC time. Format: YYYY-MM-DDThh:mm:ssZ. For example, 2013-08-15T12:00:00Z indicates 20:00:00, Aug 15, 2013, Beijing time.
SignatureVersion	String	Yes	The version of the signature algorithm. The current version is 1.0.
SignatureNonce	String	Yes	The unique random number. This is used to prevent replay attacks. For different requests, you must use different random numbers.

Examples

```
https://emr.aliyuncs.com/
? Format=json
&Version=2016-04-08
&Signature=Pc5WB8gokVn0xfeu%2FZV%2BiNM1dgI%3D
&SignatureMethod=HMAC-SHA1
&SignatureNonce=15215528852396
&SignatureVersion=1.0
&AccessKeyId=key-test
&OwnerId=12345678
&Timestamp=2014-10-10T12:00:00Z
```

Common response parameters

All requests, successful or failed, are replied with a unique ID (RequestId).

- Examples

  XML format

```
<? xml version="1.0" encoding="UTF-8"? >
<! --Result root node-->
<operation name+response>
<! ----returned request >
<RequestId>4C467B38-3910-447D-87BC-AC049166F216</RequestId>
<! --Returns the result-->
</operation name+response>
```

  JSON format:

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

2.3. Sign signatures

Alibaba Cloud performs identity authentication on each access request. Therefore, whether submitted through HTTP or HTTPS, a request must contain signature information.

ECS uses symmetric encryption based on an Access Key ID and Access Key Secret to verify the identity of a request sender. The Access Key ID and Access Key Secret are issued to users by Alibaba Cloud (users can request and manage keys on the website of Alibaba Cloud). The Access Key ID indicates the identity of the user. The Access Key Secret is the secret key used to encrypt the signature string and to verify the signature string on the server. It must be kept strictly confidential and only be known to Alibaba Cloud and authenticated users.

> **Notice** For more information, see Developer Resources.

Procedure

Follow the instructions below to sign the signatures for your requests.

1. Use request parameters to construct a Canonicalized Query String.

i. Sort parameters

Sort all request parameters (including common request parameters and user-defined parameters for the given request interfaces described in this document, excluding the Signature parameter mentioned in "Common request parameters") alphabetically by the parameter name.

> **Notice** If you use the GET method to submit requests, these parameters are included in the request URI that is the part after the question mark (?) following the ampersand (&) in the URI .

ii. Encode parameters

Encode the name and value of each request parameter. The names and values must undergo URL encoding using the UTF-8 character set. The URL encoding rules are as follows:

- Uppercase letters (A-Z), lowercase letters (a-z), numbers (0-9), hyphens (-), underscores (_), periods (.), and tildes (~) are not encoded.
- Other characters are encoded in "%XY" format, with XY representing the character ASCII code in hexadecimal notation. The double quotation mark (") is coded as %22.
- Extended UTF-8 characters are encoded in "%XY%ZA... "
- An English space is encoded as %20 instead of a plus sign (+).

> **Notice** This encoding method is similar to but different from the application/x-www-form-urlencoded MIME encoding algorithm (such as the implementation of the java.net.URLEncoder class provided by the Java standard library). You can use this encoding method directly by replacing the plus sign (+) in the encoded string with "%20", the asterisk (*) with "%2A", and change "%7E" back to the tilde (~) to conform to the encoding rules described above. This algorithm can be implemented using the following percentEncode() method:
>
> ```
> private static final String ENCODING = "UTF-8";
> private static String percentEncode(String value) throws UnsupportedEncodingExc
> eption {
> return value != null ? URLEncoder.encode(value, ENCODING).replace("+", "%20").r
> eplace("*", "%2A").replace("%7E", "~") : null;
> }
> ```

iii. Connect the encoded parameter names and values with equal signs (=).

iv. Then, sort the parameter name and value pairs connected by equal signs in alphabetical order, and connect them with an ampersand (&) to produce the canonicalized query string.

2. Follow the rules below to use the canonicalized query string to construct the string for signature calculation:

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

In this formulation,

- HTTPMethod is the HTTP method (such as GET) used for request submission.
- percentEncode(“/ “) is the encoded value (%2F) for the character “/ “ according to the URL encoding rules described in 1.ii.
- percentEncode (CanonicalizedQueryString) is the encoded string for the canonicalized query string constructed in Step 1 according to the URL encoding rules described in 1.ii.

3. Use the string for signature calculation to calculate the HMAC value of the signature based on RFC2104.

> **Notice** The key used for signature calculation is your secret access key adding the ampersand “&” (ASCII:38) and it is based on the SHA1 hashing algorithm.

4. Encode the HMAC value into a string according to Base64 encoding rules. You can then obtain the signature value.
5. Add the obtained signature value to request parameters as the Signature parameter to complete the request signing process.

> **Notice** The obtained signature value requires URL encoding based on the RFC3986 rule like other parameters before it is submitted to the GPDB server as the final request parameter value.

Examples

Take "DescribeDBInstances" as an example, the request URL before a signature is :

```
http://ecs.aliyuncs.com/?TimeStamp=2016-02-23T12:46:24Z&Format=XML&AccessKeyId=testid&Action=DescribeRegions&SignatureMethod=HMAC-SHA1&SignatureNonce=3ee8c1b8-83d3-44af-a94f-4e0ad82fd6cf&Version=2014-05-26&SignatureVersion=1.0
```

The corresponding StringToSign is:

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

Assume that the value of the Access Key Secret parameter is testsecret. Then the key used for HMAC calculation is testsecret& and the calculated signature value is `CT9X0VtwR86fNWSnsc6v8YGOjuE`.

The signed request URL is (with the Signature parameter added):

```
http://ecs.aliyuncs.com/?SignatureVersion=1.0&Action=DescribeRegions&Format=XML&SignatureNonce=3ee8c1b8-83d3-44af-a94f-4e0ad82fd6cf&Version=2014-05-26&AccessKeyId=testid&Signature=CT9X0VtwR86fNWSnsc6v8YGOjuE%3D&SignatureMethod=HMAC-SHA1&TimeStamp=2016-02-23T12%3A46%3A24Z
```

2.4. Responses

Responses can be returned in the JSON or XML format. The default response format is XML. To change the format, you can specify the common parameter `Format` in requests. To improve readability, the sample responses in this topic are formatted. The actual responses are not formatted with line breaks or indentation.

Sample success responses

If a request is successful, the request ID is returned. The HTTP status code is 2xx.

- XML format

```
<RequestId>4C467B38-3910-447D-87BC-AC049166F216</RequestId> <!--Request ID-->
```

- JSON format

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

Sample error responses

If an error occurs when you call an operation, an error response that consists of the error code, error message, and request ID is returned. The HTTP status code is 4xx or 5xx.

You can troubleshoot issues based on Common errors and operation-specific error codes. If the error persists, you can submit a ticket and provide `HostId` and `RequestId` to request technical support from Alibaba Cloud.

- XML format

```
<?xml version="1.0" encoding="UTF-8"?><!--Root node of the response -->
<Error>
    <RequestId>540CFF28-407A-40B5-B6A5-74Bxxxxxxxxx</RequestId> <!--Request ID-->
    <HostId>emr.aliyuncs.com</HostId> <!--Endpoint-->
    <Code>MissingParameter.CommandId</Code> <!--Error code-->
    <Message>The input parameter "CommandId" that is mandatory for processing this reques
t is not supplied.</Message> <!-- Error message-->
</Error>
```

- JSON format

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

Common errors

For a list of common error codes, visit API Error Center.

3.Cluster

3.1. Create an ASK cluster

Creates a E-MapReduce cluster.

Debugging

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

Request parameters

Parameter	Type	Required	Example	Description
Action	String	Yes	CreateClusterV2	The operation that you want to perform. Set the value to CreateClusterV2.
BootstrapAction.N.Name	String	Yes	init_script	The name of the bootstrap action.
BootstrapAction.N.Path	String	Yes	oss://bucket/path	The OSS storage path of the boot action script.
ClusterType	String	Yes	HADOOP	The type of the cluster. Valid values: • HADOOP • KAFKA • DATA SCIENCE • DRUID • FLINK • GATEWAY • CLICKHOUSE • SHUFFLE_SERVICE • EMR_STUDIO
Config.N.ConfigKey	String	Yes	fs.trash.interval	The key of custom configuration item N.
Config.N.ConfigValue	String	Yes	60	The value of custom configuration item N.

Parameter	Type	Required	Example	Description
Config.N.FileName	String	Yes	yarn-site	The name of the file that contains custom configuration item N.
Config.N.ServiceName	String	Yes	YARN	The name of the service for which custom configuration item N is configured. Specify the entire name in uppercase.
EmrVer	String	Yes	EMR-3.35.0	The EMR version. **Note** You can view the EMR versions when you create a cluster in the console.
HostGroup.N.DiskCapacity	Integer	Yes	80	The data disk capacity of host group N.
HostGroup.N.DiskCount	Integer	Yes	4	The number of data disks in host group N.
HostGroup.N.DiskType	String	Yes	CLOUD_EFFICIENCY	The data disk type of the machine group. Valid values: • CLOUD_EFFICIENCY: ultra disk. • CLOUD_SSD:SSD • LOCAL_DISK: This value can only be specified for the ECS instance type with local disks. • CLOUD: basic cloud disks (not recommended).
HostGroup.N.HostGroupName	String	Yes	Master instance group	The name of the machine group.

Parameter	Type	Required	Example	Description
HostGroup.N.HostGroupType	String	Yes	MASTER	The type of the machine group. Valid values: • MASTER: the primary instance group. • CORE: the core instance group. • TASK: compute instance group. **Note** You can set only one group for both **MASTER** and **CORE**.
HostGroup.N.InstanceType	String	Yes	ecs.g6.2xlarge	The instance type. For more information, see Instance families or call the DescribeInstanceTypes operation to query the most recent instance type list.
HostGroup.N.NodeCount	Integer	Yes	2	The number of nodes in host group N.
HostGroup.N.SysDiskCapacity	Integer	Yes	80	The system disk capacity of the machine group. Unit: GB.
HostGroup.N.SysDiskType	String	Yes	CLOUD_SSD	The system disk type of the machine group. Valid values: • CLOUD_EFFICIENCY: ultra disk. • CLOUD_SSD:SSD • CLOUD: basic cloud disks (not recommended).
Name	String	Yes	bi_hadoop	The name of the cluster. The name must be 1 to 64 characters in length and can contain only letters, digits, hyphens (-), and underscores (_).
RegionId	String	Yes	cn-hangzhou	The region ID of the security group. You can call the DescribeRegions operation to query the most recent region list.
UserInfo.N.Password	String	Yes	pwd	The password of the Knox user.
UserInfo.N.UserId	String	Yes	123456789	The RAM user ID of the Knox user.

Parameter	Type	Required	Example	Description
UserInfo.N.UserName	String	Yes	username	The username of the Knox user.
ZoneId	String	Yes	cn-hangzhou-b	The zone ID of the VNode. You can call the DescribeZones operation to query the most recent zone list.
SecurityGroupId	String	No	sg-bp1id7ajv83kmqwq****	The ID of the security group. You can enter the ID of an existing security group. If the security group does not exist, a security group is automatically created. **Note** Parameter SecurityGroupId and SecurityGroupName requirements cannot be empty at the same time.
IsOpenPublicIp	Boolean	No	true	Specifies whether to enable a public IP address for the MASTER node. Valid values: • true: enables the public IP address. If you enable this feature, the bandwidth is 8 MB by default. • false: disables the public IP address.

Parameter	Type	Required	Example	Description
SecurityGroupName	String	No	emr-sg	The name of the security group to be created. If you do not specify SecurityGroupId, a security group is created with the value of this parameter as its name. After the cluster is created, you can view the ID of the security group in cluster details. This security group will have the default security group policy: all ports are opened in the outbound direction. **Note** Parameter SecurityGroupId and SecurityGroupName requirements cannot be empty at the same time.
ChargeType	String	No	PostPaid	The billing type of the cluster. Valid values: • PostPaid: pay-as-you-go • PrePaid: subscription
Period	Integer	No	2	The subscription period. Valid values: 1, 2, 3, 4, 5, 6, 7, 8, 9, 12, 24, and 36. Unit: months. This parameter is required when the ChargeType parameter is set to PrePaid.
AutoRenew	Boolean	No	false	Indicates whether the subscription cluster is auto-renewal. Valid values: • true: enables auto-renewal. • false: does not enable auto-renewal.

Parameter	Type	Required	Example	Description
AutoPayOrder	Boolean	No	true	Specifies whether to automatically pay. This parameter takes effect only when the billing method is PrePay. Valid values: • true: The system automatically renews the instance. • false: Do not pay automatically.
VpcId	String	No	vpc-bp1l4urd87xlh7i4b****	The ID of the VPC.
VSwitchId	String	No	vsw-bp10tvjyc77psy0z5****	The IDs of vSwitches.
NetType	String	No	VPC	The network type of the instance. Set the value to VPC.
UserDefinedEmrEcsRole	String	No	AliyunEmrEcsDefaultRole	Role authorized to ECS for internal access to OSS and other Alibaba Cloud services: • AliyunECSInstanceForEMRRole :3.x series>= EMR-3.33.0, 4.x series>=EMR-4.6.0, 5.x series>=EMR-5.1.0. • AliyunEmrEcsDefaultRole:3.x series < EMR-3.33.0, 4.x series <EMR-4.6.0, 5.x series <EMR-5.1.0.
OptionSoftWareList.N	RepeatList	No	["ZOOKEEPER","LIVY"]	Supported optional services. The service name needs to be capitalized. You can view the supported optional services on the Software Configuration page of the cluster created in the EMR console. **Note** You can specify an optional component. This parameter is limited in length. You must specify no more than 20 service names. Otherwise, the extra parameters are discarded.

Parameter	Type	Required	Example	Description
HighAvailabilityEnable	Boolean	No	true	Specifies whether to enable high-availability clusters. Valid values: • true: enables a high-availability cluster. A high-availability cluster requires two master nodes. • false: disables the high-availability cluster. The high-availability cluster has at least two MASTER nodes. If the high-availability cluster is not enabled, the high reliability of the cluster cannot be guaranteed.
UseLocalMetaDb	Boolean	No	true	Specifies whether to use the built-in MySQL database as the Hive metadatabase. Valid values: • true: The local Hive metadatabase is used. • false: The local Hive metadatabase is not available. The cluster has a built-in MySQL single node and cannot guarantee high reliability.
MasterPwd	String	No	pwd	The root password of the master node. The password must be 8 to 30 characters in length and contain three characters (uppercase letters, lowercase letters, digits, and special character).
KeyPairName	String	No	test_pair	Password-free logon to the ECS key pair.

Parameter	Type	Required	Example	Description
MetaStoreType	String	No	local	The type of the Hive metadata service. Valid values: • local: The MYSQL service within the cluster. A single node of MYSQL does not guarantee high availability. • user_rds: user-created RDS service. • dlf:DLF metadata service.
MetaStoreConf	String	No	{"dbUrl":"jdbc:mysql://rm-xxxxxxxxxx.mysql.rds.aliyuncs.com/hmsdata?createDatabaseIfNotExist=true&characterEncoding=UTF-8","dbUserName":"xxxxxxx","dbPassword":"xxxxxx"}	The configuration information of the unified metadata service. Valid values: • If MetaStoreType:local or dlf, this parameter is not specified. • MetaStoreType:user_rds. Example: {"dbUrl":"jdbc:mysql://rm-***.mysql.rds.aliyuncs.com/hmsdata?createDatabaseIfNotExist=true&characterEncoding=UTF-8","dbUserName":"name** *","dbPassword":"pws "}.
ClickHouseConf	String	No	None	A reserved parameter. You do not need to specify this parameter.
ExtraAttributes	String	No	None	A reserved parameter. You do not need to specify this parameter.
HostComponentInfo.N.HostName	String	No	emr-header-1	The target hostname of the component deployment.
HostComponentInfo.N.ServiceName	String	No	HDFS	The name of the service to which the component belongs. The service name is in uppercase letters, such as HDFS and ZOOKEEPER. Optional services can be obtained from the EMR console to create a cluster step 1-software configuration-service list view.
HostComponentInfo.N.ComponentNameList.N	RepeatList	No	NAMENODE	The components.

Parameter	Type	Required	Example	Description
ServiceInfo.N.ServiceName	String	No	HDFS	The name of the service. The service name is in uppercase letters, such as HDFS and ZOOKEEPER. Optional services can be obtained from the EMR console to create a cluster step 1-software configuration-service list view.
ServiceInfo.N.ServiceVersion	String	No	2.3.3-1.0.2	The internal version of the service.
PromotionInfo.N.PromotionOptionNo	String	No	11080***0000	The coupon number.
PromotionInfo.N.PromotionOptionCode	String	No	youhui_quan	The type of the coupon. This parameter is optional. Default value: youhui_quan.
PromotionInfo.N.ProductCode	String	No	ecs	The product of the coupon application. Valid values: • emr : applies to EMR orders. • ecs : applies to ECS orders.
DepositType	String	No	HALF_MANAGED	The hosting type of the cluster. Set the value to HALF_MANAGED. Semi-managed indicates that the EMR cluster uses user-side ECS or ACK.
MachineType	String	No	ECS	The resource type of the IaaS layer to which the cluster is built.
HostGroup.N.ClusterId	String	No	None	A reserved parameter. You do not need to specify this parameter.
HostGroup.N.HostGroupId	String	No	None	A reserved parameter. You do not need to specify this parameter.
HostGroup.N.Comment	String	No	None	A reserved parameter. You do not need to specify this parameter.

Parameter	Type	Required	Example	Description
HostGroup.N.CreateType	String	No	None	The type of the machine group creation. Valid values: • ON-DEMAND: creates as needed. • MANUAL: manually created.
HostGroup.N.ChargeType	String	No	PostPaid	The billing method of the instance. Valid values: • Postpaid: pay-as-you-go • PrePaid: subscription
HostGroup.N.Period	Integer	No	2	The subscription period. Valid values: 1, 2, 3, 4, 5, 6, 7, 8, 9, 12, 24, and 36. Unit: months. Set this parameter when HostGroup.n.ChargeType is set to PrePaid.
HostGroup.N.AutoRenew	Boolean	No	false	machine group whether the machine is auto-renewal. Valid values: • true: enables auto-renewal. • false: manual renewal.
HostGroup.N.VSwitchId	String	No	vsw-bp10tvjyc77psy0z5****	The IDs of vSwitches.
HostGroup.N.GpuDriver	String	No	cuda9	The name of the GPU driver.

Parameter	Type	Required	Example	Description
HostGroup.N.PrivatePoolOptionsMatchCriteria	String	No	Target	The type of the private pool. A private pool is generated after an elasticity assurance or a capacity reservation takes effect. You can select a private pool when you create instances. Valid values: • Open: open private pool. The system selects a matching open private pool to create the instance. If no matching open private pools are found, the resources in the public pool are used. In this mode, you do not need to set the HostGroup.N.PrivatePoolOptionsId parameter. • Target: specified private pool. The system uses the capacity of a specified private pool to create the instance. If the specified private pool is unavailable, the instance cannot be created. In this mode, you must specify the private pool ID, that is, the HostGroup.N.PrivatePoolOptionsId parameter is required. • None: no private pool. The capacity of private pools is not used.
HostGroup.N.PrivatePoolOptionsId	String	No	crp-bp1e4wcvoucrish*****	The ID of the private pool. The ID of a private pool is the same as that of the elasticity assurance or capacity reservation for which the private pool is generated.
BootstrapAction.N.Arg	String	No	test1 test2	Boot operation parameters. If you need to specify multiple parameters, you can separate them with spaces. For example, `test1 test2`. It is `mkdir /root/$1;mkdir /root/$2;` in the script. After the execution succeeds, folders named test1 and test2 are created in the `/root` directory.

Parameter	Type	Required	Example	Description
BootstrapAction.N.ExecutionTarget	String	No	core_group	The scope of script execution. Valid values: • For the entire cluster, specify a null value. • The name of the machine group.
BootstrapAction.N.ExecutionMoment	String	No	BEFORE_INSTALL	The execution timing of the script. Valid values: • BEFORE_INSTALL: This parameter is executed before the cluster service is installed. • AFTER_STARTED: The cluster service is executed after it is started.
BootstrapAction.N.ExecutionFailStrategy	String	No	FAILED_BLOCKED	The script failure execution policy. Valid values: • FAILED_BLOCKED: The workflow is manually processed after a failure. • FAILED_CONTINUE: The execution continues after the failure.
UseCustomHiveMetaDB	Boolean	No	false	A reserved parameter. You do not need to specify this parameter.
InitCustomHiveMetaDB	Boolean	No	false	A reserved parameter. You do not need to specify this parameter.
Config.N.Encrypt	String	No	0	A reserved parameter. You do not need to specify this parameter.
Config.N.Replace	String	No	0	A reserved parameter. You do not need to specify this parameter.
Configurations	String	No	0	A reserved parameter. You do not need to specify this parameter.
EasEnable	Boolean	No	false	Specifies whether to enable high security for the cluster. Valid values: • true: high-security clusters. • false: The cluster is not a high-security cluster.

Parameter	Type	Required	Example	Description
RelatedClusterId	String	No	C-D7958B72E59B*****	The ID of the primary cluster that is associated with the current cluster if it is a gateway.
WhiteListType	String	No	IP	The type of the whitelist. Valid values: • IP: IP whitelist group. • SecurityGroup: the security group.
AuthorizeContent	String	No	None	A reserved parameter. You do not need to specify this parameter.
Tag.N.Key	String	No	Dept	The tag key of the EMR instance and node ECS instance. Valid values of N: 1 to 20. The tag key cannot be an empty string. Valid values: 1 to 128. It cannot start with aliyun or acs: and cannot contain http:// or https://.
Tag.N.Value	String	No	DevIT	The tag values of EMR instances and node ECS instances. Valid values of N: 1 to 20. The tag value can be an empty string. Valid values: 1 to 128. It cannot start with acs: and cannot contain http:// or https://.
ResourceGroupId	String	No	rg-bp67acfmxazb4p****	The ID of the enterprise resource group to which the EMR cluster belongs.
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 ensure that it is unique among different requests.

Response parameters

Parameter	Type	Example	Description
ClusterId	String	C-D7958B72E59B****	The ID of the cluster.
CoreOrderId	String	None	The order ID of the core node.

Parameter	Type	Example	Description
EmrOrderId	String	None	The ID of the E-MapReduce order.
MasterOrderId	String	None	The order ID of the master node.
RequestId	String	BF4FBAC6-B03E-4BFB-B6DB-EB53C34F2E22	The ID of the request.

Examples

Sample requests

```
http(s)://[Endpoint]/?Action=CreateClusterV2
&BootstrapAction.1.Name=name
&BootstrapAction.1.Path=oss://bucket/path
&ClusterType=HADOOP
&Config.1.ConfigKey=fs.trash.interval
&Config.1.ConfigValue=60
&Config.1.FileName=yarn-site
&Config.1.ServiceName=YARN
&EmrVer=EMR-3.15.0
&HostGroup.1.HostGroupType=MASTER
&HostGroup.1.InstanceType=ecs.mn4.2xlarge
&HostGroup.1.NodeCount=2
&Name=bi_hadoop
&RegionId=cn-hangzhou
&UserInfo.1.Password=pwd
&UserInfo.1.UserId=12345
&UserInfo.1.UserName=tom
&<Common request parameters>
```

Sample success responses

`XML` format

```
<ClusterId>C-4DE6DA872B0E****</ClusterId>
<RequestId>F4DE89FB-7054-475C-B7E2-B9A38152DA7E</RequestId>
```

`JSON` format

```
{
    "ClusterId": "C-4DE6DA872B0E****",
    "RequestId": "F4DE89FB-7054-475C-B7E2-B9A38152DA7E"
}
```

3.2. Create a cluster template

Call the CreateClusterTemplate operation to create a E-MapReduce cluster 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	CreateClusterTemplate	The operation that you want to perform. Set the value to CreateClusterTemplate.
ClusterType	String	Yes	HADOOP	The type of the cluster. Valid values: • HADOOP • KAFKA • DATA SCIENCE • DRUID • FLINK • GATEWAY • CLICKHOUSE • SHUFFLE_SERVICE • EMR_STUDIO
TemplateName	String	Yes	ETLClusterTemplate	The name of the template.
ZoneId	String	Yes	cn-hangzhou-b	The ID of the zone. You can call the DescribeZones to view zones in an Alibaba Cloud region.
BootstrapAction.N.Name	String	Yes	init_script	The name of the bootstrap action.
BootstrapAction.N.Path	String	Yes	oss://bucket/path	The OSS storage path of the boot action script.
Config.N.ConfigKey	String	Yes	fs.trash.interval	The key of custom configuration item N.
Config.N.ConfigValue	String	Yes	60	The value of custom configuration item N.

Parameter	Type	Required	Example	Description
Config.N.FileName	String	Yes	yarn-site	The name of the file that contains custom configuration item N.
Config.N.ServiceName	String	Yes	YARN	The name of the service for which custom configuration item N is configured. Specify the entire name in uppercase.
HostGroup.N.DiskCapacity	Integer	Yes	80	The data disk capacity of host group N.
HostGroup.N.DiskCount	Integer	Yes	1	The number of data disks in host group N.
HostGroup.N.DiskType	String	Yes	CLOUD_EFFICIENCY	The data disk type of the machine group. Valid values: • CLOUD_EFFICIENCY: ultra disks • CLOUD_SSD:SSD • LOCAL_DISK: This value can only be specified for the local disk ECS instance type. • CLOUD: basic cloud disks (not recommended)
HostGroup.N.HostGroupName	String	Yes	master_group	The name of the machine group.
HostGroup.N.HostGroupType	String	Yes	MASTER	The type of the machine group. Valid values: • MASTER: primary instance group • CORE: core instance group • TASK: compute instance group **Note** Only one group can be set for **MASTER** and **CORE**.
HostGroup.N.InstanceType	String	Yes	ecs.g5.xlarge	The type of the ECS instance in the machine group.
HostGroup.N.NodeCount	Integer	Yes	2	The number of nodes in host group N.

Parameter	Type	Required	Example	Description
HostGroup.N.SysDiskCapacity	Integer	Yes	80	The system disk capacity of host group N.
HostGroup.N.SysDiskType	String	Yes	CLOUD_SSD	The type of the system disk. Valid values: • CLOUD_EFFICIENCY: ultra disks • CLOUD_SSD:SSD • CLOUD: basic cloud disks (not recommended)
EmrVer	String	Yes	EMR-3.35.0	The EMR version. Tip: You can view the list of EMR versions when you create a cluster in the console.
RegionId	String	Yes	cn-hangzhou	The region ID of the VNode. You can call the DescribeRegions operation to query the most recent region list.
KeyPairName	String	No	test_pair	Log on to the ECS key pair without password.
MetaStoreType	String	No	user_rds	The type of the Hive metadata service. Valid values: • local: The internal MySQL service of the cluster. A single node of MySQL does not guarantee high availability. • user_rds: user-created RDS service • dlf:DLF metadata service
MetaStoreConf	String	No	{"dbUrl":"jdbc:mysql://rm-xxxxxxxxxx.mysql.rds.aliyuncs.com/hmsdata?createDatabaseIfNotExist=true&characterEncoding=UTF-8","dbUserName":"xxxxxxx","dbPassword":"xxxxxx"}	The configuration information of the unified metadata service. If the MetaStoreType parameter is set to local or dlf, this parameter is not specified. When MetaStoreType is set to user_rds, the value example: {"dbUrl":"jdbc:mysql://rm-xxxxxxxxxx.mysql.rds.aliyuncs.com/hmsdata?createDatabaseIfNotExist=true&characterEncoding=UTF-8","dbUserName":"xxxxxxx","dbPassword":"xxxxxx"}

Parameter	Type	Required	Example	Description
HostGroup.N.PrivatePoolOptionsMatchCriteria	String	No	Target	The type of the private pool. A private pool is generated after an elasticity assurance or a capacity reservation takes effect. You can select the private pool when you start an instance. Valid values: • Open: open private pool. The system selects a matching private pool to create the instance. If no matching open private pools are found, resources in the public pool are used. There is no need to set the HostGroup.N.PrivatePoolOptionsId parameter in this mode. • Target: specified private pool. The capacity in a specified private pool is used. If the specified private pool is unavailable, the instance cannot be created. In this mode, you must specify the private pool ID, that is, the HostGroup.N.PrivatePoolOptionsId parameter is required • None: no private pool. Instance launch will not use private pool capacity
HostGroup.N.PrivatePoolOptionsId	String	No	crp-bp1e4wcvoucrish****	The ID of the private pool. The ID of a private pool is the same as that of the elasticity assurance or capacity reservation for which the private pool is generated.
BootstrapAction.N.ExecutionTarget	String	No	core_group	The execution scope of the script. Valid values: • For the entire cluster, specify a null value. • Set the name of the machine group.
BootstrapAction.N.ExecutionMoment	String	No	BEFORE_INSTALL	The execution timing of the script. Valid values: • BEFORE_INSTALL: Execution before service installation • AFTER_STARTED: Executed after the service is started.

Parameter	Type	Required	Example	Description
BootstrapAction.N.ExecutionFailStrategy	String	No	FAILED_BLOCKED	The script failure execution policy. Valid values: • FAILED_BLOCKED: The workflow is manually processed after a failure. • FAILED_CONTINUE: Continue execution after failure
Tag.N.Key	String	No	Dept	The tag key of the EMR cluster. Valid values of N: 1 to 20. The tag key cannot be an empty string. The value of the tag key ranges from 1 to 128. It cannot start with acs: or aliyun. It cannot contain http:// or https://.
Tag.N.Value	String	No	DevIT	The tag value of the EMR cluster. Valid values of N: 1 to 20. The tag value can be an empty string. Valid values: 1 to 128. It cannot start with acs: and cannot contain http:// or https://.
ResourceGroupId	String	No	rg-bp67acfmxazb4p****	The ID of the resource group.
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 ensure that it is unique among different requests.
DataDiskEncrypted	Boolean	No	false	A reserved parameter.
DataDiskKMSKeyId	String	No	false	A reserved parameter.

Parameter	Type	Required	Example	Description
Configurations	String	No	[{"classification": "core-site","properties": {"fs.trash.interval": "61"}}, {"classification": "hadoop-log4j","properties": {"hadoop.log.file": "hadoop1.log","hadoop.root.logger": "INFO","a.b.c": "ABC"}}]	The custom configuration items for software. You can use a JSON file to modify the software configurations before you start a cluster.
EasEnable	Boolean	No	true	Specifies whether to enable high security for the cluster. Valid values: • true: high-security clusters. • false: The cluster is not a high-security cluster.
HighAvailabilityEnable	Boolean	No	true	Specifies whether to enable a high-availability cluster. Valid values: • true: enables a high-availability cluster. If high availability is enabled, at least two master nodes are required. • false: disables the high-availability cluster. The high-availability cluster has at least two MASTER nodes. If the high-availability cluster is not enabled, the high reliability of the cluster cannot be guaranteed.
InitCustomHiveMetaDb	Boolean	No	false	A reserved parameter.
InstanceGeneration	String	No	ecs-3	The generation of ECS instances.

Parameter	Type	Required	Example	Description
IoOptimized	Boolean	No	true	Specifies whether to enable I/O optimization. Default value: true. This parameter is obsolete. Valid values: • true: optimized • false: not optimized
IsOpenPublicIp	Boolean	No	true	Specifies whether to enable public IP addresses: • true: The public IP address is available. • false: disables public IP addresses.
LogPath	String	No	oss://bucket/path	The path of the OSS log. This parameter is obsolete.
MachineType	String	No	ECS	The resource type of the IaaS layer that is built on the cluster. Set the value to ECS.
MasterPwd	String	No	pwd	The root password of the master node. The password must be 8 to 30 characters in length and contain any three characters (uppercase letters, lowercase letters, digits, and special character).
NetType	String	No	VPC	The network type. Set the value to VPC.
OptionSoftWareList.N	RepeatList	No	["HBASE","FLINK"]	The list of optional services. The service name is in uppercase letters, such as ZOOKEEPER,LIVY. Optional services can be obtained from the EMR console to create a cluster Step 1-Software Configuration-Optional Services View.
Period	Integer	No	36	The expiration time of the subscription cluster. Unit: months.
SecurityGroupId	String	No	sg-bp1id7ajv83kmqwq****	The ID of the security group.

Parameter	Type	Required	Example	Description
SecurityGroupName	String	No	sg-name	The name of the security group to be created. If you do not specify SecurityGroupId, a security group is created with the value of this parameter as its name. After the cluster is created, you can view the ID of the security group in cluster details. This security group will have the default security group policy: all ports are opened in the outbound direction. Parameter SecurityGroupId and SecurityGroupName requirements cannot be empty at the same time.
SshEnable	Boolean	No	true	Specifies whether to modify the security group rules to allow public SSH logon. Default value: false. This parameter is obsolete. Valid values: • true: enables SSH. • false: disables SSH.
UseCustomHiveMetaDb	Boolean	No	false	A reserved parameter. You do not need to specify this parameter.
UseLocalMetaDb	Boolean	No	false	Specifies whether to use the cluster's built-in MySQL as the Hive metadatabase. Valid values: • true: uses the local Hive metadatabase. • false: The local Hive metadatabase is not available. The cluster has a built-in MySQL single node and cannot guarantee high reliability.
UserDefinedEmrEcsRole	String	No	AliyunEmrEcsDefaultRole	The role that is authorized to ECS for internal access to other Alibaba Cloud services such as OSS. • AliyunECSInstanceForEMRRole :3.x series>= EMR-3.33.0, 4.x series>=EMR-4.6.0, 5.x series>=EMR-5.1.0 • AliyunEmrEcsDefaultRole:3.x series < EMR-3.33.0, 4.x series <EMR-4.6.0, 5.x series <EMR-5.1.0

Parameter	Type	Required	Example	Description
VpcId	String	No	vpc-bp1l4urd87xlh7i4b****	The ID of the virtual private cloud (VPC) in which the database instance is deployed.
VSwitchId	String	No	vsw-bp10tvjyc77psy0z5****	The ID of the vSwitch.
BootstrapAction.N.Arg	String	No	--arg1	The argument that you pass into bootstrap action N.
Config.N.Encrypt	String	No	0	A reserved parameter.
Config.N.Replace	String	No	0	A reserved parameter.
HostGroup.N.AutoRenew	Boolean	No	false	machine group whether the machine is auto-renewal. Valid values: • true: enables auto-renewal. • false: manual renewal
HostGroup.N.ChargeType	String	No	PostPaid	The billing method of the instance. Valid values: • PostPaid: pay-as-you-go • PrePaid: subscription
HostGroup.N.ClusterId	String	No	0	A reserved parameter.
HostGroup.N.Comment	String	No	header	The comment for host group N.
HostGroup.N.CreateType	String	No	ON-DEMAND	The type of the machine group creation. Valid values: • ON-DEMAND: Create as needed • MANUAL: manually created
HostGroup.N.HostGroupId	String	No	0	A reserved parameter.
HostGroup.N.MultiInstanceTypes	String	No	["ecs.c5.xlarge","ecs.sn1ne.xlarge","ecs.hfc5.xlarge"]	A JSON field that consists of the supported instance types.

Parameter	Type	Required	Example	Description
HostGroup.N.Period	Integer	No	30	The validity period of host group N.
HostGroup.N.VSwitchId	String	No	vsw-bp10tvjyc77psy0z5****	The ID of the VSwitch.
AutoRenew	Boolean	No	false	Specifies whether to automatically renew the subscription.
DepositType	String	No	HALF_MANAGED	The managed type of the cluster. Valid values: • HALF_MANAGED: semi-managed • MANAGED: fully managed

Response parameters

Parameter	Type	Example	Description
ClusterTemplateId	String	CT-35498C56B3F1****	The ID of the cluster template.
RequestId	String	8CA40D40-2092-4A09-9F07-2F9C1399FB11	The ID of the request.

Examples

Sample requests

```
http(s)://[Endpoint]/?Action=CreateClusterTemplate
&ClusterType=HADOOP
&TemplateName=templateName2
&BootstrapAction.1.1ame=action_name
&BootstrapAction.1.Path=oss://bucket/path
&Config.1.ConfigKey=fs.trash.interval
&Config.1.ConfigValue=60
&Config.1.FileName=yarn-site
&Config.1.ServiceName=YARN
&HostGroup.1.HostGroupType=MASTER
&HostGroup.1.InstanceType=ecs.g5.xlarge
&HostGroup.1.1odeCount=2
&EmrVer=EMR-3.15.0
&RegionId=cn-hangzhou
&<Common request parameters>
```

Sample success responses

`XML` format

```
<code>200</code>
<data>
    <RequestId>8CA40D40-2092-4A09-9F07-2F9C1399FB11</RequestId>
    <ClusterTemplateId>CT-35498C56B3F1****</ClusterTemplateId>
</data>
<requestId>8CA40D40-2092-4A09-9F07-2F9C1399FB11</requestId>
<successResponse>true</successResponse>
```

`JSON` format

```
{
    "code": "200",
    "data": {
        "RequestId": "8CA40D40-2092-4A09-9F07-2F9C1399FB11",
        "ClusterTemplateId": "CT-35498C56B3F1****"
    },
    "requestId": "8CA40D40-2092-4A09-9F07-2F9C1399FB11",
    "successResponse": true
}
```

3.3. Create a cluster by using templates

Call the CreateClusterWithTemplate operation to create a cluster by using 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	CreateClusterWithTemplate	The operation that you want to perform. Set the value to CreateClusterWithTemplate.
TemplateBizId	String	Yes	CT-35498C56B3F1****	The ID of the template. You can call ListClusterTemplates View.
UniqueTag	String	No	60a632f0-5909-430d-b65c-1b0f248e4947	A reserved parameter.
ClusterName	String	No	hadoop_cluster_name_1	The name of the EMR cluster created by using the template.

Parameter	Type	Required	Example	Description
ResourceGroupId	String	No	rg-bp67acfmxazb4p****	The ID of the resource group to which the EMR cluster belongs.

Response parameters

Parameter	Type	Example	Description
ClusterId	String	C-D7958B72E59B****	The ID of the cluster.
CoreOrderId	String	N/A	A reserved parameter.
EmrOrderId	String	N/A	A reserved parameter.
MasterOrderId	String	N/A	A reserved parameter.
RequestId	String	BF4FBAC6-B03E-4BFB-B6DB-EB53C34F****	The ID of the request.

Examples

Sample requests

```
http(s)://[Endpoint]/?Action=CreateClusterWithTemplate
&TemplateBizId=CT-35498C56B3F1****
&<common request parameters>
```

Sample success responses

`XML` format

```
<ClusterId>C-956FA9059886****</ClusterId>
<RequestId>BF4FBAC6-B03E-4BFB-B6DB-EB53C34F2E22</RequestId>
```

`JSON` format

```
{
    "ClusterId": "C-956FA9059886****",
    "RequestId": "BF4FBAC6-B03E-4BFB-B6DB-EB53C34F2E22"
}
```

3.4. Delete a cluster Template

You can call DeleteClusterTemplate operation to delete a cluster template.

Debugging

OpenAPI Explorer automatically calculates the signature value. For your convenience, we recommend that you call this operation in OpenAPI Explorer. You can use OpenAPI Explorer to search for API operations, call API operations, and dynamically generate SDK sample code.

Request parameters

Parameter	Type	Required	Example	Description
Action	String	Yes	DeleteClusterTemplate	The operation that you want to perform. This parameter is required for API requests that you create by piecing together HTTP or HTTPS URLs. Set the value to DeleteClusterTemplate.
BizId	String	Yes	CT-35498C56B3F1****	The ID of the template. You can call ListClusterTemplates View data on the Member Management page.
RegionId	String	Yes	cn-hangzhou	The region ID. You can call DescribeRegions To view the latest list of Alibaba Cloud regions.
ResourceGroupId	String	No	rg-bp67acfmxazb4p****	The ID of the resource group to which to add the resource.

Response parameters

Parameter	Type	Example	Description
RequestId	String	F2BF8586-045D-4104-B00C-44A4AA619C05	The ID of the request.

Examples

Sample requests

```
http(s)://[Endpoint]/?Action=DeleteClusterTemplate
&BizId=CT-35498C56B3F1****
&RegionId=cn-hangzhou
&<common request parameters>
```

Sample success responses

`XML` format

```
<requestId>F2BF8586-045D-4104-B00C-44A4AA619C05</requestId>
```

JSON Syntax

```
{"requestId":"F2BF8586-045D-4104-B00C-44A4AA619C05"}
```

3.5. Queries the details of a cluster template

You can call DescribeClusterTemplate operation to query the details of cluster templates.

Debugging

OpenAPI Explorer automatically calculates the signature value. For your convenience, we recommend that you call this operation in OpenAPI Explorer. You can use OpenAPI Explorer to search for API operations, call API operations, and dynamically generate SDK sample code.

Request parameters

Parameter	Type	Required	Example	Description
Action	String	Yes	DescribeClusterTemplate	The operation that you want to perform. Set the value to DescribeClusterTemplate.
BizId	String	Yes	CT-35498C56B3F1****	The ID of the cluster template. You can call ListClusterTemplates View data on the Member Management page.
ResourceGroupId	String	No	rg-acfmv6jutt6****	The ID of the resource group. You can call ListResourceGroups View the resource group ID.

Response parameters

Parameter	Type	Example	Description
RequestId	String	29A1D3B7-661C-4FCD-8577-DE93C8F6CA55	The ID of the request.
TemplateInfo	Struct		The information of the cluster template.
AllowNotebook	Boolean	false	Indicates whether the Notebook app is allowed.

Parameter	Type	Example	Description
BootstrapActionList	Array of BootstrapAction		The list of bootstrap actions.
BootstrapAction			
Arg	String	--a	parameter.
Name	String	action_name	The operation name.
Path	String	oss://bucket/path	The path of the script.
ClusterType	String	HADOOP	Cluster Type: • HADOOP • KAFKA • GATEWAY • DRUID • ZOOKEEPER • DATA_SCIENCE
ConfigList	Array of Config		The list of custom configuration items.
Config			
ConfigKey	String	fs.trash.interval	The key of custom configuration item N.
ConfigValue	String	60	The value of custom configuration item N.
Encrypt	String	0	A reserved parameter. You do not need to specify this parameter.
FileName	String	yarn-site	The name of the file that contains custom configuration item N.
Replace	String	0	A reserved parameter. You do not need to specify this parameter.

Parameter	Type	Example	Description
ServiceName	String	YARN	The name of the service for which the custom configuration item is configured. Specify the entire name in uppercase.
Configurations	String	[{"classification": "core-site","properties": {"fs.trash.interval": "61"}}, {"classification": "hadoop-log4j","properties": {"hadoop.log.file": "hadoop1.log","hadoop.root.logger": "INFO","a.b.c": "ABC"}}]	The custom configuration items for software. You can use a JSON file to modify the software configurations before you start a cluster.
CreateSource	String	2	A reserved parameter.
DepositType	String	HALF_MANAGED	The hosting type of the cluster. Valid values: • HALF_MANAGED: Semi-managed • MANAGED: fully MANAGED
EasEnable	Boolean	true	Indicates whether the cluster is high-security: • true • false: no
EmrVer	String	EMR-3.16.0	The version of the E-MapReduce.
GmtCreate	Long	1543765033000	The time when the cluster template was created.
GmtModified	Long	1543765033000	The time when the cluster template was modified.
HighAvailabilityEnable	Boolean	true	Indicates whether the cluster is a high-availability cluster. Valid values: • true: The service is highly available. • false: Not High Availability

Parameter	Type	Example	Description
HostGroupList	Array of HostGroup		The list of host groups.
HostGroup			
ChargeType	String	PostPaid	The billing method of the instance. Default value: Postpaid. Valid values: • PostPaid: pay-as-you-go clusters • PrePaid: subscription cluster
DiskCapacity	Integer	80	The data disk capacity of host group N.
DiskCount	Integer	4	The number of data disks in the host group.
DiskType	String	CLOUD_SSD	System disk type: • CLOUD: basic CLOUD disk • CLOUD_EFFICIENCY: Ultra disk • CLOUD_SSD: Cloud SSD
HostGroupId	String	0	A reserved parameter. You do not need to specify this parameter.
HostGroupName	String	Master instance group	The name of host group N.
HostGroupType	String	MASTER	The type of the machine group to be queried: • MASTER: MASTER instance Group • CORE: CORE instance Group • TASK: compute instance Group
InstanceType	String	ecs.mn4.2xlarge	The type of instances in host group N.
MultiInstanceTypes	String	ecs.sn1.xlarge,ecs.sn2.xlarge	The types of instances in the host group. Separate each type with a comma (,).
NodeCount	Integer	2	The number of nodes in host group N.

Parameter	Type	Example	Description
Period	String	36	The validity period of the subscription. Unit: days.
SysDiskCapacity	Integer	40	The system disk capacity of host group N.
SysDiskType	String	CLOUD_SSD	Machine Group system disk type: • CLOUD: basic CLOUD disk • CLOUD_EFFICIENCY: Ultra disk • CLOUD_SSD: Cloud SSD
Id	String	CT-4A6799A79D73****	The ID of the cluster template.
InitCustomHiveMetaDb	Boolean	true	A reserved parameter that you do not need to specify.
InstanceGeneration	String	ecs-3	The generation of ECS instances.
IoOptimized	Boolean	true	Whether I/O optimization: • true: Optimized • false: Do not optimize
IsOpenPublicIp	Boolean	true	Whether to open public network IP: • true: Enable • false: not activated
KeyPairName	String	test_kp	The name of the key pair.
LogEnable	Boolean	true	Indicates whether to enable OSS logging. Valid values: • true: Dynamic indexing is enabled. • false: Dynamic indexing is disabled.
LogPath	String	oss//bucketname/path	The path of logs that are stored in OSS buckets.
MachineType	String	ECS	The instance type.

Parameter	Type	Example	Description
MasterNodeTotal	Integer	1	The number of master nodes.
MasterPwd	String	testpd	The password that is used to log on to the master node.
MetaStoreConf	String	rds-xxx.com	The configuration information of Hive Metastore.
MetaStoreType	String	LOCAL	Metadata type: • LOCAL: internal metadata of the cluster • UNIFIED: UNIFIED metadata • USER_RDS: User-created RDS
NetType	String	vpc	The type of the network.
SecurityGroupId	String	sg-bp1id7ajv83kmqwq2isx	The ID of the security group.
SecurityGroupName	String	emr_sg	The name of the security group to be created.
SoftwareInfoList	List	["ZOOKEEPER"]	The information of an optional service.
SshEnable	Boolean	true	Whether to enable SSH: • true: Dynamic indexing is enabled. • false: Dynamic indexing is disabled.
Tags	Array of Tag		The information of a tag.
Tag			
TagKey	String	DevDept	The key of each tag.
TagValue	String	DevDept	The tag value.
TemplateName	String	template_name_2	The name of the cluster template.

Parameter	Type	Example	Description
UseCustomHiveMetaDb	Boolean	false	A reserved parameter.
UseLocalMetaDb	Boolean	true	Indicates whether to use local Hive metadata. Valid values: • true • false
UserDefinedEmrEcsRole	String	AliyunEmrEcsDefaultRole	The E-MapReduce permission name used for ECS calls.
UserId	String	125046002175****	The ID of the user.
VSwitchId	String	vsw-bp10tvjyc77psy0z5*****	The ID of the vSwitch.
VpcId	String	vpc-bp1l4urd87xlh7i4b*****	The ID of the VPC to which the instance belongs.
ZoneId	String	cn-hangzhou-b	The zone ID.

Examples

Sample requests

```
http(s)://[Endpoint]/?Action=DescribeClusterTemplate
&BizId=CT-35498C56B3F1****
&<common request parameters>
```

Sample success responses

`XML` format

```
<requestId>29A1D3B7-661C-4FCD-8577-DE93C8F6CA55</requestId>
<templateInfo>
    <clusterType>HADOOP</clusterType>
    <createSource>2</createSource>
    <depositType>HALF_MANAGED</depositType>
    <easEnable>false</easEnable>
    <emrVer>EMR-3.16.0</emrVer>
    <gmtCreate>1543765033000</gmtCreate>
    <gmtModified>1543765033000</gmtModified>
    <highAvailabilityEnable>false</highAvailabilityEnable>
    <hostGroupList>
        <chargeType>PostPaid</chargeType>
        <diskCapacity>80</diskCapacity>
        <diskCount>1</diskCount>
        <diskType>CLOUD_EFFICIENCY</diskType>
        <hostGroupId/>
        <hostGroupName>Master instance group</hostGroupName>
        <hostGroupType>MASTER</hostGroupType>
        <instanceType>ecs.n4.xlarge</instanceType>
        <nodeCount>1</nodeCount>
    </hostGroupList>
    <hostGroupList>
        <chargeType>PostPaid</chargeType>
        <diskCapacity>80</diskCapacity>
        <diskCount>4</diskCount>
        <diskType>CLOUD_EFFICIENCY</diskType>
        <hostGroupId/>
        <hostGroupName>Core instance group</hostGroupName>
        <hostGroupType>CORE</hostGroupType>
        <instanceType>ecs.n4.xlarge</instanceType>
        <nodeCount>2</nodeCount>
    </hostGroupList>
    <id>CT-35498C56B3F1****</id>
    <ioOptimized>true</ioOptimized>
    <isOpenPublicIp>true</isOpenPublicIp>
    <logEnable>false</logEnable>
    <machineType>ECS</machineType>
    <masterNodeTotal>0</masterNodeTotal>
    <netType>vpc</netType>
    <securityGroupId>sg-bp1id7ajv83kmqwq****</securityGroupId>
    <securityGroupName>emxxx</securityGroupName>
    <softwareInfoList>FLUME</softwareInfoList>
    <softwareInfoList>FLINK</softwareInfoList>
    <sshEnable>false</sshEnable>
    <templateName>template_name_2</templateName>
    <useLocalMetaDb>true</useLocalMetaDb>
    <userDefinedEmrEcsRole>AliyunEmrEcsDefaultRole</userDefinedEmrEcsRole>
    <userId>125046002175****</userId>
    <vSwitchId>vsw-bp10tvjyc77psy0z5****</vSwitchId>
    <vpcId>vpc-bp1l4urd87xlh7i4b****</vpcId>
    <zoneId>cn-hangzhou-b</zoneId>
</templateInfo>
```

JSON Syntax


```
{
    "requestId": "29A1D3B7-661C-4FCD-8577-DE93C8F6CA55",
    "templateInfo": {
        "bootstrapActionList": [],
        "clusterType": "HADOOP",
        "configList": [],
        "createSource": "2",
        "depositType": "HALF_MANAGED",
        "easEnable": false,
        "emrVer": "EMR-3.16.0",
        "gmtCreate": 1543765033000,
        "gmtModified": 1543765033000,
        "highAvailabilityEnable": false,
        "hostGroupList": [
            {
                "chargeType": "PostPaid",
                "diskCapacity": 80,
                "diskCount": 1,
                "diskType": "CLOUD_EFFICIENCY",
                "hostGroupId": "",
                "hostGroupName": "Master instance group",
                "hostGroupType": "MASTER",
                "instanceType": "ecs.n4.xlarge",
                "nodeCount": 1
            },
            {
                "chargeType": "PostPaid",
                "diskCapacity": 80,
                "diskCount": 4,
                "diskType": "CLOUD_EFFICIENCY",
                "hostGroupId": "",
                "hostGroupName": "Core instance group",
                "hostGroupType": "CORE",
                "instanceType": "ecs.n4.xlarge",
                "nodeCount": 2
            }
        ],
        "id": "CT-35498C56B3F1****",
        "ioOptimized": true,
        "isOpenPublicIp": true,
        "logEnable": false,
        "machineType": "ECS",
        "masterNodeTotal": 0,
        "netType": "vpc",
        "securityGroupId": "sg-bp1id7ajv83kmqwq****",
        "securityGroupName": "emxxx",
        "softwareInfoList": [
            "FLUME",
            "FLINK"
        ],
        "sshEnable": false,
        "templateName": "template_name_2",
```

```
        "useLocalMetaDb": true,
        "userDefinedEmrEcsRole": "AliyunEmrEcsDefaultRole",
        "userId": "125046002175****",
        "vSwitchId": "vsw-bp10tvjyc77psy0z5****",
        "vpcId": "vpc-bp1l4urd87xlh7i4b****",
        "zoneId": "cn-hangzhou-b"
    }
}
```

3.6. Queries the basic information of a cluster

You can call DescribeClusterV2 operation to query the basic information of a cluster, such as billing, ECS Machine overview, and E-MapReduce service list.

Debugging

OpenAPI Explorer automatically calculates the signature value. For your convenience, we recommend that you call this operation in OpenAPI Explorer. You can use OpenAPI Explorer to search for API operations, call API operations, and dynamically generate SDK sample code.

Request parameters

Parameter	Type	Required	Example	Description
Action	String	Yes	DescribeClusterV2	The operation that you want to perform. Set the value to DescribeClusterV2.
Id	String	Yes	C-E331B8AC12BF****	The ID of the cluster. You can call ListClusters You can call this operation to view the ID of a cluster.
RegionId	String	Yes	cn-hangzhou	The region ID of the instance. You can call DescribeRegions To view the latest list of Alibaba Cloud regions.

Response parameters

Parameter	Type	Example	Description
ClusterInfo	Struct		The details about the cluster.
AccessInfo	Struct		The cluster connection information.

Parameter	Type	Example	Description
ZKLinks	Array of ZKLink		The ZooKeeper connection information.
ZKLink			
Link	String	emr-worker-1,emr-header-2,emr-header-1	The endpoint of ZooKeeper.
Port	String	2181	The port that is used to access ZooKeeper.
AutoScalingAllowed	Boolean	false	Indicates whether elastic scaling is allowed. Valid values: • true: enables the system to automatically copy snapshots across regions. • false: disables the system to automatically copy snapshots across regions.
AutoScalingByLoadAllowed	Boolean	true	Indicates whether scaling by load is allowed. Valid values: • true: enables the system to automatically copy snapshots across regions. • false: disables the system to automatically copy snapshots across regions.
AutoScalingEnable	Boolean	false	Whether to enable elastic expansion: • true: Dynamic indexing is enabled. • false: Dynamic indexing is disabled.
AutoScalingSpotWithLimitAllowed	Boolean	false	Whether to allow auto scaling spot instances: • true: enables the system to automatically copy snapshots across regions. • false: disables the system to automatically copy snapshots across regions.
AutoScalingVersion	String	N/A	A reserved parameter.
AutoScalingWithGraceAllowed	Boolean	false	A reserved parameter.

Parameter	Type	Example	Description
BootstrapActionList	Array of BootstrapAction		The list of bootstrap actions.
BootstrapAction			
Arg	String	--a	The argument that you passed into the bootstrap action.
Name	String	action_name	The name of the bootstrap action.
Path	String	oss://bucket/path	The path where the bootstrap action script is stored.
BootstrapFailed	Boolean	false	Indicates whether the bootstrap action fails.
ChargeType	String	PostPaid	The billing method of the instance. Default value: Postpaid. Valid values: • PostPaid: pay-as-you-go clusters • PrePaid: subscription cluster
Configurations	String	[]	A reserved parameter.
CoreNodeInService	Integer	3	The number of core nodes that are in use.
CoreNodeTotal	Integer	3	The total number of core nodes.
CreateResource	String	ECM_EMR	The label that is automatically added to the created EMR cluster.
CreateType	String	MANUAL	The method of creating the cluster. • ON-DEMAND: Create ON DEMAND • MANUAL: manually created
DepositType	String	HALF_MANAGED	The hosting type of the cluster. Valid values: • HALF_MANAGED: Semi-managed • MANAGED: fully MANAGED

Parameter	Type	Example	Description
EasEnable	Boolean	true	Indicates whether the cluster is a high-security cluster. Valid values: • true: A high-security cluster is created. • false: The cluster is not a high-security cluster.
ExpiredTime	Long	1544076205000	The validity period of the subscription cluster.
ExtraInfo	String	-None-	The additional information about the Stack.
FailReason	Struct		The reason why the cluster failed to be created.
ErrorCode	String	InvalidImageId.NotFound	The error code for the creation failure.
ErrorMsg	String	The specified ImageId does not exist.	The error message for the creation failure.
RequestId	String	B8DC3A91-3953-4444-92BB-DBC29C47EC1A	The ID of the request for creating a cluster.
GatewayClusterIds	String	C-D7958B72E59B****	The IDs of the included gateway clusters.
GatewayClusterInfoList	Array of GatewayClusterInfo		The information of the gateway clusters.
GatewayClusterInfo			
ClusterId	String	C-D7958B72E59B****	The ID of the gateway cluster.
ClusterName	String	gateway-name	The name of the gateway cluster.

Parameter	Type	Example	Description
Status	String	IDLE	The status of the cluster. Valid values: • CREATING: the cluster is being created. • CREATE_FAILED: the cluster fails to be created. • RUNNING • IDLE: the cluster is IDLE. • RELEASING: the cluster is being released. • RELEASE_FAILED: the cluster fails to be released. • RELEASED: the cluster has been RELEASED. • WAIT_FOR_PAY: to be paid • ABNORMAL: the cluster status is ABNORMAL.
HighAvailabilityEnable	Boolean	true	Indicates whether the cluster is a high-availability cluster. Valid values: • true: the cluster has high availability. • false: The cluster is not a high-availability cluster.
HostGroupList	Array of HostGroup		The list of host groups.
HostGroup			
BandWidth	String	10	The bandwidth value,
ChargeType	String	PostPaid	The billing method of the instance. Default value: Postpaid. Valid values: • PostPaid: pay-as-you-go clusters • PrePaid: subscription cluster
CpuCore	Integer	16	The number of CPU cores.
DiskCapacity	Integer	120	The capacity of each data disk.
DiskCount	Integer	4	The number of data disks.

Parameter	Type	Example	Description
DiskType	String	CLOUD_SSD	System disk type: • CLOUD: basic CLOUD disk • CLOUD_EFFICIENCY: Ultra disk • CLOUD_SSD: Cloud SSD
HostGroupChangeStatus	String	N/A	A reserved parameter.
HostGroupChangeType	String	RESIZE_DISK	Machine Group the current operation type. • RESIZE_DISK: resizes the disk. • MODIFY_INSTANCE_TYPE: to change the instance type • RESTART_HOST_GROUP: restart the machine Group
HostGroupId	String	G-9D08642FB8CE****	The ID of the host group.
HostGroupName	String	Master instance group	The name of the host group.
HostGroupSubType	String	0	A reserved parameter. You do not need to specify this parameter.
HostGroupType	String	CORE	The role of the host in the cluster: • MASTER: The MASTER instance node. • CORE: CORE instance node • TASK: compute instance node
InstanceType	String	ecs.n4.2xlarge	Machine Group instances.
LockReason	String	0	A reserved parameter. You do not need to specify this parameter.
LockType	String	0	A reserved parameter. You do not need to specify this parameter.
MemoryCapacity	Integer	16	The amount of memory.
NodeCount	Integer	4	The number of nodes in the host group.

Parameter	Type	Example	Description
Nodes	Array of Node		A list of nodes.
Node			
CreateTime	String	1543804242000	The time when the node was created.
DaemonInfos	Array of DaemonInfo		A reserved parameter.
DaemonInfo			
Name	String	0	A reserved parameter. You do not need to specify this parameter.
DiskInfos	Array of DiskInfo		The information of disks.
DiskInfo			
Device	String	/dev/xvdb	The name of the disk.
DiskId	String	d-bp15vg2nr3x2t0f37ko9	The ID of the disk.
DiskName	String	disk1	The name of the disk.
Size	Integer	80	The capacity of the disk. Unit: GB.
Type	String	data	The type of the disk.
EmrExpiredTime	String	2099-12-31T15:59Z	The time when the EMR cluster expires.
ExpiredTime	String	2099-12-31T15:59Z	The time when the node expires.
InnerIp	String	192.168.128.236	The private IP address.
InstanceId	String	i-bp1ftve3lzvpm16hp7lo	The ID of the instance.

Parameter	Type	Example	Description
PubIp	String	47.99. ***. ***	The public IP address.
Status	String	NORMAL	The status of the node.
SupportIpV6	Boolean	false	Indicates whether the IPv6 protocol is supported.
ZoneId	String	cn-hangzhou-e	The zone ID.
Period	String	30	The length of the subscription. Unit: days.
HostPoolInfo	Struct		The information of the host pool.
HpBizId	String	id	The ID of the host pool.
HpName	String	name	The name of the host pool.
Id	String	C-E331B8AC12BF****	The ID of the cluster.
ImageId	String	m-bp118knl07yk88y8s6cj	The ID of the image that is used to create the cluster.
InstanceGeneration	String	ecs-3	The generation of the ECS instance.
IoOptimized	Boolean	true	Whether I/O optimization: • true • false: Do not optimize
K8sClusterId	String	N/A	A reserved parameter.
LocalMetaDb	Boolean	true	Indicates whether the local Hive metadatabase is used.
LogEnable	Boolean	true	Whether to open the cluster OSS log: • true: Open • false: Do not open

Parameter	Type	Example	Description
LogPath	String	oss://bucketname/path	The path of logs that are stored in the OSS bucket.
MachineType	String	ECS	The instance type of the cluster. Currently, ECS instances are used by default.
MasterNodeInService	Integer	2	The number of master nodes that are in use.
MasterNodeTotal	Integer	2	The total number of master nodes.
MetaStoreType	String	LOCAL	Metadata type: • LOCAL: internal metadata of the cluster • UNIFIED: UNIFIED metadata • USER_RDS: User-created RDS
Name	String	cluster_name	The name of the cluster.
NetType	String	vpc	The network type of the cluster.
Period	Integer	36	The validity period of the subscription host group. Unit: months. Valid values: 1, 2, 3, 4, 5, 6, 7, 8, 9, 12, 24, and 36.
RegionId	String	cn-hangzhou	The region ID of the instance.
RelateClusterId	String	C-D7958B72E59****	The ID of the EMR cluster that is associated with the gateway cluster.
RelateClusterInfo	Struct		The information of the EMR cluster that is associated with the gateway cluster.
ClusterId	String	C-D7958B72E59B****	The ID of the EMR cluster.
ClusterName	String	main	The name of the EMR cluster.
ClusterType	String	HADOOP	The type of ACK cluster. Valid values:

Parameter	Type	Example	Description
Status	String	SUCCESS	The status of the action.
ResizeDiskEnable	Boolean	true	Indicates whether disk expansion is allowed. Valid values: • true: resizes the disk. • false: does not expand the disk
RunningTime	Integer	1102	The runtime. Unit: seconds.
SecurityGroupId	String	sg-bp1bvompzxgx7q0***	The ID of the security group.
SecurityGroupName	String	emr-default-securitygroup	The name of the security group.
ShowSoftwareInterface	Boolean	true	Indicates whether to display the shortcut links page. Valid values: • true: the shortcut links page is displayed. • false: the shortcut links page is not displayed.
SoftwareInfo	Struct		The information of services.
ClusterType	String	HADOOP	Cluster Type: • HADOOP • KAFKA • GATEWAY • DRUID • ZOOKEEPER • DATA_SCIENCE
EmrVer	String	EMR-3.16.0	The version number of the E-MapReduce.
Softwares	Array of Software		The list of services.
Software			
DisplayName	String	Hive	The name of the service.

Parameter	Type	Example	Description
Name	String	HIVE	The internal name of the service.
OnlyDisplay	Boolean	false	Indicates whether the service name is displayed.
StartTpe	Integer	1	The startup type.
Version	String	2.3.3	The version of the service.
StartTime	Long	1543804234000	The time when the cluster was started. The value is a timestamp.
Status	String	IDLE	Cluster status. The values are as follows: • CREATING: initializing • CREATE_FAILED: The instance fails to be created. • RUNNING • IDLE: IDLE • RELEASING: being released • RELEASE_FAILED: release failed • RELEASED: RELEASED • ABNORMAL: The status is ABNORMAL.
StopTime	Long	1543804234000	The time when the cluster stops.
TaskNodeInService	Integer	2	The number of task nodes that are in use.
TaskNodeTotal	Integer	2	The total number of task nodes.
UserDefinedEmrEcsRole	String	AliyunEmrEcsDefaultRole	The RAM role that you assigned to the EMR service.
UserId	String	125046002175****	The ID of the user.
VSwitchId	String	vsw-bp11qjbyggil4pow0****	The ID of the vSwitch to which the instance is connected.

Parameter	Type	Example	Description
VpcId	String	vpc-bp1l4urd87xlh7i4****	The ID of the VPC to which the instance belongs.
ZoneId	String	cn-hangzhou-b	The ID of the zone.
RequestId	String	14E9C045-9B8D-4D1E-8D23-FC0027B6D947	The ID of the request.

Examples

Sample requests

```
http(s)://[Endpoint]/?Action=DescribeClusterV2
&Id=C-E331B8AC12BF****
&RegionId=cn-hangzhou
&<common request parameters>
```

Sample success responses

`XML` format

```
<ClusterInfo>
    <AutoScalingAllowed>true</AutoScalingAllowed>
    <AutoScalingEnable>false</AutoScalingEnable>
    <AutoScalingSpotWithLimitAllowed>true</AutoScalingSpotWithLimitAllowed>
    <BootstrapActionList>
    </BootstrapActionList>
    <BootstrapFailed>false</BootstrapFailed>
    <ChargeType>PostPaid</ChargeType>
    <Configurations/>
    <CoreNodeInService>2</CoreNodeInService>
    <CoreNodeTotal>2</CoreNodeTotal>
    <CreateResource>ECM_EMR</CreateResource>
    <CreateType>MANUAL</CreateType>
    <EasEnable>true</EasEnable>
    <GatewayClusterInfoList>
    </GatewayClusterInfoList>
    <HighAvailabilityEnable>true</HighAvailabilityEnable>
    <HostGroupList>
        <HostGroup>
            <ChargeType>PostPaid</ChargeType>
            <CpuCore>8</CpuCore>
            <DiskCapacity>80</DiskCapacity>
            <DiskCount>1</DiskCount>
            <DiskType>CLOUD_SSD</DiskType>
            <HostGroupId>G-79AA94922DFB****</HostGroupId>
            <HostGroupName>Master instance group</HostGroupName>
            <HostGroupType>MASTER</HostGroupType>
            <InstanceType>ecs.n4.2xlarge</InstanceType>
```

```
            <MemoryCapacity>16</MemoryCapacity>
            <NodeCount>2</NodeCount>
            <Nodes>
                <Node>
                    <CreateTime>1543804242000</CreateTime>
                    <DaemonInfos>
                    </DaemonInfos>
                    <DiskInfos>
                        <DiskInfo>
                            <Device>/dev/xvdb</Device>
                            <DiskId>d-bp15vg2nr3x2t0f37ko9</DiskId>
                            <Size>80</Size>
                            <Type>data</Type>
                        </DiskInfo>
                        <DiskInfo>
                            <Device>/dev/xvda</Device>
                            <DiskId>d-bp16c7qipsxtrq97mybg</DiskId>
                            <Size>120</Size>
                            <Type>system</Type>
                        </DiskInfo>
                    </DiskInfos>
                    <EmrExpiredTime>null</EmrExpiredTime>
                    <ExpiredTime>2099-12-31T15:59Z</ExpiredTime>
                    <InnerIp>192.168.*.*</InnerIp>
                    <InstanceId>i-bp16c7qipsxtrq99****</InstanceId>
                    <PubIp>47.97.*.*</PubIp>
                    <Status>NORMAL</Status>
                    <ZoneId>cn-hangzhou-b</ZoneId>
                </Node>
                <Node>
                    <CreateTime>1543804242000</CreateTime>
                    <DaemonInfos>
                    </DaemonInfos>
                    <DiskInfos>
                        <DiskInfo>
                            <Device>/dev/xvdb</Device>
                            <DiskId>d-bp1568nnv4ev81672qe6</DiskId>
                            <Size>80</Size>
                            <Type>data</Type>
                        </DiskInfo>
                        <DiskInfo>
                            <Device>/dev/xvda</Device>
                            <DiskId>d-bp16z8pr0y2vgfkghuba</DiskId>
                            <Size>120</Size>
                            <Type>system</Type>
                        </DiskInfo>
                    </DiskInfos>
                    <EmrExpiredTime>null</EmrExpiredTime>
                    <ExpiredTime>2099-12-31T15:59Z</ExpiredTime>
                    <InnerIp>192.168.*.*</InnerIp>
                    <InstanceId>i-bp1ftve3lzvpm16h****</InstanceId>
                    <PubIp>47.99.*.*</PubIp>
                    <Status>NORMAL</Status>
                    <ZoneId>cn-hangzhou-b</ZoneId>
```

```
                </Node>
            </Nodes>
        </HostGroup>
        <HostGroup>
            <ChargeType>PostPaid</ChargeType>
            <CpuCore>8</CpuCore>
            <DiskCapacity>80</DiskCapacity>
            <DiskCount>4</DiskCount>
            <DiskType>CLOUD_SSD</DiskType>
            <HostGroupId>G-9D08642FB8CE****</HostGroupId>
            <HostGroupName>Core instance group</HostGroupName>
            <HostGroupType>CORE</HostGroupType>
            <InstanceType>ecs.n4.2xlarge</InstanceType>
            <MemoryCapacity>16</MemoryCapacity>
            <NodeCount>2</NodeCount>
            <Nodes>
                <Node>
                    <CreateTime>1543804244000</CreateTime>
                    <DaemonInfos>
                    </DaemonInfos>
                    <DiskInfos>
                        <DiskInfo>
                            <Device>/dev/xvde</Device>
                            <DiskId>d-bp1568nnv4ev81672qe5</DiskId>
                            <Size>80</Size>
                            <Type>data</Type>
                        </DiskInfo>
                        <DiskInfo>
                            <Device>/dev/xvdd</Device>
                            <DiskId>d-bp1967p3xp86y3wiudgq</DiskId>
                            <Size>80</Size>
                            <Type>data</Type>
                        </DiskInfo>
                        <DiskInfo>
                            <Device>/dev/xvdc</Device>
                            <DiskId>d-bp11qsh4zwrwup8jm9rr</DiskId>
                            <Size>80</Size>
                            <Type>data</Type>
                        </DiskInfo>
                        <DiskInfo>
                            <Device>/dev/xvdb</Device>
                            <DiskId>d-bp1d1juyl8z8aeuza9co</DiskId>
                            <Size>80</Size>
                            <Type>data</Type>
                        </DiskInfo>
                        <DiskInfo>
                            <Device>/dev/xvda</Device>
                            <DiskId>d-bp1ftve3lzvpm16i37y1</DiskId>
                            <Size>80</Size>
                            <Type>system</Type>
                        </DiskInfo>
                    </DiskInfos>
                    <EmrExpiredTime>null</EmrExpiredTime>
                    <ExpiredTime>2099-12-31T15:59Z</ExpiredTime>
```

```
                <InnerIp>192.168.*.*</InnerIp>
                <InstanceId>i-bp1gyhphkjplgljr****</InstanceId>
                <PubIp/>
                <Status>NORMAL</Status>
                <ZoneId>cn-hangzhou-b</ZoneId>
            </Node>
            <Node>
                <CreateTime>1543804247000</CreateTime>
                <DaemonInfos>
                </DaemonInfos>
                <DiskInfos>
                    <DiskInfo>
                        <Device>/dev/xvde</Device>
                        <DiskId>d-bp12zhcmd96101qhz8ko</DiskId>
                        <Size>80</Size>
                        <Type>data</Type>
                    </DiskInfo>
                    <DiskInfo>
                        <Device>/dev/xvdd</Device>
                        <DiskId>d-bp13rttoh3l1gj84gcas</DiskId>
                        <Size>80</Size>
                        <Type>data</Type>
                    </DiskInfo>
                    <DiskInfo>
                        <Device>/dev/xvdc</Device>
                        <DiskId>d-bp1cnruigppe54k6fx18</DiskId>
                        <Size>80</Size>
                        <Type>data</Type>
                    </DiskInfo>
                    <DiskInfo>
                        <Device>/dev/xvdb</Device>
                        <DiskId>d-bp1967p3xp86y3wiudgr</DiskId>
                        <Size>80</Size>
                        <Type>data</Type>
                    </DiskInfo>
                    <DiskInfo>
                        <Device>/dev/xvda</Device>
                        <DiskId>d-bp1ik6bdp8fpsr8zsebj</DiskId>
                        <Size>80</Size>
                        <Type>system</Type>
                    </DiskInfo>
                </DiskInfos>
                <EmrExpiredTime>null</EmrExpiredTime>
                <ExpiredTime>2099-12-31T15:59Z</ExpiredTime>
                <InnerIp>192.168*.*</InnerIp>
                <InstanceId>i-bp1ftve3lzvpm16h****</InstanceId>
                <PubIp/>
                <Status>NORMAL</Status>
                <ZoneId>cn-hangzhou-b</ZoneId>
            </Node>
        </Nodes>
    </HostGroup>
</HostGroupList>
<Id>C-E331B8AC12BF****</Id>
<ImageId>m-bp118kpl07yk88y8s6ci</ImageId>
```

```
    <ImageId>m-bp1fuxhi07yx00y030cj</ImageId>
    <IoOptimized>true</IoOptimized>
    <LocalMetaDb>true</LocalMetaDb>
    <MasterNodeInService>2</MasterNodeInService>
    <MasterNodeTotal>0</MasterNodeTotal>
    <Name>df-test-safe</Name>
    <NetType>vpc</NetType>
    <RegionId>cn-hangzhou</RegionId>
    <ResizeDiskEnable>true</ResizeDiskEnable>
    <RunningTime>1102</RunningTime>
    <SecurityGroupId>sg-bp1bvompzxgx7q0l****</SecurityGroupId>
    <SecurityGroupName>emr-default-securitygroup</SecurityGroupName>
    <ShowSoftwareInterface>false</ShowSoftwareInterface>
    <SoftwareInfo>
        <ClusterType>HADOOP</ClusterType>
        <EmrVer>EMR-3.16.0_pre</EmrVer>
        <Softwares>
            <Software>
                <DisplayName>HDFS</DisplayName>
                <Name>HDFS</Name>
                <OnlyDisplay>false</OnlyDisplay>
                <StartTpe>1</StartTpe>
                <Version>2.7.2-1.3.2</Version>
            </Software>
            <Software>
                <DisplayName>YARN</DisplayName>
                <Name>YARN</Name>
                <OnlyDisplay>false</OnlyDisplay>
                <StartTpe>1</StartTpe>
                <Version>2.7.2-1.3.2</Version>
            </Software>
            <Software>
                <DisplayName>Hive</DisplayName>
                <Name>HIVE</Name>
                <OnlyDisplay>false</OnlyDisplay>
                <StartTpe>1</StartTpe>
                <Version>2.3.3-1.0.3</Version>
            </Software>
            <Software>
                <DisplayName>Ganglia</DisplayName>
                <Name>GANGLIA</Name>
                <OnlyDisplay>false</OnlyDisplay>
                <StartTpe>1</StartTpe>
                <Version>3.7.2</Version>
            </Software>
            <Software>
                <DisplayName>Zookeeper</DisplayName>
                <Name>ZOOKEEPER</Name>
                <OnlyDisplay>false</OnlyDisplay>
                <StartTpe>1</StartTpe>
                <Version>3.4.13</Version>
            </Software>
            <Software>
                <DisplayName>Spark</DisplayName>
                <Name>SPARK</Name>
```

```
            <OnlyDisplay>false</OnlyDisplay>
            <StartTpe>1</StartTpe>
            <Version>2.3.2-1.0.1</Version>
        </Software>
        <Software>
            <DisplayName>HBase</DisplayName>
            <Name>HBASE</Name>
            <OnlyDisplay>false</OnlyDisplay>
            <StartTpe>1</StartTpe>
            <Version>1.1.1-1.0.2</Version>
        </Software>
        <Software>
            <DisplayName>HUE</DisplayName>
            <Name>HUE</Name>
            <OnlyDisplay>false</OnlyDisplay>
            <StartTpe>1</StartTpe>
            <Version>4.1.0</Version>
        </Software>
        <Software>
            <DisplayName>Zeppelin</DisplayName>
            <Name>ZEPPELIN</Name>
            <OnlyDisplay>false</OnlyDisplay>
            <StartTpe>1</StartTpe>
            <Version>0.8.0</Version>
        </Software>
        <Software>
            <DisplayName>Tez</DisplayName>
            <Name>TEZ</Name>
            <OnlyDisplay>false</OnlyDisplay>
            <StartTpe>1</StartTpe>
            <Version>0.9.1-1.0.2</Version>
        </Software>
        <Software>
            <DisplayName>Presto</DisplayName>
            <Name>PRESTO</Name>
            <OnlyDisplay>false</OnlyDisplay>
            <StartTpe>1</StartTpe>
            <Version>0.208</Version>
        </Software>
        <Software>
            <DisplayName>Sqoop</DisplayName>
            <Name>SQOOP</Name>
            <OnlyDisplay>false</OnlyDisplay>
            <StartTpe>1</StartTpe>
            <Version>1.4.7-1.0.0</Version>
        </Software>
        <Software>
            <DisplayName>Pig</DisplayName>
            <Name>PIG</Name>
            <OnlyDisplay>false</OnlyDisplay>
            <StartTpe>1</StartTpe>
            <Version>0.14.0</Version>
        </Software>
        <Software>
```

```
                <DisplayName>ApacheDS</DisplayName>
                <Name>APACHEDS</Name>
                <OnlyDisplay>false</OnlyDisplay>
                <StartTpe>1</StartTpe>
                <Version>2.0.0</Version>
            </Software>
            <Software>
                <DisplayName>HAS</DisplayName>
                <Name>HAS</Name>
                <OnlyDisplay>false</OnlyDisplay>
                <StartTpe>1</StartTpe>
                <Version>1.1.1</Version>
            </Software>
            <Software>
                <DisplayName>Knox</DisplayName>
                <Name>KNOX</Name>
                <OnlyDisplay>false</OnlyDisplay>
                <StartTpe>1</StartTpe>
                <Version>0.13.0-0.0.3</Version>
            </Software>
        </Softwares>
    </SoftwareInfo>
    <StartTime>1543804234000</StartTime>
    <Status>IDLE</Status>
    <TaskNodeInService>0</TaskNodeInService>
    <TaskNodeTotal>0</TaskNodeTotal>
    <UserDefinedEmrEcsRole>AliyunEmrEcsDefaultRole</UserDefinedEmrEcsRole>
    <UserId>125046002175****</UserId>
    <VSwitchId>vsw-bp11qjbyggil4pow0****</VSwitchId>
    <VpcId>vpc-bp1l4urd87xlh7i4b****</VpcId>
    <ZoneId>cn-hangzhou-b</ZoneId>
</ClusterInfo>
<requestId>14E9C045-9B8D-4D1E-8D23-FC0027B6D947</requestId>
```

JSON Syntax

```
{
    "ClusterInfo": {
        "AutoScalingAllowed": true,
        "AutoScalingEnable": false,
        "AutoScalingSpotWithLimitAllowed": true,
        "BootstrapActionList": {
            "BootstrapAction": []
        },
        "BootstrapFailed": false,
        "ChargeType": "PostPaid",
        "Configurations": "",
        "CoreNodeInService": 2,
        "CoreNodeTotal": 2,
        "CreateResource": "ECM_EMR",
        "CreateType": "MANUAL",
        "EasEnable": true,
        "GatewayClusterInfoList": {
            "GatewayClusterInfo": []
```

```
            "GatewayClusterInfo": []
        },
        "HighAvailabilityEnable": true,
        "HostGroupList": {
            "HostGroup": [
                {
                    "ChargeType": "PostPaid",
                    "CpuCore": 8,
                    "DiskCapacity": 80,
                    "DiskCount": 1,
                    "DiskType": "CLOUD_SSD",
                    "HostGroupId": "G-79AA94922DFB****",
                    "HostGroupName": "Master instance group",
                    "HostGroupType": "MASTER",
                    "InstanceType": "ecs.n4.2xlarge",
                    "MemoryCapacity": 16,
                    "NodeCount": 2,
                    "Nodes": {
                        "Node": [
                            {
                                "CreateTime": "1543804242000",
                                "DaemonInfos": {
                                    "DaemonInfo": []
                                },
                                "DiskInfos": {
                                    "DiskInfo": [
                                        {
                                            "Device": "/dev/xvdb",
                                            "DiskId": "d-bp15vg2nr3x2t0f37ko9",
                                            "Size": 80,
                                            "Type": "data"
                                        },
                                        {
                                            "Device": "/dev/xvda",
                                            "DiskId": "d-bp16c7qipsxtrq97mybg",
                                            "Size": 120,
                                            "Type": "system"
                                        }
                                    ]
                                },
                                "EmrExpiredTime": "null",
                                "ExpiredTime": "2099-12-31T15:59Z",
                                "InnerIp": "192.168.*.*",
                                "InstanceId": "i-bp16c7qipsxtrq99****",
                                "PubIp": "47.97.*.*",
                                "Status": "NORMAL",
                                "ZoneId": "cn-hangzhou-b"
                            },
                            {
                                "CreateTime": "1543804242000",
                                "DaemonInfos": {
                                    "DaemonInfo": []
                                },
                                "DiskInfos": {
                                    "DiskInfo": [
```

```
                                    {
                                        "Device": "/dev/xvdb",
                                        "DiskId": "d-bp1568nnv4ev81672qe6",
                                        "Size": 80,
                                        "Type": "data"
                                    },
                                    {
                                        "Device": "/dev/xvda",
                                        "DiskId": "d-bp16z8pr0y2vgfkghuba",
                                        "Size": 120,
                                        "Type": "system"
                                    }
                                ]
                            },
                            "EmrExpiredTime": "null",
                            "ExpiredTime": "2099-12-31T15:59Z",
                            "InnerIp": "192.168.*.*",
                            "InstanceId": "i-bp1ftve3lzvpm16h****",
                            "PubIp": "47.99.*.*",
                            "Status": "NORMAL",
                            "ZoneId": "cn-hangzhou-b"
                        }
                    ]
                }
            },
            {
                "ChargeType": "PostPaid",
                "CpuCore": 8,
                "DiskCapacity": 80,
                "DiskCount": 4,
                "DiskType": "CLOUD_SSD",
                "HostGroupId": "G-9D08642FB8CE****",
                "HostGroupName": "Core instance group",
                "HostGroupType": "CORE",
                "InstanceType": "ecs.n4.2xlarge",
                "MemoryCapacity": 16,
                "NodeCount": 2,
                "Nodes": {
                    "Node": [
                        {
                            "CreateTime": "1543804244000",
                            "DaemonInfos": {
                                "DaemonInfo": []
                            },
                            "DiskInfos": {
                                "DiskInfo": [
                                    {
                                        "Device": "/dev/xvde",
                                        "DiskId": "d-bp1568nnv4ev81672qe5",
                                        "Size": 80,
                                        "Type": "data"
                                    },
                                    {
                                        "Device": "/dev/xvdd",
```

```
                                "DiskId": "d-bp1967p3xp86y3wiudgq",
                                "Size": 80,
                                "Type": "data"
                            },
                            {
                                "Device": "/dev/xvdc",
                                "DiskId": "d-bp11qsh4zwrwup8jm9rr",
                                "Size": 80,
                                "Type": "data"
                            },
                            {
                                "Device": "/dev/xvdb",
                                "DiskId": "d-bp1d1juyl8z8aeuza9co",
                                "Size": 80,
                                "Type": "data"
                            },
                            {
                                "Device": "/dev/xvda",
                                "DiskId": "d-bp1ftve3lzvpm16i37y1",
                                "Size": 80,
                                "Type": "system"
                            }
                        ]
                    },
                    "EmrExpiredTime": "null",
                    "ExpiredTime": "2099-12-31T15:59Z",
                    "InnerIp": "192.168.*.*",
                    "InstanceId": "i-bp1gyhphkjplgljr****",
                    "PubIp": "",
                    "Status": "NORMAL",
                    "ZoneId": "cn-hangzhou-b"
                },
                {
                    "CreateTime": "1543804247000",
                    "DaemonInfos": {
                        "DaemonInfo": []
                    },
                    "DiskInfos": {
                        "DiskInfo": [
                            {
                                "Device": "/dev/xvde",
                                "DiskId": "d-bp12zhcmd96101qhz8ko",
                                "Size": 80,
                                "Type": "data"
                            },
                            {
                                "Device": "/dev/xvdd",
                                "DiskId": "d-bp13rttoh3l1gj84gcas",
                                "Size": 80,
                                "Type": "data"
                            },
                            {
                                "Device": "/dev/xvdc",
                                "DiskId": "d-bp1cnruigppe54k6fx18",
```

```
                                        "Size": 80,
                                        "Type": "data"
                                    },
                                    {
                                        "Device": "/dev/xvdb",
                                        "DiskId": "d-bp1967p3xp86y3wiudgr",
                                        "Size": 80,
                                        "Type": "data"
                                    },
                                    {
                                        "Device": "/dev/xvda",
                                        "DiskId": "d-bp1ik6bdp8fpsr8zsebj",
                                        "Size": 80,
                                        "Type": "system"
                                    }
                                ]
                            },
                            "EmrExpiredTime": "null",
                            "ExpiredTime": "2099-12-31T15:59Z",
                            "InnerIp": "192.168*.*",
                            "InstanceId": "i-bp1ftve3lzvpm16h****",
                            "PubIp": "",
                            "Status": "NORMAL",
                            "ZoneId": "cn-hangzhou-b"
                        }
                    ]
                }
            }
        ]
    },
    "Id": "C-E331B8AC12BF****",
    "ImageId": "m-bp118knl07yk88y8s6cj",
    "IoOptimized": true,
    "LocalMetaDb": true,
    "MasterNodeInService": 2,
    "MasterNodeTotal": 0,
    "Name": "df-test-safe",
    "NetType": "vpc",
    "RegionId": "cn-hangzhou",
    "ResizeDiskEnable": true,
    "RunningTime": 1102,
    "SecurityGroupId": "sg-bp1bvompzxgx7q0l****",
    "SecurityGroupName": "emr-default-securitygroup",
    "ShowSoftwareInterface": false,
    "SoftwareInfo": {
        "ClusterType": "HADOOP",
        "EmrVer": "EMR-3.16.0_pre",
        "Softwares": {
            "Software": [
                {
                    "DisplayName": "HDFS",
                    "Name": "HDFS",
                    "OnlyDisplay": false,
                    "StartTpe": 1,
```

```
                "Version": "2.7.2-1.3.2"
            },
            {
                "DisplayName": "YARN",
                "Name": "YARN",
                "OnlyDisplay": false,
                "StartTpe": 1,
                "Version": "2.7.2-1.3.2"
            },
            {
                "DisplayName": "Hive",
                "Name": "HIVE",
                "OnlyDisplay": false,
                "StartTpe": 1,
                "Version": "2.3.3-1.0.3"
            },
            {
                "DisplayName": "Ganglia",
                "Name": "GANGLIA",
                "OnlyDisplay": false,
                "StartTpe": 1,
                "Version": "3.7.2"
            },
            {
                "DisplayName": "Zookeeper",
                "Name": "ZOOKEEPER",
                "OnlyDisplay": false,
                "StartTpe": 1,
                "Version": "3.4.13"
            },
            {
                "DisplayName": "Spark",
                "Name": "SPARK",
                "OnlyDisplay": false,
                "StartTpe": 1,
                "Version": "2.3.2-1.0.1"
            },
            {
                "DisplayName": "HBase",
                "Name": "HBASE",
                "OnlyDisplay": false,
                "StartTpe": 1,
                "Version": "1.1.1-1.0.2"
            },
            {
                "DisplayName": "HUE",
                "Name": "HUE",
                "OnlyDisplay": false,
                "StartTpe": 1,
                "Version": "4.1.0"
            },
            {
                "DisplayName": "Zeppelin",
                "Name": "ZEPPELIN",
                "OnlyDisplay": false
```

```
                "OnlyDisplay": false,
                "StartTpe": 1,
                "Version": "0.8.0"
            },
            {
                "DisplayName": "Tez",
                "Name": "TEZ",
                "OnlyDisplay": false,
                "StartTpe": 1,
                "Version": "0.9.1-1.0.2"
            },
            {
                "DisplayName": "Presto",
                "Name": "PRESTO",
                "OnlyDisplay": false,
                "StartTpe": 1,
                "Version": "0.208"
            },
            {
                "DisplayName": "Sqoop",
                "Name": "SQOOP",
                "OnlyDisplay": false,
                "StartTpe": 1,
                "Version": "1.4.7-1.0.0"
            },
            {
                "DisplayName": "Pig",
                "Name": "PIG",
                "OnlyDisplay": false,
                "StartTpe": 1,
                "Version": "0.14.0"
            },
            {
                "DisplayName": "ApacheDS",
                "Name": "APACHEDS",
                "OnlyDisplay": false,
                "StartTpe": 1,
                "Version": "2.0.0"
            },
            {
                "DisplayName": "HAS",
                "Name": "HAS",
                "OnlyDisplay": false,
                "StartTpe": 1,
                "Version": "1.1.1"
            },
            {
                "DisplayName": "Knox",
                "Name": "KNOX",
                "OnlyDisplay": false,
                "StartTpe": 1,
                "Version": "0.13.0-0.0.3"
            }
        ]
    }
```

```
        },
        "StartTime": 1543804234000,
        "Status": "IDLE",
        "TaskNodeInService": 0,
        "TaskNodeTotal": 0,
        "UserDefinedEmrEcsRole": "AliyunEmrEcsDefaultRole",
        "UserId": "125046002175****",
        "VSwitchId": "vsw-bp11qjbyggil4pow0****",
        "VpcId": "vpc-bp1l4urd87xlh7i4b****",
        "ZoneId": "cn-hangzhou-b"
    },
    "requestId": "14E9C045-9B8D-4D1E-8D23-FC0027B6D947"
}
```

3.7. Query cluster information

Call the DescribeClusterBasicInfo interface to query the basic information of the created cluster.

Debugging

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

Request parameters

Parameter	Type	Required	Example	Description
Action	String	Yes	DescribeClusterBasicInfo	The operation that you want to perform. Set this parameter to DescribeClusterBasicInfo.
ClusterId	String	Yes	C-0EF9B0EC8564****	The ID of the cluster. You can call the ListClusters operation to view the ID of the cluster.
RegionId	String	Yes	cn-huhehaote	The ID of the region. You can call the DescribeRegions operation to view the latest list of Alibaba Cloud regions.

Response parameters

Parameter	Type	Example	Description
ClusterInfo	Struct		The detailed information about the cluster.
AccessInfo	Struct		The access address of the cluster.

Parameter	Type	Example	Description
ZKLinks	Array of ZKLink		The list of link address information for ZooKeeper.
ZKLink			
Link	String	192.168.*.*	The endpoint address of ZooKeeper.
Port	String	2181	The port of ZooKeeper.
AutoScalingAllowed	Boolean	true	Whether the cluster supports Auto Scaling: • true: supports Auto Scaling • false: Auto Scaling is not supported.
AutoScalingByLoadAllowed	Boolean	true	Whether the cluster supports scaling by load: • true: supports scaling by load • false: scaling by load is not supported.
AutoScalingEnable	Boolean	true	Whether Auto Scaling is currently enabled for the cluster: • true: The Auto Scaling is enabled. • false: The Auto Scaling is not enabled.
AutoScalingSpotWithLimitAllowed	Boolean	true	Auto Scaling whether spot instances are allowed: • true: The spot instance is allowed. • false: spot instances are not allowed.
AutoScalingVersion	String	N/A	A reserved parameter.
AutoScalingWithGraceAllowed	Boolean	true	Valid values: • true: The job files are decompressed. • false: no
BootstrapActionList	Array of BootstrapAction		The list of bootstrap actions.
BootstrapAction			

Parameter	Type	Example	Description
Arg	String	name=NAME	Boot script parameters.
Name	String	boot1	The name of the boot script.
Path	String	oss://script/boot1	The OSS path of the boot script.
BootstrapFailed	Boolean	false	Execution result of the bootstrap operation: • true: The operation is successful. • false: The operation failed.
ChargeType	String	PostPaid	The billing type of the cluster. Valid values: • PostPaid: pay-as-you-go cluster • PrePaid: subscription cluster
ClickhouseConf	String	""	A reserved parameter.
ClusterId	String	C-02582A4A415E****	The ID of the cluster.
Configurations	String	""	A reserved parameter.
CoreNodeInService	Integer	0	Discard fields.
CoreNodeTotal	Integer	0	Discard fields.
CreateResource	String	ECM_EMR	The deployment mode of the cluster. Valid values: • ECM_EMR: the default value. • RAW_EMR: Some clusters created in earlier EMR versions, such as 1.3.0.
CreateType	String	MANUAL	The method of creating the cluster. Valid values: • MANUAL: manually created • ON-DEMAND: automatically created
DataDiskEncrypted	Boolean	false	A reserved parameter.

Parameter	Type	Example	Description
DataDiskKMSKeyId	String	false	A reserved parameter.
DepositType	String	HALF_MANAGED	The managed type of the cluster. Valid values: • HALF_MANAGED: semi-managed • MANAGED: fully managed
EasEnable	Boolean	false	The high security mode of the cluster. Valid values: • true: high-security cluster • false: non-high-security cluster
ExpiredTime	Long	1564367083000	The expiration time of a subscription cluster. **Note** This parameter is not displayed for clusters of the pay-as-you-go type.
ExtraInfo	String	-None-	Stack additional information.
FailReason	Struct		The reason why the cluster failed to be created.
ErrorCode	String	ClusterId.NotFound	The error code when the cluster fails to be created.
ErrorMsg	String	ClusterId [null] does not exist.	The error message returned when the cluster fails to be created.
RequestId	String	FDFFCB97-1609-469A-B153-F511CA9FC1F5	The ID of the corresponding background request when the cluster fails to be created.
GatewayClusterIds	String	C-xxx	Discard fields.
GatewayClusterInfoList	Array of GatewayClusterInfo		The list of gateway clusters associated with the cluster.
GatewayClusterInfo			

Parameter	Type	Example	Description
ClusterId	String	C-1AD4D95AF8B6****	The ID of the Gateway cluster.
ClusterName	String	test_gateway	The name of the Gateway cluster.
Status	String	IDLE	The status of the Gateway cluster. Valid values: • CREATING: The cluster is being created. • CREATE_FAILED: The cluster failed to be created. • RUNNING: The DAG is running. • IDLE: cluster idle • RELEASING: The cluster is being released. • RELEASE_FAILED: The cluster failed to be released. • RELEASED: The cluster has been released. • WAIT_FOR_PAY: Pending Payment • ABNORMAL: The cluster status is abnormal.
HighAvailability Enable	Boolean	true	Indicates whether the cluster is a high-availability cluster.
HostPoolInfo	Struct		The information about the host pool that is used to create the cluster. This parameter is returned when the cluster is created by using the host pool.
HpBizId	String	HP-xxx	The ID of the machine pool.
HpName	String	test_hp	The name of the host pool.
ImageId	String	m-hp37dmahkdx7h2b5****	The ID of the ECS image used by nodes in the cluster.
InstanceGeneration	String	ecs-2	Discard fields.
IoOptimized	Boolean	true	Discard fields.
K8sClusterId	String	None	A reserved parameter.

Parameter	Type	Example	Description
LocalMetaDb	Boolean	true	Indicates whether the cluster uses the local HIVE metadatabase: • true: local metadatabase • false: unified metadatabase
LogEnable	Boolean	false	Discard fields.
LogPath	String	""	Discard fields.
MachineType	String	ECS	The node type of the cluster. Default value: ECS.
MasterNodeInService	Integer	0	Discard fields.
MasterNodeTotal	Integer	0	Discard fields.
MetaStoreType	String	LOCAL	The unified metadata type of the cluster. Valid values: • LOCAL • USER_RDS • UNIFIED
Name	String	test_cluster	The name of the global active database cluster.
NetType	String	VPC	The network type of the cluster.
OperationId	String	1111	The ID of the operation.
Period	Integer	0	Discard fields.
RegionId	String	cn-huhehaote-a	The ID of the region.
RelateClusterId	String	C-xxx	Discard fields.
RelateClusterInfo	Struct		The information about the primary cluster associated with the gateway cluster.

Parameter	Type	Example	Description
ClusterId	String	C-4A502AECB275****	The ID of the cluster.
ClusterName	String	test_hadoop	The name of the EMR cluster.
ClusterType	String	HADOOP	The type of the cluster.
Status	String	IDLE	The status of the associated cluster.
ResizeClusterEnable	Boolean	false	A reserved parameter.
ResizeDiskEnable	Boolean	true	Indicates whether the cluster supports disk resizing.
RunningTime	Integer	1583000	The running duration of the cluster. Unit: milliseconds.
SecurityGroupId	String	sg-xxx	The ID of the security group of the cluster.
SecurityGroupName	String	emr-default-securitygroup	The name of the security group of the cluster.
ShowSoftwareInterface	Boolean	false	Discard fields.
SoftwareInfo	Struct		The information about the software services deployed in the cluster.
ClusterType	String	HADOOP	The type of the cluster. Valid values: • HADOOP • KAFKA • DATA SCIENCE • DRUID • FLINK • GATEWAY • CLICKHOUSE • SHUFFLE_SERVICE • EMR_STUDIO

Parameter	Type	Example	Description
EmrVer	String	EMR-3.21.0	The EMR version.
Softwares	Array of Software		The list of service information.
Software			
DisplayName	String	HDFS	The display name of the service.
Name	String	HDFS	The name of the service.
OnlyDisplay	Boolean	false	A deprecated field. This field will be removed from later versions.
StartTpe	Integer	1	A deprecated field. This field will be removed from later versions.
Version	String	2.8.5	The version of the service.
StartTime	Long	1564367083000	The time when the cluster started.
Status	String	IDLE	The status of the cluster. Valid values: • CREATING: The cluster is being created. • CREATE_FAILED: The cluster failed to be created. • RUNNING: The DAG is running. • IDLE: cluster idle • RELEASING: The cluster is being released. • RELEASE_FAILED: The cluster failed to be released. • RELEASED: The cluster has been released. • WAIT_FOR_PAY: Pending Payment • ABNORMAL: The cluster status is abnormal.
StopTime	Long	1564367083000	The time when the cluster stops.
TaskNodeInService	Integer	0	Discard fields.

Parameter	Type	Example	Description
TaskNodeTotal	Integer	0	Discard fields.
UserDefinedEmrEcsRole	String	AliyunEmrEcsDefaultRole	The name of the service role of E-MapReduce.
UserId	String	11131321311****	The ID of the user.
VSwitchId	String	vsw-xxx	The ID of the vSwitch.
VpcId	String	vpc-xxx	The ID of the VPC.
ZoneId	String	cn-huhehaote-a	The ID of the zone.
RequestId	String	BB81FF02-2FE0-4DB0-A04B-A0876D21EDD7	The ID of the request.

Examples

Sample requests

```
http(s)://[Endpoint]/?Action=DescribeClusterBasicInfo
&ClusterId=C-0EF9B0EC8564****
&RegionId=cn-huhehaote
&<Common request parameters>
```

Sample success responses

`XML` format

```
<ClusterInfo>
    <ImageId>m-hp37dmahkdx7h2b5****</ImageId>
    <SecurityGroupId>sg-hp360xqw5l179aty****</SecurityGroupId>
    <DepositType>HALF_MANAGED</DepositType>
    <CoreNodeInService>0</CoreNodeInService>
    <ZoneId>cn-huhehaote-a</ZoneId>
    <AutoScalingSpotWithLimitAllowed>false</AutoScalingSpotWithLimitAllowed>
    <IoOptimized>true</IoOptimized>
    <TaskNodeInService>0</TaskNodeInService>
    <MachineType>ECS</MachineType>
    <AutoScalingAllowed>false</AutoScalingAllowed>
    <ShowSoftwareInterface>false</ShowSoftwareInterface>
    <ResizeDiskEnable>false</ResizeDiskEnable>
    <SecurityGroupName>sg-hp360xqw5l179aty****</SecurityGroupName>
    <BootstrapActionList>
```

```
    </BootstrapActionList>
    <CreateResource>ECM_EMR</CreateResource>
    <RegionId>cn-huhehaote</RegionId>
    <GatewayClusterInfoList>
    </GatewayClusterInfoList>
    <NetType>vpc</NetType>
    <MasterNodeInService>0</MasterNodeInService>
    <AutoScalingByLoadAllowed>true</AutoScalingByLoadAllowed>
    <SoftwareInfo>
        <Softwares>
            <Software>
                <Name>HDFS</Name>
                <OnlyDisplay>false</OnlyDisplay>
                <Version>2.8.5</Version>
                <DisplayName>HDFS</DisplayName>
                <StartTpe>1</StartTpe>
            </Software>
            <Software>
                <Name>YARN</Name>
                <OnlyDisplay>false</OnlyDisplay>
                <Version>2.8.5</Version>
                <DisplayName>YARN</DisplayName>
                <StartTpe>1</StartTpe>
            </Software>
            <Software>
                <Name>HIVE</Name>
                <OnlyDisplay>false</OnlyDisplay>
                <Version>3.1.1</Version>
                <DisplayName>Hive</DisplayName>
                <StartTpe>1</StartTpe>
            </Software>
            <Software>
                <Name>GANGLIA</Name>
                <OnlyDisplay>false</OnlyDisplay>
                <Version>3.7.2</Version>
                <DisplayName>Ganglia</DisplayName>
                <StartTpe>1</StartTpe>
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                <Version>3.4.13</Version>
                <DisplayName>Zookeeper</DisplayName>
                <StartTpe>1</StartTpe>
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            <Software>
                <Name>SPARK</Name>
                <OnlyDisplay>false</OnlyDisplay>
                <Version>2.4.3</Version>
                <DisplayName>Spark</DisplayName>
                <StartTpe>1</StartTpe>
            </Software>
            <Software>
                <Name>HBASE</Name>
```

```
            <OnlyDisplay>false</OnlyDisplay>
            <Version>1.4.9</Version>
            <DisplayName>HBase</DisplayName>
            <StartTpe>1</StartTpe>
        </Software>
        <Software>
            <Name>HUE</Name>
            <OnlyDisplay>false</OnlyDisplay>
            <Version>4.4.0</Version>
            <DisplayName>HUE</DisplayName>
            <StartTpe>1</StartTpe>
        </Software>
        <Software>
            <Name>ZEPPELIN</Name>
            <OnlyDisplay>false</OnlyDisplay>
            <Version>0.8.1</Version>
            <DisplayName>Zeppelin</DisplayName>
            <StartTpe>1</StartTpe>
        </Software>
        <Software>
            <Name>OOZIE</Name>
            <OnlyDisplay>false</OnlyDisplay>
            <Version>5.1.0</Version>
            <DisplayName>Oozie</DisplayName>
            <StartTpe>1</StartTpe>
        </Software>
        <Software>
            <Name>TEZ</Name>
            <OnlyDisplay>false</OnlyDisplay>
            <Version>0.9.1</Version>
            <DisplayName>Tez</DisplayName>
            <StartTpe>1</StartTpe>
        </Software>
        <Software>
            <Name>PHOENIX</Name>
            <OnlyDisplay>false</OnlyDisplay>
            <Version>4.14.1</Version>
            <DisplayName>Phoenix</DisplayName>
            <StartTpe>1</StartTpe>
        </Software>
        <Software>
            <Name>PRESTO</Name>
            <OnlyDisplay>false</OnlyDisplay>
            <Version>0.213</Version>
            <DisplayName>Presto</DisplayName>
            <StartTpe>1</StartTpe>
        </Software>
        <Software>
            <Name>SQOOP</Name>
            <OnlyDisplay>false</OnlyDisplay>
            <Version>1.4.7</Version>
            <DisplayName>Sqoop</DisplayName>
            <StartTpe>1</StartTpe>
        </Software>
        <Software>
```

```
            <Software>
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                <OnlyDisplay>false</OnlyDisplay>
                <Version>0.14.0</Version>
                <DisplayName>Pig</DisplayName>
                <StartTpe>1</StartTpe>
            </Software>
            <Software>
                <Name>STORM</Name>
                <OnlyDisplay>false</OnlyDisplay>
                <Version>1.2.2</Version>
                <DisplayName>Storm</DisplayName>
                <StartTpe>1</StartTpe>
            </Software>
            <Software>
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                <OnlyDisplay>false</OnlyDisplay>
                <Version>2.12.2</Version>
                <DisplayName>Impala</DisplayName>
                <StartTpe>1</StartTpe>
            </Software>
            <Software>
                <Name>FLINK</Name>
                <OnlyDisplay>false</OnlyDisplay>
                <Version>1.7.2</Version>
                <DisplayName>Flink</DisplayName>
                <StartTpe>1</StartTpe>
            </Software>
            <Software>
                <Name>RANGER</Name>
                <OnlyDisplay>false</OnlyDisplay>
                <Version>1.2.0</Version>
                <DisplayName>Ranger</DisplayName>
                <StartTpe>1</StartTpe>
            </Software>
            <Software>
                <Name>KNOX</Name>
                <OnlyDisplay>false</OnlyDisplay>
                <Version>1.1.0</Version>
                <DisplayName>Knox</DisplayName>
                <StartTpe>1</StartTpe>
            </Software>
            <Software>
                <Name>SUPERSET</Name>
                <OnlyDisplay>false</OnlyDisplay>
                <Version>0.28.1</Version>
                <DisplayName>Superset</DisplayName>
                <StartTpe>1</StartTpe>
            </Software>
            <Software>
                <Name>BIGBOOT</Name>
                <OnlyDisplay>false</OnlyDisplay>
                <Version>1.0.0</Version>
                <DisplayName>Bigboot</DisplayName>
                <StartTpe>1</StartTpe>
```

```
            </Software>
            <Software>
                <Name>LIVY</Name>
                <OnlyDisplay>false</OnlyDisplay>
                <Version>0.6.0</Version>
                <DisplayName>LIVY</DisplayName>
                <StartTpe>1</StartTpe>
            </Software>
            <Software>
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                <Version>1.0.0</Version>
                <DisplayName>SmartData</DisplayName>
                <StartTpe>1</StartTpe>
            </Software>
            <Software>
                <Name>FLUME</Name>
                <OnlyDisplay>false</OnlyDisplay>
                <Version>1.8.0</Version>
                <DisplayName>FLUME</DisplayName>
                <StartTpe>1</StartTpe>
            </Software>
            <Software>
                <Name>ANALYTICS-ZOO</Name>
                <OnlyDisplay>false</OnlyDisplay>
                <Version>0.5.0</Version>
                <DisplayName>analytics-zoo</DisplayName>
                <StartTpe>1</StartTpe>
            </Software>
            <Software>
                <Name>APACHEDS</Name>
                <OnlyDisplay>false</OnlyDisplay>
                <Version>2.0.0</Version>
                <DisplayName>ApacheDS</DisplayName>
                <StartTpe>1</StartTpe>
            </Software>
        </Softwares>
        <EmrVer>EMR-3.21.1</EmrVer>
        <ClusterType>HADOOP</ClusterType>
    </SoftwareInfo>
    <CreateType>MANUAL</CreateType>
    <VSwitchId>vsw-hp333ghqgdxkk3djb****</VSwitchId>
    <VpcId>vpc-hp3fawn3tu8ny436o****</VpcId>
    <TaskNodeTotal>0</TaskNodeTotal>
    <BootstrapFailed>false</BootstrapFailed>
    <CoreNodeTotal>0</CoreNodeTotal>
    <StartTime>1564132024000</StartTime>
    <MasterNodeTotal>0</MasterNodeTotal>
    <ChargeType>PostPaid</ChargeType>
    <Configurations/>
    <UserId>107992689699****</UserId>
    <Name>EMR-API-test</Name>
    <EasEnable>false</EasEnable>
    <AutoScalingEnable>false</AutoScalingEnable>
```

```
    <Status>IDLE</Status>
    <LocalMetaDb>true</LocalMetaDb>
    <HighAvailabilityEnable>false</HighAvailabilityEnable>
    <ClusterId>C-02582A4A415E****</ClusterId>
    <RunningTime>1004</RunningTime>
    <UserDefinedEmrEcsRole>AliyunEmrEcsDefaultRole</UserDefinedEmrEcsRole>
</ClusterInfo>
<RequestId>BB81FF02-2FE0-4DB0-A04B-A0876D21EDD7</RequestId>
```

`JSON` format

```
{
    "ClusterInfo": {
        "ImageId": "m-hp37dmahkdx7h2b5****",
        "SecurityGroupId": "sg-hp360xqw5l179aty****",
        "DepositType": "HALF_MANAGED",
        "CoreNodeInService": 0,
        "ZoneId": "cn-huhehaote-a",
        "AutoScalingSpotWithLimitAllowed": false,
        "IoOptimized": true,
        "TaskNodeInService": 0,
        "MachineType": "ECS",
        "AutoScalingAllowed": false,
        "ShowSoftwareInterface": false,
        "ResizeDiskEnable": false,
        "SecurityGroupName": "sg-hp360xqw5l179aty****",
        "BootstrapActionList": {
            "BootstrapAction": []
        },
        "CreateResource": "ECM_EMR",
        "RegionId": "cn-huhehaote",
        "GatewayClusterInfoList": {
            "GatewayClusterInfo": []
        },
        "NetType": "vpc",
        "MasterNodeInService": 0,
        "AutoScalingByLoadAllowed": true,
        "SoftwareInfo": {
            "Softwares": {
                "Software": [
                    {
                        "Name": "HDFS",
                        "OnlyDisplay": false,
                        "Version": "2.8.5",
                        "DisplayName": "HDFS",
                        "StartTpe": 1
                    },
                    {
                        "Name": "YARN",
                        "OnlyDisplay": false,
                        "Version": "2.8.5",
                        "DisplayName": "YARN",
                        "StartTpe": 1
                    }
```

```
                    },
                    {
                        "Name": "HIVE",
                        "OnlyDisplay": false,
                        "Version": "3.1.1",
                        "DisplayName": "Hive",
                        "StartTpe": 1
                    },
                    {
                        "Name": "GANGLIA",
                        "OnlyDisplay": false,
                        "Version": "3.7.2",
                        "DisplayName": "Ganglia",
                        "StartTpe": 1
                    },
                    {
                        "Name": "ZOOKEEPER",
                        "OnlyDisplay": false,
                        "Version": "3.4.13",
                        "DisplayName": "Zookeeper",
                        "StartTpe": 1
                    },
                    {
                        "Name": "SPARK",
                        "OnlyDisplay": false,
                        "Version": "2.4.3",
                        "DisplayName": "Spark",
                        "StartTpe": 1
                    },
                    {
                        "Name": "HBASE",
                        "OnlyDisplay": false,
                        "Version": "1.4.9",
                        "DisplayName": "HBase",
                        "StartTpe": 1
                    },
                    {
                        "Name": "HUE",
                        "OnlyDisplay": false,
                        "Version": "4.4.0",
                        "DisplayName": "HUE",
                        "StartTpe": 1
                    },
                    {
                        "Name": "ZEPPELIN",
                        "OnlyDisplay": false,
                        "Version": "0.8.1",
                        "DisplayName": "Zeppelin",
                        "StartTpe": 1
                    },
                    {
                        "Name": "OOZIE",
                        "OnlyDisplay": false,
                        "Version": "5.1.0",
                        "DisplayName": "Oozie",
```

```
                "StartTpe": 1
            },
            {
                "Name": "TEZ",
                "OnlyDisplay": false,
                "Version": "0.9.1",
                "DisplayName": "Tez",
                "StartTpe": 1
            },
            {
                "Name": "PHOENIX",
                "OnlyDisplay": false,
                "Version": "4.14.1",
                "DisplayName": "Phoenix",
                "StartTpe": 1
            },
            {
                "Name": "PRESTO",
                "OnlyDisplay": false,
                "Version": "0.213",
                "DisplayName": "Presto",
                "StartTpe": 1
            },
            {
                "Name": "SQOOP",
                "OnlyDisplay": false,
                "Version": "1.4.7",
                "DisplayName": "Sqoop",
                "StartTpe": 1
            },
            {
                "Name": "PIG",
                "OnlyDisplay": false,
                "Version": "0.14.0",
                "DisplayName": "Pig",
                "StartTpe": 1
            },
            {
                "Name": "STORM",
                "OnlyDisplay": false,
                "Version": "1.2.2",
                "DisplayName": "Storm",
                "StartTpe": 1
            },
            {
                "Name": "IMPALA",
                "OnlyDisplay": false,
                "Version": "2.12.2",
                "DisplayName": "Impala",
                "StartTpe": 1
            },
            {
                "Name": "FLINK",
                "OnlyDisplay": false,
```

```
                "Version": "1.7.2",
                "DisplayName": "Flink",
                "StartTpe": 1
            },
            {
                "Name": "RANGER",
                "OnlyDisplay": false,
                "Version": "1.2.0",
                "DisplayName": "Ranger",
                "StartTpe": 1
            },
            {
                "Name": "KNOX",
                "OnlyDisplay": false,
                "Version": "1.1.0",
                "DisplayName": "Knox",
                "StartTpe": 1
            },
            {
                "Name": "SUPERSET",
                "OnlyDisplay": false,
                "Version": "0.28.1",
                "DisplayName": "Superset",
                "StartTpe": 1
            },
            {
                "Name": "BIGBOOT",
                "OnlyDisplay": false,
                "Version": "1.0.0",
                "DisplayName": "Bigboot",
                "StartTpe": 1
            },
            {
                "Name": "LIVY",
                "OnlyDisplay": false,
                "Version": "0.6.0",
                "DisplayName": "LIVY",
                "StartTpe": 1
            },
            {
                "Name": "SMARTDATA",
                "OnlyDisplay": false,
                "Version": "1.0.0",
                "DisplayName": "SmartData",
                "StartTpe": 1
            },
            {
                "Name": "FLUME",
                "OnlyDisplay": false,
                "Version": "1.8.0",
                "DisplayName": "FLUME",
                "StartTpe": 1
            },
            {
```

```
                        "Name": "ANALYTICS-ZOO",
                        "OnlyDisplay": false,
                        "Version": "0.5.0",
                        "DisplayName": "analytics-zoo",
                        "StartTpe": 1
                    },
                    {
                        "Name": "APACHEDS",
                        "OnlyDisplay": false,
                        "Version": "2.0.0",
                        "DisplayName": "ApacheDS",
                        "StartTpe": 1
                    }
                ]
            },
            "EmrVer": "EMR-3.21.1",
            "ClusterType": "HADOOP"
        },
        "CreateType": "MANUAL",
        "VSwitchId": "vsw-hp333ghqgdxkk3djb****",
        "VpcId": "vpc-hp3fawn3tu8ny436o****",
        "TaskNodeTotal": 0,
        "BootstrapFailed": false,
        "CoreNodeTotal": 0,
        "StartTime": 1564132024000,
        "MasterNodeTotal": 0,
        "ChargeType": "PostPaid",
        "Configurations": "",
        "UserId": "107992689699****",
        "Name": "EMR-API-test",
        "EasEnable": false,
        "AutoScalingEnable": false,
        "Status": "IDLE",
        "LocalMetaDb": true,
        "HighAvailabilityEnable": false,
        "ClusterId": "C-02582A4A415E****",
        "RunningTime": 1004,
        "UserDefinedEmrEcsRole": "AliyunEmrEcsDefaultRole"
    },
    "RequestId": "BB81FF02-2FE0-4DB0-A04B-A0876D21EDD7"
}
```


3.8. Queries the host list of a cluster

You can call ListClusterHost operation to query a list of cluster hosts, including their disk and CPU memory configurations.

Debugging

OpenAPI Explorer automatically calculates the signature value. For your convenience, we recommend that you call this operation in OpenAPI Explorer. You can use OpenAPI Explorer to search for API operations, call API operations, and dynamically generate SDK sample code.

Request parameters

Parameter	Type	Required	Example	Description
Action	String	Yes	ListClusterHost	The operation that you want to perform. This parameter is required for API requests that you create by piecing together HTTP or HTTPS URLs. Set the value to ListClusterHost.
ClusterId	String	Yes	C-D7CA98AAA96A****	The ID of the cluster. You can call ListClusters Interface to view the cluster ID.
RegionId	String	Yes	cn-hangzhou	The region ID of the instance. You can DescribeRegions Interface to view the latest list of Alibaba Cloud regions.
HostInstanceId	String	No	i-bp11vdyh3l6xvmnl****	The ID of the Elastic Compute Service (ECS) instance.
HostGroupId	String	No	G-A5EA210E15FC****	The ID of the host group.
HostName	String	No	emr-header-1	The hostname of the server.
PrivateIp	String	No	192. ***. ***. ***	The internal IP address of the host.
PublicIp	String	No	47. ***. ***. ***	The public IP address of the host.
GroupType	String	No	MASTER	Machine group type: • MASTER: The MASTER instance node. • CORE: CORE instance node • TASK: compute instance node
ComponentName	String	No	HiveServer2	The name of the component.

Parameter	Type	Required	Example	Description
StatusList.N	RepeatList	No	["NORMAL"]	Host status list: • NORMAL: The API group is normal. • ABNORMAL: ABNORMAL • RESIZING: Configuring • INITIALIZING: the instance is being initialized. • RELEASED: RELEASED
PageNumber	Integer	No	1	The number of the page to return. Pages start from page 1.
PageSize	Integer	No	10	The number of entries returned per page.

Response parameters

Parameter	Type	Example	Description
HostList	Array of Host		The information about the hosts.
Host			
ChargeType	String	PostPaid	The billing method of the instance. Default value: Postpaid. Valid values: • PostPaid: pay-as-you-go clusters • PrePaid: subscription cluster
Cpu	Integer	4	The number of vCPUs.
CreateTime	String	1599635156000	The time when the template was created.
DiskList	Array of Disk		The list of disks.
Disk			
BlockMountPoint	String	None	A reserved parameter.
Device	String	/dev/xvde	The name of the disk.

Parameter	Type	Example	Description
DiskId	String	d-bp1aq78lhbig6iel*****	The ID of the disk.
DiskMountPoint	String	None	A reserved parameter.
DiskSize	Integer	80	The disk capacity.
DiskType	String	CLOUD_ESSD	The type of the disk. Valid values: • CLOUD_ESSD: Enhanced SSD • CLOUD_SSD: Cloud SSD • CLOUD: CLOUD Disk • CLOUD_EFFCIENCY: Ultra disk
Event	String	Local disks damaged due to system maintenance isolation	The name of the disk O&M event.
Type	String	data	Specifies whether the disk is a data disk or system disk.
EmrExpiredTime	String	None	The time when the EMR cluster expires. A reserved parameter.
ExpiredTime	Long	32493801600000	The time when the host expires.
HostGroupId	String	G-A5EA210E15FC****	The ID of the host group.
HostInstanceId	String	i-bp1cfwf2cwgji7ds*****	The ID of the ECS instance.
HostName	String	emr-header-1	The hostname of the server.
InstanceStatus	String	NORMAL	The status of the ECS instance.
InstanceType	String	ecs.mn4.xlarge	The instance type of the host.
Memory	Integer	16	The memory size of the host. Unit: GB.

Parameter	Type	Example	Description
PrivateIp	String	192. ***. ****. ***	The internal IP address of the host.
PublicIp	String	47. ***. ***. ***	The public IP address of the host.
Role	String	MASTER	The role of the host in the cluster: • MASTER: The MASTER instance node. • CORE: CORE instance node • TASK: compute instance node
SerialNumber	String	3c2a5078-778d-4c18-87e4-1a38fbcb****	The serial number of the host.
Status	String	NORMAL	Host Status: • NORMAL: The API group is normal. • ABNORMAL: ABNORMAL • RESIZING: Configuring • INITIALIZING: the instance is being initialized. • RELEASED: RELEASED
SupportIpV6	Boolean	false	Specifies whether the IPv6 protocol is supported.
Type	String	VM	The type of the host.
ZoneId	String	cn-hangzhou-i	The ID of the region where your project resides.
PageNumber	Integer	1	The page number of the returned page.
PageSize	Integer	10	The maximum number of exceptions on each page.
RequestId	String	50F7151C-915D-4576-A291-833E8D193853	The ID of the request.
Total	Integer	12	The total number of hosts that you have queried.

Examples

Sample requests

```
http(s)://[Endpoint]/?Action=ListClusterHost
&ClusterId=C-D7CA98AAA96A****
&RegionId=cn-hangzhou
&<common request parameters>
```

Sample success responses

`XML` format

```
<PageSize>10</PageSize>
<RequestId>50F7151C-915D-4576-A291-833E8D193853</RequestId>
<PageNumber>1</PageNumber>
<Total>12</Total>
<HostList>
    <Host>
        <Status>NORMAL</Status>
        <ZoneId>cn-hangzhou-i</ZoneId>
        <PublicIp>47.***.***.***</PublicIp>
        <Memory>16</Memory>
        <CreateTime>1599635156000</CreateTime>
        <Cpu>4</Cpu>
        <HostInstanceId>i-bp1cfwf2cwgji7ds****</HostInstanceId>
        <Role>MASTER</Role>
        <Type>VM</Type>
        <HostGroupId>G-A5EA210E15FC****</HostGroupId>
        <SerialNumber>3c2a5078-778d-4c18-87e4-1a38fbcb****</SerialNumber>
        <PrivateIp>192.***.****.***</PrivateIp>
        <ChargeType>PostPaid</ChargeType>
        <InstanceStatus>NORMAL</InstanceStatus>
        <ExpiredTime>32493801600000</ExpiredTime>
        <SupportIpV6>false</SupportIpV6>
        <EmrExpiredTime>None</EmrExpiredTime>
        <InstanceType>ecs.mn4.xlarge</InstanceType>
        <HostName>emr-header-1</HostName>
    </Host>
    <Host>
        <DiskList>
            <Disk>
                <DiskType>CLOUD_ESSD</DiskType>
                <Type>data</Type>
                <DiskMountPoint>None</DiskMountPoint>
                <Device>/dev/xvde</Device>
                <BlockMountPoint>None</BlockMountPoint>
                <DiskSize>80</DiskSize>
                <Event/>
                <DiskId>d-bp1aq78lhbig6iel****</DiskId>
            </Disk>
        </DiskList>
    </Host>
</HostList>
```


`JSON` Syntax

```
{
    "PageSize": 10,
    "RequestId": "50F7151C-915D-4576-A291-833E8D193853",
    "PageNumber": 1,
    "Total": 12,
    "HostList": {
        "Host": [
            {
                "Status": "NORMAL",
                "ZoneId": "cn-hangzhou-i",
                "PublicIp": "47.***.***.***",
                "Memory": 16,
                "CreateTime": 1599635156000,
                "Cpu": 4,
                "HostInstanceId": "i-bp1cfwf2cwgji7ds****",
                "Role": "MASTER",
                "Type": "VM",
                "HostGroupId": "G-A5EA210E15FC****",
                "SerialNumber": "3c2a5078-778d-4c18-87e4-1a38fbcb****",
                "PrivateIp": "192.***.****.***",
                "ChargeType": "PostPaid",
                "InstanceStatus": "NORMAL",
                "ExpiredTime": 32493801600000,
                "SupportIpV6": false,
                "EmrExpiredTime": "None",
                "InstanceType": "ecs.mn4.xlarge",
                "HostName": "emr-header-1"
            },
            {
                "DiskList": {
                    "Disk": {
                        "DiskType": "CLOUD_ESSD",
                        "Type": "data",
                        "DiskMountPoint": "None",
                        "Device": "/dev/xvde",
                        "BlockMountPoint": "None",
                        "DiskSize": 80,
                        "Event": "",
                        "DiskId": "d-bp1aq78lhbig6iel****"
                    }
                }
            }
        ]
    }
}
```


3.9. Query the list of clusters

You can call this operation to query the list of all clusters in each 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	ListClusters	The operation that you want to perform. Set the value to ListClusters.
RegionId	String	Yes	cn-hangzhou	The ID of the region. You can call the DescribeRegions operation to query the most recent list of regions.
ClusterTypeList.N	RepeatList	No	["HADOOP","KAFKA"]	The type of the cluster. Valid values: • HADOOP • KAFKA • DATA SCIENCE • DRUID • FLINK • GATEWAY • CLICKHOUSE • SHUFFLE_SERVICE • EMR_STUDIO
CreateType	String	No	ON-DEMAND	The method of creating the cluster. Valid values: • ON-DEMAND: Create as needed • MANUAL: manually created
MachineType	String	No	ECS	The instance type. The default value is ECS.

Parameter	Type	Required	Example	Description
StatusList.N	RepeatList	No	["CREATING","IDLE"]	The status of the cluster. Valid values: • CREATING: The cluster is being created. • CREATE_FAILED: The cluster failed to be created. • RUNNING: The DAG is running. • IDLE: cluster idle • RELEASING: The cluster is being released. • RELEASE_FAILED: The cluster failed to be released. • RELEASED: The cluster has been released. • WAIT_FOR_PAY: Pending Payment • ABNORMAL: The cluster status is abnormal.
IsDesc	Boolean	No	false	Indicates whether the order is in reverse order. Valid values: • true: In reverse order • false: non-reverse order
DepositType	String	No	HALF_MANAGED	The managed type. Valid values: • HALF_MANAGED: semi-managed • MANAGED: fully managed
PageNumber	Integer	No	1	The number of the page to return. Pages start from page 1.
PageSize	Integer	No	10	The number of entries to return on each page.
DefaultStatus	Boolean	No	true	Specifies whether to query clusters whose default status is Initializing, Waiting for Build, Idle, Running, Released, or Failed to Create. Valid values: • false: Yes • true: No
Name	String	No	cluster_name	The name of the global active database cluster.

Parameter	Type	Required	Example	Description
VpcId	String	No	vpc-bp1c85tzgqu1bf5b****	The ID of the VPC to which the instance belongs.
ResourceGroupId	String	No	rg-bp67acfmxazb4p****	The ID of the resource group. You can call the ListResourceGroups to view the resource group ID.
Tag.N.Key	String	No	TestKey	The tag key of the EMR instance and node ECS instance. Valid values of N: 1 to 20. The tag key cannot be an empty string. The tag key value is 1 to 128. It cannot start with acs: or aliyun. It cannot contain http:// or https://.
Tag.N.Value	String	No	TestValue	The tag values of EMR instances and node ECS instances. Valid values of N: 1 to 20. The tag value can be an empty string. Valid values: 1 to 128. It cannot start with acs: and cannot contain http:// or https://.
ExpiredTagList.N	RepeatList	No	0	A reserved parameter.

Response parameters

Parameter	Type	Example	Description
Clusters	Array of ClusterInfo		The details about the returned clusters.
ClusterInfo			
ChargeType	String	PostPaid	The billing method of the instance. Valid values: • PostPaid: pay-as-you-go cluster • PrePaid: subscription cluster
CreateResource	String	ECM_EMR	Tags that are automatically attached to EMR clusters.

Parameter	Type	Example	Description
CreateTime	Long	1542784048000	The time when the instance was created.
DepositType	String	HALF_MANAGED	The managed type. Valid values: • HALF_MANAGED: semi-managed • MANAGED: fully managed
ExpiredTime	Long	1542784048000	The time-out period of the subscription cluster. **Note** This parameter is not reflected in pay-as-you-go clusters.
FailReason	Struct		The reason why the creation of the cluster fails.
ErrorCode	String	InvalidImageId.NotFound	The error code.
ErrorMsg	String	The specified ImageId does not exist.	The error message.
RequestId	String	B8DC3A91-3953-4444-92BB-DBC29C47EC1A	The ID of the request.
HasUncompletedOrder	Boolean	false	Whether there are outstanding orders: • true: There are outstanding orders. • false: no outstanding orders
Id	String	C-010A704DA760****	The ID of the cluster.
K8sClusterId	String	None	A reserved parameter.
MachineType	String	ECS	The instance type of the cluster. Currently, ECS instances are used by default.

Parameter	Type	Example	Description
MetaStoreType	String	LOCAL	The type of the metadata. Valid values: • LOCAL: internal metadata of the cluster • UNIFEM: unified metadata • USER_RDS: user-created RDS
Name	String	cluster_name	The name of the cluster.
OperationId	Long	1111	The ID of the operation.
OrderList	String	0	The list of orders.
OrderTaskInfo	Struct		A reserved parameter that indicates the information of orders.
CurrentCount	Integer	0	A reserved parameter.
OrderIdList	String	0	A reserved parameter.
TargetCount	Integer	0	A reserved parameter.
Period	Integer	36	The validity period of the subscription cluster. Valid values: 1, 2, 3, 4, 5, 6, 7, 8, 9, 12, 24, and 36. Unit: months.
RunningTime	Integer	2345	up time. Unit: seconds.
Status	String	IDEL	The status of the global active database cluster.
Tags	Array of Tag		The labels of the alert.
Tag			
TagKey	String	DevDept	The key of the resource tag N. Valid values of N: 1 to 20. The tag key cannot be an empty string. The value of the tag key ranges from 1 to 128. It cannot start with acs: or aliyun. It cannot contain http:// or https://.

Parameter	Type	Example	Description
TagValue	String	DevNianmin	The value of the resource tag N. Valid values of N: 1 to 20. The tag value can be an empty string. Valid values: 1 to 128. It cannot start with acs: and cannot contain http:// or https://.
Type	String	HADOOP	The type of the cluster.
PageNumber	Integer	1	The number of the returned page.
PageSize	Integer	10	The number of entries to return on each page.
RequestId	String	BF4FBAC6-B03E-4BFB-B6DB-EB53C34F2E22	The ID of the request.
TotalCount	Integer	12	The total number of returned entries.

Examples

Sample requests

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

Sample success responses

`XML` format

```
<clusters>
    <chargeType>PostPaid</chargeType>
    <createResource>ECM_EMR</createResource>
    <createTime>1542784048000</createTime>
    <failReason/>
    <hasUncompletedOrder>false</hasUncompletedOrder>
    <id>C-010A704DA760****</id>
    <name>jy_test_d1_test</name>
    <orderTaskInfo/>
    <runningTime>3138</runningTime>
    <status>RELEASED</status>
    <type>HADOOP</type>
</clusters>
<clusters>
    <chargeType>PostPaid</chargeType>
    <createResource>ECM_EMR</createResource>
    <createTime>1538107586000</createTime>
```

```
    <createTime>1538107586000</createTime>
    <failReason/>
    <hasUncompletedOrder>false</hasUncompletedOrder>
    <id>C-B9712209060C****</id>
    <name>intelligence-313-yp</name>
    <orderTaskInfo/>
    <runningTime>2069400</runningTime>
    <status>RELEASED</status>
    <type>HADOOP</type>
</clusters>
<clusters>
    <chargeType>PostPaid</chargeType>
    <createResource>ECM_EMR</createResource>
    <createTime>1536546078000</createTime>
    <failReason/>
    <hasUncompletedOrder>false</hasUncompletedOrder>
    <id>C-4CD9EBBD6B23****</id>
    <name>mg-storm</name>
    <orderTaskInfo/>
    <runningTime>1382155</runningTime>
    <status>RELEASED</status>
    <type>HADOOP</type>
</clusters>
<clusters>
    <chargeType>PostPaid</chargeType>
    <createResource>ECM_EMR</createResource>
    <createTime>1535363759000</createTime>
    <failReason/>
    <hasUncompletedOrder>false</hasUncompletedOrder>
    <id>C-75D6EE95D722****</id>
    <name>df-3101-upgrade-test</name>
    <orderTaskInfo/>
    <runningTime>676284</runningTime>
    <status>RELEASED</status>
    <type>HADOOP</type>
</clusters>
<clusters>
    <chargeType>PostPaid</chargeType>
    <createResource>ECM_EMR</createResource>
    <createTime>1534492361000</createTime>
    <failReason>
        <errorCode>InvalidImageId.NotFound</errorCode>
        <errorMsg>The specified ImageId does not exist.</errorMsg>
        <requestId>B8DC3A91-3953-4444-92BB-DBC29C47EC1A</requestId>
    </failReason>
    <hasUncompletedOrder>false</hasUncompletedOrder>
    <id>C-5EF0F3C257B1****</id>
    <name>Test Cluster 1</name>
    <orderTaskInfo/>
    <runningTime>0</runningTime>
    <status>CREATE_FAILED</status>
    <type>HADOOP</type>
</clusters>
<pageNumber>1</pageNumber>
<pageSize>5</pageSize>
```

```
<requestId>5443DB14-4641-4DFF-9226-4888EC5A2EA9</requestId>
<totalCount>11</totalCount>
```

`JSON` format


```
{
    "clusters": [
        {
            "chargeType": "PostPaid",
            "createResource": "ECM_EMR",
            "createTime": 1542784048000,
            "failReason": {},
            "hasUncompletedOrder": false,
            "id": "C-010A704DA760****",
            "name": "jy_test_d1_test",
            "orderTaskInfo": {},
            "runningTime": 3138,
            "status": "RELEASED",
            "type": "HADOOP"
        },
        {
            "chargeType": "PostPaid",
            "createResource": "ECM_EMR",
            "createTime": 1538107586000,
            "failReason": {},
            "hasUncompletedOrder": false,
            "id": "C-B9712209060C****",
            "name": "intelligence-313-yp",
            "orderTaskInfo": {},
            "runningTime": 2069400,
            "status": "RELEASED",
            "type": "HADOOP"
        },
        {
            "chargeType": "PostPaid",
            "createResource": "ECM_EMR",
            "createTime": 1536546078000,
            "failReason": {},
            "hasUncompletedOrder": false,
            "id": "C-4CD9EBBD6B23****",
            "name": "mg-storm",
            "orderTaskInfo": {},
            "runningTime": 1382155,
            "status": "RELEASED",
            "type": "HADOOP"
        },
        {
            "chargeType": "PostPaid",
            "createResource": "ECM_EMR",
            "createTime": 1535363759000,
            "failReason": {},
            "hasUncompletedOrder": false,
            "id": "C-75D6EE95D722****",
```

```
            "name": "df-3101-upgrade-test",
            "orderTaskInfo": {},
            "runningTime": 676284,
            "status": "RELEASED",
            "type": "HADOOP"
        },
        {
            "chargeType": "PostPaid",
            "createResource": "ECM_EMR",
            "createTime": 1534492361000,
            "failReason": {
                "errorCode": "InvalidImageId.NotFound",
                "errorMsg": "The specified ImageId does not exist.",
                "requestId": "B8DC3A91-3953-4444-92BB-DBC29C47EC1A"
            },
            "hasUncompletedOrder": false,
            "id": "C-5EF0F3C257B1****",
            "name": "Test cluster 1",
            "orderTaskInfo": {},
            "runningTime": 0,
            "status": "CREATE_FAILED",
            "type": "HADOOP"
        }
    ],
    "pageNumber": 1,
    "pageSize": 5,
    "requestId": "5443DB14-4641-4DFF-9226-4888EC5A2EA9",
    "totalCount": 11
}
```


3.10. Queries the list of cluster templates

You can call ListClusterTemplates operation to query the list of specified or all cluster templates.

Debugging

OpenAPI Explorer automatically calculates the signature value. For your convenience, we recommend that you call this operation in OpenAPI Explorer. You can use OpenAPI Explorer to search for API operations, call API operations, and dynamically generate SDK sample code.

Request parameters

Parameter	Type	Required	Example	Description
Action	String	Yes	ListClusterTemplates	The operation that you want to perform. This parameter is required for API requests that you create by piecing together HTTP or HTTPS URLs. Set the value to ListClusterTemplates.

Parameter	Type	Required	Example	Description
PageNumber	Integer	Yes	1	The number of the page to return. Pages start from page 1.
PageSize	Integer	Yes	5	The number of entries returned per page.
RegionId	String	No	cn-hangzhou	The region ID of the instance. You can call DescribeRegions Interface to view the latest list of Alibaba Cloud regions.
BizId	String	No	CT-1422C105DE88****	The ID of the cluster template.
ProductType	String	No	EMR	The edition of the product. static field EMR.
ResourceGroupId	String	No	rg-bp67acfmxazb4p****	The ID of the resource group to which the snapshot belongs. You can call ListResourceGroups View the resource group ID.

Response parameters

Parameter	Type	Example	Description
PageNumber	Integer	1	The number of the returned page.
PageSize	Integer	5	The number of automatic snapshot tasks returned per page.
RequestId	String	2DAD3958-DB40-45AC-A08D-01D876AA6D04	The ID of the request.
TemplateInfoList	Array of TemplateInfo		The list of cluster templates.
TemplateInfo			
AllowNotebook	Boolean	true	A reserved parameter that you do not need to specify.

Parameter	Type	Example	Description
BootstrapActionList	Array of BootstrapAction		The list of bootstrap actions.
BootstrapAction			
Arg	String	---a	parameter.
Name	String	create	The operation name.
Path	String	oss://bucket/path	The path where the script of bootstrap action N is stored.
ClusterType	String	HADOOP	The type of ACK cluster. Valid values:
ConfigList	Array of Config		The list of custom configuration items.
Config			
ConfigKey	String	fs.trash.interval	The key of the custom configuration items.
ConfigValue	String	60	The value of custom configuration item N.
Encrypt	String	0	A reserved parameter. You do not need to specify this parameter.
FileName	String	yarn-site	The name of the file that contains custom configuration item N.
Replace	String	0	A reserved parameter. You do not need to specify this parameter.
ServiceName	String	YARN	The name of the service for which the custom configuration item is configured. Specify the entire name in uppercase.

Parameter	Type	Example	Description
Configurations	String	[{"classification": "core-site","properties": {"fs.trash.interval": "61"}}, {"classification": "hadoop-log4j","properties": {"hadoop.log.file": "hadoop1.log","hadoop.root.logger": "INFO","a.b.c": "ABC"}}]	Custom software configurations. You can specify a JSON file to modify software configurations before you start a cluster.
CreateSource	String	2	The method in which the cluster template was created.
DepositType	String	HALF_MANAGED	Hosting type: • HALF_MANAGED: Semi-managed • MANAGED: fully MANAGED
EasEnable	Boolean	false	Indicates whether the cluster is a high-security cluster template. Valid values: • true: high security. • false: not highly secure
GmtCreate	Long	1601361773000	The time when the accelerated domain name was created.
GmtModified	Long	1601361773000	The time when the cluster template was modified.
HighAvailabilityEnable	Boolean	false	Indicates whether the cluster is a high-availability cluster. Valid values: • true: the cluster is a high-availability cluster. • false: The cluster is not a high-availability cluster.
HostGroupList	Array of HostGroup		The list of host groups.
HostGroup			

Parameter	Type	Example	Description
ChargeType	String	PostPaid	The billing method. Valid values: • PostPaid: pay-as-you-go clusters • PrePaid: subscription cluster
DiskCapacity	Integer	80	The data disk capacity of host group N. Unit: GB.
DiskCount	Integer	1	The number of data disks in host group N.
DiskType	String	CLOUD_ESSD	The data disk type of host group N.
HostGroupId	String	0	A reserved parameter. You do not need to specify this parameter.
HostGroupName	String	Master instance group	The name of host group N.
HostGroupType	String	MASTER	The type of host group N.
InstanceType	String	ecs.g6.xlarge	The type of instances in host group N.
MultiInstanceTypes	String	ecs.sn1.xlarge,ecs.sn2.xlarge	A list of machine models with multiple specifications, separated by commas (,).
NodeCount	Integer	1	The number of nodes in host group N.
Period	String	36	Subscription duration (months: 1,2,3,4,5,6,7,8,9,12,24,36). **Note** This parameter is unavailable for pay-as-you-go clusters.
SysDiskCapacity	Integer	120	The system disk capacity of host group N.
SysDiskType	String	CLOUD_ESSD	The system disk type of host group N.

Parameter	Type	Example	Description
Id	String	CT-53B394A1B559****	The ID of the cluster template.
InitCustomHiveMetaDb	Boolean	false	A reserved parameter. You do not need to specify this parameter.
InstanceGeneration	String	ecs-3	The instance family. A reserved parameter.
IoOptimized	Boolean	true	Whether I/O optimization: • true • false
IsOpenPublicIp	Boolean	true	Whether to open public network IP: • true: the public IP address is activated. • false: no public IP address is activated.
KeyPairName	String	test_kp	The name of the key pair.
LogEnable	Boolean	false	Indicates whether to enable OSS logging. Valid values: • true • false
LogPath	String	oss//bucketname/path	The path of logs that are stored in OSS buckets.
MachineType	String	ECS	The instance type.
MasterNodeTotal	Integer	1	The number of master nodes.
MetaStoreConf	String	rdsxxx.com	The configuration information of Hive Metastore.
MetaStoreType	String	local	The type of unified metadata.
NetType	String	vpc	The type of the network.

Parameter	Type	Example	Description
SecurityGroupId	String	sg-bp1gldj1nzq5t3b8****	The ID of the security group.
SecurityGroupName	String	emr_sg	The name of the security group to be created.
SoftwareInfoList	List	["ZOOKEEPER"]	The information of an optional service.
SshEnable	Boolean	true	Whether to enable SSH: • true • false
TemplateName	String	template_name_2	The name of the cluster template.
UseCustomHiveMetaDb	Boolean	false	A reserved parameter.
UseLocalMetaDb	Boolean	true	Indicates whether to use local Hive metadata. Valid values: • true • false
UserDefinedEmrEcsRole	String	AliyunEmrEcsDefaultRole	The RAM role that is assigned to EMR to access ECS resources.
UserId	String	125046002175****	The ID of the user.
VSwitchId	String	vsw-bp1g6ftcv6p1w6h8x****	The ID of the vSwitch.
VpcId	String	pc-bp15pknn5td3mkc4g****	The ID of the VPC to which the instance belongs.
ZoneId	String	cn-hangzhou-i	The zone ID of the reserved instance.
TotalCount	Integer	1	The total number of cluster templates.

Examples

Sample requests

```
http(s)://[Endpoint]/?Action=ListClusterTemplates
&PageNumber=1
&PageSize=5
&<common request parameters>
```

Sample success responses

`XML` format


```
<TotalCount>1</TotalCount>
<RequestId>2DAD3958-DB40-45AC-A08D-01D876AA6D04</RequestId>
<PageSize>5</PageSize>
<PageNumber>1</PageNumber>
<TemplateInfoList>
    <TemplateInfo>
        <SecurityGroupName>emr_sg</SecurityGroupName>
        <BootstrapActionList>
            <BootstrapAction>
                <Path>oss://bucket/path</Path>
                <Arg>---a</Arg>
                <Name>create</Name>
            </BootstrapAction>
        </BootstrapActionList>
        <CreateSource>2</CreateSource>
        <LogEnable>false</LogEnable>
        <GmtModified>1601361773000</GmtModified>
        <HighAvailabilityEnable>false</HighAvailabilityEnable>
        <SshEnable>true</SshEnable>
        <IsOpenPublicIp>true</IsOpenPublicIp>
        <TemplateName>template_name_2</TemplateName>
        <UserDefinedEmrEcsRole>AliyunEmrEcsDefaultRole</UserDefinedEmrEcsRole>
        <NetType>vpc</NetType>
        <SoftwareInfoList>
        </SoftwareInfoList>
        <UseLocalMetaDb>true</UseLocalMetaDb>
        <KeyPairName>test_kp</KeyPairName>
        <IoOptimized>true</IoOptimized>
        <ZoneId>cn-hangzhou-i</ZoneId>
        <VSwitchId>vsw-bp1g6ftcv6p1w6h8x****</VSwitchId>
        <SecurityGroupId>sg-bp1gldj1nzq5t3b8****</SecurityGroupId>
        <DepositType>HALF_MANAGED</DepositType>
        <MachineType>ECS</MachineType>
        <MetaStoreType>LOCAL</MetaStoreType>
        <MasterNodeTotal>1</MasterNodeTotal>
        <ClusterType>HADOOP</ClusterType>
        <EasEnable>false</EasEnable>
        <GmtCreate>1601361773000</GmtCreate>
        <VpcId>vpc-bp15pknn5td3mkc4g****</VpcId>
        <UserId>125046002175****</UserId>
        <HostGroupList>
            <HostGroup>
                <HostGroupType>MASTER</HostGroupType>
                <DiskType>CLOUD_ESSD</DiskType>
                <DiskCount>1</DiskCount>
```

```
                <DiskCapacity>80</DiskCapacity>
                <HostGroupId>0</HostGroupId>
                <NodeCount>1</NodeCount>
                <SysDiskType>CLOUD_ESSD</SysDiskType>
                <ChargeType>PostPaid</ChargeType>
                <HostGroupName>Master instance group</HostGroupName>
                <InstanceType>ecs.g6.xlarge</InstanceType>
                <SysDiskCapacity>120</SysDiskCapacity>
            </HostGroup>
            <HostGroup>
                <HostGroupType>CORE</HostGroupType>
                <DiskType>CLOUD_ESSD</DiskType>
                <DiskCount>4</DiskCount>
                <DiskCapacity>80</DiskCapacity>
                <HostGroupId>0</HostGroupId>
                <NodeCount>2</NodeCount>
                <SysDiskType>CLOUD_ESSD</SysDiskType>
                <ChargeType>PostPaid</ChargeType>
                <HostGroupName>Core instance group</HostGroupName>
                <InstanceType>ecs.g6.xlarge</InstanceType>
                <SysDiskCapacity>120</SysDiskCapacity>
            </HostGroup>
        </HostGroupList>
        <Id>CT-53B394A1B559****</Id>
        <ConfigList>
        </ConfigList>
    </TemplateInfo>
</TemplateInfoList>
```

JSON Syntax

```
{
    "TotalCount": 1,
    "RequestId": "2DAD3958-DB40-45AC-A08D-01D876AA6D04",
    "PageSize": 5,
    "PageNumber": 1,
    "TemplateInfoList": {
        "TemplateInfo": [
            {
                "SecurityGroupName": "emr_sg",
                "BootstrapActionList": {
                    "BootstrapAction": [
                        {
                            "Path": "oss://bucket/path",
                            "Arg": "---a",
                            "Name": "create"
                        }
                    ]
                },
                "CreateSource": 2,
                "LogEnable": false,
                "GmtModified": 1601361773000,
                "HighAvailabilityEnable": false,
```

```
            "SshEnable": true,
            "IsOpenPublicIp": true,
            "TemplateName": "template_name_2",
            "UserDefinedEmrEcsRole": "AliyunEmrEcsDefaultRole",
            "NetType": "vpc",
            "SoftwareInfoList": {
                "SoftwareInfo": []
            },
            "UseLocalMetaDb": true,
            "KeyPairName": "test_kp",
            "IoOptimized": true,
            "ZoneId": "cn-hangzhou-i",
            "VSwitchId": "vsw-bp1g6ftcv6p1w6h8x****",
            "SecurityGroupId": "sg-bp1gldj1nzq5t3b8****",
            "DepositType": "HALF_MANAGED",
            "MachineType": "ECS",
            "MetaStoreType": "LOCAL",
            "MasterNodeTotal": 1,
            "ClusterType": "HADOOP",
            "EasEnable": false,
            "GmtCreate": 1601361773000,
            "VpcId": "vpc-bp15pknn5td3mkc4g****",
            "UserId": "125046002175****",
            "HostGroupList": {
                "HostGroup": [
                    {
                        "HostGroupType": "MASTER",
                        "DiskType": "CLOUD_ESSD",
                        "DiskCount": 1,
                        "DiskCapacity": 80,
                        "HostGroupId": "0",
                        "NodeCount": 1,
                        "SysDiskType": "CLOUD_ESSD",
                        "ChargeType": "PostPaid",
                        "HostGroupName": "Master instance group",
                        "InstanceType": "ecs.g6.xlarge",
                        "SysDiskCapacity": 120
                    },
                    {
                        "HostGroupType": "CORE",
                        "DiskType": "CLOUD_ESSD",
                        "DiskCount": 4,
                        "DiskCapacity": 80,
                        "HostGroupId": "0",
                        "NodeCount": 2,
                        "SysDiskType": "CLOUD_ESSD",
                        "ChargeType": "PostPaid",
                        "HostGroupName": "Core instance group",
                        "InstanceType": "ecs.g6.xlarge",
                        "SysDiskCapacity": 120
                    }
                ]
            },
            "Id": "CT-53B394A1B559****",
            "ConfigList": {
```

```
                    "ConfigList": {
                        "Config": []
                    }
                }
            ]
        }
    }
```

3.11. Query quick links of a service

You can call ListClusterServiceQuickLink operation to query the shortcut links of a specified service or all services of a cluster.

Debugging

OpenAPI Explorer automatically calculates the signature value. For your convenience, we recommend that you call this operation in OpenAPI Explorer. You can use OpenAPI Explorer to search for API operations, call API operations, and dynamically generate SDK sample code.

Request parameters

Parameter	Type	Required	Example	Description
Action	String	Yes	ListClusterServiceQuickLink	The operation that you want to perform. This parameter is required for API requests that you create by piecing together HTTP or HTTPS URLs. Set the value to ListClusterServiceQuickLink.
ClusterId	String	Yes	C-A15B381E446C****	The ID of the cluster. You can call ListClusters Interface to view the cluster ID.
RegionId	String	Yes	cn-hangzhou	The region ID of the instance. You can call DescribeRegions Interface to view the latest list of Alibaba Cloud regions.
DirectType	Boolean	No	true	A reserved parameter that you do not need to specify.
ServiceName	String	No	SPARK	Service name: • SPARK • RANGER • GANGLIA • HDFS • YARN

Response parameters

Parameter	Type	Example	Description
QuickLinkList	Array of QuickLink		The list of links.
QuickLink			
Port	String	8443	The service port.
Protocol	String	https	The connection protocol.
QuickLinkAddress	String	knox.C-A15B381E446C****.cn-hangzhou.emr.aliyuncs.com:8443/gateway/cluster-topo/sparkhistory/	The URL of the service.
ServiceDisplayName	String	Spark	The display name of the service.
ServiceName	String	SPARK	The name of the service.
Type	String	KNOX	Service type: • DEFAULT: includes the HUE and ZEPPELIN services. Note The HUE and ZEPPELIN services are added to the cluster. • KNOX: includes services for YARN, HDFS, SPARK, GANGLIA, and RANGER.
RequestId	String	621094BA-8C21-4199-9F04-CA9AA5B63955	The ID of the request.

Examples

Sample requests

```
http(s)://[Endpoint]/?Action=ListClusterServiceQuickLink
&ClusterId=C-A15B381E446C****
&RegionId=cn-hangzhou
&<common request parameters>
```

Sample success responses

XML format

```
<RequestId>621094BA-8C21-4199-9F04-CA9AA5B63955</RequestId>
<QuickLinkList>
    <QuickLink>
        <QuickLinkAddress>knox.C-A15B381E446C****.cn-hangzhou.emr.aliyuncs.com:8443/gateway
/cluster-topo/sparkhistory/</QuickLinkAddress>
        <Type>KNOX</Type>
        <ServiceName>SPARK</ServiceName>
        <Port>8443</Port>
        <Protocol>https</Protocol>
        <ServiceDisplayName>Spark</ServiceDisplayName>
    </QuickLink>
</QuickLinkList>
```

JSON Syntax

```
{
    "RequestId": "621094BA-8C21-4199-9F04-CA9AA5B63955",
    "QuickLinkList": {
        "QuickLink": [
            {
                "QuickLinkAddress": "knox.C-A15B381E446C****.cn-hangzhou.emr.aliyuncs.com:8
443/gateway/cluster-topo/sparkhistory/",
                "Type": "KNOX",
                "ServiceName": "SPARK",
                "Port": "8443",
                "Protocol": "https",
                "ServiceDisplayName": "Spark"
            }
        ]
    }
}
```

3.12. Queries host groups in a cluster

You can call ListClusterHostGroup operation to query host groups in a cluster.

Debugging

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

Request parameters

Parameter	Type	Required	Example	Description

Parameter	Type	Required	Example	Description
Action	String	Yes	ListClusterHostGroup	The operation that you want to perform. This parameter is required for API requests that you initiate by piecing together HTTP or HTTPS URLs. Set this parameter to ListClusterHostGroup.
ClusterId	String	Yes	C-D7958B72E59B****	The ID of the cluster. You can call the ListClusters operation to view the ID of the cluster.
RegionId	String	Yes	cn-hangzhou	The region ID of the instance. You can call the DescribeRegions operation to query the most recent region list.
HostGroupId	String	No	G-76D09CF110A3****	The ID of the host group.
HostGroupName	String	No	core_group	The name of the host group you want to query.
HostGroupType	String	No	CORE	The type of machine group to query. Valid values: • MASTER: primary instance group • CORE: core instance group • TASK: compute instance group
StatusList.N	RepeatList	No	NORMAL	The machine group status list to be queried: • NORMAL • ABNORMAL • DELETED
PageNumber	Integer	No	1	The number of the page to return. Pages start from page 1.
PageSize	Integer	No	10	The number of entries to return on each page.

Response parameters

Parameter	Type	Example	Description
ClusterId	String	C-D7958B72E59B****	The ID of the cluster.
HostGroupList	Array of HostGroup		The list of host groups in the cluster.
HostGroup			
ChargeType	String	PostPaid	The payment method of the current machine group: • PostPaid: pay-as-you-go cluster • PrePaid: subscription cluster
Comment	String	The remarks.	The remarks about the host group.
CostSavingPercent	Float	0	A reserved parameter.
Cpu	Integer	4	The CPU specifications of nodes in the host group.
DataDiskCount	Integer	4	The number of data disks used by nodes in the host group.
DataDiskSize	Integer	100	The size of a single data disk used by nodes in the host group. Unit: GB.
DataDiskType	String	CLOUD_SSD	The type of data disks used by nodes in the host group.
HostGroupChangeStatus	String	IN_PROGRESS	The execution status of the upgrade task. Valid values: • IN_PROGRESS: The instance is being processed. • COMPLETED: The job is completed. • FAILED: The task failed.

Parameter	Type	Example	Description
HostGroupChangeType	String	RESIZE_DISK	machine group the current operation type: • RESIZE_DISK: resizes the disk. • MODIFY_INSTANCE_TYPE: Modifying an Instance Type • RESTART_HOST_GROUP: Restart machine group
HostGroupId	String	G-EBAA5D6566E7****	The ID of the host group.
HostGroupName	String	Core_Group	The name of the machine group.
HostGroupSubType	String	AutoScaling	The subtype of the machine group. such as AutoScaling.
HostGroupType	String	CORE	machine group type: • MASTER: primary instance node • CORE: core instance node • TASK: compute instance node
InstanceType	String	ecs.c5.xlarge	The type of instances in the host group.
LockReason	String	Your account balance is insufficient	The reason why secure DCDN was locked.
LockType	String	ACCOUNT_ARREARS	machine group lock class: • CLUSTER_EXPIRED (cluster expiration) • ACCOUNT_ARREARS (account overdue)
Memory	Integer	8	The memory specifications of nodes in the host group.
NodeCount	Integer	3	The number of nodes in the host group.
PayType	String	PostPaid	The billing method of the host group.
ScalingGroupActiveStatus	String	N/A	A reserved parameter.

Parameter	Type	Example	Description
ScalingGroupBizId	String	N/A	A reserved parameter.
ScalingGroupConfigState	String	N/A	A reserved parameter.
ScalingGroupMaxNode	Integer	0	A reserved parameter.
ScalingGroupMinNode	Integer	0	A reserved parameter.
ScalingInMode	String	N/A	A reserved parameter.
SecurityGroupId	String	sg-xxx	The ID of the security group.
Status	String	NORMAL	The status of the host group.
SystemDiskCount	Integer	1	The number of system disks used by nodes in the host group.
SystemDiskSize	Integer	40	The size of a single system disk used by nodes in the host group. Unit: GB.
SystemDiskType	String	CLOUD_SSD	The type of system disks used by nodes in the host group.
VswitchId	String	vsw-bp1aij6ynkt53ntnf****	The ID of the vSwitch.
gmtCreate	String	1597042920000	The time when the media file was created.
gmtModified	String	1597043525000	The time when the configuration was updated.
PageNumber	Integer	1	The page number of the returned page.
PageSize	Integer	100	The number of entries to return on each page.

Parameter	Type	Example	Description
RequestId	String	BF4FBAC6-B03E-4BFB-B6DB-EB53C34F2E22	The ID of the request.
Total	Integer	15	The total number of returned entries.

Examples

Sample requests

```
http(s)://[Endpoint]/?Action=ListClusterHostGroup
&ClusterId=C-D7958B72E59B****
&RegionId=cn-hangzhou
&<Common request parameters>
```

Sample responses

`XML` format

```
<RequestId>9807D530-57B4-4BA7-93E8-E4F2B3826345</RequestId>
<PageSize>100</PageSize>
<PageNumber>1</PageNumber>
<HostGroupList>
    <HostGroup>
        <HostGroupType>CORE</HostGroupType>
        <Status>NORMAL</Status>
        <Comment/>
        <gmtModified>1597043525000</gmtModified>
        <NodeCount>2</NodeCount>
        <SystemDiskSize>120</SystemDiskSize>
        <Memory>8</Memory>
        <Cpu>4</Cpu>
        <DataDiskCount>4</DataDiskCount>
        <PayType>PostPaid</PayType>
        <HostGroupName>Core instance group</HostGroupName>
        <gmtCreate>1597042920000</gmtCreate>
        <VswitchId>vsw-bp1aij6ynkt53ntnffynb</VswitchId>
        <SystemDiskType>CLOUD_SSD</SystemDiskType>
        <HostGroupId>G-519D30DDF1D6B3E1</HostGroupId>
        <DataDiskType>CLOUD_SSD</DataDiskType>
        <ChargeType>PostPaid</ChargeType>
        <DataDiskSize>80</DataDiskSize>
        <InstanceType>ecs.n4.xlarge</InstanceType>
    </HostGroup>
    <HostGroup>
        <HostGroupType>MASTER</HostGroupType>
        <Status>NORMAL</Status>
        <Comment/>
        <gmtModified>1597043525000</gmtModified>
        <NodeCount>1</NodeCount>
        <SystemDiskSize>120</SystemDiskSize>
        <Memory>8</Memory>
        <Cpu>4</Cpu>
        <DataDiskCount>1</DataDiskCount>
        <PayType>PostPaid</PayType>
        <HostGroupName>Master instance group</HostGroupName>
        <gmtCreate>1597042920000</gmtCreate>
        <VswitchId>vsw-bp1aij6ynkt53ntnffynb</VswitchId>
        <SystemDiskType>CLOUD_SSD</SystemDiskType>
        <HostGroupId>G-FFE7A21D570D050E</HostGroupId>
        <DataDiskType>CLOUD_SSD</DataDiskType>
        <ChargeType>PostPaid</ChargeType>
        <DataDiskSize>80</DataDiskSize>
        <InstanceType>ecs.n4.xlarge</InstanceType>
    </HostGroup>
</HostGroupList>
```


`JSON` format

```
{
    "RequestId": "9807D530-57B4-4BA7-93E8-E4F2B3826345",
    "PageSize": 100,
    "PageNumber": 1,
    "HostGroupList": {
        "HostGroup": [
            {
                "HostGroupType": "CORE",
                "Status": "NORMAL",
                "Comment": "",
                "gmtModified": 1597043525000,
                "NodeCount": 2,
                "SystemDiskSize": 120,
                "Memory": 8,
                "Cpu": 4,
                "DataDiskCount": 4,
                "PayType": "PostPaid",
                "HostGroupName": "Core instance group",
                "gmtCreate": 1597042920000,
                "VswitchId": "vsw-bp1aij6ynkt53ntnffynb",
                "SystemDiskType": "CLOUD_SSD",
                "HostGroupId": "G-519D30DDF1D6B3E1",
                "DataDiskType": "CLOUD_SSD",
                "ChargeType": "PostPaid",
                "DataDiskSize": 80,
                "InstanceType": "ecs.n4.xlarge"
            },
            {
                "HostGroupType": "MASTER",
                "Status": "NORMAL",
                "Comment": "",
                "gmtModified": 1597043525000,
                "NodeCount": 1,
                "SystemDiskSize": 120,
                "Memory": 8,
                "Cpu": 4,
                "DataDiskCount": 1,
                "PayType": "PostPaid",
                "HostGroupName": "Primary instance group",
                "gmtCreate": 1597042920000,
                "VswitchId": "vsw-bp1aij6ynkt53ntnffynb",
                "SystemDiskType": "CLOUD_SSD",
                "HostGroupId": "G-FFE7A21D570D050E",
                "DataDiskType": "CLOUD_SSD",
                "ChargeType": "PostPaid",
                "DataDiskSize": 80,
                "InstanceType": "ecs.n4.xlarge"
            }
        ]
    }
}
```

3.13. Query the list of available cluster information

You can call the ListEmrAvailableConfig operation to query the list of available cluster information.

Debugging

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

Request parameters

Parameter	Type	Required	Example	Description
Action	String	Yes	ListEmrAvailableConfig	The operation that you want to perform. This parameter is required for API requests that you initiate by piecing together HTTP or HTTPS URLs. Set the value to ListEmrAvailableConfig.
RegionId	String	Yes	cn-hangzhou	The region ID of the instance. You can call the DescribeRegions operation to query the most recent region list.
ResourceGroupId	String	No	rg-bp67acfmxazb4p****	The ID of the resource group to which the ENI belongs. You can call the ListResourceGroups to view the resource group ID.

Response parameters

Parameter	Type	Example	Description
EmrMainVersionList	Array of EmrMainVersion		The list of EMR versions.
EmrMainVersion			
ClusterTypeInfoList	Array of ClusterTypeInfo		The list of cluster types.
ClusterTypeInfo			
ClusterServiceInfoList	Array of ClusterServiceInfo		The list of services in the cluster.

Parameter	Type	Example	Description
ClusterServiceInfo			
Mandatory	Boolean	false	Indicates whether the service is required. Valid values: • true: The job files are decompressed. • false: no
ServiceDisplayName	String	Hive	The displayed name of the service.
ServiceName	String	HIVE	The name of the service.
ServiceVersion	String	2.3.3	The version of the service.
ClusterType	String	HADOOP	The type of the cluster.
EcmVersion	Boolean	true	A reserved parameter.
ExtraInfo	String	This is additional information	Stack additional information.
MainVersionName	String	EMR-3.15.1	The EMR version.
OnCloudNative	Boolean	true	A reserved parameter.
PublishType	String	N/A	A reserved parameter.
RegionId	String	cn-hangzhou	The region ID of the images.
StackName	String	EMR	The name of the EMR software stack.
StackVersion	String	EMR-3.15.1	The version of the EMR software stack.
KeyPairNameList	List	["key_pair"]	The list of key pairs.
RequestId	String	BF4FBAC6-B03E-4BFB-B6DB-EB53C34F2E22	The ID of the request.

Parameter	Type	Example	Description
SecurityGroupList	Array of SecurityGroup		The list of security groups.
SecurityGroup			
AvailableInstanceAmount	Integer	10	The number of available instances.
CreationTime	String	2018-12-03T10:11:55Z	The time when the media file was created. T is used as a delimiter. Z indicates that the time is in UTC.
Description	String	sgdesc	The description of the security group.
EcsCount	Integer	10	The total number of Elastic Compute Service (ECS) instances in the cluster.
SecurityGroupId	String	sg-bp1j1n0xcwfs19y9****	The ID of the security group.
SecurityGroupName	String	ziguansg	The name of the security group.
SecurityGroupType	String	Advanced security group	The type of the security group. Valid values: • normal: basic security group • enterprise: advanced security group
VpcId	String	vpc-bp1d618azoa9go6wo****	The ID of the VPC.
VpcInfoList	Array of VpcInfo		The list of VPCs.
VpcInfo			
CidrBlock	String	192.168.0.0/16	The Classless Inter-Domain Routing (CIDR) block.
CreationTime	String	2018-11-22T07:38:44Z	The time when the snapshot-consistent group was created.

Parameter	Type	Example	Description
Description	String	vpc_desc	The description of the VPC.
VRouterId	String	0	A reserved parameter.
VpcId	String	vpc-bp1d618azoa9go6wo****	The ID of the VPC.
VpcName	String	zgtest	The name of the VPC.
VswitchInfoList	Array of VswitchInfo		The list of vSwitches.
VswitchInfo			
AvailableIpAddressCount	Long	200	The number of available IP addresses.
CidrBlock	String	192.168.0.0/24	The Classless Inter-Domain Routing (CIDR) block.
CreationTime	String	2018-11-22T07:38:49Z	The time when the snapshot-consistent group was created.
Description	String	switch desc	The description.
VpcId	String	vpc-bp1d618azoa9go6wo****	The ID of the VPC.
VswitchId	String	vsw-bp18amcazibt1u0d8****	The ID of the vSwitch.
VswitchName	String	hangzhou_g	The name of the VSwitch.
ZoneId	String	cn-hangzhou-g	The ID of the region.

Examples

Sample requests

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

Sample responses

`XML` format

```
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        <EmrMainVersion>
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                            <ServiceName>LIVY</ServiceName>
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                            <ServiceName>SUPERSET</ServiceName>
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                            <ServiceName>FLINK</ServiceName>
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                        <ClusterServiceInfo>
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                            <ServiceName>APACHEDS</ServiceName>
```

```
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        <ClusterServiceInfo>
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            <ServiceName>SQOOP</ServiceName>
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```

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```

```
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```

```
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```

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```

```
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```

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```

`JSON` format

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                                        },
                                        {
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```

```
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```

```
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```

```
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                        "ServiceName": "PRESTO",
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```

```
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```
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                "Mandatory": true,
                "ServiceDisplayName": "YARN",
                "ServiceName": "YARN",
                "ServiceVersion": "2.7.2-1.3.1"
            },
            {
                "Mandatory": true,
                "ServiceDisplayName": "HDFS",
                "ServiceName": "HDFS",
                "ServiceVersion": "2.7.2-1.3.1"
            },
            {
                "Mandatory": true,
                "ServiceDisplayName": "ZooKeeper",
                "ServiceName": "ZOOKEEPER",
                "ServiceVersion": "3.4.13"
            },
            {
                "Mandatory": true,
                "ServiceDisplayName": "Ganglia",
                "ServiceName": "GANGLIA",
                "ServiceVersion": "3.7.2"
            }
        ]
    },
    "ClusterType": "DATA_SCIENCE"
},
{
    "ClusterServiceInfoList": {
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            {
                "Mandatory": false,
                "ServiceDisplayName": "Ranger"
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                                "ServiceName": "RANGER",
                                "ServiceVersion": "1.0.0"
                            },
                            {
                                "Mandatory": true,
                                "ServiceDisplayName": "Kafka-Manager",
                                "ServiceName": "KAFKA-MANAGER",
                                "ServiceVersion": "1.3.3.16-1.1.0"
                            },
                            {
                                "Mandatory": true,
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                                "ServiceName": "KAFKA",
                                "ServiceVersion": "2.11-1.1.0-1.0.0"
                            },
                            {
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                                "ServiceVersion": "3.4.13"
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                            {
                                "Mandatory": true,
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                                "ServiceVersion": "3.7.2"
                            }
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                {
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                                "ServiceDisplayName": "ZooKeeper",
                                "ServiceName": "ZOOKEEPER",
                                "ServiceVersion": "3.4.13"
                            },
                            {
                                "Mandatory": true,
                                "ServiceDisplayName": "Ganglia",
                                "ServiceName": "GANGLIA",
                                "ServiceVersion": "3.7.2"
                            }
                        ]
                    },
                    "ClusterType": "ZOOKEEPER"
                }
            ]
        },
        "EcmVersion": true,
        "MainVersionName": "EMR-3.15.1",
```

```
                "RegionId": "cn-hangzhou"
            }
        ]
    },
    "KeyPairNameList": {
        "KeyPairName": [
            "lr_test",
            "zx"
        ]
    },
    "RequestId": "BFA129D8-2D93-4B20-9883-FBD981483585",
    "SecurityGroupList": {
        "SecurityGroup": [
            {
                "CreationTime": "2018-12-03T10:11:55Z",
                "Description": "",
                "SecurityGroupId": "sg-bp1j1n0xcwfs19y9****",
                "SecurityGroupName": "ziguansg",
                "VpcId": "vpc-bp1d618azoa9go6wo****"
            }
        ]
    },
    "VpcInfoList": {
        "VpcInfo": [
            {
                "CidrBlock": "192.168.0.0/16",
                "CreationTime": "2018-11-22T07:38:44Z",
                "Description": "",
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                "VpcName": "zgtest",
                "VswitchInfoList": {
                    "VswitchInfo": [
                        {
                            "AvailableIpAddressCount": 200,
                            "CidrBlock": "192.168.0.0/24",
                            "CreationTime": "2018-11-22T07:38:49Z",
                            "Description": "",
                            "VpcId": "vpc-bp1d618azoa9go6wo****",
                            "VswitchId": "vsw-bp18amcazibt1u0d8****",
                            "VswitchName": "hangzhou_g",
                            "ZoneId": "cn-hangzhou-g"
                        }
                    ]
                }
            },
            {
                "CidrBlock": "192.168.0.0/16",
                "CreationTime": "2018-04-02T07:46:16Z",
                "Description": "ecm-admin-case-dedicated",
                "VpcId": "vpc-bp1t3gj27698ijqq7****",
                "VpcName": "ecm-admin-case-dedicated",
                "VswitchInfoList": {
                    "VswitchInfo": [
                        {
```

```
                                "AvailableIpAddressCount": 234,
                                "CidrBlock": "192.168.100.0/24",
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                                "Description": "",
                                "VpcId": "vpc-bp1t3gj27698ijqq7****",
                                "VswitchId": "vsw-bp1eph7e1p67a4pru****",
                                "VswitchName": "xxx",
                                "ZoneId": "cn-hangzhou-f"
                            },
                            {
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                                "CreationTime": "2018-04-02T07:46:21Z",
                                "Description": "ecm-admin-case-dedicated",
                                "VpcId": "vpc-bp1t3gj27698ijqq7****",
                                "VswitchId": "vsw-bp1iyxwwoxqlyr6ue****",
                                "VswitchName": "ecm-admin-case-dedicated",
                                "ZoneId": "cn-hangzhou-b"
                            }
                        ]
                    }
                }
            ]
        }
    },
    "requestId": "BFA129D8-2D93-4B20-9883-FBD981483585"
}
```


3.14. Query available resources

Call ListEmrAvailableResource operation to query available EMR 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	ListEmrAvailableResource	The operation that you want to perform. Set the value to ListEmrAvailableResource.

Parameter	Type	Required	Example	Description
ClusterType	String	Yes	HADOOP	The type of the cluster. Valid values: • HADOOP • KAFKA • DATA SCIENCE • DRUID • FLINK • GATEWAY • CLICKHOUSE • SHUFFLE_SERVICE • EMR_STUDIO
DestinationResource	String	Yes	DataDisk	The required resources. Valid values: • SystemDisk: system disk • DataDisk: data disk • InstanceType: local disk
InstanceChargeType	String	Yes	PostPaid	The billing method of the instance. Valid values: • PostPaid: pay-as-you-go cluster • PrePaid: subscription cluster
RegionId	String	Yes	cn-hangzhou	The ID of the region. You can call the DescribeRegions operation to query the most recent list of regions.
SpotStrategy	String	No	SpotWithPriceLimit	The instance bidding policy. Valid values: • NoSpot: applies to regular pay-as-you-go instances. The default value is NoSpot. • SpotWithPriceLimit: applies to preemptible instances that have maximum hourly prices. • SpotAsPriceGo: The system places bids based on the spot price.
ZoneId	String	No	cn-hangzhou-b	The ID of the zone.
NetType	String	No	VPC	The network type.

Parameter	Type	Required	Example	Description
InstanceType	String	No	ecs.g5.xlarge	The instance family of the instances. Valid values:
SystemDiskType	String	No	cloud_ssd	The type of the system disk. Valid values: • cloud: basic disk • cloud_efficiency: ultra disk • cloud_ssd: standard SSD
DataDiskType	String	No	cloud_ssd	The type of the data disk. Valid values: • cloud: basic disk • cloud_efficiency: ultra disk • cloud_ssd: standard SSD
DepositType	String	No	HALF_MANAGED	The managed type of the cluster. Valid values: • HALF_MANAGED: semi-managed • MANAGED: fully managed
ClusterId	String	No	C-D7958B72E59B****	The ID of the cluster. You can call the ListClusters operation to view the ID of the cluster.
ResourceGroupId	String	No	rg-bp67acfmxazb4p****	The ID of the resource group.
EmrVersion	String	No	EMR-3.16.0	The EMR version.

Response parameters

Parameter	Type	Example	Description
EmrZoneInfoList	Array of EmrZoneInfo		The list of zones.
EmrZoneInfo			
EmrResourceInfoList	Array of EmrResourceInfo		The information about the resources.

Parameter	Type	Example	Description
EmrResourceInfo			
SupportedResourceList	Array of SupportedResource		The list of supported resource types.
SupportedResource			
EmrInstanceType	Struct		The supported ECS instance types.
BaselineCredit	Integer	0	The baseline vCPU computing performance of a burstable instance.
CpuCoreCount	Integer	4	The number of CPU cores.
EniQuantity	Integer	3	The number of ENIs.
GPUAmount	Integer	1	The number of GPUs.
GPUSpec	String	NVIDIA P100	The GPU model.
InitialCredit	Integer	0	A reserved parameter.
InstanceBandwidthRx	Integer	1536000	A reserved parameter.
InstanceBandwidthTx	Integer	1536000	A reserved parameter.
InstancePpsRx	Long	500000	A reserved parameter.
InstancePpsTx	Long	500000	A reserved parameter.
InstanceType	String	ecs.g5.xlarge	The instance family of the instances. Valid values:
InstanceTypeFamily	String	ecs.g5	The instance family.
LocalStorageAmount	Integer	2	The number of local disks.

Parameter	Type	Example	Description
LocalStorageCapacity	Long	80	The capacity of local disks.
LocalStorageCategory	String	local_ssd_pro	The category of the local disks.
MemorySize	Integer	16	The memory capacity. Unit: GiB.
Max	Integer	32768	The maximum capacity of a disk.
Min	Integer	40	The minimum capacity of a disk.
SupportNodeTypeList	List	["MASTER", "CORE"]	The list of supported node types.
Unit	String	GiB	The unit.
Value	String	cloud_essd	The value.
Type	String	DataDisk	The type of the data to be queried.
ZoneId	String	cn-hangzhou-b	The ID of the zone.
RegionId	String	cn-hangzhou	The ID of the region.
RequestId	String	BF4FBAC6-B03E-4BFB-B6DB-EB53C34F2E22	The ID of the request.

Examples

Sample requests

```
http(s)://[Endpoint]/?Action=ListEmrAvailableResource
&ClusterType=HADOOP
&DestinationResource=SystemDisk
&InstanceChargeType=PostPaid
&RegionId=cn-hangzhou
&<Common request parameters>
```

Sample success responses

`XML` format


```
<emrZoneInfoList>
    <emrResourceInfoList>
        <supportedResourceList>
            <emrInstanceType>
                <cpuCoreCount>4</cpuCoreCount>
                <eniQuantity>2</eniQuantity>
                <gPUAmount>0</gPUAmount>
                <gPUSpec/>
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                <instanceBandwidthTx>819200</instanceBandwidthTx>
                <instancePpsRx>150000</instancePpsRx>
                <instancePpsTx>150000</instancePpsTx>
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                <instanceTypeFamily>ecs.n4</instanceTypeFamily>
                <localStorageCategory/>
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            </emrInstanceType>
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            <supportNodeTypeList>MASTER</supportNodeTypeList>
            <supportNodeTypeList>TASK</supportNodeTypeList>
            <supportNodeTypeList>GATEWAY</supportNodeTypeList>
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            <value1>ecs.n4.xlarge</value1>
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        <supportedResourceList>
            <emrInstanceType>
                <cpuCoreCount>8</cpuCoreCount>
                <eniQuantity>4</eniQuantity>
                <gPUAmount>0</gPUAmount>
                <gPUSpec/>
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                <instanceBandwidthTx>1536000</instanceBandwidthTx>
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                <instancePpsTx>400000</instancePpsTx>
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                <instanceTypeFamily>ecs.se1</instanceTypeFamily>
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            <supportNodeTypeList>MASTER</supportNodeTypeList>
            <supportNodeTypeList>TASK</supportNodeTypeList>
            <supportNodeTypeList>GATEWAY</supportNodeTypeList>
            <value>ecs.se1.2xlarge</value>
            <value1>ecs.se1.2xlarge</value1>
        </supportedResourceList>
        <supportedResourceList>
            <emrInstanceType>
                <cpuCoreCount>16</cpuCoreCount>
                <eniQuantity>8</eniQuantity>
                <gPUAmount>0</gPUAmount>
                <gPUSpec/>
```

```
                <instanceBandwidthRx>3072000</instanceBandwidthRx>
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                <instancePpsTx>1600000</instancePpsTx>
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                <instanceTypeFamily>ecs.sn2ne</instanceTypeFamily>
                <localStorageCategory/>
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            <supportNodeTypeList>MASTER</supportNodeTypeList>
            <supportNodeTypeList>TASK</supportNodeTypeList>
            <supportNodeTypeList>GATEWAY</supportNodeTypeList>
            <value>ecs.sn2ne.4xlarge</value>
            <value1>ecs.sn2ne.4xlarge</value1>
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        <supportedResourceList>
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                <instancePpsTx>150000</instancePpsTx>
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            <value>ecs.mn4.xlarge</value>
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```

```
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            <supportNodeTypeList>MASTER</supportNodeTypeList>
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```

```
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            <instanceTypeFamily>ecs.d1</instanceTypeFamily>
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```

```
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```

```
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            <supportNodeTypeList>GATEWAY</supportNodeTypeList>
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                <gPUSpec/>
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                <instancePpsRx>300000</instancePpsRx>
                <instancePpsTx>300000</instancePpsTx>
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                <instanceTypeFamily>ecs.d1</instanceTypeFamily>
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```

```
            </emrInstanceType>
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        <supportedResourceList>
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`JSON` format

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                "TASK",
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                "instanceTypeFamily": "ecs.d1",
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                "instancePpsTx": 200000,
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```

```
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                "instanceBandwidthTx": 819200,
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                "GATEWAY"
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                "TASK",
                "GATEWAY"
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        },
```

```
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                    "gPUAmount": 0,
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                    "instancePpsTx": 400000,
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                    "localStorageCategory": "",
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                    "MASTER",
                    "TASK",
                    "GATEWAY"
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                "value1": "ecs.sn2.xlarge"
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                    "eniQuantity": 4,
                    "gPUAmount": 0,
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                    "instanceBandwidthTx": 1536000,
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                    "instancePpsTx": 400000,
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                    "instanceTypeFamily": "ecs.sn1",
                    "localStorageCategory": "",
                    "memorySize": 16
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                    "MASTER",
                    "TASK",
                    "GATEWAY"
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                    "gPUAmount": 0,
                    "gPUSpec": "",
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```

```
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                "instanceBandwidthTx": 3072000,
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                "instancePpsTx": 300000,
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                "instanceTypeFamily": "ecs.d1",
                "localStorageAmount": 4,
                "localStorageCapacity": 5500,
                "localStorageCategory": "local_hdd_pro",
                "memorySize": 32
            },
            "supportNodeTypeList": "CORE",
            "value": "ecs.d1.2xlarge",
            "value1": "ecs.d1.2xlarge"
        },
        {
            "emrInstanceType": {
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                "eniQuantity": 8,
                "gPUAmount": 0,
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                "instancePpsTx": 500000,
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                "instanceTypeFamily": "ecs.se1",
                "localStorageCategory": "",
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                "MASTER",
                "TASK",
                "GATEWAY"
            ],
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        {
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                "eniQuantity": 4,
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                "instanceTypeFamily": "ecs.sn1ne",
                "localStorageCategory": "",
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```

```
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                "TASK",
                "GATEWAY"
            ],
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        },
        {
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                "gPUSpec": "",
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                "instanceBandwidthTx": 3072000,
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                "instancePpsTx": 500000,
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                "instanceTypeFamily": "ecs.sn2",
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                "MASTER",
                "TASK",
                "GATEWAY"
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            "value1": "ecs.sn2.3xlarge"
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        {
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                "gPUAmount": 0,
                "gPUSpec": "",
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                "instanceBandwidthTx": 1228800,
                "instancePpsRx": 300000,
                "instancePpsTx": 300000,
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                "instanceTypeFamily": "ecs.mn4",
                "localStorageCategory": "",
                "memorySize": 32
            },
            "supportNodeTypeList": [
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                "MASTER",
                "TASK",
                "GATEWAY"
            ],
            "value": "ecs.mn4.2xlarge",
```

```
                "value1": "ecs.mn4.2xlarge"
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            {
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                    "gPUSpec": "",
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                    "instancePpsTx": 500000,
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                    "instanceTypeFamily": "ecs.sn2ne",
                    "localStorageCategory": "",
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                },
                "supportNodeTypeList": [
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                    "MASTER",
                    "TASK",
                    "GATEWAY"
                ],
                "value": "ecs.sn2ne.xlarge",
                "value1": "ecs.sn2ne.xlarge"
            },
            {
                "emrInstanceType": {
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                    "eniQuantity": 8,
                    "gPUAmount": 1,
                    "gPUSpec": "Nvidia Tesla P4",
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                    "instancePpsTx": 800000,
                    "instanceType": "ecs.gn5i-c16g1.4xlarge",
                    "instanceTypeFamily": "ecs.gn5i",
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                    "TASK"
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                "value1": "ecs.gn5i-c16g1.4xlarge"
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                    "eniQuantity": 8,
                    "gPUAmount": 0,
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```

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                "instancePpsTx": 500000,
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                "memorySize": 128
            },
            "supportNodeTypeList": [
                "CORE",
                "MASTER",
                "TASK",
                "GATEWAY"
            ],
            "value": "ecs.mn4.8xlarge",
            "value1": "ecs.mn4.8xlarge"
        },
        {
            "emrInstanceType": {
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                "eniQuantity": 4,
                "gPUAmount": 0,
                "gPUSpec": "",
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                "instanceBandwidthTx": 2048000,
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                "instancePpsTx": 1000000,
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                "instanceTypeFamily": "ecs.se1ne",
                "localStorageCategory": "",
                "memorySize": 64
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            "supportNodeTypeList": [
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                "MASTER",
                "TASK",
                "GATEWAY"
            ],
            "value": "ecs.se1ne.2xlarge",
            "value1": "ecs.se1ne.2xlarge"
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                "gPUAmount": 0,
                "gPUSpec": "",
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                "instanceBandwidthTx": 2560000,
                "instancePpsRx": 400000,
                "instancePpsTx": 400000,
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```

```
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                "TASK",
                "GATEWAY"
            ],
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            "value1": "ecs.n4.4xlarge"
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        {
            "emrInstanceType": {
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                "eniQuantity": 8,
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                "gPUSpec": "",
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                "instancePpsTx": 2500000,
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                "memorySize": 256
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                "MASTER",
                "TASK",
                "GATEWAY"
            ],
            "value": "ecs.se1ne.8xlarge",
            "value1": "ecs.se1ne.8xlarge"
        },
        {
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                "instancePpsTx": 500000,
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                "instanceTypeFamily": "ecs.n4",
                "localStorageCategory": "",
                "memorySize": 64
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            "supportNodeTypeList": [
                "CORE",
                "MASTER",
                "TASK"
```

```
                "TASK",
                "GATEWAY"
            ],
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            "value1": "ecs.n4.8xlarge"
        },
        {
            "emrInstanceType": {
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                "gPUSpec": "",
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                "instanceBandwidthTx": 2048000,
                "instancePpsRx": 1000000,
                "instancePpsTx": 1000000,
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                "instanceTypeFamily": "ecs.sn2ne",
                "localStorageCategory": "",
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                "MASTER",
                "TASK",
                "GATEWAY"
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            "value1": "ecs.sn2ne.2xlarge"
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                "memorySize": 32
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            "supportNodeTypeList": [
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                "MASTER",
                "TASK",
                "GATEWAY"
            ],
            "value": "ecs.se1ne.xlarge",
            "value1": "ecs.se1ne.xlarge"
        },
        {
```

```
            {
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                    "cpuCoreCount": 24,
                    "eniQuantity": 8,
                    "gPUAmount": 0,
                    "gPUSpec": "",
                    "instanceBandwidthRx": 8192000,
                    "instanceBandwidthTx": 8192000,
                    "instancePpsRx": 800000,
                    "instancePpsTx": 800000,
                    "instanceType": "ecs.d1.6xlarge",
                    "instanceTypeFamily": "ecs.d1",
                    "localStorageAmount": 12,
                    "localStorageCapacity": 5500,
                    "localStorageCategory": "local_hdd_pro",
                    "memorySize": 96
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                "supportNodeTypeList": "CORE",
                "value": "ecs.d1.6xlarge",
                "value1": "ecs.d1.6xlarge"
            },
            {
                "emrInstanceType": {
                    "cpuCoreCount": 8,
                    "eniQuantity": 4,
                    "gPUAmount": 1,
                    "gPUSpec": "Nvidia Tesla P4",
                    "instanceBandwidthRx": 2048000,
                    "instanceBandwidthTx": 2048000,
                    "instancePpsRx": 400000,
                    "instancePpsTx": 400000,
                    "instanceType": "ecs.gn5i-c8g1.2xlarge",
                    "instanceTypeFamily": "ecs.gn5i",
                    "localStorageCategory": "",
                    "memorySize": 32
                },
                "supportNodeTypeList": [
                    "CORE",
                    "TASK"
                ],
                "value": "ecs.gn5i-c8g1.2xlarge",
                "value1": "ecs.gn5i-c8g1.2xlarge"
            },
            {
                "emrInstanceType": {
                    "cpuCoreCount": 8,
                    "eniQuantity": 2,
                    "gPUAmount": 0,
                    "gPUSpec": "",
                    "instanceBandwidthRx": 1228800,
                    "instanceBandwidthTx": 1228800,
                    "instancePpsRx": 300000,
                    "instancePpsTx": 300000,
                    "instanceType": "ecs.n4.2xlarge",
                    "instanceTypeFamily": "ecs.n4",
```

```
                "localStorageCategory": "",
                "memorySize": 16
            },
            "supportNodeTypeList": [
                "CORE",
                "MASTER",
                "TASK",
                "GATEWAY"
            ],
            "value": "ecs.n4.2xlarge",
            "value1": "ecs.n4.2xlarge"
        },
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            "emrInstanceType": {
                "cpuCoreCount": 32,
                "eniQuantity": 8,
                "gPUAmount": 0,
                "gPUSpec": "",
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                "instanceBandwidthTx": 6144000,
                "instancePpsRx": 2500000,
                "instancePpsTx": 2500000,
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                "instanceTypeFamily": "ecs.sn1ne",
                "localStorageCategory": "",
                "memorySize": 64
            },
            "supportNodeTypeList": [
                "CORE",
                "MASTER",
                "TASK",
                "GATEWAY"
            ],
            "value": "ecs.sn1ne.8xlarge",
            "value1": "ecs.sn1ne.8xlarge"
        },
        {
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                "eniQuantity": 8,
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                "gPUSpec": "",
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                "instanceBandwidthTx": 3072000,
                "instancePpsRx": 500000,
                "instancePpsTx": 500000,
                "instanceType": "ecs.sn1.3xlarge",
                "instanceTypeFamily": "ecs.sn1",
                "localStorageCategory": "",
                "memorySize": 32
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            "supportNodeTypeList": [
                "CORE",
                "MASTER",
```

```
                "TASK",
                "GATEWAY"
            ],
            "value": "ecs.sn1.3xlarge",
            "value1": "ecs.sn1.3xlarge"
        },
        {
            "emrInstanceType": {
                "cpuCoreCount": 16,
                "eniQuantity": 8,
                "gPUAmount": 0,
                "gPUSpec": "",
                "instanceBandwidthRx": 3072000,
                "instanceBandwidthTx": 3072000,
                "instancePpsRx": 1600000,
                "instancePpsTx": 1600000,
                "instanceType": "ecs.sn1ne.4xlarge",
                "instanceTypeFamily": "ecs.sn1ne",
                "localStorageCategory": "",
                "memorySize": 32
            },
            "supportNodeTypeList": [
                "CORE",
                "MASTER",
                "TASK",
                "GATEWAY"
            ],
            "value": "ecs.sn1ne.4xlarge",
            "value1": "ecs.sn1ne.4xlarge"
        },
        {
            "emrInstanceType": {
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                "eniQuantity": 3,
                "gPUAmount": 0,
                "gPUSpec": "",
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                "instanceBandwidthTx": 1536000,
                "instancePpsRx": 500000,
                "instancePpsTx": 500000,
                "instanceType": "ecs.sn1ne.xlarge",
                "instanceTypeFamily": "ecs.sn1ne",
                "localStorageCategory": "",
                "memorySize": 8
            },
            "supportNodeTypeList": [
                "CORE",
                "MASTER",
                "TASK",
                "GATEWAY"
            ],
            "value": "ecs.sn1ne.xlarge",
            "value1": "ecs.sn1ne.xlarge"
        },
```

```
                {
                    "emrInstanceType": {
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                        "eniQuantity": 8,
                        "gPUAmount": 0,
                        "gPUSpec": "",
                        "instanceBandwidthRx": 2560000,
                        "instanceBandwidthTx": 2560000,
                        "instancePpsRx": 400000,
                        "instancePpsTx": 400000,
                        "instanceType": "ecs.mn4.4xlarge",
                        "instanceTypeFamily": "ecs.mn4",
                        "localStorageCategory": "",
                        "memorySize": 64
                    },
                    "supportNodeTypeList": [
                        "CORE",
                        "MASTER",
                        "TASK",
                        "GATEWAY"
                    ],
                    "value": "ecs.mn4.4xlarge",
                    "value1": "ecs.mn4.4xlarge"
                }
            ],
            "type": "InstanceType"
        },
        "zoneId": "cn-hangzhou-b"
    },
    "regionId": "cn-hangzhou",
    "requestId": "A3239C3B-641F-4082-B5A1-AE2362CBCCD7"
}
```


3.15. View EMR version information

You can call the ListEmrMainVersion operation to query the list of E-MapReduce versions.

Debugging

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

Request parameters

Parameter	Type	Required	Example	Description

Parameter	Type	Required	Example	Description
Action	String	Yes	ListEmrMainVersion	The operation that you want to perform. This parameter is required for API requests initiated by piecing together HTTP or HTTPS URLs. Set the value to ListEmrMainVersion.
RegionId	String	Yes	cn-hangzhou	The ID of the region. You can call the DescribeRegions operation to query the most recent list of regions.
EmrVersion	String	No	EMR-3.16.0	The EMR version.
StackName	String	No	EMR	The name of the software stack. Set the value to EMR.
StackVersion	String	No	3.16.0.1.2	The version of the software stack.
PageNumber	Integer	No	1	The number of the page to return. Pages start from page 1.
PageSize	Integer	No	10	The number of entries returned per page.

Response parameters

Parameter	Type	Example	Description
EmrMainVersionList	Array of EmrMainVersion		The list of EMR versions.
EmrMainVersion			
ClusterTypeInfoList	Array of ClusterTypeInfo		The list of cluster types.
ClusterTypeInfo			
ClusterType	String	HADOOP	The type of the cluster.
ServiceInfoList	Array of ServiceInfo		An array that consists of the information of services.
ServiceInfo			

Parameter	Type	Example	Description
Display	Boolean	true	Indicates whether the service is displayed.
Mandatory	Boolean	true	Indicates whether the request parameter is required.
ServiceDisplayName	String	Hive	The display name of the service.
ServiceDisplayVersion	String	2.3.3	The display version of the service.
ServiceName	String	HIVE	The name of the service.
ServiceVersion	String	2.3.3.0.1	The internal version of the service.
ClusterTypeWhiteUserList	Array of ClusterTypeWhiteUser		The list of cluster whitelist information.
ClusterTypeWhiteUser			
ClusterType	String	HADOOP	The type of the cluster. Valid values: • HADOOP • KAFKA • DATA SCIENCE • DRUID • FLINK • GATEWAY • CLICKHOUSE • SHUFFLE_SERVICE • EMR_STUDIO
UserId	String	1528342356764****	The ID of the user.
Display	Boolean	true	Indicates whether the cluster type is available.
EcmVersion	Boolean	true	Indicates whether the cluster type supports the software stack version.

Parameter	Type	Example	Description
EmrVersion	String	EMR-3.29.1	The EMR version.
ImageId	String	m-bp1hdwryap03nxpl***	The ID of the image.
PublishType	String	None	A reserved parameter.
RegionId	String	cn-hangzhou	The ID of the region.
StackName	String	EMR	A reserved parameter.
StackVersion	String	3.29.1.2.2	A reserved parameter.
WhiteUserList	List	""	A reserved parameter.
PageNumber	Integer	1	The number of the page to return.
PageSize	Integer	10	The number of entries returned per page.
RequestId	String	BF4FBAC6-B03E-4BFB-B6DB-EB53C34F2E22	The ID of the request.
TotalCount	Integer	12	The total number of returned entries.

Examples

Sample requests

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

Sample success responses

`XML` format

```
<TotalCount>98</TotalCount>
<RequestId>D97D7163-6F2E-47C5-AC16-D926BC3D2158</RequestId>
<PageSize>10</PageSize>
<PageNumber>1</PageNumber>
<EmrMainVersionList>
    <EmrMainVersion>
```

```
        <ClusterTypeInfoList>
        </ClusterTypeInfoList>
        <ImageId>m-bp1e4xw8ys8srxjp****</ImageId>
        <EcmVersion>true</EcmVersion>
        <WhiteUserList>
        </WhiteUserList>
        <ClusterTypeWhiteUserList>
        </ClusterTypeWhiteUserList>
        <RegionId>cn-hangzhou</RegionId>
        <EmrVersion>EMR-3.29.0</EmrVersion>
        <StackName>EMR</StackName>
        <Display>true</Display>
        <StackVersion>3.29.0.0.109</StackVersion>
    </EmrMainVersion>
    <EmrMainVersion>
        <ClusterTypeInfoList>
        </ClusterTypeInfoList>
        <ImageId>m-bp11z0k3d593hr40****</ImageId>
        <EcmVersion>true</EcmVersion>
        <WhiteUserList>
        </WhiteUserList>
        <ClusterTypeWhiteUserList>
        </ClusterTypeWhiteUserList>
        <RegionId>cn-hangzhou</RegionId>
        <EmrVersion>EMR-3.29.1</EmrVersion>
        <StackName>EMR</StackName>
        <Display>true</Display>
        <StackVersion>3.29.1.2.2</StackVersion>
    </EmrMainVersion>
    <EmrMainVersion>
        <ClusterTypeInfoList>
        </ClusterTypeInfoList>
        <ImageId>m-bp1ascs0tl4zdbai****</ImageId>
        <EcmVersion>true</EcmVersion>
        <WhiteUserList>
        </WhiteUserList>
        <ClusterTypeWhiteUserList>
        </ClusterTypeWhiteUserList>
        <RegionId>cn-hangzhou</RegionId>
        <EmrVersion>EMR-4.4.0</EmrVersion>
        <StackName>EMR</StackName>
        <Display>true</Display>
        <StackVersion>4.4.0.1.2</StackVersion>
    </EmrMainVersion>
    <EmrMainVersion>
        <ClusterTypeInfoList>
        </ClusterTypeInfoList>
        <ImageId>m-bp1edp201fgcgf71****</ImageId>
        <EcmVersion>true</EcmVersion>
        <WhiteUserList>
        </WhiteUserList>
        <ClusterTypeWhiteUserList>
        </ClusterTypeWhiteUserList>
        <RegionId>cn-hangzhou</RegionId>
```

```
        <EmrVersion>EMR-3.28.2</EmrVersion>
        <StackName>EMR</StackName>
        <Display>true</Display>
        <StackVersion>3.28.2.0.4</StackVersion>
    </EmrMainVersion>
    <EmrMainVersion>
        <ClusterTypeInfoList>
        </ClusterTypeInfoList>
        <ImageId>m-bp11wvscj5y1ggv8****</ImageId>
        <EcmVersion>true</EcmVersion>
        <WhiteUserList>
        </WhiteUserList>
        <ClusterTypeWhiteUserList>
        </ClusterTypeWhiteUserList>
        <RegionId>cn-hangzhou</RegionId>
        <EmrVersion>EMR-3.28.1</EmrVersion>
        <StackName>EMR</StackName>
        <Display>true</Display>
        <StackVersion>3.28.1.0.4</StackVersion>
    </EmrMainVersion>
    <EmrMainVersion>
        <ClusterTypeInfoList>
        </ClusterTypeInfoList>
        <ImageId>m-bp1i4eha5b7cw8y6****</ImageId>
        <EcmVersion>true</EcmVersion>
        <WhiteUserList>
        </WhiteUserList>
        <ClusterTypeWhiteUserList>
        </ClusterTypeWhiteUserList>
        <RegionId>cn-hangzhou</RegionId>
        <EmrVersion>EMR-4.2.5</EmrVersion>
        <StackName>EMR</StackName>
        <Display>false</Display>
        <StackVersion>4.2.5.0.5</StackVersion>
    </EmrMainVersion>
    <EmrMainVersion>
        <ClusterTypeInfoList>
        </ClusterTypeInfoList>
        <ImageId>m-bp18ez855bmwofqs****</ImageId>
        <EcmVersion>true</EcmVersion>
        <WhiteUserList>
        </WhiteUserList>
        <ClusterTypeWhiteUserList>
        </ClusterTypeWhiteUserList>
        <RegionId>cn-hangzhou</RegionId>
        <EmrVersion>EMR-4.2.4</EmrVersion>
        <StackName>EMR</StackName>
        <Display>false</Display>
        <StackVersion>4.2.4.0.4</StackVersion>
    </EmrMainVersion>
    <EmrMainVersion>
        <ClusterTypeInfoList>
        </ClusterTypeInfoList>
        <ImageId>m-bp1ewvm4yos67dpk****</ImageId>
```

```
        <EcmVersion>true</EcmVersion>
        <WhiteUserList>
        </WhiteUserList>
        <ClusterTypeWhiteUserList>
        </ClusterTypeWhiteUserList>
        <RegionId>cn-hangzhou</RegionId>
        <EmrVersion>EMR-3.28.0</EmrVersion>
        <StackName>EMR</StackName>
        <Display>true</Display>
        <StackVersion>3.28.0.1.10</StackVersion>
    </EmrMainVersion>
    <EmrMainVersion>
        <ClusterTypeInfoList>
        </ClusterTypeInfoList>
        <ImageId>m-bp14nzsz01vp4cd0****</ImageId>
        <EcmVersion>true</EcmVersion>
        <WhiteUserList>
        </WhiteUserList>
        <ClusterTypeWhiteUserList>
        </ClusterTypeWhiteUserList>
        <RegionId>cn-hangzhou</RegionId>
        <EmrVersion>EMR-4.3.0</EmrVersion>
        <StackName>EMR</StackName>
        <Display>true</Display>
        <StackVersion>4.3.0.1.9</StackVersion>
    </EmrMainVersion>
    <EmrMainVersion>
        <ClusterTypeInfoList>
        </ClusterTypeInfoList>
        <ImageId>m-bp15nu6jo58t11nr****</ImageId>
        <EcmVersion>true</EcmVersion>
        <WhiteUserList>
        </WhiteUserList>
        <ClusterTypeWhiteUserList>
        </ClusterTypeWhiteUserList>
        <RegionId>cn-hangzhou</RegionId>
        <EmrVersion>EMR-3.24.100</EmrVersion>
        <StackName>EMR</StackName>
        <Display>true</Display>
        <StackVersion>3.24.100.5.12</StackVersion>
    </EmrMainVersion>
</EmrMainVersionList>
```

`JSON` format

```
{
 "TotalCount": 98,
 "RequestId": "D97D7163-6F2E-47C5-AC16-D926BC3D2158",
 "PageSize": 10,
 "PageNumber": 1,
 "EmrMainVersionList": {
  "EmrMainVersion": [
   {
    "ClusterTypeInfoList": {
```

```
      "ClusterTypeInfo": []
     },
     "ImageId": "m-bp1e4xw8ys8srxjp****",
     "EcmVersion": true,
     "WhiteUserList": {
      "WhiteUser": []
     },
     "ClusterTypeWhiteUserList": {
      "ClusterTypeWhiteUser": []
     },
     "RegionId": "cn-hangzhou",
     "EmrVersion": "EMR-3.29.0",
     "StackName": "EMR",
     "Display": true,
     "StackVersion": "3.29.0.0.109"
    },
    {
     "ClusterTypeInfoList": {
      "ClusterTypeInfo": []
     },
     "ImageId": "m-bp11z0k3d593hr40****",
     "EcmVersion": true,
     "WhiteUserList": {
      "WhiteUser": []
     },
     "ClusterTypeWhiteUserList": {
      "ClusterTypeWhiteUser": []
     },
     "RegionId": "cn-hangzhou",
     "EmrVersion": "EMR-3.29.1",
     "StackName": "EMR",
     "Display": true,
     "StackVersion": "3.29.1.2.2"
    },
    {
     "ClusterTypeInfoList": {
      "ClusterTypeInfo": []
     },
     "ImageId": "m-bp1ascs0tl4zdbai****",
     "EcmVersion": true,
     "WhiteUserList": {
      "WhiteUser": []
     },
     "ClusterTypeWhiteUserList": {
      "ClusterTypeWhiteUser": []
     },
     "RegionId": "cn-hangzhou",
     "EmrVersion": "EMR-4.4.0",
     "StackName": "EMR",
     "Display": true,
     "StackVersion": "4.4.0.1.2"
    },
    {
     "ClusterTypeInfoList": {
```

```
      "ClusterTypeInfo": []
     },
     "ImageId": "m-bp1edp201fgcgf71****",
     "EcmVersion": true,
     "WhiteUserList": {
      "WhiteUser": []
     },
     "ClusterTypeWhiteUserList": {
      "ClusterTypeWhiteUser": []
     },
     "RegionId": "cn-hangzhou",
     "EmrVersion": "EMR-3.28.2",
     "StackName": "EMR",
     "Display": true,
     "StackVersion": "3.28.2.0.4"
    },
    {
     "ClusterTypeInfoList": {
      "ClusterTypeInfo": []
     },
     "ImageId": "m-bp11wvscj5y1ggv8****",
     "EcmVersion": true,
     "WhiteUserList": {
      "WhiteUser": []
     },
     "ClusterTypeWhiteUserList": {
      "ClusterTypeWhiteUser": []
     },
     "RegionId": "cn-hangzhou",
     "EmrVersion": "EMR-3.28.1",
     "StackName": "EMR",
     "Display": true,
     "StackVersion": "3.28.1.0.4"
    },
    {
     "ClusterTypeInfoList": {
      "ClusterTypeInfo": []
     },
     "ImageId": "m-bp1i4eha5b7cw8y6****",
     "EcmVersion": true,
     "WhiteUserList": {
      "WhiteUser": []
     },
     "ClusterTypeWhiteUserList": {
      "ClusterTypeWhiteUser": []
     },
     "RegionId": "cn-hangzhou",
     "EmrVersion": "EMR-4.2.5",
     "StackName": "EMR",
     "Display": false,
     "StackVersion": "4.2.5.0.5"
    },
    {
     "ClusterTypeInfoList": {
```

```
      "ClusterTypeInfo": []
     },
     "ImageId": "m-bp18ez855bmwofqs****",
     "EcmVersion": true,
     "WhiteUserList": {
      "WhiteUser": []
     },
     "ClusterTypeWhiteUserList": {
      "ClusterTypeWhiteUser": []
     },
     "RegionId": "cn-hangzhou",
     "EmrVersion": "EMR-4.2.4",
     "StackName": "EMR",
     "Display": false,
     "StackVersion": "4.2.4.0.4"
    },
    {
     "ClusterTypeInfoList": {
      "ClusterTypeInfo": []
     },
     "ImageId": "m-bp1ewvm4yos67dpk****",
     "EcmVersion": true,
     "WhiteUserList": {
      "WhiteUser": []
     },
     "ClusterTypeWhiteUserList": {
      "ClusterTypeWhiteUser": []
     },
     "RegionId": "cn-hangzhou",
     "EmrVersion": "EMR-3.28.0",
     "StackName": "EMR",
     "Display": true,
     "StackVersion": "3.28.0.1.10"
    },
    {
     "ClusterTypeInfoList": {
      "ClusterTypeInfo": []
     },
     "ImageId": "m-bp14nzsz01vp4cd0****",
     "EcmVersion": true,
     "WhiteUserList": {
      "WhiteUser": []
     },
     "ClusterTypeWhiteUserList": {
      "ClusterTypeWhiteUser": []
     },
     "RegionId": "cn-hangzhou",
     "EmrVersion": "EMR-4.3.0",
     "StackName": "EMR",
     "Display": true,
     "StackVersion": "4.3.0.1.9"
    },
    {
     "ClusterTypeInfoList": {
```

```
      "ClusterTypeInfo": []
     },
     "ImageId": "m-bp15nu6jo58t11nr****",
     "EcmVersion": true,
     "WhiteUserList": {
      "WhiteUser": []
     },
     "ClusterTypeWhiteUserList": {
      "ClusterTypeWhiteUser": []
     },
     "RegionId": "cn-hangzhou",
     "EmrVersion": "EMR-3.24.100",
     "StackName": "EMR",
     "Display": true,
     "StackVersion": "3.24.100.5.12"
    }
   ]
  }
}
```


3.16. Modify a cluster Template

You can call ModifyClusterTemplate operation to modify a cluster template.

Debugging

OpenAPI Explorer automatically calculates the signature value. For your convenience, we recommend that you call this operation in OpenAPI Explorer. You can use OpenAPI Explorer to search for API operations, call API operations, and dynamically generate SDK sample code.

Request parameters

Parameter	Type	Required	Example	Description
Action	String	Yes	ModifyClusterTemplate	The operation that you want to perform. This parameter is required for API requests that you create by piecing together HTTP or HTTPS URLs. Set the value to ModifyClusterTemplate.
BizId	String	Yes	CT-4A6799A79D73****	The ID of the cluster template.
BootstrapAction.N.Name	String	Yes	action_name	The name of bootstrap action N.
BootstrapAction.N.Path	String	Yes	oss://bucket/path	The path where the script of bootstrap action N is stored.

Parameter	Type	Required	Example	Description
ClusterType	String	Yes	HADOOP	The type of ACK cluster. Valid values:
Config.N.ConfigKey	String	Yes	fs.trash.interval	The key of custom configuration item N.
Config.N.ConfigValue	String	Yes	60	The value of custom configuration item N.
Config.N.FileName	String	Yes	yarn-site	The name of the file that contains custom configuration item N.
Config.N.ServiceName	String	Yes	YARN	The name of the service for which custom configuration item N is configured. Specify the entire name in uppercase.
EmrVer	String	Yes	EMR-3.15.0	The EMR version.
HostGroup.N.DiskCapacity	Integer	Yes	80	The data disk capacity of host group N.
HostGroup.N.DiskCount	Integer	Yes	4	The number of data disks in the host group.
HostGroup.N.DiskType	String	Yes	CLOUD_SSD	The data disk type of the instance in the host group.
HostGroup.N.HostGroupName	String	Yes	Master Instance Group	The name of host group N.
HostGroup.N.HostGroupType	String	Yes	MASTER	The type of host group N.
HostGroup.N.InstanceType	String	Yes	ecs.mn4.2xlarge	The type of instances in host group N.
HostGroup.N.NodeCount	Integer	Yes	4	The number of nodes in host group N.
HostGroup.N.SysDiskCapacity	Integer	Yes	80	The system disk capacity of host group N.

Parameter	Type	Required	Example	Description
HostGroup.N.SysDiskType	String	Yes	CLOUD_SSD	The system disk type of host group N.
RegionId	String	Yes	cn-hangzhou	The ID of the region to which the cluster belongs.
TemplateName	String	Yes	new_template_name	The name of the cluster template.
ZoneId	String	Yes	cn-hangzhou-b	The zone ID.
LogPath	String	No	oss//bucketname/path	The path of logs that are stored in OSS buckets.
SecurityGroupId	String	No	sg-bp1id7ajv83kmqwq****	The ID of the security group.
IsOpenPublicIp	Boolean	No	true	Specifies whether to use a public IP address.
SecurityGroupName	String	No	emr_sg	The name of the security group.
ChargeType	String	No	PostPaid	The billing method of the host.
Period	Integer	No	36	The subscription period of the host group. Unit: months. Valid values: 1, 2, 3, 4, 5, 6, 7, 8, 9, 12, 24, and 36.
AutoRenew	Boolean	No	false	Specifies whether to automatically renew the subscription cluster.
VpcId	String	No	vpc-bp1l4urd87xlh7i4b****	The ID of the VPC to which created instances belong.
VSwitchId	String	No	vsw-bp10tvjyc77psy0z5****	The ID of the vSwitch.
NetType	String	No	vpc	The type of the network.

Parameter	Type	Required	Example	Description
UserDefinedEmrEcsRole	String	No	AliyunEmrEcsDefaultRole	The role that is assigned to EMR to call ECS resources.
OptionSoftWareList.N	RepeatList	No	["ZOOKEEPER","LIVY"]	The list of optional services.
HighAvailabilityEnable	Boolean	No	true	Specifies whether the cluster is a high-availability cluster.
UseLocalMetaDb	Boolean	No	true	Specifies whether to use the local Hive metadatabase.
IoOptimized	Boolean	No	true	Specifies whether to enable I/O optimization.
SshEnable	Boolean	No	true	Specifies whether to enable the SSH authentication.
InstanceGeneration	String	No	ecs-3	A reserved parameter. You do not need to specify this parameter.
MasterPwd	String	No	pwd	The SSH password that is used to access the master node.
KeyPairName	String	No	test_kp	The name of the key pair.
MetaStoreType	String	No	local	The type of unified metadata.
MetaStoreConf	String	No	rdsxxx.com	The configuration information of Hive Metastore.
HostGroup.N.HostGroupId	String	No	0	A reserved parameter. You do not need to specify this parameter.
HostGroup.N.ClusterId	String	No	0	A reserved parameter. You do not need to specify this parameter.
HostGroup.N.Comment	String	No	comment	A reserved parameter.

Parameter	Type	Required	Example	Description
HostGroup.N.CreateType	String	No	ON_DEMAND	A reserved parameter.
HostGroup.N.ChargeType	String	No	PostPaid	The billing method of the host group.
HostGroup.N.Period	Integer	No	36	The subscription period of the host group. Unit: months. Valid values: 1, 2, 3, 4, 5, 6, 7, 8, 9, 12, 24, and 36.
HostGroup.N.AutoRenew	Boolean	No	true	Specifies whether to enable auto-renewal for host group N.
HostGroup.N.VSwitchId	String	No	vsw-bp10tvjyc77psy0z5****	The ID of the vSwitch.
HostGroup.N.MultiInstanceTypes	String	No	ecs.sn1.xlarge,ecs.sn2.xlarge	A list of machine models with multiple specifications, separated by commas (,).
BootstrapAction.N.Arg	String	No	--a	The argument that you pass into bootstrap action N.
BootstrapAction.N.ExecutionTarget	String	No	core_group	The scope of script execution. Valid values: • For the entire cluster, you can pass in a null value. • The name of the machine group.
BootstrapAction.N.ExecutionMoment	String	No	BEFORE_INSTALL	The script execution time. Values are as follows: • BEFORE_INSTALL: run before the service is installed. • AFTER_STARTED: The task is executed after the service is started.

Parameter	Type	Required	Example	Description
BootstrapAction.N.ExecutionFailStrategy	String	No	FAILED_BLOCKED	The execution policy for failed scripts. The values are as follows: • FAILED_BLOCKED: the workflow is turned to manual for processing after a failure occurs. • FAILED_CONTINUE: continue after failure
Configurations	String	No	[{"classification": "core-site","properties": {"fs.trash.interval": "61"}}, {"classification": "hadoop-log4j","properties": {"hadoop.log.file": "hadoop1.log","hadoop.root.logger": "INFO","a.b.c": "ABC"}}]	The custom software configurations. You can use a JSON file to modify the software configurations before you start a cluster.
EasEnable	Boolean	No	true	Specifies whether the cluster is a high-security cluster.
DepositType	String	No	HALF_MANAGED	The hosting type of the cluster.
MachineType	String	No	ECS	A reserved parameter. You do not need to specify this parameter.
UseCustomHiveMetaDb	Boolean	No	false	A reserved parameter. You do not need to specify this parameter.
InitCustomHiveMetaDb	Boolean	No	false	A reserved parameter. You do not need to specify this parameter.
Config.N.Encrypt	String	No	0	A reserved parameter. You do not need to specify this parameter.

Parameter	Type	Required	Example	Description
Config.N.Replace	String	No	0	A reserved parameter. You do not need to specify this parameter.
Tag.N.Key	String	No	TestKey	The key of Tag n of the EMR instance and ECS instance on the node. Valid values of N: 1 to 20 The tag key cannot be an empty string. Valid values of the tag key: 1 to 128. The tag key cannot start with aliyun or `acs:` At the beginning. It cannot contain `http://` or `https://` .
Tag.N.Value	String	No	TestValue	The tag value of the EMR instance and ECS instance on the node. Valid values of N: 1 to 20. The tag value can be an empty string. The value of the tag value ranges from 1 to 128. The value cannot start with `acs:` At the beginning. It cannot contain `http://` or `https://` .
ResourceGroupId	String	No	rg-bp67acfmxazb4p****	The ID of the enterprise resource group to which the EMR instances and ECS node instances belong.

Response parameters

Parameter	Type	Example	Description
ClusterTemplateId	String	CT-4A6799A79D73****	The ID of the cluster template.
RequestId	String	BF4FBAC6-B03E-4BFB-B6DB-EB53C34F2E22	The ID of the request.

Examples

Sample requests

```
http(s)://[Endpoint]/?Action=ModifyClusterTemplate
&BizId=CT-4A6799A79D73****
&BootstrapAction.1.1ame=action_name
&BootstrapAction.1.Path=oss://bucket/path
&ClusterType=HADOOP
&Config.1.ConfigKey=fs.trash.interval
&Config.1.ConfigValue=60
&Config.1.FileName=yarn-site
&Config.1.ServiceName=YARN
&EmrVer=EMR-3.15.0
&HostGroup.1.HostGroupType=MASTER
&HostGroup.1.InstanceType=ecs.mn4.2xlarge
&HostGroup.1.1odeCount=4
&RegionId=cn-hangzhou
&TemplateName=new_template_name
&<common request parameters>
```

Sample success responses

`XML` format

```
<ClusterTemplateId>CT-4A6799A79D73****</ClusterTemplateId>
<RequestId>BF4FBAC6-B03E-4BFB-B6DB-EB53C34F2E22</RequestId>
```

`JSON` Syntax

```
{
  "ClusterTemplateId": "CT-4A6799A79D73****",
  "RequestId":"BF4FBAC6-B03E-4BFB-B6DB-EB53C34F2E22"
}
```

3.17. ModifyClusterName

You can call ModifyClusterName operation to modify the cluster name.

Debugging

OpenAPI Explorer automatically calculates the signature value. For your convenience, we recommend that you call this operation in OpenAPI Explorer. You can use OpenAPI Explorer to search for API operations, call API operations, and dynamically generate SDK sample code.

Request parameters

Parameter	Type	Required	Example	Description
Action	String	Yes	ModifyClusterName	The operation that you want to perform. This parameter is required for API requests that you create by piecing together HTTP or HTTPS URLs. Set the value to ModifyClusterName.

Parameter	Type	Required	Example	Description
Id	String	Yes	C-D7958B72E59B****	The ID of the cluster. You can call ListClusters Interface to view the cluster ID.
Name	String	Yes	bi_hadoop	The new name of the cluster. You must use the same naming conventions as you used for the original cluster name. It can be 1 to 64 characters in length and can only contain letters, digits, hyphens (-), and underscores (_). (_).
RegionId	String	Yes	cn-hangzhou	The region ID of the instance. You can call DescribeRegions Interface to view the latest list of Alibaba Cloud regions.

Response parameters

Parameter	Type	Example	Description
RequestId	String	588E7707-D8C8-4618-9B74-FE54B6903A9A	The ID of the request.

Examples

Sample requests

```
http(s)://[Endpoint]/?Action=ModifyClusterName
&Id=C-D7958B72E59B****
&Name=bi_hadoop
&RegionId=cn-hangzhou
&<common request parameters>
```

Sample success responses

`XML` format

```
<RequestId>588E7707-D8C8-4618-9B74-FE54B6903A9A</RequestId>
```

`JSON` Syntax

```
{
    "RequestId": "588E7707-D8C8-4618-9B74-FE54B6903A9A"
}
```

3.18. Release a cluster

You can call the ReleaseCluster operation to release all nodes of a cluster.

Debugging

OpenAPI Explorer automatically calculates the signature value. For your convenience, we recommend that you call this operation in OpenAPI Explorer. You can use OpenAPI Explorer to search for API operations, call API operations, and dynamically generate SDK sample code.

Request parameters

Parameter	Type	Required	Example	Description
Action	String	Yes	ReleaseCluster	The operation that you want to perform. This parameter is required for API requests that you create by piecing together HTTP or HTTPS URLs. Set the value to ReleaseCluster.
Id	String	Yes	C-D7958B72E59B****	The ID of the cluster. You can call ListClusters Interface to view the cluster ID.
RegionId	String	Yes	cn-hangzhou	The ID of the region to which the cluster belongs. You can call DescribeRegions Interface to view the latest list of Alibaba Cloud regions.
ForceRelease	Boolean	No	true	Specifies whether you forcibly release the nodes. If you do not specify this parameter and enable the log storage feature, the system will save the job logs to your OSS bucket. The log storage process takes a few minutes. You can also set this parameter to true. In this case, the nodes are released immediately and the job logs are not saved.

Response parameters

Parameter	Type	Example	Description
RequestId	String	BF4FBAC6-B03E-4BFB-B6DB-EB53C34F2E22	The ID of the request.

Examples

Sample requests

```
http(s)://[Endpoint]/?Action=ReleaseCluster
&Id=C-D7958B72E59B****
&RegionId=cn-hangzhou
&<common request parameters>
```

Sample success responses

`XML` format

```
<RequestId>1BD8FE28-82AC-4433-848A-37B4928430C4</RequestId>
```

`JSON` Syntax

```
{
    "RequestId":"1BD8FE28-82AC-4433-848A-37B4928430C4"
}
```

3.19. Scale out or scale up an instance

Call the ResizeClusterV2 operation to scale out a cluster based on the configuration.

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.

Parameters

Parameter	Type	Required	Example	Description
Action	String	Yes	ResizeClusterV2	The operation that you want to perform. Set the value to ResizeClusterV2.
ClusterId	String	Yes	C-D7958B72E59B****	The ID of the cluster. You can call the ListClusters operation to view the ID of the cluster.

Parameter	Type	Required	Example	Description
HostGroup.N.HostGroupType	String	Yes	TASK	The type of the machine group to be queried. Valid values: • MASTER: the primary instance node. • CORE: core instance nodes. • TASK: compute instance nodes. **Note** Currently, both MASTER and CORE can set only one group.
HostGroup.N.InstanceType	String	Yes	ecs.mn4.2xlarge	The type of the ECS instance in the machine group.
HostGroup.N.NodeCount	Integer	Yes	1	The number of nodes in host group.
RegionId	String	Yes	cn-hangzhou	The ID of the region.
AutoPayOrder	Boolean	No	true	Specifies whether to pay automatically. Valid values: • true: automatic payment. • false: Do not pay automatically.
VswitchId	String	No	vsw-bp10tvjyc77psy0z5****	The ID of the VSwitch.
IsOpenPublicIp	Boolean	No	false	Specifies whether to enable the public IP address. Valid values: • true: enables public IP addresses. If this feature is enabled, it has a bandwidth of 8 MB by default. • false: disables the public IP address.
ClickhouseConf	String	No	{"resizeType":"RESIZE_REPLICA"}	For the specific scale-out configuration of the clickhouse cluster, the resizeType value is as follows: • RESIZE_SHARD: the number of shards in the clickhouse cluster. • RESIZE_REPLICA: the number of replicas of the clickhouse cluster.

Parameter	Type	Required	Example	Description
HostComponentInfo.N.HostName	String	No	emr-header-1	The name of a host.
HostComponentInfo.N.ServiceName	String	No	HDFS	The name of a service.
HostComponentInfo.N.ComponentNameList.N	RepeatList	No	NAMENODE	The list of the components.
HostGroup.N.ClusterId	String	No	C-D7958B72E59B****	The ID of the scaled-out cluster.
HostGroup.N.HostGroupId	String	No	G-48E83B43E971****	The ID of the machine group to be resized.
HostGroup.N.HostGroupName	String	No	Task instance group	The name of the machine group.
HostGroup.N.Comment	String	No	No default value	A reserved parameter. You do not need to specify this parameter.
HostGroup.N.CreateType	String	No	No default value	A reserved parameter. You do not need to specify this parameter.
HostGroup.N.ChargeType	String	No	PostPaid	The billing method for host group N. Valid values: • PostPaid: pay-as-you-go • PrePaid: the subscription billing method.
HostGroup.N.Period	Integer	No	1	The subscription period of the host group. Unit: months. Valid values: 1, 2, 3, 4, 5, 6, 7, 8, 9, 12, 24, and 36. **Note** This parameter is required when the HostGroup.n.ChargeType parameter is set to PrePaid.

Parameter	Type	Required	Example	Description
HostGroup.N.DiskType	String	No	CLOUD_SSD	The category of data disk N. Valid values: • CLOUD: basic disk. • CLOUD_EFFICIENCY: ultra disk. • CLOUD_SSD:SSD.
HostGroup.N.DiskCapacity	Integer	No	120	The data disk capacity of the host group. Note If the machine group is added, this parameter is required.
HostGroup.N.DiskCount	Integer	No	4	The number of data disks in the host group. Note If the machine group is added, this parameter is required.
HostGroup.N.SysDiskType	String	No	CLOUD_SSD	The type of the system disk. Valid values: • CLOUD: basic disk. • CLOUD_EFFICIENCY: ultra disk. • CLOUD_SSD:SSD.
HostGroup.N.SysDiskCapacity	Integer	No	120	The capacity of system disks.
HostGroup.N.AutoRenew	Boolean	No	false	Specifies whether to automatically renew the subscription host group. Valid values: • true: enables auto-renewal. • false: disables auto renewal.
HostGroup.N.VswitchId	Integer	No	0	The VSwitch ID of the host group.
HostGroup.N.HostPassword	String	No	pwd	The password for the hosts in the host group. Currently, you can only use the password to access a gateway node.

Parameter	Type	Required	Example	Description
HostGroup.N.HostKeyPairName	String	No	test-pair	The Secure Shell (SSH) key pair of the host group. Currently, you can only use the key pair to access a gateway node.
HostGroup.N.PrivatePoolOptionsMatchCriteria	String	No	Target	The type of the private pool. A private pool is generated after an elasticity assurance or a capacity reservation takes effect. You can select the private pool when you create instances. Valid values: • Open: open private pool. The system selects a matching open private pool to create the instance. If no matching open private pools are found, resources in the public pool are used. In this mode, you do not need to set the HostGroup.N.PrivatePoolOptionsId parameter. • Target: specified private pool. The capacity in a specified private pool is used. If the specified private pool is unavailable, the instance cannot be created. In this mode, you must specify the private pool ID, that is, the HostGroup.N.PrivatePoolOptionsId parameter is required. • None: no private pool. The capacity in private pools is not used.
HostGroup.N.PrivatePoolOptionsId	String	No	crp-bp1e4wcvoucrish****	The ID of the private pool. The ID of a private pool is the same as that of the elasticity assurance or capacity reservation for which the private pool is generated.
PromotionInfo.N.PromotionOptionNo	String	No	[]	Promotional Information, Promotion No.
PromotionInfo.N.PromotionOptionCode	String	No	[]	Promotional information, promotion option code.

Parameter	Type	Required	Example	Description
PromotionInfo.N.ProductCode	String	No	[]	Promotional information, product code.

Response parameters

Parameter	Type	Example	Description
ClusterId	String	C-D7958B72E59B****	The ID of the cluster.
RequestId	String	BF4FBAC6-B03E-4BFB-B6DB-EB53C34F2E22	The ID of the request.

Examples

Sample requests

```
http(s)://[Endpoint]/?Action=ResizeClusterV2
&ClusterId=C-D7958B72E59B****
&HostGroup.1.HostGroupType=TASK
&HostGroup.1.InstanceType=ecs.mn4.2xlarge
&HostGroup.1.1odeCount=1
&RegionId=cn-hangzhou
&<Common request parameters>
```

Sample success responses

`XML` format

```
<ClusterId>C-D7958B72E59B****</ClusterId>
<RequestId>BF4FBAC6-B03E-4BFB-B6DB-EB53C34F2E22</RequestId>
```

`JSON` format

```
{
    "ClusterId": "C-D7958B72E59B****",
    "RequestId": "BF4FBAC6-B03E-4BFB-B6DB-EB53C34F2E22"
}
```

3.20. Add to a resource group

Call the JoinResourceGroup operation to add EMR-related resources to a resource group.

A resource is a cloud service entity that you create on Alibaba Cloud. E-MapReduce cloud resources that support resource groups are clusters and projects. When a cluster is added to a resource group, the ECS instances of each node in the cluster are added to the resource group to which the cluster belongs. A resource group is a collection of infrastructure for projects, environments, or stacks. In a resource group, you can manage resources and monitor and run tasks in a centralized manner without switching between Alibaba Cloud services.

Debugging

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

Request parameters

Parameter	Type	Required	Example	Description
Action	String	No	JoinResourceGroup	The operation that you want to perform. Set the value to JoinResourceGroup.
RegionId	String	Yes	cn-hangzhou	The region ID of the instance. You can call DescribeRegions You can call this operation to view the latest list of Alibaba Cloud regions.
ResourceGroupId	String	Yes	rg-bp67acfmxazb4p****	The ID of the resource group to which the snapshot belongs. You can call ListResourceGroups View the ID of the resource group.
ResourceId	String	Yes	C-3652B95F654AF*****	The ID of the resource. This parameter value depends on the ResourceType value. For example, if the ResourceType parameter is set to cluster, the ResourceId parameter can be interpreted as ClusterId.
ResourceType	String	Yes	cluster	The type of the EMR resource. Valid values: • cluster • flowproject: project

Response parameters

Parameter	Type	Example	Description

Parameter	Type	Example	Description
RequestId	String	473469C7-AA6F-4DC5-B3DB-A3DC0DE3C83E	The ID of the request. If the request is successful, the request ID is returned. If the request fails, the corresponding error code is returned.

Examples

Sample requests

```
http(s)://[Endpoint]/?Action=JoinResourceGroup
&RegionId=cn-hangzhou
&ResourceGroupId=rg-bp67acfmxazb4p****
&ResourceId=C-3652B95F654AF****
&ResourceType=cluster
&<common request parameters>
```

Sample success responses

`XML` format

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

`JSON` Syntax

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

3.21. Scale in a cluster

Removes host groups from a cluster.

Debugging

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

Request parameters

Parameter	Type	Required	Example	Description
Action	String	Yes	ReleaseClusterHostGroup	The operation that you want to perform. This parameter is required for API requests that you initiate by piecing together HTTP or HTTPS URLs. Set the value to ReleaseClusterHostGroup.

Parameter	Type	Required	Example	Description
ClusterId	String	Yes	C-D7958B72E59B****	The ID of the cluster. You can call the ListClusters to view the ID of the cluster.
HostGroupId	String	Yes	G-EF460256A55F****	The ID of the host group. You can call the ListClusterHostGroup to view the machine group ID.
RegionId	String	Yes	cn-hangzhou	The region ID of the security group. You can call the DescribeRegions operation to query the most recent region list.
InstanceIdList	String	No	["i-bp1bm7y86rscdx1a****"]	The ID of ECS instance N.
ReleaseNumber	Integer	No	2	The number of scales in.
EnableGracefulDecommission	Boolean	No	true	Whether to enable YARN graceful offline: • true: no. • false: Yes. <note> This feature is enabled only for the TASK node group of the HADOOP cluster. </note>
DecommissionTimeout	Integer	No	3600	The timeout period for graceful unpublishing. Unit: seconds. Valid values: 0 to 3600.

Response parameters

Parameter	Type	Example	Description
RequestId	String	991B3409-6C8D-48CB-903C-3B9C166E17A8	The ID of the request.

Example

Sample request

```
http(s)://[Endpoint]/?Action=ReleaseClusterHostGroup
&ClusterId=C-D7958B72E59B****
&HostGroupId=G-EF460256A55F****
&RegionId=cn-hangzhou
&<Common request parameters>
```

Sample success responses

`XML` format

```
<RequestId>991B3409-6C8D-48CB-903C-3B9C166E17A8</RequestId>
```

`JSON` format

```
{
    "RequestId":"991B3409-6C8D-48CB-903C-3B9C166E17A8"
    }
```

4.Cluster service

4.1. Add a service

You can call the AddClusterService operation to add a service that is supported by the current EMR version to a specified cluster.

Debugging

OpenAPI Explorer automatically calculates the signature value. For your convenience, we recommend that you call this operation in OpenAPI Explorer. You can use OpenAPI Explorer to search for API operations, call API operations, and dynamically generate SDK sample code.

Request parameters

Parameter	Type	Required	Example	Description
Action	String	Yes	AddClusterServic e	The operation that you want to perform. Set the value to AddClusterService.
ClusterId	String	Yes	C-F32FB31D8295*** *	The ID of the cluster to which you want to add the service.
RegionId	String	Yes	cn-hangzhou	The ID of the region where your cluster resides.
Service.N.Service Name	String	Yes	HDFS	The name of the service to be added, such as HDFS and YARN.
Comment	String	No	addService	The comment for the service you want to add.

Response parameters

Parameter	Type	Example	Description
RequestId	String	EBB4D49C-4064-4818-B3AE-4C6BE5FC8264	The ID of the request.

Examples

Sample requests

```
http(s)://[Endpoint]/?Action=AddClusterService
&ClusterId=C-F32FB31D82954C64
&RegionId=cn-hangzhou
&Service.1.ServiceName=HDFS
&<common request parameters>
```

Sample success responses

`XML` format

```
<AddClusterServiceResponse>
      <requestId>EBB4D49C-4064-4818-B3AE-4C6BE5FC8264</requestId>
</AddClusterServiceResponse>
```

`JSON` Syntax

```
{
   "requestId":"EBB4D49C-4064-4818-B3AE-4C6BE5FC8264"
}
```

4.2. View cluster operation logs

Queries the operations logs of a specified task on a specified host of a cluster.

Debugging

OpenAPI Explorer automatically calculates the signature value. For your convenience, we recommend that you call this operation in OpenAPI Explorer. You can use OpenAPI Explorer to search for API operations, call API operations, and dynamically generate SDK sample code.

Request parameters

Parameter	Type	Required	Example	Description
Action	String	Yes	DescribeClusterOperationHostTaskLog	The operation that you want to perform. Set the value to DescribeClusterOperationHostTaskLog.
ClusterId	String	Yes	C-F32FB31D82954C64	The ID of the cluster. You can call ListClusters You can call this operation to view the ID of a cluster.
OperationId	String	Yes	11123	The ID of the historical operation. You can obtain this value by calling the ListClusterOperation operation.

Parameter	Type	Required	Example	Description
TaskId	String	Yes	1098803	The ID of the task to be queried. You can obtain this value by calling the ListClusterOperationHostTask operation.
RegionId	String	Yes	cn-hangzhou	The region ID of the instance. You can call DescribeRegions To view the latest list of Alibaba Cloud regions.
HostId	String	No	41008	The ID of the host that stores the logs to be queries. You can obtain this value by calling the ListClusterOperationHost operation.
Status	String	No	SUCCESS	The status of the task.

Response parameters

Parameter	Type	Example	Description
RequestId	String	4CD0BBA0-AC8A-4239-A219-953472BEB4F6	The unique ID of the request.
Stderr	String	2018-11-27 14:21:59== Tue, 27 Nov 2018 14:21:59 IlogtaildComponentOperator.py[line:140] INFO ilogtail has been started, return	Of the task **stderr** The content of the log entry.

Parameter	Type	Example	Description
Stdout	String	2018-11-27 14:21:59== touch -c /var/lib/ecm-agent/cache/ecm/service/ILOGTAIL/1.0.0.0.1-df/package/scripts/IlogtaildComponentOperator.py touch -c /var/lib/ecm-agent/cache/ecm/service/ILOGTAIL/1.0.0.0.1-df/package/scripts/IlogtaildConfigService.py root 2844 0.0 0.0 49244 2380 ? Ss 14:20 0:00 /usr/local/ilogtail/ilogtail root 2846 0.5 0.2 231416 18352 ? Sl 14:20 0:00 /usr/local/ilogtail/ilogtail Command completed successfully!	Of the task **stdout** The content of the log entry.

Examples

Sample requests

```
http(s)://[Endpoint]/?Action=DescribeClusterOperationHostTaskLog
&ClusterId=C-F32FB31D82954C64
&HostId=41008
&OperationId=11123
&TaskId=1098803
&RegionId=cn-hangzhou
&<common request parameters>
```

Sample success responses

`XML` format

```
<requestId>xxx</requestId>
<stderr>2018-11-27 14:21:59==================================================================
========================================== Tue, 27 Nov 2018 14:21:59 IlogtaildComponentOper
ator.py[line:140] INFO ilogtail has been started, return</stderr>
<stdout>2018-11-27 14:21:59==================================================================
========================================== touch -c /var/lib/ecm-agent/cache/ecm/service/IL
OGTAIL/1.0.0.0.1-df/package/scripts/IlogtaildComponentOperator.py touch -c /var/lib/ecm-age
nt/cache/ecm/service/ILOGTAIL/1.0.0.0.1-df/package/scripts/IlogtaildConfigService.py root 2
844 0.0 0.0 49244 2380 ? Ss 14:20 0:00 /usr/local/ilogtail/ilogtail root 2846 0.5 0.2 23141
6 18352 ? Sl 14:20 0:00 /usr/local/ilogtail/ilogtail   Command completed successfully!</std
out>
```

JSON Syntax

```
{"requestId":"xxx",
"stderr":"2018-11-27 14:21:59==================================================================
========================================== Tue, 27 Nov 2018 14:21:59 IlogtaildComponentOp
erator.py[line:140] INFO ilogtail has been started, return",
"stdout":"2018-11-27 14:21:59==================================================================
========================================== touch -c /var/lib/ecm-agent/cache/ecm/service/
ILOGTAIL/1.0.0.0.1-df/package/scripts/IlogtaildComponentOperator.py touch -c /var/lib/ecm-a
gent/cache/ecm/service/ILOGTAIL/1.0.0.0.1-df/package/scripts/IlogtaildConfigService.py root
2844 0.0 0.0 49244 2380 ? Ss 14:20 0:00 /usr/local/ilogtail/ilogtail root 2846 0.5 0.2 2314
16 18352 ? Sl 14:20 0:00 /usr/local/ilogtail/ilogtail   Command completed successfully!"}
```

4.3. Query Service information

You can call DescribeClusterService operation to query the details of a service in a cluster.

Debugging

OpenAPI Explorer automatically calculates the signature value. For your convenience, we recommend that you call this operation in OpenAPI Explorer. You can use OpenAPI Explorer to search for API operations, call API operations, and dynamically generate SDK sample code.

Request parameters

Parameter	Type	Required	Example	Description
Action	String	Yes	DescribeClusterService	The operation that you want to perform. Set the value to DescribeClusterService.
ClusterId	String	Yes	C-F32FB31D8295****	The ID of the cluster. You can call ListClusters You can call this operation to view the ID of a cluster.

Parameter	Type	Required	Example	Description
RegionId	String	Yes	cn-hangzhou	The region ID of the instance. You can call DescribeRegions To view the latest list of Alibaba Cloud regions.
ServiceName	String	Yes	HDFS	The name of the service to be queried. Example: HDFS or YARN.

Response parameters

Parameter	Type	Example	Description
RequestId	String	EBB4D49C-4064-4818-B3AE-4C6BE5FC8264	The ID of the request.
ServiceInfo	Struct		The information of the service in the cluster.
ClusterServiceSummaryList	Array of ClusterServiceSummary		The information about components of the service.
ClusterServiceSummary			
AlertInfo	String	""	The warning message for the component.
Category	String	MASTER	The type of the component. Valid values: Client, MASTER, and SLAVE.
DesiredStoppedValue	Integer	1	The number of hosts on which the installed component is expected to stop running.
DisplayName	String	NodeManager	The display name of the component.
Key	String	NodeManager	The component key. It specifies the name of the component.
Status	String	OK	The status of the component.
Type	String	COMPONENT	The type of the component.

Parameter	Type	Example	Description
Value	String	20/20 Started	The status of the component on the hosts where it is installed.
NeedRestartComponentNameList	List	["NodeManager","ResourceManager"]	The name of a component to be restarted.
NeedRestartHostIdList	List	["HostId1"]	The ID of a host in the cluster where the components to be restarted are located.
NeedRestartInfo	String	""	The information of the components to be restarted for the current service.
NeedRestartNum	Integer	0	The number of components to be restarted for the current service.
ServiceActionList	Array of ServiceAction		The list of actions that the service supports.
ServiceAction			
ActionName	String	CUSTOM_COMMAND	The name of the action.
Command	String	refreshQueues	ActionName is **CUSTOM_COMMAND** When, there will be corresponding **Command** DMS console as an administrator. Different services support different **Command** , currently supported by YARN **refreshQueues** , **enableCGroups** and **disableCGroups** DMS console as an administrator.
ComponentName	String	NodeManager	The name of the component on which the action is performed.
DisplayName	String	RESTART NodeManager	The display name of the action.
ServiceName	String	YARN	The name of the service.
ServiceName	String	YARN	The name of the service.

Parameter	Type	Example	Description
ServiceStatus	String	INSTALLED	The status of the service.
ServiceVersion	String	2.7.2	The version of the service.

Examples

Sample requests

```
http(s)://[Endpoint]/?Action=DescribeClusterService
&ClusterId=C-F32FB31D8295****
&RegionId=cn-hangzhou
&ServiceName=HDFS
&<common request parameters>
```

Sample success responses

`XML` format

```
<DescribeClusterServiceResponse>
      <data>
            <RequestId>7A23195A-BC03-4D82-BED5-90ED0D36F002</RequestId>
            <ServiceInfo>
                  <NeedRestartHostIdList></NeedRestartHostIdList>
                  <ServiceActionList>
                        <ServiceAction>
                              <ActionName>CONFIGURE</ActionName>
                              <ServiceName>YARN</ServiceName>
                              <DisplayName>CONFIGURE All Components</DisplayName>
                              <ComponentName>ALL COMPONENTS</ComponentName>
                        </ServiceAction>
                        <ServiceAction>
                              <ActionName>START</ActionName>
                              <ServiceName>YARN</ServiceName>
                              <DisplayName>START All Components</DisplayName>
                              <ComponentName>ALL COMPONENTS</ComponentName>
                        </ServiceAction>
                        <ServiceAction>
                              <ActionName>STOP</ActionName>
                              <ServiceName>YARN</ServiceName>
                              <DisplayName>STOP All Components</DisplayName>
                              <ComponentName>ALL COMPONENTS</ComponentName>
                        </ServiceAction>
                        <ServiceAction>
                              <ActionName>RESTART</ActionName>
                              <ServiceName>YARN</ServiceName>
                              <DisplayName>RESTART All Components</DisplayName>
                              <ComponentName>ALL COMPONENTS</ComponentName>
                        </ServiceAction>
                        <ServiceAction>
                              <ActionName>RESTART</ActionName>
```

```
                <ServiceName>YARN</ServiceName>
                <DisplayName>RESTART NodeManager</DisplayName>
                <ComponentName>NodeManager</ComponentName>
            </ServiceAction>
            <ServiceAction>
                <ActionName>RESTART</ActionName>
                <ServiceName>YARN</ServiceName>
                <DisplayName>RESTART WebAppProxyServer</DisplayName>
                <ComponentName>WebAppProxyServer</ComponentName>
            </ServiceAction>
            <ServiceAction>
                <ActionName>RESTART</ActionName>
                <ServiceName>YARN</ServiceName>
                <DisplayName>RESTART JobHistory</DisplayName>
                <ComponentName>JobHistory</ComponentName>
            </ServiceAction>
            <ServiceAction>
                <ActionName>RESTART</ActionName>
                <ServiceName>YARN</ServiceName>
                <DisplayName>RESTART ResourceManager</DisplayName>
                <ComponentName>ResourceManager</ComponentName>
            </ServiceAction>
            <ServiceAction>
                <ActionName>RESTART</ActionName>
                <ServiceName>YARN</ServiceName>
                <DisplayName>RESTART App Timeline Server</DisplayName>
                <ComponentName>TimeLineServer</ComponentName>
            </ServiceAction>
            <ServiceAction>
                <Command>refreshQueues</Command>
                <ActionName>CUSTOM_COMMAND</ActionName>
                <ServiceName>YARN</ServiceName>
                <DisplayName>Refresh Queues</DisplayName>
                <ComponentName>ResourceManager</ComponentName>
            </ServiceAction>
            <ServiceAction>
                <Command>enableCGroups</Command>
                <ActionName>CUSTOM_COMMAND</ActionName>
                <ServiceName>YARN</ServiceName>
                <DisplayName>Enable CGroups</DisplayName>
                <ComponentName>NodeManager</ComponentName>
            </ServiceAction>
            <ServiceAction>
                <Command>disableCGroups</Command>
                <ActionName>CUSTOM_COMMAND</ActionName>
                <ServiceName>YARN</ServiceName>
                <DisplayName>Disable CGroups</DisplayName>
                <ComponentName>NodeManager</ComponentName>
            </ServiceAction>
        </ServiceActionList>
        <ServiceName>YARN</ServiceName>
        <NeedRestartInfo></NeedRestartInfo>
        <NeedRestartNum>0</NeedRestartNum>
        <ClusterServiceSummaryList>
```

```
                        <ClusterServiceSummary>
                              <Status>OK</Status>
                              <Value>20/20 Started</Value>
                              <Key>NodeManager</Key>
                              <Type>COMPONENT</Type>
                              <DisplayName>NodeManager</DisplayName>
                              <AlertInfo></AlertInfo>
                        </ClusterServiceSummary>
                        <ClusterServiceSummary>
                              <Status>OK</Status>
                              <Value>1/1 Started</Value>
                              <Key>JobHistory</Key>
                              <Type>COMPONENT</Type>
                              <DisplayName>JobHistory</DisplayName>
                              <AlertInfo></AlertInfo>
                        </ClusterServiceSummary>
                        <ClusterServiceSummary>
                              <Status>OK</Status>
                              <Value>22/22 Installed</Value>
                              <Key>YarnInit</Key>
                              <Type>COMPONENT</Type>
                              <DisplayName>Yarn Client</DisplayName>
                              <AlertInfo></AlertInfo>
                        </ClusterServiceSummary>
                        <ClusterServiceSummary>
                              <Status>OK</Status>
                              <Value>1/1 Started</Value>
                              <Key>TimeLineServer</Key>
                              <Type>COMPONENT</Type>
                              <DisplayName>App Timeline Server</DisplayName>
                              <AlertInfo></AlertInfo>
                        </ClusterServiceSummary>
                        <ClusterServiceSummary>
                              <Status>OK</Status>
                              <Value>1/1 Started</Value>
                              <Key>WebAppProxyServer</Key>
                              <Type>COMPONENT</Type>
                              <DisplayName>WebAppProxyServer</DisplayName>
                              <AlertInfo></AlertInfo>
                        </ClusterServiceSummary>
                        <ClusterServiceSummary>
                              <Status>OK</Status>
                              <Value>2/2 Started</Value>
                              <Key>ResourceManager</Key>
                              <Type>COMPONENT</Type>
                              <DisplayName>ResourceManager</DisplayName>
                              <AlertInfo></AlertInfo>
                        </ClusterServiceSummary>
                  </ClusterServiceSummaryList>
                  <ServiceVersion>2.7.2-1.3.1</ServiceVersion>
                  <NeedRestartComponentNameList></NeedRestartComponentNameList>
                  <ServiceStatus>INSTALLING</ServiceStatus>
            </ServiceInfo>
      </data>
```

```
    <requestId>7A23195A-BC03-4D82-BED5-90ED0D36F002</requestId>
</DescribeClusterServiceResponse>
```

JSON Syntax

```
{
    "data": {
        "RequestId": "7A23195A-BC03-4D82-BED5-90ED0D36F002",
        "ServiceInfo": {
            "NeedRestartHostIdList": {
                "Service": []
            },
            "ServiceActionList": {
                "ServiceAction": [
                    {
                        "ActionName": "CONFIGURE",
                        "ServiceName": "YARN",
                        "DisplayName": "CONFIGURE All Components",
                        "ComponentName": "ALL COMPONENTS"
                    },
                    {
                        "ActionName": "START",
                        "ServiceName": "YARN",
                        "DisplayName": "START All Components",
                        "ComponentName": "ALL COMPONENTS"
                    },
                    {
                        "ActionName": "STOP",
                        "ServiceName": "YARN",
                        "DisplayName": "STOP All Components",
                        "ComponentName": "ALL COMPONENTS"
                    },
                    {
                        "ActionName": "RESTART",
                        "ServiceName": "YARN",
                        "DisplayName": "RESTART All Components",
                        "ComponentName": "ALL COMPONENTS"
                    },
                    {
                        "ActionName": "RESTART",
                        "ServiceName": "YARN",
                        "DisplayName": "RESTART NodeManager",
                        "ComponentName": "NodeManager"
                    },
                    {
                        "ActionName": "RESTART",
                        "ServiceName": "YARN",
                        "DisplayName": "RESTART WebAppProxyServer",
                        "ComponentName": "WebAppProxyServer"
                    },
                    {
                        "ActionName": "RESTART",
                        "ServiceName": "YARN",
                        "DisplayName": "RESTART JobHistory",
```

```
                "ComponentName": "JobHistory"
            },
            {
                "ActionName": "RESTART",
                "ServiceName": "YARN",
                "DisplayName": "RESTART ResourceManager",
                "ComponentName": "ResourceManager"
            },
            {
                "ActionName": "RESTART",
                "ServiceName": "YARN",
                "DisplayName": "RESTART App Timeline Server",
                "ComponentName": "TimeLineServer"
            },
            {
                "Command": "refreshQueues",
                "ActionName": "CUSTOM_COMMAND",
                "ServiceName": "YARN",
                "DisplayName": "Refresh Queues",
                "ComponentName": "ResourceManager"
            },
            {
                "Command": "enableCGroups",
                "ActionName": "CUSTOM_COMMAND",
                "ServiceName": "YARN",
                "DisplayName": "Enable CGroups",
                "ComponentName": "NodeManager"
            },
            {
                "Command": "disableCGroups",
                "ActionName": "CUSTOM_COMMAND",
                "ServiceName": "YARN",
                "DisplayName": "Disable CGroups",
                "ComponentName": "NodeManager"
            }
        ]
    },
    "ServiceName": "YARN",
    "NeedRestartInfo": "",
    "NeedRestartNum": 0,
    "ClusterServiceSummaryList": {
        "ClusterServiceSummary": [
            {
                "Status": "OK",
                "Value": "20/20 Started",
                "Key": "NodeManager",
                "Type": "COMPONENT",
                "DisplayName": "NodeManager",
                "AlertInfo": ""
            },
            {
                "Status": "OK",
                "Value": "1/1 Started",
                "Key": "JobHistory",
```

```
                        "Type": "COMPONENT",
                        "DisplayName": "JobHistory",
                        "AlertInfo": ""
                    },
                    {
                        "Status": "OK",
                        "Value": "22/22 Installed",
                        "Key": "YarnInit",
                        "Type": "COMPONENT",
                        "DisplayName": "Yarn Client",
                        "AlertInfo": ""
                    },
                    {
                        "Status": "OK",
                        "Value": "1/1 Started",
                        "Key": "TimeLineServer",
                        "Type": "COMPONENT",
                        "DisplayName": "App Timeline Server",
                        "AlertInfo": ""
                    },
                    {
                        "Status": "OK",
                        "Value": "1/1 Started",
                        "Key": "WebAppProxyServer",
                        "Type": "COMPONENT",
                        "DisplayName": "WebAppProxyServer",
                        "AlertInfo": ""
                    },
                    {
                        "Status": "OK",
                        "Value": "2/2 Started",
                        "Key": "ResourceManager",
                        "Type": "COMPONENT",
                        "DisplayName": "ResourceManager",
                        "AlertInfo": ""
                    }
                ]
            },
            "ServiceVersion": "2.7.2-1.3.1",
            "NeedRestartComponentNameList": {
                "Service": []
            },
            "ServiceStatus": "INSTALLING"
        }
    },
    "requestId": "7A23195A-BC03-4D82-BED5-90ED0D36F002"
}
```


4.4. Query Service configuration details

You can call DescribeClusterServiceConfig operation to query the configuration details of a specified service in a cluster.

Debugging

OpenAPI Explorer automatically calculates the signature value. For your convenience, we recommend that you call this operation in OpenAPI Explorer. You can use OpenAPI Explorer to search for API operations, call API operations, and dynamically generate SDK sample code.

Request parameters

Parameter	Type	Required	Example	Description
Action	String	Yes	DescribeClusterServiceConfig	The operation that you want to perform. This parameter is required for API requests that you create by piecing together HTTP or HTTPS URLs. Set the value to DescribeClusterServiceConfig.
RegionId	String	Yes	cn-hangzhou	The region ID of the instance. You can call DescribeRegions To view the latest list of Alibaba Cloud regions.
ClusterId	String	Yes	C-F32FB31D8295****	The ID of the cluster. You can call ListClusters You can call this operation to view the ID of a cluster.
ServiceName	String	No	TEZ	The name of the service. You can call ListClusterService View data on the Member Management page.
ConfigVersion	String	No	0	The configured version information. You can use **DescribeClusterServiceConfigHistory** Interface to get.
GroupId	String	No	0	The ID of the configuration group.
HostInstanceId	String	No	ecsId	The instanceId information of the host, which usually corresponds to the ecsId information.
TagValue	String	No	tez-site	The tag information of the configuration to be queried. You can use the **DescribeClusterServiceConfigTag** Interface to get.

Response parameters

Parameter	Type	Example	Description
Config	Struct		The description of the configuration.
Applied	String	true	Indicates whether the configuration takes effect.
Author	String	111	The user who modified the configuration.
Comment	String	""	The description of the coupon.
ConfigValueList	Array of ConfigValue		The list of configuration files for the service.
ConfigValue			
AllowCustom	Boolean	true	Indicates whether the current configuration file can contain custom configuration items.
ConfigItemValueList	Array of ConfigItemValue		The list of key-value pairs for the configuration item.
ConfigItemValue			
Description	String	""	The description of the configuration item.
IsCustom	Boolean	false	Indicates whether the configuration item is a custom configuration item.
ItemName	String	tez.history.logging.service.class	The name of the configuration item.
Value	String	org.apache.tez.dag.history.logging.ats.ATSHistoryLoggingService	The value of the configuration item.
ConfigName	String	tez-site	The name of the configuration file.
Scope	String	None	A reserved parameter.
ScopeId	Long	0	A reserved parameter.

Parameter	Type	Example	Description
ConfigVersion	String	0	The version of the configuration file.
CreateTime	String	1543312717000	The time when the configuration file was created.
PropertyInfoList	Array of PropertyInfo		The list of the property information for the configuration item.
PropertyInfo			
Component	String	""	The name of the component.
Description	String	""	The description of the configuration item.
DisplayName	String	tez-site	The display name.
EffectWay	Struct		A reserved parameter.
EffectType	String	""	A reserved parameter.
InvokeServiceName	String	""	A reserved parameter.
FileName	String	tez-site	The name of the configuration file.
Name	String	tez.lib.uris	The name of the configuration item.
PropertyTypes	List	["MEMORY"]	The property type of the configuration item.
PropertyValueAttributes	Struct		The property of the configuration item value.
Entries	Array of ValueEntryInfo		A reserved parameter.
ValueEntryInfo			
Description	String	""	A reserved parameter.

Parameter	Type	Example	Description
Label	String	""	A reserved parameter.
Value	String	""	A reserved parameter.
Hidden	Boolean	true	Indicates whether the configuration item is displayed.
IncrememtStep	String	10	The increment step size of configuration item values.
Maximum	String	10000	The maximum value of the configuration item.
Mimimum	String	10	The minimum value of the configuration item.
ReadOnly	Boolean	true	Indicates whether the configuration item is read-only and cannot be modified.
Type	String	""	A reserved parameter that does not take effect currently.
Unit	String	MB	The unit for the value of the configuration item.
ServiceName	String	TEZ	The name of the service.
Value	String	${fs.defaultFS}/apps/tez-0.9.1-1.0.2/,${fs.defaultFS}/apps/tez-0.9.1-1.0.2/lib/	The value template or example of the configuration item.
ServiceName	String	TEZ	The name of the service.
RequestId	String	094585B2-13AF-4780-96B3-C8E925418B5D	The ID of the request.

Examples

Sample requests

```
http(s)://[Endpoint]/?Action=DescribeClusterServiceConfig
&RegionId=cn-hangzhou
&ClusterId=C-F32FB31D8295****
&<common request parameters>
```

Sample success responses

`XML` format

```
<RequestId>094585B2-13AF-4780-96B3-C8E925418B5D</RequestId>
<Config>
    <Comment/>
    <ServiceName>TEZ</ServiceName>
    <PropertyInfoList>
        <PropertyInfo>
            <PropertyTypes>
            </PropertyTypes>
            <Description/>
            <PropertyValueAttributes>
                <ReadOnly>false</ReadOnly>
                <Type/>
                <Maximum>2147483647</Maximum>
                <Mimimum/>
                <Hidden>false</Hidden>
                <IncrememtStep/>
                <Entries>
                </Entries>
                <Unit/>
            </PropertyValueAttributes>
            <ServiceName>TEZ</ServiceName>
            <EffectWay/>
            <FileName>tez-site</FileName>
            <Value>${fs.defaultFS}/apps/tez-0.9.1-1.0.2/,${fs.defaultFS}/apps/tez-0.9.1-1.0
.2/lib/</Value>
            <DisplayName/>
            <Name>tez.lib.uris</Name>
        </PropertyInfo>
        <PropertyInfo>
            <PropertyTypes>
            </PropertyTypes>
            <Description/>
            <PropertyValueAttributes>
                <ReadOnly>false</ReadOnly>
                <Type/>
                <Maximum>2147483647</Maximum>
                <Mimimum/>
                <Hidden>false</Hidden>
                <IncrememtStep/>
                <Entries>
                </Entries>
                <Unit/>
            </PropertyValueAttributes>
            <ServiceName>TEZ</ServiceName>
            <EffectWay/>
```

```
            <FileName>tez-site</FileName>
            <Value>/tmp/tez/staging</Value>
            <DisplayName/>
            <Name>tez.staging-dir</Name>
        </PropertyInfo>
        <PropertyInfo>
            <PropertyTypes>
                <propertyType>MEMORY</propertyType>
            </PropertyTypes>
            <Description/>
            <PropertyValueAttributes>
                <ReadOnly>false</ReadOnly>
                <Type/>
                <Maximum>2147483647</Maximum>
                <Mimimum/>
                <Hidden>false</Hidden>
                <IncrememtStep/>
                <Entries>
                </Entries>
                <Unit/>
            </PropertyValueAttributes>
            <ServiceName>TEZ</ServiceName>
            <EffectWay/>
            <FileName>tez-site</FileName>
            <Value>#yarn_app_mapreduce_am_resource_mb#</Value>
            <DisplayName/>
            <Name>tez.am.resource.memory.mb</Name>
        </PropertyInfo>
        <PropertyInfo>
            <PropertyTypes>
                <propertyType>MEMORY</propertyType>
            </PropertyTypes>
            <Description/>
            <PropertyValueAttributes>
                <ReadOnly>false</ReadOnly>
                <Type/>
                <Maximum>2147483647</Maximum>
                <Mimimum/>
                <Hidden>false</Hidden>
                <IncrememtStep/>
                <Entries>
                </Entries>
                <Unit/>
            </PropertyValueAttributes>
            <ServiceName>TEZ</ServiceName>
            <EffectWay/>
            <FileName>tez-site</FileName>
            <Value>0.8</Value>
            <DisplayName/>
            <Name>tez.container.max.java.heap.fraction</Name>
        </PropertyInfo>
        <PropertyInfo>
            <PropertyTypes>
            </PropertyTypes>
```

```
            <Description/>
            <PropertyValueAttributes>
                <ReadOnly>false</ReadOnly>
                <Type/>
                <Maximum>2147483647</Maximum>
                <Mimimum/>
                <Hidden>false</Hidden>
                <IncrememtStep/>
                <Entries>
                </Entries>
                <Unit/>
            </PropertyValueAttributes>
            <ServiceName>TEZ</ServiceName>
            <EffectWay/>
            <FileName>tez-site</FileName>
            <Value>org.apache.tez.dag.history.logging.ats.ATSHistoryLoggingService</Value>
            <DisplayName/>
            <Name>tez.history.logging.service.class</Name>
        </PropertyInfo>
        <PropertyInfo>
            <PropertyTypes>
            </PropertyTypes>
            <Description>Publish configuration information to Timeline server.</Description
>
            <PropertyValueAttributes>
                <ReadOnly>false</ReadOnly>
                <Type/>
                <Maximum>2147483647</Maximum>
                <Mimimum/>
                <Hidden>false</Hidden>
                <IncrememtStep/>
                <Entries>
                </Entries>
                <Unit/>
            </PropertyValueAttributes>
            <ServiceName>TEZ</ServiceName>
            <EffectWay/>
            <FileName>tez-site</FileName>
            <Value>true</Value>
            <DisplayName/>
            <Name>tez.runtime.convert.user-payload.to.history-text</Name>
        </PropertyInfo>
        <PropertyInfo>
            <PropertyTypes>
            </PropertyTypes>
            <Description/>
            <PropertyValueAttributes>
                <ReadOnly>false</ReadOnly>
                <Type/>
                <Maximum>2147483647</Maximum>
                <Mimimum/>
                <Hidden>false</Hidden>
                <IncrememtStep/>
                <Entries>
```

```
                </Entries>
                <Unit/>
            </PropertyValueAttributes>
            <ServiceName>TEZ</ServiceName>
            <EffectWay/>
            <FileName>tez-site</FileName>
            <Value>http://emr-header-1:8090/tez-ui2/</Value>
            <DisplayName/>
            <Name>tez.tez-ui.history-url.base</Name>
        </PropertyInfo>
        <PropertyInfo>
            <PropertyTypes>
            </PropertyTypes>
            <Description/>
            <PropertyValueAttributes>
                <ReadOnly>false</ReadOnly>
                <Type/>
                <Maximum>2147483647</Maximum>
                <Mimimum/>
                <Hidden>false</Hidden>
                <IncrememtStep/>
                <Entries>
                </Entries>
                <Unit/>
            </PropertyValueAttributes>
            <ServiceName>TEZ</ServiceName>
            <EffectWay/>
            <FileName>tez-site</FileName>
            <Value>-Xmx512m</Value>
            <DisplayName>tez.am.java.opts</DisplayName>
            <Name>tez.am.java.opts</Name>
        </PropertyInfo>
        <PropertyInfo>
            <PropertyTypes>
            </PropertyTypes>
            <Description/>
            <PropertyValueAttributes>
                <ReadOnly>false</ReadOnly>
                <Type/>
                <Maximum>2147483647</Maximum>
                <Mimimum/>
                <Hidden>false</Hidden>
                <IncrememtStep/>
                <Entries>
                </Entries>
                <Unit/>
            </PropertyValueAttributes>
            <ServiceName>TEZ</ServiceName>
            <EffectWay/>
            <FileName>user_params</FileName>
            <Value>512</Value>
            <DisplayName>tomcat_heapsize</DisplayName>
            <Name>tomcat_heapsize</Name>
        </PropertyInfo>
```

```
        <PropertyInfo>
            <PropertyTypes>
            </PropertyTypes>
            <Description/>
            <PropertyValueAttributes>
                <ReadOnly>false</ReadOnly>
                <Type/>
                <Maximum>2147483647</Maximum>
                <Mimimum/>
                <Hidden>false</Hidden>
                <IncrememtStep/>
                <Entries>
                </Entries>
                <Unit/>
            </PropertyValueAttributes>
            <ServiceName>TEZ</ServiceName>
            <EffectWay/>
            <FileName>user_params</FileName>
            <Value>emr-header-1</Value>
            <DisplayName>do_init_host</DisplayName>
            <Name>do_init_host</Name>
        </PropertyInfo>
    </PropertyInfoList>
    <ConfigVersion>0</ConfigVersion>
    <CreateTime>1543312717000</CreateTime>
    <Author>1250460021754461</Author>
    <Applied>true</Applied>
    <ConfigValueList>
        <ConfigValue>
            <ConfigName>tez-site</ConfigName>
            <AllowCustom>true</AllowCustom>
            <ConfigItemValueList>
                <ConfigItemValue>
                    <Value>org.apache.tez.dag.history.logging.ats.ATSHistoryLoggingService<
/Value>
                    <ItemName>tez.history.logging.service.class</ItemName>
                </ConfigItemValue>
                <ConfigItemValue>
                    <Value>true</Value>
                    <ItemName>tez.runtime.convert.user-payload.to.history-text</ItemName>
                </ConfigItemValue>
                <ConfigItemValue>
                    <Value>640</Value>
                    <ItemName>tez.am.resource.memory.mb</ItemName>
                </ConfigItemValue>
                <ConfigItemValue>
                    <Value>http://emr-header-1:8090/tez-ui2/</Value>
                    <ItemName>tez.tez-ui.history-url.base</ItemName>
                </ConfigItemValue>
                <ConfigItemValue>
                    <Value>${fs.defaultFS}/apps/tez-0.9.1-1.0.2/,${fs.defaultFS}/apps/tez-0
.9.1-1.0.2/lib/</Value>
                    <ItemName>tez.lib.uris</ItemName>
                </ConfigItemValue>
                <ConfigItemValue>
```

```
                <ConfigItemValue>
                    <Value>0.8</Value>
                    <ItemName>tez.container.max.java.heap.fraction</ItemName>
                </ConfigItemValue>
                <ConfigItemValue>
                    <Value>-Xmx512m</Value>
                    <ItemName>tez.am.java.opts</ItemName>
                </ConfigItemValue>
                <ConfigItemValue>
                    <Value>/tmp/tez/staging</Value>
                    <ItemName>tez.staging-dir</ItemName>
                </ConfigItemValue>
            </ConfigItemValueList>
        </ConfigValue>
    </ConfigValueList>
</Config>
```

JSON Syntax


```
{"RequestId":"094585B2-13AF-4780-96B3-C8E925418B5D","Config":{"Comment":"","ServiceNam
e":"TEZ","PropertyInfoList":{"PropertyInfo":[{"PropertyTypes":{"propertyType":[]},"Descript
ion":"","PropertyValueAttributes":{"ReadOnly":false,"Type":"","Maximum":"2147483647","Mimim
um":"","Hidden":false,"IncrememtStep":"","Entries":{"ValueEntryInfo":[]},"Unit":""},"Servic
eName":"TEZ","EffectWay":{},"FileName":"tez-site","Value":"${fs.defaultFS}/apps/tez-0.9.1-1
.0.2/,${fs.defaultFS}/apps/tez-0.9.1-1.0.2/lib/","DisplayName":"","Name":"tez.lib.uris"},{"
PropertyTypes":{"propertyType":[]},"Description":"","PropertyValueAttributes":{"ReadOnly":f
alse,"Type":"","Maximum":"2147483647","Mimimum":"","Hidden":false,"IncrememtStep":"","Entri
es":{"ValueEntryInfo":[]},"Unit":""},"ServiceName":"TEZ","EffectWay":{},"FileName":"tez-sit
e","Value":"/tmp/tez/staging","DisplayName":"","Name":"tez.staging-dir"},{"PropertyTypes":{
"propertyType":["MEMORY"]},"Description":"","PropertyValueAttributes":{"ReadOnly":false,"Ty
pe":"","Maximum":"2147483647","Mimimum":"","Hidden":false,"IncrememtStep":"","Entries":{"Va
lueEntryInfo":[]},"Unit":""},"ServiceName":"TEZ","EffectWay":{},"FileName":"tez-site","Valu
e":"#yarn_app_mapreduce_am_resource_mb#","DisplayName":"","Name":"tez.am.resource.memory.mb
"},{"PropertyTypes":{"propertyType":["MEMORY"]},"Description":"","PropertyValueAttributes":
{"ReadOnly":false,"Type":"","Maximum":"2147483647","Mimimum":"","Hidden":false,"IncrememtSt
ep":"","Entries":{"ValueEntryInfo":[]},"Unit":""},"ServiceName":"TEZ","EffectWay":{},"FileN
ame":"tez-site","Value":"0.8","DisplayName":"","Name":"tez.container.max.java.heap.fraction
"},{"PropertyTypes":{"propertyType":[]},"Description":"","PropertyValueAttributes":{"ReadOn
ly":false,"Type":"","Maximum":"2147483647","Mimimum":"","Hidden":false,"IncrememtStep":"","
Entries":{"ValueEntryInfo":[]},"Unit":""},"ServiceName":"TEZ","EffectWay":{},"FileName":"te
z-site","Value":"org.apache.tez.dag.history.logging.ats.ATSHistoryLoggingService","DisplayN
ame":"","Name":"tez.history.logging.service.class"},{"PropertyTypes":{"propertyType":[]},"D
escription":"Publish configuration information to Timeline server.","PropertyValueAttribute
s":{"ReadOnly":false,"Type":"","Maximum":"2147483647","Mimimum":"","Hidden":false,"Incremem
tStep":"","Entries":{"ValueEntryInfo":[]},"Unit":""},"ServiceName":"TEZ","EffectWay":{},"Fi
leName":"tez-site","Value":"true","DisplayName":"","Name":"tez.runtime.convert.user-payload
.to.history-text"},{"PropertyTypes":{"propertyType":[]},"Description":"","PropertyValueAttr
ibutes":{"ReadOnly":false,"Type":"","Maximum":"2147483647","Mimimum":"","Hidden":false,"Inc
rememtStep":"","Entries":{"ValueEntryInfo":[]},"Unit":""},"ServiceName":"TEZ","EffectWay":{
},"FileName":"tez-site","Value":"http://emr-header-1:8090/tez-ui2/","DisplayName":"","Name"
:"tez.tez-ui.history-url.base"},{"PropertyTypes":{"propertyType":[]},"Description":"","Prop
ertyValueAttributes":{"ReadOnly":false,"Type":"","Maximum":"2147483647","Mimimum":"","Hidde
n":false,"IncrememtStep":"","Entries":{"ValueEntryInfo":[]},"Unit":""},"ServiceName":"TEZ",
"EffectWay":{},"FileName":"tez-site","Value":"-Xmx512m","DisplayName":"tez.am.java.opts","N
```

```
ame":"tez.am.java.opts"},{"PropertyTypes":{"propertyType":[]},"Description":"","PropertyVal
ueAttributes":{"ReadOnly":false,"Type":"","Maximum":"2147483647","Mimimum":"","Hidden":fals
e,"IncrememtStep":"","Entries":{"ValueEntryInfo":[]},"Unit":""},"ServiceName":"TEZ","Effect
Way":{},"FileName":"user_params","Value":"512","DisplayName":"tomcat_heapsize","Name":"tomc
at_heapsize"},{"PropertyTypes":{"propertyType":[]},"Description":"","PropertyValueAttribute
s":{"ReadOnly":false,"Type":"","Maximum":"2147483647","Mimimum":"","Hidden":false,"Incremem
tStep":"","Entries":{"ValueEntryInfo":[]},"Unit":""},"ServiceName":"TEZ","EffectWay":{},"Fi
leName":"user_params","Value":"emr-header-1","DisplayName":"do_init_host","Name":"do_init_h
ost"}]},"ConfigVersion":"0","CreateTime":"1543312717000","Author":"1250460021754461","Appli
ed":true,"ConfigValueList":{"ConfigValue":[{"ConfigName":"tez-site","AllowCustom":true,"Con
figItemValueList":{"ConfigItemValue":[{"Value":"org.apache.tez.dag.history.logging.ats.ATSH
istoryLoggingService","ItemName":"tez.history.logging.service.class"},{"Value":"true","Item
Name":"tez.runtime.convert.user-payload.to.history-text"},{"Value":"640","ItemName":"tez.am
.resource.memory.mb"},{"Value":"http://emr-header-1:8090/tez-ui2/","ItemName":"tez.tez-ui.h
istory-url.base"},{"Value":"${fs.defaultFS}/apps/tez-0.9.1-1.0.2/,${fs.defaultFS}/apps/tez-
0.9.1-1.0.2/lib/","ItemName":"tez.lib.uris"},{"Value":"0.8","ItemName":"tez.container.max.j
ava.heap.fraction"},{"Value":"-Xmx512m","ItemName":"tez.am.java.opts"},{"Value":"/tmp/tez/s
taging","ItemName":"tez.staging-dir"}]}}]}}}
```


4.5. Queries the service configuration tags of a cluster

You can call DescribeClusterServiceConfigTag operation to query the list of configuration tag values for a specified service of a cluster. The responses that are returned can be used to filter configuration items.

Debugging

OpenAPI Explorer automatically calculates the signature value. For your convenience, we recommend that you call this operation in OpenAPI Explorer. You can use OpenAPI Explorer to search for API operations, call API operations, and dynamically generate SDK sample code.

Request parameters

Parameter	Type	Required	Example	Description
Action	String	Yes	DescribeClusterServiceConfigTag	The operation that you want to perform. Set the value to DescribeClusterServiceConfigTag.
ClusterId	String	Yes	C-F32FB31D8295****	The ID of the cluster. You can call ListClusters You can call this operation to view the ID of a cluster.
RegionId	String	Yes	cn-hangzhou	The region ID of the instance. You can call DescribeRegions To view the latest list of Alibaba Cloud regions.

Parameter	Type	Required	Example	Description
ServiceName	String	Yes	TEZ	The name of the service. You can call ListClusterService View data on the Member Management page.
ConfigTag	String	No	PROPERTY_TYPE	The type of the tag. Supported value: PROPERTY_TYPE.

Response parameters

Parameter	Type	Example	Description
ConfigTagList	Array of ConfigTag		The list of tag types configured for the cluster.
ConfigTag			
Tag	String	PROPERTY_TYPE	The type of the tag.
TagDesc	String	Configuration type	The description of the tag type.
ValueList	Array of Value		The information of a tag value.
Value			
Value	String	BASIC	The tag value.
ValueDesc	String	Basic Configurations	The description of the tag value.
RequestId	String	EBB4D49C-4064-4818-B3AE-4C6BE5FC8264	The ID of the request.

Examples

Sample requests

```
http(s)://[Endpoint]/?Action=DescribeClusterServiceConfigTag
&ClusterId=C-F32FB31D8295****
&RegionId=cn-hangzhou
&ServiceName=TEZ
&<common request parameters>
```

Sample success responses

`XML` format


```
<ConfigTagList>
    <ConfigTag>
        <ValueList>
            <Value>
                <ValueDesc>tez-site</ValueDesc>
                <Value>tez-site</Value>
            </Value>
        </ValueList>
        <TagDesc>Configuration type</TagDesc>
        <Tag>FILE_NAME</Tag>
    </ConfigTag>
    <ConfigTag>
        <ValueList>
            <Value>
                <ValueDesc>Basic Configurations</ValueDesc>
                <Value>BASIC</Value>
            </Value>
            <Value>
                <ValueDesc>Advanced configuration</ValueDesc>
                <Value>ADVANCED</Value>
            </Value>
            <Value>
                <ValueDesc>Read only configuration</ValueDesc>
                <Value>INFORMATION</Value>
            </Value>
            <Value>
                <ValueDesc>Data path</ValueDesc>
                <Value>DATA_PATH</Value>
            </Value>
            <Value>
                <ValueDesc>Log path</ValueDesc>
                <Value>LOG_PATH</Value>
            </Value>
            <Value>
                <ValueDesc>Log related</ValueDesc>
                <Value>LOG</Value>
            </Value>
            <Value>
                <ValueDesc>JVM related</ValueDesc>
                <Value>JVM</Value>
            </Value>
            <Value>
                <ValueDesc>Data related</ValueDesc>
                <Value>DATA</Value>
            </Value>
            <Value>
                <ValueDesc>Database related</ValueDesc>
                <Value>DATABASE</Value>
            </Value>
            <Value>
                <ValueDesc>Performance related</ValueDesc>
                <Value>PERFORMANCE</Value>
```

```
            </Value>
            <Value>
                <ValueDesc>Time dependent</ValueDesc>
                <Value>TIME</Value>
            </Value>
            <Value>
                <ValueDesc>Codec correlation</ValueDesc>
                <Value>CODEC</Value>
            </Value>
            <Value>
                <ValueDesc>OSS related</ValueDesc>
                <Value>OSS</Value>
            </Value>
            <Value>
                <ValueDesc>Address port</ValueDesc>
                <Value>PORT</Value>
            </Value>
            <Value>
                <ValueDesc>Memory configuration</ValueDesc>
                <Value>MEMORY</Value>
            </Value>
            <Value>
                <ValueDesc>Disk related</ValueDesc>
                <Value>DISK</Value>
            </Value>
            <Value>
                <ValueDesc>Network related</ValueDesc>
                <Value>NETWORK</Value>
            </Value>
            <Value>
                <ValueDesc>File path</ValueDesc>
                <Value>PATH</Value>
            </Value>
            <Value>
                <ValueDesc>URL or URI</ValueDesc>
                <Value>URI</Value>
            </Value>
        </ValueList>
        <TagDesc>Configuration type</TagDesc>
        <Tag>PROPERTY_TYPE</Tag>
    </ConfigTag>
</ConfigTagList>
<RequestId>B887B2A3-E770-4340-A556-D9FAF41ABF47</RequestId>
```

`JSON` Syntax

```
{
    "ConfigTagList":
    {
        "ConfigTag":
        [
            {
                "ValueList":
                {
```

```
                    "Value":
                    [
                        {
                            "ValueDesc":"tez-site",
                            "Value":"tez-site"
                            }
                            ]
                            },
                            "TagDesc":"Configuration type",
                            "Tag":"FILE_NAME"
                            },
                            {
                                "ValueList":
                                {
                                    "Value":
                                    [
                                        {
                                            "ValueDesc":"Basic Configurations",
                                            "Value":"BASIC"
                                            },
                                            {
                                                "ValueDesc":"Advanced configuration",
                                                "Value":"ADVANCED"
                                                },
                                                {
                                                    "ValueDesc":"Read only configuration",
                                                    "Value":"INFORMATION"
                                                    },
                                                    {
                                                        "ValueDesc":"Data path",
                                                        "Value":"DATA_PATH"
                                                        },
                                                        {
                                                            "ValueDesc":"Log path",
                                                            "Value":"LOG_PATH"
                                                            },
                                                            {
                                                                "ValueDesc":"Log related",
                                                                "Value":"LOG"
                                                                },
                                                                {
                                                                    "ValueDesc":"JVM relate
d",
                                                                    "Value":"JVM"
                                                                    },
                                                                    {
                                                                        "ValueDesc":"Data r
elated",
                                                                        "Value":"DATA"
                                                                        },
                                                                        {
                                                                            "ValueDesc":"Da
tabase related",
                                                                            "Value":"DATABA
```

```
SE"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                
},
{
"ValueDesc"
:"Performance related",
"Value":"PE
RFORMANCE"
},
{
"ValueD
esc":"Time dependent",
"Value"
:"TIME"
},
{
"Va
lueDesc":"Codec correlation",
"Va
lue":"CODEC"
},
{
"ValueDesc":"OSS related",
"Value":"OSS"
},
{
"ValueDesc":"Address port",
"Value":"PORT"
},
{
"ValueDesc":"Memory configuration",
"Value":"MEMORY"
},
{
"ValueDesc":"Disk related",
"Value":"DISK"
},
{
```

```
"ValueDesc":"Network related",

"Value":"NETWORK"

},

{

"ValueDesc":"File path",

"Value":"PATH"

},

{

"ValueDesc":"URL or URI",

"Value":"URI"

}

]

},

"TagDesc":"Configuration type",

"Tag":"PROPERTY_TYPE"

}

]

},

"RequestId":"B887B2A3-E770-4340-A556-D9FAF41ABF47"

}
```


4.6. Query the list of components

You can call ListClusterHostComponent operation to query the components that are installed on each host of a cluster.

Debugging

OpenAPI Explorer automatically calculates the signature value. For your convenience, we recommend that you call this operation in OpenAPI Explorer. You can use OpenAPI Explorer to search for API operations, call API operations, and dynamically generate SDK sample code.

Request parameters

Parameter	Type	Required	Example	Description
Action	String	Yes	ListClusterHostComponent	The operation that you want to perform. Set the value to ListClusterHostComponent.
ClusterId	String	Yes	C-F32FB31D82954C64	The ID of the cluster. You can call ListClusters You can call this operation to view the ID of a cluster.
RegionId	String	Yes	cn-hangzhou	The region ID of the instance. You can call DescribeRegions To view the latest list of Alibaba Cloud regions.
ServiceName	String	No	TEZ	The service name.
HostInstanceId	String	No	i-xxx	The host instance ID, which is typically the ecsId.
HostName	String	No	emr-worker-1	The names of the hosts on which the component is installed.
ComponentName	String	No	TezInit	The name of the component to be queried.
ComponentStatus	String	No	STARTED	The status of the component to be queried.
HostRole	String	No	CORE	The role of the host.
PageNumber	Integer	No	1	The number of the page to return.
PageSize	Integer	No	100	The number of entries to return on each page.

Response parameters

Parameter	Type	Example	Description
ComponentList	Array of Component		The components installed on the host.
Component			

Parameter	Type	Example	Description
CommissionStatus	String	None	A reserved parameter.
ComponentDisplayName	String	Tez Client	The display name of the component.
ComponentName	String	TezInit	The names of add-ons.
Cpu	Integer	4	The number of vCPUs on the host.
HostId	String	111	The ID of the host.
HostInstanceId	String	i-xxx	The host instance ID, which is typically **ecsID** DMS console as an administrator.
HostName	String	emr-worker-1	The names of the hosts on which the component is installed.
InstanceType	String	ecs.sn1.xlarge	The type of the ECS instance.
Memory	Integer	8	The memory of the ECS instance.
NeedRestart	Boolean	true	Indicates whether the component needs to be restarted.
PrivateIp	String	192.168.1.1	The private IP address of the host.
PublicIp	String	48.20.119.10	The public IP address of the host.
Role	String	CORE	The role of the host.
SerialNumber	String	x11-05e5-4d36-b773-8ae4106babd4	Of the host **SerialNumber** The message.
ServerStatus	String	active	The service status of the component. For example, the valid values for some components of a high availability cluster are active and standby.

Parameter	Type	Example	Description
ServiceDisplayName	String	Tez	The display name of the service.
ServiceName	String	TEZ	The name of the service.
Status	String	STARTED	The status of the component.
PageNumber	Integer	100	The page number of the returned page.
PageSize	Integer	1	The number of entries returned on each page.
RequestId	String	DF202AC2-5D5D-4288-B608-B7B1595B5C7C	The ID of the request.
Total	Integer	4	The total number of entries returned.

Examples

Sample requests

```
http(s)://[Endpoint]/?Action=ListClusterHostComponent
&ClusterId=C-F32FB31D8295****
&RegionId=cn-hangzhou
&<common request parameters>
```

Sample success responses

`XML` format

```
<PageSize>10</PageSize>
<RequestId>DF202AC2-5D5D-4288-B608-B7B1595B5C7C</RequestId>
<PageNumber>1</PageNumber>
<Total>4</Total>
<ComponentList>
    <Component>
        <Status>STARTED</Status>
        <ComponentDisplayName>Tez Client</ComponentDisplayName>
        <PublicIp>47.97.106.27</PublicIp>
        <HostInstanceId>i-xxx1</HostInstanceId>
        <HostId>124903</HostId>
        <ServiceDisplayName>Tez</ServiceDisplayName>
        <Role>MASTER</Role>
        <SerialNumber>x11-05e5-4d36-b773-8ae4106babd4</SerialNumber>
        <PrivateIp>192.168.143.231</PrivateIp>
        <ServiceName>TEZ</ServiceName>
```

```
        <NeedRestart>false</NeedRestart>
        <ComponentName>TezInit</ComponentName>
        <InstanceType>ecs.n4.xlarge</InstanceType>
        <HostName>emr-header-1</HostName>
    </Component>
    <Component>
        <Status>STARTED</Status>
        <ComponentDisplayName>Tomcat</ComponentDisplayName>
        <PublicIp>47.97.106.27</PublicIp>
        <HostInstanceId>i-xxx2</HostInstanceId>
        <HostId>124903</HostId>
        <ServiceDisplayName>Tez</ServiceDisplayName>
        <Role>MASTER</Role>
        <SerialNumber>1xx1-05e5-x-b773-xxx</SerialNumber>
        <PrivateIp>192.168.143.231</PrivateIp>
        <ServiceName>TEZ</ServiceName>
        <NeedRestart>false</NeedRestart>
        <ComponentName>Tomcat</ComponentName>
        <InstanceType>ecs.n4.xlarge</InstanceType>
        <HostName>emr-header-1</HostName>
    </Component>
    <Component>
        <Status>STARTED</Status>
        <ComponentDisplayName>Tez Client</ComponentDisplayName>
        <PublicIp/>
        <HostInstanceId>i-xxx3</HostInstanceId>
        <HostId>124902</HostId>
        <ServiceDisplayName>Tez</ServiceDisplayName>
        <Role>CORE</Role>
        <SerialNumber>asd1x1-af39-1c-32b27d83d4c3</SerialNumber>
        <PrivateIp>192.168.143.232</PrivateIp>
        <ServiceName>TEZ</ServiceName>
        <NeedRestart>false</NeedRestart>
        <ComponentName>TezInit</ComponentName>
        <InstanceType>ecs.n4.xlarge</InstanceType>
        <HostName>emr-worker-1</HostName>
    </Component>
    <Component>
        <Status>STARTED</Status>
        <ComponentDisplayName>Tez Client</ComponentDisplayName>
        <PublicIp/>
        <HostInstanceId>i-xxx4</HostInstanceId>
        <HostId>124901</HostId>
        <ServiceDisplayName>Tez</ServiceDisplayName>
        <Role>CORE</Role>
        <SerialNumber>1cc-2762-4d84-a430-xxx</SerialNumber>
        <PrivateIp>192.168.143.233</PrivateIp>
        <ServiceName>TEZ</ServiceName>
        <NeedRestart>false</NeedRestart>
        <ComponentName>TezInit</ComponentName>
        <InstanceType>ecs.n4.xlarge</InstanceType>
        <HostName>emr-worker-2</HostName>
    </Component>
</ComponentList>
```

JSON Syntax


```
{"PageSize":10,"RequestId":"DF202AC2-5D5D-4288-B608-B7B1595B5C7C","PageNumber":1,"Total":4,"ComponentList":{"Component":[{"Status":"STARTED","ComponentDisplayName":"Tez Client","PublicIp":"47.97.106.27","HostInstanceId":"i-xxx1","HostId":"124903","ServiceDisplayName":"Tez","Role":"MASTER","SerialNumber":"x11-05e5-4d36-b773-8ae4106babd4","PrivateIp":"192.168.143.231","ServiceName":"TEZ","NeedRestart":false,"ComponentName":"TezInit","InstanceType":"ecs.n4.xlarge","HostName":"emr-header-1"},{"Status":"STARTED","ComponentDisplayName":"Tomcat","PublicIp":"47.97.106.27","HostInstanceId":"i-xxx2","HostId":"124903","ServiceDisplayName":"Tez","Role":"MASTER","SerialNumber":"1xx1-05e5-x-b773-xxx","PrivateIp":"192.168.143.231","ServiceName":"TEZ","NeedRestart":false,"ComponentName":"Tomcat","InstanceType":"ecs.n4.xlarge","HostName":"emr-header-1"},{"Status":"STARTED","ComponentDisplayName":"Tez Client","PublicIp":"","HostInstanceId":"i-xxx3","HostId":"124902","ServiceDisplayName":"Tez","Role":"CORE","SerialNumber":"asd1x1-af39-1c-32b27d83d4c3","PrivateIp":"192.168.143.232","ServiceName":"TEZ","NeedRestart":false,"ComponentName":"TezInit","InstanceType":"ecs.n4.xlarge","HostName":"emr-worker-1"},{"Status":"STARTED","ComponentDisplayName":"Tez Client","PublicIp":"","HostInstanceId":"i-xxx4","HostId":"124901","ServiceDisplayName":"Tez","Role":"CORE","SerialNumber":"1cc-2762-4d84-a430-xxx","PrivateIp":"192.168.143.233","ServiceName":"TEZ","NeedRestart":false,"ComponentName":"TezInit","InstanceType":"ecs.n4.xlarge","HostName":"emr-worker-2"}]}}
```


4.7. Query the operation history of a cluster

You can call ListClusterOperation operation to query the actions that are taken on a cluster.

Debugging

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

Request parameters

Parameter	Type	Required	Example	Description
Action	String	Yes	ListClusterOperation	The operation that you want to perform. Set the value to ListClusterOperation.
ClusterId	String	Yes	C-F32FB31D8295****	The ID of the cluster. You can call ListClusters The ID of the cluster.
RegionId	String	Yes	cn-hangzhou	The ID of the region. You can call DescribeRegions View the latest Alibaba Cloud region list.

Parameter	Type	Required	Example	Description
ServiceName	String	No	YARN	The name of the service.
Status	String	No	SUCCESS	The status of the task. Valid values: • SUCCESS: The image was built • WAITING: Waiting • READY: Preparing • IN_PROGRESS: In progress • COMPLETED: The job is completed • FAILED: The task failed
PageNumber	Integer	No	1	The number of the page to return.
PageSize	Integer	No	10	The number of entries to return on each page.

Response parameters

Parameter	Type	Example	Description
ClusterOperationList	Array of ClusterOperation		The actions that are performed in the cluster.
ClusterOperation			
Comment	String	Create cluster	The comment for the action.
Duration	String	303	The duration of the action.
OperationId	String	41027	The ID of the operation.
OperationName	String	CREATE	The name of the action.
Percentage	String	100	The progress (%) of the action.
StartTime	String	1543312720000	The time when the action started.
Status	String	SUCCESS	The status of the action.

Parameter	Type	Example	Description
PageNumber	Integer	1	The page number of the returned page.
PageSize	Integer	10	The number of entries returned per page.
RequestId	String	DF202AC2-5D5D-4288-B608-B7B1595B5C7C	The ID of the request.
TotalCount	Integer	1	The total number of entries that are returned.

Examples

Sample requests

```
http(s)://[Endpoint]/?Action=ListClusterOperation
&ClusterId=C-F32FB31D8295****
&RegionId=cn-hangzhou
&<common request parameters>
```

Sample success responses

`XML` format

```
<ListClusterOperationResponse>
      <ClusterOperationList>
            <ClusterOperation>
                  <Status>SUCCESS</Status>
                  <Comment>Create cluster</Comment>
                  <Percentage>100</Percentage>
                  <OperationName>CREATE</OperationName>
                  <OperationId>41027</OperationId>
                  <StartTime>1543312720000</StartTime>
                  <Duration>303</Duration>
            </ClusterOperation>
      </ClusterOperationList>
      <TotalCount>1</TotalCount>
      <PageSize>10</PageSize>
      <RequestId>FB29CC76-D7DC-4A08-AE96-E1F96F9FFC4E</RequestId>
      <PageNumber>1</PageNumber>
</ListClusterOperationResponse>
```

`JSON` format

```
{
    "PageNumber":1,
    "TotalCount":1,
    "PageSize":10,
    "RequestId":"FB29CC76-D7DC-4A08-AE96-E1F96F9FFC4E",
    "ClusterOperationList":{
        "ClusterOperation":[
            {
                "Percentage":"100",
                "Status":"SUCCESS",
                "Duration":"303",
                "OperationId":"41027",
                "Comment":"Create cluster",
                "StartTime":"1543312720000",
                "OperationName":"CREATE"
            }
        ]
    }
}
```


4.8. View the task list for a specified host

You can call ListClusterOperationTask operation to query the tasks of the cluster on which a specific action is taken.

Debugging

OpenAPI Explorer automatically calculates the signature value. For your convenience, we recommend that you call this operation in OpenAPI Explorer. You can use OpenAPI Explorer to search for API operations, call API operations, and dynamically generate SDK sample code.

Request parameters

Parameter	Type	Required	Example	Description
Action	String	Yes	ListClusterOperationTask	The operation that you want to perform. This parameter is required for API requests that you create by piecing together HTTP or HTTPS URLs. Set the value to ListClusterOperationTask.
ClusterId	String	Yes	C-E71BCCAF7F6F****	The ID of the cluster. You can call ListClusters You can call this operation to view the ID of a cluster.
OperationId	String	Yes	83586	The ID of the action.

Parameter	Type	Required	Example	Description
RegionId	String	Yes	cn-hangzhou	The region ID of the instance. You can call DescribeRegions To view the latest list of Alibaba Cloud regions.
Status	String	No	COMPLETED	Indicates whether the operation was successful. Valid values: • SUCCESS: The task was successful. • WAITING: WAITING • READY: Preparing • IN_PROGRESS • COMPLETED: The job is COMPLETED. • FAILED
PageNumber	Integer	No	1	You can call this operation to query the page number by page.
PageSize	Integer	No	10	You can call this operation to query the number of records on each page.

Response parameters

Parameter	Type	Example	Description
ClusterOperationTaskList	Array of ClusterOperationTask		The Task list of the specified OperationHistory.
ClusterOperationTask			
Percentage	String	100	The progress (%) of the task.
Status	String	COMPLETED	Execution status: • WAITING • READY • IN_PROGRESS • COMPLETED • FAILED
TaskId	String	9060461	The ID of the site monitoring task.

Parameter	Type	Example	Description
TaskName	String	START_SparkHistory	The name of the availability monitoring task.
PageNumber	Integer	1	The page number of the returned page.
PageSize	Integer	10	You can call this operation to query the number of records on each page.
RequestId	String	1320AD6F-45A5-4FC6-B5EA-A0A4B86AD8B4	The ID of the request.
TotalCount	Integer	3	The total number of entries returned.

Examples

Sample requests

```
http(s)://[Endpoint]/?Action=ListClusterOperationTask
&ClusterId=C-E71BCCAF7F6F****
&RegionId=cn-hangzhou
&OperationId=83586
&<common request parameters>
```

Sample success responses

`XML` format

```
<clusterOperationTaskList>
    <percentage/>
    <status>COMPLETED</status>
    <taskId>9060461</taskId>
    <taskName>START_SparkHistory</taskName>
</clusterOperationTaskList>
<clusterOperationTaskList>
    <percentage/>
    <status>COMPLETED</status>
    <taskId>9060460</taskId>
    <taskName>INSTALL_SparkInit</taskName>
</clusterOperationTaskList>
<clusterOperationTaskList>
    <percentage/>
    <status>COMPLETED</status>
    <taskId>9060459</taskId>
    <taskName>INSTALL_SparkHistory</taskName>
</clusterOperationTaskList>
<pageNumber>1</pageNumber>
<pageSize>10</pageSize>
<requestId>1320AD6F-45A5-4FC6-B5EA-A0A4B86AD8B4</requestId>
<totalCount>3</totalCount>
```

JSON Syntax

```
{
    "clusterOperationTaskList":
    [
        {
            "percentage":"",
            "status":"COMPLETED",
            "taskId":"9060461",
            "taskName":"START_SparkHistory"
            },
            {
                "percentage":"",
                "status":"COMPLETED",
                "taskId":"9060460",
                "taskName":"INSTALL_SparkInit"
                },
                {
                    "percentage":"",
                    "status":"COMPLETED",
                    "taskId":"9060459",
                    "taskName":"INSTALL_SparkHistory"
                    }
                    ],
                    "pageNumber":1,
                    "pageSize":10,
                    "requestId":"1320AD6F-45A5-4FC6-B5EA-A0A4B86AD8B4",
                    "totalCount":3
                    }
```

4.9. A list of hosts whose operation history is queried

You can call ListClusterOperationHost operation to query the list of hosts whose operation history is displayed.

Debugging

OpenAPI Explorer automatically calculates the signature value. For your convenience, we recommend that you call this operation in OpenAPI Explorer. You can use OpenAPI Explorer to search for API operations, call API operations, and dynamically generate SDK sample code.

Request parameters

Parameter	Type	Required	Example	Description
Action	String	Yes	ListClusterOperationHost	The operation that you want to perform. Set the value to ListClusterOperationHost.
ClusterId	String	Yes	C-A14A3F241AF3****	The ID of the cluster. You can call ListClusters You can call this operation to view the ID of a cluster.
OperationId	String	Yes	111	The ID of the action.
RegionId	String	Yes	cn-hangzhou	The region ID of the instance. You can call DescribeRegions To view the latest list of Alibaba Cloud regions.
Status	String	No	SUCCESS	The status of the action.
PageNumber	Integer	No	1	The number of the page to return.
PageSize	Integer	No	100	The number of entries to return on each page.

Response parameters

Parameter	Type	Example	Description
ClusterOperationHostList	Array of ClusterOperationHost		The hosts on which the action is performed.

Parameter	Type	Example	Description
ClusterOperationHost			
HostId	String	111	The ID of the host.
HostName	String	emr-worker-1	The names of the hosts on which the component is installed.
Percentage	String	100	The progress (%) of the task.
Status	String	SUCCESS	The status of the task.
PageNumber	Integer	1	The page number of the returned page.
PageSize	Integer	100	The number of entries returned on each page.
RequestId	String	DF202AC2-5D5D-4288-B608-B7B1595B5C7C	The ID of the request.
TotalCount	Integer	3	The total number of entries returned.

Examples

Sample requests

```
http(s)://[Endpoint]/?Action=ListClusterOperationHost
&ClusterId=C-A14A3F241AF3****
&OperationId=111
&RegionId=cn-hangzhou
&<common request parameters>
```

Sample responses

`XML` format

```
<TotalCount>3</TotalCount>
<PageSize>500</PageSize>
<RequestId>12B58AF8-40E0-42E9-B6E5-1F4201AFB4F8</RequestId>
<PageNumber>1</PageNumber>
<ClusterOperationHostList>
    <ClusterOperationHost>
        <Status>SUCCESS</Status>
        <Percentage>100</Percentage>
        <HostId>124903</HostId>
        <HostName>emr-header-1</HostName>
    </ClusterOperationHost>
    <ClusterOperationHost>
        <Status>SUCCESS</Status>
        <Percentage>100</Percentage>
        <HostId>124902</HostId>
        <HostName>emr-worker-1</HostName>
    </ClusterOperationHost>
    <ClusterOperationHost>
        <Status>SUCCESS</Status>
        <Percentage>100</Percentage>
        <HostId>124901</HostId>
        <HostName>emr-worker-2</HostName>
    </ClusterOperationHost>
</ClusterOperationHostList>
```

JSON Syntax

```
    {"TotalCount":3,"PageSize":500,"RequestId":"12B58AF8-40E0-42E9-B6E5-1F4201AFB4F8","Pag
eNumber":1,"ClusterOperationHostList":{"ClusterOperationHost":[{"Status":"SUCCESS","Percent
age":"100","HostId":"124903","HostName":"emr-header-1"},{"Status":"SUCCESS","Percentage":"1
00","HostId":"124902","HostName":"emr-worker-1"},{"Status":"SUCCESS","Percentage":"100","Ho
stId":"124901","HostName":"emr-worker-2"}]}}
```

4.10. Query the list of services installed on a cluster

You can call ListClusterInstalledService operation to query the services that are installed in a cluster.

Debugging

OpenAPI Explorer automatically calculates the signature value. For your convenience, we recommend that you call this operation in OpenAPI Explorer. You can use OpenAPI Explorer to search for API operations, call API operations, and dynamically generate SDK sample code.

Request parameters

Parameter	Type	Required	Example	Description

Parameter	Type	Required	Example	Description
Action	String	Yes	ListClusterInstalledService	The operation that you want to perform. This parameter is required for API requests that you create by piecing together HTTP or HTTPS URLs. Set this parameter to ListClusterInstalledService.
ClusterId	String	Yes	C-0EF9B0EC8564****	The ID of the cluster. You can call ListClusters You can call this operation to view the ID of a cluster.
RegionId	String	Yes	cn-hangzhou	The region ID of the instance. You can call DescribeRegions To view the latest list of Alibaba Cloud regions.
PageNumber	Integer	No	1	The page number of the returned page.
PageSize	Integer	No	30	The number of entries returned on each page.

Response parameters

Parameter	Type	Example	Description
ClusterInstalledServiceList	Array of ClusterInstalledService		The list of services installed in the cluster.
ClusterInstalledService			
ServiceActionList	Array of ServiceAction		The list of operations supported by the service.
ServiceAction			
ActionName	String	CUSTOM_COMMAND	Operation name: • CONFIGURE • START • STOP • RESTART • CUSTOM_COMMAND

Parameter	Type	Example	Description
Command	String	rebalance	For specific commands, when the Action name is CUSTOM_COMMAND, it must be specified.
ComponentName	String	DataNode	The name of a component.
DisplayName	String	Start All Components	The displayed name of the operation.
ServiceName	String	HDFS	The name of the service.
ServiceDisplayName	String	YARN	The displayed name of the service.
ServiceEcmVersion	String	3.7.2.2.7	The reserved field.
ServiceName	String	YARN	The name of the service.
ServiceVersion	String	3.7.2	The version of the service.
abnormalNum	Integer	0	The number of abnormal components.
comment	String	test	The description of the service.
needRestartNum	Integer	0	The number of components to be restarted.
notStartedNum	Integer	0	The number of components that have been stopped.
onlyClient	Boolean	false	Whether only **Client** Type components: • true • false
serviceStatus	String	INSTALLING	The service status of the topic.
RequestId	String	88A94B4A-898D-448B-BC0B-6F0FE2CC64CA	The unique ID of the request.

Examples

Sample requests

```
http(s)://[Endpoint]/?Action=ListClusterInstalledService
&ClusterId=C-0EF9B0EC8564****
&RegionId=cn-hangzhou
&<common request parameters>
```

Sample success responses

XML Format

```
<RequestId>F14E2754-DC4E-4D9C-BB59-3136FF6EF033</RequestId>
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                            "ComponentName": "ALL COMPONENTS"
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                            "ServiceName": "HIVE",
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                            "ComponentName": "GMOND"
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                            "ComponentName": "ALL COMPONENTS"
                        },
                        {
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                            "ServiceName": "ZOOKEEPER",
                            "DisplayName": "Stop All Components",
                            "ComponentName": "ALL COMPONENTS"
                        },
                        {
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                            "ServiceName": "ZOOKEEPER",
                            "DisplayName": "Restart All Components",
                            "ComponentName": "ALL COMPONENTS"
                        },
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                            "ComponentName": "ZOOKEEPER"
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            },
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            },
            {
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                "ComponentName": "ALL COMPONENTS"
            },
            {
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                "ServiceName": "SPARK",
                "DisplayName": "Restart SparkHistory",
                "ComponentName": "SparkHistory"
            },
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                },
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                    "ComponentName": "HMaster"
                },
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                    "ComponentName": "HRegionServer"
                },
                {
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                    "ComponentName": "HRegionServer"
                },
                {
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                "ComponentName": "ALL COMPONENTS"
            },
            {
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                "ComponentName": "ALL COMPONENTS"
            },
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                "ServiceName": "HUE",
                "DisplayName": "Restart All Components",
                "ComponentName": "ALL COMPONENTS"
            },
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                "DisplayName": "Restart Hue",
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            },
            {
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                        "ComponentName": "ALL COMPONENTS"
                    },
                    {
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                "ComponentName": "ALL COMPONENTS"
            }
        ]
    },
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                            "ComponentName": "ALL COMPONENTS"
                        },
                        {
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                        },
                        {
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                            "ServiceName": "STORM",
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                            "ComponentName": "Supervisor"
                        },
                        {
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                    }
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                    },
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                        "DisplayName": "Start All Components",
                        "ComponentName": "ALL COMPONENTS"
                    },
                    {
                        "ActionName": "STOP",
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                        "ComponentName": "ALL COMPONENTS"
                    },
                    {
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                        "ComponentName": "ALL COMPONENTS"
                    },
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                        "ServiceName": "KUDU",
                        "DisplayName": "Restart Kudu Master",
                        "ComponentName": "KuduMaster"
                    },
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                        "ActionName": "RESTART",
                        "ServiceName": "KUDU",
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                    }
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            "onlyClient": false
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                        "ComponentName": "ALL COMPONENTS"
                    },
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                        "DisplayName": "Start All Components",
                        "ComponentName": "ALL COMPONENTS"
                    },
                    {
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                    },
                    {
                        "ActionName": "RESTART",
                        "ServiceName": "FLUME",
                        "DisplayName": "Restart All Components",
                        "ComponentName": "ALL COMPONENTS"
                    },
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                        "ServiceName": "FLUME",
                        "DisplayName": "Restart Flume Agent",
                        "ComponentName": "FlumeAgent"
                    }
                ]
            },
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                            "ServiceName": "LIVY",
                            "DisplayName": "Configure All Components",
                            "ComponentName": "ALL COMPONENTS"
                        },
                        {
                            "ActionName": "START",
                            "ServiceName": "LIVY",
                            "DisplayName": "Start All Components",
                            "ComponentName": "ALL COMPONENTS"
                        },
                        {
                            "ActionName": "STOP",
                            "ServiceName": "LIVY",
                            "DisplayName": "Stop All Components",
                            "ComponentName": "ALL COMPONENTS"
                        },
                        {
                            "ActionName": "RESTART",
                            "ServiceName": "LIVY",
                            "DisplayName": "Restart All Components",
                            "ComponentName": "ALL COMPONENTS"
                        },
                        {
                            "ActionName": "RESTART",
                            "ServiceName": "LIVY",
                            "DisplayName": "Restart Livy",
                            "ComponentName": "Livy"
                        }
                    ]
                },
                "ServiceName": "LIVY",
                "notStartedNum": 1,
                "ServiceVersion": "0.6.0",
                "ServiceDisplayName": "LIVY",
                "onlyClient": false
            },
            {
                "needRestartNum": 0,
                "abnormalNum": 1,
                "ServiceActionList": {
                    "ServiceAction": [
                        {
                            "ActionName": "CONFIGURE",
                            "ServiceName": "SUPERSET",
                            "DisplayName": "Configure All Components",
                            "ComponentName": "ALL COMPONENTS"
                        },
                        {
                            "ActionName": "START",
                            "ServiceName": "SUPERSET",
                            "DisplayName": "Start All Components"
```

```
                "DisplayName": "Start All Components",
                "ComponentName": "ALL COMPONENTS"
            },
            {
                "ActionName": "STOP",
                "ServiceName": "SUPERSET",
                "DisplayName": "Stop All Components",
                "ComponentName": "ALL COMPONENTS"
            },
            {
                "ActionName": "RESTART",
                "ServiceName": "SUPERSET",
                "DisplayName": "Restart All Components",
                "ComponentName": "ALL COMPONENTS"
            },
            {
                "ActionName": "RESTART",
                "ServiceName": "SUPERSET",
                "DisplayName": "Restart Superset",
                "ComponentName": "Superset"
            }
        ]
    },
    "ServiceName": "SUPERSET",
    "notStartedNum": 1,
    "ServiceVersion": "0.35.2",
    "ServiceDisplayName": "Superset",
    "onlyClient": false
},
{
    "needRestartNum": 0,
    "abnormalNum": 1,
    "ServiceActionList": {
        "ServiceAction": [
            {
                "ActionName": "CONFIGURE",
                "ServiceName": "FLINK",
                "DisplayName": "Configure All Components",
                "ComponentName": "ALL COMPONENTS"
            },
            {
                "ActionName": "START",
                "ServiceName": "FLINK",
                "DisplayName": "Start All Components",
                "ComponentName": "ALL COMPONENTS"
            },
            {
                "ActionName": "STOP",
                "ServiceName": "FLINK",
                "DisplayName": "Stop All Components",
                "ComponentName": "ALL COMPONENTS"
            },
            {
                "ActionName": "RESTART",
                "ServiceName": "FLINK",
```

```
                    "ServiceName": "FLINK",
                    "DisplayName": "Restart All Components",
                    "ComponentName": "ALL COMPONENTS"
                },
                {
                    "ActionName": "RESTART",
                    "ServiceName": "FLINK",
                    "DisplayName": "Restart FlinkHistoryServer",
                    "ComponentName": "FlinkHistoryServer"
                }
            ]
        },
        "ServiceName": "FLINK",
        "notStartedNum": 1,
        "ServiceVersion": "1.10-vvr-1.0.4",
        "ServiceDisplayName": "Flink",
        "onlyClient": false
    },
    {
        "needRestartNum": 0,
        "abnormalNum": 4,
        "ServiceActionList": {
            "ServiceAction": [
                {
                    "ActionName": "CONFIGURE",
                    "ServiceName": "IMPALA",
                    "DisplayName": "Configure All Components",
                    "ComponentName": "ALL COMPONENTS"
                },
                {
                    "ActionName": "START",
                    "ServiceName": "IMPALA",
                    "DisplayName": "Start All Components",
                    "ComponentName": "ALL COMPONENTS"
                },
                {
                    "ActionName": "STOP",
                    "ServiceName": "IMPALA",
                    "DisplayName": "Stop All Components",
                    "ComponentName": "ALL COMPONENTS"
                },
                {
                    "ActionName": "RESTART",
                    "ServiceName": "IMPALA",
                    "DisplayName": "Restart All Components",
                    "ComponentName": "ALL COMPONENTS"
                },
                {
                    "ActionName": "RESTART",
                    "ServiceName": "IMPALA",
                    "DisplayName": "Restart Impala Catalog Server",
                    "ComponentName": "ImpalaCatalogd"
                },
                {
                    "ActionName": "RESTART",
```

```
                        "ServiceName": "IMPALA",
                        "DisplayName": "Restart Impala Daemon Server",
                        "ComponentName": "Impalad"
                    },
                    {
                        "ActionName": "RESTART",
                        "ServiceName": "IMPALA",
                        "DisplayName": "Restart Impala StateStore Server",
                        "ComponentName": "ImpalaStatestored"
                    }
                ]
            },
            "ServiceName": "IMPALA",
            "notStartedNum": 4,
            "ServiceVersion": "2.12.2",
            "ServiceDisplayName": "Impala",
            "onlyClient": false
        },
        {
            "needRestartNum": 0,
            "abnormalNum": 2,
            "ServiceActionList": {
                "ServiceAction": [
                    {
                        "ActionName": "CONFIGURE",
                        "ServiceName": "RANGER",
                        "DisplayName": "Configure All Components",
                        "ComponentName": "ALL COMPONENTS"
                    },
                    {
                        "ActionName": "START",
                        "ServiceName": "RANGER",
                        "DisplayName": "Start All Components",
                        "ComponentName": "ALL COMPONENTS"
                    },
                    {
                        "ActionName": "STOP",
                        "ServiceName": "RANGER",
                        "DisplayName": "Stop All Components",
                        "ComponentName": "ALL COMPONENTS"
                    },
                    {
                        "ActionName": "RESTART",
                        "ServiceName": "RANGER",
                        "DisplayName": "Restart All Components",
                        "ComponentName": "ALL COMPONENTS"
                    },
                    {
                        "ActionName": "RESTART",
                        "ServiceName": "RANGER",
                        "DisplayName": "Restart RangerAdmin",
                        "ComponentName": "RangerAdmin"
                    },
                    {
```

```
                "ActionName": "RESTART",
                "ServiceName": "RANGER",
                "DisplayName": "Restart RangerUserSync",
                "ComponentName": "RangerUserSync"
            },
            {
                "ActionName": "RESTART",
                "ServiceName": "RANGER",
                "DisplayName": "Restart Solr",
                "ComponentName": "Solr"
            },
            {
                "ActionName": "CUSTOM_COMMAND",
                "ServiceName": "RANGER",
                "Command": "enableHDFS",
                "DisplayName": "enableHDFS",
                "ComponentName": "RangerAdmin"
            },
            {
                "ActionName": "CUSTOM_COMMAND",
                "ServiceName": "RANGER",
                "Command": "disableHDFS",
                "DisplayName": "disableHDFS",
                "ComponentName": "RangerAdmin"
            },
            {
                "ActionName": "CUSTOM_COMMAND",
                "ServiceName": "RANGER",
                "Command": "enableHive",
                "DisplayName": "enableHive",
                "ComponentName": "RangerAdmin"
            },
            {
                "ActionName": "CUSTOM_COMMAND",
                "ServiceName": "RANGER",
                "Command": "disableHive",
                "DisplayName": "disableHive",
                "ComponentName": "RangerAdmin"
            },
            {
                "ActionName": "CUSTOM_COMMAND",
                "ServiceName": "RANGER",
                "Command": "enableSpark",
                "DisplayName": "enableSpark",
                "ComponentName": "RangerAdmin"
            },
            {
                "ActionName": "CUSTOM_COMMAND",
                "ServiceName": "RANGER",
                "Command": "disableSpark",
                "DisplayName": "disableSpark",
                "ComponentName": "RangerAdmin"
            },
            {
```

```
                "ActionName": "CUSTOM_COMMAND",
                "ServiceName": "RANGER",
                "Command": "enablePresto",
                "DisplayName": "enablePresto",
                "ComponentName": "RangerAdmin"
            },
            {
                "ActionName": "CUSTOM_COMMAND",
                "ServiceName": "RANGER",
                "Command": "disablePresto",
                "DisplayName": "disablePresto",
                "ComponentName": "RangerAdmin"
            },
            {
                "ActionName": "CUSTOM_COMMAND",
                "ServiceName": "RANGER",
                "Command": "enableHBase",
                "DisplayName": "enableHBase",
                "ComponentName": "RangerPlugin"
            },
            {
                "ActionName": "CUSTOM_COMMAND",
                "ServiceName": "RANGER",
                "Command": "disableHBase",
                "DisplayName": "disableHBase",
                "ComponentName": "RangerPlugin"
            },
            {
                "ActionName": "CUSTOM_COMMAND",
                "ServiceName": "RANGER",
                "Command": "enableKafka",
                "DisplayName": "enableKafka",
                "ComponentName": "RangerPlugin"
            },
            {
                "ActionName": "CUSTOM_COMMAND",
                "ServiceName": "RANGER",
                "Command": "disableKafka",
                "DisplayName": "disableKafka",
                "ComponentName": "RangerPlugin"
            }
        ]
    },
    "ServiceName": "RANGER",
    "notStartedNum": 2,
    "ServiceVersion": "1.2.0",
    "ServiceDisplayName": "RANGER",
    "onlyClient": false
},
{
    "needRestartNum": 0,
    "abnormalNum": 0,
    "ServiceActionList": {
        "ServiceAction": [
```

```
                    {
                        "ActionName": "CONFIGURE",
                        "ServiceName": "SMARTDATA",
                        "DisplayName": "Configure All Components",
                        "ComponentName": "ALL COMPONENTS"
                    },
                    {
                        "ActionName": "START",
                        "ServiceName": "SMARTDATA",
                        "DisplayName": "Start All Components",
                        "ComponentName": "ALL COMPONENTS"
                    },
                    {
                        "ActionName": "STOP",
                        "ServiceName": "SMARTDATA",
                        "DisplayName": "Stop All Components",
                        "ComponentName": "ALL COMPONENTS"
                    },
                    {
                        "ActionName": "RESTART",
                        "ServiceName": "SMARTDATA",
                        "DisplayName": "Restart All Components",
                        "ComponentName": "ALL COMPONENTS"
                    },
                    {
                        "ActionName": "RESTART",
                        "ServiceName": "SMARTDATA",
                        "DisplayName": "Restart Jindo Namespace Service",
                        "ComponentName": "JindoNamespaceService"
                    },
                    {
                        "ActionName": "RESTART",
                        "ServiceName": "SMARTDATA",
                        "DisplayName": "Restart Jindo Storage Service",
                        "ComponentName": "JindoStorageService"
                    }
                ]
            },
            "ServiceName": "SMARTDATA",
            "notStartedNum": 0,
            "ServiceVersion": "2.7.202",
            "ServiceDisplayName": "SmartData",
            "onlyClient": false
        },
        {
            "needRestartNum": 0,
            "abnormalNum": 1,
            "ServiceActionList": {
                "ServiceAction": [
                    {
                        "ActionName": "CONFIGURE",
                        "ServiceName": "KNOX",
                        "DisplayName": "Configure All Components",
                        "ComponentName": "ALL COMPONENTS"
                    },
```

```
                    },
                    {
                        "ActionName": "START",
                        "ServiceName": "KNOX",
                        "DisplayName": "Start All Components",
                        "ComponentName": "ALL COMPONENTS"
                    },
                    {
                        "ActionName": "STOP",
                        "ServiceName": "KNOX",
                        "DisplayName": "Stop All Components",
                        "ComponentName": "ALL COMPONENTS"
                    },
                    {
                        "ActionName": "RESTART",
                        "ServiceName": "KNOX",
                        "DisplayName": "Restart All Components",
                        "ComponentName": "ALL COMPONENTS"
                    },
                    {
                        "ActionName": "RESTART",
                        "ServiceName": "KNOX",
                        "DisplayName": "Restart Knox",
                        "ComponentName": "KNOX"
                    }
                ]
            },
            "ServiceName": "KNOX",
            "notStartedNum": 1,
            "ServiceVersion": "1.1.0",
            "ServiceDisplayName": "Knox",
            "onlyClient": false
        },
        {
            "needRestartNum": 0,
            "abnormalNum": 0,
            "ServiceActionList": {
                "ServiceAction": [
                    {
                        "ActionName": "CONFIGURE",
                        "ServiceName": "OPENLDAP",
                        "DisplayName": "Configure All Components",
                        "ComponentName": "ALL COMPONENTS"
                    },
                    {
                        "ActionName": "START",
                        "ServiceName": "OPENLDAP",
                        "DisplayName": "Start All Components",
                        "ComponentName": "ALL COMPONENTS"
                    },
                    {
                        "ActionName": "STOP",
                        "ServiceName": "OPENLDAP",
                        "DisplayName": "Stop All Components",
                        "ComponentName": "ALL COMPONENTS"
```

```
                    },
                    {
                        "ActionName": "RESTART",
                        "ServiceName": "OPENLDAP",
                        "DisplayName": "Restart All Components",
                        "ComponentName": "ALL COMPONENTS"
                    },
                    {
                        "ActionName": "RESTART",
                        "ServiceName": "OPENLDAP",
                        "DisplayName": "Restart OpenLDAP",
                        "ComponentName": "OpenLDAP"
                    }
                ]
            },
            "ServiceName": "OPENLDAP",
            "notStartedNum": 0,
            "ServiceVersion": "2.4.44",
            "ServiceDisplayName": "OpenLDAP",
            "onlyClient": false
        },
        {
            "needRestartNum": 0,
            "abnormalNum": 0,
            "ServiceActionList": {
                "ServiceAction": [
                    {
                        "ActionName": "CONFIGURE",
                        "ServiceName": "BIGBOOT",
                        "DisplayName": "Configure All Components",
                        "ComponentName": "ALL COMPONENTS"
                    },
                    {
                        "ActionName": "START",
                        "ServiceName": "BIGBOOT",
                        "DisplayName": "Start All Components",
                        "ComponentName": "ALL COMPONENTS"
                    },
                    {
                        "ActionName": "STOP",
                        "ServiceName": "BIGBOOT",
                        "DisplayName": "Stop All Components",
                        "ComponentName": "ALL COMPONENTS"
                    },
                    {
                        "ActionName": "RESTART",
                        "ServiceName": "BIGBOOT",
                        "DisplayName": "Restart All Components",
                        "ComponentName": "ALL COMPONENTS"
                    },
                    {
                        "ActionName": "RESTART",
                        "ServiceName": "BIGBOOT",
                        "DisplayName": "Restart Bigboot Monitor",
```

```
                            "ComponentName": "BigbootMonitor"
                        }
                    ]
                },
                "ServiceName": "BIGBOOT",
                "notStartedNum": 0,
                "ServiceVersion": "2.7.202",
                "ServiceDisplayName": "Bigboot",
                "onlyClient": false
            }
        ]
    }
}
```


4.11. Queries the task list for a specified host

You can call ListClusterOperationHostTask operation to query the tasks of the host on which a specific action is taken.

Debugging

OpenAPI Explorer automatically calculates the signature value. For your convenience, we recommend that you call this operation in OpenAPI Explorer. You can use OpenAPI Explorer to search for API operations, call API operations, and dynamically generate SDK sample code.

Request parameters

Parameter	Type	Required	Example	Description
Action	String	Yes	ListClusterOperationHostTask	The operation that you want to perform. Set the value to ListClusterOperationHostTask.
ClusterId	String	Yes	C-F32FB31D82954C64	The ID of the cluster. You can call ListClusters You can call this operation to view the ID of a cluster.
HostId	String	Yes	11	The ID of the host to which the instances belong.
OperationId	String	Yes	11	The ID of the action.
RegionId	String	Yes	cn-hangzhou	The region ID of the instance. You can call DescribeRegions To view the latest list of Alibaba Cloud regions.

Parameter	Type	Required	Example	Description
Status	String	No	SUCCESS	The status of the task.
PageNumber	Integer	No	1	The number of the page to return.
PageSize	Integer	No	100	The number of entries to return on each page.

Response parameters

Parameter	Type	Example	Description
ClusterOperationHostTaskList	Array of ClusterOperationHostTask		The tasks of the host on which a specific action is performed.
ClusterOperationHostTask			
Percentage	String	100	The progress (%) of the task.
Status	String	SUCCESS	The status of the task.
TaskId	String	111	The ID of the task.
TaskName	String	START_SparkHistory_ON_emr-header-1	Task Name
PageNumber	Integer	1	The page number of the returned page.
PageSize	Integer	100	The number of entries returned on each page.
RequestId	String	DF202AC2-5D5D-4288-B608-B7B1595B5C7C	The ID of the request.
TotalCount	Integer	72	The total number of entries returned.

Examples

Sample requests

```
http(s)://[Endpoint]/?Action=ListClusterOperationHostTask
&ClusterId=C-F32FB31D82954C64
&HostId=11
&OperationId=11
&RegionId=cn-hangzhou
&<common request parameters>
```

Sample responses

`XML` format

```
<TotalCount>72</TotalCount>
<PageSize>500</PageSize>
<RequestId>69E38B7E-1A85-44C1-BEC4-1704F23BB2C7</RequestId>
<PageNumber>1</PageNumber>
<ClusterOperationHostTaskList>
    <ClusterOperationHostTask>
        <Status>COMPLETED</Status>
        <TaskId>4628214</TaskId>
        <Percentage/>
        <TaskName>START_SparkHistory_ON_emr-header-1</TaskName>
    </ClusterOperationHostTask>
    <ClusterOperationHostTask>
        <Status>COMPLETED</Status>
        <TaskId>4628213</TaskId>
        <Percentage/>
        <TaskName>START_DoctorScheduler_ON_emr-header-1</TaskName>
    </ClusterOperationHostTask>
    <ClusterOperationHostTask>
        <Status>COMPLETED</Status>
        <TaskId>4628212</TaskId>
        <Percentage/>
        <TaskName>START_MySQL_ON_emr-header-1</TaskName>
    </ClusterOperationHostTask>
    <ClusterOperationHostTask>
        <Status>COMPLETED</Status>
        <TaskId>4628211</TaskId>
        <Percentage/>
        <TaskName>START_HiveMetaStore_ON_emr-header-1</TaskName>
    </ClusterOperationHostTask>
    <ClusterOperationHostTask>
        <Status>COMPLETED</Status>
        <TaskId>4628210</TaskId>
        <Percentage/>
        <TaskName>START_NameNode_ON_emr-header-1</TaskName>
    </ClusterOperationHostTask>
    <ClusterOperationHostTask>
        <Status>COMPLETED</Status>
        <TaskId>4628209</TaskId>
        <Percentage/>
        <TaskName>START_Ilogtaild_ON_emr-header-1</TaskName>
    </ClusterOperationHostTask>
    <ClusterOperationHostTask>
        <Status>COMPLETED</Status>
```

```
        <TaskId>4628206</TaskId>
        <Percentage/>
        <TaskName>START_HiveServer_ON_emr-header-1</TaskName>
    </ClusterOperationHostTask>
    <ClusterOperationHostTask>
        <Status>COMPLETED</Status>
        <TaskId>4628205</TaskId>
        <Percentage/>
        <TaskName>START_GmetricCollector_ON_emr-header-1</TaskName>
    </ClusterOperationHostTask>
    <ClusterOperationHostTask>
        <Status>COMPLETED</Status>
        <TaskId>4628202</TaskId>
        <Percentage/>
        <TaskName>START_SecondaryNameNode_ON_emr-header-1</TaskName>
    </ClusterOperationHostTask>
    <ClusterOperationHostTask>
        <Status>COMPLETED</Status>
        <TaskId>4628201</TaskId>
        <Percentage/>
        <TaskName>START_KNOX_ON_emr-header-1</TaskName>
    </ClusterOperationHostTask>
    <ClusterOperationHostTask>
        <Status>COMPLETED</Status>
        <TaskId>4628200</TaskId>
        <Percentage/>
        <TaskName>START_FlowAgentDaemon_ON_emr-header-1</TaskName>
    </ClusterOperationHostTask>
    <ClusterOperationHostTask>
        <Status>COMPLETED</Status>
        <TaskId>4628197</TaskId>
        <Percentage/>
        <TaskName>START_Hue_ON_emr-header-1</TaskName>
    </ClusterOperationHostTask>
    <ClusterOperationHostTask>
        <Status>COMPLETED</Status>
        <TaskId>4628196</TaskId>
        <Percentage/>
        <TaskName>START_HTTPD_ON_emr-header-1</TaskName>
    </ClusterOperationHostTask>
    <ClusterOperationHostTask>
        <Status>COMPLETED</Status>
        <TaskId>4628195</TaskId>
        <Percentage/>
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    </ClusterOperationHostTask>
    <ClusterOperationHostTask>
        <Status>COMPLETED</Status>
        <TaskId>4628194</TaskId>
        <Percentage/>
        <TaskName>START_GMETAD_ON_emr-header-1</TaskName>
    </ClusterOperationHostTask>
    <ClusterOperationHostTask>
        <Status>COMPLETED</Status>
```

```
        <TaskId>4628193</TaskId>
        <Percentage/>
        <TaskName>START_TimeLineServer_ON_emr-header-1</TaskName>
    </ClusterOperationHostTask>
    <ClusterOperationHostTask>
        <Status>COMPLETED</Status>
        <TaskId>4628192</TaskId>
        <Percentage/>
        <TaskName>START_PrestoMaster_ON_emr-header-1</TaskName>
    </ClusterOperationHostTask>
    <ClusterOperationHostTask>
        <Status>COMPLETED</Status>
        <TaskId>4628191</TaskId>
        <Percentage/>
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    </ClusterOperationHostTask>
    <ClusterOperationHostTask>
        <Status>COMPLETED</Status>
        <TaskId>4628190</TaskId>
        <Percentage/>
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    <ClusterOperationHostTask>
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        <TaskId>4628187</TaskId>
        <Percentage/>
        <TaskName>START_MetaCommand_ON_emr-header-1</TaskName>
    </ClusterOperationHostTask>
    <ClusterOperationHostTask>
        <Status>COMPLETED</Status>
        <TaskId>4628186</TaskId>
        <Percentage/>
        <TaskName>START_ApacheDS_ON_emr-header-1</TaskName>
    </ClusterOperationHostTask>
    <ClusterOperationHostTask>
        <Status>COMPLETED</Status>
        <TaskId>4628185</TaskId>
        <Percentage/>
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    <ClusterOperationHostTask>
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        <TaskId>4628180</TaskId>
        <Percentage/>
        <TaskName>START_MachineHealthMonitor_ON_emr-header-1</TaskName>
    </ClusterOperationHostTask>
    <ClusterOperationHostTask>
        <Status>COMPLETED</Status>
        <TaskId>4628177</TaskId>
        <Percentage/>
        <TaskName>START_GMOND_ON_emr-header-1</TaskName>
    </ClusterOperationHostTask>
    <ClusterOperationHostTask>
        <Status>COMPLETED</Status>
```

```
        <TaskId>4628174</TaskId>
        <Percentage/>
        <TaskName>START_SparkThriftServer_ON_emr-header-1</TaskName>
    </ClusterOperationHostTask>
    <ClusterOperationHostTask>
        <Status>COMPLETED</Status>
        <TaskId>4628173</TaskId>
        <Percentage/>
        <TaskName>START_JobHistory_ON_emr-header-1</TaskName>
    </ClusterOperationHostTask>
    <ClusterOperationHostTask>
        <Status>COMPLETED</Status>
        <TaskId>4628172</TaskId>
        <Percentage/>
        <TaskName>START_Tomcat_ON_emr-header-1</TaskName>
    </ClusterOperationHostTask>
    <ClusterOperationHostTask>
        <Status>COMPLETED</Status>
        <TaskId>4628171</TaskId>
        <Percentage/>
        <TaskName>START_OpsCommand_ON_emr-header-1</TaskName>
    </ClusterOperationHostTask>
    <ClusterOperationHostTask>
        <Status>COMPLETED</Status>
        <TaskId>4628168</TaskId>
        <Percentage/>
        <TaskName>START_ResourceManager_ON_emr-header-1</TaskName>
    </ClusterOperationHostTask>
    <ClusterOperationHostTask>
        <Status>COMPLETED</Status>
        <TaskId>4628167</TaskId>
        <Percentage/>
        <TaskName>INSTALL_SparkHistory_ON_emr-header-1</TaskName>
    </ClusterOperationHostTask>
    <ClusterOperationHostTask>
        <Status>COMPLETED</Status>
        <TaskId>4628166</TaskId>
        <Percentage/>
        <TaskName>INSTALL_DoctorScheduler_ON_emr-header-1</TaskName>
    </ClusterOperationHostTask>
    <ClusterOperationHostTask>
        <Status>COMPLETED</Status>
        <TaskId>4628165</TaskId>
        <Percentage/>
        <TaskName>INSTALL_MySQL_ON_emr-header-1</TaskName>
    </ClusterOperationHostTask>
    <ClusterOperationHostTask>
        <Status>COMPLETED</Status>
        <TaskId>4628164</TaskId>
        <Percentage/>
        <TaskName>INSTALL_KMS_ON_emr-header-1</TaskName>
    </ClusterOperationHostTask>
    <ClusterOperationHostTask>
        <Status>COMPLETED</Status>
```

```
        <TaskId>4628163</TaskId>
        <Percentage/>
        <TaskName>INSTALL_GANGLIAInit_ON_emr-header-1</TaskName>
    </ClusterOperationHostTask>
    <ClusterOperationHostTask>
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JSON Syntax


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4.12. View the list of services supported by a cluster

You can call ListClusterSupportService operation to view the list of services supported by a cluster.

Debugging

OpenAPI Explorer automatically calculates the signature value. For your convenience, we recommend that you call this operation in OpenAPI Explorer. You can use OpenAPI Explorer to search for API operations, call API operations, and dynamically generate SDK sample code.

Request parameters

Parameter	Type	Required	Example	Description
Action	String	Yes	ListClusterSupportService	The operation that you want to perform. This parameter is required for API requests that you create by piecing together HTTP or HTTPS URLs. Set this parameter to ListClusterSupportService.
ClusterId	String	Yes	C-0EF9B0EC8564****	The ID of the cluster. You can call ListClusters You can call this operation to view the ID of a cluster.
RegionId	String	Yes	cn-hangzhou	The region ID of the instance. You can call DescribeRegions To view the latest list of Alibaba Cloud regions.

Response parameters

Parameter	Type	Example	Description
RequestId	String	EA5FB7F2-BDDA-49C8-B9ED-9C4D3F5D27E8	The ID of the request.
StackName	String	N/A	A reserved parameter.
StackVersion	String	N/A	A reserved parameter.
SupportServiceList	Array of SupportService		The list of supported services.
SupportService			

Parameter	Type	Example	Description
ServiceDisplayName	String	Hive	The name of the service.
ServiceEcmVersion	String	2.3.5.5.1	The reserved field.
ServiceName	String	HIVE	The name of the service.
ServiceVersion	String	2.3.5-1.1.0	The version of the service.

Examples

Sample requests

```
http(s)://[Endpoint]/?Action=ListClusterSupportService
&ClusterId=C-0EF9B0EC8564****
&RegionId=cn-hangzhou
&<common request parameters>
```

Sample success responses

`XML` format

```
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```

```
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        <ServiceEcmVersion>2.4.44.3.0</ServiceEcmVersion>
        <ServiceVersion>2.4.44</ServiceVersion>
        <ServiceDisplayName>OpenLDAP</ServiceDisplayName>
    </SupportService>
    <SupportService>
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        <ServiceEcmVersion>1.1.0.2.1</ServiceEcmVersion>
        <ServiceVersion>1.1.0-1.0.7</ServiceVersion>
        <ServiceDisplayName>Knox</ServiceDisplayName>
    </SupportService>
    <SupportService>
        <ServiceName>FLINK</ServiceName>
        <ServiceEcmVersion>1.10.0.400.0</ServiceEcmVersion>
        <ServiceVersion>1.10-vvr-1.0.4</ServiceVersion>
        <ServiceDisplayName>Flink</ServiceDisplayName>
    </SupportService>
    <SupportService>
        <ServiceName>RANGER</ServiceName>
```

```
        <ServiceEcmVersion>1.2.0.7.3</ServiceEcmVersion>
        <ServiceVersion>1.2.0-1.4.0</ServiceVersion>
        <ServiceDisplayName>RANGER</ServiceDisplayName>
    </SupportService>
    <SupportService>
        <ServiceName>SUPERSET</ServiceName>
        <ServiceEcmVersion>0.35.2.1.0</ServiceEcmVersion>
        <ServiceVersion>0.35.2</ServiceVersion>
        <ServiceDisplayName>Superset</ServiceDisplayName>
    </SupportService>
    <SupportService>
        <ServiceName>LIVY</ServiceName>
        <ServiceEcmVersion>0.6.0.4.0</ServiceEcmVersion>
        <ServiceVersion>0.6.0-1.0.3</ServiceVersion>
        <ServiceDisplayName>LIVY</ServiceDisplayName>
    </SupportService>
    <SupportService>
        <ServiceName>FLUME</ServiceName>
        <ServiceEcmVersion>1.9.0.2.0</ServiceEcmVersion>
        <ServiceVersion>1.9.0-1.0.1</ServiceVersion>
        <ServiceDisplayName>FLUME</ServiceDisplayName>
    </SupportService>
    <SupportService>
        <ServiceName>KUDU</ServiceName>
        <ServiceEcmVersion>1.10.0.2.0</ServiceEcmVersion>
        <ServiceVersion>1.10.0</ServiceVersion>
        <ServiceDisplayName>Kudu</ServiceDisplayName>
    </SupportService>
</SupportServiceList>
<TotalCount>EMR</TotalCount>
<RequestId>AFE6955C-3652-47E9-8770-6E63B77658E2</RequestId>
<PageNumber>3.28.2.0.4</PageNumber>
```

JSON Syntax

```
{
    "SupportServiceList": {
        "SupportService": [
            {
                "ServiceName": "BIGBOOT",
                "ServiceEcmVersion": "2.7.202.0.3",
                "ServiceVersion": "2.7.202",
                "ServiceDisplayName": "Bigboot"
            },
            {
                "ServiceName": "SMARTDATA",
                "ServiceEcmVersion": "2.7.202.0.3",
                "ServiceVersion": "2.7.202",
                "ServiceDisplayName": "SmartData"
            },
            {
                "ServiceName": "GANGLIA",
                "ServiceEcmVersion": "3.7.2.10.1",
                "ServiceVersion": "3.7.2",
```

```
                "ServiceDisplayName": "Ganglia"
            },
            {
                "ServiceName": "IMPALA",
                "ServiceEcmVersion": "2.12.2.0.2.1",
                "ServiceVersion": "2.12.2-1.0.2",
                "ServiceDisplayName": "Impala"
            },
            {
                "ServiceName": "PRESTO",
                "ServiceEcmVersion": "331.2.0",
                "ServiceVersion": "331-1.0.1",
                "ServiceDisplayName": "Presto"
            },
            {
                "ServiceName": "OOZIE",
                "ServiceEcmVersion": "5.1.0.0.5",
                "ServiceVersion": "5.1.0-1.0.0",
                "ServiceDisplayName": "Oozie"
            },
            {
                "ServiceName": "ZOOKEEPER",
                "ServiceEcmVersion": "3.5.6.1.0",
                "ServiceVersion": "3.5.6",
                "ServiceDisplayName": "ZooKeeper"
            },
            {
                "ServiceName": "HDFS",
                "ServiceEcmVersion": "2.8.5.9.2",
                "ServiceVersion": "2.8.5-1.5.2",
                "ServiceDisplayName": "HDFS"
            },
            {
                "ServiceName": "YARN",
                "ServiceEcmVersion": "2.8.5.9.2",
                "ServiceVersion": "2.8.5-1.5.2",
                "ServiceDisplayName": "YARN"
            },
            {
                "ServiceName": "HIVE",
                "ServiceEcmVersion": "2.3.5.5.1",
                "ServiceVersion": "2.3.5-1.1.0",
                "ServiceDisplayName": "Hive"
            },
            {
                "ServiceName": "HBASE",
                "ServiceEcmVersion": "1.4.9.1.4",
                "ServiceVersion": "1.4.9-1.0.0",
                "ServiceDisplayName": "HBase"
            },
            {
                "ServiceName": "SPARK",
                "ServiceEcmVersion": "2.4.5.1.0",
                "ServiceVersion": "2.4.5-hadoop2.8-1.0.0",
```

```
            "ServiceDisplayName": "Spark"
        },
        {
            "ServiceName": "PIG",
            "ServiceEcmVersion": "0.14.0.1.1",
            "ServiceVersion": "0.14.0",
            "ServiceDisplayName": "Pig"
        },
        {
            "ServiceName": "PHOENIX",
            "ServiceEcmVersion": "4.14.1.1.1",
            "ServiceVersion": "4.14.1",
            "ServiceDisplayName": "Phoenix"
        },
        {
            "ServiceName": "SQOOP",
            "ServiceEcmVersion": "1.4.7.3.2",
            "ServiceVersion": "1.4.7-1.0.3",
            "ServiceDisplayName": "Sqoop"
        },
        {
            "ServiceName": "TEZ",
            "ServiceEcmVersion": "0.9.2.4.0",
            "ServiceVersion": "0.9.2-1.2.1",
            "ServiceDisplayName": "Tez"
        },
        {
            "ServiceName": "HUE",
            "ServiceEcmVersion": "4.4.0.3.1",
            "ServiceVersion": "4.4.0",
            "ServiceDisplayName": "Hue"
        },
        {
            "ServiceName": "ZEPPELIN",
            "ServiceEcmVersion": "0.8.1.1.5",
            "ServiceVersion": "0.8.1-1.0.2",
            "ServiceDisplayName": "Zeppelin"
        },
        {
            "ServiceName": "STORM",
            "ServiceEcmVersion": "1.2.2.2.0",
            "ServiceVersion": "1.2.2-1.0.1",
            "ServiceDisplayName": "Storm"
        },
        {
            "ServiceName": "OPENLDAP",
            "ServiceEcmVersion": "2.4.44.3.0",
            "ServiceVersion": "2.4.44",
            "ServiceDisplayName": "OpenLDAP"
        },
        {
            "ServiceName": "KNOX",
            "ServiceEcmVersion": "1.1.0.2.1",
            "ServiceVersion": "1.1.0-1.0.7",
```

```
                "ServiceDisplayName": "Knox"
            },
            {
                "ServiceName": "FLINK",
                "ServiceEcmVersion": "1.10.0.400.0",
                "ServiceVersion": "1.10-vvr-1.0.4",
                "ServiceDisplayName": "Flink"
            },
            {
                "ServiceName": "RANGER",
                "ServiceEcmVersion": "1.2.0.7.3",
                "ServiceVersion": "1.2.0-1.4.0",
                "ServiceDisplayName": "RANGER"
            },
            {
                "ServiceName": "SUPERSET",
                "ServiceEcmVersion": "0.35.2.1.0",
                "ServiceVersion": "0.35.2",
                "ServiceDisplayName": "Superset"
            },
            {
                "ServiceName": "LIVY",
                "ServiceEcmVersion": "0.6.0.4.0",
                "ServiceVersion": "0.6.0-1.0.3",
                "ServiceDisplayName": "LIVY"
            },
            {
                "ServiceName": "FLUME",
                "ServiceEcmVersion": "1.9.0.2.0",
                "ServiceVersion": "1.9.0-1.0.1",
                "ServiceDisplayName": "FLUME"
            },
            {
                "ServiceName": "KUDU",
                "ServiceEcmVersion": "1.10.0.2.0",
                "ServiceVersion": "1.10.0",
                "ServiceDisplayName": "Kudu"
            }
        ]
    },
    "TotalCount": "EMR",
    "RequestId": "AFE6955C-3652-47E9-8770-6E63B77658E2",
    "PageNumber": "3.28.2.0.4"
}
```


4.13. Queries the Service list of a cluster

You can call the ListClusterService operation to query services in a cluster.

Debugging

OpenAPI Explorer automatically calculates the signature value. For your convenience, we recommend that you call this operation in OpenAPI Explorer. You can use OpenAPI Explorer to search for API operations, call API operations, and dynamically generate SDK sample code.

Request parameters

Parameter	Type	Required	Example	Description
Action	String	Yes	ListClusterService	The operation that you want to perform. Set the value to ListClusterService.
ClusterId	String	Yes	C-F32FB31D8295****	The ID of the cluster. You can call ListClusters You can call this operation to view the ID of a cluster.
RegionId	String	Yes	cn-hangzhou	The region ID. You can call DescribeRegions To view the latest list of Alibaba Cloud regions.
PageNumber	Integer	No	1	The number of the page to return.
PageSize	Integer	No	100	The number of entries to return on each page.

Response parameters

Parameter	Type	Example	Description
ClusterServiceList	Array of ClusterService		The services provided by the cluster.
ClusterService			
AbnormalNum	Integer	0	The number of components that are in abnormal state.
ClientType	Boolean	false	Required **Client** The type of the topic.
HealthStatus	String	""	The health status of the service components.
InstallStatus	Boolean	true	Indicates whether the service is installed in the cluster.

Parameter	Type	Example	Description
NeedRestartInfo	String	""	Indicates whether the components of the service need to be restarted.
NeedRestartNum	Integer	0	The number of the components that need to be restarted.
NotStartInfo	String	""	The information of the components that are not started.
ServiceActionList	Array of ServiceAction		Supported by the service **Action** The details about an item.
ServiceAction			
ActionName	String	CUSTOM_COMMAND	The name of the Action.
Command	String	refreshQueues	For specific commands, when the Action name is CUSTOM_COMMAND, it must be specified.
ComponentName	String	ResourceManager	The name of a component.
DisplayName	String	Refresh Queues	The display name of the component.
ServiceName	String	YARN	The name of the service.
ServiceDisplayName	String	HDFS	The display name of the service.
ServiceName	String	HDFS	The name of the service.
ServiceStatus	String	INSTALLED	The status of the service.
ServiceVersion	String	2.7.2	The version of the service.
StoppedNum	Integer	0	The number of components that have stopped running.

Parameter	Type	Example	Description
PageNumber	Integer	1	The page number of the returned page.
PageSize	Integer	100	The number of records per page.
RequestId	String	DF202AC2-5D5D-4288-B608-B7B1595B5C7C	The ID of the request.
TotalCount	Integer	25	The total number of entries returned.

Examples

Sample requests

```
http(s)://[Endpoint]/?Action=ListClusterService
&ClusterId=C-F32FB31D8295****
&RegionId=cn-hangzhou
&<common request parameters>
```

Sample success responses

`XML` format

```
<ClusterServiceList>
    <ClusterService>
        <AbnormalNum>0</AbnormalNum>
        <ClientType>false</ClientType>
        <HealthStatus/>
        <InstallStatus>true</InstallStatus>
        <NeedRestartInfo/>
        <NeedRestartNum>0</NeedRestartNum>
        <NotStartInfo>Have 0 component(s) not started.</NotStartInfo>
        <ServiceActionList>
            <ServiceAction>
                <ActionName>CONFIGURE</ActionName>
                <ComponentName>ALL COMPONENTS</ComponentName>
                <DisplayName>CONFIGURE All Components</DisplayName>
                <ServiceName>HDFS</ServiceName>
            </ServiceAction>
            <ServiceAction>
                <ActionName>START</ActionName>
                <ComponentName>ALL COMPONENTS</ComponentName>
                <DisplayName>START All Components</DisplayName>
                <ServiceName>HDFS</ServiceName>
            </ServiceAction>
            <ServiceAction>
                <ActionName>STOP</ActionName>
                <ComponentName>ALL COMPONENTS</ComponentName>
                <DisplayName>STOP All Components</DisplayName>
```

```
            <ServiceName>HDFS</ServiceName>
        </ServiceAction>
        <ServiceAction>
            <ActionName>RESTART</ActionName>
            <ComponentName>ALL COMPONENTS</ComponentName>
            <DisplayName>RESTART All Components</DisplayName>
            <ServiceName>HDFS</ServiceName>
        </ServiceAction>
        <ServiceAction>
            <ActionName>RESTART</ActionName>
            <ComponentName>DataNode</ComponentName>
            <DisplayName>RESTART DataNode</DisplayName>
            <ServiceName>HDFS</ServiceName>
        </ServiceAction>
        <ServiceAction>
            <ActionName>RESTART</ActionName>
            <ComponentName>HttpFS</ComponentName>
            <DisplayName>RESTART HttpFS</DisplayName>
            <ServiceName>HDFS</ServiceName>
        </ServiceAction>
        <ServiceAction>
            <ActionName>RESTART</ActionName>
            <ComponentName>KMS</ComponentName>
            <DisplayName>RESTART KMS</DisplayName>
            <ServiceName>HDFS</ServiceName>
        </ServiceAction>
        <ServiceAction>
            <ActionName>RESTART</ActionName>
            <ComponentName>NameNode</ComponentName>
            <DisplayName>RESTART NameNode</DisplayName>
            <ServiceName>HDFS</ServiceName>
        </ServiceAction>
        <ServiceAction>
            <ActionName>RESTART</ActionName>
            <ComponentName>SecondaryNameNode</ComponentName>
            <DisplayName>RESTART SecondaryNameNode</DisplayName>
            <ServiceName>HDFS</ServiceName>
        </ServiceAction>
        <ServiceAction>
            <ActionName>CUSTOM_COMMAND</ActionName>
            <Command>rebalance</Command>
            <ComponentName>NameNode</ComponentName>
            <DisplayName>REBALANCE HDFS</DisplayName>
            <ServiceName>HDFS</ServiceName>
        </ServiceAction>
        <ServiceAction>
            <ActionName>CUSTOM_COMMAND</ActionName>
            <Command>stop_rebalance</Command>
            <ComponentName>NameNode</ComponentName>
            <DisplayName>STOP_REBALANCE HDFS</DisplayName>
            <ServiceName>HDFS</ServiceName>
        </ServiceAction>
    </ServiceActionList>
    <ServiceDisplayName>HDFS</ServiceDisplayName>
```

```
        <ServiceName>HDFS</ServiceName>
        <ServiceStatus>INSTALLED</ServiceStatus>
        <ServiceVersion>2.7.2</ServiceVersion>
        <StoppedNum>2</StoppedNum>
    </ClusterService>
    <ClusterService>
        <AbnormalNum>0</AbnormalNum>
        <ClientType>false</ClientType>
        <HealthStatus/>
        <InstallStatus>true</InstallStatus>
        <NeedRestartInfo/>
        <NeedRestartNum>0</NeedRestartNum>
        <NotStartInfo/>
        <ServiceActionList>
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                <ComponentName>ALL COMPONENTS</ComponentName>
                <DisplayName>CONFIGURE All Components</DisplayName>
                <ServiceName>YARN</ServiceName>
            </ServiceAction>
            <ServiceAction>
                <ActionName>START</ActionName>
                <ComponentName>ALL COMPONENTS</ComponentName>
                <DisplayName>START All Components</DisplayName>
                <ServiceName>YARN</ServiceName>
            </ServiceAction>
            <ServiceAction>
                <ActionName>STOP</ActionName>
                <ComponentName>ALL COMPONENTS</ComponentName>
                <DisplayName>STOP All Components</DisplayName>
                <ServiceName>YARN</ServiceName>
            </ServiceAction>
            <ServiceAction>
                <ActionName>RESTART</ActionName>
                <ComponentName>ALL COMPONENTS</ComponentName>
                <DisplayName>RESTART All Components</DisplayName>
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            <ServiceAction>
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                <ComponentName>JobHistory</ComponentName>
                <DisplayName>RESTART JobHistory</DisplayName>
                <ServiceName>YARN</ServiceName>
            </ServiceAction>
            <ServiceAction>
                <ActionName>RESTART</ActionName>
                <ComponentName>NodeManager</ComponentName>
                <DisplayName>RESTART NodeManager</DisplayName>
                <ServiceName>YARN</ServiceName>
            </ServiceAction>
            <ServiceAction>
                <ActionName>RESTART</ActionName>
                <ComponentName>ResourceManager</ComponentName>
                <DisplayName>RESTART ResourceManager</DisplayName>
```

```
                <ServiceName>YARN</ServiceName>
            </ServiceAction>
            <ServiceAction>
                <ActionName>RESTART</ActionName>
                <ComponentName>TimeLineServer</ComponentName>
                <DisplayName>RESTART App Timeline Server</DisplayName>
                <ServiceName>YARN</ServiceName>
            </ServiceAction>
            <ServiceAction>
                <ActionName>RESTART</ActionName>
                <ComponentName>WebAppProxyServer</ComponentName>
                <DisplayName>RESTART WebAppProxyServer</DisplayName>
                <ServiceName>YARN</ServiceName>
            </ServiceAction>
            <ServiceAction>
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                <Command>refreshQueues</Command>
                <ComponentName>ResourceManager</ComponentName>
                <DisplayName>Refresh Queues</DisplayName>
                <ServiceName>YARN</ServiceName>
            </ServiceAction>
            <ServiceAction>
                <ActionName>CUSTOM_COMMAND</ActionName>
                <Command>enableCGroups</Command>
                <ComponentName>NodeManager</ComponentName>
                <DisplayName>Enable CGroups</DisplayName>
                <ServiceName>YARN</ServiceName>
            </ServiceAction>
            <ServiceAction>
                <ActionName>CUSTOM_COMMAND</ActionName>
                <Command>disableCGroups</Command>
                <ComponentName>NodeManager</ComponentName>
                <DisplayName>Disable CGroups</DisplayName>
                <ServiceName>YARN</ServiceName>
            </ServiceAction>
        </ServiceActionList>
        <ServiceDisplayName>YARN</ServiceDisplayName>
        <ServiceName>YARN</ServiceName>
        <ServiceStatus>INSTALLED</ServiceStatus>
        <ServiceVersion>2.7.2</ServiceVersion>
        <StoppedNum>0</StoppedNum>
    </ClusterService>
    <ClusterService>
        <AbnormalNum>0</AbnormalNum>
        <ClientType>false</ClientType>
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        <InstallStatus>true</InstallStatus>
        <NeedRestartInfo/>
        <NeedRestartNum>0</NeedRestartNum>
        <NotStartInfo/>
        <ServiceActionList>
            <ServiceAction>
                <ActionName>CONFIGURE</ActionName>
                <ComponentName>ALL COMPONENTS</ComponentName>
                <DisplayName>CONFIGURE All Components</DisplayName>
```

```
                <ServiceName>HIVE</ServiceName>
            </ServiceAction>
            <ServiceAction>
                <ActionName>START</ActionName>
                <ComponentName>ALL COMPONENTS</ComponentName>
                <DisplayName>START All Components</DisplayName>
                <ServiceName>HIVE</ServiceName>
            </ServiceAction>
            <ServiceAction>
                <ActionName>STOP</ActionName>
                <ComponentName>ALL COMPONENTS</ComponentName>
                <DisplayName>STOP All Components</DisplayName>
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            <ServiceAction>
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                <ComponentName>ALL COMPONENTS</ComponentName>
                <DisplayName>RESTART All Components</DisplayName>
                <ServiceName>HIVE</ServiceName>
            </ServiceAction>
            <ServiceAction>
                <ActionName>RESTART</ActionName>
                <ComponentName>HiveMetaStore</ComponentName>
                <DisplayName>RESTART Hive MetaStore</DisplayName>
                <ServiceName>HIVE</ServiceName>
            </ServiceAction>
            <ServiceAction>
                <ActionName>RESTART</ActionName>
                <ComponentName>HiveServer</ComponentName>
                <DisplayName>RESTART HiveServer2</DisplayName>
                <ServiceName>HIVE</ServiceName>
            </ServiceAction>
        </ServiceActionList>
        <ServiceDisplayName>Hive</ServiceDisplayName>
        <ServiceName>HIVE</ServiceName>
        <ServiceStatus>INSTALLED</ServiceStatus>
        <ServiceVersion>2.3.3</ServiceVersion>
        <StoppedNum>0</StoppedNum>
    </ClusterService>
    <ClusterService>
        <AbnormalNum>0</AbnormalNum>
        <ClientType>false</ClientType>
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        <InstallStatus>true</InstallStatus>
        <NeedRestartInfo/>
        <NeedRestartNum>0</NeedRestartNum>
        <NotStartInfo/>
        <ServiceActionList>
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                <ActionName>CONFIGURE</ActionName>
                <ComponentName>ALL COMPONENTS</ComponentName>
                <DisplayName>CONFIGURE All Components</DisplayName>
                <ServiceName>GANGLIA</ServiceName>
            </ServiceAction>
```

```
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                <ComponentName>ALL COMPONENTS</ComponentName>
                <DisplayName>START All Components</DisplayName>
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            </ServiceAction>
            <ServiceAction>
                <ActionName>STOP</ActionName>
                <ComponentName>ALL COMPONENTS</ComponentName>
                <DisplayName>STOP All Components</DisplayName>
                <ServiceName>GANGLIA</ServiceName>
            </ServiceAction>
            <ServiceAction>
                <ActionName>RESTART</ActionName>
                <ComponentName>ALL COMPONENTS</ComponentName>
                <DisplayName>RESTART All Components</DisplayName>
                <ServiceName>GANGLIA</ServiceName>
            </ServiceAction>
            <ServiceAction>
                <ActionName>RESTART</ActionName>
                <ComponentName>GMETAD</ComponentName>
                <DisplayName>RESTART Gmetad</DisplayName>
                <ServiceName>GANGLIA</ServiceName>
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            <ServiceAction>
                <ActionName>RESTART</ActionName>
                <ComponentName>GMOND</ComponentName>
                <DisplayName>RESTART Gmond</DisplayName>
                <ServiceName>GANGLIA</ServiceName>
            </ServiceAction>
            <ServiceAction>
                <ActionName>RESTART</ActionName>
                <ComponentName>HTTPD</ComponentName>
                <DisplayName>RESTART Httpd</DisplayName>
                <ServiceName>GANGLIA</ServiceName>
            </ServiceAction>
        </ServiceActionList>
        <ServiceDisplayName>Ganglia</ServiceDisplayName>
        <ServiceName>GANGLIA</ServiceName>
        <ServiceStatus>INSTALLED</ServiceStatus>
        <ServiceVersion>3.7.2</ServiceVersion>
        <StoppedNum>0</StoppedNum>
    </ClusterService>
    <ClusterService>
        <HealthStatus/>
        <InstallStatus>false</InstallStatus>
        <NeedRestartInfo/>
        <NotStartInfo/>
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        </ServiceActionList>
        <ServiceDisplayName>ZooKeeper</ServiceDisplayName>
        <ServiceName>ZOOKEEPER</ServiceName>
        <ServiceStatus/>
        <ServiceVersion>3.4.13</ServiceVersion>
```

```
    </ClusterService>
    <ClusterService>
        <AbnormalNum>0</AbnormalNum>
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        <HealthStatus/>
        <InstallStatus>true</InstallStatus>
        <NeedRestartInfo/>
        <NeedRestartNum>0</NeedRestartNum>
        <NotStartInfo/>
        <ServiceActionList>
            <ServiceAction>
                <ActionName>CONFIGURE</ActionName>
                <ComponentName>ALL COMPONENTS</ComponentName>
                <DisplayName>CONFIGURE All Components</DisplayName>
                <ServiceName>SPARK</ServiceName>
            </ServiceAction>
            <ServiceAction>
                <ActionName>START</ActionName>
                <ComponentName>ALL COMPONENTS</ComponentName>
                <DisplayName>START All Components</DisplayName>
                <ServiceName>SPARK</ServiceName>
            </ServiceAction>
            <ServiceAction>
                <ActionName>STOP</ActionName>
                <ComponentName>ALL COMPONENTS</ComponentName>
                <DisplayName>STOP All Components</DisplayName>
                <ServiceName>SPARK</ServiceName>
            </ServiceAction>
            <ServiceAction>
                <ActionName>RESTART</ActionName>
                <ComponentName>ALL COMPONENTS</ComponentName>
                <DisplayName>RESTART All Components</DisplayName>
                <ServiceName>SPARK</ServiceName>
            </ServiceAction>
            <ServiceAction>
                <ActionName>RESTART</ActionName>
                <ComponentName>SparkHistory</ComponentName>
                <DisplayName>RESTART SparkHistory</DisplayName>
                <ServiceName>SPARK</ServiceName>
            </ServiceAction>
            <ServiceAction>
                <ActionName>RESTART</ActionName>
                <ComponentName>SparkThriftServer</ComponentName>
                <DisplayName>RESTART ThriftServer</DisplayName>
                <ServiceName>SPARK</ServiceName>
            </ServiceAction>
        </ServiceActionList>
        <ServiceDisplayName>Spark</ServiceDisplayName>
        <ServiceName>SPARK</ServiceName>
        <ServiceStatus>INSTALLED</ServiceStatus>
        <ServiceVersion>2.3.2</ServiceVersion>
        <StoppedNum>0</StoppedNum>
    </ClusterService>
    <ClusterService>
```

```
        <HealthStatus/>
        <InstallStatus>false</InstallStatus>
        <NeedRestartInfo/>
        <NotStartInfo/>
        <ServiceActionList>
        </ServiceActionList>
        <ServiceDisplayName>HBase</ServiceDisplayName>
        <ServiceName>HBASE</ServiceName>
        <ServiceStatus/>
        <ServiceVersion>1.1.1</ServiceVersion>
    </ClusterService>
    <ClusterService>
        <AbnormalNum>0</AbnormalNum>
        <ClientType>false</ClientType>
        <HealthStatus/>
        <InstallStatus>true</InstallStatus>
        <NeedRestartInfo/>
        <NeedRestartNum>0</NeedRestartNum>
        <NotStartInfo/>
        <ServiceActionList>
            <ServiceAction>
                <ActionName>CONFIGURE</ActionName>
                <ComponentName>ALL COMPONENTS</ComponentName>
                <DisplayName>CONFIGURE All Components</DisplayName>
                <ServiceName>HUE</ServiceName>
            </ServiceAction>
            <ServiceAction>
                <ActionName>START</ActionName>
                <ComponentName>ALL COMPONENTS</ComponentName>
                <DisplayName>START All Components</DisplayName>
                <ServiceName>HUE</ServiceName>
            </ServiceAction>
            <ServiceAction>
                <ActionName>STOP</ActionName>
                <ComponentName>ALL COMPONENTS</ComponentName>
                <DisplayName>STOP All Components</DisplayName>
                <ServiceName>HUE</ServiceName>
            </ServiceAction>
            <ServiceAction>
                <ActionName>RESTART</ActionName>
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JSON Syntax

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                        {
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```
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```

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                            "ServiceName":"EMRFLOW"
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                            "DisplayName":"metacli ops",
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                        }
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}
```


4.14. View a list of health information

You can call ListClusterServiceComponentHealthInfo operation to query the health information of the components of a specified service in a cluster.

Debugging

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

Request parameters

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

Parameter	Type	Required	Example	Description
ClusterId	String	Yes	C-F32FB31D8295****	The cluster ID. You can call ListClusters View the ID of the cluster.
RegionId	String	Yes	cn-hangzhou	The region ID. You can call DescribeRegions View the latest list of Alibaba Cloud regions.
ServiceName	String	No	TEZ	The name of the service.

Response parameters

Parameter	Type	Example	Description
ClusterId	String	C-F32FB31D8295****	The ID of the cluster.
HealthInfoList	Array of HealthInfo		The health information of the components of the specified service.
HealthInfo			
AgentHeartBeatLostNum	Integer	0	The number of hosts on which the agent heartbeat is lost.
ComponentName	String	ResourceManager	The name of the component that you want to upgrade.
CreatedTime	Long	0	A reserved parameter. You do not need to specify this parameter.
HealthDetailList	Array of HealthDetail		The health details of the component.
HealthDetail			
HealthRuleParam	Struct		The rule used to monitor the health detail of the component.
Component	String	Ecm-Agent	The names of add-ons.

Parameter	Type	Example	Description
HostNames	String	emr-worker-1	The names of the hosts on which the component is installed.
Pass	String	""	The result of the monitoring rule.
RuleDescription	String	Agent monitoring	The description of the rule.
RuleId	String	111	The IDs of the rules.
RuleTitle	String	AgentHeartBeatCheck	The title of the health monitoring rule.
Service	String	YARN	The name of the service.
code	String	200	The code of the error.
HealthLevel	String	NORMAL	Health level, the value is as follows: • ABNORMAL: abnormal • NORMAL: The virtual MFA device is normal. • RESIZING: in configuration • INITIALIZING: Initializing • RELEASED: Released
ManualStoppedNum	Integer	0	The number of manually stopped components.
NormalNum	Integer	7	The number of functioning components.
ServiceName	String	YARN	The name of the service.
StoppedNum	Integer	0	The number of components that have stopped running.
TotalNum	Integer	7	The total number of components.
RequestId	String	DF202AC2-5D5D-4288-B608-B7B1595B5C7C	The ID of the request.

Examples

Sample requests

```
http(s)://[Endpoint]/?Action=ListClusterServiceComponentHealthInfo
&ClusterId=C-F32FB31D8295****
&RegionId=cn-hangzhou
&<common request parameters>
```

Sample success responses

`XML` format

```
<RequestId>F695F08B-6C37-482A-AA4F-44A07B05CE84</RequestId>
<ClusterId>C-F7CBF0B43D98****</ClusterId>
<HealthInfoList>
    <HealthInfo>
        <StoppedNum>0</StoppedNum>
        <NormalNum>7</NormalNum>
        <TotalNum>7</TotalNum>
        <HealthDetailList>
        </HealthDetailList>
        <ServiceName>EMR-MONITOR</ServiceName>
        <ManualStoppedNum>0</ManualStoppedNum>
        <HealthLevel>NORMAL</HealthLevel>
        <AgentHeartBeatLostNum>0</AgentHeartBeatLostNum>
    </HealthInfo>
    <HealthInfo>
        <StoppedNum>0</StoppedNum>
        <NormalNum>8</NormalNum>
        <TotalNum>8</TotalNum>
        <HealthDetailList>
        </HealthDetailList>
        <ServiceName>GANGLIA</ServiceName>
        <ManualStoppedNum>0</ManualStoppedNum>
        <HealthLevel>NORMAL</HealthLevel>
        <AgentHeartBeatLostNum>0</AgentHeartBeatLostNum>
    </HealthInfo>
    <HealthInfo>
        <StoppedNum>0</StoppedNum>
        <NormalNum>4</NormalNum>
        <TotalNum>4</TotalNum>
        <HealthDetailList>
        </HealthDetailList>
        <ServiceName>EMRDOCTOR</ServiceName>
        <ManualStoppedNum>0</ManualStoppedNum>
        <HealthLevel>NORMAL</HealthLevel>
        <AgentHeartBeatLostNum>0</AgentHeartBeatLostNum>
    </HealthInfo>
    <HealthInfo>
        <StoppedNum>0</StoppedNum>
        <NormalNum>1</NormalNum>
        <TotalNum>1</TotalNum>
        <HealthDetailList>
```

```
        </HealthDetailList>
        <ServiceName>MYSQL</ServiceName>
        <ManualStoppedNum>0</ManualStoppedNum>
        <HealthLevel>NORMAL</HealthLevel>
        <AgentHeartBeatLostNum>0</AgentHeartBeatLostNum>
    </HealthInfo>
    <HealthInfo>
        <StoppedNum>0</StoppedNum>
        <NormalNum>3</NormalNum>
        <TotalNum>3</TotalNum>
        <HealthDetailList>
        </HealthDetailList>
        <ServiceName>SQOOP</ServiceName>
        <ManualStoppedNum>0</ManualStoppedNum>
        <HealthLevel>NORMAL</HealthLevel>
        <AgentHeartBeatLostNum>0</AgentHeartBeatLostNum>
    </HealthInfo>
    <HealthInfo>
        <StoppedNum>0</StoppedNum>
        <NormalNum>1</NormalNum>
        <TotalNum>1</TotalNum>
        <HealthDetailList>
        </HealthDetailList>
        <ServiceName>APACHEDS</ServiceName>
        <ManualStoppedNum>0</ManualStoppedNum>
        <HealthLevel>NORMAL</HealthLevel>
        <AgentHeartBeatLostNum>0</AgentHeartBeatLostNum>
    </HealthInfo>
    <HealthInfo>
        <StoppedNum>0</StoppedNum>
        <NormalNum>3</NormalNum>
        <TotalNum>3</TotalNum>
        <HealthDetailList>
        </HealthDetailList>
        <ServiceName>ILOGTAIL</ServiceName>
        <ManualStoppedNum>0</ManualStoppedNum>
        <HealthLevel>NORMAL</HealthLevel>
        <AgentHeartBeatLostNum>0</AgentHeartBeatLostNum>
    </HealthInfo>
    <HealthInfo>
        <StoppedNum>2</StoppedNum>
        <NormalNum>7</NormalNum>
        <TotalNum>9</TotalNum>
        <HealthDetailList>
        </HealthDetailList>
        <ServiceName>HDFS</ServiceName>
        <ManualStoppedNum>2</ManualStoppedNum>
        <HealthLevel>NORMAL</HealthLevel>
        <AgentHeartBeatLostNum>0</AgentHeartBeatLostNum>
    </HealthInfo>
    <HealthInfo>
        <StoppedNum>0</StoppedNum>
        <NormalNum>4</NormalNum>
        <TotalNum>4</TotalNum>
        <HealthDetailList>
```

```
        <HealthDetailList>
        </HealthDetailList>
        <ServiceName>TEZ</ServiceName>
        <ManualStoppedNum>0</ManualStoppedNum>
        <HealthLevel>NORMAL</HealthLevel>
        <AgentHeartBeatLostNum>0</AgentHeartBeatLostNum>
    </HealthInfo>
    <HealthInfo>
        <StoppedNum>0</StoppedNum>
        <NormalNum>5</NormalNum>
        <TotalNum>5</TotalNum>
        <HealthDetailList>
        </HealthDetailList>
        <ServiceName>SPARK</ServiceName>
        <ManualStoppedNum>0</ManualStoppedNum>
        <HealthLevel>NORMAL</HealthLevel>
        <AgentHeartBeatLostNum>0</AgentHeartBeatLostNum>
    </HealthInfo>
    <HealthInfo>
        <StoppedNum>0</StoppedNum>
        <NormalNum>1</NormalNum>
        <TotalNum>1</TotalNum>
        <HealthDetailList>
        </HealthDetailList>
        <ServiceName>HAPROXY</ServiceName>
        <ManualStoppedNum>0</ManualStoppedNum>
        <HealthLevel>NORMAL</HealthLevel>
        <AgentHeartBeatLostNum>0</AgentHeartBeatLostNum>
    </HealthInfo>
    <HealthInfo>
        <StoppedNum>0</StoppedNum>
        <NormalNum>6</NormalNum>
        <TotalNum>6</TotalNum>
        <HealthDetailList>
        </HealthDetailList>
        <ServiceName>PRESTO</ServiceName>
        <ManualStoppedNum>0</ManualStoppedNum>
        <HealthLevel>NORMAL</HealthLevel>
        <AgentHeartBeatLostNum>0</AgentHeartBeatLostNum>
    </HealthInfo>
    <HealthInfo>
        <StoppedNum>0</StoppedNum>
        <NormalNum>9</NormalNum>
        <TotalNum>9</TotalNum>
        <HealthDetailList>
        </HealthDetailList>
        <ServiceName>YARN</ServiceName>
        <ManualStoppedNum>0</ManualStoppedNum>
        <HealthLevel>NORMAL</HealthLevel>
        <AgentHeartBeatLostNum>0</AgentHeartBeatLostNum>
    </HealthInfo>
    <HealthInfo>
        <StoppedNum>0</StoppedNum>
        <NormalNum>5</NormalNum>
        <TotalNum>5</TotalNum>
```

```
        <HealthDetailList>
        </HealthDetailList>
        <ServiceName>EMRFLOW</ServiceName>
        <ManualStoppedNum>0</ManualStoppedNum>
        <HealthLevel>NORMAL</HealthLevel>
        <AgentHeartBeatLostNum>0</AgentHeartBeatLostNum>
    </HealthInfo>
    <HealthInfo>
        <StoppedNum>0</StoppedNum>
        <NormalNum>1</NormalNum>
        <TotalNum>1</TotalNum>
        <HealthDetailList>
        </HealthDetailList>
        <ServiceName>KNOX</ServiceName>
        <ManualStoppedNum>0</ManualStoppedNum>
        <HealthLevel>NORMAL</HealthLevel>
        <AgentHeartBeatLostNum>0</AgentHeartBeatLostNum>
    </HealthInfo>
    <HealthInfo>
        <StoppedNum>0</StoppedNum>
        <NormalNum>3</NormalNum>
        <TotalNum>3</TotalNum>
        <HealthDetailList>
        </HealthDetailList>
        <ServiceName>PIG</ServiceName>
        <ManualStoppedNum>0</ManualStoppedNum>
        <HealthLevel>NORMAL</HealthLevel>
        <AgentHeartBeatLostNum>0</AgentHeartBeatLostNum>
    </HealthInfo>
    <HealthInfo>
        <StoppedNum>0</StoppedNum>
        <NormalNum>5</NormalNum>
        <TotalNum>5</TotalNum>
        <HealthDetailList>
        </HealthDetailList>
        <ServiceName>HIVE</ServiceName>
        <ManualStoppedNum>0</ManualStoppedNum>
        <HealthLevel>NORMAL</HealthLevel>
        <AgentHeartBeatLostNum>0</AgentHeartBeatLostNum>
    </HealthInfo>
    <HealthInfo>
        <StoppedNum>0</StoppedNum>
        <NormalNum>1</NormalNum>
        <TotalNum>1</TotalNum>
        <HealthDetailList>
        </HealthDetailList>
        <ServiceName>HUE</ServiceName>
        <ManualStoppedNum>0</ManualStoppedNum>
        <HealthLevel>NORMAL</HealthLevel>
        <AgentHeartBeatLostNum>0</AgentHeartBeatLostNum>
    </HealthInfo>
</HealthInfoList>
```

JSON Syntax


```
{
    "RequestId": "F695F08B-6C37-482A-AA4F-44A07B05CE84",
    "ClusterId": "C-F7CBF0B43D98****",
    "HealthInfoList": {
        "HealthInfo": [
            {
                "StoppedNum": 0,
                "NormalNum": 7,
                "TotalNum": 7,
                "HealthDetailList": {
                    "HealthDetail": []
                },
                "ServiceName": "EMR-MONITOR",
                "ManualStoppedNum": 0,
                "HealthLevel": "NORMAL",
                "AgentHeartBeatLostNum": 0
            },
            {
                "StoppedNum": 0,
                "NormalNum": 8,
                "TotalNum": 8,
                "HealthDetailList": {
                    "HealthDetail": []
                },
                "ServiceName": "GANGLIA",
                "ManualStoppedNum": 0,
                "HealthLevel": "NORMAL",
                "AgentHeartBeatLostNum": 0
            },
            {
                "StoppedNum": 0,
                "NormalNum": 4,
                "TotalNum": 4,
                "HealthDetailList": {
                    "HealthDetail": []
                },
                "ServiceName": "EMRDOCTOR",
                "ManualStoppedNum": 0,
                "HealthLevel": "NORMAL",
                "AgentHeartBeatLostNum": 0
            },
            {
                "StoppedNum": 0,
                "NormalNum": 1,
                "TotalNum": 1,
                "HealthDetailList": {
                    "HealthDetail": []
                },
                "ServiceName": "MYSQL",
                "ManualStoppedNum": 0,
                "HealthLevel": "NORMAL",
                "AgentHeartBeatLostNum": 0
```

```
            },
            {
                "StoppedNum": 0,
                "NormalNum": 3,
                "TotalNum": 3,
                "HealthDetailList": {
                    "HealthDetail": []
                },
                "ServiceName": "SQOOP",
                "ManualStoppedNum": 0,
                "HealthLevel": "NORMAL",
                "AgentHeartBeatLostNum": 0
            },
            {
                "StoppedNum": 0,
                "NormalNum": 1,
                "TotalNum": 1,
                "HealthDetailList": {
                    "HealthDetail": []
                },
                "ServiceName": "APACHEDS",
                "ManualStoppedNum": 0,
                "HealthLevel": "NORMAL",
                "AgentHeartBeatLostNum": 0
            },
            {
                "StoppedNum": 0,
                "NormalNum": 3,
                "TotalNum": 3,
                "HealthDetailList": {
                    "HealthDetail": []
                },
                "ServiceName": "ILOGTAIL",
                "ManualStoppedNum": 0,
                "HealthLevel": "NORMAL",
                "AgentHeartBeatLostNum": 0
            },
            {
                "StoppedNum": 2,
                "NormalNum": 7,
                "TotalNum": 9,
                "HealthDetailList": {
                    "HealthDetail": []
                },
                "ServiceName": "HDFS",
                "ManualStoppedNum": 2,
                "HealthLevel": "NORMAL",
                "AgentHeartBeatLostNum": 0
            },
            {
                "StoppedNum": 0,
                "NormalNum": 4,
                "TotalNum": 4,
                "HealthDetailList": {
```

```
                "HealthDetail": []
            },
            "ServiceName": "TEZ",
            "ManualStoppedNum": 0,
            "HealthLevel": "NORMAL",
            "AgentHeartBeatLostNum": 0
        },
        {
            "StoppedNum": 0,
            "NormalNum": 5,
            "TotalNum": 5,
            "HealthDetailList": {
                "HealthDetail": []
            },
            "ServiceName": "SPARK",
            "ManualStoppedNum": 0,
            "HealthLevel": "NORMAL",
            "AgentHeartBeatLostNum": 0
        },
        {
            "StoppedNum": 0,
            "NormalNum": 1,
            "TotalNum": 1,
            "HealthDetailList": {
                "HealthDetail": []
            },
            "ServiceName": "HAPROXY",
            "ManualStoppedNum": 0,
            "HealthLevel": "NORMAL",
            "AgentHeartBeatLostNum": 0
        },
        {
            "StoppedNum": 0,
            "NormalNum": 6,
            "TotalNum": 6,
            "HealthDetailList": {
                "HealthDetail": []
            },
            "ServiceName": "PRESTO",
            "ManualStoppedNum": 0,
            "HealthLevel": "NORMAL",
            "AgentHeartBeatLostNum": 0
        },
        {
            "StoppedNum": 0,
            "NormalNum": 9,
            "TotalNum": 9,
            "HealthDetailList": {
                "HealthDetail": []
            },
            "ServiceName": "YARN",
            "ManualStoppedNum": 0,
            "HealthLevel": "NORMAL",
            "AgentHeartBeatLostNum": 0
        },
```

```
            },
            {
                "StoppedNum": 0,
                "NormalNum": 5,
                "TotalNum": 5,
                "HealthDetailList": {
                    "HealthDetail": []
                },
                "ServiceName": "EMRFLOW",
                "ManualStoppedNum": 0,
                "HealthLevel": "NORMAL",
                "AgentHeartBeatLostNum": 0
            },
            {
                "StoppedNum": 0,
                "NormalNum": 1,
                "TotalNum": 1,
                "HealthDetailList": {
                    "HealthDetail": []
                },
                "ServiceName": "KNOX",
                "ManualStoppedNum": 0,
                "HealthLevel": "NORMAL",
                "AgentHeartBeatLostNum": 0
            },
            {
                "StoppedNum": 0,
                "NormalNum": 3,
                "TotalNum": 3,
                "HealthDetailList": {
                    "HealthDetail": []
                },
                "ServiceName": "PIG",
                "ManualStoppedNum": 0,
                "HealthLevel": "NORMAL",
                "AgentHeartBeatLostNum": 0
            },
            {
                "StoppedNum": 0,
                "NormalNum": 5,
                "TotalNum": 5,
                "HealthDetailList": {
                    "HealthDetail": []
                },
                "ServiceName": "HIVE",
                "ManualStoppedNum": 0,
                "HealthLevel": "NORMAL",
                "AgentHeartBeatLostNum": 0
            },
            {
                "StoppedNum": 0,
                "NormalNum": 1,
                "TotalNum": 1,
                "HealthDetailList": {
                    "HealthDetail": []
```

```
                },
                "ServiceName": "HUE",
                "ManualStoppedNum": 0,
                "HealthLevel": "NORMAL",
                "AgentHeartBeatLostNum": 0
            }
        ]
    }
}
```

4.15. Query the modification history of a service configuration

You can call ListClusterServiceConfigHistory operation to query the configuration modification history of a specified service of a cluster.

Debugging

OpenAPI Explorer automatically calculates the signature value. For your convenience, we recommend that you call this operation in OpenAPI Explorer. You can use OpenAPI Explorer to search for API operations, call API operations, and dynamically generate SDK sample code.

Request parameters

Parameter	Type	Required	Example	Description
Action	String	Yes	ListClusterServiceConfigHistory	The operation that you want to perform. This parameter is required for API requests that you create by piecing together HTTP or HTTPS URLs. Set the value to ListClusterServiceConfigHistory.
ClusterId	String	Yes	C-F32FB31D8295****	The ID of the cluster. You can call ListClusters You can call this operation to view the ID of a cluster.
RegionId	String	Yes	cn-hangzhou	The region ID of the instance. You can call DescribeRegions To view the latest list of Alibaba Cloud regions.
ServiceName	String	No	TEZ	The name of the service. You can call ListClusterService View data on the Member Management page.
ConfigVersion	String	No	0	The version of the configuration file.

Parameter	Type	Required	Example	Description
HostGroupId	String	No	G-A5EA210E15FC*****	The ID of the host group. You can call ListClusterHostGroup View the machine group ID.
HostInstanceId	String	No	i-bp146tnrkq4tcso2****	The ID of the host.
ConfigFileName	String	No	N/A	A reserved parameter.
ConfigItemKey	String	No	N/A	A reserved parameter.
Author	String	No	111	The user who modified the configuration.
Comment	String	No	This is	The description of the cluster.
PageNumber	Integer	No	1	The number of the page to return.
PageSize	Integer	No	100	The number of entries to return on each page.

Response parameters

Parameter	Type	Example	Description
ConfigHistoryList	Array of ConfigHistory		The configuration change histories of the specified service.
ConfigHistory			
Applied	Boolean	true	Indicates whether the configuration takes effect. Valid values: • true: The setting takes effect. • false: does not take effect.
Author	String	1111	The user who modified the configuration data.
Comment	String	modifyConfig	The comment about the modifications.

Parameter	Type	Example	Description
ConfigFileName	String	tez-site	The name of the configuration file.
ConfigItemName	String	tez.am.resource.memory.mb	The name of the configuration parameter.
ConfigVersion	String	1543320502944	The version of the configuration file. It is represented by the modification timestamp of the configuration file.
CreateTime	Long	1543320503000	The time when the user modified the configuration data.
HostGroupId	String	G-A5EA210E15FC****	The ID of the host group.
HostGroupName	String	Master instance group	The name of host group N.
HostInstanceId	String	i-bp146tnrkq4tcso2****	The instance ID of the host. This is typically the ID of an ECS instance.
HostName	String	emr-header-1	The hostname of the server.
NewValue	String	1280	The parameter value after modification.
OldValue	String	640	The parameter value before modification.
ServiceName	String	TEZ	The name of the service.
PageNumber	Integer	1	The page number of the returned page.
PageSize	Integer	100	The number of entries returned on each page.
RequestId	String	DF202AC2-5D5D-4288-B608-B7B1595B5C7C	The ID of the request.
TotalCount	Integer	30	The total number of entries returned.

Examples

Sample requests

```
http(s)://[Endpoint]/?Action=ListClusterServiceConfigHistory
&ClusterId=C-F32FB31D8295****
&RegionId=cn-hangzhou
&<common request parameters>
```

Sample responses

`XML` format

```
<TotalCount>1</TotalCount>
<ConfigHistoryList>
    <ConfigHistory>
        <ConfigFileName>tez-site</ConfigFileName>
        <Comment>xxx</Comment>
        <ServiceName>TEZ</ServiceName>
        <OldValue>640</OldValue>
        <ConfigVersion>1543320502944</ConfigVersion>
        <CreateTime>1543320503000</CreateTime>
        <Author>1250460021754461</Author>
        <NewValue>1280</NewValue>
        <Applied>true</Applied>
        <ConfigItemName>tez.am.resource.memory.mb</ConfigItemName>
    </ConfigHistory>
</ConfigHistoryList>
<PageSize>500</PageSize>
<RequestId>8CC97161-4A0C-4EDB-9799-F0A51C40B070</RequestId>
<PageNumber>1</PageNumber>
```

`JSON` Syntax

```
{
    "TotalCount":1,
    "ConfigHistoryList":
    {
        "ConfigHistory":
        [
            {
                "ConfigFileName":"tez-site",
                "Comment":"xxx",
                "ServiceName":"TEZ",
                "OldValue":"640",
                "ConfigVersion":"1543320502944",
                "CreateTime":1543320503000,
                "Author":"1250460021754461",
                "NewValue":"1280",
                "Applied":true,
                "ConfigItemName":"tez.am.resource.memory.mb"
                }
                ]
                },
                "PageSize":500,
                "RequestId":"8CC97161-4A0C-4EDB-9799-F0A51C40B070",
                "PageNumber":1
                }
```


4.16. Modifies the configuration of a specified service of a cluster

You can call ModifyClusterServiceConfig operation to modify the configuration information of a specified service in a cluster.

Debugging

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

Request parameters

Parameter	Type	Required	Example	Description
Action	String	Yes	ModifyClusterServiceConfig	The operation that you want to perform. This parameter is required for API requests that you create by piecing together HTTP or HTTPS URLs. Set the value to ModifyClusterServiceConfig.

Parameter	Type	Required	Example	Description
ClusterId	String	Yes	C-F32FB31D8295****	The ID of the cluster. You can call ListClusters You can call this operation to view the ID of a cluster.
ConfigParams	String	Yes	{"tez-site": {"tez.am.resource.memory.mb":"640"}}	The specific change of the configuration. It is a JSON string.
RegionId	String	Yes	cn-hangzhou	The region ID. You can call DescribeRegions To view the latest list of Alibaba Cloud regions.
ServiceName	String	Yes	TEZ	The name of the service.
Comment	String	No	modify tez config	The comment for the configuration change.
CustomConfigParams	String	No	{"tez-site": {"key1": {"Value":"value1"}}}	The modification of custom configuration parameters.
GroupId	String	No	G-xxx	The ID of the host group.
HostInstanceId	String	No	i-bp146tnrkq4tcso2****	The instance ID of the host. This is typically the ID of an ECS instance.
ConfigType	String	No	""	The type of the configuration parameters.
GatewayClusterIdList.N	RepeatList	No	C-XXX	The ID of the associated gateway cluster to be synchronized.
RefreshHostConfig	Boolean	No	false	Specifies whether to configure the job immediately after the modification.

Response parameters

Parameter	Type	Example	Description

Parameter	Type	Example	Description
RequestId	String	D9A09DDE-6BE7-473B-9E4B-B3CB762FD4B3	The ID of the request.

Examples

Sample request

```
http(s)://[Endpoint]/?Action=ModifyClusterServiceConfig
&ClusterId=C-F32FB31D8295****
&RegionId=cn-hangzhou
&ServiceName=TEZ
&<common request parameters>
```

Sample success responses

`XML` format

```
<RequestId>D9A09DDE-6BE7-473B-9E4B-B3CB762FD4B3</RequestId>
```

`JSON` Syntax

```
{"RequestId":"D9A09DDE-6BE7-473B-9E4B-B3CB762FD4B3"}
```

4.17. Run specified actions

You can call RunClusterServiceAction operation to run specified operations on a specified service of a cluster.

Debugging

OpenAPI Explorer automatically calculates the signature value. For your convenience, we recommend that you call this operation in OpenAPI Explorer. You can use OpenAPI Explorer to search for API operations, call API operations, and dynamically generate SDK sample code.

Request parameters

Parameter	Type	Required	Example	Description
Action	String	Yes	RunClusterServiceAction	The operation that you want to perform. This parameter is required for API requests that you create by piecing together HTTP or HTTPS URLs. Set the value to RunClusterServiceAction.

Parameter	Type	Required	Example	Description
ServiceName	String	Yes	TEZ	The name of the service. The service name of an existing service in the cluster.
ClusterId	String	Yes	C-F32FB31D8295****	The ID of the cluster. You can call ListClusters You can call this operation to view the ID of a cluster.
RegionId	String	Yes	cn-hangzhou	The region ID. You can call DescribeRegions To view the latest list of Alibaba Cloud regions.
ServiceActionName	String	Yes	STOP	Action name: • CONFIGURE • START • STOP
HostGroupIdList.N	RepeatList	No	1	The ID of the host group. You can call ListClusterHostGroup View Machine Group ID.
HostIdList	String	No	""	The list of host IDs. Separate host IDs with commas (,).
CustomCommand	String	No	""	In the ServiceActionName for **CUSTOM_COMMAND** When, you need to specify. For example, you can run the following command: **refreshQueues** .
ComponentNameList	String	No	Tomcat	The list of components. Separate component names with commas (,).
Comment	String	No	test run action	The comment for the action.
IsRolling	Boolean	No	true	Specifies whether to roll actions.
ExecuteStrategy	String	No	FAILED_BLOCK	Task execution policy: • FAILED_BLOCK • FAILED_CONTINUE

Parameter	Type	Required	Example	Description
CustomParams	String	No	""	Optional configuration parameters for running custom actions. Currently, only the following configuration parameters are supported: **innode_disks_balance of kafka** .
Interval	Long	No	60	The execution interval of each task. IsRolling is **true** Can be specified when.
NodeCountPerBatch	Integer	No	2	The number of hosts on which each batch is performed. The IsRolling is **true** Can be specified when.
TotlerateFailCount	Integer	No	5	A reserved parameter. You do not need to specify this parameter.
OnlyRestartStaleConfigNodes	Boolean	No	true	Specifies whether to modify only the host where the configuration items runs the command. Valid values: • true • false
TurnOnMaintenanceMode	Boolean	No	false	Enable the maintenance mode: • true • false

Response parameters

Parameter	Type	Example	Description
RequestId	String	9AEDC439-1F63-491D-B8C6-9737C372BF3A	The ID of the request.

Examples

Sample requests

```
http(s)://[Endpoint]/?Action=RunClusterServiceAction
&ClusterId=C-F32FB31D8295****
&RegionId=cn-hangzhou
&ServiceActionName=STOP
&<common request parameters>
```

Sample success responses

`XML` format

```
<requestId>9AEDC439-1F63-491D-B8C6-9737C372BF3A</requestId>
```

`JSON` Syntax

```
{
    "requestId": "9AEDC439-1F63-491D-B8C6-9737C372BF3A"
}
```

5.Auto Scaling

5.1. Create a scaling group

You can call CreateScalingGroupV2 operation to create a scaling 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 parameter

Parameter	Type	Required	Example	Description
Action	String	Yes	CreateScalingGroupV2	The operation that you want to perform. Set the value to CreateScalingGroupV2.
Description	String	Yes	This is an example scaling group	The description of the scaling group. .
HostGroupId	String	Yes	G-AB1234567****	The ID of the host group. You can call the ListClusterHostGroup to view the machine group ID.
Name	String	Yes	test	The name of the scaling group. You can customize the settings.
RegionId	String	Yes	cn-hangzhou	The ID of the region to which the cluster belongs. You can call the DescribeRegions operation to view the latest Alibaba Cloud region list.
ResourceGroupId	String	No	rg-acfmv6jutt6****	The ID of the resource group. You can call the ListResourceGroups to view the resource group ID.

Response parameters

Parameter	Type	Example	Description
Data	String	SGB-8C44755C8432****	The ID of the newly created scaling group.

Parameter	Type	Example	Description
RequestId	String	6C96FD2C-95A0-4C03-8A19-7D84A4BAAA1E	The ID of the request.

Examples

Sample requests

```
http(s)://[Endpoint]/? Action=CreateScalingGroupV2
&Description=This is a sample scaling Group
&HostGroupId=G-AB1234567****
&Name=test
&RegionId=cn-hangzhou
&<common request parameters>
```

Sample success responses

`XML` format

```
<RequestId>6C96FD2C-95A0-4C03-8A19-7D84A4BAAA1E</RequestId>
<Data>SGB-8C44755C8432****</Data>
```

`JSON` Syntax

```
{
"RequestId":"6C96FD2C-95A0-4C03-8A19-7D84A4BAAA1E",
"Data":"SGB-8C44755C8432****"
 }
```

5.2. Create a Auto Scaling configuration items

You can call AddScalingConfigItemV2 operation to add a scaling configuration item.

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	AddScalingConfigItemV2	The operation that you want to perform. Set the value to AddScalingConfigItemV2.

Parameter	Type	Required	Example	Description
ConfigItemInformation	String	Yes	{"ruleName": "Triggered by Load", "adjustmentType": "QUANTITYCHANGEINCAPACITY", "coolDownTime": 100, "ruleParam": {"metricName": "YarnFreeCores", "period": 10, "statistics": "xxx", "comparisonOperator": "\u003e\u003d", "threshold": 10,	configuration items information. Information varies with configuration items type. Valid values: • SCALING_RULE: ○ Triggered by load. This field returns an example: `{ "ruleName": "Triggered by Load", "adjustmentType": "QUANTITY_CHANGE_IN_CAPACITY", "coolDownTime": 100, "ruleParam": { "metricName": "YarnFreeCores", "period": 10, "statistics": "xxx", "comparisonOperator": "\u003e\u003d", "threshold": 10, "evaluationCount": 1 }, "adjustmentValue": 1, "ruleType": "BY_LOAD", "configItemType": "SCALING_RULE" }` ○ Scheduled scheduling. The following example is returned for this field: `{ "ruleName": "Scheduled Scheduling", "adjustmentType": "QUANTITY_CHANGE_IN_CAPACITY", "coolDownTime": 100, "ruleParam": { "recurrenceType": "Daily", "recurrenceValue": "1", "recurrenceEndTime": "2020-07-22T03:01Z", "launchTime": "2020-07-22T03:07Z", "launchExpirationTime": 0 }, "adjustmentValue": 1, "ruleType": "SCHEDULED", "configItemType": "SCALING_RULE" }` ○ Fixed-point execution. The following example is returned for this field: `{ "ruleName": "fixed-point execution", "adjustmentType": "QUANTITY_CHANGE_IN_CAPACITY", "coolDownTime": 100, "ruleParam": { "launchTime": "2020-07-22T03:09Z", "launchExpirationTime": 1 }, "adjustmentValue": 1, "ruleType": "BY_TIME_ONCE", "configItemType": "SCALING_RULE" }` • SCALING_STRATEGY: `{ "spotStr`

Parameter	Type	Required	Example	Description
			"evaluationCount": 1, "adjustmentValue": 1, "ruleType": "BYLOAD", "configItemType": "SCALING_RULE" }	ategy": "NoSpot", "spotPriceLimits": 0.01, "instanceTypeList": [], "sysDiskCategory": "cloud_essd", "sysDiskSize": { "value": 40.0, "unit": "GIGABYTE" }, "dataDiskCategory": "cloud_essd", "dataDiskSize": { "value": 40.0, "unit": "GIGABYTE" }, "dataDiskCount": 4, "scalingMaxSize": 1, "scalingMinSize": 1, "defaultCoolDownTime": 0, "scalingTimeoutPolice": { "timeoutPolicy": "ROLLBACK" }, "privatePoolOptionsMatchCriteria": "Target", "privatePoolOptionsId": "crp-bp1e4wcvoucrish5vph7", "nodeOfflineMode": "NORMAL", "nodeOfflineModeParam": { "timeoutMs": 0 }, "triggerMode": "Scheduled", "multiAvailablePolicy": "PRIORITY", "multiAvailablePolicyParam": { "onDemandBaseCapacity": 0, "onDemandPercentageAboveBaseCapacity": 0, "spotInstanceRemedy": 0, "spotInstance": false }, "configItemType": "SCALING_STRATEGY" }
ConfigItemType	String	Yes	SCALING_RULE	The type of the configuration parameters. Valid values: • SCALING_RULE: scaling rule • SCALING_STRATEGY: Scaling Policies

Parameter	Type	Required	Example	Description
RegionId	String	Yes	cn-hangzhou	The region ID of the instance. You can call DescribeRegions You can call this operation to view the latest list of Alibaba Cloud regions.
ScalingGroupBizId	String	Yes	SGB-A4521231C****	The ID of the scaling group. You can call ListScalingGroupV2 View the ID of the scaling group.
ResourceGroupId	String	No	rg-acfmv6jutt6****	The ID of the resource group. You can call ListResourceGroups View the ID of the resource group.

Response parameters

Parameter	Type	Example	Description
Data	String	SRB-DA382429BA82****	The ID of the new configuration items.
RequestId	String	6C96FD2C-95A0-4C03-8A19-7D84A4BAAA1E	The ID of the request.

Examples

Sample requests

```
http(s)://[Endpoint]/?Action=AddScalingConfigItemV2
&ConfigItemInformation={ "ruleName": "Trigger by payload", "adjustmentType": "QUANTITYCHANG
EINCAPACITY", "coolDownTime": 100, "ruleParam": { "metricName": "YarnFreeCores", "period":
10, "statistics": "xxx", "comparisonOperator": "\u003e\u003d", "threshold": 10, "evaluation
Count": 1 }, " adjustmentValue ": 1, " ruleType ": " BYLOAD ", " configItemType ": " SCALIN
G_RULE " }
&ConfigItemType=SCALING_RULE
&RegionId=cn-hangzhou
&ScalingGroupBizId=SGB-A4521231C****
&<common request parameters>
```

Sample success responses

`XML` format

```
<RequestId>6C96FD2C-95A0-4C03-8A19-7D84A4BAAA1E</RequestId>
<Data>SRB-DA382429BA82****</Data>
```

`JSON` Syntax

```
{
    "RequestId":"6C96FD2C-95A0-4C03-8A19-7D84A4BAAA1E",
    "Data":"SRB-DA382429BA82****"
}
```

5.3. Modify a scaling group

You can call ModifyScalingGroupV2 operation to modify the basic information of a scaling group.

Debugging

OpenAPI Explorer automatically calculates the signature value. For your convenience, we recommend that you call this operation in OpenAPI Explorer. You can use OpenAPI Explorer to search for API operations, call API operations, and dynamically generate SDK sample code.

Request parameters

Parameter	Type	Required	Example	Description
Action	String	Yes	ModifyScalingGroupV2	The operation that you want to perform. This parameter is required for API requests that you create by piecing together HTTP or HTTPS URLs. Valid values: ModifyScalingGroupV2.
Description	String	Yes	This is a sample scaling Group	The description of the scaling group. You can call ListScalingGroupV2 View the description of the scaling group.
Name	String	Yes	test	The name of the scaling group. You can call ListScalingGroupV2 View the scaling group name.
RegionId	String	Yes	cn-hangzhou	The region ID of the instance. You can call DescribeRegions To view the latest list of Alibaba Cloud regions.
ScalingGroupBizId	String	Yes	SGB-12324AC3****	The ID of the scaling group. You can call ListScalingGroupV2 View the scaling group ID.
ResourceGroupId	String	No	rg-acfmv6jutt6****	The ID of the resource group. You can call ListResourceGroups View the resource group ID.

Response parameters

Parameter	Type	Example	Description
Data	Boolean	true	Indicates whether SQL audit was disabled for the DRDS database. Valid values: • true: The operation was successful. • false: The operation failed.
RequestId	String	7B804810-3C11-4927-B116-1D1A98A60BDD	The ID of the request.

Examples

Sample requests

```
http(s)://[Endpoint]/?Action=ModifyScalingGroupV2
&Description=This is a sample scaling Group
&Name=test
&RegionId=cn-hangzhou
&ScalingGroupBizId=SGB-12324AC3****
&<common request parameters>
```

Sample success responses

`XML` format

```
<RequestId>7B804810-3C11-4927-B116-1D1A98A60BDD</RequestId>
<Data>true</Data>
```

`JSON` Syntax

```
{
    "RequestId":"7B804810-3C11-4927-B116-1D1A98A60BDD",
    "Data":"true"
}
```

5.4. Modify a scaling configuration items

You can call the ModifyScalingConfigItemV2 operation to modify the scaling configuration items.

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	ModifyScalingConfigItemV2	The operation that you want to perform. Set the value to ModifyScalingConfigItemV2.
ConfigItemBizId	String	Yes	SCB-232423A****	The ID of the scaling configuration items. You can call ListScalingConfigItemV2 View the ID of the scaling configuration items.
			{ "ruleName": "Triggered by Load", "adjustmentType": "QUANTITY_CHANGE_IN_CAPACITY", "coolDownTime": 100, "ruleParam":	The JSON format of the configuration items value varies with the type. Valid values: • SCALING_RULE: ○ Triggered by load. This field returns an example: `{ "ruleName": "Triggered by Load", "adjustmentType": "QUANTITY_CHANGE_IN_CAPACITY", "coolDownTime": 100, "ruleParam": { "metricName": "YarnFreeCores", "period": 10, "statistics": "xxx", "comparisonOperator": "\u003e\u003d", "threshold": 10, "evaluationCount": 1 }, "adjustmentValue": 1, "ruleType": "BY_LOAD", "configItemType": "SCALING_RULE" }` ○ Scheduled scheduling. The following example is returned for this field: `{ "ruleName": "Scheduled Scheduling", "adjustmentType": "QUANTITY_CHANGE_IN_CAPACITY", "coolDownTime": 100, "ruleParam": { "recurrenceType": "Daily", "recurrenceValue": "1", "recurrenceEndTime": "2020-07-22T03:01Z", "launchTime": "2020-07-22T03:07Z", "launchExpirationTime": 0 }, "adjustmentValue": 1, "ruleType": "SCHEDULED", "configItemType": "SCALING_RULE" }`

Parameter	Type	Required	Example	Description
ConfigItemInformation	String	Yes	100, "ruleParam": { "metricName": "YarnFreeCores", "period": 10, "statistics": "xxx", "comparisonOperator": "\u003e\u003d", "threshold": 10, "evaluationCount": 1 }, "adjustmentValue": 1, "ruleType": "BY_LOAD", "configItemType": "SCALING_RULE" }	○ Fixed-point execution. The following example is returned for this field: `{ "ruleName": "fixed-point execution", "adjustmentType": "QUANTITY_CHANGE_IN_CAPACITY", "coolDownTime": 100, "ruleParam": { "launchTime": "2020-07-22T03:09Z", "launchExpirationTime": 1 }, "adjustmentValue": 1, "ruleType": "BY_TIME_ONCE", "configItemType": "SCALING_RULE" }` • SCALING_STRATEGY: `{ "spotStrategy": "NoSpot", "spotPriceLimits": 0.01, "instanceTypeList": [], "sysDiskCategory": "cloud_essd", "sysDiskSize": { "value": 40.0, "unit": "GIGABYTE" }, "dataDiskCategory": "cloud_essd", "dataDiskSize": { "value": 40.0, "unit": "GIGABYTE" }, "dataDiskCount": 4, "scalingMaxSize": 1, "scalingMinSize": 1, "defaultCoolDownTime": 0, "scalingTimeoutPolice": { "timeoutPolicy": "ROLLBACK" }, "nodeOfflineMode": "NORMAL", "nodeOfflineModeParam": { "timeoutMs": 0 }, "triggerMode": "Scheduled", "privatePoolOptionsMatchCriteria": "Target", "privatePoolOptionsId": "crp-bp1e4wcvoucrish5vph7", "multiAvailablePolicy": "PRIORITY", "multiAvailablePolicyParam": { "onDemandBaseCapacity": 0, "onDemandPercentageAboveBaseCapacity": 0, "spotInstanceRemedy": 0, "spotInstance": false }, "configItemType": "SCALING_STRATEGY" }`

Parameter	Type	Required	Example	Description
ConfigItemType	String	Yes	SCALING_RULE	The type of the configuration parameters. Valid values: • SCALING_RULE: scaling rule • SCALING_STRATEGY: Scaling Policies
RegionId	String	Yes	cn-hangzhou	The region ID of the instance. You can call DescribeRegions You can call this operation to view the latest list of Alibaba Cloud regions.
ScalingGroupBizId	String	Yes	SGB-1232423AB****	The ID of the scaling group. You can call ListScalingGroupV2 View the ID of the scaling group.
ResourceGroupId	String	No	rg-acfmv6jutt6****	The ID of the resource group. You can call ListResourceGroups View the ID of the resource group.

Response parameters

Parameter	Type	Example	Description
Data	Boolean	true	Indicates whether SQL audit was disabled for the DRDS database. Valid values: • true: The operation was successful. • false: The operation failed.
RequestId	String	7B804810-3C11-4927-B116-1D1A98A60BDD	The ID of the request.

Examples

Sample requests

```
http(s)://[Endpoint]/?Action=ModifyScalingConfigItemV2
&ConfigItemBizId=SCB-232423A****
&ConfigItemInformation=
&ConfigItemType=SCALING_RULE
&RegionId=cn-hangzhou
&ScalingGroupBizId=SGB-1232423AB****
&<common request parameters>
```

Sample success responses

`XML` format

```
<RequestId>7B804810-3C11-4927-B116-1D1A98A60BDD</RequestId>
<Data>true</Data>
```

`JSON` Syntax

```
{
    "RequestId":"7B804810-3C11-4927-B116-1D1A98A60BDD",
    "Data":"true"
}
```

5.5. View scaling groups

You can call ListScalingGroupV2 operation to view the scaling group list.

Debugging

OpenAPI Explorer automatically calculates the signature value. For your convenience, we recommend that you call this operation in OpenAPI Explorer. You can use OpenAPI Explorer to search for API operations, call API operations, and dynamically generate SDK sample code.

Request parameters

Parameter	Type	Required	Example	Description
Action	String	Yes	ListScalingGroupV2	The operation that you want to perform. This parameter is required for API requests that you create by piecing together HTTP or HTTPS URLs. Valid values: ListScalingGroupV2.
RegionId	String	Yes	cn-hangzhou	The region ID of the instance. You can call DescribeRegions Interface to view the latest list of Alibaba Cloud regions.
ResourceGroupId	String	No	rg-bp67acfmxazb4p****	The ID of the resource group to which the snapshot belongs. You can call ListResourceGroups View the resource group ID.
Limit	Integer	No	0	Abandoned Field.
PageNumber	Integer	No	1	The page number of the returned page.

Parameter	Type	Required	Example	Description
PageSize	Integer	No	100	The number of entries to return per page. Maximum value: 100 Default value: 100
CurrentSize	Integer	No	0	Abandoned Field.
PageCount	Integer	No	0	Abandoned Field.
OrderField	String	No	id	Abandoned Field.
OrderMode	String	No	desc	Abandoned Field.
ClusterBizId	String	No	C-ABC12323****	The ID of the cluster. You can call ListClusters Interface to view the cluster ID.

Response parameters

Parameter	Type	Example	Description
Items	Array of Item		Scaling group list
Item			
ActiveStatus	String	ACTIVE	The activity status of the scaling group. Valid values: • ACTIVE: The scaling group is started. • INACTIVE: the scaling group is not started.
Description	String	This is a sample scaling Group	The description of the scaling group.
HostGroupBizId	String	G-3242ABC24****	The ID of the host group.
Name	String	test	The name of the scaling group.
ScalingGroupId	String	SGB-242342ABC****	The ID of the scaling group.

Parameter	Type	Example	Description
ScalingInMode	String	GRACEFUL	The scaling mode. Valid values: • GRACEFUL: GRACEFUL offline • DEFAULT: DEFAULT
ScalingMaxSize	Integer	10	The maximum number of nodes in a scaling group. Default value: 500.
ScalingMinSize	Integer	0	The minimum number of nodes in the scaling group. The minimum value is 0.
NextToken	String	None	Abandoned Field.
PageNumber	Integer	1	The page number of the returned page.
PageSize	Integer	100	The number of records on each page.
RequestId	String	123DF0CD-C5F5-4A8D-984A-C5A4331EB84F	The ID of the request.
TotalCount	Integer	1	The total number of entries returned.

Examples

Sample requests

```
http(s)://[Endpoint]/?Action=ListScalingGroupV2
&RegionId=cn-hangzhou
&<common request parameters>
```

Sample success responses

`XML` format

```
<TotalCount>100</TotalCount>
<RequestId>123DF0CD-C5F5-4A8D-984A-C5A4331EB84F</RequestId>
<PageSize>100</PageSize>
<PageNumber>1</PageNumber>
<Items>
    <Item>
         <Description>this is an example of scaling group</Description>
         <HostGroupBizId>G-3242ABC24****</HostGroupBizId>
         <ScalingInMode>graceful</ScalingInMode>
         <ScalingGroupId>SGB-242342ABC****</ScalingGroupId>
         <ScalingMaxSize>10</ScalingMaxSize>
         <ScalingMinSize>0</ScalingMinSize>
         <Name>test</Name>
         <ActiveStatus>ACTIVE</ActiveStatus>
   </Item>
</Items>
```

JSON Syntax

```
{
    "TotalCount":"100",
    "RequestId":"123DF0CD-C5F5-4A8D-984A-C5A4331EB84F",
    "PageSize":"100",
    "PageNumber":"1",
    "Items":
    {
        "Item":
        [
            {
                "Description":"this is an example of scaling group",
                "HostGroupBizId":"G-3242ABC24****",
                "ScalingInMode":"GRACEFUL",
                "ScalingGroupId":"SGB-242342ABC****",
                "ScalingMaxSize":"10",
                "ScalingMinSize":"0",
                "Name":"test",
                "ActiveStatus":"ACTIVE"
                }
         ]
       }
}
```

5.6. View scaling configuration items

You can call ListScalingConfigItemV2 to query scaling configuration items.

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	ListScalingConfigItemV2	The operation that you want to perform. Set the value to ListScalingConfigItemV2.
ConfigItemType	String	Yes	SCALING_STRATEGY	The type of the configuration parameters. Valid values: • SCALING_RULE: scaling rule • SCALING_STRATEGY: Scaling Policies
RegionId	String	Yes	cn-hangzhou	The region ID of the instance. You can call DescribeRegions You can call this operation to view the latest list of Alibaba Cloud regions.
ScalingGroupBizId	String	Yes	SGB-16ABA17988F39*****	The ID of the scaling group. You can call ListScalingGroupV2 View the ID of the scaling group.
ResourceGroupId	String	No	rg-acfmv6jutt6****	The ID of the resource group. You can call ListResourceGroups View the ID of the resource group.
PageNumber	Integer	No	1	The number of the page to return.
PageSize	Integer	No	100	The number of records on a single page.

Response parameters

Parameter	Type	Example	Description
Items	Array of Item		configuration items list
Item			

Parameter	Type	Example	Description
ConfigItemInformation	String	{\"spotStrategy\":\"NoSpot\",\"spotPriceLimits\":[],\"instanceTypeList\":[],\"sysDiskCategory\":\"cloud_essd\",\"sysDiskSize\":{\"value\":40.0,\"unit\":\"GIGABYTE\"},\"dataDiskCategory\":\"cloud_essd\",\"dataDiskSize\":{\"value\":40.0,\"unit\":\"GIGABYTE\"},\"dataDiskCount\":4,\"scalingMaxSize\":10,\"scalingMinSize\":0,\"defaultCoolDownTime\":0,\"scalingTimeoutPolice\":{\"timeoutPolicy\":\"ROLLBACK\"},\"nodeOfflineMode\":\"DEFAULT\",\"nodeOfflineModeParam\":{\"timeoutMs\":0},\"triggerMode\":\"Scheduled\",\"multiAvailablePolicy\":\"PRIORITY\",\"multiAvailablePolicyParam\":{\"onDemandBaseCapacity\":0,\"onDemandPercentageAboveBaseCapacity\":0,\"spotInstanceRemedy\":false,\"spotInstancePools\":0},\"configItemType\":\"SCALING_STRATEGY\",\"scalingConfigBizId\":\"SCB-5B74B3834D9A446F\"}	configuration items information. Information varies with configuration items type.
ConfigItemType	String	SCALING_STRATEGY	The type of the configuration parameters.
ScalingConfigItemBizId	String	SSB-B1AC1532C218****	The ID of the configuration items.

Parameter	Type	Example	Description
ScalingGroupBizId	String	SGB-84314D112C67****	The ID of the scaling group.
NextToken	String	None	Discard fields.
PageNumber	Integer	1	The number of the page to return.
PageSize	Integer	100	The number of records on a single page.
RequestId	String	7B804810-3C11-4927-B116-1D1A98A60BDD	The ID of the request.
TotalCount	Integer	100	The total number of entries that are returned.

Examples

Sample requests

```
http(s)://[Endpoint]/?Action=ListScalingConfigItemV2
&ConfigItemType=SCALING_RULE
&RegionId=cn-hangzhou
&ScalingGroupBizId=SGB-16ABA17988F3****
&<common request parameters>
```

Sample success responses

`XML` format

```
<TotalCount>100</TotalCount>
<RequestId>7B804810-3C11-4927-B116-1D1A98A60BDD</RequestId>
<PageSize>100</PageSize>
<NextToken>None</NextToken>
<PageNumber>1</PageNumber>
<Items>
    <Item>
        <ScalingConfigItemBizId>SSB-B1AC1532C218****</ScalingConfigItemBizId>
        <ScalingGroupBizId>SGB-84314D112C67****</ScalingGroupBizId>
        <ConfigItemInformation>{"spotStrategy":"NoSpot","spotPriceLimits":[],"instanceTypeL
ist":[],"sysDiskCategory":"cloud_essd","sysDiskSize":{"value":40.0,"unit":"GIGABYTE"},"data
DiskCategory":"cloud_essd","dataDiskSize":{"value":40.0,"unit":"GIGABYTE"},"dataDiskCount":
4,"scalingMaxSize":10,"scalingMinSize":0,"defaultCoolDownTime":0,"scalingTimeoutPolice":{"t
imeoutPolicy":"ROLLBACK"},"nodeOfflineMode":"DEFAULT","nodeOfflineModeParam":{"timeoutMs":0
},"triggerMode":"Scheduled","multiAvailablePolicy":"PRIORITY","multiAvailablePolicyParam":{
"onDemandBaseCapacity":0,"onDemandPercentageAboveBaseCapacity":0,"spotInstanceRemedy":false
,"spotInstancePools":0},"configItemType":"SCALING_STRATEGY","scalingConfigBizId":"SCB-5B74B
3834D9A446F"}</ConfigItemInformation>
        <ConfigItemType>SCALING_STRATEGY</ConfigItemType>
    </Item>
</Items>
```

JSON Syntax

```
{
    "TotalCount":"100",
    "RequestId":"7B804810-3C11-4927-B116-1D1A98A60BDD",
    "PageSize":"100",
    "NextToken":"None",
    "PageNumber":"1",
    "Items":
    {
        "Item": [
            {
                "ScalingConfigItemBizId": "SSB-B1AC1532C218****",
                "ScalingGroupBizId": "SGB-84314D112C67****",
                "ConfigItemInformation": "{\"spotStrategy\":\"NoSpot\",\"spotPriceLimits\":
[],\"instanceTypeList\":[],\"sysDiskCategory\":\"cloud_essd\",\"sysDiskSize\":{\"value\":40
.0,\"unit\":\"GIGABYTE\"},\"dataDiskCategory\":\"cloud_essd\",\"dataDiskSize\":{\"value\":4
0.0,\"unit\":\"GIGABYTE\"},\"dataDiskCount\":4,\"scalingMaxSize\":10,\"scalingMinSize\":0,\
"defaultCoolDownTime\":0,\"scalingTimeoutPolice\":{\"timeoutPolicy\":\"ROLLBACK\"},\"nodeOf
flineMode\":\"DEFAULT\",\"nodeOfflineModeParam\":{\"timeoutMs\":0},\"triggerMode\":\"Schedu
led\",\"multiAvailablePolicy\":\"PRIORITY\",\"multiAvailablePolicyParam\":{\"onDemandBaseCa
pacity\":0,\"onDemandPercentageAboveBaseCapacity\":0,\"spotInstanceRemedy\":false,\"spotIns
tancePools\":0},\"configItemType\":\"SCALING_STRATEGY\",\"scalingConfigBizId\":\"SCB-5B74B3
834D9A446F\"}",
                "ConfigItemType": "SCALING_STRATEGY"
            }
        ]
     }
}
```

5.7. View scaling activities

You can call ListScalingActivityV2 operation to view the scaling activity list.

Debugging

OpenAPI Explorer automatically calculates the signature value. For your convenience, we recommend that you call this operation in OpenAPI Explorer. You can use OpenAPI Explorer to search for API operations, call API operations, and dynamically generate SDK sample code.

Request parameters

Parameter	Type	Required	Example	Description
Action	String	Yes	ListScalingActivityV2	The operation that you want to perform. This parameter is required for API requests that you create by piecing together HTTP or HTTPS URLs. Valid values: ListScalingActivityV2.
ClusterBizId	String	Yes	C-12324352352****	The ID of the cluster. You can call ListClusters Interface to view the cluster ID.
RegionId	String	Yes	cn-hangzhou	The region ID of the instance. You can call DescribeRegions Interface to view the latest list of Alibaba Cloud regions.
ResourceGroupId	String	No	rg-acfmv6jutt6****	The ID of the resource group. You can call ListResourceGroups View the resource group ID.
Limit	Integer	No	0	Abandoned Field.
PageNumber	Integer	No	1	The number of the page to return.
PageSize	Integer	No	100	The number of entries to return per page. Maximum value: 100 Default value: 100
CurrentSize	Integer	No	0	Abandoned Field.
PageCount	Integer	No	0	Abandoned Field.

Parameter	Type	Required	Example	Description
OrderField	String	No	id	The page turning parameter.
OrderMode	String	No	desc	The page turning parameter.
HostGroupId	String	No	G-2342423****	The ID of the host group. You can call ListClusterHostGroup View the machine group ID.
ScalingGroupBizId	String	No	SGB-A2343453****	The ID of the scaling group. You can call ListScalingGroupV2 View the scaling group ID.
ScalingRuleName	String	No	Scale-out load -1	The name of the scaling rule.
HostGroupName	String	No	Scaling Group 1	The name of the machine group.
Status	String	No	Successful	Activity Status: • Successful: execution Successful • Warning: partial execution successful • Failed: execution Failed • InProgress: The execution is in progress. • Rejected: The request is Rejected.

Response parameters

Parameter	Type	Example	Description
Items	Array of Item		Scaling activity list
Item			
BizId	String	asa-bp18jfxw7gqnkhtz*****	The ID of the scaling activity.

Parameter	Type	Example	Description
Cause	String	A user requests to execute scaling rule \"asr-bp1d8mebzisgwu34mcn3\", changing the Total Capacity from \"0\" to \"1\".	The reason for the scaling activity.
Description	String	\"1\" ECS instances are added	The description of the instance.
EndTime	Long	1600691996000	The end of the time range to query.
ExpectNum	Integer	1	The expected number of scaling operations.
HostGroupBizId	String	G-4A1833AA86EA****	The ID of the host group.
HostGroupName	String	Scaling Group 1	The name of the machine group.
InstanceIds	String	[\"i-bp1ci2e4xqt9eqjqtfrr\"]	A list of ECS instances.
ScalingRuleId	String	asr-bp19zruz0q7pru31****	The ID of the scaling rule.
ScalingRuleName	String	Scale-out load -1	The name of the scaling rule.
StartTime	Long	1600691996000	The start time.
Status	String	Successful	The status of the activity. Valid values: • Successful: Successful • Failed; Failed • Abandon: abnormal • Reject: Reject
TotalCapacity	Integer	10	The total capacity of the scaling group.
Transition	String	SCALE_OUT	The scaling type. Valid values: • SCALE_OUT: the scale-out activity. • SCALE_IN: scale-in activity.

Parameter	Type	Example	Description
NextToken	String	None	Abandoned Field.
PageNumber	Integer	1	The number of the page to return.
PageSize	Integer	100	The number of records on each page.
RequestId	String	123DF0CD-C5F5-4A8D-984A-C5A4331EB84F	The ID of the request.
TotalCount	Integer	100	The total number of scaling activity records.

Examples

Sample requests

```
http(s)://[Endpoint]/?Action=ListScalingActivityV2
&ClusterBizId=C-12324352352****
&RegionId=cn-hangzhou
&<common request parameters>
```

Sample success responses

`XML` format

```
<TotalCount>100</TotalCount>
<RequestId>123DF0CD-C5F5-4A8D-984A-C5A4331EB84F</RequestId>
<PageSize>100</PageSize>
<PageNumber>1</PageNumber>
<Items>
    <Item>
        <Status>Successful</Status>
        <Description>\"1\" ECS instances are added</Description>
        <EndTime>1600691996000</EndTime>
        <StartTime>1600691996000</StartTime>
        <ScalingRuleId>asr-bp19zruz0q7pru31****</ScalingRuleId>
        <HostGroupName>Scaling Group 1</HostGroupName>
        <ScalingRuleName>Scale-out load -1 </ScalingRuleName>
        <HostGroupBizId>G-4A1833AA86EA****</HostGroupBizId>
        <ExpectNum>1</ExpectNum>
        <Cause>A user requests to execute scaling rule \"asr-bp1d8mebzisgwu34mcn3\", changi
ng the Total Capacity from \"0\" to \"1\".</Cause>
        <Transition>SCALE_OUT</Transition>
        <TotalCapacity>10</TotalCapacity>
        <InstanceIds>[\"i-bp1ci2e4xqt9eqjqtfrr\"]</InstanceIds>
        <BizId>asa-bp18jfxw7gqnkhtz****</BizId>
    </Item>
</Items>
```

`JSON` Syntax

```
{
    "TotalCount":"100",
    "RequestId":"123DF0CD-C5F5-4A8D-984A-C5A4331EB84F",
    "PageSize":"100",
    "PageNumber":"1",
    "Items":
    {
        "Item":[
            {
                "Status":"Successful",
                "Description":"\\\"1\\\" ECS instances are added",
                "EndTime":"1600691996000",
                "StartTime":"1600691996000",
                "ScalingRuleId":"asr-bp19zruz0q7pru31****",
                "HostGroupName":"Scaling Group 1",
                "ScalingRuleName":"Scale-out load -1",
                "HostGroupBizId":"G-4A1833AA86EA****",
                "ExpectNum":"1",
                "Cause":"A user requests to execute scaling rule \\\"asr-bp1d8mebzisgwu34mc
n3\\\", changing the Total Capacity from \\\"0\\\" to \\\"1\\\".",
                "Transition":"SCALE_OUT",
                "TotalCapacity":"10",
                "InstanceIds":"[\\\"i-bp1ci2e4xqt9eqjqtfrr\\\"]",
                "BizId":"asa-bp18jfxw7gqnkhtz****"
                }
         ]
     }
}
```


5.8. Querying Scaling configuration items Details

Call DescribeScalingConfigItemV2 to query the details of a scaling configuration items.

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	DescribeScalingConfigItemV2	The operation that you want to perform. Set the value to DescribeScalingConfigItemV2.

Parameter	Type	Required	Example	Description
ConfigItemType	String	Yes	SCALING_RULE	The type of the configuration parameters. Valid values: • SCALING_RULE: scaling rule • SCALING_STRATEGY: Scaling Policies
RegionId	String	Yes	cn-hangzhou	The region ID of the instance. You can call DescribeRegions You can call this operation to view the latest list of Alibaba Cloud regions.
ScalingConfigItemId	String	Yes	SRB-0F2A154CFD4D****	The ID of the scaling configuration items. You can call ListScalingConfigItemV2 View the ID of the scaling configuration items.
ScalingGroupBizId	String	Yes	SGB-8E52011DD26C****	The ID of the scaling group. You can call ListScalingGroupV2 View the ID of the scaling group.
ResourceGroupId	String	No	rg-acfmv6jutt6****	The ID of the resource group. You can call ListResourceGroups View the ID of the resource group.

Response parameters

Parameter	Type	Example	Description
			configuration items information. Information varies with configuration items type. Valid values: • SCALING_RULE: ○ Triggered by load. This field returns an example: `{ "ruleName": "Triggered by Load", "adjustmentType": "QUANTITY_CHANGE_IN_CAPACITY", "coolDownTime": 100, "ruleParam": { "metricName": "YarnFreeCores", "period": 10, "statistics": "xxx", "comparisonOperator": "\u003e\u003d", "threshold": 10, "evaluationCount": 1 }, "adjustmentValue": 1, "ruleType": "BY_LOAD", "configItemType": "SCALING_RULE" }`

Parameter	Type	Example	Description
ConfigItemInformation	String	{ "ruleName": "Triggered by Load", "adjustmentType": "QUANTITY_CHANGE_IN_CAPACITY", "coolDownTime": 100, "ruleParam": { "metricName": "YarnFreeCores", "period": 10, "statistics": "xxx", "comparisonOperator": "\u003e\u003d", "threshold": 10, "evaluationCount": 1 }, "adjustmentValue": 1, "ruleType": "BY_LOAD", "configItemType": "SCALING_RULE" }	◦ Scheduled scheduling. The following example is returned for this field: `{ "ruleName": "Scheduled Scheduling", "adjustmentType": "QUANTITY_CHANGE_IN_CAPACITY", "coolDownTime": 100, "ruleParam": { "recurrenceType": "Daily", "recurrenceValue": "1", "recurrenceEndTime": "2020-07-22T03:01Z", "launchTime": "2020-07-22T03:07Z", "launchExpirationTime": 0 }, "adjustmentValue": 1, "ruleType": "SCHEDULED", "configItemType": "SCALING_RULE" }` ◦ Fixed-point execution. The following example is returned for this field: `{ "ruleName": "fixed-point execution", "adjustmentType": "QUANTITY_CHANGE_IN_CAPACITY", "coolDownTime": 100, "ruleParam": { "launchTime": "2020-07-22T03:09Z", "launchExpirationTime": 1 }, "adjustmentValue": 1, "ruleType": "BY_TIME_ONCE", "configItemType": "SCALING_RULE" }` • SCALING_STRATEGY: `{ "spotStrategy": "NoSpot", "spotPriceLimits": 0.01, "instanceTypeList":[],"sysDiskCategory": "cloud_essd", "sysDiskSize": { "value": 40.0, "unit": "GIGABYTE" }, "dataDiskCategory": "cloud_essd", "dataDiskSize": { "value": 40.0, "unit": "GIGABYTE" }, "dataDiskCount": 4, "scalingMaxSize": 1, "scalingMinSize": 1, "defaultCoolDownTime": 0, "scalingTimeoutPolice": { "timeoutPolicy": "ROLLBACK" }, "nodeOfflineMode": "NORMAL", "nodeOfflineModeParam": { "timeoutMs": 0 }, "triggerMode": "Scheduled", "privatePoolOptionsMatchCriteria": "Target", "privatePoolOptionsId": "crp-bp1e4wcvoucrish5vph7", "multiAvailablePolicy": "PRIORITY", "multiAvailablePolicyParam": { "onDemandBaseCapacity": 0, "onDemandPercentageAboveBaseCapacity": 0, "spotInstanceRemedy": 0, "spotInstance": false }, "configItemType": "SCALING_STRATEGY" }`

Parameter	Type	Example	Description
ConfigItemType	String	SCALING_RULE	The type of the configuration parameters. Valid values: • SCALING_RULE: scaling rule • SCALING_STRATEGY: Scaling Policies
RequestId	String	6C96FD2C-95A0-4C03-8A19-7D84A4BAAA1E	The ID of the request.
ScalingConfigItemBizId	String	SRB-0F2A154CFD4D****	The ID of the scaling configuration items.
ScalingGroupBizId	String	SGB-0F2A154CFD4D****	The ID of the scaling group.

Examples

Sample requests

```
http(s)://[Endpoint]/?Action=DescribeScalingConfigItemV2
&ConfigItemType=SCALING_RULE
&RegionId=cn-hangzhou
&ScalingConfigItemId=SCB-8E52011DD26123****
&ScalingGroupBizId=SGB-8E52011DD26C****
&<common request parameters>
```

Sample success responses

`XML` format

```
<RequestId>6C96FD2C-95A0-4C03-8A19-7D84A4BAAA1E</RequestId>
<ScalingConfigItemBizId>SRB-0F2A154CFD4D****</ScalingConfigItemBizId>
<ScalingGroupBizId>SGB-0F2A154CFD4D****</ScalingGroupBizId>
<ConfigItemInformation> <ScalingGroupBizId> SGB-0F2A154CFD4D**** </ScalingGroupBizId> {"rul
eName": "triggered by payload", "adjustmentType": "QUANTITY_CHANGE_IN_CAPACITY", "coolDownT
ime": 100, "ruleParam": { "metricName": "YarnFreeCores", "period": 10, "statistics": "xxx",
"comparisonOperator": "\u003e\u003d", "threshold": 10, "evaluationCount": 1 }, "adjustmentV
alue": 1, "ruleType": "BY_LOAD", "configItemType": "SCALING_RULE"} </ConfigItemInformation>
<ConfigItemType>SCALING_RULE</ConfigItemType>
```

`JSON` Syntax

```
{
    "RequestId":"6C96FD2C-95A0-4C03-8A19-7D84A4BAAA1E",
    "ScalingConfigItemBizId":"SRB-0F2A154CFD4D****",
    "ScalingGroupBizId":"SGB-0F2A154CFD4D****",
    "ConfigItemInformation":"{ \" ruleName\": \" trigger by load \", \" adjustmentType\":"
QUANTITY_CHANGE_IN_CAPACITY ", " coolDownTime ": 100," ruleParam ": { \" metricName\": \" Y
arnFreeCores\", \" period\": 10, \" statistics\": \" xxx\", \" comparisonOperator\":" \u003
e \u003d ", \" threshold\": 10, \" evaluationCount\": 1 }, \" adjustmentValue\": 1, \" rule
Type\": \"BY_LOAD\", \"configItemType\": \"SCALING_RULE\" }",
    "ConfigItemType":"SCALING_RULE"
}
```

5.9. View scaling group instance details

Call DescribeScalingGroupInstanceV2 to view the details of a running scaling group instance.

Debugging

OpenAPI Explorer automatically calculates the signature value. For your convenience, we recommend that you call this operation in OpenAPI Explorer. You can use OpenAPI Explorer to search for API operations, call API operations, and dynamically generate SDK sample code.

Request parameters

Parameter	Type	Required	Example	Description
Action	String	Yes	DescribeScalingGroupInstanceV2	The operation that you want to perform. This parameter is required for API requests that you create by piecing together HTTP or HTTPS URLs. Valid values: DescribeScalingGroupInstanceV2.
RegionId	String	Yes	cn-hangzhou	The region ID of the instance. You can call DescribeRegions To view the latest list of Alibaba Cloud regions.
ResourceGroupId	String	No	rg-acfmv6jutt6****	The ID of the resource group. You can call ListResourceGroups View the resource group ID.
ScalingGroupBizId	String	No	SGB-AA1234567****	The ID of the scaling group. You can call ListScalingGroupV2 View the scaling group ID. **Note** Enter at least one of the ScalingGroupBizId and hostgroupbis ID.

Parameter	Type	Required	Example	Description
HostGroupBizId	String	No	G-1234567890A****	The ID of the host group. You can call ListClusterHostGroup View Machine Group ID. **Note** Enter at least one of the ScalingGroupBizId and hostgroupbis ID. In this example, hostgroupbis is entered.

Response parameters

Parameter	Type	Example	Description
ActiveRuleCategory	String	ByLoad	The scaling policy. Valid values: • ByLoad: scaling by load • Scheduled: Scheduled scaling
DefaultCooldown	Integer	300	The cooldown time. Unit: second.
HostGroupId	String	G-5011FB3E4928****	The ID of the host group.
MaxSize	Integer	10	The maximum number of nodes in the Machine Group.
MinSize	Integer	0	Machine Group the minimum number of nodes.

Parameter	Type	Example	Description
MultiAvailablePolicy	String	PRIORITY	The optimization policy. Valid values: • PRIORITY: ECS instances are scaled based on the VSwitchIds.N parameter. • COST_OPTIMIZED: ECS instances are created based on the unit price of vCPUs, from low to high. Preemptible instances are preferentially created when preemptible instance types are specified for the scaling configuration. **Note** COST_OPTIMIZED takes effect only when multiple instance types are specified or at least one preemptible instance type is specified.
MultiAvailablePolicyParam	String	{"onDemandBaseCapacity": 1, "onDemandPercentageAboveBaseCapacity": 10, "spotInstanceRemedy": false, "spotInstancePools": 2}	Optimize parameters. The following settings are required only when MultiAvailablePolicy is set to COST_OPTIMIZED: • onDemandBaseCapacity: number of pay-as-you-go nodes • onDemandPercentageAboveBaseCapacity: pay-as-you-go node ratio • spotInstanceRemedy: whether to enable compensation-as-you-go • spotInstancePools: the number of preemptible node specifications types
RequestId	String	6C96FD2C-95A0-4C03-8A19-7D84A4BAAA1E	The ID of the request.
ScalingConfig	Struct		The scaling configuration.
DataDiskCategory	String	ssd	The data disk type. Values are as follows: • cloud: basic disk • cloud_efficiency: ultra disk • cloud_ssd: local SSD • ephemeral_ssd: local SSD • cloud_essd: ESSD
DataDiskCount	Integer	4	The number of data disks.

Parameter	Type	Example	Description
DataDiskSize	Integer	40	The size of a data disk. Unit: GiB.
InstanceTypeList	List	ecs.c5.xlarge	The architecture type of the instance.
PayType	String	PostPaid	The billing method of the host. Valid values: • PostPaid: pay-as-you-go clusters • PrePaid: subscription cluster
SpotPriceLimits	Array of SpotPriceLimit		Preemptible instance type and price parameters
SpotPriceLimit			
InstanceType	String	ecs.c5.xlarge	The type of the preemptible instance.
PriceLimit	Float	0.1	The unit price of the preemptible instance.
SpotStrategy	String	NoSpot	The bidding strategy. Valid values: • NoSpot: no preemptible instances • SpotWithPriceLimit: use preemptible instances with price limits • SpotAsPriceGo: uses preemptible instances based on their prices
SysDiskCategory	String	ssd	The category of the system disk. Valid values: • cloud: basic disk • cloud_efficiency: ultra disk • cloud_ssd: standard SSD
SysDiskSize	Integer	40	The size of the system disk. Unit: GB.
ScalingRuleList	Array of ScalingRule		The list of scaling rules.
ScalingRule			
AdjustmentType	String	QuantityChangeInCapacity	The incremental mode. The value is fixed to QuantityChangeInCapacity.

Parameter	Type	Example	Description
AdjustmentValue	Integer	-1	The number of nodes to be adjusted each time. A value greater than 0 is expansion, and a value less than 0 is contraction.
CloudWatchTrigger	Struct		Trigger rule parameters by load.
ComparisonOperator	String	>	Comparison operator: • > • ≥ • < • ≤ • =
EvaluationCount	String	1	The number of computations.
MetricDisplayName	String	YARN.PendingVCores	The display name of the measure.
MetricName	String	YarnRootPendingVCores	The name of the measure.
Period	Integer	5	The time when the statistics are collected. Unit: minute.
Statistics	String	Average	The statistical method.
Threshold	String	0	The threshold.
Unit	String	None	Abandoned Field.
Cooldown	Integer	600	The cooldown time. Unit: second.
EssScalingRuleId	String	sgr-34234eed234242	The ID of the associated ESS scaling rule.
LaunchExpirationTime	Integer	600	The time period during which the failed scheduled task is retried. Unit: seconds. Valid values: 0 to 21600.

Parameter	Type	Example	Description
LaunchTime	String	2020-07-22T03:09Z	The time at which the scheduled task is triggered. UTC time is used and complies with the ISO 8601 standard. The time is displayed in UTC. You cannot enter a time point later than 90 days from the scheduled task creation. If the RecurrenceType parameter is specified, the task is executed each day at the time specified by LaunchTime. If the RecurrenceType parameter is not specified, the task is executed only once at the time specified by LaunchTime.
RecurrenceEndTime	String	2020-07-22T03:09Z	The end time of the scheduled task to be repeated. Specify the time in the ISO 8601 standard in the YYYY-MM-DDThh:mmZ format.
RecurrenceType	String	Daily	The interval that a scheduled task is repeated at. Valid values: • Daily: The scheduled task is executed once every specified number of days. • Weekly: The scheduled task is executed on each specified day of a week. • Monthly: The scheduled task is executed on each specified day of a month. You must specify RecurrenceType and RecurrenceValue at the same time.

Parameter	Type	Example	Description
RecurrenceValue	String	1	The number of recurrences of the scheduled task. • Daily: If you set RecurrenceType to Daily, you can specify only one value. Valid values: 1 to 31. • Weekly: If you set RecurrenceType to Weekly, you can specify multiple values and separate them with commas (,). For example, the values of Sunday, Monday, Tuesday, Wednesday, Thursday, Friday, and Saturday are 0, 1, 2, 3, 4, 5, and 6. • Monthly: If you set RecurrenceType to Monthly, you can specify two values in the A-B format. Valid values: 1 to 31. B must be greater than or equal to A. You must specify RecurrenceType and RecurrenceValue at the same time.
RuleCategory	String	ByLoad	The type of the rule. Valid values: • ByLoad: scaling by load • Scheduled: Scheduled scaling
RuleName	String	Rule 1	The name of the rule.
ScalingGroupId	Long	122	The instance ID of the scaling group.
SchedulerTrigger	Struct		Details of rules for periodic scheduling
LaunchExpirationTime	Integer	600	The time period during which the failed scheduled task is retried. Unit: seconds. Valid values: 0 to 21600.
LaunchTime	Long	1434321345621	The point in time at which the scheduled task was triggered.
RecurrenceEndTime	Long	1434321345621	The end time of the repeated scheduled task.

Parameter	Type	Example	Description
RecurrenceType	String	Daily	The interval that a scheduled task is repeated at. Valid values: • Daily: The scheduled task is executed once every specified number of days. • Weekly: The scheduled task is executed on each specified day of a week. • Monthly: The scheduled task is executed on each specified day of a month. You must specify RecurrenceType and RecurrenceValue at the same time.
RecurrenceValue	String	1	The number of recurrences of the scheduled task. • Daily: If you set RecurrenceType to Daily, you can specify only one value. Valid values: 1 to 31. • Weekly: If you set RecurrenceType to Weekly, you can specify multiple values and separate them with commas (,). For example, the values of Sunday, Monday, Tuesday, Wednesday, Thursday, Friday, and Saturday are 0, 1, 2, 3, 4, 5, and 6. • Monthly: If you set RecurrenceType to Monthly, you can specify two values in the A-B format. Valid values: 1 to 31. B must be greater than or equal to A. You must specify RecurrenceType and RecurrenceValue at the same time.
Status	String	ACTIVE	The running Status. Valid values: • ACTIVE: The scaling group is started. • INACTIVE: the scaling group is not started.
TimeoutWithGrace	Long	1000	The timeout period for graceful disconnection, in milliseconds. A reserved parameter.
WithGrace	Boolean	true	Whether to enable graceful disconnection: • true • false
ScalingGroupId	String	SGB-12324546568****	The ID of the scaling group.

Parameter	Type	Example	Description
TimeoutWithGrace	Long	1000	The timeout period for graceful disconnection, in milliseconds.
WithGrace	Boolean	true	Whether to enable graceful disconnection: • true: optimization offline is enabled. • false: do not enable graceful disconnection

Examples

Sample requests

```
http(s)://[Endpoint]/?Action=DescribeScalingGroupInstanceV2
&RegionId=cn-hangzhou
&HostGroupBizId=G-1234567890A****
&<common request parameters>
```

Sample success responses

`XML` format

```
<ScalingConfig>
    <SpotPriceLimits>
        <SpotPriceLimit>
            <PriceLimit>0.1</PriceLimit>
            <InstanceType>ecs.c5.xlarge</InstanceType>
        </SpotPriceLimit>
    </SpotPriceLimits>
    <DataDiskCount>4</DataDiskCount>
    <PayType>PostPaid</PayType>
    <DataDiskSize>40</DataDiskSize>
    <SysDiskSize>40</SysDiskSize>
    <DataDiskCategory>ssd</DataDiskCategory>
    <SpotStrategy>NoSpot</SpotStrategy>
    <SysDiskCategory>ssd</SysDiskCategory>
    <InstanceTypeList>
        <InstanceType>ecs.c5.xlarge</InstanceType>
    </InstanceTypeList>
</ScalingConfig>
<RequestId>6C96FD2C-95A0-4C03-8A19-7D84A4BAAA1E</RequestId>
<ActiveRuleCategory>ByLoad</ActiveRuleCategory>
<TimeoutWithGrace>1000</TimeoutWithGrace>
<ScalingGroupId>SGB-123245465686****</ScalingGroupId>
<MaxSize>10</MaxSize>
<MultiAvailablePolicyParam>{"onDemandBaseCapacity": 1, "onDemandPercentageAboveBaseCapacity
": 10, "spotInstanceRemedy": false, "spotInstancePools": 2}</MultiAvailablePolicyParam>
<MinSize>0</MinSize>
```

```
<MinSize>0</MinSize>
<DefaultCooldown>300</DefaultCooldown>
<HostGroupId>G-5011FB3E49288C19</HostGroupId>
<WithGrace>true</WithGrace>
<MultiAvailablePolicy>PRIORITY</MultiAvailablePolicy>
<ScalingRuleList>
    <ScalingRule>
        <Status>ACTIVE</Status>
        <EssScalingRuleId>sgr-34234eed234242</EssScalingRuleId>
        <LaunchTime>2020-07-22T03:09Z</LaunchTime>
        <TimeoutWithGrace>1000</TimeoutWithGrace>
        <ScalingGroupId>122</ScalingGroupId>
        <Cooldown>600</Cooldown>
        <RecurrenceType>Daily</RecurrenceType>
        <LaunchExpirationTime>600</LaunchExpirationTime>
        <AdjustmentType>QuantityChangeInCapacity</AdjustmentType>
        <AdjustmentValue>-1</AdjustmentValue>
        <WithGrace>true</WithGrace>
        <RecurrenceValue>1</RecurrenceValue>
        <RecurrenceEndTime>2020-07-22T03:09Z</RecurrenceEndTime>
        <RuleName>Rule 1</RuleName>
        <RuleCategory>ByLoad</RuleCategory>
    </ScalingRule>
    <ScalingRule>
        <SchedulerTrigger>
            <ComparisonOperator></ComparisonOperator>
            <LaunchTime>1434321345621</LaunchTime>
            <RecurrenceType>Daily</RecurrenceType>
            <MetricDisplayName>YARN.PendingVCores</MetricDisplayName>
            <Period>5</Period>
            <EvaluationCount>1</EvaluationCount>
            <Unit> </Unit>
            <Statistics>Average</Statistics>
            <LaunchExpirationTime>600</LaunchExpirationTime>
            <MetricName>YarnRootPendingVCores</MetricName>
            <RecurrenceValue>1</RecurrenceValue>
            <RecurrenceEndTime>1434321345621</RecurrenceEndTime>
            <Threshold>0</Threshold>
        </SchedulerTrigger>
        <CloudWatchTrigger>
            <ComparisonOperator></ComparisonOperator>
            <LaunchTime>1434321345621</LaunchTime>
            <RecurrenceType>Daily</RecurrenceType>
            <MetricDisplayName>YARN.PendingVCores</MetricDisplayName>
            <Period>5</Period>
            <EvaluationCount>1</EvaluationCount>
            <Unit> </Unit>
            <Statistics>Average</Statistics>
            <LaunchExpirationTime>600</LaunchExpirationTime>
            <MetricName>YarnRootPendingVCores</MetricName>
            <RecurrenceValue>1</RecurrenceValue>
            <RecurrenceEndTime>1434321345621</RecurrenceEndTime>
            <Threshold>0</Threshold>
        </CloudWatchTrigger>
    </ScalingRule>
```

```
</ScalingRuleList>
```

JSON Syntax

```
{
    "ScalingConfig":
    {
        "SpotPriceLimits":
        {
            "SpotPriceLimit":
            [
                {
                    "PriceLimit":"0.1",
                    "InstanceType":"ecs.c5.xlarge"
                    }
                    ]
                    },
                    "DataDiskCount":"4",
                    "PayType":"PostPaid",
                    "DataDiskSize":"40",
                    "SysDiskSize":"40",
                    "DataDiskCategory":"ssd",
                    "SpotStrategy":"NoSpot",
                    "SysDiskCategory":"ssd",
                    "InstanceTypeList":
                    {
                        "InstanceType":"ecs.c5.xlarge"
                        }
                        },
                        "RequestId":"6C96FD2C-95A0-4C03-8A19-7D84A4BAAA1E",
                        "ActiveRuleCategory":"ByLoad",
                        "TimeoutWithGrace":"1000",
                        "ScalingGroupId":"SGB-123245465686****",
                        "MaxSize":"10",
                        "MultiAvailablePolicyParam":"{\"onDemandBaseCapacity\": 1, \"onDema
ndPercentageAboveBaseCapacity\": 10, \"spotInstanceRemedy\": false, \"spotInstancePools\":
2}","MinSize":"0","DefaultCooldown":"300","HostGroupId":"G-5011FB3E49288C19",
                        "WithGrace":"true",
                        "MultiAvailablePolicy":"PRIORITY",
                        "ScalingRuleList":
                        {
                            "ScalingRule":
                            [
                                {
                                    "Status":"ACTIVE",
                                    "EssScalingRuleId":"sgr-34234eed234242",
                                    "LaunchTime":"2020-07-22T03:09Z",
                                    "TimeoutWithGrace":"1000",
                                    "ScalingGroupId":"122",
                                    "Cooldown":"600",
                                    "RecurrenceType":"Daily",
                                    "LaunchExpirationTime":"600",
                                    "AdjustmentType":"QuantityChangeInCapacity",
```

```
                                    "AdjustmentValue":"-1",
                                    "WithGrace":"true",
                                    "RecurrenceValue":"1",
                                    "RecurrenceEndTime":"2020-07-22T03:09Z",
                                    "RuleName":"Rule 1",
                                    "RuleCategory":"ByLoad"
                                    },
                                    {
                                        "SchedulerTrigger":    {
                                         "ComparisonOperator":">",
                                         "LaunchTime":"1434321345621",
                                         "RecurrenceType":"Daily",
                                         "MetricDisplayName":"YARN.PendingVCores",
                                         "Period":"5",
                                         "EvaluationCount":"1",
                                         "Unit":" ",
                                         "Statistics":"Average",
                                         "LaunchExpirationTime":"600",
                                         "MetricName":"YarnRootPendingVCores",
                                         "RecurrenceValue":"1",
                                         "RecurrenceEndTime":"1434321345621",
                                         "Threshold":"0"
                                         },
                                         "CloudWatchTrigger":
                                         {
                                             "ComparisonOperator":">",
                                             "LaunchTime":"1434321345621",
                                             "RecurrenceType":"Daily",

                                             "MetricDisplayName":"YARN.PendingVCores",
                                             "Period":"5",
                                             "EvaluationCount":"1",
                                             "Unit":" ",
                                             "Statistics":"Average",
                                             "LaunchExpirationTime":"600",
                                             "MetricName":"YarnRootPendingVCores",
                                             "RecurrenceValue":"1",
                                             "RecurrenceEndTime":"1434321345621",
                                             "Threshold":"0"
                                          }
                                }
                        ]
                }
}
```


5.10. Query details about a scaling Group

Call DescribeScalingGroupV2 to query details about a scaling group.

Debugging

OpenAPI Explorer automatically calculates the signature value. For your convenience, we recommend that you call this operation in OpenAPI Explorer. You can use OpenAPI Explorer to search for API operations, call API operations, and dynamically generate SDK sample code.

Request parameters

Parameter	Type	Required	Example	Description
Action	String	Yes	DescribeScalingGroupV2	The operation that you want to perform. This parameter is required for API requests that you create by piecing together HTTP or HTTPS URLs. Valid values: DescribeScalingGroupV2.
RegionId	String	Yes	cn-hangzhou	The region ID of the instance. You can call DescribeRegions To view the latest list of Alibaba Cloud regions.
ResourceGroupId	String	No	rg-acfmv6jutt6****	The ID of the resource group. You can call ListResourceGroups View the resource group ID.
ScalingGroupBizId	String	No	SGB-232432123245****	The ID of the scaling group. You can call ListScalingGroupV2 View the scaling group ID. **Note** Enter at least one of the ScalingGroupBizId and hostgroupbis ID.
HostGroupBizId	String	No	G-AB342535346545****	The ID of the host group. You can call ListClusterHostGroup View Machine Group ID. **Note** Enter at least one of the ScalingGroupBizId and hostgroupbis. In this example, enter hostgroupbis.

Response parameters

Parameter	Type	Example	Description

Parameter	Type	Example	Description
ActiveStatus	String	ACTIVE	The activity status of the scaling group. Valid values: • ACTIVE: The scaling group is started. • INACTIVE: the scaling group is not started.
ConfigState	String	APPLIED	The active status of the scaling configuration. Valid values: • APPLIED: the application has taken effect. • MODIFIED: it has been MODIFIED and has not taken effect.
Description	String	This is an example	The description of the scaling group.
HostGroupBizId	String	G-5011FB3E4928****	The machine group associated with the scaling group.
Name	String	Sample scaling Group	The name of the scaling group.
RequestId	String	C390A685-2707-4F42-BCFA-E4BC40E4B7A3	The ID of the request.
ScalingGroupId	String	SGB-16ABA17988F3****	The ID of the scaling group.
ScalingInMode	String	DEFAULT	The scaling type. Valid values: • DEFAULT: regular scaling • GRACEFUL: GRACEFUL offline
ScalingMaxSize	Integer	10	The maximum number of nodes in a scaling group.
ScalingMinSize	Integer	1	The minimum number of nodes in a scaling group.

Examples

Sample requests

```
http(s)://[Endpoint]/?Action=DescribeScalingGroupV2
&RegionId=cn-hangzhou
&ScalingGroupBizId=SGB-AA1234567****
&<common request parameters>
```

Sample success responses

`XML` format

```
<Description>this is a sample</Description>
<HostGroupBizId>G-5011FB3E4928****</HostGroupBizId>
<RequestId>C390A685-2707-4F42-BCFA-E4BC40E4B7A3</RequestId>
<ConfigState>APPLIED</ConfigState>
<ScalingInMode>DEFAULT</ScalingInMode>
<ScalingGroupId>SGB-16ABA17988F39****</ScalingGroupId>
<ScalingMaxSize>10</ScalingMaxSize>
<ScalingMinSize>1</ScalingMinSize>
<Name>Sample scaling group</Name>
<ActiveStatus>ACTIVE</ActiveStatus>
```

`JSON` Syntax

```
{
    "Description":"this is a sample",
    "HostGroupBizId":"G-5011FB3E4928****",
    "RequestId":"C390A685-2707-4F42-BCFA-E4BC40E4B7A3",
    "ConfigState":"APPLIED",
    "ScalingInMode":"DEFAULT",
    "ScalingGroupId":"SGB-16ABA17988F39****",
    "ScalingMaxSize":"10",
    "ScalingMinSize":"1",
    "Name":"Sample scaling group",
    "ActiveStatus":"ACTIVE"
    }
```

5.11. Perform operations on scaling Group instances

Calls the RunScalingActionV2 operation to perform scaling group instance control actions. For example, start, stop, restart, and refresh instances of a scaling group.

Debugging

OpenAPI Explorer automatically calculates the signature value. For your convenience, we recommend that you call this operation in OpenAPI Explorer. You can use OpenAPI Explorer to search for API operations, call API operations, and dynamically generate SDK sample code.

Request parameters

Parameter	Type	Required	Example	Description

Parameter	Type	Required	Example	Description
Action	String	Yes	RunScalingActionV2	The operation that you want to perform. This parameter is required for API requests that you create by piecing together HTTP or HTTPS URLs. Valid values: RunScalingActionV2.
RegionId	String	Yes	cn-hangzhou	The region ID of the instance. You can call DescribeRegions Interface to view the latest list of Alibaba Cloud regions.
ScalingActionType	String	Yes	START_SCALING_GROUP	Auto Scaling Engine actions. Valid values: • START_SCALING_GROUP: to start a scaling Group • STOP_SCALING_GROUP: to stop a scaling Group • RESTART_SCALING_GROUP: to restart a scaling Group • UPDATE_SCALING_GROUP_INSTANCE: refresh the scaling group configuration and apply the latest configuration
ScalingGroupBizId	String	Yes	SGB-234242ABC****	The ID of the scaling group. You can call ListScalingGroupV2 View data on the Member Management page.
ResourceGroupId	String	No	rg-9gLOoK****	The ID of the resource group. You can call ListResourceGroups View the resource group ID.
ActionParam	String	No	N/A	A reserved parameter.

Response parameters

Parameter	Type	Example	Description
Data	String	asg-uf6iir8uwwpb7j4****	The ID of the external instance.
RequestId	String	123DF0CD-C5F5-4A8D-984A-C5A4331EB84F	The ID of the request.

Examples

Sample requests

```
http(s)://[Endpoint]/?Action=RunScalingActionV2
&RegionId=cn-hangzhou
&ScalingActionType=START_SCALING_GROUP
&ScalingGroupBizId=SGB-234242ABC****
&<common request parameters>
```

Sample success responses

`XML` format

```
<RequestId>123DF0CD-C5F5-4A8D-984A-C5A4331EB84F</RequestId>
<Data>asg-uf6iir8uwwpb7j4****</Data>
```

`JSON` Syntax

```
{
    "RequestId":"123DF0CD-C5F5-4A8D-984A-C5A4331EB84F",
    "Data":"asg-uf6iir8uwwpb7j4****"
}
```

5.12. Delete Auto Scaling configuration items

Call RemoveScalingConfigItemV2 interface to delete Auto Scaling configuration items.

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	RemoveScalingConfigItemV2	The operation that you want to perform. Value: RemoveScalingConfigItemV2.
ConfigItemBizId	String	Yes	SRB-54CCB030511A****	configuration items ID. You can call ListScalingConfigItemV2 View configuration items ID.

Parameter	Type	Required	Example	Description
ConfigItemType	String	Yes	SCALING_RULE	configuration items type, with the following values: • SCALING_RULE: a scaling rule • SCALING_STRATEGY: Scaling Policy
RegionId	String	Yes	cn-hangzhou	The region ID. You can call DescribeRegions API to view the latest list of Alibaba Cloud regions.
ScalingGroupBizId	String	Yes	SGB-32242E323****	The scaling group ID. You can call ListScalingGroupV2 View the scaling group ID.
ResourceGroupId	String	No	rg-acfmv6jutt6****	The resource group ID. You can call ListResourceGroups View the resource group ID.

Response parameters

Parameter	Type	Example	Description
Data	Boolean	true	Indicates whether SQL audit was disabled for the DRDS database. Valid values: • true: The configuration items deleted successfully • false: delete configuration items failed
RequestId	String	7B804810-3C11-4927-B116-1D1A98A60BDD	The ID of the request.

Samples

Sample request

```
http(s)://[Endpoint]/?Action=RemoveScalingConfigItemV2
&ConfigItemBizId=SRB-54CCB030511A****
&ConfigItemType=SCALING_RULE
&RegionId=cn-hangzhou
&ScalingGroupBizId=SGB-32242E323****
&<common request parameters>
```

Sample success responses

`XML` format

```
<RequestId>7B804810-3C11-4927-B116-1D1A98A60BDD</RequestId>
<Data>true</Data>
```

`JSON` Format

```
{
    "RequestId":"7B804810-3C11-4927-B116-1D1A98A60BDD",
    "Data":"true"
}
```

6.Manage resources

6.1. Create Resource Pool

You can call CreateResourcePool to create a YARN resource pool.

Debugging

OpenAPI Explorer automatically calculates the signature value. For your convenience, we recommend that you call this operation in OpenAPI Explorer. You can use OpenAPI Explorer to search for API operations, call API operations, and dynamically generate SDK sample code.

Request parameters

Parameter	Type	Required	Example	Description
Action	String	Yes	CreateResourcePool	The operation that you want to perform. Set the value to CreateResourcePool.
Active	Boolean	Yes	true	Whether to activate: • true: Activate • false: do not activate
ClusterId	String	Yes	C-0E995C0EE7E5****	The ID of the cluster. You can call ListClusters You can call this operation to view the ID of a cluster.
Config.N.Category	String	Yes	DEFAULT_SETTINGS	The name of the parameter. Valid values: DEFAULT_SETTINGS, ACCESS_CONTROL_SETTINGS, QUEUE_RESOURCE_LIMIT, QUEUE_SCHEDULING_POLICY, QUEUE_PREEMPTION, QUEUE_SUBMISSION_ACCESS_CONTROL, and QUEUE_ADMINISTRATION_ACCESS_CONTROL.
Config.N.ConfigKey	String	Yes	capacity	The key of the parameter.
Config.N.configType	String	Yes	RESOURCE_POOL_CONFIG	Configuration type, filled in here **RESOURCE_POOL_CONFIG** .
Config.N.ConfigValue	String	Yes	100	The value of the parameter.

Parameter	Type	Required	Example	Description
Config.N.TargetId	String	Yes	test	A parameter that no longer takes effect. You can specify any value for this parameter.
Name	String	Yes	default	The name of the resource pool.
PoolType	String	Yes	CAPACITY_SCHEDULER	The scheduler type of the resource pool. Valid values: CAPACITY_SCHEDULER and FAIR_SCHEDULER.
RegionId	String	Yes	cn-hangzhou	The region ID of the instance.
Note	String	No	The default resource pool.	The description of the resouce pool.
YarnSiteConfig	String	No	configList	The list of parameters that you specify in the yarn-site.xml configuration file.
Config.N.Note	String	No	The capacity and weight of the queue	The description of the parameter.

Response parameters

Parameter	Type	Example	Description
RequestId	String	A544317F-4A60-4532-AC96-191B9D80420AF	The ID of the request.

Examples

Sample requests

```
http(s)://[Endpoint]/?Action=CreateResourcePool
&Active=true
&ClusterId=C-0E995C0EE7E5ECB3
&Config.1.Category=DEFAULT_SETTINGS
&Config.1.ConfigKey=capacity
&Config.1.configType=RESOURCE_POOL_CONFIG
&Config.1.ConfigValue=100
&Config.1.TargetId=test
&Name=default
&PoolType=CAPACITY_SCHEDULER
&RegionId=cn-hangzhou
&<common request parameters>
```

Sample success responses

`XML` format

```
<code>200</code>
<requestId>A544317F-4A60-4532-AC96-191B9D80420A</requestId>
<successResponse>true</successResponse>
```

`JSON` Syntax

```
{
    "code":"200",
    "requestId":"A544317F-4A60-4532-AC96-191B9D80420A",
    "successResponse":true
}
```

6.2. Create a resource queue

You can call CreateResourceQueue operation to create a resource queue.

Debugging

OpenAPI Explorer automatically calculates the signature value. For your convenience, we recommend that you call this operation in OpenAPI Explorer. You can use OpenAPI Explorer to search for API operations, call API operations, and dynamically generate SDK sample code.

Request parameters

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

Parameter	Type	Required	Example	Description
ClusterId	String	Yes	C-0E995C0EE7E5****	The ID of the cluster. You can call ListClusters You can call this operation to view the ID of a cluster.
Config.N.Category	String	Yes	QUEUE_RESOURCE_LIMIT	The name of the parameter.
Config.N.ConfigKey	String	Yes	capacity	The key of the parameter.
Config.N.ConfigValue	String	Yes	100	The value of the parameter.
Name	String	Yes	DefaultQueue	The name of the resource queue.
RegionId	String	Yes	cn-hangzhou	The region ID of the instance.
ResourcePoolId	Long	Yes	115	The ID of the resource pool.
QualifiedName	String	No	test	A parameter that you do not need to specify.
ParentQueueId	Long	No	225	The ID of the parent queue.
Leaf	Boolean	No	false	Specifies whether the queue is a leaf queue.
Config.N.Note	String	No	The capacity and weight of the queue	The description of the parameter.

Response parameters

Parameter	Type	Example	Description
RequestId	String	A1153E6C-9FB9-466C-AC11-1ED0BC12858E	The ID of the request.

Examples

Sample requests

```
http(s)://[Endpoint]/?Action=CreateResourceQueue
&ClusterId=C-0E995C0EE7E5***
&Name=DefaultQueue
&RegionId=cn-hangzhou
&ResourcePoolId=115
&AccessKeyId=xxx
&Leaf=false
&ParentQueueId=225
&QualifiedName=
&Config.1.Category=QUEUE_RESOURCE_LIMIT
&Config.1.ConfigKey=capacity
&Config.1.ConfigValue=100
&Config.1.1ote=capacity weight
&<common request parameters>
```

Sample success responses

`XML` format

```
<code>200</code>
<requestId>A544317F-4A60-4532-AC96-191B9D80420A</requestId>
<successResponse>true</successResponse>
```

`JSON` Syntax

```
{
    "code":"200",
    "requestId":"A544317F-4A60-4532-AC96-191B9D80420A",
    "successResponse":true
}
```

6.3. Deletes a specified resource pool

You can call DeleteResourcePool operation to delete a specified resource pool.

Debugging

OpenAPI Explorer automatically calculates the signature value. For your convenience, we recommend that you call this operation in OpenAPI Explorer. You can use OpenAPI Explorer to search for API operations, call API operations, and dynamically generate SDK sample code.

Request parameters

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

Parameter	Type	Required	Example	Description
ClusterId	String	Yes	C-EBD62A703A43****	The ID of the cluster. You can call ListClusters You can call this operation to view the ID of a cluster.
RegionId	String	Yes	cn-hangzhou	The region ID. You can call DescribeRegions To view the latest list of Alibaba Cloud regions.
ResourcePoolId	String	Yes	115	The ID of the resource pool. You can call ListResourcePool View the resource pool ID.

Response parameters

Parameter	Type	Example	Description
RequestId	String	26CE1B1C-C2FE-49DC-8CDF-5D9055B663A2	The ID of the request.

Examples

Sample requests

```
http(s)://[Endpoint]/?Action=DeleteResourcePool
&ClusterId=C-EBD62A703A43****
&RegionId=cn-hangzhou
&ResourcePoolId=115
&<common request parameters>
```

Sample success responses

`XML` format

```
<code>200</code>
<requestId>A544317F-4A60-4532-AC96-191B9D80420A</requestId>
<successResponse>true</successResponse>
```

`JSON` Syntax

```
{
    "code":"200",
    "requestId":"A544317F-4A60-4532-AC96-191B9D80420A",
    "successResponse":true
}
```

6.4. Delete Resource Queue

Deletes a resource queue.

Debugging

OpenAPI Explorer automatically calculates the signature value. For your convenience, we recommend that you call this operation in OpenAPI Explorer. You can use OpenAPI Explorer to search for API operations, call API operations, and dynamically generate SDK sample code.

Request parameters

Parameter	Type	Required	Example	Description
Action	String	Yes	DeleteResourceQueue	The operation that you want to perform. Set the value to DeleteResourceQueue.
ClusterId	String	Yes	C-EBD62A703A430E23	The ID of the cluster. You can call ListClusters You can call this operation to view the ID of a cluster.
RegionId	String	Yes	cn-hangzhou	The region ID of the instance. You can call DescribeRegions To view the latest list of Alibaba Cloud regions.
ResourceQueueId	String	Yes	248	The ID of the resource queue.

Response parameters

Parameter	Type	Example	Description
RequestId	String	A544317F-4A60-4532-AC96-191B9D80420A	The ID of the request.

Examples

Sample requests

```
http(s)://[Endpoint]/?Action=DeleteResourceQueue
&ClusterId=C-EBD62A703A430E23
&RegionId=cn-hangzhou
&ResourceQueueId=248
&<common request parameters>
```

Sample success responses

`XML` format

```
<code>200</code>
<requestId>A544317F-4A60-4532-AC96-191B9D80420A</requestId>
<successResponse>true</successResponse>
```

JSON Syntax

```
{
    "code":"200",
    "requestId":"A544317F-4A60-4532-AC96-191B9D80420A",
    "successResponse":true
}
```

6.5. Queries the list of resource pools

You can call ListResourcePool operation to query resource pools.

Debugging

OpenAPI Explorer automatically calculates the signature value. For your convenience, we recommend that you call this operation in OpenAPI Explorer. You can use OpenAPI Explorer to search for API operations, call API operations, and dynamically generate SDK sample code.

Request parameters

Parameter	Type	Required	Example	Description
Action	String	Yes	ListResourcePool	The operation that you want to perform. This parameter is required for API requests that you create by piecing together HTTP or HTTPS URLs. Set the value to ListResourcePool.
ClusterId	String	Yes	C-EBD62A703A43*** *	The ID of the cluster. You can call ListClusters You can call this operation to view the ID of a cluster.
RegionId	String	Yes	cn-hangzhou	The region ID of the instance. You can call DescribeRegions To view the latest list of Alibaba Cloud regions.
PoolType	String	No	CAPACITY_SCHEDULER	The scheduler type of the resource pool. Valid values: CAPACITY_SCHEDULER and FAIR_SCHEDULER.
PageNumber	Integer	No	100	The page number of the returned page.

Parameter	Type	Required	Example	Description
PageSize	Integer	No	50	The number of entries to return on each page.

Response parameters

Parameter	Type	Example	Description
PageNumber	Integer	1	The page number of the returned page.
PageSize	Integer	20	The maximum number of exceptions on each page.
PoolInfoList	Array of PoolInfo		The resource pools of the cluster.
PoolInfo			
EcmResourcePool	Struct		The basic information of the resource pool.
Active	Boolean	true	Indicates whether the resource pool is in active state.
Id	Long	116	The ID of the resource pool.
Name	String	DEFAULT	The name of the resource pool.
Note	String	test	The description of the resource pool.
PoolType	String	CAPACITY_SCHEDULER	The scheduler type of the resource pool.
UserId	String	1528342356764****	The ID of the user.
YarnSiteConfig	String	null	The configurations of the yarn-site.xml file.
EcmResourcePoolConfigList	Array of EcmResourcePoolConfig		The configuration parameters of the resource pool.

Parameter	Type	Example	Description
EcmResourcePoolConfig			
Category	String	QUEUE_RESOURCE_LIMIT	The category of the parameter.
ConfigKey	String	minimum-user-limit-percent	The key of the parameter.
ConfigType	String	RESOURCE_QUEUE_CONFIG	The data type of the parameter.
ConfigValue	String	0	The value of the parameter.
Id	Long	2926	The ID of the parameter.
Note	String	test	The description of the parameter.
Status	String	NORMAL	The status of the parameter.
QueueList	Array of Queue		The queues of the resource pool.
Queue			
EcmResourcePoolConfigList	Array of EcmResourcePoolConfig		The configuration parameters of the resource pool.
EcmResourcePoolConfig			
Category	String	QUEUE_RESOURCE_LIMIT	The category of the parameter.
ConfigKey	String	minimum-user-limit-percent	The key of the parameter.
ConfigType	String	RESOURCE_QUEUE_CONFIG	The data type of the parameter.
ConfigValue	String	0	The value of the parameter.
Id	Long	2926	The ID of the parameter.

Parameter	Type	Example	Description
Note	String	test	The description of the parameter.
Status	String	NORMAL	The status of the parameter.
EcmResourceQueue	Struct		The queue of the resource pool.
Id	Long	2928	The ID of the queue.
Leaf	Boolean	false	Indicates whether the queue is a leaf queue.
Name	String	DEFAULT2	The name of the queue.
ParentQueueId	Long	116	The ID of the parent queue.
QualifiedName	String	default	The qualified name.
QueueType	String	null	The type of the queue.
ResourcePoolId	Long	116	The ID of the resource pool.
Status	String	NORMAL	The status of the queue.
UserId	String	1528342356764****	The ID of the user.
RequestId	String	A544317F-4A60-4532-AC96-191B9D80420A	The ID of the request.
Total	Integer	10	The total number of entries.

Examples

Sample requests

```
http(s)://[Endpoint]/?Action=ListResourcePool
&ClusterId=C-EBD62A703A43****
&RegionId=cn-hangzhou
&<common request parameters>
```

Sample responses

`XML` format


```
{
    "data": {
        "PoolInfoList": {
            "PoolInfo": [
                {
                    "EcmResourcePoolConfigList": {
                        "EcmResourcePoolConfig": []
                    },
                    "EcmResourcePool": {
                        "Name": "DEFAULT",
                        "YarnSiteConfig": "",
                        "PoolType": "CAPACITY_SCHEDULER",
                        "Active": true,
                        "Id": 116,
                        "Note": "",
                        "UserId": "152834231764****"
                    },
                    "QueueList": {
                        "Queue": [
                            {
                                "EcmResourcePoolConfigList": {
                                    "EcmResourcePoolConfig": [
                                        {
                                            "Status": "NORMAL",
                                            "Category": "QUEUE_RESOURCE_LIMIT",
                                            "ConfigKey": "capacity",
                                            "ConfigValue": "100",
                                            "Id": 2925,
                                            "Note": "",
                                            "ConfigType": "RESOURCE_QUEUE_CONFIG"
                                        },
                                        {
                                            "Status": "NORMAL",
                                            "Category": "QUEUE_RESOURCE_LIMIT",
                                            "ConfigKey": "minimum-user-limit-percent",
                                            "ConfigValue": "0",
                                            "Id": 2926,
                                            "Note": "",
                                            "ConfigType": "RESOURCE_QUEUE_CONFIG"
                                        },
                                        {
                                            "Status": "NORMAL",
                                            "Category": "QUEUE_RESOURCE_LIMIT",
                                            "ConfigKey": "maximum-capacity",
                                            "ConfigValue": "0",
                                            "Id": 2927,
                                            "Note": "",
                                            "ConfigType": "RESOURCE_QUEUE_CONFIG"
                                        },
                                        {
                                            "Status": "NORMAL",
```

```
            "Category": "QUEUE_RESOURCE_LIMIT",
            "ConfigKey": "user-limit-factor",
            "ConfigValue": "",
            "Id": 2928,
            "Note": "",
            "ConfigType": "RESOURCE_QUEUE_CONFIG"
        },
        {
            "Status": "NORMAL",
            "Category": "QUEUE_RESOURCE_LIMIT",
            "ConfigKey": "maximum-allocation-mb",
            "ConfigValue": "",
            "Id": 2929,
            "Note": "",
            "ConfigType": "RESOURCE_QUEUE_CONFIG"
        },
        {
            "Status": "NORMAL",
            "Category": "QUEUE_RESOURCE_LIMIT",
            "ConfigKey": "maximum-allocation-vcores",
            "ConfigValue": "",
            "Id": 2930,
            "Note": "",
            "ConfigType": "RESOURCE_QUEUE_CONFIG"
        },
        {
            "Status": "NORMAL",
            "Category": "QUEUE_RESOURCE_LIMIT",
            "ConfigKey": "maximum-applications",
            "ConfigValue": "",
            "Id": 2931,
            "Note": "",
            "ConfigType": "RESOURCE_QUEUE_CONFIG"
        },
        {
            "Status": "NORMAL",
            "Category": "QUEUE_RESOURCE_LIMIT",
            "ConfigKey": "maximum-am-resource-percent",
            "ConfigValue": "",
            "Id": 2932,
            "Note": "",
            "ConfigType": "RESOURCE_QUEUE_CONFIG"
        },
        {
            "Status": "NORMAL",
            "Category": "QUEUE_RESOURCE_LIMIT",
            "ConfigKey": "state",
            "ConfigValue": "RUNNING",
            "Id": 2933,
            "Note": "",
            "ConfigType": "RESOURCE_QUEUE_CONFIG"
        },
        {
            "Status": "NORMAL",
```

```
                                            "Category": "QUEUE_SUBMISSION_ACCESS_CONTROL",
                                            "ConfigKey": "acl_submit_applications",
                                            "ConfigValue": "",
                                            "Id": 2934,
                                            "Note": "",
                                            "ConfigType": "RESOURCE_QUEUE_CONFIG"
                                        },
                                        {
                                            "Status": "NORMAL",
                                            "Category": "QUEUE_ADMINISTRATION_ACCESS_CONTRO
L",
                                            "ConfigKey": "acl_administer_queue",
                                            "ConfigValue": "",
                                            "Id": 2935,
                                            "Note": "",
                                            "ConfigType": "RESOURCE_QUEUE_CONFIG"
                                        }
                                    ]
                                },
                                "EcmResourceQueue": {
                                    "Name": "default",
                                    "Status": "NORMAL",
                                    "QualifiedName": "default",
                                    "Id": 247,
                                    "QueueType": "",
                                    "ResourcePoolId": 116,
                                    "UserId": "152834231764****",
                                    "Leaf": false,
                                    "ParentQueueId": 0
                                }
                            }
                        ]
                    }
                },
                {
                    "EcmResourcePoolConfigList": {
                        "EcmResourcePoolConfig": []
                    },
                    "EcmResourcePool": {
                        "Name": "pool1",
                        "YarnSiteConfig": "",
                        "PoolType": "CAPACITY_SCHEDULER",
                        "Active": true,
                        "Id": 117,
                        "Note": "",
                        "UserId": "152834231764****"
                    },
                    "QueueList": {
                        "Queue": []
                    }
                }
            ]
        },
        "RequestId": "213DD361-EF38-4A31-A909-96857AEE42DE"
```

```
    },
    "requestId": "213DD361-EF38-4A31-A909-96857AEE42DE"
}
```

JSON Syntax


```
{ "data": { "PoolInfoList": { "PoolInfo": [ { "EcmResourcePoolConfigList": { "EcmResourcePoolConfig": [] }, "EcmResourcePool": { "Name": "DEFAULT", "YarnSiteConfig": "", "PoolType": "CAPACITY_SCHEDULER", "Active": true, "Id": 116, "Note": "", "UserId": "152834231764*****" }, "QueueList": { "Queue": [ { "EcmResourcePoolConfigList": { "EcmResourcePoolConfig": [ { "Status": "NORMAL", "Category": "QUEUE_RESOURCE_LIMIT", "ConfigKey": "capacity", "ConfigValue": "100", "Id": 2925, "Note": "", "ConfigType": "RESOURCE_QUEUE_CONFIG" }, { "Status": "NORMAL", "Category": "QUEUE_RESOURCE_LIMIT", "ConfigKey": "minimum-user-limit-percent", "ConfigValue": "0", "Id": 2926, "Note": "", "ConfigType": "RESOURCE_QUEUE_CONFIG" }, { "Status": "NORMAL", "Category": "QUEUE_RESOURCE_LIMIT", "ConfigKey": "maximum-capacity", "ConfigValue": "0", "Id": 2927, "Note": "", "ConfigType": "RESOURCE_QUEUE_CONFIG" }, { "Status": "NORMAL", "Category": "QUEUE_RESOURCE_LIMIT", "ConfigKey": "user-limit-factor", "ConfigValue": "", "Id": 2928, "Note": "", "ConfigType": "RESOURCE_QUEUE_CONFIG" }, { "Status": "NORMAL", "Category": "QUEUE_RESOURCE_LIMIT", "ConfigKey": "maximum-allocation-mb", "ConfigValue": "", "Id": 2929, "Note": "", "ConfigType": "RESOURCE_QUEUE_CONFIG" }, { "Status": "NORMAL", "Category": "QUEUE_RESOURCE_LIMIT", "ConfigKey": "maximum-allocation-vcores", "ConfigValue": "", "Id": 2930, "Note": "", "ConfigType": "RESOURCE_QUEUE_CONFIG" }, { "Status": "NORMAL", "Category": "QUEUE_RESOURCE_LIMIT", "ConfigKey": "maximum-applications", "ConfigValue": "", "Id": 2931, "Note": "", "ConfigType": "RESOURCE_QUEUE_CONFIG" }, { "Status": "NORMAL", "Category": "QUEUE_RESOURCE_LIMIT", "ConfigKey": "maximum-am-resource-percent", "ConfigValue": "", "Id": 2932, "Note": "", "ConfigType": "RESOURCE_QUEUE_CONFIG" }, { "Status": "NORMAL", "Category": "QUEUE_RESOURCE_LIMIT", "ConfigKey": "state", "ConfigValue": "RUNNING", "Id": 2933, "Note": "", "ConfigType": "RESOURCE_QUEUE_CONFIG" }, { "Status": "NORMAL", "Category": "QUEUE_SUBMISSION_ACCESS_CONTROL", "ConfigKey": "acl_submit_applications", "ConfigValue": "", "Id": 2934, "Note": "", "ConfigType": "RESOURCE_QUEUE_CONFIG" }, { "Status": "NORMAL", "Category": "QUEUE_ADMINISTRATION_ACCESS_CONTROL", "ConfigKey": "acl_administer_queue", "ConfigValue": "", "Id": 2935, "Note": "", "ConfigType": "RESOURCE_QUEUE_CONFIG" } ] }, "EcmResourceQueue": { "Name": "default", "Status": "NORMAL", "QualifiedName": "default", "Id": 247, "QueueType": "", "ResourcePoolId": 116, "UserId": "152834231764****", "Leaf": false, "ParentQueueId": 0 } } ] } }, { "EcmResourcePoolConfigList": { "EcmResourcePoolConfig": [] }, "EcmResourcePool": { "Name": "pool1", "YarnSiteConfig": "", "PoolType": "CAPACITY_SCHEDULER", "Active": true, "Id": 117, "Note": "", "UserId": "152834231764****" }, "QueueList": { "Queue": [] } } ] }, "RequestId": "213DD361-EF38-4A31-A909-96857AEE42DE" }, "requestId": "213DD361-EF38-4A31-A909-96857AEE42DE" }
```


6.6. Update resource pools

You can call ModifyResourcePool operation to update a resource pool.

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	ModifyResourcePool	The operation that you want to perform. This parameter is required for API requests that you create by piecing together HTTP or HTTPS URLs. Set the value to ModifyResourcePool.
ClusterId	String	Yes	C-0E995C0EE7E5****	The ID of the cluster. You can call ListClusters You can call this operation to view the ID of a cluster.
Id	String	Yes	116	The ID of the resource pool. You can call ListResourcePool View the resource pool ID.
RegionId	String	Yes	cn-hangzhou	The region ID. You can call DescribeRegions To view the latest list of Alibaba Cloud regions.
Active	Boolean	No	true	Indicates whether this resource pool is an active activation pool. The values are as follows: • true: The pool is an active activation pool. • false: not an active active pool.
Name	String	No	custompool	The name of the resource pool.
Yarnsiteconfig	String	No	Yarnsiteconfig	The list of YARN configurations.
Config.N.Id	String	No	10	The ID of the parameter.
Config.N.ConfigKey	String	No	capacity	The key of the parameter.
Config.N.ConfigValue	String	No	100	The value of the parameter.

Parameter	Type	Required	Example	Description
Config.N.Category	String	No	DEFAULT_SETTINGS	Configuration type: • DEFAULT_SETTINGS: the default configuration. • ACCESS_CONTROL_SETTINGS: Resource Access Management settings. • QUEUE_RESOURCE_LIMIT: the resource limit of the queue. • QUEUE_SCHEDULING_POLICY: The queue scheduling policy. • QUEUE_PREEMPTION: queue preemption. • QUEUE_SUBMISSION_ACCESS_CONTROL: The queue submits Resource Access Management. • QUEUE_ADMINISTRATION_ACCESS_CONTROL: The queue management Resource Access Management.
Config.N.Note	String	No	The weight used to determine the fraction of total resources that the queue can use	The description of the parameter.

Response parameters

Parameter	Type	Example	Description
RequestId	String	A544317F-4A60-4532-AC96-191B9D80420A	The ID of the request.

Examples

Sample requests

```
http(s)://[Endpoint]/?Action=ModifyResourcePool
&ClusterId=C-0E995C0EE7E5****
&Id=116
&RegionId=cn-hangzhou
&<common request parameters>
```

Sample success responses

`XML` format

```
<requestId>A544317F-4A60-4532-AC96-191B9D80420A</requestId>
```

JSON Syntax

```
{
    "requestId":"A544317F-4A60-4532-AC96-191B9D80420A"
}
```

6.7. Modifies the scheduling type of a resource pool

You can call ModifyResourcePoolSchedulerType operation to modify the scheduler type of a resource pool.

Debugging

OpenAPI Explorer automatically calculates the signature value. For your convenience, we recommend that you call this operation in OpenAPI Explorer. You can use OpenAPI Explorer to search for API operations, call API operations, and dynamically generate SDK sample code.

Request parameters

Parameter	Type	Required	Example	Description
Action	String	Yes	ModifyResourcePoolSchedulerType	The operation that you want to perform. Set the value to ModifyResourcePoolSchedulerType.
ClusterId	String	Yes	C-EBD62A703A43****	The ID of the cluster. You can call ListClusters You can call this operation to view the ID of a cluster.
RegionId	String	Yes	cn-hangzhou	The region ID of the instance. You can call DescribeRegions To view the latest list of Alibaba Cloud regions.
SchedulerType	String	Yes	CAPACITY_SCHEDULER	The scheduler type of the resource pool.

Response parameters

Parameter	Type	Example	Description
RequestId	String	A544317F-4A60-4532-AC96-191B9D80420A	The ID of the request.

Examples

Sample requests

```
http(s)://[Endpoint]/?Action=ModifyResourcePoolSchedulerType
&ClusterId=C-EBD62A703A43****
&RegionId=cn-hangzhou
&SchedulerType=CAPACITY_SCHEDULER
&<common request parameters>
```

Sample responses

`XML` format

```
<code>200</code>
<requestId>A544317F-4A60-4532-AC96-191B9D80420A</requestId>
<successResponse>true</successResponse>
```

`JSON` Syntax

```
{
    "code":"200",
    "requestId":"A544317F-4A60-4532-AC96-191B9D80420A",
    "successResponse":true
}
```

6.8. Modify resource queue

You can call ModifyResourceQueue operation to modify a resource queue.

Debugging

OpenAPI Explorer automatically calculates the signature value. For your convenience, we recommend that you call this operation in OpenAPI Explorer. You can use OpenAPI Explorer to search for API operations, call API operations, and dynamically generate SDK sample code.

Request parameters

Parameter	Type	Required	Example	Description
Action	String	Yes	ModifyResourceQueue	The operation that you want to perform. Set the value to ModifyResourceQueue.
ClusterId	String	Yes	C-0E995C0EE7E5****	The ID of the cluster. You can call ListClusters You can call this operation to view the ID of a cluster.

Parameter	Type	Required	Example	Description
Config.N.ConfigKey	String	Yes	capacity	The key of the parameter.
Config.N.ConfigValue	String	Yes	100	The value of the parameter.
Id	String	Yes	116	The queue ID of the resource pool.
RegionId	String	Yes	cn-hangzhou	The region ID of the instance. You can call DescribeRegions To view the latest list of Alibaba Cloud regions.
ResourcePoolId	Long	Yes	115	The ID of the resource pool. You can call ListResourcePool View the resource pool ID.
Name	String	No	pool2	The name of the queue.
QualifiedName	String	No	test	A parameter that you do not need to specify.
ParentQueueId	Long	No	115	The ID of the parent queue.
Leaf	Boolean	No	false	Specifies whether the queue is a leaf queue.
Config.N.Id	Long	No	200	The ID of the parameter.
Config.N.Category	String	No	QUEUE_RESOURCE_LIMIT	The name of the parameter.
Config.N.Note	String	No	The capacity and weight of the queue	The description of the parameter.

Response parameters

Parameter	Type	Example	Description
RequestId	String	A544317F-4A60-4532-AC96-191B9D80420A	The ID of the request.

Examples

Sample requets

```
/?Action=ModifyResourceQueue
&ClusterId=C-0E995C0EE7E5ECB3
&Id=116
&RegionId=cn-hangzhou
&ResourcePoolId=115
&AccessKeyId=xxx
&Leaf=false
&Name=pool2
&ParentQueueId=115
&QualifiedName=test
&Config.1.Category=QUEUE_RESOURCE_LIMIT
&Config.1.ConfigKey=capacity
&Config.1.ConfigValue=100
&Config.1.Id=200
&Config.1.1ote=capacity weight
&<common request parameters>
```

Sample responses

`XML` format

```
<code>200</code>
<requestId>A544317F-4A60-4532-AC96-191B9D80420A</requestId>
<successResponse>true</successResponse>
```

`JSON` Syntax

```
{
    "code":"200",
    "requestId":"A544317F-4A60-4532-AC96-191B9D80420A",
    "successResponse":true
}
```

6.9. Synchronize resource pools and configure to clusters

You can call RefreshClusterResourcePool operation to synchronize data from a resource pool and configure it to a cluster.

Debugging

OpenAPI Explorer automatically calculates the signature value. For your convenience, we recommend that you call this operation in OpenAPI Explorer. You can use OpenAPI Explorer to search for API operations, call API operations, and dynamically generate SDK sample code.

Request parameters

Parameter	Type	Required	Example	Description
Action	String	Yes	RefreshClusterResourcePool	The operation that you want to perform. This parameter is required for API requests that you create by piecing together HTTP or HTTPS URLs. Set the value to RefreshClusterResourcePool.
ClusterId	String	Yes	C-0E995C0EE7E5****	The ID of the cluster. You can call ListClusters Interface to view the cluster ID.
RegionId	String	Yes	cn-hangzhou	The region ID of the instance. You can call DescribeRegions Interface to view the latest list of Alibaba Cloud regions.
ResourcePoolId	Long	Yes	115	The ID of the resource pool. You can call ListResourcePool View the resource pool ID.

Response parameters

Parameter	Type	Example	Description
OperationId	String	xxxx	The ID of the action.
RequestId	String	A544317F-4A60-4532-AC96-191B9D80420A	The ID of the request.
WorkFlowInstanceId	String	****	The ID of the workflow instance.

Examples

Sample requests

```
http(s)://[Endpoint]/?Action=RefreshClusterResourcePool
&ClusterId=C-0E995C0EE7E5****
&RegionId=cn-hangzhou
&ResourcePoolId=115
&<common request parameters>
```

Sample responses

`XML` format

```
<OperationId>****</OperationId>
<RequestId>A544317F-4A60-4532-AC96-191B9D80420A</RequestId>
<WorkFlowInstanceId>****</WorkFlowInstanceId>
```

JSON Syntax

```
{
    "OperationId":"****",
    "RequestId":"A544317F-4A60-4532-AC96-191B9D80420A",
    "WorkFlowInstanceId":"****"
}
```

6.10. View resource pool policy types

Call the DescribeClusterResourcePoolSchedulerType operation to query the scheduling policies of resource pools.

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	DescribeClusterResourcePoolSchedulerType	The operation that you want to perform. Set the value to DescribeClusterResourcePoolSchedulerType.
ClusterId	String	Yes	C-EBD62A703A43****	The ID of the cluster. You can call ListClusters The ID of the cluster.
RegionId	String	Yes	cn-hangzhou	The region ID of the instance. You can call DescribeRegions View the latest Alibaba Cloud region list.

Response parameters

Parameter	Type	Example	Description
CurrentSchedulerType	String	FAIR_SCHEDULER	The current scheduling policy.
DefaultSchedulerType	String	CAPACITY_SCHEDULER	The default scheduling policy.

Parameter	Type	Example	Description
RequestId	String	7DEE7967-3F9E-44AE-8B4E-021CBCA3A26C	The ID of the request.
SupportSchedulerType	String	CAPACITY_SCHEDULER,FAIR_SCHEDULER	Supported scheduling policy types: • CAPACITY_SCHEDULER: Capacity Scheduler • FAIR_SCHEDULER: fair scheduler

Examples

Sample requests

```
http(s)://[Endpoint]/?Action=DescribeClusterResourcePoolSchedulerType
&ClusterId=C-EBD62A703A43****
&RegionId=cn-hangzhou
&<common request parameters>
```

Sample success responses

`XML` format

```
<SupportSchedulerType>CAPACITY_SCHEDULER,FAIR_SCHEDULER</SupportSchedulerType>
<RequestId>7DEE7967-3F9E-44AE-8B4E-021CBCA3A26C</RequestId>
<DefaultSchedulerType>CAPACITY_SCHEDULER</DefaultSchedulerType>
<CurrentSchedulerType/>
```

`JSON` Syntax

```
{
    "SupportSchedulerType": "CAPACITY_SCHEDULER,FAIR_SCHEDULER",
    "RequestId": "7DEE7967-3F9E-44AE-8B4E-021CBCA3A26C",
    "DefaultSchedulerType": "CAPACITY_SCHEDULER",
    "CurrentSchedulerType": ""
}
```

7.Tags

7.1. Create and bind a tag

You can call TagResources operation to create and bind tags to specified EMR clusters.

Note the following limits when you call this operation:

- You can bind a maximum of 20 tags to a cluster.
- Tags bound to an EMR cluster are synchronized to the ECS instances of the nodes.

Debugging

OpenAPI Explorer automatically calculates the signature value. For your convenience, we recommend that you call this operation in OpenAPI Explorer. You can use OpenAPI Explorer to search for API operations, call API operations, and dynamically generate SDK sample code.

Request parameters

Parameter	Type	Required	Example	Description
Action	String	No	TagResources	The operation that you want to perform. This parameter is required for API requests that you create by piecing together HTTP or HTTPS URLs. Set the value to TagResources.
RegionId	String	Yes	cn-hangzhou	The region ID of the instance. You can call DescribeRegions Interface to view the latest list of Alibaba Cloud regions.
ResourceId.N	RepeatList	Yes	C-3652B95F6596****	The ID of resource N. Valid values of N: 1 to 50.
ResourceType	String	Yes	cluster	The type of the resource. The EMR cluster is cluster.
Tag.N.Key	String	No	DevDept	The key of tag N of the resource. Valid values of N: 1 to 20 The tag key cannot be an empty string. The value of a tag key ranges from 1 to 128. It cannot start with aliyun or acs: and cannot contain http:// or https://.

Parameter	Type	Required	Example	Description
Tag.N.Value	String	No	DevNianmin	The value of tag N of the resource. Valid values of N: 1 to 20. The tag value can be an empty string. The value of the tag ranges from 1 to 128. It cannot start with acs: and cannot contain http:// or https://.

Response parameters

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

Examples

Sample requests

```
http(s)://[Endpoint]/?Action=TagResources &RegionId=cn-hangzhou &ResourceId.1=C-3652B95F659
6****
&ResourceType=cluster
&Tag.1.Key=DevDept
&<common request parameters>
```

Sample success responses

`XML` format

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

`JSON` Syntax

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

7.2. Query tag list

You can call ListTagResources to query the tags that are bound to one or more EMR clusters.

Note the following information when you call the operation:

- Specify at least one of the ResourceId.N and Tag.N(Tag.N.Key and Tag.N.Value) in the request to specify the query object.
- When you specify Tag.N and ResourceId.N at the same time, only EMR clusters that meet both conditions are included in the returned result.

Debugging

OpenAPI Explorer automatically calculates the signature value. For your convenience, we recommend that you call this operation in OpenAPI Explorer. You can use OpenAPI Explorer to search for API operations, call API operations, and dynamically generate SDK sample code.

Request parameters

Parameter	Type	Required	Example	Description
Action	String	No	ListTagResources	The operation that you want to perform. This parameter is required for API requests that you create by piecing together HTTP or HTTPS URLs. Set the value to ListTagResources.
RegionId	String	Yes	cn-hangzhou	The region ID of the instance. You can call DescribeRegions Interface to view the latest list of Alibaba Cloud regions.
ResourceType	String	Yes	cluster	The type of the resource. The EMR cluster is cluster.
ResourceId.N	RepeatList	No	C-3652B95F65967***	The ID of the EMR cluster. You can call the ListClusters You can call this operation to view the ID of a cluster. Valid values of N: 1 to 50.
Tag.N.Key	String	No	DevDept	The tag key used for exact search of EMR clusters. Valid values of a tag key: 1 to 128. Valid values of N: 1 to 20. Tag.N is used for exact match of EMR clusters that are bound with specified tags. It consists of one key-value pair. • If you specify only Tag.N.Key, all clusters that are associated with this tag key are returned. • If you specify only Tag.N.Value, the MissingParameter.TagKey error code is returned. • When you specify multiple tag key-value pairs at the same time, only EMR clusters that match all tag key-value pairs can be found.

Parameter	Type	Required	Example	Description
Tag.N.Value	String	No	DevNianmin	The tag value used for exact searches of EMR clusters. You can call ListTagResources View data on the Member Management page. Valid values of the tag value: 1 to 128. Valid values of N: 1 to 20.
NextToken	String	No	caeba0bbb2be03f84eb48b699f0a****	The token used to perform the next query.

Response parameters

Parameter	Type	Example	Description
NextToken	String	caeba0bbb2be03f84eb48b699f0a****	The token that was returned for the next query.
RequestId	String	DE65F6B7-7566-4802-9007-96F2494AC5XX	The ID of the request.
TagResources	Array of TagResource		A collection of clusters and tags, including the cluster ID, resource type, and tag key-value pair.
TagResource			
ResourceId	String	C-3652B95F6596****	The ID of the cluster.
ResourceType	String	cluster	The type of the resource. The EMR cluster is cluster.
TagKey	String	DevDept	The key of each tag.
TagValue	String	DevNianmin	The tag value of the instance.

Examples

Sample requests

```
http(s)://[Endpoint]/?Action=ListTagResources
&RegionId=cn-hangzhou
&ResourceType=cluster
&<common request parameters>
```

Sample success responses

`XML` format

```
<RequestId>DE65F6B7-7566-4802-9007-96F2494AC5XX</RequestId>
<NextToken>caeba0bbb2be03f84eb48b699f0a****</NextToken>
<TagResources>
  <TagResource>
   <ResourceId>C-3652B95F6596****</ResourceId>
   <TagKey>DevDept</TagKey>
   <ResourceType>cluster</ResourceType>
   <TagValue>DevNianmin</TagValue>
  </TagResource>
</TagResources>
```

`JSON` Syntax

```
{
    "RequestId":"DE65F6B7-7566-4802-9007-96F2494AC5XX",
    "NextToken":"caeba0bbb2be03f84eb48b699f0a****",
    "TagResources":{
        "TagResource":[
            {
              "ResourceId":"C-3652B95F6596****",
              "TagKey":"DevDept",
              "ResourceType":"cluster",
              "TagValue":"DevNianmin"
            }
           ]
          }
        }
```

7.3. Unbind a tag

You can call UntagResources to unbind tags from specified EMR clusters. After a tag is unbound, the tag is automatically deleted if it is not bound to any other resources.

Debugging

OpenAPI Explorer automatically calculates the signature value. For your convenience, we recommend that you call this operation in OpenAPI Explorer. You can use OpenAPI Explorer to search for API operations, call API operations, and dynamically generate SDK sample code.

Request parameters

Parameter	Type	Required	Example	Description
Action	String	No	UntagResources	The operation that you want to perform. This parameter is required for API requests that you create by piecing together HTTP or HTTPS URLs. Set the value to UntagResources.
RegionId	String	Yes	cn-hangzhou	The region ID of the instance. You can call DescribeRegions Interface to view the latest list of Alibaba Cloud regions.
ResourceId.N	RepeatList	Yes	C-3652B95F65967***	The ID of the EMR cluster. You can call the ListClusters You can call this operation to view the ID of a cluster. Valid values of N: 1 to 50.
ResourceType	String	Yes	cluster	The type of the resource. The EMR cluster is cluster.
TagKey.N	RepeatList	No	DevNianmin	The key of Tag n of the EMR cluster. Valid values of N: 1 to 20.
All	Boolean	No	false	Specifies whether to unbind all tags from the resource. This parameter takes effect only when the TagKey.N parameter is not specified. Valid values: • true • false

Response parameters

Parameter	Type	Example	Description
RequestId	String	C46FF5A8-C5F0-4024-8262-B16B639225A0	The ID of the request.

Examples

Sample requests

```
http(s)://[Endpoint]/?Action=UntagResources
&RegionId=cn-hangzhou
&ResourceId.1=C-3652B95F65967***
&ResourceType=cluster
&<common request parameters>
```

Sample success responses

`XML` format

```
<RequestId>C46FF5A8-C5F0-4024-8262-B16B639225A0</RequestId>
```

`JSON` Syntax

```
{
 "RequestId":"C46FF5A8-C5F0-4024-8262-B16B639225A0"
}
```

8.Data development

8.1. Create a job

Call the CreateFlowJob interface to create a job.

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	CreateFlowJob	The operation that you want to perform. Set the value to CreateFlowJob.
Description	String	Yes	Job description	The description of the job.
Name	String	Yes	my_shell_job	The name of the job that you want to create.
ProjectId	String	Yes	FP-257A173659F5****	The project ID. You can call ListFlowProject View the ID of the project.
RegionId	String	Yes	cn-hangzhou	The region ID. You can call DescribeRegions View the latest list of Alibaba Cloud regions.
ResourceList.N.Path	String	Yes	oss://path/demo.jar	The path of the resource, which supports OSS and HDFS.

Parameter	Type	Required	Example	Description
Type	String	Yes	SHELL	The job type, with the following values: • MR • SPARK • HIVE_SQL • HIVE • PIG • SQOOP • SPARK_SQL • SPARK_STREAMING • SHELL
FailAct	String	No	CONTINUE	Failure policy, with the following values: • CONTINUE: Skip this job • STOP: Stop a job
MaxRetry	Integer	No	5	The maximum number of retries, ranging from 0 to 5.
RetryPolicy	String	No	None.	retry policy, retain parameters.
MaxRunningTimeSec	Long	No	0	Retain parameters.
RetryInterval	Long	No	200	Retry interval 0~300 (seconds).
Params	String	No	ls -l	The content of the job.
ParamConf	String	No	{"date":"${yyyy-MM-dd}"}	The configuration parameters of the job.

Parameter	Type	Required	Example	Description
CustomVariables	String	No	{\"scope\":\"PROJECT\",\"entityId\":\"FP-80C2FDDBF35D9CC5\",\"variables\":[{\"name\":\"v1\",\"value\":\"1\",\"properties\":{\"password\":true}}]}	The custom variables configured for the job.
EnvConf	String	No	{"key":"value"}	The environment variables configured for the job. **Note** The maximum length of the entire JSON string is 1024 bytes.
RunConf	String	No	{"priority":1,"userName":"hadoop","memory":2048,"cores":1}	Run the configuration, the value is as follows: • priority: priority • userName: task Linux submission user • memory: memory, in MB • cores: number of cores
MonitorConf	String	No	{"inputs":[{"type":"KAFKA","clusterId":"C-1234567","topics":"kafka_topic","consumer.group":"kafka_consumer_group"}],"outputs":[{"type":"KAFKA","clusterId":"C-1234567","topics":"kafka_topic"}]}	Monitoring configuration, only SPARK_STREAMING types of jobs support monitoring configuration.

Parameter	Type	Required	Example	Description
Mode	String	No	YARN	Model mode, with the following values: • YARN: Package the job as a Launcher and submit it to YARN for execution. • LOCAL: submits the job from a header or gateway node
ParentCategory	String	No	FC-5BD9575E3462****	The parent directory ID. You can call DescribeFlowCategory View.
ResourceList.N.Alias	String	No	demo.jar	The alias of the resource.
Adhoc	Boolean	No	false	Indicates whether the job is a temporary query job.
ClusterId	String	No	C-A23BD131A862****	The cluster ID. You can call ListClusters View the ID of the cluster.
AlertConf	String	No	None.	Retain parameters.

Response parameters

Parameter	Type	Example	Description
Id	String	FJ-A23BD131A862****	The ID of the job.
RequestId	String	1549175a-6d14-4c8a-89f9-5e28300f6d7e	The ID of the request.

Examples

Sample requests

```
http(s)://[Endpoint]/?Action=CreateFlowJob
&Description=This is a data development job Description
&Name=my_shell_job
&ProjectId=FP-257A173659F5****
&RegionId=cn-hangzhou
&ResourceList.1.Path=oss://path/demo.jar
&Type=SHELL
&<common request parameters>
```

Sample success responses

`XML` format

```
<RequestId>2670BCFB-925D-4C3E-9994-8D12F7A9F538</RequestId>
<Id>FJ-BBCAE48B90CC****</Id>
```

`JSON` Syntax

```
{
    "RequestId": "2670BCFB-925D-4C3E-9994-8D12F7A9F538",
    "Id": "FJ-BBCAE48B90CC****"
}
```

8.2. Clone a job

You can call the CloneFlowJob operation to clone a job.

Debugging

OpenAPI Explorer automatically calculates the signature value. For your convenience, we recommend that you call this operation in OpenAPI Explorer. You can use OpenAPI Explorer to search for API operations, call API operations, and dynamically generate SDK sample code.

Request parameters

Parameter	Type	Required	Example	Description
Action	String	Yes	CloneFlowJob	The operation that you want to perform. This parameter is required for API requests that you create by piecing together HTTP or HTTPS URLs. Set the value to CloneFlowJob.
Id	String	Yes	FJ-244582F1934C****	The ID of the job to be cloned. You can call ListFlowJob View data on the Member Management page.
ProjectId	String	Yes	FP-C62EEC30F773****	The ID of the project to which the job to be cloned belongs. You can call ListFlowProject View the ID of the project.
RegionId	String	Yes	cn-hangzhou	The region ID of the instance. You can call DescribeRegions To view the latest list of Alibaba Cloud regions.
Name	String	No	test	The name of the job to be cloned.

Response parameters

Parameter	Type	Example	Description
Id	String	FJ-06D12BA16419****	The ID of the created job.
RequestId	String	BCE475E4-129D-43D2-8595-C80B80CBC114	The ID of the request.

Examples

Sample requests

```
http(s)://[Endpoint]/?Action=CloneFlowJob
&Id=FJ-244582F1934C****
&ProjectId=FP-C62EEC30F773****
&RegionId=cn-hangzhou
&<common request parameters>
```

Sample success responses

`XML` format

```
<RequestId>BCE475E4-129D-43D2-8595-C80B80CBC114</RequestId>
<Id>FJ-06D12BA16419****</Id>
```

`JSON` Syntax

```
{
        "RequestId": "BCE475E4-129D-43D2-8595-C80B80CBC114",
        "Id": "FJ-06D12BA16419****"
}
```

8.3. Create a workflow

You can call CreateFlowForWeb operation to create a workflow.

Debugging

OpenAPI Explorer automatically calculates the signature value. For your convenience, we recommend that you call this operation in OpenAPI Explorer. You can use OpenAPI Explorer to search for API operations, call API operations, and dynamically generate SDK sample code.

Request parameters

Parameter	Type	Required	Example	Description

Parameter	Type	Required	Example	Description
Action	String	Yes	CreateFlowForWeb	The operation that you want to perform. This parameter is required for API requests that you create by piecing together HTTP or HTTPS URLs. Set the value to CreateFlowForWeb.
ClusterId	String	Yes	C-A23BD131A862****	The ID of the cluster. You can call ListClusters You can call this operation to view the ID of a cluster.
CreateCluster	Boolean	Yes	false	Indicates whether to create a cluster through the cluster template. true indicates that a cluster is created through the cluster template. ClusterId should be set to the cluster template ID (CT-xxx) Otherwise, it is the existing cluster ID(C-xxx).
Description	String	Yes	This is the description of a workflow	The description of the workflow.
Name	String	Yes	my_flow_demo	The name of the workflow.
ProjectId	String	Yes	FP-257A173659F5****	The ID of the project. You can call ListFlowProject View the ID of the project.
RegionId	String	Yes	cn-hangzhou	The region ID of the instance. You can call DescribeRegions To view the latest list of Alibaba Cloud regions.
StartSchedule	Long	No	1538017814000	The start time of the scheduling. It is a long integer timestamp. Example: System.currentTimeMillis () . • Must be less than EndSchedule. • This item is required when CronExpr is not empty.

Parameter	Type	Required	Example	Description
EndSchedule	Long	No	1538018814000	The scheduling failure time, which is a long integer timestamp, for example, System.currentTimeMillis. () .
CronExpr	String	No	0 0 0-23/1 * * ?	The cron expression of the time-based periodic scheduling.
HostName	String	No	emr-header-1.cluster-123456	The name of the host where the node instance is run. You can call ListFlow Or log on to the host using `hostname` command to view partition information.
Namespace	String	No	N/A	A reserved parameter.
LogArchiveLocation	String	No	N/A	A reserved parameter.
Lifecycle	String	No	N/A	A reserved parameter.
Graph	String	No	{"nodes": [{"id":"48d474ea","index":0,"spmAnchorId":"0.0.0.i0.766645eb2cmNtQ","attribute": {"type":"START"}, "shape":"startControlNode","type":"node","y":250, "size":"80*34","x":500}, {"id":"7ba480b3", "index":1,"spmAnchorId":"5176.8250060.0.i19.771e28d0IPNQGE","attribute": {"jobType":"SHELL","jobId":"FJ-7BE1062897B19D25","type":"JOB"}, "config": {"hostName":""}," label":"fail_job"," shape":"shellJobNode","type":"node","y":398.5,"siz	The DAG graphic information.

Parameter	Type	Required	Example	Description
			e":"170*34","x":470.5}, {"id":"33202d60","index":2,"spmAnchorId":"5176.8250060.0.i23.771e28d0IPNQGE","attribute":{"type":"END"},"shape":"endControlNode","type":"node","y":562.5,"size":"80*34","x":430.5}],"edges":[{"id":"28167ea0","index":3,"source":"48d474ea","sourceAnchor":0,"target":"7ba480b3","targetAnchor":0}, {"id":"e8d5ff52","index":4,"source":"7ba480b3","sourceAnchor":1,"target":"33202d60","targetAnchor":0}]}	

Parameter	Type	Required	Example	Description
AlertConf	String	No	{"items": [{"enable":true,"eventId":"EMR-210401001","alertUserGroupIdList":["AUG-b79bb29bb6e14ddd89674a242623851b"],"alertDingDingGroupList":["ADG-af1f9689d6194e2dbd89927d5c515172"]}, {"enable":true,"eventId":"EMR-110401015","alertUserGroupIdList":["AUG-b79bb29bb6e14ddd89674a242623851b"],"alertDingDingGroupList":["ADG-af1f9689d6194e2dbd89927d5c515172"]}, {"enable":true,"eventId":"EMR-110401002","alertUserGroupIdList":["AUG-b79bb29bb6e14ddd89674a242623851b"],"alertDingDingGroupList":["ADG-af1f9689d6194e2dbd89927d5c515172"]}]}	The alert notification configurations. eventId can be set to the following alerts: • EMR-210401001: indicates that the workflow instance execution failed. • EMR-110401002: indicates that the workflow instance execution succeeded. • EMR-110401015: indicates that a workflow node failed.
AlertUserGroupBizId	String	No	-	A deprecated parameter.
AlertDingDingGroupBizId	String	No	-	A deprecated parameter.

Parameter	Type	Required	Example	Description
ParentFlowList	String	No	F-62ECFC6E1BF6EAD2,F-1E6528634E67B615,F-7E0A84332E9D9A89	The parent workflows that the created workflow relies on. Separate the workflows with commas (,). You can call ListFlowInstance View the workflow ID.
ParentCategory	String	No	FC-F2495319DA05****	The ID of the parent directory. You can call DescribeFlowCategory View data on the Member Management page. If not empty, the default is the root directory.

Response parameters

Parameter	Type	Example	Description
Id	String	F-7A39731FE719****	The ID of the newly created workflow.
RequestId	String	243D5A48-96A5-4C0C-8966-93CBF65635ED	The ID of the request.

Examples

Sample requests

```
http(s)://[Endpoint]/?Action=CreateFlowForWeb
&Description=This is a create workflow Description
&Name=my_flow_demo
&ProjectId=FP-257A173659F5****
&RegionId=cn-hangzhou
&ClusterId=C-A23BD131A862****
&CreateCluster=false
&<common request parameters>
```

Sample success responses

`XML` format

```
<RequestId>2670BCFB-925D-4C3E-9994-8D12F7A9F538</RequestId>
<Id>F-7A39731FE719****</Id>
```

`JSON` Syntax

```
{
    "RequestId": "2670BCFB-925D-4C3E-9994-8D12F7A9F538",
    "Id": "F-7A39731FE719****"
}
```

8.4. Clone workflow

You can call the CloneFlow operation to clone a workflow.

Debugging

OpenAPI Explorer automatically calculates the signature value. For your convenience, we recommend that you call this operation in OpenAPI Explorer. You can use OpenAPI Explorer to search for API operations, call API operations, and dynamically generate SDK sample code.

Request parameters

Parameter	Type	Required	Example	Description
Action	String	Yes	CloneFlow	The operation that you want to perform. This parameter is required for API requests that you create by piecing together HTTP or HTTPS URLs. Set the value to CloneFlow.
Id	String	Yes	F-8C1EB0C6452****	The ID of the workflow to be cloned. You can call ListFlowInstance View the workflow ID.
ProjectId	String	Yes	FP-53C4D36FC731****	The ID of the project to which the workflow to be cloned belongs. You can call ListFlowProject View the ID of the project.
RegionId	String	Yes	cn-hangzhou	The region ID. You can call DescribeRegions To view the latest list of Alibaba Cloud regions.

Response parameters

Parameter	Type	Example	Description
Id	String	F-CDFE2BF3A796****	The ID of the created workflow.
RequestId	String	12E7685E-C7A2-4BED-878B-07AF5BAD475F	The ID of the request.

Examples

Sample requests

```
http(s)://[Endpoint]/?Action=CloneFlow
&Id=F-8C1EB0C6452A****
&ProjectId=FP-53C4D36FC731****
&RegionId=cn-hangzhou
&<common request parameters>
```

Sample success responses

`XML` format

```
<RequestId>12E7685E-C7A2-4BED-878B-07AF5BAD475F</RequestId>
<Id>F-CDFE2BF3A796****</Id>
```

`JSON` Syntax

```
{
    "RequestId": "12E7685E-C7A2-4BED-878B-07AF5BAD475F",
    "Id": "F-CDFE2BF3A796****"
}
```

8.5. Create a data development project

You can call CreateFlowProject operation to create a data development project.

Debugging

OpenAPI Explorer automatically calculates the signature value. For your convenience, we recommend that you call this operation in OpenAPI Explorer. You can use OpenAPI Explorer to search for API operations, call API operations, and dynamically generate SDK sample code.

Request parameters

Parameter	Type	Required	Example	Description
Action	String	Yes	CreateFlowProject	The operation that you want to perform. This parameter is required for API requests that you create by piecing together HTTP or HTTPS URLs. Set the value to CreateFlowProject.
Description	String	Yes	This is the description of a project	The description of the project.
Name	String	Yes	my_project	The name of the project.

Parameter	Type	Required	Example	Description
RegionId	String	Yes	cn-hangzhou	The region ID of the instance.
ProductType	String	No	EMR	The edition of the product. static field EMR.
ResourceGroupId	String	No	rg-bp67acfmxazb4p****	The ID of the enterprise resource group to which the EMR instances and ECS node instances belong.

Response parameters

Parameter	Type	Example	Description
Id	String	FP-257A173659F5****	The ID of the project.
RequestId	String	2670BCFB-925D-4C3E-9994-8D12F7A9F538	The ID of the request.

Examples

Sample requests

```
http(s)://[Endpoint]/?Action=CreateFlowProject
&Description=This is a project Description
&Name=my_project
&RegionId=cn-hangzhou
&<common request parameters>
```

Sample success responses

`XML` format

```
<RequestId>2670BCFB-925D-4C3E-9994-8D12F7A9F538</RequestId>
<Id>FP-257A173659F5****</Id>
```

`JSON` Syntax

```
{
    "RequestId": "2670BCFB-925D-4C3E-9994-8D12F7A9F538",
    "Id": "FP-257A173659F5****"
}
```

8.6. Create project cluster settings

You can call CreateFlowProjectClusterSetting operation to create cluster settings for a project.

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	CreateFlowProjectClusterSetting	The operation that you want to perform. Set the value to CreateFlowProjectClusterSetting.
ClusterId	String	Yes	C-DCEE11B49C8F****	The cluster ID. You can call ListClusters View the ID of the cluster.
ProjectId	String	Yes	FP-ED2F3E844FE3****	The project ID. You can call ListFlowProject View the ID of the project.
RegionId	String	Yes	cn-hangzhou	The region ID. You can call DescribeRegions View the latest list of Alibaba Cloud regions.
DefaultUser	String	No	hadoop	The default Linux submission user, the default value is hadoop.
DefaultQueue	String	No	default	The default submission queue. The default value is default.
UserList.N	RepeatList	No	hadoop	The whitelisted Linux user who can submit jobs.
QueueList.N	RepeatList	No	queue1	The whitelist of queues to which jobs can be submitted.
HostList.N	RepeatList	No	emr-header-1.cluster-12345	Submit a whitelist list of machines, which only supports Gateway and Master machines.

Response parameters

Parameter	Type	Example	Description
Data	Boolean	true	Indicates whether the call was successful.
RequestId	String	0AD9FF20-F585-4E0A-870D-B8A8F884CCE6	The ID of the request.

Examples

Sample requests

```
http(s)://[Endpoint]/?Action=CreateFlowProjectClusterSetting
&ClusterId=C-DCEE11B49C8F****
&ProjectId=FP-ED2F3E844FE3****
&RegionId=cn-hangzhou
&<common request parameters>
```

Sample success responses

`XML` format

```
<CreateFlowProjectClusterSettingResponse>
  <RequestId>ECC2D0D1-B6D5-468D-B698-30E8805EB574</RequestId>
      <Data>true</Data>
</CreateFlowProjectClusterSettingResponse>
```

`JSON` Syntax

```
{
  "RequestId":"ECC2D0D1-B6D5-468D-B698-30E8805EB574",
  "Data":true
}
```

8.7. Create a workflow directory folder

You can call the CreateFlowCategory operation to create a workflow directory folder.

Debugging

OpenAPI Explorer automatically calculates the signature value. For your convenience, we recommend that you call this operation in OpenAPI Explorer. You can use OpenAPI Explorer to search for API operations, call API operations, and dynamically generate SDK sample code.

Request parameters

Parameter	Type	Required	Example	Description

Parameter	Type	Required	Example	Description
Action	String	Yes	CreateFlowCategory	The operation that you want to perform. This parameter is required for API requests that you create by piecing together HTTP or HTTPS URLs. Set the value to CreateFlowCategory.
Name	String	Yes	myFolder	The name of the directory. You can call ListFlowProject View data on the Member Management page.
ProjectId	String	Yes	FP-AC84F265C8E4****	The ID of the project. You can call ListFlowProject View data on the Member Management page.
RegionId	String	Yes	cn-hangzhou	The region ID. You can call DescribeRegions To view the latest list of Alibaba Cloud regions.
Type	String	Yes	FLOW	The type of the directory. Valid values: • FLOW (workflow) • JOB (JOB) • ADHOC: ad hoc query
ParentId	String	No	FC-AF08490649B8****	The ID of the parent directory. If it is null, the default value is **root** The information of a directory.

Response parameters

Parameter	Type	Example	Description
Id	String	FC-AF08490649B8****	The ID of the created directory.
RequestId	String	2670BCFB-925D-4C3E-9994-8D12F7A9F538	The ID of the request.

Examples

Sample requests

```
http(s)://[Endpoint]/?Action=CreateFlowCategory
&Name=myFolder
&ProjectId=FP-AC84F265C8E4****
&RegionId=cn-hangzhou
&Type=FLOW
&<common request parameters>
```

Sample success responses

`XML` format

```
<RequestId>2670BCFB-925D-4C3E-9994-8D12F7A9F538</RequestId>
<Id>FC-AF08490649B8****</Id>
```

`JSON` Syntax

```
{
    "RequestId": "2670BCFB-925D-4C3E-9994-8D12F7A9F538",
    "Id": "FC-AF08490649B8****"
}
```

8.8. Add a project user

You can call CreateFlowProjectUser operation to add a RAM user for a project.

Debugging

OpenAPI Explorer automatically calculates the signature value. For your convenience, we recommend that you call this operation in OpenAPI Explorer. You can use OpenAPI Explorer to search for API operations, call API operations, and dynamically generate SDK sample code.

Request parameters

Parameter	Type	Required	Example	Description
Action	String	Yes	CreateFlowProjectUser	The operation that you want to perform. For API requests using the HTTP or HTTPS URL, this parameter is required. Set the value to CreateFlowProjectUser.
ProjectId	String	Yes	FP-257A173659F5****	The ID of the project. You can call ListFlowProject View the project ID.
RegionId	String	Yes	cn-hangzhou	The ID of the region. You can call DescribeRegions View the latest list of Alibaba Cloud regions.

Parameter	Type	Required	Example	Description
User.N.UserId	String	Yes	12*****	The ID of an Alibaba Cloud account. You can call ListFlowProjectUser Query your Alibaba Cloud account ID.
User.N.UserName	String	Yes	subuser1	The RAM username. You can call ListFlowProjectUser View the RAM user name.

Response parameters

Parameter	Type	Example	Description
Data	Boolean	true	The execution result returned, including the following: • true: Added successfully. • false: add fails.
RequestId	String	243D5A48-96A5-4C0C-8966-93CBF65635ED	The ID of the request.

Examples

Sample requests

```
http(s)://[Endpoint]/?Action=CreateFlowProjectUser
&ProjectId=FP-257A173659F5****
&RegionId=cn-hangzhou
&User.1.UserId=12****
&User.1.UserName=subuser1
&<common request parameters>
```

Sample success responses

`XML` format

```
<RequestId>2670BCFB-925D-4C3E-9994-8D12F7A9F538</RequestId>
<Data>true</Data>
```

`JSON`

```
{
    "RequestId": "2670BCFB-925D-4C3E-9994-8D12F7A9F538",
    "Data": "true"
}
```

8.9. Delete a workflow

You can call the DeleteFlow operation to delete a workflow.

Debugging

OpenAPI Explorer automatically calculates the signature value. For your convenience, we recommend that you call this operation in OpenAPI Explorer. You can use OpenAPI Explorer to search for API operations, call API operations, and dynamically generate SDK sample code.

Request parameters

Parameter	Type	Required	Example	Description
Action	String	Yes	DeleteFlow	The operation that you want to perform. This parameter is required for API requests that you create by piecing together HTTP or HTTPS URLs. Set the value to DeleteFlow.
Id	String	Yes	F-7A39731FE719****	The ID of the workflow. You can call ListFlowInstance View the workflow ID.
ProjectId	String	Yes	FP-257A173659F5****	The ID of the project. You can call ListFlowProject View the ID of the project.
RegionId	String	Yes	cn-hangzhou	The region ID of the instance. You can call DescribeRegions To view the latest list of Alibaba Cloud regions.

Response parameters

Parameter	Type	Example	Description
Data	Boolean	true	The execution results are returned, including the following: • true: The object is deleted successfully. • false: The object fails to be deleted.
RequestId	String	11BAFBD8-8509-4177-A26D-407505E73713	The ID of the request.

Examples

Sample requests

```
http(s)://[Endpoint]/?Action=DeleteFlow
&Id=F-7A39731FE719****
&ProjectId=FP-257A173659F5****
&RegionId=cn-hangzhou
&<common request parameters>
```

Sample success responses

`XML` format

```
<RequestId>ECC2D0D1-B6D5-468D-B698-30E8805EB574</RequestId>
<Data>true</Data>
```

`JSON` Syntax

```
{
"RequestId":"ECC2D0D1-B6D5-468D-B698-30E8805EB574",
"Data":true
}
```

8.10. Delete workflow Directory

You can call DeleteFlowCategory operation to delete a workflow directory.

Debugging

OpenAPI Explorer automatically calculates the signature value. For your convenience, we recommend that you call this operation in OpenAPI Explorer. You can use OpenAPI Explorer to search for API operations, call API operations, and dynamically generate SDK sample code.

Request parameters

Parameter	Type	Required	Example	Description
Action	String	Yes	DeleteFlowCategory	The operation that you want to perform. This parameter is required for API requests that you create by piecing together HTTP or HTTPS URLs. Set the value to DeleteFlowCategory.
Id	String	Yes	FC-075AB9477DAE****	The ID of the directory. You can call DescribeFlowCategory View data on the Member Management page.
ProjectId	String	Yes	FP-ABD24A6163D3****	The ID of the project. You can call ListFlowProject View the ID of the project.

Parameter	Type	Required	Example	Description
RegionId	String	Yes	cn-hangzhou	The region ID of the instance. You can call DescribeRegions To view the latest list of Alibaba Cloud regions.

Response parameters

Parameter	Type	Example	Description
Data	Boolean	true	The execution results are returned, including the following: • true: The object is deleted successfully. • false: The object fails to be deleted.
RequestId	String	243D5A48-96A5-4C0C-8966-93CBF65635ED	The ID of the request.

Examples

Sample requests

```
http(s)://[Endpoint]/?Action=DeleteFlowCategory
&Id=FC-075AB9477DAE****
&ProjectId=FP-ABD24A6163D3****
&RegionId=cn-hangzhou
&<common request parameters>
```

Sample success responses

`XML` format

```
<RequestId>2670BCFB-925D-4C3E-9994-8D12F7A9F538</RequestId>
<Data>true</Data>
```

`JSON` Syntax

```
{
    "RequestId": "2670BCFB-925D-4C3E-9994-8D12F7A9F538",
    "Data": "true"
}
```

8.11. Delete a job

You can call DeleteFlowJob operation to delete a job.

Debugging

OpenAPI Explorer automatically calculates the signature value. For your convenience, we recommend that you call this operation in OpenAPI Explorer. You can use OpenAPI Explorer to search for API operations, call API operations, and dynamically generate SDK sample code.

Request parameters

Parameter	Type	Required	Example	Description
Action	String	Yes	DeleteFlowJob	The operation that you want to perform. This parameter is required for API requests that you create by piecing together HTTP or HTTPS URLs. Set the value to DeleteFlowJob.
Id	String	Yes	FJ-BBCAE48B90CC****	The ID of the job. You can call ListFlowJob View data on the Member Management page.
ProjectId	String	Yes	FP-257A173659F5****	The ID of the project. You can call ListFlowProject View the ID of the project.
RegionId	String	Yes	cn-hangzhou	The region ID of the instance. You can call DescribeRegions To view the latest list of Alibaba Cloud regions.

Response parameters

Parameter	Type	Example	Description
Data	Boolean	true	The execution results are returned, including the following: • true: The object is deleted successfully. • false: The object fails to be deleted.
RequestId	String	549175a-6d14-4c8a-89f9-5e28300f6d7e	The ID of the request.

Examples

Sample requests

```
http(s)://[Endpoint]/?Action=DeleteFlowJob
&Id=FJ-BBCAE48B90CC****
&ProjectId=FP-257A173659F5****
&RegionId=cn-hangzhou
&<common request parameters>
```

Sample success responses

`XML` format

```
<RequestId>549175a-6d14-4c8a-89f9-5e28300f6d7e</RequestId>
<Data>true</Data>
```

`JSON` Syntax

```
{
    "RequestId":"549175a-6d14-4c8a-89f9-5e28300f6d7e",
    "Data":"true"
}
```

8.12. Delete a data development project

You can call DeleteFlowProject operation to delete a data development project.

Debugging

OpenAPI Explorer automatically calculates the signature value. For your convenience, we recommend that you call this operation in OpenAPI Explorer. You can use OpenAPI Explorer to search for API operations, call API operations, and dynamically generate SDK sample code.

Request parameters

Parameter	Type	Required	Example	Description
Action	String	Yes	DeleteFlowProject	The operation that you want to perform. This parameter is required for API requests that you create by piecing together HTTP or HTTPS URLs. Set the value to DeleteFlowProject.
ProjectId	String	Yes	FP-257A173659F5****	The ID of the project. You can call ListFlowProject View the ID of the project.
RegionId	String	Yes	cn-hangzhou	The region ID of the instance. You can call DescribeRegions To view the latest list of Alibaba Cloud regions.

Response parameters

Parameter	Type	Example	Description

Parameter	Type	Example	Description
Data	Boolean	true	The execution results are returned, including the following: • true: The object is deleted successfully. • false: The object fails to be deleted.
RequestId	String	2670BCFB-925D-4C3E-9994-8D12F7A9F538	The ID of the request.

Examples

Sample requests

```
http(s)://[Endpoint]/?Action=DeleteFlowProject
&ProjectId=FP-257A173659F5****
&RegionId=cn-hangzhou
&<common request parameters>
```

Sample success responses

`XML` format

```
<RequestId>2670BCFB-925D-4C3E-9994-8D12F7A9F538</RequestId>
<Data>true</Data>
```

`JSON` Syntax

```
{
    "RequestId": "2670BCFB-925D-4C3E-9994-8D12F7A9F538",
    "Data": "true"
}
```

8.13. Delete project cluster settings

You can call the DeleteFlowProjectClusterSetting operation to delete cluster settings from a project.

Debugging

OpenAPI Explorer automatically calculates the signature value. For your convenience, we recommend that you call this operation in OpenAPI Explorer. You can use OpenAPI Explorer to search for API operations, call API operations, and dynamically generate SDK sample code.

Request parameters

Parameter	Type	Required	Example	Description

Parameter	Type	Required	Example	Description
Action	String	Yes	DeleteFlowProjectClusterSetting	The operation that you want to perform. This parameter is required for API requests that you create by piecing together HTTP or HTTPS URLs. Set the value to DeleteFlowProjectClusterSetting.
ClusterId	String	Yes	C-F32FB31D8295****	The ID of the cluster. You can call ListClusters You can call this operation to view the ID of a cluster.
ProjectId	String	Yes	FP-E3F1523F8FC1****	The ID of the project. You can call ListFlowProject View the ID of the project.
RegionId	String	Yes	cn-hangzhou	The region ID. You can call DescribeRegions To view the latest list of Alibaba Cloud regions.

Response parameters

Parameter	Type	Example	Description
Data	Boolean	true	The execution results are returned, including the following: • true: The object is deleted successfully. • false: The object fails to be deleted.
RequestId	String	ECC2D0D1-B6D5-468D-B698-30E8805EB574	The ID of the request.

Examples

Sample requests

```
http(s)://[Endpoint]/?Action=DeleteFlowProjectClusterSetting
&ClusterId=C-F32FB31D8295****
&ProjectId=FP-E3F1523F8FC1****
&RegionId=cn-hangzhou
&<common request parameters>
```

Sample success responses

`XML` format

```
<RequestId>ECC2D0D1-B6D5-468D-B698-30E8805EB574</RequestId>
<Data>true</Data>
```

JSON Syntax

```
{
  "RequestId":"ECC2D0D1-B6D5-468D-B698-30E8805EB574",
  "Data":true
}
```

8.14. Delete a project user

You can call the DeleteFlowProjectUser operation to delete a RAM user from a project.

Debugging

OpenAPI Explorer automatically calculates the signature value. For your convenience, we recommend that you call this operation in OpenAPI Explorer. You can use OpenAPI Explorer to search for API operations, call API operations, and dynamically generate SDK sample code.

Request parameters

Parameter	Type	Required	Example	Description
Action	String	Yes	DeleteFlowProjectUser	The operation that you want to perform. This parameter is required for API requests that you create by piecing together HTTP or HTTPS URLs. Set the value to DeleteFlowProjectUser.
ProjectId	String	Yes	FP-257A173659F5****	The ID of the project. You can call ListFlowProject View the ID of the project.
RegionId	String	Yes	cn-hangzhou	The region ID. You can call DescribeRegions To view the latest list of Alibaba Cloud regions.
UserName	String	Yes	subuser1	The RAM username. You can call ListFlowProjectUser View the RAM username.

Response parameters

Parameter	Type	Example	Description

Parameter	Type	Example	Description
Data	Boolean	true	The execution results are returned, including the following: • true: The object is deleted successfully. • false: The object fails to be deleted.
RequestId	String	243D5A48-96A5-4C0C-8966-93CBF65635ED	The ID of the request.

Examples

Sample requests

```
http(s)://[Endpoint]/?Action=DeleteFlowProjectUser
&ProjectId=FP-257A173659F5****
&RegionId=cn-hangzhou
&UserName=subuser1
&<common request parameters>
```

Sample success responses

`XML` format

```
<RequestId>2670BCFB-925D-4C3E-9994-8D12F7A9F538</RequestId>
<Data>true</Data>
```

`JSON` Syntax

```
{
    "RequestId": "2670BCFB-925D-4C3E-9994-8D12F7A9F538",
    "Data": "true"
}
```

8.15. Queries the information of a workflow

You can call the DescribeFlow operation to query the information of a workflow.

Debugging

OpenAPI Explorer automatically calculates the signature value. For your convenience, we recommend that you call this operation in OpenAPI Explorer. You can use OpenAPI Explorer to search for API operations, call API operations, and dynamically generate SDK sample code.

Request parameters

Parameter	Type	Required	Example	Description
Action	String	Yes	DescribeFlow	The operation that you want to perform. This parameter is required for API requests that you create by piecing together HTTP or HTTPS URLs. Set the value to DescribeFlow.
Id	String	Yes	F-7A39731FE719****	The ID of the workflow. You can call ListFlowInstance View the workflow ID.
ProjectId	String	Yes	FP-257A173659F5****	The ID of the project. You can call ListFlowProject View the ID of the project.
RegionId	String	Yes	cn-hangzhou	The region ID. You can call DescribeRegions To view the latest list of Alibaba Cloud regions.

Response parameters

Parameter	Type	Example	Description

Parameter	Type	Example	Description
AlertConf	String	{"items": [{"enable":true,"eventId":"EMR-210401001","alertUserGroupIdList": ["AUG-b79bb29bb6e14ddd89674a242623851b"],"alertDingDingGroupList":["ADG-af1f9689d6194e2dbd89927d5c515172"]}, {"enable":true,"eventId":"EMR-110401015","alertUserGroupIdList": ["AUG-b79bb29bb6e14ddd89674a242623851b"],"alertDingDingGroupList":["ADG-af1f9689d6194e2dbd89927d5c515172"]}, {"enable":true,"eventId":"EMR-110401002","alertUserGroupIdList": ["AUG-b79bb29bb6e14ddd89674a242623851b"],"alertDingDingGroupList":["ADG-af1f9689d6194e2dbd89927d5c515172"]}]}	The alert notification configuration. eventId currently supports: • EMR-210401001: indicates that the workflow instance execution failed. • EMR-110401002: indicates that the workflow instance execution succeeded. • EMR-110401015: indicates that a workflow node failed.
AlertDingDingGroupBizId	String	AUG-c917bbfaf6494bbfacdee69c8284967c	The ID of the DingTalk group to which alerts are sent.
AlertUserGroupBizId	String	ADG-0a00d00abb7743ff9f812f1a997f3d87	The ID of the user group to which alerts are sent.

Parameter	Type	Example	Description
Application	String	{"nodeDefMap": {":start:": {"name":":start:","type":":start:","transitions": ["cluster"]},"cluster": {"id":"CT-0C74281682CF03B4", "name":"cluster","type":":Cluster:","transitions": ["job1"]},"job1": {"jobId":"FJ-242AB240DBAF4195" ,"name":"job1","type":":action:","transitions": ["end"]},"end": {"name":"end","type":":end:"}}}	The construction information of the workflow. It consists of a set of node definitions nodeDefMap. When multiple node definitions are set, each node is separated with a comma (,). • type: the type includes the start node (:start :), build on demand Cluster node (:Cluster :), action node (:action :), and end node (:end :). • transitions: downstream nodes.
CategoryId	String	FC-F2495319DA05****	The directory ID of the workflow.
ClusterId	String	C-A23BD131A862****	The ID of the cluster or cluster template.
CreateCluster	Boolean	false	Indicates whether the cluster was created from the cluster template. • true:ClusterId is the id of the cluster template (CT-XXXXXX). • false:ClusterId is the cluster id(C-XXXXXX).
CronExpr	String	0 0 0-23/1 * * ?	The CRON expression of the time-based scheduling of the workflow.
Description	String	This is the description of a workflow	The description of the workflow.
EditLockDetail	String	{}	Edit the lock information.
EndSchedule	Long	1538018814000	The end time of the scheduling.
GmtCreate	Long	1538017814000	The creation time of the job.

Parameter	Type	Example	Description
GmtModified	Long	1538017814000	The modification time of the workflow.
Graph	String	{"nodes": [{"id":"48d474ea","index":0,"spmAnchorId":"0.0.0.i0.766645eb2cmNtQ","attribute": {"type":"START"},"shape":"startControlNode","type":"node","y":250,"size":"80*34","x":500}, {"id":"7ba480b3","index":1,"spmAnchorId":"5176.8250060.0.i19.771e28d0IPNQGE","attribute": {"jobType":"SHELL","jobId":"FJ-7BE1062897B19D25","type":"JOB"},"config": {"hostName":""},"label":"fail_job","shape":"shellJobNode","type":"node","y":398.5,"size":"170*34","x":470.5}, {"id":"33202d60","index":2,"spmAnchorId":"5176.8250060.0.i23.771e28d0IPNQGE","attribute": {"type":"END"},"shape":"endControlNode","type":"node","y":562.5,"size":"80*34","x":430.5}],"edges": [{"id":"28167ea0","index":3,"source":"48d474ea","sourceAnchor":0,"target":"7ba480b3","targetAnchor":0}, {"id":"e8d5ff52","index":4,"source":"7ba480b3","sourceAnchor":1,"target":"33202d60","targetAnchor":0}]}	The information of the directed acyclic graph (DAG) of the workflow.

Parameter	Type	Example	Description
HostName	String	emr-header-1.cluster-123456	Specify the running machine information in the format of **emr-header-1.cluster-123456** .
Id	String	F-7A39731FE719****	The ID of the workflow.
Lifecycle	String	N/A	A reserved parameter.
LogArchiveLocation	String	N/A	A reserved parameter.
Name	String	my_flow_demo	The name of the workflow.
Namespace	String	N/A	A reserved parameter.
ParentFlowList	Array of ParentFlow		The parent workflows of the queried workflow.
ParentFlow			
ParentFlowId	String	F-123456	The ID of the parent workflow.
ParentFlowName	String	parent_flow	The name of the parent workflow.
ProjectId	String	FP-257A173659F5****	The ID of the project.
ProjectName	String	my_project	The name of the project.
Periodic	Boolean	true	Whether to perform periodically: • true: performs the task periodically. • false: execution is performed on non-periodic rows.
RequestId	String	243D5A48-96A5-4C0C-8966-93CBF65635ED	The ID of the request.
StartSchedule	Long	1538017814000	The start time of the scheduling.

Parameter	Type	Example	Description
Status	String	STOP_SCHEDULE	Support Status: • STOP_SCHEDULE (stop scheduling) • UNDER_SCHEDULE (scheduling)
Type	String	EMR	The type of the workflow. Valid value: EMR.

Examples

Sample requests

```
http(s)://[Endpoint]/?Action=DescribeFlow
&Id=F-7A39731FE719****
&ProjectId=FP-257A173659F5****
&RegionId=cn-hangzhou
&<common request parameters>
```

Sample success responses

`XML` format

```
<alertUserGroupBizId/>
<Description>flow</Description>
<Type>EMR</Type>
<CreateCluster>false</CreateCluster>
<GmtCreate>1533294723000</GmtCreate>
<GmtModified>1535449545000</GmtModified>
<HostName/>
<Name>flow</Name>
<Status>STOP_SCHEDULE</Status>
<ParentFlowList>
</ParentFlowList>
<CategoryId>FC-020BA6E39BF0****</CategoryId>
<alertDingDingGroupBizId/>
<ClusterId>C-23D6879E9BBE****</ClusterId>
<Periodic>false</Periodic>
<RequestId>E909BE04-1989-4751-93E6-1327FFC71EC0</RequestId>
<Graph>
    <edges>
        <id>af91****</id>
        <index>2</index>
        <sourceAnchor>0</sourceAnchor>
        <source>48d474ea</source>
        <target>f2764af5</target>
        <targetAnchor>0</targetAnchor>
    </edges>
    <edges>
        <id>3022****</id>
        <index>4</index>
        <source>48d474ea</source>
```

```
        <sourceAnchor>0</sourceAnchor>
        <target>ee4ee659</target>
        <targetAnchor>0</targetAnchor>
    </edges>
    <edges>
        <id>cfa9****</id>
        <index>6</index>
        <source>f2764af5</source>
        <sourceAnchor>1</sourceAnchor>
        <target>75ba7979</target>
        <targetAnchor>0</targetAnchor>
    </edges>
    <edges>
        <id>00cd****</id>
        <index>7</index>
        <source>ee4ee659</source>
        <sourceAnchor>1</sourceAnchor>
        <target>75ba7979</target>
        <targetAnchor>0</targetAnchor>
    </edges>
    <edges>
        <id>c53a****</id>
        <index>9</index>
        <source>75ba7979</source>
        <sourceAnchor>1</sourceAnchor>
        <target>ea5b3e8f</target>
        <targetAnchor>0</targetAnchor>
    </edges>
    <nodes>
        <id>f276****</id>
        <index>0</index>
        <spmAnchorId>5176.8250060.0.i158.771e28d0IP****</spmAnchorId>
        <config>
            <clusterId>C-E2544BF48603****</clusterId>
        </config>
        <attribute>
            <jobType>SHELL</jobType>
            <jobId>FJ-D9595F5B79AD****</jobId>
            <type>JOB</type>
        </attribute>
        <label>echo</label>
        <shape>shellJobNode</shape>
        <type>node</type>
        <y>394.5</y>
        <x>321.25</x>
        <size>170*34</size>
    </nodes>
    <nodes>
        <id>48d4****</id>
        <index>1</index>
        <spmAnchorId>0.0.0.i0.766645eb2c****</spmAnchorId>
        <attribute>
            <type>START</type>
        </attribute>
        <shape>startControlNode</shape>
```

```
        <shape>startControlNode</shape>
        <type>node</type>
        <y>262</y>
        <size>80*34</size>
        <x>500</x>
    </nodes>
    <nodes>
        <id>ee4e****</id>
        <index>3</index>
        <spmAnchorId>5176.8250060.0.i11.6bb528d0eM****</spmAnchorId>
        <attribute>
            <jobType>SHELL</jobType>
            <jobId>FJ-7BE1062897B1****</jobId>
            <type>JOB</type>
        </attribute>
        <config>
            <hostName/>
        </config>
        <label>fail_job</label>
        <shape>shellJobNode</shape>
        <type>node</type>
        <y>456.5</y>
        <size>170*34</size>
        <x>518.125</x>
    </nodes>
    <nodes>
        <id>75ba****</id>
        <index>5</index>
        <spmAnchorId>5176.8250060.0.i11.6bb528d0eM****</spmAnchorId>
        <attribute>
            <jobType>SHELL</jobType>
            <jobId>FJ-D9595F5B79AD****</jobId>
            <type>JOB</type>
        </attribute>
        <config>
            <hostName>emr-header-1.cluster-71886</hostName>
            <clusterId>C-7CE7BC10276E****</clusterId>
        </config>
        <label>echo</label>
        <shape>shellJobNode</shape>
        <type>node</type>
        <y>585.5</y>
        <size>170*34</size>
        <x>250.125</x>
    </nodes>
    <nodes>
        <id>ea5b****</id>
        <index>8</index>
        <spmAnchorId>5176.8250060.0.i19.6bb528d0eM****</spmAnchorId>
        <attribute>
            <type>END</type>
        </attribute>
        <shape>endControlNode</shape>
        <type>node</type>
        <y>700.5</y>
```

```
        <size>80*34</size>
        <x>239.125</x>
    </nodes>
</Graph>
<Id>F-7A39731FE719****</Id>
```

JSON Syntax

```
{
    "alertUserGroupBizId": "",
    "Description": "flow",
    "Type": "EMR",
    "CreateCluster": false,
    "GmtCreate": 1533294723000,
    "GmtModified": 1535449545000,
    "HostName": "",
    "Name": "flow",
    "Status": "STOP_SCHEDULE",
    "ParentFlowList": {
        "ParentFlow": []
    },
    "CategoryId": "FC-020BA6E39BF0****",
    "alertDingDingGroupBizId": "",
    "ClusterId": "C-23D6879E9BBE****",
    "Periodic": false,
    "RequestId": "E909BE04-1989-4751-93E6-1327FFC71EC0",
    "Graph": {
        "edges": [
            {
                "id": "af91****",
                "index": 2,
                "sourceAnchor": 0,
                "source": "48d474ea",
                "target": "f2764af5",
                "targetAnchor": 0
            },
            {
                "id": "3022****",
                "index": 4,
                "source": "48d474ea",
                "sourceAnchor": 0,
                "target": "ee4ee659",
                "targetAnchor": 0
            },
            {
                "id": "cfa9****",
                "index": 6,
                "source": "f2764af5",
                "sourceAnchor": 1,
                "target": "75ba7979",
                "targetAnchor": 0
            },
            {
```

```
                "id": "00cd****",
                "index": 7,
                "source": "ee4ee659",
                "sourceAnchor": 1,
                "target": "75ba7979",
                "targetAnchor": 0
            },
            {
                "id": "c53a****",
                "index": 9,
                "source": "75ba7979",
                "sourceAnchor": 1,
                "target": "ea5b3e8f",
                "targetAnchor": 0
            }
        ],
        "nodes": [
            {
                "id": "f276****",
                "index": 0,
                "spmAnchorId": "5176.8250060.0.i158.771e28d0IP****",
                "config": {
                    "clusterId": "C-E2544BF48603****"
                },
                "attribute": {
                    "jobType": "SHELL",
                    "jobId": "FJ-D9595F5B79AD****",
                    "type": "JOB"
                },
                "label": "echo",
                "shape": "shellJobNode",
                "type": "node",
                "y": 394.5,
                "x": 321.25,
                "size": "170*34"
            },
            {
                "id": "48d4****",
                "index": 1,
                "spmAnchorId": "0.0.0.i0.766645eb2c****",
                "attribute": {
                    "type": "START"
                },
                "shape": "startControlNode",
                "type": "node",
                "y": 262,
                "size": "80*34",
                "x": 500
            },
            {
                "id": "ee4e****",
                "index": 3,
                "spmAnchorId": "5176.8250060.0.i11.6bb528d0eM****",
                "attribute": {
                    "jobType": "SHELL"
```

```
                "jobType": "SHELL",
                "jobId": "FJ-7BE1062897B1****",
                "type": "JOB"
            },
            "config": {
                "hostName": ""
            },
            "label": "fail_job",
            "shape": "shellJobNode",
            "type": "node",
            "y": 456.5,
            "size": "170*34",
            "x": 518.125
        },
        {
            "id": "75ba****",
            "index": 5,
            "spmAnchorId": "5176.8250060.0.i11.6bb528d0eM****",
            "attribute": {
                "jobType": "SHELL",
                "jobId": "FJ-D9595F5B79AD****",
                "type": "JOB"
            },
            "config": {
                "hostName": "emr-header-1.cluster-71886",
                "clusterId": "C-7CE7BC10276E****"
            },
            "label": "echo",
            "shape": "shellJobNode",
            "type": "node",
            "y": 585.5,
            "size": "170*34",
            "x": 250.125
        },
        {
            "id": "ea5b****",
            "index": 8,
            "spmAnchorId": "5176.8250060.0.i19.6bb528d0eM****",
            "attribute": {
                "type": "END"
            },
            "shape": "endControlNode",
            "type": "node",
            "y": 700.5,
            "size": "80*34",
            "x": 239.125
        }
    ]
},
"Id": "F-7A39731FE719****"
}
```

8.16. Query directory information

You can call the DescribeFlowCategory operation to query the information of a directory.

Debugging

OpenAPI Explorer automatically calculates the signature value. For your convenience, we recommend that you call this operation in OpenAPI Explorer. You can use OpenAPI Explorer to search for API operations, call API operations, and dynamically generate SDK sample code.

Request parameters

Parameter	Type	Required	Example	Description
Action	String	Yes	DescribeFlowCategory	The operation that you want to perform. This parameter is required for API requests that you create by piecing together HTTP or HTTPS URLs. Set the value to DescribeFlowCategory.
Id	String	Yes	FC-075AB9477DAE****	The ID of the directory. You can call DescribeFlowCategory View data on the Member Management page.
ProjectId	String	Yes	FP-ABD24A6163D3****	The ID of the project. You can call ListFlowProject View the ID of the project.
RegionId	String	Yes	cn-hangzhou	The region ID. You can call DescribeRegions To view the latest list of Alibaba Cloud regions.

Response parameters

Parameter	Type	Example	Description
CategoryType	String	FILE	The type of the object to which the directory references. Valid values: • FOLDER: FOLDER. • FILE: FILE.
GmtCreate	Long	1542783867503	The creation time of the directory.
GmtModified	Long	1542783867503	The modification time of the directory.

Parameter	Type	Example	Description
Id	String	FC-075AB9477DAE****	The ID of the directory.
Name	String	my_category	The name of the directory.
ObjectId	String	F-EB3021F73E51****	The ID of the associated target object. For example, the ID of a workflow or a job.
ObjectType	String	FLOW	The type of the associated entity. Valid values: • FLOW: workflow • JOB: job
ParentId	String	FC-3A749C1F5D12****	The ID of the parent directory.
ProjectId	String	FP-E3F1523F8FC1****	The ID of the project.
RequestId	String	BCEDC663-43F1-4202-9C49-9D3D66EA93D7	The ID of the request.
Type	String	FLOW	The type of the directory. Valid values: • FLOW: The type of the workflow. • JOB: the type of the JOB.

Examples

Sample requests

```
http(s)://[Endpoint]/?Action=DescribeFlowCategory
&Id=FC-075AB9477DAE****
&ProjectId=FP-ABD24A6163D3****
&RegionId=cn-hangzhou
&<common request parameters>
```

Sample success responses

`XML` format

```
<Data>
    <ParentId>FC-198D4E3ACA4F****</ParentId>
    <ObjectType>FLOW</ObjectType>
    <Type>FLOW</Type>
    <GmtCreate>1541858202000</GmtCreate>
    <RequestId>BBEB8FD9-3AA8-4D53-831C-037D9C53348E</RequestId>
    <ObjectId>F-33FA7CD5E195****</ObjectId>
    <ProjectId>FP-E3F1523F8FC1****</ProjectId>
    <GmtModified>1541858767000</GmtModified>
    <CategoryType>FILE</CategoryType>
    <Id>FC-3A749C1F5D12****</Id>
    <Name>myFlow</Name>
</Data>
<RequestId>BBEB8FD9-3AA8-4D53-831C-037D9C53348E</RequestId>
```

JSON Syntax

```
{
    "Data": {
        "ParentId": "FC-198D4E3ACA4F****",
        "ObjectType": "FLOW",
        "Type": "FLOW",
        "GmtCreate": 1541858202000,
        "RequestId": "BBEB8FD9-3AA8-4D53-831C-037D9C53348E",
        "ObjectId": "F-33FA7CD5E195****",
        "ProjectId": "FP-E3F1523F8FC1****",
        "GmtModified": 1541858767000,
        "CategoryType": "FILE",
        "Id": "FC-3A749C1F5D12****",
        "Name": "myFlow"
    },
    "RequestId": "BBEB8FD9-3AA8-4D53-831C-037D9C53348E"
}
```

8.17. Obtain directory tree

You can call the DescribeFlowCategoryTree to query the information of a directory tree.

Debugging

OpenAPI Explorer automatically calculates the signature value. For your convenience, we recommend that you call this operation in OpenAPI Explorer. You can use OpenAPI Explorer to search for API operations, call API operations, and dynamically generate SDK sample code.

Request parameters

Parameter	Type	Required	Example	Description

Parameter	Type	Required	Example	Description
Action	String	Yes	DescribeFlowCategoryTree	The operation that you want to perform. This parameter is required for API requests that you create by piecing together HTTP or HTTPS URLs. Set the value to DescribeFlowCategoryTree.
ProjectId	String	Yes	FP-ABD24A6163D3****	The ID of the project. You can call ListFlowProject View the ID of the project.
RegionId	String	Yes	cn-hangzhou	The region ID. You can call DescribeRegions To view the latest list of Alibaba Cloud regions.
Type	String	Yes	FLOW	Directory type. The values are as follows: • FLOW (workflow) • JOB (JOB) • ADHOC: ad hoc query
Mode	String	No	YARN	The mode of the model. The following values are supported: • YARN: submits the job from a worker node • LOCAL: submits the job from a header or gateway node
Keyword	String	No	None	A reserved parameter.
CategoryId	String	No	FC-5BD9575E3462****	The directory ID of the job.

Response parameters

Parameter	Type	Example	Description

Parameter	Type	Example	Description
Data	String	{"node":{"categoryType":"FOLDER","gmtModified":1540344706000,"name":"FLOW","id":"FC-6B5B5BDAD3EFAB67","gmtCreate":1540344706000,"type":"FLOW","projectId":"FP-7A1018ADE9179EE1","parentId":"root_parent"},"children":[{"node":{"categoryType":"FILE","gmtModified":1542855766000,"name":"flow2","id":"FC-D30AC9A7795F03A1","gmtCreate":1542855766000,"type":"FLOW","projectId":"FP-7A1018ADE9179EE1","parentId":"FC-6B5B5BDAD3EFAB67","objectId":"F-E9DC5533695C989B","objectType":"FLOW"},"children":[],"childrenMap":{}},{"node":{"categoryType":"FILE","gmtModified":1540796206000,"name":"flow-hive","id":"FC-296E3BB9491E39F2","gmtCreate":1540796206000,"type":"FLOW","projectId":"FP-7A1018ADE9179EE1","parentId":"FC-6B5B5BDAD3EFAB67","objectId":"F-35683D0E45734E34","objectType":"FLOW"},"children":[],"childrenMap":{}}]}	Result, by **node** and **children** A tree structure.
RequestId	String	5C5E4A6F-5140-4627-AB81-F3E0D06C5C36	The ID of the request.

Examples

Sample requests

```
http(s)://[Endpoint]/?Action=DescribeFlowCategoryTree
&ProjectId=FP-ABD24A6163D3****
&RegionId=cn-hangzhou
&Type=FLOW
&<common request parameters>
```

Sample success responses

`XML` format

```
<Data>
    <node>
        <categoryType>FOLDER</categoryType>
        <gmtModified>1540344706000</gmtModified>
        <name>FLOW</name>
        <id>FC-6B5B5BDAD3EF****</id>
        <gmtCreate>1540344706000</gmtCreate>
        <type>FLOW</type>
        <projectId>FP-7A1018ADE917****</projectId>
        <parentId>root_parent</parentId>
    </node>
    <children>
        <node>
            <categoryType>FILE</categoryType>
            <gmtModified>1542855766000</gmtModified>
            <name>flow2</name>
            <id>FC-D30AC9A7795F****</id>
            <gmtCreate>1542855766000</gmtCreate>
            <type>FLOW</type>
            <projectId>FP-7A1018ADE917****</projectId>
            <parentId>FC-6B5B5BDAD3EF****</parentId>
            <objectId>F-E9DC5533695C****</objectId>
            <objectType>FLOW</objectType>
        </node>
        <childrenMap/>
    </children>
    <children>
        <node>
            <categoryType>FILE</categoryType>
            <gmtModified>1540796206000</gmtModified>
            <name>flow-hive</name>
            <id>FC-296E3BB9491E****</id>
            <gmtCreate>1540796206000</gmtCreate>
            <type>FLOW</type>
            <projectId>FP-7A1018ADE917****</projectId>
            <parentId>FC-6B5B5BDAD3EF****</parentId>
            <objectId>F-35683D0E4573****</objectId>
            <objectType>FLOW</objectType>
        </node>
        <childrenMap/>
```

```
    </children>
    <childrenMap>
        <FC-D30AC9A7795F03A1>
            <node>
                <categoryType>FILE</categoryType>
                <gmtModified>1542855766000</gmtModified>
                <name>flow2</name>
                <id>FC-D30AC9A7795F****</id>
                <gmtCreate>1542855766000</gmtCreate>
                <type>FLOW</type>
                <projectId>FP-7A1018ADE917****</projectId>
                <parentId>FC-6B5B5BDAD3EF****</parentId>
                <objectId>F-E9DC5533695C****</objectId>
                <objectType>FLOW</objectType>
            </node>
            <childrenMap/>
        </FC-D30AC9A7795F03A1>
        <FC-296E3BB9491E39F2>
            <node>
                <categoryType>FILE</categoryType>
                <gmtModified>1540796206000</gmtModified>
                <name>flow-hive</name>
                <id>FC-296E3BB9491E****</id>
                <gmtCreate>1540796206000</gmtCreate>
                <type>FLOW</type>
                <projectId>FP-7A1018ADE917****</projectId>
                <parentId>FC-6B5B5BDAD3EF****</parentId>
                <objectId>F-35683D0E4573****</objectId>
                <objectType>FLOW</objectType>
            </node>
            <childrenMap/>
        </FC-296E3BB9491E39F2>
    </childrenMap>
</Data>
<RequestId>B12F5D42-52C2-47F2-8A2F-4D0D68E64E44</RequestId>
```

JSON Syntax

```
{
    "Data": {
        "node": {
            "categoryType": "FOLDER",
            "gmtModified": 1540344706000,
            "name": "FLOW",
            "id": "FC-6B5B5BDAD3EF****",
            "gmtCreate": 1540344706000,
            "type": "FLOW",
            "projectId": "FP-7A1018ADE917****",
            "parentId": "root_parent"
        },
        "children": [
            {
                "node": {
                    "categoryType": "FILE",
```

```
                "gmtModified": 1542855766000,
                "name": "flow2",
                "id": "FC-D30AC9A7795F****",
                "gmtCreate": 1542855766000,
                "type": "FLOW",
                "projectId": "FP-7A1018ADE917****",
                "parentId": "FC-6B5B5BDAD3EF****",
                "objectId": "F-E9DC5533695C****",
                "objectType": "FLOW"
            },
            "children": [],
            "childrenMap": {}
        },
        {
            "node": {
                "categoryType": "FILE",
                "gmtModified": 1540796206000,
                "name": "flow-hive",
                "id": "FC-296E3BB9491E****",
                "gmtCreate": 1540796206000,
                "type": "FLOW",
                "projectId": "FP-7A1018ADE917****",
                "parentId": "FC-6B5B5BDAD3EF****",
                "objectId": "F-35683D0E4573****",
                "objectType": "FLOW"
            },
            "children": [],
            "childrenMap": {}
        }
    ],
    "childrenMap": {
        "FC-D30AC9A7795F03A1": {
            "node": {
                "categoryType": "FILE",
                "gmtModified": 1542855766000,
                "name": "flow2",
                "id": "FC-D30AC9A7795F****",
                "gmtCreate": 1542855766000,
                "type": "FLOW",
                "projectId": "FP-7A1018ADE917****",
                "parentId": "FC-6B5B5BDAD3EF****",
                "objectId": "F-E9DC5533695C****",
                "objectType": "FLOW"
            },
            "children": [],
            "childrenMap": {}
        },
        "FC-296E3BB9491E39F2": {
            "node": {
                "categoryType": "FILE",
                "gmtModified": 1540796206000,
                "name": "flow-hive",
                "id": "FC-296E3BB9491E****",
                "gmtCreate": 1540796206000,
```

```
                    "type": "FLOW",
                    "projectId": "FP-7A1018ADE917****",
                    "parentId": "FC-6B5B5BDAD3EF****",
                    "objectId": "F-35683D0E4573****",
                    "objectType": "FLOW"
                },
                "children": [],
                "childrenMap": {}
            }
        }
    },
    "RequestId": "B12F5D42-52C2-47F2-8A2F-4D0D68E64E44"
}
```


8.18. Obtains the information about a workflow instance

You can call DescribeFlowInstance operation to query the information of a workflow instance.

Debugging

OpenAPI Explorer automatically calculates the signature value. For your convenience, we recommend that you call this operation in OpenAPI Explorer. You can use OpenAPI Explorer to search for API operations, call API operations, and dynamically generate SDK sample code.

Request parameters

Parameter	Type	Required	Example	Description
Action	String	Yes	DescribeFlowInstance	The operation that you want to perform. This parameter is required for API requests that you create by piecing together HTTP or HTTPS URLs. Set the value to DescribeFlowInstance.
Id	String	Yes	FI-7CAF9709CD32****	The ID of the workflow. You can call ListFlowInstance View the workflow ID.
ProjectId	String	Yes	FP-7A1018ADE917****	The ID of the project. You can call ListFlowProject View the ID of the project.
RegionId	String	Yes	cn-hangzhou	The region ID of the instance. You can call DescribeRegions To view the latest list of Alibaba Cloud regions.

Response parameters

Parameter	Type	Example	Description
ClusterId	String	C-F32FB31D8295****	The ID of the cluster.
Duration	Long	12000	Running duration, in units ms .
EndTime	Long	1540796248000	The time when the execution of the workflow instance ended.
FlowId	String	F-35683D0E4573****	The ID of the workflow.
FlowName	String	flow-hive	The name of the workflow.
GmtCreate	Long	1540796248000	The time when the accelerated domain name was created.
GmtModified	Long	1540796248000	The modification time of the workflow.

Parameter	Type	Example	Description
Graph	String	{"nodes":[{"shape":"startControlNode","size":"80*34","spmAnchorId":"0.0.0.i0.766645eb2cmNtQ","x":500,"y":250,"index":0,"id":"48d474ea","attribute":{"type":"START"},"type":"node"},{"shape":"hiveSQLJobNode","size":"170*34","spmAnchorId":"5176.8250060.0.i11.499128d0KWdQvq","x":515,"y":334.5,"index":1,"id":"2f089966","label":"hive-test","attribute":{"jobId":"FJ-C6C794219DE652B9","type":"JOB","jobType":"HIVE_SQL"},"type":"node","config":{"hostName":"","clusterId":""}},{"shape":"endControlNode","size":"80*34","spmAnchorId":"5176.8250060.0.i15.499128d0KWdQvq","x":532,"y":453.5,"index":2,"id":"ac092a54","attribute":{"type":"END"},"type":"node"}],"edges":[{"sourceAnchor":0,"targetAnchor":0,"index":3,"source":"48d474ea","id":"77e6117c","target":"2f089966"},{"sourceAnchor":1,"targetAnchor":0,"index":4,"source":"2f089966","id":"95ba3716","target":"ac092a54"}]}	The information of the workflow graph.
Id	String	FI-7CAF9709CD32****	The ID of the workflow instance.

Parameter	Type	Example	Description
NodeInstance	Array of NodeInstance		The node instances of the workflow instance.
NodeInstance			
ClusterId	String	C-F32FB31D8295****	The ID of the cluster.
Duration	Long	11000	The execution time of the node instance.
EndTime	Long	1540796248000	The time when the node instance execution ended.
ExternalId	String	application_1540362938289_1858	The external ID. For example, the initiator **ApplicationId** .
ExternalInfo	String	empty	The external information. For example, the error diagnosis information of running jobs.
ExternalStatus	String	SUCCESS	The external status of the job instance. Valid values: • SUBMITTED (SUBMITTED) • RUNNING • SUCCESS (execution successful) • FAIL: The execution failed. • KILL_FAIL (termination failure) • KILL_SUCCESS (termination successful)
FailAct	String	STOP	The action to take upon an operation failure of the node instance. Valid values: • STOP (terminate the workflow) • CONTINUE (skip)
GmtCreate	Long	1540796236000	The creation time of the project.
GmtModified	Long	1540796247000	The time when the workflow node instance was modified.

Parameter	Type	Example	Description
HostName	String	emr-header-1.cluster-12345	The name of the host where the node instance is run. You can log on to the host to use the `hostname` Command to view the hostname.
Id	String	FNI-9D14A7CCF26****	The ID of the workflow node instance.
JobId	String	FJ-C6C794219DE6****	The ID of the corresponding job.
JobName	String	hive-test	The name of the corresponding job.
JobType	String	HIVE_SQL	The type of the corresponding job.
MaxRetry	String	0	The maximum number of times the job can be retried.
NodeName	String	2f089966	The name of the node.
Pending	Boolean	true	Indicates whether the execution of the node instance ended.
ProjectId	String	FP-7A1018ADE917****	The ID of the project.
Retries	Integer	0	The number of retries of running the node instance.
RetryInterval	String	15	The retry interval. Unit: s.
StartTime	Long	1540796237000	The time when the execution of the job instance started.

Parameter	Type	Example	Description
Status	String	OK	The execution status of the instance. Valid values: • PREP (waiting to start) • SUBMITTING (SUBMITTING) • RUNNING • DONE (completed) • OK (successful execution) • FAILED (execution FAILED) • KILLED (terminated) • KILL_FAILED (termination failed) • START_RETRY
Type	String	JOB	The type of the node. Valid values: • JOB • CLUSTER • START • END
ProjectId	String	FP-7A1018ADE917****	The ID of the project.
RequestId	String	EDF99BA3-F7AF-49B2-ABA1-36430A31F482	The ID of the request.
StartTime	Long	1540796236000	The time when the execution of the workflow instance started.
Status	String	SUCCEEDED	The execution status of the instance. Valid values: • PREP (preparing) • RUNNING • SUCCEEDED • FAILED (FAILED) • KILLED (terminated) • SUSPENDED

Examples

Sample requests

```
http(s)://[Endpoint]/?Action=DescribeFlowInstance
&Id=FI-7CAF9709CD32****
&ProjectId=FP-7A1018ADE917****
&RegionId=cn-hangzhou
&<common request parameters>
```

Sample success responses

`XML` format

```
<Status>SUCCEEDED</Status>
<RequestId>EDF99BA3-F7AF-49B2-ABA1-36430A31F482</RequestId>
<EndTime>1540796248000</EndTime>
<ClusterId>C-F32FB31D8295****</ClusterId>
<GmtModified>1540796247000</GmtModified>
<StartTime>1540796236000</StartTime>
<ProjectId>FP-7A1018ADE917****</ProjectId>
<Duration>12000</Duration>
<FlowId>F-35683D0E4573****</FlowId>
<GmtCreate>1540796235000</GmtCreate>
<Graph>
    <nodes>
        <shape>startControlNode</shape>
        <size>80*34</size>
        <spmAnchorId>0.0.0.i0.766645eb2c****</spmAnchorId>
        <x>500</x>
        <y>250</y>
        <index>0</index>
        <id>48d4****</id>
        <attribute>
            <type>START</type>
        </attribute>
        <type>node</type>
    </nodes>
    <nodes>
        <shape>hiveSQLJobNode</shape>
        <size>170*34</size>
        <spmAnchorId>5176.8250060.0.i11.499128d0KW****</spmAnchorId>
        <x>515</x>
        <y>334.5</y>
        <index>1</index>
        <id>2f089966</id>
        <label>hive-test</label>
        <attribute>
            <jobId>FJ-C6C794219DE6****</jobId>
            <type>JOB</type>
            <jobType>HIVE_SQL</jobType>
        </attribute>
        <type>node</type>
        <config>
            <hostName/>
            <clusterId/>
        </config>
    </nodes>
```

```
    <nodes>
        <shape>endControlNode</shape>
        <size>80*34</size>
        <spmAnchorId>5176.8250060.0.i15.499128d0KW****</spmAnchorId>
        <x>532</x>
        <y>453.5</y>
        <index>2</index>
        <id>ac09****</id>
        <attribute>
            <type>END</type>
        </attribute>
        <type>node</type>
    </nodes>
    <edges>
        <sourceAnchor>0</sourceAnchor>
        <targetAnchor>0</targetAnchor>
        <index>3</index>
        <source>48d474ea</source>
        <id>77e6****</id>
        <target>2f089966</target>
    </edges>
    <edges>
        <sourceAnchor>1</sourceAnchor>
        <targetAnchor>0</targetAnchor>
        <index>4</index>
        <source>2f089966</source>
        <id>95ba****</id>
        <target>ac092a54</target>
    </edges>
</Graph>
<ScheduleTime>1596596400000</ScheduleTime>
<FlowName>flow-hive</FlowName>
<Id>FI-7CAF9709CD32****</Id>
<DependencyFlowList>
</DependencyFlowList>
<NodeInstance>
    <NodeInstance>
        <FailAct>STOP</FailAct>
        <Status>OK</Status>
        <EndTime>1540796236000</EndTime>
        <ClusterId>C-F32FB31D8295****</ClusterId>
        <NodeName>:start:</NodeName>
        <GmtModified>1540796236000</GmtModified>
        <StartTime>1540796236000</StartTime>
        <ProjectId>FP-7A1018ADE917****</ProjectId>
        <Duration>0</Duration>
        <MaxRetry>0</MaxRetry>
        <Type>START</Type>
        <GmtCreate>1540796236000</GmtCreate>
        <Retries>0</Retries>
        <Id>FNI-1286C1ED46C4****</Id>
        <HostName/>
        <Pending>false</Pending>
    </NodeInstance>
```

```
    <NodeInstance>
        <FailAct>STOP</FailAct>
        <Status>OK</Status>
        <EndTime>1540796248000</EndTime>
        <ClusterId>C-F32FB31D8295****</ClusterId>
        <NodeName>2f089966</NodeName>
        <ExternalId>application_1540362938289_1858</ExternalId>
        <JobName>hive-test</JobName>
        <GmtModified>1540796247000</GmtModified>
        <StartTime>1540796237000</StartTime>
        <ProjectId>FP-7A1018ADE917****</ProjectId>
        <Duration>11000</Duration>
        <MaxRetry>0</MaxRetry>
        <ExternalStatus>SUCCESS</ExternalStatus>
        <Type>JOB</Type>
        <GmtCreate>1540796236000</GmtCreate>
        <JobType>HIVE_SQL</JobType>
        <ExternalInfo/>
        <Retries>0</Retries>
        <RetryInterval>15</RetryInterval>
        <Id>FNI-9D14A7CCF268****</Id>
        <HostName>emr-header-1.cluster-500159692</HostName>
        <JobId>FJ-C6C794219DE6****</JobId>
        <Pending>false</Pending>
    </NodeInstance>
    <NodeInstance>
        <FailAct>STOP</FailAct>
        <Status>OK</Status>
        <EndTime>1540796248000</EndTime>
        <ClusterId>C-F32FB31D8295****</ClusterId>
        <NodeName>ac092a54</NodeName>
        <GmtModified>1540796247000</GmtModified>
        <StartTime>1540796248000</StartTime>
        <ProjectId>FP-7A1018ADE917****</ProjectId>
        <Duration>0</Duration>
        <MaxRetry>0</MaxRetry>
        <Type>END</Type>
        <GmtCreate>1540796247000</GmtCreate>
        <Retries>0</Retries>
        <Id>FNI-14C14E312AF9****</Id>
        <HostName/>
        <Pending>false</Pending>
    </NodeInstance>
</NodeInstance>
```

JSON Syntax

```
{
        "Status": "SUCCEEDED",
        "RequestId": "EDF99BA3-F7AF-49B2-ABA1-36430A31F482",
        "EndTime": 1540796248000,
        "ClusterId": "C-F32FB31D8295****",
        "GmtModified": 1540796247000,
        "StartTime": 1540796236000
```

```
        "StartTime": 1540796230000,
        "ProjectId": "FP-7A1018ADE917****",
        "Duration": 12000,
        "FlowId": "F-35683D0E4573****",
        "GmtCreate": 1540796235000,
        "Graph": {
            "nodes": [
                {
                    "shape": "startControlNode",
                    "size": "80*34",
                    "spmAnchorId": "0.0.0.i0.766645eb2c****",
                    "x": 500,
                    "y": 250,
                    "index": 0,
                    "id": "48d4****",
                    "attribute": {
                        "type": "START"
                    },
                    "type": "node"
                },
                {
                    "shape": "hiveSQLJobNode",
                    "size": "170*34",
                    "spmAnchorId": "5176.8250060.0.i11.499128d0KW****",
                    "x": 515,
                    "y": 334.5,
                    "index": 1,
                    "id": "2f089966",
                    "label": "hive-test",
                    "attribute": {
                        "jobId": "FJ-C6C794219DE6****",
                        "type": "JOB",
                        "jobType": "HIVE_SQL"
                    },
                    "type": "node",
                    "config": {
                        "hostName": "",
                        "clusterId": ""
                    }
                },
                {
                    "shape": "endControlNode",
                    "size": "80*34",
                    "spmAnchorId": "5176.8250060.0.i15.499128d0KW****",
                    "x": 532,
                    "y": 453.5,
                    "index": 2,
                    "id": "ac09****",
                    "attribute": {
                        "type": "END"
                    },
                    "type": "node"
                }
            ],
            "edges": [
```

```
                {
                    "sourceAnchor": 0,
                    "targetAnchor": 0,
                    "index": 3,
                    "source": "48d474ea",
                    "id": "77e6****",
                    "target": "2f089966"
                },
                {
                    "sourceAnchor": 1,
                    "targetAnchor": 0,
                    "index": 4,
                    "source": "2f089966",
                    "id": "95ba****",
                    "target": "ac092a54"
                }
            ]
        },
        "ScheduleTime": 1596596400000,
        "FlowName": "flow-hive",
        "Id": "FI-7CAF9709CD32****",
        "DependencyFlowList": {
        "ParentFlow": []
        },
        "NodeInstance": {
            "NodeInstance": [
                {
                    "FailAct": "STOP",
                    "Status": "OK",
                    "EndTime": 1540796236000,
                    "ClusterId": "C-F32FB31D8295****",
                    "NodeName": ":start:",
                    "GmtModified": 1540796236000,
                    "StartTime": 1540796236000,
                    "ProjectId": "FP-7A1018ADE917****",
                    "Duration": 0,
                    "MaxRetry": "0",
                    "Type": "START",
                    "GmtCreate": 1540796236000,
                    "Retries": 0,
                    "Id": "FNI-1286C1ED46C4****",
                    "HostName": "",
                    "Pending": false
                },
                {
                    "FailAct": "STOP",
                    "Status": "OK",
                    "EndTime": 1540796248000,
                    "ClusterId": "C-F32FB31D8295****",
                    "NodeName": "2f089966",
                    "ExternalId": "application_1540362938289_1858",
                    "JobName": "hive-test",
                    "GmtModified": 1540796247000,
                    "StartTime": 1540796237000,
```

```
                    "ProjectId": "FP-7A1018ADE917****",
                    "Duration": 11000,
                    "MaxRetry": "0",
                    "ExternalStatus": "SUCCESS",
                    "Type": "JOB",
                    "GmtCreate": 1540796236000,
                    "JobType": "HIVE_SQL",
                    "ExternalInfo": "",
                    "Retries": 0,
                    "RetryInterval": "15",
                    "Id": "FNI-9D14A7CCF268****",
                    "HostName": "emr-header-1.cluster-500159692",
                    "JobId": "FJ-C6C794219DE6****",
                    "Pending": false
                },
                {
                    "FailAct": "STOP",
                    "Status": "OK",
                    "EndTime": 1540796248000,
                    "ClusterId": "C-F32FB31D8295****",
                    "NodeName": "ac092a54",
                    "GmtModified": 1540796247000,
                    "StartTime": 1540796248000,
                    "ProjectId": "FP-7A1018ADE917****",
                    "Duration": 0,
                    "MaxRetry": "0",
                    "Type": "END",
                    "GmtCreate": 1540796247000,
                    "Retries": 0,
                    "Id": "FNI-14C14E312AF9****",
                    "HostName": "",
                    "Pending": false
                }
            ]
        }
}
```


8.19. Query job information

You can call DescribeFlowJob operation to query the information of a job.

Debugging

OpenAPI Explorer automatically calculates the signature value. For your convenience, we recommend that you call this operation in OpenAPI Explorer. You can use OpenAPI Explorer to search for API operations, call API operations, and dynamically generate SDK sample code.

Request parameters

Parameter	Type	Required	Example	Description

Parameter	Type	Required	Example	Description
Action	String	Yes	DescribeFlowJob	The operation that you want to perform. For API requests using the HTTP or HTTPS URL, this parameter is required. Set the value to DescribeFlowJob.
Id	String	Yes	FJ-BCCAE48B90CC****	The ID of the job. You can call ListFlowJob View.
ProjectId	String	Yes	FP-257A173659F5****	The ID of the project. You can call ListFlowProject View the project ID.
RegionId	String	Yes	cn-hangzhou	The ID of the region. You can call DescribeRegions View the latest list of Alibaba Cloud regions.

Response parameters

Parameter	Type	Example	Description
Adhoc	String	false	Indicates whether the query is an ad hoc query. Valid values: • true: Ad-hoc query. • false: The query is not an ad hoc query.
AlertConf	String	"{\"items\":[{\"enable\":true,\"eventId\":\"EMR-210401001\",\"alertUserGroupIdList\":[\"AUG-52dabfbbca654b52aae05ac5acd9a0f0\"],\"alertDingDingGroupList\":[\"ADG-2c411c452e6b467b9a59fadf21d195ad\"]}]}"	The alert settings for the job instance.
CategoryId	String	FC-5BD9575E3462****	The directory ID of the job.
CustomVariables	String	N/A	The custom variables configured for the job.

Parameter	Type	Example	Description
Description	String	This is the description of a job	The description of the job.
EditLockDetail	String	N/A	Retain parameters.
EnvConf	String	{"key":"value"}	The environment variables configured for the job.
FailAct	String	CONTINUE	The action to take upon an operation failure of the node instance. Valid values: • CONTINUE: skips the node instance • STOP: stops the workflow instance
GmtCreate	Long	1538017813000	The time when the accelerated domain name was created.
GmtModified	Long	1538017814000	The modification time of the job.
Id	String	FJ-BCCAE48B90CC****	The ID of the job.
LastInstanceId	String	FJI-0BA97D0BB8F3****	The ID of the last executed job instance.
MaxRetry	Integer	5	The maximum number of retries. The value ranges from 0 to 5.
MaxRunningTimeSec	Long	0	Retain parameters.
MonitorConf	String	{"inputs":[{"type":"KAFKA","clusterId":"C-1234567","topics":"kafka_topic","consumer.group":"kafka_consumer_group"}],"outputs":[{"type":"KAFKA","clusterId":"C-1234567","topics":"kafka_topic"}]}	Monitoring configuration, only **SPARK_STREAMING** Job type support.
Name	String	my_shell_job	The name of the job.

Parameter	Type	Example	Description
ParamConf	String	{"date":"${yyyy-MM-dd}"}	The configuration parameters of the job.
Params	String	ls -l	The content of the job.
RequestId	String	1549175a-6d14-4c8a-89f9-5e28300f6d7e	The ID of the request.
ResourceList	Array of Resource		The resources configured for the job.
Resource			
Alias	String	demo.jar	The alias of the resource.
Path	String	oss://path/demo.jar	The storage path of the resource.
RetryInterval	Long	200	The retry interval ranges from 0 to 300. Unit: seconds.
RetryPolicy	String	N/A	Retain parameters.
RunConf	String	{"priority":1,"userName":"hadoop","memory":2048,"cores":1}	The scheduling parameters configured for the job. • priority: the priority of the job. • userName: the name of the Linux user who submitted the job. • memory: The memory allocated to the job. Unit: MB. • cores: the number of vCPUs allocated to the job.
Type	String	SHELL	The type of the job. Valid values: SPARK_SQL, SPARK_STREAMING, MR, SQOOP, PIG, FLINK, STREAMING_SQL, IMPALA_SQL, PRESTO_SQL, SPARK, Hive_SQL, Hive, SHELL, and SPARK_SHELL.
mode	String	YARN	The model mode. Valid values: YARN and LOCAL.

Examples

Sample requests

```
http(s)://[Endpoint]/?Action=DescribeFlowJob
&Id=FJ-BCCAE48B90CC****
&ProjectId=FP-257A173659F5****
&RegionId=cn-hangzhou
&<common request parameters>
```

Sample success responses

`XML` format

```
<FailAct>STOP</FailAct>
<CategoryId>FC-F2495319D****</CategoryId>
<Description>shell</Description>
<RequestId>7D2B1B2E-8D89-49C1-8D31-097C83879D20</RequestId>
<GmtCreate>1538017813000</GmtCreate>
<GmtModified>1538017814000</GmtModified>
<Params>ls -l</Params>
<ParamConf>{}</ParamConf>
<Adhoc>false</Adhoc>
<LastInstanceId>FJI-0BA97D0BB8F3****</LastInstanceId>
<MaxRetry>0</MaxRetry>
<MaxRunningTimeSec>0</MaxRunningTimeSec>
<Name>shell_copy</Name>
<Type>SHELL</Type>
<ResourceList>
</ResourceList>
<RetryInterval>15</RetryInterval>
<Id>FJ-C7FB9F1075C7****</Id>
<AlertConf>{}</AlertConf>
```

`JSON`

```
{
    "FailAct": "STOP",
    "CategoryId": "FC-F2495319D****",
    "Description": "shell",
    "RequestId": "7D2B1B2E-8D89-49C1-8D31-097C83879D20",
    "GmtCreate": 1538017813000,
    "GmtModified": 1538017814000,
    "Params": "ls -l",
    "ParamConf": "{}",
    "Adhoc": false,
    "LastInstanceId": "FJI-0BA97D0BB8F3****",
    "MaxRetry": 0,
    "MaxRunningTimeSec": 0,
    "Name": "shell_copy",
    "Type": "SHELL",
    "ResourceList": {
        "Resource": []
    },
    "RetryInterval": 15,
    "Id": "FJ-C7FB9F1075C7****",
    "CustomVariables": [],
    "AlertConf": "{}"
}
```


8.20. Queries the details of a node instance

You can call the DescribeFlowNodeInstance operation to query the details of node instances, including workflow node instances and job running node instances.

Debugging

OpenAPI Explorer automatically calculates the signature value. For your convenience, we recommend that you call this operation in OpenAPI Explorer. You can use OpenAPI Explorer to search for API operations, call API operations, and dynamically generate SDK sample code.

Request parameters

Parameter	Type	Required	Example	Description
Action	String	Yes	DescribeFlowNodeInstance	The operation that you want to perform. This parameter is required for API requests that you create by piecing together HTTP or HTTPS URLs. Set the value to DescribeFlowNodeInstance.

Parameter	Type	Required	Example	Description
Id	String	Yes	FNI-FE4BD156E939****	The ID of the ECS instance that is added to the ACK cluster. You can call ListFlowNodeInstance View the ID of the node instance.
ProjectId	String	Yes	FP-7A1018ADE917****	The ID of the project. You can call ListFlowProject View the ID of the project.
RegionId	String	Yes	cn-hangzhou	The region ID of the instance. You can call DescribeRegions To view the latest list of Alibaba Cloud regions.

Response parameters

Parameter	Type	Example	Description
Adhoc	Boolean	true	Indicates whether the job is a temporary query job.
ClusterId	String	C-F32FB31D8295****	The ID of the cluster.
ClusterName	String	myCluster	The name of the cluster.
Duration	Long	200	The running duration, in milliseconds.
EndTime	Long	1540796248000	The time when the execution of the job instance ended.
EnvConf	String	{"key":"value"}	The environment variables configured for the job.
ExternalChildIds	String	application_1541559535023_34028	Of the task **application** The details about an item.
ExternalId	String	application_1541559535023_34027	Of the initiator **application** ID.
ExternalInfo	String	empty	The external information. For example, the error diagnosis information of running jobs.

Parameter	Type	Example	Description
ExternalStatus	String	SUCCESS	The status of the Container corresponding to the instance: • SUBMITTED (SUBMITTED) • RUNNING • SUCCESS (execution successful) • FAIL: The execution failed. • KILL_FAIL (termination failure) • KILL_SUCCESS (termination successful)
ExternalSubId	String	container_1541559535023_34027_01_000001	Initiator **container** ID.
FailAct	String	STOP	The action to take upon an operation failure of the node instance. Valid values: • STOP (terminate the workflow) • CONTINUE (skip)
FlowId	String	F-35683D0E4573****	The ID of the workflow.
FlowInstanceId	String	FI-7CAF9709CD32****	The ID of the workflow instance.
GmtCreate	Long	1540796236000	The creation time of the project.
GmtModified	Long	1540796247000	The time when the workflow node instance was modified.
HostName	String	emr-header-1.cluster-12345	The name of the host where the node instance is run. You can log on to the host to use the `hostname` Command to view the hostname.
Id	String	FNI-9D14A7CCF268****	The ID of the workflow node instance.
JobId	String	FJ-A23BD131A862****	The ID of the job.
JobName	String	myJob	The name of the job.
JobParams	String	ls -l	The content of the job.

Parameter	Type	Example	Description
JobType	String	HIVE_SQL	The type of the job.
MaxRetry	String	0	The maximum number of retries of running the node instance if a failure occurs.
Mode	String	YARN	The mode of the model. Supported: YARN and LOCAL YARN. YARN: submits the job from a worker node Jobs run as processes directly on the host.
MonitorConf	String	{"inputs": [{"type":"KAFKA","clusterId":"C-1234567","topics":"kafka_topic","consumer.group":"kafka_consumer_group"}],"outputs": [{"type":"KAFKA","clusterId":"C-1234567","topics":"kafka_topic"}]}	The monitoring configurations of the job. This parameter only applies to SPARK_STREAMING jobs.
NodeName	String	The name of the node	The name of the node.
ParamConf	String	{"date":"${yyyy-MM-dd}"}	The configuration parameters of the job.
Pending	Boolean	true	Indicates whether the execution of the node instance ended.
ProjectId	String	FP-7A1018ADE917****	The ID of the project.
RequestId	String	1549175a-6d14-4c8a-89f9-5e28300f6d7e	The ID of the request.
Retries	Integer	0	The number of retries of running the node instance.
RetryInterval	String	15	The retry interval, in units. s .
RetryPolicy	String	None	The retry policy. A reserved parameter.

Parameter	Type	Example	Description
RunConf	String	{"priority":1,"userName":"hadoop","memory":2048,"cores":1}	The scheduling parameters configured for the job. • priority: the priority of the job. • userName: The linux user used to submit jobs. • memory: the memory allocated to the job. Unit: MB. • cores: the number of vCPUs allocated to the job.
StartTime	Long	1540796237000	The time when the execution of the job instance started.
Status	String	OK	The execution status of the instance. Valid values: • PREP (waiting to start) • SUBMITTING (SUBMITTING) • RUNNING • DONE (completed) • OK (successful execution) • FAILED (execution FAILED) • KILLED (terminated) • KILL_FAILED (termination failed) • START_RETRY
Type	String	JOB	The type of the node. Valid values: • JOB (JOB) • CLUSTER • START (START) • END

Examples

Sample requests

```
http(s)://[Endpoint]/?Action=DescribeFlowNodeInstance
&Id=FNI-FE4BD156E939****
&ProjectId=FP-7A1018ADE917****
&RegionId=cn-hangzhou
&<<common request parameters>
```

Sample success responses

`XML` format

```
<data>
    <FailAct>STOP</FailAct>
    <EndTime>1542884476000</EndTime>
    <NodeName>812589f5</NodeName>
    <GmtModified>1542884475000</GmtModified>
    <JobName>success</JobName>
    <ExternalStatus>SUCCESS</ExternalStatus>
    <FlowId>F-60C9B1257A80****</FlowId>
    <ParamConf>
        <cyctime>2018-11-22 19:00:00</cyctime>
    </ParamConf>
    <ExternalInfo/>
    <Retries>0</Retries>
    <ClusterName>myCluster</ClusterName>
    <JobId>FJ-EE3AF471B2E6****</JobId>
    <HostName>emr-header-1.cluster-500159692</HostName>
    <JobParams>sleep 10;
exit 0;</JobParams>
    <Status>OK</Status>
    <RequestId>F5540D8F-06E8-4E3C-B47A-D75CED72A795</RequestId>
    <ClusterId>C-F32FB31D8295****</ClusterId>
    <ExternalId>application_1541559535023_34027</ExternalId>
    <StartTime>1542884402000</StartTime>
    <ProjectId>FP-3535FE0BE522****</ProjectId>
    <FlowInstanceId>FI-C112BB938D2C****</FlowInstanceId>
    <Duration>74000</Duration>
    <ExternalSubId>container_1541559535023_34027_01_000001</ExternalSubId>
    <MaxRetry>0</MaxRetry>
    <Type>JOB</Type>
    <GmtCreate>1542884401000</GmtCreate>
    <JobType>SHELL</JobType>
    <RetryInterval>15</RetryInterval>
    <Id>FNI-E548777B9DCD****</Id>
    <Pending>false</Pending>
</data>
<requestId>F5540D8F-06E8-4E3C-B47A-D75CED72A795</requestId>
```

`JSON` Syntax

```
{
    "data": {
        "FailAct": "STOP",
        "EndTime": 1542884476000,
        "NodeName": "812589f5",
        "GmtModified": 1542884475000,
        "JobName": "success",
        "ExternalStatus": "SUCCESS",
        "FlowId": "F-60C9B1257A80****",
        "ParamConf": {
            "cyctime": "2018-11-22 19:00:00"
        },
        "ExternalInfo": "",
        "Retries": 0,
        "ClusterName": "myCluster",
        "JobId": "FJ-EE3AF471B2E6****",
        "HostName": "emr-header-1.cluster-500159692",
        "JobParams": "sleep 10;\nexit 0;",
        "Status": "OK",
        "RequestId": "F5540D8F-06E8-4E3C-B47A-D75CED72A795",
        "ClusterId": "C-F32FB31D8295****",
        "ExternalId": "application_1541559535023_34027",
        "StartTime": 1542884402000,
        "ProjectId": "FP-3535FE0BE522****",
        "FlowInstanceId": "FI-C112BB938D2C****",
        "Duration": 74000,
        "ExternalSubId": "container_1541559535023_34027_01_000001",
        "MaxRetry": "0",
        "Type": "JOB",
        "GmtCreate": 1542884401000,
        "JobType": "SHELL",
        "RetryInterval": "15",
        "Id": "FNI-E548777B9DCD****",
        "Pending": false
    },
    "requestId": "F5540D8F-06E8-4E3C-B47A-D75CED72A795"
}
```


8.21. Queries the container logs of a node instance

You can call DescribeFlowNodeInstanceContainerLog operation to query the log of a container that runs on a node instance.

> **Note** The return rate of the DescribeFlowNodeInstanceContainerLog interface is low due to data throttling. We recommend that you do not use the interface.

Debugging

OpenAPI Explorer automatically calculates the signature value. For your convenience, we recommend that you call this operation in OpenAPI Explorer. You can use OpenAPI Explorer to search for API operations, call API operations, and dynamically generate SDK sample code.

Request parameters

Parameter	Type	Required	Example	Description
Action	String	Yes	DescribeFlowNodeInstanceContainerLog	The operation that you want to perform. This parameter is required for API requests that you create by piecing together HTTP or HTTPS URLs. Set the value to DescribeFlowNodeInstanceContainerLog.
AppId	String	Yes	application_1542620905989_****	The application ID of the job.
ContainerId	String	Yes	container_1542620905989_0010_01_00****	The ID of the container.
LogName	String	Yes	stderr	Log name: • stderr • syslog • stdout
NodeInstanceId	String	Yes	FNI-0D2534B3AB67****	The ID of the ECS instance that is added to the ACK cluster. You can call ListFlowNodeInstance View the ID of the node instance.
ProjectId	String	Yes	FP-BECB9D35CB12****	The ID of the project. You can call ListFlowProject View the ID of the project.
RegionId	String	Yes	cn-hangzhou	The region ID of the instance. You can call DescribeRegions To view the latest list of Alibaba Cloud regions.
Offset	Integer	No	0	The offset of the SQL result.

Parameter	Type	Required	Example	Description
Length	Integer	No	200	The number of the log entries to return. The maximum number of log entries to return at a time is 1,000.

Response parameters

Parameter	Type	Example	Description
LogEnd	Boolean	true	Indicates whether the log is ended. Valid values: • true: End • false: does not end.
LogEntrys	Array of LogEntry		An array of log entries.
LogEntry			
Content	String	2018-11-19 17:55:11,792 INFO [RMCommunicator Allocator] org.apache.hadoop.yarn.util.RackResolver: Resolved emr-worker-1.cluster-500160492 to /default-rack	The log entry.
RequestId	String	4E216C44-F828-4D59-B398-253DCF86F23C	The ID of the request.

Examples

Sample requests

```
http(s)://[Endpoint]/?Action=DescribeFlowNodeInstanceContainerLog
&AppId=application_1542620905989_****
&ContainerId=container_1542620905989_0010_01_00****
&LogName=stderr
&NodeInstanceId=FNI-0D2534B3AB67****
&ProjectId=FP-BECB9D35CB12****
&RegionId=cn-hangzhou
&<common request parameters>
```

Sample success responses

`XML` format

```
<DescribeFlowNodeInstanceContainerLogResponse>
      <data>
            <RequestId>4E216C44-F828-4D59-B398-253DCF86F23C</RequestId>
            <LogEnd>false</LogEnd>
            <LogEntrys>
                  <LogEntry>
                        <Content>2018-11-19 17:55:11,792 INFO [RMCommunicator Allocator] or
g.apache.hadoop.yarn.util.RackResolver: Resolved emr-worker-1.cluster-500160492 to /default
-rack</Content>
                  </LogEntry>
                  <LogEntry>
                        <Content>2018-11-19 17:55:11,793 INFO [RMCommunicator Allocator] or
g.apache.hadoop.yarn.util.RackResolver: Resolved emr-worker-2.cluster-500160492 to /default
-rack</Content>
                  </LogEntry>
            </LogEntrys>
      </data>
      <requestId>4E216C44-F828-4D59-B398-253DCF86F23C</requestId>
</DescribeFlowNodeInstanceContainerLogResponse>
```

JSON Syntax

```
{
    "data": {
        "RequestId": "4E216C44-F828-4D59-B398-253DCF86F23C",
        "LogEnd": false,
        "LogEntrys": {
            "LogEntry": [
                {
                    "Content": "2018-11-19 17:55:11,792 INFO [RMCommunicator Allocator] org
.apache.hadoop.yarn.util.RackResolver: Resolved emr-worker-1.cluster-500160492 to /default-
rack"
                },
                {
                    "Content": "2018-11-19 17:55:11,793 INFO [RMCommunicator Allocator] org
.apache.hadoop.yarn.util.RackResolver: Resolved emr-worker-2.cluster-500160492 to /default-
rack"
                }
            ]
        }
    },
    "requestId": "4E216C44-F828-4D59-B398-253DCF86F23C"
}
```

8.22. Query the initiator logs of a node instance

You can call DescribeFlowNodeInstanceLauncherLog operation to query the log of a launcher that runs on a node instance.

Debugging

OpenAPI Explorer automatically calculates the signature value. For your convenience, we recommend that you call this operation in OpenAPI Explorer. You can use OpenAPI Explorer to search for API operations, call API operations, and dynamically generate SDK sample code.

Request parameters

Parameter	Type	Required	Example	Description
Action	String	Yes	DescribeFlowNodeInstanceLauncherLog	The operation that you want to perform. Set the value to DescribeFlowNodeInstanceLauncherLog.
NodeInstanceId	String	Yes	FNI-0D2534B3AB67****	The ID of the job instance.
ProjectId	String	Yes	FP-BECB9D35CB12****	The ID of the project. You can call ListFlowProject View the ID of the project.
RegionId	String	Yes	cn-hangzhou	The region ID of the instance. You can call DescribeRegions To view the latest list of Alibaba Cloud regions.
Start	Integer	No	200	The start offset of the log.
Lines	Integer	No	100	The number of log entries to return. The maximum number of log entries to return at a time is 1,000.
Offset	Integer	No	200	A deprecated parameter.
Length	Integer	No	100	A deprecated parameter.
Reverse	Boolean	No	true	Specifies whether log entries are sorted in reverse chronological order.
StartTime	Long	No	1540796236000	The start time of the query.
EndTime	Long	No	1540796248000	The end time of the queried log.

Response parameters

Parameter	Type	Example	Description
LogEnd	Boolean	false	Indicates whether the log stream ended.
LogEntrys	Array of LogEntry		An array of log entries.
LogEntry			
Content	String	2018-11-19 17:55:11,792 INFO [RMCommunicator Allocator] org.apache.hadoop.yarn.util.RackResolver: Resolved emr-worker-1.cluster-500160492 to /default-rack	The log entry.
RequestId	String	4E216C44-F828-4D59-B398-253DCF86F23C	The ID of the request.

Examples

Sample requests

```
http(s)://[Endpoint]/?Action=DescribeFlowNodeInstanceLauncherLog
&NodeInstanceId=FNI-0D2534B3AB67****
&ProjectId=FP-BECB9D35CB12****
&RegionId=cn-hangzhou
&<common request parameters>
```

Sample success responses

`XML` format

```
<RequestId>F4BBBCEF-20B9-4AD2-99EF-E1BA8D72B2C3</RequestId>
<LogEnd>false</LogEnd>
<LogEntrys>
    <LogEntry>
        <Content>Fri Nov 16 09:56:00 CST 2018 [LocalJobLauncherAM] INFO Starting emr flow l
auncher am ...</Content>
    </LogEntry>
    <LogEntry>
        <Content>== System Properties ============</Content>
    </LogEntry>
    <LogEntry>
        <Content>  java.runtime.name=OpenJDK Runtime Environment</Content>
    </LogEntry>
</LogEntrys>
```

JSON Syntax

```
{
        "RequestId": "F4BBBCEF-20B9-4AD2-99EF-E1BA8D72B2C3",
        "LogEnd": false,
        "LogEntrys": {
            "LogEntry": [
                {
                    "Content": "Fri Nov 16 09:56:00 CST 2018 [LocalJobLauncherAM] INFO Star
ting emr flow launcher am ..."
                },
                {
                    "Content": "== System Properties ============"
                },
                {
                    "Content": "  java.runtime.name=OpenJDK Runtime Environment"
                }
            ]
        }
}
```

8.23. Query project details

You can call DescribeFlowProject operation to query the details of a project.

Debugging

OpenAPI Explorer automatically calculates the signature value. For your convenience, we recommend that you call this operation in OpenAPI Explorer. You can use OpenAPI Explorer to search for API operations, call API operations, and dynamically generate SDK sample code.

Request parameters

Parameter	Type	Required	Example	Description

Parameter	Type	Required	Example	Description
Action	String	Yes	DescribeFlowProject	The operation that you want to perform. This parameter is required for API requests that you create by piecing together HTTP or HTTPS URLs. Set the value to DescribeFlowProject.
ProjectId	String	Yes	FP-5D55DA9DEDF2****	The ID of the project. You can call ListFlowProject View the ID of the project.
RegionId	String	Yes	cn-hangzhou	The region ID of the instance. You can call DescribeRegions To view the latest list of Alibaba Cloud regions.

Response parameters

Parameter	Type	Example	Description
Description	String	integration_test_project	The description of the project.
GmtCreate	Long	1542934807000	The time when the accelerated domain name was created.
GmtModified	Long	1542934809000	The time when the directory was modified.
Id	String	FP-5D55DA9DEDF2****	The ID of the project.
Name	String	project_name_demo	The name of the project.
RequestId	String	ACD3A7A5-CD6E-48DA-823B-ACE5B01DA43D	The ID of the request.
UserId	String	12345****	The ID of the master account.

Examples

Sample requests

```
http(s)://[Endpoint]/?Action=DescribeFlowProject
&ProjectId=FP-5D55DA9DEDF2****
&RegionId=cn-hangzhou
&<common request parameters>
```

Sample success responses

`XML` format

```
<GmtCreate>1542934807000</GmtCreate>
<Description>integration_test_project</Description>
<RequestId>ACD3A7A5-CD6E-48DA-823B-ACE5B01DA43D</RequestId>
<UserId>12345****</UserId>
<GmtModified>1542934809000</GmtModified>
<Id>FP-5D55DA9DEDF2****</Id>
<Name>integration_test_project</Name>
```

`JSON` Syntax

```
{
        "GmtCreate": 1542934807000,
        "Description": "integration_test_project",
        "RequestId": "ACD3A7A5-CD6E-48DA-823B-ACE5B01DA43D",
        "UserId": "12345****",
        "GmtModified": 1542934809000,
        "Id": "FP-5D55DA9DEDF2****",
        "Name": "integration_test_project"
}
```

8.24. Query the details of Project settings

You can call the DescribeFlowProjectClusterSetting operation to query the project setting details.

Debugging

OpenAPI Explorer automatically calculates the signature value. For your convenience, we recommend that you call this operation in OpenAPI Explorer. You can use OpenAPI Explorer to search for API operations, call API operations, and dynamically generate SDK sample code.

Request parameters

Parameter	Type	Required	Example	Description
Action	String	Yes	DescribeFlowProjectClusterSetting	The operation that you want to perform. This parameter is required for API requests that you create by piecing together HTTP or HTTPS URLs. Set the value to DescribeFlowProjectClusterSetting.

Parameter	Type	Required	Example	Description
ClusterId	String	Yes	C-DCEE11B49C8F****	The ID of the cluster. You can call ListClusters You can call this operation to view the ID of a cluster.
ProjectId	String	Yes	FP-ED2F3E844FE3****	The ID of the project. You can call ListFlowProject View the ID of the project.
RegionId	String	Yes	cn-hangzhou	The region ID. You can call DescribeRegions To view the latest list of Alibaba Cloud regions.

Response parameters

Parameter	Type	Example	Description
ClusterId	String	C-DCEE11B49C8F****	The ID of the cluster.
DefaultQueue	String	default	The default YARN queue to which jobs are submitted.
DefaultUser	String	hadoop	The default Linux user who submits jobs.
GmtCreate	Long	1541561123000	The time when the user was added to the project.
GmtModified	Long	1541561123000	The modification time of the cluster.
HostList	List	"Host":["emr-header-1.cluster-500159692"	The whitelist of clients that can submit jobs.
K8sClusterId	String	N/A	A reserved parameter.
ProjectId	String	FP-3535FE0BE522****	The ID of the project.
QueueList	List	"Queue": ["default"]	The whitelisted YARN queue to which jobs can be submitted.

Parameter	Type	Example	Description
RequestId	String	F2168FB7-8E60-44EE-A946-DA887297****	The ID of the request.
UserList	List	"User": ["hadoop"]	The whitelisted Linux user who can submit jobs.

Examples

Sample requests

```
http(s)://[Endpoint]/?Action=DescribeFlowProjectClusterSetting
&ClusterId=C-DCEE11B49C8F****
&ProjectId=FP-ED2F3E844FE3****
&RegionId=cn-hangzhou
&<common request parameters>
```

Sample success responses

`XML` format

```
<data>
    <DefaultUser>hadoop</DefaultUser>
    <GmtCreate>1541561123000</GmtCreate>
    <RequestId>80F270E8-27BD-4F24-BB2A-CD3FBCC450DA</RequestId>
    <DefaultQueue>undefined</DefaultQueue>
    <ClusterId>C-F32FB31D8295****</ClusterId>
    <ProjectId>FP-3535FE0BE5224A47</ProjectId>
    <GmtModified>1542948908000</GmtModified>
    <HostList>
        <Host>emr-header-1.cluster-500159692</Host>
    </HostList>
    <UserList>
    </UserList>
    <QueueList>
    </QueueList>
</data>
<requestId>80F270E8-27BD-4F24-BB2A-CD3FBCC450DA</requestId>
```

`JSON` Syntax

```
{
    "data": {
        "DefaultUser": "hadoop",
        "GmtCreate": 1541561123000,
        "RequestId": "80F270E8-27BD-4F24-BB2A-CD3FBCC450DA",
        "DefaultQueue": "undefined",
        "ClusterId": "C-F32FB31D8295****",
        "ProjectId": "FP-3535FE0BE5224A47",
        "GmtModified": 1542948908000,
        "HostList": {
            "Host": [
                "emr-header-1.cluster-500159692"
            ]
        },
        "UserList": {
            "User": []
        },
        "QueueList": {
            "Queue": []
        }
    },
    "requestId": "80F270E8-27BD-4F24-BB2A-CD3FBCC450DA"
}
```

8.25. Terminate job instance

You can call the KillFlowJob operation to Terminates a job instance.

Debugging

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

Request parameters

Parameter	Type	Required	Example	Description
Action	String	Yes	KillFlowJob	The operation that you want to perform. Set the value to KillFlowJob.
JobInstanceId	String	Yes	FJI-9DDAAA3ADA5F****	The ID of the job instance. You can call the DescribeFlowJob to view the job instance ID.

Parameter	Type	Required	Example	Description
ProjectId	String	Yes	FP-3535FE0BE522****	The ID of the project. You can call the ListFlowProject to view the ID of the project.
RegionId	String	Yes	cn-hangzhou	The ID of the region. You can call the DescribeRegions operation to query the most recent region list.

Response parameters

Parameter	Type	Example	Description
Data	Boolean	true	Returns the execution result, including the following: • true: The operation is successful. • false: The operation failed.
RequestId	String	B46F8A2A-B46B-415C-8A9C-B01B99B775A2	The ID of the request.

Examples

Sample requests

```
http(s)://[Endpoint]/?Action=KillFlowJob
&JobInstanceId=FJI-9DDAAA3ADA5F****
&ProjectId=FP-3535FE0BE522****
&RegionId=cn-hangzhou
&<Common request parameters>|
```

Sample success responses

`XML` format

```
<RequestId>B46F8A2A-B46B-415C-8A9C-B01B99B775A2</RequestId>
<Data>true</Data>
```

`JSON` format

```
{
        "RequestId": "B46F8A2A-B46B-415C-8A9C-B01B99B775A2",
        "Data": true
}
```

8.26. Queries the workflow list

You can call the ListFlow operation to query workflows.

Debugging

OpenAPI Explorer automatically calculates the signature value. For your convenience, we recommend that you call this operation in OpenAPI Explorer. You can use OpenAPI Explorer to search for API operations, call API operations, and dynamically generate SDK sample code.

Request parameters

Parameter	Type	Required	Example	Description
Action	String	Yes	ListFlow	The operation that you want to perform. This parameter is required for API requests that you create by piecing together HTTP or HTTPS URLs. Set the value to ListFlow.
RegionId	String	Yes	cn-hangzhou	The region ID of the instance. You can call DescribeRegions To view the latest list of Alibaba Cloud regions.
ProjectId	String	No	FP-3535FE0BE522****	The ID of the project. You can call ListFlowProject View the ID of the project.
JobId	String	No	FJ-F32FB31D8295****	The ID of the job. You can call ListFlowJob View data on the Member Management page.
Name	String	No	my_flow	The name of the workflow. You can call ListFlowInstance View data on the Member Management page.
Id	String	No	F-A32FB31D8295****	The ID of the workflow. You can call ListFlowInstance View the workflow ID.
ClusterId	String	No	C-F32FB31D8295****	The ID of the cluster. You can call ListClusters You can call this operation to view the ID of a cluster.

Parameter	Type	Required	Example	Description
Status	String	No	STOP_SCHEDULE	The scheduling status of the workflow. Valid values: • STOP_SCHEDULE (stop scheduling) • UNDER_SCHEDULE (scheduling)
Periodic	Boolean	No	true	Specifies whether to periodically schedule the workflow.
PageNumber	Integer	No	1	The page number.
PageSize	Integer	No	20	The number of entries to return on each page.

Response parameters

Parameter	Type	Example	Description
Flow	Array of Flow		The list of workflows.
Flow			
AlertConf	String	"{\"items\":[{\"enable\":true,\"eventId\":\"EMR-210401001\",\"alertUserGroupIdList\":[\"AUG-52dabfbbca654b52aae05ac5acd9a0f0\"],\"alertDingDingGroupList\":[\"ADG-2c411c452e6b467b9a59fadf21d195ad\"]}]}"	The alert settings for the workflow instance.
AlertDingDingGroupBizId	String	N/A	This parameter is unavailable.
AlertUserGroupBizId	String	N/A	This parameter is unavailable.
CategoryId	String	FC-2CF58396A189****	The directory ID of the workflow.
ClusterId	String	C-F32FB31D8295****	The ID of the cluster.

Parameter	Type	Example	Description
CreateCluster	Boolean	false	Indicates whether the cluster was created from the cluster template.
CronExpr	String	0 0 0 * * ?	The CRON expression of the time-based scheduling of the workflow.
Description	String	my flow demo	The description of the workflow.
EndSchedule	Long	4102416001000	The end time of the scheduling.
GmtCreate	Long	1541561048000	The creation time of the workflow.
GmtModified	Long	1542902401000	The modification time of the workflow.

Parameter	Type	Example	Description
Graph	String	{"nodes": [{"id":"48d474ea","index":0,"spmAnchorId":"0.0.0.i0.766645eb2cmNtQ","attribute": {"type":"START"},"shape":"startControlNode","type":"node","y":250,"size":"80*34","x":500}, {"id":"7ba480b3","index":1,"spmAnchorId":"5176.8250060.0.i19.771e28d0IPNQGE","attribute": {"jobType":"SHELL","jobId":"FJ-7BE1062897B19D25","type":"JOB"},"config": {"hostName":""},"label":"fail_job","shape":"shellJobNode","type":"node","y":398.5,"size":"170*34","x":470.5}, {"id":"33202d60","index":2,"spmAnchorId":"5176.8250060.0.i23.771e28d0IPNQGE","attribute": {"type":"END"},"shape":"endControlNode","type":"node","y":562.5,"size":"80*34","x":430.5}],"edges": [{"id":"28167ea0","index":3,"source":"48d474ea","sourceAnchor":0,"target":"7ba480b3","targetAnchor":0}, {"id":"e8d5ff52","index":4,"source":"7ba480b3","sourceAnchor":1,"target":"33202d60","targetAnchor":0}]}	The information of the directed acyclic graph (DAG) of the workflow.

Parameter	Type	Example	Description
HostName	String	emr-header-1.cluster-123456	Specify the running machine information in the format of **emr-header-1.cluster-123456** .
Id	String	7A39731FE719****	The ID of the workflow.
Name	String	my_flow_demo	The name of the workflow.
Periodic	Boolean	true	Indicates whether the workflow is periodically scheduled.
ProjectId	String	FP-3535FE0BE522****	The ID of the project.
StartSchedule	Long	1541561443000	The start time of the scheduling of the workflow.
Status	String	UNDER_SCHEDULE	Status, support **STOP_SCHEDULE** , **UNDER_SCHEDULE** .
Type	String	EMR	The type of the workflow. Valid value: EMR.
PageNumber	Integer	1	The page number.
PageSize	Integer	20	The page number of the returned page.
RequestId	String	7DDFF4C7-3AE3-485F-BFA1-BAE0AA3689DD	The ID of the request.
Total	Integer	1	The total number of entries returned.

Examples

Sample requests

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

Sample success responses

`XML` format

```
<PageSize>500</PageSize>
<RequestId>7DDFF4C7-3AE3-485F-BFA1-BAE0AA3689DD</RequestId>
<PageNumber>1</PageNumber>
<Total>1</Total>
<Flow>
    <Flow>
        <StartSchedule>1541561443000</StartSchedule>
        <Status>UNDER_SCHEDULE</Status>
        <CategoryId>FC-2CF58396A189****</CategoryId>
        <Description>daily_0</Description>
        <ClusterId>C-F32FB31D8295****</ClusterId>
        <GmtModified>1542902401000</GmtModified>
        <ProjectId>FP-3535FE0BE522****</ProjectId>
        <Periodic>true</Periodic>
        <CronExpr>0 0 0 * * ?</CronExpr>
        <Name>daily_0</Name>
        <Type>EMR</Type>
        <GmtCreate>1541561048000</GmtCreate>
        <Id>F-D156B45E06F1****</Id>
        <EndSchedule>4102416001000</EndSchedule>
        <HostName/>
        <CreateCluster>false</CreateCluster>
    </Flow>
</Flow>
```

`JSON` Syntax

```
{
    "PageSize": 500,
    "RequestId": "7DDFF4C7-3AE3-485F-BFA1-BAE0AA3689DD",
    "PageNumber": 1,
    "Total": 1,
    "Flow": {
        "Flow": [
            {
                "StartSchedule": 1541561443000,
                "Status": "UNDER_SCHEDULE",
                "CategoryId": "FC-2CF58396A189****",
                "Description": "daily_0",
                "ClusterId": "C-F32FB31D8295****",
                "GmtModified": 1542902401000,
                "ProjectId": "FP-3535FE0BE522****",
                "Periodic": true,
                "CronExpr": "0 0 0 * * ?",
                "Name": "daily_0",
                "Type": "EMR",
                "GmtCreate": 1541561048000,
                "Id": "F-D156B45E06F1****",
                "EndSchedule": 4102416001000,
                "HostName": "",
                "CreateCluster": false
            }
        ]
    }
}
```


8.27. Query the list of clusters available in a project

You can call the ListFlowCluster operation to query the clusters that are available for a project.

Debugging

OpenAPI Explorer automatically calculates the signature value. For your convenience, we recommend that you call this operation in OpenAPI Explorer. You can use OpenAPI Explorer to search for API operations, call API operations, and dynamically generate SDK sample code.

Request parameters

Parameter	Type	Required	Example	Description
Action	String	Yes	ListFlowCluster	The operation that you want to perform. This parameter is required for API requests that you create by piecing together HTTP or HTTPS URLs. Set the value to ListFlowCluster.

Parameter	Type	Required	Example	Description
ProjectId	String	Yes	FP-5D55DA9DEDF2****	The ID of the project. You can call ListFlowProject View the ID of the project.
RegionId	String	Yes	cn-hangzhou	The region ID of the instance. You can call DescribeRegions To view the latest list of Alibaba Cloud regions.
PageNumber	Integer	No	1	The number of the page to return. Pages start from page 1.
PageSize	Integer	No	10	The number of entries returned per page.
ResourceGroupId	String	No	rg-acfmv6jutt6****	The ID of the resource group. You can call ListResourceGroups View the resource group ID.

Response parameters

Parameter	Type	Example	Description
Clusters	Array of ClusterInfo		The list of clusters available in a project.
ClusterInfo			
ChargeType	String	PostPaid	The billing method of the instance. Default value: Postpaid. Valid values: • PostPaid: pay-as-you-go clusters • PrePaid: subscription cluster
CreateResource	String	ECM_EMR	The label of the cluster.
CreateTime	Long	1542953603000	The creation time of the cluster.
ExpiredTime	Long	1542953605000	The expiration time of the cluster.
FailReason	Struct		The cause of the cluster failure.

Parameter	Type	Example	Description
ErrorCode	String	400	The error code of the failure.
ErrorMsg	String	failed	The error message of the failure.
RequestId	String	0d18b019-00ab-455f-b60c-2891bf02f538	The ID of the request.
HasUncompleted Order	Boolean	false	Uncompleted orders: • true: there are outstanding orders. • false: there are no unfinished orders.
Id	String	C-2E6ABBD39BD0****	The ID of the cluster.
K8sClusterId	String	None	A reserved parameter.
Name	String	my_cluster	The name of the cluster.
OrderList	String	1,2	The list of orders.
OrderTaskInfo	Struct		The information of the order.
CurrentCount	Integer	2	The number of completed orders.
OrderIdList	String	1,2	The list of order IDs.
TargetCount	Integer	2	The target number of orders to be completed.
Period	Integer	1	The length of the subscription. Valid values: 1, 2, 3, 4, 5, 6, 7, 8, 9, 12, 24, and 36. Unit: months. Set this parameter when ChargeType is set to PrePaid.
RunningTime	Integer	200	The execution time of the cluster. Unit: seconds.

Parameter	Type	Example	Description
Status	String	IDLE	The status of the cluster. Valid values: • CREATING: the cluster is being created. • CREATE_FAILED: the cluster fails to be created. • RUNNING • IDLE: the cluster is IDLE. • RELEASING: the cluster is being released. • RELEASE_FAILED: the cluster fails to be released. • RELEASED: the cluster has been RELEASED. • WAIT_FOR_PAY: to be paid • ABNORMAL: the cluster status is ABNORMAL.
Type	String	HADOOP	Cluster Type: • HADOOP • KAFKA • GATEWAY • DRUID • ZOOKEEPER • DATA_SCIENCE
PageNumber	Integer	1	The number of the page to return. Pages start from page 1.
PageSize	Integer	10	The number of automatic snapshot tasks returned per page.
RequestId	String	0d18b019-00ab-455f-b60c-2891bf02f538	The ID of the request.
TotalCount	Integer	2	The total number of returned entries.

Examples

Sample requests

```
http(s)://[Endpoint]/?Action=ListFlowCluster
&ProjectId=FP-5D55DA9DEDF2****
&RegionId=cn-hangzhou
&<common request parameters>
```

Sample success responses

`XML` format

```
<TotalCount>2</TotalCount>
<PageSize>10</PageSize>
<PageNumber>1</PageNumber>
<Clusters>
    <ClusterInfo>
        <Status>IDLE</Status>
        <Type>HADOOP</Type>
        <CreateResource>ECM_EMR</CreateResource>
        <ChargeType>PostPaid</ChargeType>
        <OrderTaskInfo/>
        <CreateTime>1542953603000</CreateTime>
        <FailReason/>
        <Id>C-4042079DFF01****</Id>
        <HasUncompletedOrder>false</HasUncompletedOrder>
        <RunningTime>1322</RunningTime>
        <Name>zx-presto-1</Name>
    </ClusterInfo>
    <ClusterInfo>
        <Status>IDLE</Status>
        <Type>HADOOP</Type>
        <CreateResource>ECM_EMR</CreateResource>
        <ChargeType>PostPaid</ChargeType>
        <OrderTaskInfo/>
        <CreateTime>1542950611000</CreateTime>
        <FailReason/>
        <Id>C-3D0B53253595****</Id>
        <HasUncompletedOrder>false</HasUncompletedOrder>
        <RunningTime>4314</RunningTime>
        <Name>zx-presto-213</Name>
    </ClusterInfo>
</Clusters>
```

`JSON` Syntax

```
{
    "TotalCount": 2,
    "PageSize": 10,
    "PageNumber": 1,
    "Clusters": {
        "ClusterInfo": [
            {
                "Status": "IDLE",
                "Type": "HADOOP",
                "CreateResource": "ECM_EMR",
                "ChargeType": "PostPaid",
                "OrderTaskInfo": {},
                "CreateTime": 1542953603000,
                "FailReason": {},
                "Id": "C-4042079DFF01****",
                "HasUncompletedOrder": false,
                "RunningTime": 1322,
                "Name": "zx-presto-1"
            },
            {
                "Status": "IDLE",
                "Type": "HADOOP",
                "CreateResource": "ECM_EMR",
                "ChargeType": "PostPaid",
                "OrderTaskInfo": {},
                "CreateTime": 1542950611000,
                "FailReason": {},
                "Id": "C-3D0B53253595****",
                "HasUncompletedOrder": false,
                "RunningTime": 4314,
                "Name": "zx-presto-213"
            }
        ]
    }
}
```


8.28. Query the list of clusters available for data development

You can call the ListFlowClusterAll operation to query all the clusters that are available in a specified region for data development.

Debugging

OpenAPI Explorer automatically calculates the signature value. For your convenience, we recommend that you call this operation in OpenAPI Explorer. You can use OpenAPI Explorer to search for API operations, call API operations, and dynamically generate SDK sample code.

Request parameters

Parameter	Type	Required	Example	Description
Action	String	Yes	ListFlowClusterAll	The operation that you want to perform. This parameter is required for API requests that you create by piecing together HTTP or HTTPS URLs. Set the value to ListFlowClusterAll.
RegionId	String	Yes	cn-hangzhou	The region ID of the instance. You can call DescribeRegions To view the latest list of Alibaba Cloud regions.
ProductType	String	No	EMR	The edition of the product. static field EMR.
ResourceGroupId	String	No	rg-bp67acfmxazb4p****	The ID of the resource group to which the snapshot belongs. You can call ListResourceGroups View the resource group ID.

Response parameters

Parameter	Type	Example	Description
Clusters	Array of ClusterInfo		The list of clusters available in a project.
ClusterInfo			
ChargeType	String	PostPaid	The billing method of the instance. Default value: Postpaid. Valid values: • PostPaid: pay-as-you-go clusters • PrePaid: subscription cluster
CreateResource	String	ECM_EMR	The label of the cluster.
CreateTime	Long	1542953602000	The creation time of the cluster.
ExpiredTime	Long	1542953603000	The expiration time of the cluster.
FailReason	Struct		The cause of the cluster failure.
ErrorCode	String	400	The error code of the failure.

Parameter	Type	Example	Description
ErrorMsg	String	failed	The error message.
RequestId	String	0d18b019-00ab-455f-b60c-2891bf02f538	The ID of the request.
HasUncompletedOrder	Boolean	false	Indicates whether an order is uncompleted.
Id	String	C-2E6ABBD39BD0****	The ID of the cluster.
K8sClusterId	String	N/A	A reserved parameter.
Name	String	my_cluster	The name of the cluster.
OrderList	String	1,2	The list of orders.
OrderTaskInfo	Struct		The information of the order.
CurrentCount	Integer	2	The number of completed orders.
OrderIdList	String	1,2	The list of order IDs.
TargetCount	Integer	2	The target number of orders to be completed.
Period	Integer	0	A reserved parameter. You do not need to specify this parameter.
RunningTime	Integer	200	The execution time of the cluster. Unit: seconds.

Parameter	Type	Example	Description
Status	String	IDLE	The status of the cluster. Valid values: • CREATING: the cluster is being created. • CREATE_FAILED: the cluster fails to be created. • RUNNING • IDLE: the cluster is IDLE. • RELEASING: the cluster is being released. • RELEASE_FAILED: the cluster fails to be released. • RELEASED: the cluster has been RELEASED. • WAIT_FOR_PAY: to be paid • ABNORMAL: the cluster status is ABNORMAL.
Type	String	HADOOP	The type of the cluster.
PageNumber	Integer	1	The page number of the returned page.
PageSize	Integer	20	The page number of the returned page.
RequestId	String	0d18b019-00ab-455f-b60c-2891bf02f538	The ID of the request.
TotalCount	Integer	42	The total number of entries returned.

Examples

Sample requests

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

Sample success responses

`XML` format

```
<TotalCount>2</TotalCount>
<PageSize>10</PageSize>
<PageNumber>1</PageNumber>
<Clusters>
    <ClusterInfo>
        <Status>IDLE</Status>
        <Type>HADOOP</Type>
        <CreateResource>ECM_EMR</CreateResource>
        <ChargeType>PostPaid</ChargeType>
        <OrderTaskInfo/>
        <CreateTime>1542953602000</CreateTime>
        <FailReason/>
        <Id>C-4042079DFF01****</Id>
        <HasUncompletedOrder>false</HasUncompletedOrder>
        <RunningTime>1322</RunningTime>
        <Name>zx-presto-1</Name>
    </ClusterInfo>
    <ClusterInfo>
        <Status>IDLE</Status>
        <Type>HADOOP</Type>
        <CreateResource>ECM_EMR</CreateResource>
        <ChargeType>PostPaid</ChargeType>
        <OrderTaskInfo/>
        <CreateTime>1542950611000</CreateTime>
        <FailReason/>
        <Id>C-3D0B53253595****</Id>
        <HasUncompletedOrder>false</HasUncompletedOrder>
        <RunningTime>4314</RunningTime>
        <Name>zx-presto-213</Name>
    </ClusterInfo>
</Clusters>
```

`JSON` Syntax

```
{
    "TotalCount": 2,
    "PageSize": 10,
    "PageNumber": 1,
    "Clusters": {
        "ClusterInfo": [
            {
                "Status": "IDLE",
                "Type": "HADOOP",
                "CreateResource": "ECM_EMR",
                "ChargeType": "PostPaid",
                "OrderTaskInfo": {},
                "CreateTime": 1542953602000,
                "FailReason": {},
                "Id": "C-4042079DFF01****",
                "HasUncompletedOrder": false,
                "RunningTime": 1322,
                "Name": "zx-presto-1"
            },
            {
                "Status": "IDLE",
                "Type": "HADOOP",
                "CreateResource": "ECM_EMR",
                "ChargeType": "PostPaid",
                "OrderTaskInfo": {},
                "CreateTime": 1542950611000,
                "FailReason": {},
                "Id": "C-3D0B53253595****",
                "HasUncompletedOrder": false,
                "RunningTime": 4314,
                "Name": "zx-presto-213"
            }
        ]
    }
}
```


8.29. Obtain the commit agent node list

You can call the ListFlowClusterAllHosts operation to query the list of hosts that can be set to the whitelist in the project settings for a given cluster. Currently, Master and Gateway nodes are supported.

Debugging

OpenAPI Explorer automatically calculates the signature value. For your convenience, we recommend that you call this operation in OpenAPI Explorer. You can use OpenAPI Explorer to search for API operations, call API operations, and dynamically generate SDK sample code.

Request parameters

Parameter	Type	Required	Example	Description

Parameter	Type	Required	Example	Description
Action	String	Yes	ListFlowClusterAllHosts	The operation that you want to perform. This parameter is required for API requests that you create by piecing together HTTP or HTTPS URLs. Set the value to ListFlowClusterAllHosts.
ClusterId	String	Yes	C-F32FB31D8295****	The ID of the cluster. You can call ListClusters You can call this operation to view the ID of a cluster.
ProjectId	String	Yes	FP-3535FE0BE522****	The ID of the project. You can call ListFlowProject View the ID of the project.
RegionId	String	Yes	cn-hangzhou	The region ID. You can call DescribeRegions To view the latest list of Alibaba Cloud regions.

Response parameters

Parameter	Type	Example	Description
HostList	Array of Host		The list of hosts that can be added to the whitelist in the specified cluster.
Host			
Cpu	Integer	4	The number of vCPUs of the host.
HostId	String	119555	The ID of the host.
HostInstanceId	String	i-bp1agi4417dx08sig82j	The ID of the ECS instance.
HostName	String	emr-header-1.cluster-500159692	The name of the host.
InstanceType	String	ecs.n4.xlarge	The type of the instance.
Memory	Integer	8	Memory, in GB.

Parameter	Type	Example	Description
PrivateIp	String	127.0.0.1	The internal IP address of the host.
PublicIp	String	192.0.0.1	The public IP address of the host.
Role	String	CORE	The role of the host.
SerialNumber	String	6dc097b0-5e92-4e08-a49e-37c26c78cf9f	The serial number of the host.
Status	String	STARTING	The status of the host.
Type	String	VM	The type of the host.
RequestId	String	2E429517-6A50-4082-9A30-47755CE9F9A5	The ID of the request.

Examples

Sample requests

```
http(s)://[Endpoint]/?Action=ListFlowClusterAllHosts
&ClusterId=C-F32FB31D8295****
&ProjectId=FP-3535FE0BE522****
&RegionId=cn-hangzhou
&<common request parameters>
```

Sample success responses

`XML` format

```
<RequestId>2E429517-6A50-4082-9A30-47755CE9F9A5</RequestId>
<HostList>
    <Host>
        <Status>STARTING</Status>
        <Role>MASTER</Role>
        <SerialNumber>738d0af9-6ca3-46dd-a973-bab70da4bf74</SerialNumber>
        <PublicIp>47.**.**.**</PublicIp>
        <PrivateIp>192.**.**.**</PrivateIp>
        <Memory>8</Memory>
        <Cpu>4</Cpu>
        <HostInstanceId>i-bp1agi4417dx08si****</HostInstanceId>
        <HostId>119555</HostId>
        <HostName>emr-header-1.cluster-50015****</HostName>
    </Host>
</HostList>
```

JSON Syntax

```
{
    "RequestId": "2E429517-6A50-4082-9A30-47755CE9F9A5",
    "HostList": {
        "Host": [
            {
                "Status": "STARTING",
                "Role": "MASTER",
                "SerialNumber": "738d0af9-6ca3-46dd-a973-bab70da4bf74",
                "PublicIp": "47.**.**.**",
                "PrivateIp": "192.**.**.**",
                "Memory": 8,
                "Cpu": 4,
                "HostInstanceId": "i-bp1agi4417dx08si****",
                "HostId": "119555",
                "HostName": "emr-header-1.cluster-50015****"
            }
        ]
    }
}
```

8.30. Queries the list of clients that can submit jobs

You can call the ListFlowClusterHost operation to query the list of clients from which a cluster can submit jobs.

Debugging

OpenAPI Explorer automatically calculates the signature value. For your convenience, we recommend that you call this operation in OpenAPI Explorer. You can use OpenAPI Explorer to search for API operations, call API operations, and dynamically generate SDK sample code.

Request parameters

Parameter	Type	Required	Example	Description
Action	String	Yes	ListFlowClusterHost	The operation that you want to perform. This parameter is required for API requests that you create by piecing together HTTP or HTTPS URLs. Set the value to ListFlowClusterHost.
ClusterId	String	Yes	C-F32FB31D8295****	The ID of the cluster. You can call ListClusters You can call this operation to view the ID of a cluster.
ProjectId	String	Yes	FP-3535FE0BE522****	The ID of the project. You can call ListFlowProject View the ID of the project.
RegionId	String	Yes	cn-hangzhou	The region ID of the instance. You can call DescribeRegions To view the latest list of Alibaba Cloud regions.
ResourceGroupId	String	No	rg-bp67acfmxazb4p****	The ID of the resource group to which the snapshot belongs. You can call ListResourceGroups View the resource group ID.

Response parameters

Parameter	Type	Example	Description
HostList	Array of Host		The list of hosts that can be added to the whitelist in the specified cluster.
Host			
Cpu	Integer	4	The number of vCPUs of the host.
HostId	String	119***	The ID of the host to which the instances belong.
HostInstanceId	String	i-bp1agi4417dx08si****	The ID of the host.

Parameter	Type	Example	Description
HostName	String	emr-header-1.cluster-500159692	The name of the node.
InstanceType	String	ecs.n4.xlarge	The architecture type of the instance.
Memory	Integer	16	Memory, in GB.
PrivateIp	String	127.0.**.**	The internal IP address of the host.
PublicIp	String	192.0.**.**	The public IP address of the host.
Role	String	MASTER	Role: • MASTER • CORE • TASK
SerialNumber	String	738d0af9-6ca3-46dd-a973-bab70da4****	The serial number of the host.
Status	String	STARTING	The status of the host.
Type	String	VM	The type of the host.
RequestId	String	2E429517-6A50-4082-9A30-47755CE9F9A5	The ID of the request.

Examples

Sample requests

```
http(s)://[Endpoint]/?Action=ListFlowClusterHost
&ClusterId=C-F32FB31D8295****
&ProjectId=FP-3535FE0BE522****
&RegionId=cn-hangzhou
&<common request parameters>
```

Sample success responses

`XML` format

```
<RequestId>2E429517-6A50-4082-9A30-47755CE9F9A5</RequestId>
<HostList>
    <Host>
        <Status>STARTING</Status>
        <Role>MASTER</Role>
        <SerialNumber>738d0af9-6ca3-46dd-a973-bab70da4****</SerialNumber>
        <PublicIp>47.99.**.**</PublicIp>
        <PrivateIp>192.168.**.**</PrivateIp>
        <Memory>8</Memory>
        <Cpu>4</Cpu>
        <HostInstanceId>i-bp1agi4417dx08si****</HostInstanceId>
        <HostId>119***</HostId>
        <HostName>emr-header-1.cluster-500159692</HostName>
    </Host>
</HostList>
```

JSON Syntax

```
{
    "RequestId": "2E429517-6A50-4082-9A30-47755CE9F9A5",
    "HostList": {
        "Host": [
            {
                "Status": "STARTING",
                "Role": "MASTER",
                "SerialNumber": "738d0af9-6ca3-46dd-a973-bab70da4****",
                "PublicIp": "47.99.**.**",
                "PrivateIp": "192.168.**.**",
                "Memory": 8,
                "Cpu": 4,
                "HostInstanceId": "i-bp1agi4417dx08si****",
                "HostId": "119***",
                "HostName": "emr-header-1.cluster-500159692"
            }
        ]
    }
}
```

8.31. Query the list of workflow instances

You can call the ListFlowInstance operation to query workflow instances.

Debugging

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

Request parameters

Parameter	Type	Required	Example	Description
Action	String	Yes	ListFlowInstance	The operation that you want to perform. Set the value to ListFlowInstance.
ProjectId	String	Yes	FP-7A1018ADE917****	The ID of the project. You can call the ListFlowProject to view the ID of the project.
RegionId	String	Yes	cn-hangzhou	The ID of the region. You can call the DescribeRegions operation to query the most recent region list.
Id	String	No	None.	A reserved parameter.
FlowId	String	No	F-1B4018ADE917****	The ID of the workflow. You can call the ListFlowInstance to view the workflow ID.
FlowName	String	No	my_flow	The name of the workflow that you want to delete.
Owner	String	No	1230404****	The owner ID of the workflow instance.
InstanceId	String	No	FI-7CAF9709CD32****	The ID of the workflow instance. You can call the ListFlowInstance to view the ID of the workflow instance.
NodeInstanceId	String	No	FJI-54FEBB063136****	The ID of the job instance. You can call the DescribeFlowJob to view the job instance ID.
TimeRange	String	No	{"type": "range", "from": 1608263168000, "to": 1608263169000}	The time range parameter to query. Parameter list: • type:range • from: start time (long) • to: end time (long)

Parameter	Type	Required	Example	Description
StatusList.N	RepeatList	No	RUNNING	Workflow status: • PREP: Preparing • RUNNING • SUCCEEDED • FAILED • KILLED: terminated • SUSPENDED: paused
OrderBy	String	No	id	The field according to which workflow instances are ordered.
OrderType	String	No	ASC	Sort direction: • ASC: in ascending order • DESC: in descending order
PageNumber	Integer	No	1	The number of the returned page.
PageSize	Integer	No	20	The page number of the returned page.

Response parameters

Parameter	Type	Example	Description
FlowInstances	Array of FlowInstance		The list of workflow instances.
FlowInstance			
ClusterId	String	C-F32FB31D8295****	The ID of the cluster.
Duration	Long	12000	The running duration. Unit: ms.
EndTime	Long	1540796248000	The time when the execution of the workflow instance ended.
FlowId	String	F-35683D0E4573****	The ID of the workflow.
FlowName	String	flow-hive	The name of the workflow that you want to delete.

Parameter	Type	Example	Description
GmtCreate	Long	1540796248000	The time when the accelerated domain name was added to Alibaba Cloud CDN.
GmtModified	Long	1540796248000	The time when the scaling group was modified.
HasNodeFailed	Boolean	false	This parameter is unavailable.
Id	String	FI-7CAF9709CD32****	The ID of the workflow instance.
Owner	String	****	The owner ID of the workflow instance.
ProjectId	String	FP-7A1018ADE917****	The ID of the project.
ScheduleTime	Long	1554110977000	The time when the task was scheduled.
StartTime	Long	1540796236000	The time when the execution of the workflow instance started.
Status	String	SUCCEEDED	Workflow status: • PREP: Preparing • RUNNING • SUCCEEDED • FAILED • KILLED: terminated • SUSPENDED: paused
PageNumber	Integer	1	The number of the returned page.
PageSize	Integer	20	The page number of the returned page.
RequestId	String	EDF99BA3-F7AF-49B2-ABA1-36430A31F482	The ID of the request.

Parameter	Type	Example	Description
Total	Integer	42	The total number of returned entries.

Examples

Sample requests

```
http(s)://[Endpoint]/?Action=ListFlowInstance
&ProjectId=FP-7A1018ADE917****
&RegionId=cn-hangzhou
&<Common request parameters>|
```

Sample success responses

`XML` format

```
<FlowInstances>
    <FlowInstance>
        <Status>FAILED</Status>
        <FlowId>F-9C8D2BEC4D38****</FlowId>
        <Owner>125046002175****</Owner>
        <GmtCreate>1542963000000</GmtCreate>
        <EndTime>1542963033000</EndTime>
        <ClusterId>C-A6C9F4F1E9EC****</ClusterId>
        <FlowName>success+fail</FlowName>
        <StartTime>1542963001000</StartTime>
        <ProjectId>FP-17AB3389E1AD****</ProjectId>
        <GmtModified>1542963033000</GmtModified>
        <Duration>32000</Duration>
        <Id>FI-03F019530CB8****</Id>
    </FlowInstance>
    <FlowInstance>
        <Status>SUCCEEDED</Status>
        <FlowId>F-FECA99A4AE79****</FlowId>
        <Owner>20538903898346****</Owner>
        <GmtCreate>1542963000000</GmtCreate>
        <EndTime>1542963015000</EndTime>
        <ClusterId>C-A6C9F4F1E9EC****</ClusterId>
        <FlowName>success</FlowName>
        <StartTime>1542963000000</StartTime>
        <ProjectId>FP-17AB3389E1AD****</ProjectId>
        <GmtModified>1542963015000</GmtModified>
        <Duration>15000</Duration>
        <Id>FI-60B9DBFA5AD2****</Id>
    </FlowInstance>
</FlowInstances>
<PageSize>2</PageSize>
<RequestId>780BB15A-9038-4330-BE6C-0A47FE5A1BBF</RequestId>
<PageNumber>1</PageNumber>
<Total>50</Total>
```

`JSON` format


```
{
    "FlowInstances": {
        "FlowInstance": [
            {
                "Status": "FAILED",
                "FlowId": "F-9C8D2BEC4D38****",
                "Owner": "125046002175****",
                "GmtCreate": 1542963000000,
                "EndTime": 1542963033000,
                "ClusterId": "C-A6C9F4F1E9EC****",
                "FlowName": "success+fail",
                "StartTime": 1542963001000,
                "ProjectId": "FP-17AB3389E1AD****",
                "GmtModified": 1542963033000,
                "Duration": 32000,
                "Id": "FI-03F019530CB8****"
            },
            {
                "Status": "SUCCEEDED",
                "FlowId": "F-FECA99A4AE79****",
                "Owner": "20538903898346****",
                "GmtCreate": 1542963000000,
                "EndTime": 1542963015000,
                "ClusterId": "C-A6C9F4F1E9EC****",
                "FlowName": "success",
                "StartTime": 1542963000000,
                "ProjectId": "FP-17AB3389E1AD****",
                "GmtModified": 1542963015000,
                "Duration": 15000,
                "Id": "FI-60B9DBFA5AD2****"
            }
        ]
    },
    "PageSize": 2,
    "RequestId": "780BB15A-9038-4330-BE6C-0A47FE5A1BBF",
    "PageNumber": 1,
    "Total": 50
}
```


8.32. ListJobs

You can call the ListFlowJob operation to query jobs.

Debugging

OpenAPI Explorer automatically calculates the signature value. For your convenience, we recommend that you call this operation in OpenAPI Explorer. You can use OpenAPI Explorer to search for API operations, call API operations, and dynamically generate SDK sample code.

Request parameters

Parameter	Type	Required	Example	Description
Action	String	Yes	ListFlowJob	The operation that you want to perform. This parameter is required for API requests that you create by piecing together HTTP or HTTPS URLs. Set the value to ListFlowJob.
ProjectId	String	Yes	FP-257A173659F5****	The ID of the project. You can call ListFlowProject View the ID of the project.
RegionId	String	Yes	cn-hangzhou	The region ID of the instance. You can call DescribeRegions To view the latest list of Alibaba Cloud regions.
Id	String	No	FJ-BCCAE48B90CCB37B	The ID of the job. You can call ListFlowJob View data on the Member Management page.
Name	String	No	my_shell_job	The name of the job.
Type	String	No	SHELL	The type of the job. Valid values: MR, SPARK, HIVE_SQL, HIVE, PIG, SQOOP, SPARK_SQL, SPARK_STREAMING, and SHELL.
Adhoc	Boolean	No	false	Indicates whether the job is a temporary query job.
PageNumber	Integer	No	1	The page number of the returned page.
PageSize	Integer	No	20	The page number of the returned page.

Response parameters

Parameter	Type	Example	Description
JobList	Array of Job		The list of jobs.
Job			

Parameter	Type	Example	Description
Adhoc	String	false	Indicates whether the job is a temporary query job.
AlertConf	String	"{\"items\":[{\"enable\":true,\"eventId\":\"EMR-210401001\",\"alertUserGroupIdList\":[\"AUG-52dabfbbca654b52aae05ac5acd9a0f0\"],\"alertDingDingGroupList\":[\"ADG-2c411c452e6b467b9a59fadf21d195ad\"]}]}"	The alert settings for the job instance.
CategoryId	String	FC-5BD9575E34623940	The directory ID of the job.
CustomVariables	String	"{\"scope\":\"PROJECT\",\"entityId\":\"FP-80C2FDDBF35D9CC5\",\"variables\":[{\"name\":\"v1\",\"value\":\"1\",\"properties\":{\"password\":true}}]}"	The custom variables configured for the job.
Description	String	This is the description of a job	The description of the job.
EnvConf	String	{"key":"value"}	The environment variables configured for the job.
FailAct	String	STOP	The action to take upon an operation failure of the node instance. Valid values: • CONTINUE: skips the node instance • STOP: stops the workflow instance
GmtCreate	Long	1538017814000	The creation time of the job.
GmtModified	Long	1538017814000	The modification time of the job.

Parameter	Type	Example	Description
Id	String	FJ-BCCAE48B90CCB37B	The ID of the job.
LastInstanceDetail	String	""	A deprecated parameter.
MaxRetry	Integer	5	The maximum number of retries of running the node instance when a failure occurs.
MonitorConf	String	{"inputs":[{"type":"KAFKA","clusterId":"C-1234567","topics":"kafka_topic","consumer.group":"kafka_consumer_group"}],"outputs":[{"type":"KAFKA","clusterId":"C-1234567","topics":"kafka_topic"}]}	Monitoring configuration, only **SPARK_STREAMING** Type job support.
Name	String	my_shell_job	The name of the job.
ParamConf	String	{"date":"${yyyy-MM-dd}"}	The configuration parameters of the job.
Params	String	ls -l	The content of the job.
ResourceList	Array of Resource		The resources configured for the job.
Resource			
Alias	String	demo.jar	The alias of the resource.
Path	String	oss://path/demo.jar	The storage path of the resource.
RetryInterval	Long	200	The interval between successive retries to run the node instance. Valid values: 0 to 300. Unit: seconds.
RunConf	String	{"priority":1,"userName":"hadoop","memory":2048,"cores":1}	The scheduling parameters configured for the job.

Parameter	Type	Example	Description
Type	String	SHELL	The type of the job. Valid values: MR, SPARK, HIVE_SQL, HIVE, PIG, SQOOP, SPARK_SQL, SPARK_STREAMING, and SHELL.
mode	String	YARN	The submission mode of the job. Valid values: YARN and LOCAL.
PageNumber	Integer	1	The page number of the returned page.
PageSize	Integer	20	The page number of the returned page.
RequestId	String	7D2B1B2E-8D89-49C1-8D31-097C83879D20	The ID of the request.
Total	Integer	11	The total number of returned entries.

Examples

Sample requests

```
http(s)://[Endpoint]/?Action=ListFlowJob
&ProjectId=FP-257A173659F5****
&RegionId=cn-hangzhou
&<common request parameters>
```

Sample success responses

`XML` format

```
<PageSize>2</PageSize>
<RequestId>B83F5335-C8BF-47E9-9DE2-AC1C5E1B3D39</RequestId>
<PageNumber>1</PageNumber>
<Total>6</Total>
<JobList>
    <Job>
        <FailAct>STOP</FailAct>
        <CategoryId>FC-BF013F34DE39****</CategoryId>
        <Description>success</Description>
        <GmtModified>1542957519000</GmtModified>
        <Params>sleep 10;
exit 0;</Params>
        <MaxRetry>0</MaxRetry>
        <Name>success</Name>
        <ResourceList>
        </ResourceList>
        <Type>SHELL</Type>
        <GmtCreate>1542957478000</GmtCreate>
        <Adhoc>false</Adhoc>
        <RetryInterval>15</RetryInterval>
        <Id>FJ-31BD66C7BC50****</Id>
    </Job>
    <Job>
        <FailAct>STOP</FailAct>
        <CategoryId>FC-54C10B119442****</CategoryId>
        <Description>fail</Description>
        <GmtModified>1542958715000</GmtModified>
        <Params>sleep 10;
exit 1;</Params>
        <MaxRetry>0</MaxRetry>
        <Name>fail</Name>
        <ResourceList>
        </ResourceList>
        <Type>SHELL</Type>
        <GmtCreate>1542957560000</GmtCreate>
        <Adhoc>false</Adhoc>
        <RetryInterval>15</RetryInterval>
        <Id>FJ-A200F16108CA****</Id>
    </Job>
</JobList>
```

`JSON` Syntax

```
{
    "PageSize": 2,
    "RequestId": "B83F5335-C8BF-47E9-9DE2-AC1C5E1B3D39",
    "PageNumber": 1,
    "Total": 6,
    "JobList": {
        "Job": [
            {
                "FailAct": "STOP",
                "CategoryId": "FC-BF013F34DE39****",
                "Description": "success",
                "GmtModified": 1542957519000,
                "Params": "sleep 10;\nexit 0;",
                "MaxRetry": 0,
                "Name": "success",
                "ResourceList": {
                    "Resource": []
                },
                "Type": "SHELL",
                "GmtCreate": 1542957478000,
                "Adhoc": false,
                "RetryInterval": 15,
                "Id": "FJ-31BD66C7BC50****"
            },
            {
                "FailAct": "STOP",
                "CategoryId": "FC-54C10B119442****",
                "Description": "fail",
                "GmtModified": 1542958715000,
                "Params": "sleep 10;\nexit 1;",
                "MaxRetry": 0,
                "Name": "fail",
                "ResourceList": {
                    "Resource": []
                },
                "Type": "SHELL",
                "GmtCreate": 1542957560000,
                "Adhoc": false,
                "RetryInterval": 15,
                "Id": "FJ-A200F16108CA****"
            }
        ]
    }
}
```


8.33. Query the list of running job instances

You can call the ListFlowJobHistory operation to query job instances.

Debugging

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

Request parameters

Parameter	Type	Required	Example	Description
Action	String	Yes	ListFlowJobHistory	The operation that you want to perform. Set the value to ListFlowJobHistory.
ProjectId	String	Yes	FP-257A173659F5****	The ID of the project. You can call the ListFlowProject to view the ID of the project.
RegionId	String	Yes	cn-hangzhou	The ID of the region. You can call the DescribeRegions operation to query the most recent region list.
Id	String	No	FJ-BCCAE48B90CC****	The ID of the job. You can call the ListFlowJob view.
StatusList.N	RepeatList	No	["FAILED"]	status list. Valid values: • SUBMITTED: Submitted • RUNNING • SUCCESS: The execution is successful. • FAILED: Execution failed • KILL_FAILED: The termination failed. • KILL_SUCCESS: The termination is successful.
JobType	String	No	SHELL	The type of the job. Supported: SPARK_SQL, SPARK_STREAMING, MR, SQOOP, PIG, FLINK, STREAMING_SQL, IMPALA_SQL, PRESTO_SQL, SPARK, Hive_SQL, Hive, SHELL, and SPARK_SHELL.
InstanceId	String	No	FJI-BCCAE48B90CC****	The ID of the job instance. You can call the DescribeFlowJob to view the job instance ID.

Parameter	Type	Required	Example	Description
TimeRange	String	No	{"type":"range","from":1564416000000,"to":1567008000000}	The time range parameter to query. Parameter list: • type:range • from: start time (long) • to: end time (long)
PageNumber	Integer	No	1	The number of the page to return. Pages start from page 1.
PageSize	Integer	No	20	The number of rows to return on each page for a paged query.

Response parameters

Parameter	Type	Example	Description
NodeInstances	Array of NodeInstance		The list of job instances.
NodeInstance			
ClusterId	String	C-A6C9F4F1E9EC****	The ID of the cluster.
EndTime	Long	1540796248000	The time when the execution of the job instance ended.
EnvConf	String	{"key":"value"}	The environment variables configured for the job.
ExternalId	String	application_1541559535023_3****	The **application** ID of the initiator.
ExternalInfo	String	empty	External information. For example, error diagnostic information for running a job.

Parameter	Type	Example	Description
ExternalStatus	String	SUCCESS	The status of the container corresponding to the instance. Valid values: • SUBMITTED: Submitted • RUNNING • SUCCESS: The execution is successful. • FAIL: The execution failed. • KILL_FAIL: The termination failed. • KILL_SUCCESS: The termination is successful.
FailAct	String	STOP	The action to take upon an operation failure of the node instance. Valid values: • STOP: Terminates the current workflow upon failure. • CONTINUE: skips the current workflow if it fails.
GmtCreate	Long	1540796236000	The creation time of the project.
GmtModified	Long	1540796247000	The time when the workflow node instance was modified.
HostName	String	emr-header-1.cluster-12345	The name of the host where the node instance is running. You can log on to the host and use the `hostname` command to view the hostname.
Id	String	FJI-F4FC53D7207E****	The ID of the job instance.
JobId	String	FJ-A23BD131A862****	The ID of the job.
JobName	String	myJob	The name of the job.
JobParams	String	ls -l	The content of the job.
JobType	String	HIVE_SQL	The type of the job.

Parameter	Type	Example	Description
MaxRetry	Integer	0	The maximum number of times the job can be retried.
NodeName	String	Empty	The name of the node.
ParamConf	String	{"date":"${yyyy-MM-dd}"}	The configuration parameters of the job.
ProjectId	String	FP-3535FE0BE522****	The ID of the project.
Retries	Integer	0	The number of retries of running the node instance.
RetryInterval	Long	200	The interval between successive retries to run the node instance. Valid values: 0 to 300. Unit: seconds.
RunConf	String	{"priority":1,"userName":"hadoop","memory":2048,"cores":1}	The scheduling parameters configured for the job. • priority: the priority of the job. • userName: the name of the Linux user who summits the job. • memory: the memory allocated to the job. Unit: MB. • cores: the number of vCPUs allocated to the job.
StartTime	Long	1540796237000	The time when the execution of the job instance started.

Parameter	Type	Example	Description
Status	String	OK	The execution status of the instance. Valid values: • PREP: waiting to start • SUBMITTING: Submitting • RUNNING • DONE: completed • OK: The execution is successful • FAILED: Execution failed • KILLED: terminated • KILL_FAILED: The termination failed • START_RETRY: starts to retry
Type	String	JOB	The type of the node. Valid values: • JOB: job • CLUSTER: cluster • START: Start • END: End
pending	Boolean	false	Whether to end: • true: End • false: does not end
PageNumber	Integer	1	The page number of the returned page.
PageSize	Integer	20	The number of rows to return on each page for a paged query.
RequestId	String	F5540D8F-06E8-4E3C-B47A-D75CED72A795	The ID of the request.
Total	Integer	12	The total number of returned entries.

Examples

Sample requests

```
http(s)://[Endpoint]/?Action=ListFlowJobHistory
&ProjectId=FP-257A173659F5****
&RegionId=cn-hangzhou
&<Common request parameters>|
```

Sample success responses

`XML` format

```
<PageSize>10</PageSize>
<RequestId>BCF52B64-007F-4883-BAEA-0499106D07C2</RequestId>
<PageNumber>1</PageNumber>
<Total>1</Total>
<NodeInstances>
    <NodeInstance>
        <FailAct>STOP</FailAct>
        <Status>OK</Status>
        <EndTime>1542957514000</EndTime>
        <ClusterId>C-A6C9F4F1E9EC****</ClusterId>
        <ExternalId>application_1542955685866_****</ExternalId>
        <pending>false</pending>
        <JobName>success</JobName>
        <GmtModified>1542957514000</GmtModified>
        <StartTime>1542957499000</StartTime>
        <ProjectId>FP-17AB3389E1AD****</ProjectId>
        <MaxRetry>0</MaxRetry>
        <ParamConf>{"cyctime":"2018-11-23 15:18:19"}</ParamConf>
        <ExternalStatus>SUCCESS</ExternalStatus>
        <GmtCreate>1542957499000</GmtCreate>
        <JobType>SHELL</JobType>
        <ExternalInfo/>
        <Retries>0</Retries>
        <RetryInterval>0</RetryInterval>
        <Id>FJI-F4FC53D7207E****</Id>
        <HostName>emr-header-2.cluster-50016****</HostName>
        <JobId>FJ-31BD66C7BC50****</JobId>
    </NodeInstance>
</NodeInstances>
```

`JSON` format

```
{
    "PageSize": 10,
    "RequestId": "BCF52B64-007F-4883-BAEA-0499106D07C2",
    "PageNumber": 1,
    "Total": 1,
    "NodeInstances": {
        "NodeInstance": [
            {
                "FailAct": "STOP",
                "Status": "OK",
                "EndTime": 1542957514000,
                "ClusterId": "C-A6C9F4F1E9EC****",
                "ExternalId": "application_1542955685866_****",
                "pending": false,
                "JobName": "success",
                "GmtModified": 1542957514000,
                "StartTime": 1542957499000,
                "ProjectId": "FP-17AB3389E1AD****",
                "MaxRetry": 0,
                "ParamConf": "{\"cyctime\":\"2018-11-23 15:18:19\"}",
                "ExternalStatus": "SUCCESS",
                "GmtCreate": 1542957499000,
                "JobType": "SHELL",
                "ExternalInfo": "",
                "Retries": 0,
                "RetryInterval": 0,
                "Id": "FJI-F4FC53D7207E****",
                "HostName": "emr-header-2.cluster-50016****",
                "JobId": "FJ-31BD66C7BC50****"
            }
        ]
    }
}
```


8.34. Query the list of workflow node instances

You can call the ListFlowNodeInstance operation to query the instances on which workflow nodes run.

Debugging

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

Request parameters

Parameter	Type	Required	Example	Description

Parameter	Type	Required	Example	Description
Action	String	Yes	ListFlowNodeInstance	The operation that you want to perform. If you use a custom HTTP URL or HTTPS URL to make an API request, you must specify this parameter. Set this parameter to ListFlowNodeInstance.
RegionId	String	Yes	cn-hangzhou	The region ID of the Cloud Assistant command. You can call the DescribeRegions operation to query the most recent region list.
ProjectId	String	No	FP-257A173659F5****	The ID of the project. You can call the ListFlowProject to view the ID of the project.
StartTime	Long	No	1540796248000	The start time.
StatusList.N	RepeatList	No	FAILED	The status of the job instance. Valid values: • SUBMITTED (Submitted) • RUNNING: The node is running. • SUCCESS: The node is run as expected. • FAILED • KILL_FAILED • KILL_SUCCESS
OrderBy	String	No	start_time	The field that is used to sort data.
OrderType	String	No	desc	Sort type: • ASC • DESC
PageNumber	Integer	No	1	The number of the page to return.
PageSize	Integer	No	20	The number of entries to return on each page.

Parameter	Type	Required	Example	Description
ResourceGroupId	String	No	rg-bp67acfmxazb4p****	The ID of the resource group. You can call the ListResourceGroups to view the resource group ID.

Response parameters

Parameter	Type	Example	Description
FlowNodeInstances	Array of FlowNodeInstance		The list of workflow node instances.
FlowNodeInstance			
ClusterId	String	C-A6C9F4F1E9E****	The ID of the cluster.
Duration	Long	200	The execution time of the node instance.
EndTime	Long	1540796248000	The time when the execution of the workflow instance ended.
ExternalChildIds	String	application_1541559535023_34028	The application list of the tasks of the job.
ExternalId	String	application_1541559535023_3****	The application ID of the launcher.
ExternalInfo	String	empty	The external information of the node instance, such as the error diagnosis information of the node instance.
ExternalStatus	String	SUCCESS	The status of the container corresponding to the instance. Valid values: • SUBMITTED (Submitted) • RUNNING: The node is running. • SUCCESS: The node is run as expected. • FAILED • KILL_FAILED • KILL_SUCCESS
ExternalSubId	String	container_1541559535023_34027_01_00****	The container ID of the launcher.

Parameter	Type	Example	Description
FailAct	String	STOP	The action to take upon an operation failure of the node instance. Valid values: • STOP (Terminate Workflow) • CONTINUE (skipped)
FlowId	String	F-35683D0E4573****	The ID of the workflow.
FlowInstanceId	String	FI-7CAF9709CD32****	The ID of the workflow instance.
GmtCreate	Long	1540796236000	The time when the job was created.
GmtModified	Long	1540796247000	The time when the job was last modified.
HostName	String	emr-header-1.cluster-12345	The name of the host where the workflow node instance is running. The host can be a master node or gateway node. The hostname format is **emr-header-1.cluster-12345**. You can log on to the machine and run the **hostname** command to view the corresponding value.
Id	String	FNI-9D14A7CCF268****	The ID of the instance on which the node is deployed.
JobId	String	FJ-A23BD131A862****	The ID of the job.
JobName	String	myJob	The name of the job.
JobParams	String	ls -l	The content of the job.
JobType	String	HIVE_SQL	The type of the job. Valid values: SPARK_SQL, SPARK_STREAMING, MR, SQOOP, FLINK, STREAMING_SQL, IMPALA_SQL, PRESTO_SQL, SPARK, HIVE_SQL, HIVE, SHELL, and SPARK_SHELL.

Parameter	Type	Example	Description
MaxRetry	String	0	The maximum number of retries for writing data to the table.
NodeName	String	node	The name of the node.
Pending	Boolean	false	Indicates whether the workflow node instance was completed.
ProjectId	String	FP-7A1018ADE917****	The ID of the project.
Retries	Integer	0	The number of retries allowed.
RetryInterval	String	200	The retry interval at which data is read.
StartTime	Long	1540796237000	The time when the node instance started to run.
Status	String	OK	The execution status of the instance. Valid values: • PREP (waiting to start) • SUBMITTING • RUNNING: The node is running. • DONE (Completed) • OK • FAILED • KILLED (terminated) • KILL_FAILED • START_RETRY
Type	String	JOB	The node type.
PageNumber	Integer	1	The number of the returned page.
PageSize	Integer	20	The number of entries to return on each page.
RequestId	String	83B256D4-4E95-454B-AD08-799DF31D5556	The ID of the request.

Parameter	Type	Example	Description
Total	Integer	12	The count of the O&M events.

Examples

Sample requests

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

Sample responses

`XML` format

```
<RequestId>83B256D4-4E95-454B-AD08-799DF31D5556</RequestId>
<PageSize>20</PageSize>
<PageNumber>1</PageNumber>
<FlowNodeInstances>
    <FlowNodeInstance>
        <FailAct>STOP</FailAct>
        <EndTime>1540796248000</EndTime>
        <NodeName>node</NodeName>
        <GmtModified>1540796247000</GmtModified>
        <JobName>myJob</JobName>
        <FlowId>F-35683D0E4573****</FlowId>
        <ExternalStatus>SUCCESS</ExternalStatus>
        <ExternalInfo>empty</ExternalInfo>
        <Retries>0</Retries>
        <JobId>FJ-A23BD131A862****</JobId>
        <JobParams>ls -l</JobParams>
        <HostName>emr-header-1.cluster-12345</HostName>
        <Status>OK</Status>
        <ClusterId>C-A6C9F4F1E9E****</ClusterId>
        <ExternalId>application_1541559535023_3****</ExternalId>
        <ProjectId>FP-7A1018ADE917****</ProjectId>
        <StartTime>1540796237000</StartTime>
        <FlowInstanceId>FI-7CAF9709CD32****</FlowInstanceId>
        <Duration>200</Duration>
        <MaxRetry>0</MaxRetry>
        <ExternalSubId>container_1541559535023_34027_01_00****</ExternalSubId>
        <GmtCreate>1540796236000</GmtCreate>
        <Type>JOB</Type>
        <JobType>HIVE_SQL</JobType>
        <ExternalChildIds>application_1541559535023_34028</ExternalChildIds>
        <Id>FNI-9D14A7CCF268****</Id>
        <RetryInterval>200</RetryInterval>
        <Pending>false</Pending>
    </FlowNodeInstance>
</FlowNodeInstances>
<Total>12</Total>
```

`JSON` format


```
{
    "RequestId":"83B256D4-4E95-454B-AD08-799DF31D5556",
    "PageSize":"20",
    "PageNumber":"1",
    "FlowNodeInstances":{
        "FlowNodeInstance":[
            {
                "FailAct":"STOP",
                "EndTime":"1540796248000",
                "NodeName":"node",
                "GmtModified":"1540796247000",
                "JobName":"myJob",
                "FlowId":"F-35683D0E4573****",
                "ExternalStatus":"SUCCESS",
                "ExternalInfo":"empty",
                "Retries":"0",
                "JobId":"FJ-A23BD131A862****",
                "JobParams":"ls -l",
                "HostName":"emr-header-1.cluster-12345",
                "Status":"OK",
                "ClusterId":"C-A6C9F4F1E9E****",
                "ExternalId":"application_1541559535023_3****",
                "ProjectId":"FP-7A1018ADE917****",
                "StartTime":"1540796237000",
                "FlowInstanceId":"FI-7CAF9709CD32****",
                "Duration":"200","MaxRetry":"0",
                "ExternalSubId":"container_1541559535023_34027_01_00****",
                "GmtCreate":"1540796236000",
                "Type":"JOB",
                "JobType":"HIVE_SQL",
                "ExternalChildIds":"application_1541559535023_34028",
                "Id":"FNI-9D14A7CCF268****",
                "RetryInterval":"200",
                "Pending":"false"
                }
            ]
        },
        "Total":"12"
}
```


8.35. Queries the container status details of a node instance

You can call ListFlowNodeInstanceContainerStatus operation to query the status of containers that run on a node instance.

Debugging

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

Request parameters

Parameter	Type	Required	Example	Description
Action	String	Yes	ListFlowNodeInstanceContainerStatus	The operation that you want to perform. This parameter is required for API requests that you create by piecing together HTTP or HTTPS URLs. Set the value to ListFlowNodeInstanceContainerStatus.
NodeInstanceId	String	Yes	FNI-FE4BD156E939****	The ID of the ECS instance that is added to the ACK cluster. You can call ListFlowNodeInstance View the ID of the node instance.
ProjectId	String	Yes	FP-AC84F265C8E4****	The ID of the project. You can call ListFlowProject View the ID of the project.
RegionId	String	Yes	cn-hangzhou	The region ID. You can call DescribeRegions To view the latest list of Alibaba Cloud regions.
PageNumber	Integer	No	1	The number of the page to return. Pages start from page 1.
PageSize	Integer	No	20	The number of entries returned on each page.

Response parameters

Parameter	Type	Example	Description
ContainerStatusList	Array of ContainerStatus		The list of the status of containers.
ContainerStatus			
ApplicationId	String	application_1542333181298_0016	The ID of the application.

Parameter	Type	Example	Description
ContainerId	String	container_1542333181298_0016_01_000015	The ID of the container.
HostName	String	192.168.xx.xx	The host name, emr-worker-1.
Status	String	KILLED	Container status: • FAILED:failed. • KILLED: terminated. • SUCCEEDED: succeeded. • RUNNING: The AD connector is running.
PageNumber	Integer	1	The number of the page to return. Pages start from page 1.
PageSize	Integer	20	The number of automatic snapshot tasks returned per page.
RequestId	String	E82E504E-F1A8-4D05-AA8F-360BD9DF423A	The ID of the request.
Total	Integer	1	The total number of entries returned.

Examples

Sample request

```
http(s)://[Endpoint]/?Action=ListFlowNodeInstanceContainerStatus
&NodeInstanceId=FNI-FE4BD156E939****
&ProjectId=FP-AC84F265C8E4****
&RegionId=cn-hangzhou
&<common request parameters>
```

Sample success responses

`XML` format

```
<PageSize>200</PageSize>
<RequestId>E82E504E-F1A8-4D05-AA8F-360BD9DF423A</RequestId>
<PageNumber>1</PageNumber>
<Total>1</Total>
<ContainerStatusList>
    <ContainerStatus>
        <Status>KILLED</Status>
        <ContainerId>container_1542333181298_0016_01_000015</ContainerId>
        <ApplicationId>application_1542333181298_0016</ApplicationId>
        <HostName>192.168.128.53</HostName>
    </ContainerStatus>
</ContainerStatusList>
```

JSON Syntax

```
{
    "PageSize": 200,
    "RequestId": "E82E504E-F1A8-4D05-AA8F-360BD9DF423A",
    "PageNumber": 1,
    "Total": 1,
    "ContainerStatusList": {
        "ContainerStatus": [
            {
                "Status": "KILLED",
                "ContainerId": "container_1542333181298_0016_01_000015",
                "ApplicationId": "application_1542333181298_0016",
                "HostName": "192.168.128.53"
            }
        ]
    }
}
```

8.36. Queries the SQL results of a node instance

You can call the ListFlowNodeSqlResult operation to query the SQL results of a node instance.

Debugging

OpenAPI Explorer automatically calculates the signature value. For your convenience, we recommend that you call this operation in OpenAPI Explorer. You can use OpenAPI Explorer to search for API operations, call API operations, and dynamically generate SDK sample code.

Request parameters

Parameter	Type	Required	Example	Description

Parameter	Type	Required	Example	Description
Action	String	Yes	ListFlowNodeSqlResult	The operation that you want to perform. Set the value to ListFlowNodeSqlResult.
NodeInstanceId	String	Yes	FE4BD156E939****	The IDs of the nodes. You can call ListFlowNodeInstance View the instance ID.
ProjectId	String	Yes	FP-7A1018ADE917****	The ID of the project. You can call ListFlowProject View the project ID.
RegionId	String	Yes	cn-hangzhou	The ID of the region. You can call DescribeRegions View the latest list of Alibaba Cloud regions.
SqlIndex	Integer	No	0	The number of the SQL result.
Offset	Integer	No	0	The offset of the SQL result.
Length	Integer	No	100	The length of the SQL result.

Response parameters

Parameter	Type	Example	Description
End	Boolean	true	Indicates whether the query ended.
HeaderList	List	{ "Header": ["rankings.pageurl", "rankings.pagerank", "rankings.avgduration"] }	The header of the SQL result.
RequestId	String	90F14544-832D-4D81-8F8C-8F8547AE5B9D	The ID of the request.
RowList	Array of Row		The row list of the SQL result.
Row			

Parameter	Type	Example	Description
RowIndex	Integer	0	The number of the row.
RowItemList	List	{ "rowItem": ["1", "1", "1"] }	The content of the row.

Examples

Sample requests

```
{
    "RowList": {
        "Row": [
            {
                "RowItemList": {
                    "rowItem": [
                        "1",
                        "1",
                        "1"
                    ]
                },
                "RowIndex": 0
            },
            {
                "RowItemList": {
                    "rowItem": [
                        "1",
                        "1",
                        "1"
                    ]
                },
                "RowIndex": 1
            }
        ]
    },
    "RequestId": "90F14544-832D-4D81-8F8C-8F8547AE5B9D",
    "HeaderList": {
        "Header": [
            "rankings.pageurl",
            "rankings.pagerank",
            "rankings.avgduration"
        ]
    },
    "End": true
}
```

Sample success responses

`XML` format

```
<RowList>
    <Row>
        <RowItemList>
            <rowItem>1</rowItem>
            <rowItem>1</rowItem>
            <rowItem>1</rowItem>
        </RowItemList>
        <RowIndex>0</RowIndex>
    </Row>
    <Row>
        <RowItemList>
            <rowItem>1</rowItem>
            <rowItem>1</rowItem>
            <rowItem>1</rowItem>
        </RowItemList>
        <RowIndex>1</RowIndex>
    </Row>
</RowList>
<RequestId>90F14544-832D-4D81-8F8C-8F8547AE5B9D</RequestId>
<HeaderList>
    <Header>rankings.pageurl</Header>
    <Header>rankings.pagerank</Header>
    <Header>rankings.avgduration</Header>
</HeaderList>
<End>true</End>
```

JSON

```
{
    "RowList": {
        "Row": [
            {
                "RowItemList": {
                    "rowItem": [
                        "1",
                        "1",
                        "1"
                    ]
                },
                "RowIndex": 0
            },
            {
                "RowItemList": {
                    "rowItem": [
                        "1",
                        "1",
                        "1"
                    ]
                },
                "RowIndex": 1
            }
        ]
    },
    "RequestId": "90F14544-832D-4D81-8F8C-8F8547AE5B9D",
    "HeaderList": {
        "Header": [
            "rankings.pageurl",
            "rankings.pagerank",
            "rankings.avgduration"
        ]
    },
    "End": true
}
```


8.37. Queries the list of the specified projects

You can call the ListFlowProject operation to query the the list of the specified projects.

Debugging

OpenAPI Explorer automatically calculates the signature value. For your convenience, we recommend that you call this operation in OpenAPI Explorer. You can use OpenAPI Explorer to search for API operations, call API operations, and dynamically generate SDK sample code.

Request parameters

Parameter	Type	Required	Example	Description
Action	String	Yes	ListFlowProject	The operation that you want to perform. For API requests using the HTTP or HTTPS URL, this parameter is required. Set the value to ListFlowProject.
RegionId	String	Yes	cn-hangzhou	The ID of the region. You can call DescribeRegions View the latest list of Alibaba Cloud regions.
ProductType	String	No	EMR	The type of the service. static field EMR.
ProjectId	String	No	FP-7A1018ADE917****	The ID of the project. You can call ListFlowProject View the project ID.
Name	String	No	my_project	The name of the project.
PageNumber	Integer	No	1	The page number of the returned page.
PageSize	Integer	No	20	The page number of the returned page.
ResourceGroupId	String	No	rg-bp67acfmxazb4p****	The IDs of the resource groups to which the EMR instances and ECS instances belong.

Response parameters

Parameter	Type	Example	Description
PageNumber	Integer	1	The page number of the returned page.
PageSize	Integer	20	The page number of the returned page.
Projects	Array of Project		The list of projects.
Project			

Parameter	Type	Example	Description
Description	String	my project description	The description of the project.
GmtCreate	Long	1540796236000	The creation time of the project.
GmtModified	Long	1540796236000	The modification time of the project.
Id	String	FP-7A1018ADE917****	The ID of the project.
Name	String	my_project	The name of the project.
UserId	String	123456	The ID of the Alibaba Cloud account.
RequestId	String	83B256D4-4E95-454B-AD08-799DF31D5556	The ID of the request.
Total	Integer	1	The number of items returned.

Examples

Sample requests

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

Sample success responses

`XML` format

```
<PageSize>1</PageSize>
<RequestId>3177EF07-34F5-48D0-9BFD-3C33E70EB260</RequestId>
<PageNumber>1</PageNumber>
<Total>34</Total>
<Projects>
    <Project>
        <GmtCreate>1540796236000</GmtCreate>
        <Description>my project description</Description>
        <UserId>123456</UserId>
        <GmtModified>1540796236000</GmtModified>
        <Id>FP-7A1018ADE917****</Id>
        <Name>my_project</Name>
    </Project>
</Projects>
```

JSON

```
{
    "PageSize": 1,
    "RequestId": "3177EF07-34F5-48D0-9BFD-3C33E70EB260",
    "PageNumber": 1,
    "Total": 34,
    "Projects": {
        "Project": [
            {
                "GmtCreate": 1540796236000,
                "Description": "my project description",
                "UserId": "123456",
                "GmtModified": 1540796236000,
                "Id": "FP-7A1018ADE917****",
                "Name": "my_project"
            }
        ]
    }
}
```

8.38. Queries the cluster settings list of a project

You can call the ListFlowProjectClusterSetting operation to query the cluster settings for a project.

Debugging

OpenAPI Explorer automatically calculates the signature value. For your convenience, we recommend that you call this operation in OpenAPI Explorer. You can use OpenAPI Explorer to search for API operations, call API operations, and dynamically generate SDK sample code.

Request parameters

Parameter	Type	Required	Example	Description
Action	String	Yes	ListFlowProjectClusterSetting	The operation that you want to perform. This parameter is required for API requests that you create by piecing together HTTP or HTTPS URLs. Set the value to ListFlowProjectClusterSetting.
ProjectId	String	Yes	FP-ED2F3E844FE3****	The ID of the project. You can call ListFlowProject View the ID of the project.

Parameter	Type	Required	Example	Description
RegionId	String	Yes	cn-hangzhou	The region ID of the instance. You can call DescribeRegions To view the latest list of Alibaba Cloud regions.
PageNumber	Integer	No	1	The page number of the returned page.
PageSize	Integer	No	20	The page number of the returned page.

Response parameters

Parameter	Type	Example	Description
ClusterSettings	Array of ClusterSetting		The cluster settings of the project.
ClusterSetting			
ClusterId	String	C-F32FB31D8295****	The ID of the cluster.
ClusterName	String	mingbo-v199v1	The name of the cluster.
DefaultQueue	String	default	The default queue to which the request is submitted.
DefaultUser	String	hadoop	The default user who submits jobs.
GmtCreate	Long	1541561123000	The time when the user was added to the project.
GmtModified	Long	1541561123000	The modification time of the cluster.
HostList	List	"Host":["emr-header-1.cluster-500159692"	The whitelist of clients that can submit jobs.
K8sClusterId	String	N/A	A reserved parameter.
ProjectId	String	FP-F958DB9A2BA****	The ID of the project.

Parameter	Type	Example	Description
QueueList	List	"Queue": ["default"]	The whitelisted YARN queue to which jobs can be submitted.
UserList	List	"User": ["hadoop"]	The whitelisted Linux user who can submit jobs.
PageNumber	Integer	1	The page number of the returned page.
PageSize	Integer	20	The page number of the returned page.
RequestId	String	93F6F3CF-B2AE-411A-948F-0F7293058CF5	The ID of the request.
Total	Integer	1	The total number of entries returned.

Examples

Sample requests

```
http(s)://[Endpoint]/?Action=ListFlowProjectClusterSetting
&ProjectId=FP-ED2F3E844FE3****
&RegionId=cn-hangzhou
&<common request parameters>
```

Sample success responses

`XML` format

```
<ClusterSettings>
    <ClusterSetting>
        <DefaultUser>hadoop</DefaultUser>
        <GmtCreate>1540811745000</GmtCreate>
        <ClusterId>C-F32FB31D8295****</ClusterId>
        <ProjectId>FP-F958DB9A2BA****</ProjectId>
        <GmtModified>1540811745000</GmtModified>
        <ClusterName>mingbo-v199v1</ClusterName>
        <HostList>
        </HostList>
        <UserList>
        </UserList>
        <QueueList>
        </QueueList>
    </ClusterSetting>
</ClusterSettings>
<PageSize>10</PageSize>
<RequestId>3DB7F949-B592-49AF-9ED9-9D5CF8DA5AFE</RequestId>
<PageNumber>1</PageNumber>
<Total>1</Total>
```

JSON Syntax

```
{
    "ClusterSettings": {
        "ClusterSetting": [
            {
                "DefaultUser": "hadoop",
                "GmtCreate": 1540811745000,
                "ClusterId": "C-F32FB31D8295****",
                "ProjectId": "FP-F958DB9A2BA****",
                "GmtModified": 1540811745000,
                "ClusterName": "mingbo-v199v1",
                "HostList": {
                    "Host": []
                },
                "UserList": {
                    "User": []
                },
                "QueueList": {
                    "Queue": []
                }
            }
        ]
    },
    "PageSize": 10,
    "RequestId": "3DB7F949-B592-49AF-9ED9-9D5CF8DA5AFE",
    "PageNumber": 1,
    "Total": 1
}
```

8.39. Queries the user information of a project

You can call the ListFlowProjectUser operation to query the users of a project.

Debugging

OpenAPI Explorer automatically calculates the signature value. For your convenience, we recommend that you call this operation in OpenAPI Explorer. You can use OpenAPI Explorer to search for API operations, call API operations, and dynamically generate SDK sample code.

Request parameters

Parameter	Type	Required	Example	Description
Action	String	Yes	ListFlowProjectUser	The operation that you want to perform. This parameter is required for API requests that you create by piecing together HTTP or HTTPS URLs. Set the value to ListFlowProjectUser.
ProjectId	String	Yes	FP-3535FE0BE522****	The ID of the project. You can call ListFlowProject View the ID of the project.
RegionId	String	Yes	cn-hangzhou	The region ID of the instance. You can call DescribeRegions To view the latest list of Alibaba Cloud regions.
PageNumber	Integer	No	1	The page number of the returned page.
PageSize	Integer	No	20	The page number of the returned page.

Response parameters

Parameter	Type	Example	Description
PageNumber	Integer	1	The page number of the returned page.
PageSize	Integer	20	The page number of the returned page.

Parameter	Type	Example	Description
RequestId	String	80F270E8-27BD-4F24-BB2A-CD3FBCC450DA	The ID of the request.
Total	Integer	12	The total number of entries returned.
Users	Array of User		The list of users of the project.
User			
AccountUserId	String	N/A	A reserved parameter.
GmtCreate	Long	1541561123000	The time when the user was added to the project.
GmtModified	Long	1541561123000	The time when the user of the project was modified.
OwnerId	String	123456	The ID of the Alibaba Cloud account.
ProjectId	String	FP-3535FE0BE522****	The ID of the project.
UserName	String	testUser	The RAM username.

Examples

Sample requests

```
http(s)://[Endpoint]/?Action=ListFlowProjectUser
&ProjectId=FP-3535FE0BE522****
&RegionId=cn-hangzhou
&<common request parameters>
```

Sample success responses

`XML` format

```
<RequestId>80F270E8-27BD-4F24-BB2A-CD3FBCC450DA</RequestId>
<PageSize>20</PageSize>
<PageNumber>1</PageNumber>
<Total>12</Total>
<Users>
    <User>
        <GmtCreate>1541561123000</GmtCreate>
        <UserName>testUser</UserName>
        <OwnerId>123456</OwnerId>
        <GmtModified>1541561123000</GmtModified>
        <ProjectId>FP-3535FE0BE522****</ProjectId>
        <AccountUserId>252016171****</AccountUserId>
    </User>
</Users>
```

JSON Syntax

```
{
    "RequestId":"80F270E8-27BD-4F24-BB2A-CD3FBCC450DA",
    "PageSize":"20",
    "PageNumber":"1",
    "Total":"12",
    "Users":{
        "User":[
            {
            "GmtCreate":"1541561123000",
            "UserName":"testUser",
            "OwnerId":"123456",
            "GmtModified":"1541561123000",
            "ProjectId":"FP-3535FE0BE522****",
            "AccountUserId":"252016171****"
            }
        ]
         }
        }
```

8.40. Modify workflows

You can call the ModifyFlow operation to modify a workflow.

Debugging

OpenAPI Explorer automatically calculates the signature value. For your convenience, we recommend that you call this operation in OpenAPI Explorer. You can use OpenAPI Explorer to search for API operations, call API operations, and dynamically generate SDK sample code.

Request parameters

Parameter	Type	Required	Example	Description

Parameter	Type	Required	Example	Description
Action	String	Yes	ModifyFlow	The operation that you want to perform. This parameter is required for API requests that you create by piecing together HTTP or HTTPS URLs. Set this parameter to ModifyFlow.
Id	String	Yes	F-7A39731FE719****	The ID of the workflow. You can call ListFlowInstance View the workflow ID.
ProjectId	String	Yes	FP-3535FE0BE522****	The ID of the project. You can call ListFlowProject View the ID of the project.
RegionId	String	Yes	cn-hangzhou	The region ID of the instance. You can call DescribeRegions To view the latest list of Alibaba Cloud regions.
Name	String	No	my_flow	The name of the workflow. The name can be up to 64 characters in length and must be unique in a project.
Status	String	No	UNDER_SCHEDULE	The status of the workflow.
Description	String	No	my flow description	The description of the workflow. The description can be up to 156 characters in length.
Periodic	Boolean	No	true	Specifies whether to enable periodic scheduling.
StartSchedule	Long	No	1542783867503	The start time. It is a long integer timestamp. For example, System.currentTimeMillis () . This parameter must meet the following requirements: • The value of this parameter must be smaller than that of the EndSchedule parameter. • This parameter is required if the CronExpr parameter is not left empty.

Parameter	Type	Required	Example	Description
EndSchedule	Long	No	1542783967503	Scheduling failure time, long integer timestamp, for example, System.currentTimeMillis () .
CronExpr	String	No	0 0 0-23/1 * * ?	The Cron expression used for periodic scheduling. For more information, see Cron expressions .
CreateCluster	Boolean	No	false	Indicates whether the cluster was created from the cluster template. • If this parameter is set to true, the id of the cluster is the id CT-XXXXXX of the cluster template. • If this parameter is set to false, the id of the cluster is the id C- XXXXXX of the cluster.
ClusterId	String	No	C-F32FB31D8295****	The ID of the cluster.
HostName	String	No	emr-header-1.cluster-12345	The name of the host where the workflow is running. The host can be a master node or gateway node. The format of Hostname is **emr-header-1.cluster-12345** , you can log on to the machine to use **hostname** Command to view the corresponding value.

Parameter	Type	Required	Example	Description
Application	String	No	{"nodeDefMap": {":start:": {"name":":start:" ,"type":":start:"," transitions": ["cluster"]},"clust er":{"id":"CT-0C74281682CF03B4","name":"clus ter","type":":Clus ter:","transitions" :["job1"]},"job1": {"jobId":"FJ-242AB240DBAF4195","name":"job1 ","type":":action: ","transitions": ["end"]},"end": {"name":"end","t ype":":end:"}}}	The structure of the workflow, represented by nodeDefMap. The nodeDefMap consists of a group of nodes. Separate multiple tags with commas (,). • **type** : the type can be start node (:start :), build on demand Cluster node (:Cluster :), action node (:action :), and end node (:end :). • **transitions** : a downstream node.

Parameter	Type	Required	Example	Description
AlertConf	String	No	{"items":[{"enable":true,"eventId":"EMR-210401001","alertUserGroupIdList":["AUG-b79bb29bb6e14ddd89674a242623851b"],"alertDingDingGroupList":["ADG-af1f9689d6194e2dbd89927d5c515172"]},{"enable":true,"eventId":"EMR-110401015","alertUserGroupIdList":["AUG-b79bb29bb6e14ddd89674a242623851b"],"alertDingDingGroupList":["ADG-af1f9689d6194e2dbd89927d5c515172"]},{"enable":true,"eventId":"EMR-110401002","alertUserGroupIdList":["AUG-b79bb29bb6e14ddd89674a242623851b"],"alertDingDingGroupList":["ADG-af1f9689d6194e2dbd89927d5c515172"]}]}	The alert notification configuration. eventId currently supports: • **EMR-210401001** Alert upon workflow failure • **EMR-110401002** (Notification of workflow success) • **EMR-110401015** (Workflow node failure alarm)
AlertUserGroupBizId	String	No	Deprecated	This parameter is unavailable.
AlertDingDingGroupBizId	String	No	Deprecated	This parameter is unavailable.

Parameter	Type	Required	Example	Description
ParentFlowList	String	No	F-62ECFC6E1BF6EAD2,F-1E6528634E67B615,F-7E0A84332E9D9A89	The ID list of ancestor workflows on which the workflow depends. Separate multiple IDs with commas (,).
ParentCategory	String	No	FC-FC396F988E07C06F	The ID of the parent directory. If this parameter is empty, the default value is the root directory.

Response parameters

Parameter	Type	Example	Description
Data	Boolean	true	Returned results • true: indicates that the modification was successful. • false: indicates that the modification has failed.
RequestId	String	ECC2D0D1-B6D5-468D-B698-30E8805EB574	The ID of the request.

Examples

Sample requests

```
http(s)://[Endpoint]/?Action=ModifyFlow
&Id=F-7A39731FE719****
&ProjectId=FP-3535FE0BE522****
&RegionId=cn-hangzhou
&<common request parameters>
```

Sample success responses

`XML` format

```
<RequestId>ECC2D0D1-B6D5-468D-B698-30E8805EB574</RequestId>
<Data>true</Data>
```

`JSON` Syntax

```
{
"RequestId":"ECC2D0D1-B6D5-468D-B698-30E8805EB574",
"Data":true
}
```

8.41. Query the directory of a workflow

You can call ListFlowCategory operation to query workflow directories.

Debugging

OpenAPI Explorer automatically calculates the signature value. For your convenience, we recommend that you call this operation in OpenAPI Explorer. You can use OpenAPI Explorer to search for API operations, call API operations, and dynamically generate SDK sample code.

Request parameters

Parameter	Type	Required	Example	Description
Action	String	Yes	ListFlowCategory	The operation that you want to perform. This parameter is required for API requests that you create by piecing together HTTP or HTTPS URLs. Set the value to ListFlowCategory.
ProjectId	String	Yes	FP-6E8E198E6C79****	The ID of the project. You can call ListFlowProject View the ID of the project.
RegionId	String	Yes	cn-hangzhou	The region ID of the instance. You can call DescribeRegions To view the latest list of Alibaba Cloud regions.
ParentId	String	No	FC-6E8E198E6C79****	The ID of the parent directory. You can call DescribeFlowCategory View data on the Member Management page.
Root	Boolean	No	false	Specifies whether the directory to be queried is a root directory.
PageNumber	Integer	No	1	The number of the page returned.
PageSize	Integer	No	10	The number of entries returned on each page.

Response parameters

Parameter	Type	Example	Description
Categories	Array of Category		The list of directories.
Category			
CategoryType	String	FILE	The node type of the directory. Valid values: • FILE: file • FOLDER: folder
GmtCreate	Long	1563848015000	The time when the directory was created.
GmtModified	Long	1563848015000	The time when the directory was modified.
Id	String	FC-DF781BBF3F2E8317	The ID of the directory.
Name	String	Test	The name of the directory.
ObjectId	String	F-0B30759C146EA1E7	The ID of the entity. For example, jobs and workflows.
ObjectType	String	FLOW	The type of the associated entity. Valid values: • FLOW: workflow • JOB: job
ParentId	String	FC-DF781BBF3F2E****	The ID of the parent directory.
ProjectId	String	FP-179332E88F52****	The ID of the project.
Type	String	FLOW	The type of the directory. Valid values: • FLOW: workflow • JOB: job
PageNumber	Integer	1	The number of the page returned.
PageSize	Integer	10	The number of entries returned on each page.

Parameter	Type	Example	Description
RequestId	String	5ECD6EA1-838E-4BDF-96C8-AEAA40F04F48	The ID of the request.
Total	Integer	100	The total number of directories.

Examples

Sample requests

```
http(s)://[Endpoint]/?Action=ListFlowCategory
&ProjectId=FP-6E8E198E6C79****
&RegionId=cn-hangzhou
&<common request parameters>
```

Sample success responses

`XML` format

```
<PageSize>10</PageSize>
<RequestId>BCF52B64-007F-4883-BAEA-0499106D07C2</RequestId>
<PageNumber>1</PageNumber>
<Total>1</Total>
<Categories>
    <categoryType>FOLDER</categoryType>
    <gmtModified>1563848002000</gmtModified>
    <name>FLOW</name>
    <id>FC-D566F13A20A0****</id>
    <gmtCreate>1563848002000</gmtCreate>
    <type>FLOW</type>
    <projectId>FP-179332E88F52****</projectId>
    <parentId>root_parent</parentId>
</Categories>
```

`JSON` Syntax

```
{
    "PageSize": 10,
    "RequestId": "BCF52B64-007F-4883-BAEA-0499106D07C2",
    "PageNumber": 1,
    "Total": 1,
    "Categories": [
        {
            "categoryType": "FOLDER",
            "gmtModified": 1563848002000,
            "name": "FLOW",
            "id": "FC-D566F13A20A0****",
            "gmtCreate": 1563848002000,
            "type": "FLOW",
            "projectId": "FP-179332E88F52****",
            "parentId": "root_parent"
        }
    ]
}
```


8.42. Modify project cluster settings

You can call ModifyFlowProjectClusterSetting operation to modify the cluster settings for a project.

Debugging

OpenAPI Explorer automatically calculates the signature value. For your convenience, we recommend that you call this operation in OpenAPI Explorer. You can use OpenAPI Explorer to search for API operations, call API operations, and dynamically generate SDK sample code.

Request parameters

Parameter	Type	Required	Example	Description
Action	String	Yes	ModifyFlowProjectClusterSetting	The operation that you want to perform. This parameter is required for API requests that you create by piecing together HTTP or HTTPS URLs. Set the value to ModifyFlowProjectClusterSetting.
ClusterId	String	Yes	C-FDB726F71863****	The ID of the cluster. You can call ListClusters You can call this operation to view the ID of a cluster.
ProjectId	String	Yes	FP-179332E88F52****	The ID of the project. You can call ListFlowProject View the ID of the project.

Parameter	Type	Required	Example	Description
RegionId	String	Yes	cn-hangzhou	The region ID of the instance. You can call DescribeRegions To view the latest list of Alibaba Cloud regions.
DefaultUser	String	No	hadoop	The default user who submits the request.
DefaultQueue	String	No	default	The default queue to which the request is submitted.
UserList.N	RepeatList	No	user1	The list of users.
QueueList.N	RepeatList	No	queue1	The list of queues.
HostList.N	RepeatList	No	emr-header-1	The list of associated hosts.

Response parameters

Parameter	Type	Example	Description
Data	Boolean	true	Modification results: • true: indicates that the modification was successful. • false: indicates that the modification has failed.
RequestId	String	5ECD6EA1-838E-4BDF-96C8-AEAA40F04F48	The ID of the request.

Examples

Sample requests

```
http(s)://[Endpoint]/?Action=ModifyFlowProjectClusterSetting
&ClusterId=C-FDB726F71863****
&ProjectId=FP-179332E88F52****
&RegionId=cn-hangzhou
&<common request parameters>
```

Sample success responses

`XML` format

```
<RequestId>5ECD6EA1-838E-4BDF-96C8-AEAA40F04F48</RequestId>
<Data>true</Data>
```

JSON Syntax

```
{
    "RequestId":"5ECD6EA1-838E-4BDF-96C8-AEAA40F04F48",
    "Data":"true"
    }
```

8.43. Rename a directory

You can call ModifyFlowCategory operation to rename a directory.

Debugging

OpenAPI Explorer automatically calculates the signature value. For your convenience, we recommend that you call this operation in OpenAPI Explorer. You can use OpenAPI Explorer to search for API operations, call API operations, and dynamically generate SDK sample code.

Request parameters

Parameter	Type	Required	Example	Description
Action	String	Yes	ModifyFlowCategory	The operation that you want to perform. This parameter is required for API requests that you create by piecing together HTTP or HTTPS URLs. Set the value to ModifyFlowCategory.
Id	String	Yes	FC-ABCDEFGHI****	The ID of the directory. You can call DescribeFlowCategory View data on the Member Management page.
ProjectId	String	Yes	FP-ABCDEFGHI****	The ID of the project. You can call ListFlowProject View the ID of the project.
RegionId	String	Yes	cn-hangzhou	The region ID of the instance. You can call DescribeRegions To view the latest list of Alibaba Cloud regions.
Name	String	No	Test	The new name of the directory. You can call DescribeFlowCategory View data on the Member Management page.

Parameter	Type	Required	Example	Description
ParentId	String	No	FC-ABCDEFGHI****	The ID of the parent directory. You can call DescribeFlowCategory View data on the Member Management page.

Response parameters

Parameter	Type	Example	Description
Data	Boolean	true	The execution results are returned, including the following: • true: indicates that the modification was successful. • false: indicates that the modification has failed.
RequestId	String	CEA9AFD2-B340-41F4-A661-8916CBF07C32	The ID of the request.

Examples

Sample requests

```
http(s)://[Endpoint]/?Action=ModifyFlowCategory
&Id=FC-ABCDEFGHI****
&ProjectId=FP-ABCDEFGHI****
&RegionId=cn-hangzhou
&<common request parameters>
```

Sample success responses

`XML` format

```
<ModifyFlowCategoryResponse>
      <RequestId>CEA9AFD2-B340-41F4-A661-8916CBF07C32</RequestId>
      <Data>true</Data>
</ModifyFlowCategoryResponse>
```

`JSON` Syntax

```
{
    "RequestId": "CEA9AFD2-B340-41F4-A661-8916CBF07C32",
    "Data": true
}
```

8.44. Workflow for modifying graph information

You can call ModifyFlowForWeb operation to modify a custom graphical workflow.

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	ModifyFlowForWeb	The operation that you want to perform. This parameter is required for API requests initiated by piecing together HTTP or HTTPS URLs. Set the value to ModifyFlowForWeb.
ClusterId	String	Yes	C-F32FB31D8295****	The ID of the cluster. You can call ListClusters View the ID of the cluster.
CreateCluster	Boolean	Yes	false	Indicates whether the cluster was created from the cluster template. • When true, ClusterId is the cluster template ID: CT-XXXXXX. • When false, ClusterId is cluster ID: C-XXXXXX.
			{"nodes": [{"id":"48d474ea","index":0,"spmAnchorId":"0.0.0.i0.766645eb2cmNtQ","attribute": {"type":"START"}, "shape":"startControlNode","type":"node","y":250, "size":"80*34","x":500}, {"id":"7ba480b3", "index":1,"spmAnchorId":"5176.8250060.0.i19.771e28d0IPNQGE","attribute":	

Parameter	Type	Required	Example	Description
Graph	String	Yes	{"jobType":"SHELL","jobId":"FJ-7BE1062897B19D25","type":"JOB"},"config":{"hostName":""},"label":"fail_job","shape":"shellJobNode","type":"node","y":398.5,"size":"170*34","x":470.5},{"id":"33202d60","index":2,"spmAnchorId":"5176.8250060.0.i23.771e28d0IPNQGE","attribute":{"type":"END"},"shape":"endControlNode","type":"node","y":562.5,"size":"80*34","x":430.5}],"edges":[{"id":"28167ea0","index":3,"source":"48d474ea","sourceAnchor":0,"target":"7ba480b3","targetAnchor":0},{"id":"e8d5ff52","index":4,"source":"7ba480b3","sourceAnchor":1,"target":"33202d60","targetAnchor":0}]}	The information of the directed acyclic graph (DAG) of the workflow.
Id	String	Yes	F-7A39731FE719****	The ID of the workflow. You can call ListFlowInstance View the workflow ID.
ProjectId	String	Yes	FP-257A173659F5****	The ID of the project. You can call ListFlowProject View the ID of the project.
RegionId	String	Yes	cn-hangzhou	The region ID of the image. You can call DescribeRegions View the latest list of Alibaba Cloud regions.

Parameter	Type	Required	Example	Description
Name	String	No	my_flow	The workflow name, which is limited to 64 characters in length. Duplicate names are not allowed in the same project.
Status	String	No	STOP_SCHEDULE	The workflow status, supports STOP_SCHEDULE and UNDER_SCHEDULE.
Description	String	No	This is the description of a workflow	The workflow description, which is limited to 256 characters in length.
Periodic	Boolean	No	true	Specifies whether to enable periodic scheduling.
StartSchedule	Long	No	1538017814000	The scheduling effective time, long integer timestamp. For example: System.currentTimeMillis () Must be smaller than EndSchedule. This parameter is required if the CronExpr parameter is not left empty.
EndSchedule	Long	No	1538018814000	Scheduling expiration time, long integer timestamp, for example: System.currentTimeMillis () .
CronExpr	String	No	0 0 0-23/1 * * ?	Cron expression for time cycle scheduling. For details, see A Cron Expressions .
HostName	String	No	emr-header-1.cluster-123456	Specifies the information of the running machine, in the format of emr-header-1.cluster-123456.
Namespace	String	No	default	K8s NameSpace used when EMR clusters on ACK.
LogArchiveLocation	String	No	oss://yourbucket/xxx	The path where log files are stored on OSS.
Lifecycle	String	No	None	A reserved field.

Parameter	Type	Required	Example	Description
AlertConf	String	No	{"items":[{"enable":true,"eventId":"EMR-210401001","alertUserGroupIdList":["AUG-b79bb29bb6e14ddd89674a242623851b"],"alertDingDingGroupList":["ADG-af1f9689d6194e2dbd89927d5c515172"]},{"enable":true,"eventId":"EMR-110401015","alertUserGroupIdList":["AUG-b79bb29bb6e14ddd89674a242623851b"],"alertDingDingGroupList":["ADG-af1f9689d6194e2dbd89927d5c515172"]},{"enable":true,"eventId":"EMR-110401002","alertUserGroupIdList":["AUG-b79bb29bb6e14ddd89674a242623851b"],"alertDingDingGroupList":["ADG-af1f9689d6194e2dbd89927d5c515172"]}]}	Alarm notification configuration, eventId currently supports: • EMR-210401001 (Workflow Failure Alarm) • EMR-110401002 (Workflow Success Notification) • EMR-110401015 (Workflow Node Failure Alarm)
AlertUserGroupBizId	String	No	-	A deprecated parameter.
AlertDingDingGroupBizId	String	No	-	A deprecated parameter.
ParentFlowList	String	No	[F-123456]	The information of the parent workflow.

Parameter	Type	Required	Example	Description
ParentCategory	String	No	FC-F2495319DA05****	The ID of the parent directory.

Response parameters

Parameter	Type	Example	Description
Data	Boolean	true	The execution result is returned, including the following: • true: The operation was successful. • false: The operation failed.
RequestId	String	243D5A48-96A5-4C0C-8966-93CBF65635ED	The ID of the request.

Examples

Sample requests

```
http(s)://[Endpoint]/?Action=ModifyFlowForWeb
&Id=F-7A39731FE719****
&ProjectId=FP-257A173659F5****
&RegionId=cn-hangzhou
&ClusterId=A23BD131A862****
&CreateCluster=false
&Graph=Graph information
&<common request parameters>
```

Sample success responses

`XML` format

```
<RequestId>243D5A48-96A5-4C0C-8966-93CBF65635ED</RequestId>
<Data>true</Data>
```

`JSON` Address format

```
{
"RequestId":"243D5A48-96A5-4C0C-8966-93CBF65635ED",
"Data":true
}
```

8.45. Modify a data development project

You can call ModifyFlowProject operation to modify a data development project.

Debugging

OpenAPI Explorer automatically calculates the signature value. For your convenience, we recommend that you call this operation in OpenAPI Explorer. You can use OpenAPI Explorer to search for API operations, call API operations, and dynamically generate SDK sample code.

Request parameters

Parameter	Type	Required	Example	Description
Action	String	Yes	ModifyFlowProject	The operation that you want to perform. This parameter is required for API requests that you create by piecing together HTTP or HTTPS URLs. Set the value to ModifyFlowProject.
ProjectId	String	Yes	FP-257A173659F5****	The ID of the project. You can call ListFlowProject View the ID of the project.
RegionId	String	Yes	cn-hangzhou	The region ID of the instance. You can call DescribeRegions To view the latest list of Alibaba Cloud regions.
Name	String	No	my_project	The name of the project.
Description	String	No	my flow description	The description of the project.

Response parameters

Parameter	Type	Example	Description
Data	Boolean	true	Indicates whether SQL audit was disabled for the DRDS database. Valid values: • true: The operation was successful. • false: The operation failed.
RequestId	String	11BAFBD8-8509-4177-A26D-407505E73713	The ID of the request.

Examples

Sample requests

```
http(s)://[Endpoint]/?Action=ModifyFlowProject
&ProjectId=FP-257A173659F5****
&RegionId=cn-hangzhou
&<common request parameters>
```

Sample success responses

`XML` format

```
<RequestId>2670BCFB-925D-4C3E-9994-8D12F7A9F538</RequestId>
<Data>true</Data>
```

`JSON` Syntax

```
{
   "RequestId": "2670BCFB-925D-4C3E-9994-8D12F7A9F538",
   "Data": true
}
```

8.46. ModifyJob

Call ModifyFlowJob to modify a data development job.

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	ModifyFlowJob	The operation that you want to perform. Set the value to ModifyFlowJob.
Id	String	Yes	FJ-BCCAE48B90CC****	The job ID. You can call ListFlowJob View the scaling group ID.
ProjectId	String	Yes	FP-257A173659F5****	The project ID. You can call ListFlowProject View the ID of the project.

Parameter	Type	Required	Example	Description
RegionId	String	Yes	cn-hangzhou	The region ID. You can call DescribeRegions View the latest list of Alibaba Cloud regions.
ResourceList.N.Path	String	Yes	oss://path/demo.jar	The path of OSS or HDFS.
Name	String	No	my_shell_job	The name of the modified job.
Description	String	No	This is the description of a job	The description of the modified job.
FailAct	String	No	CONTINUE	The processing method when the job fails. The value is as follows: • CONTINUE: Skip this job • STOP: stop working
MaxRetry	Integer	No	5	The maximum number of retries. The value ranges from 0 to 5.
RetryPolicy	String	No	None.	retry policy, retain parameters.
MaxRunningTimeSec	Long	No	0	Retain parameters.
RetryInterval	Long	No	200	The retry interval, which ranges from 0 to 300 (seconds).
Params	String	No	ls -l	The content of the job.
ParamConf	String	No	{"date":"${yyyy-MM-dd}"}	The configuration parameters of the job.

Parameter	Type	Required	Example	Description
CustomVariables	String	No	{\"scope\":\"PROJECT\",\"entityId\":\"FP-80C2FDDBF35D9CC5\",\"variables\":[{\"name\":\"v1\",\"value\":\"1\",\"properties\":{\"password\":true}}]}	The custom variables configured for the job.
EnvConf	String	No	{"key":"value"}	The environment variables configured for the job. **Note** The maximum length of the entire JSON string is 1024 bytes.
RunConf	String	No	{"priority":1,"userName":"hadoop","memory":2048,"cores":1}	Run the configuration, the value is as follows: • priority: priority • userName: the Linux user who submitted the job • memory: memory, in MB • cores: number of cores
MonitorConf	String	No	{"inputs":[{"type":"KAFKA","clusterId":"C-1234567","topics":"kafka_topic","consumer.group":"kafka_consumer_group"}],"outputs":[{"type":"KAFKA","clusterId":"C-1234567","topics":"kafka_topic"}]}	Monitoring configuration, only **SPARK_STREAMING** Type jobs support monitoring configurations.
Mode	String	No	YARN	Model mode, with the following values: • YARN: Package the job as a Launcher and submit it to YARN for execution. • LOCAL: submits the job from a header or gateway node

Parameter	Type	Required	Example	Description
ResourceList.N.Alias	String	No	demo.jar	The alias of the resource.
ClusterId	String	No	C-A23BD131A862****	The ID of a cluster.
AlertConf	String	No	None.	Retain parameters.

Response parameters

Parameter	Type	Example	Description
Data	Boolean	true	Indicates whether SQL audit was disabled for the DRDS database. Valid values: • true: The operation was successful. • false: The operation failed.
RequestId	String	549175a-6d14-4c8a-89f9-5e28300f6d7e	The ID of the request.

Examples

Sample requests

```
http(s)://[Endpoint]/?Action=ModifyFlowJob
&Id=FJ-BBCAE48B90CC****
&ProjectId=FP-257A173659F5****
&RegionId=cn-hangzhou
&ClusterId=C-A23BD131A862****
&Description=This is a data development job Description
&EnvConf={"key":"value"}
&FailAct=CONTINUE
&MaxRetry=5
&Mode=YARN
&MonitorConf={"inputs":[{"type":"KAFKA","clusterId":"C-1234567","topics":"kafka_topic","con
sumer.group":"kafka_consumer_group"}],"outputs":[{"type":"KAFKA","clusterId":"C-1234567","t
opics":"kafka_topic"}]}
&Name=my_shell_job
&ParamConf={"date":"${yyyy-MM-dd}"}
&Params=ls -l
&ResourceList.1.Alias=demo.jar
&ResourceList.1.Path=oss://path/demo.jar
&RetryInterval=200
&RunConf={"priority":1,"userName":"hadoop","memory":2048,"cores":1}
&<common request parameters>
```

Sample success responses

`XML` format

```
<RequestId>ECC2D0D1-B6D5-468D-B698-30E8805EB574</RequestId>
<Data>true</Data>
```

`JSON` Syntax

```
{
"RequestId":"ECC2D0D1-B6D5-468D-B698-30E8805EB574",
"Data":true
}
```

8.47. Retry workflow

You can call the RerunFlow operation to execute the terminated workflow instance again.

Debugging

OpenAPI Explorer automatically calculates the signature value. For your convenience, we recommend that you call this operation in OpenAPI Explorer. You can use OpenAPI Explorer to search for API operations, call API operations, and dynamically generate SDK sample code.

Request parameters

Parameter	Type	Required	Example	Description
Action	String	Yes	RerunFlow	The operation that you want to perform. This parameter is required for API requests that you create by piecing together HTTP or HTTPS URLs. Set the value to RerunFlow.
FlowInstanceId	String	Yes	FI-9DDAAA3ADA5F****	The ID of the workflow instance. You can call ListFlowInstance View the ID of the workflow instance.
ProjectId	String	Yes	FP-3535FE0BE522****	The ID of the project. You can call ListFlowProject View the ID of the project.
RegionId	String	Yes	cn-hangzhou	The region ID of the instance. You can call DescribeRegions To view the latest list of Alibaba Cloud regions.
ReRunFail	Boolean	No	true	Specifies whether to retry only failed nodes.

Response parameters

Parameter	Type	Example	Description
Data	Boolean	true	The execution results are returned, including the following: • true: The retry workflow is successful. • false: retries the workflow failure.
RequestId	String	B46F8A2A-B46B-415C-8A9C-B01B99B775A2	The ID of the request.

Examples

Sample requests

```
http(s)://[Endpoint]/?Action=RerunFlow
&FlowInstanceId=FI-9DDAAA3ADA5F****
&ProjectId=FP-3535FE0BE522****
&RegionId=cn-hangzhou
&<common request parameters>
```

Sample success responses

`XML` format

```
<RequestId>B46F8A2A-B46B-415C-8A9C-B01B99B775A2</RequestId>
<Data>true</Data>
```

`JSON` Syntax

```
{
        "RequestId": "B46F8A2A-B46B-415C-8A9C-B01B99B775A2",
        "Data": true
}
```

8.48. Resume workflow

You can call ResumeFlow operation to resume a workflow.

Debugging

OpenAPI Explorer automatically calculates the signature value. For your convenience, we recommend that you call this operation in OpenAPI Explorer. You can use OpenAPI Explorer to search for API operations, call API operations, and dynamically generate SDK sample code.

Request parameters

Parameter	Type	Required	Example	Description
Action	String	Yes	ResumeFlow	The operation that you want to perform. This parameter is required for API requests that you create by piecing together HTTP or HTTPS URLs. Set the value to ResumeFlow.
FlowInstanceId	String	Yes	FI-9DDAAA3ADA5F****	The ID of the workflow instance. You can call ListFlowInstance View the ID of the workflow instance.
ProjectId	String	Yes	FP-3535FE0BE522****	The ID of the project. You can call ListFlowProject View the ID of the project.
RegionId	String	Yes	cn-hangzhou	The region ID of the instance. You can call DescribeRegions To view the latest list of Alibaba Cloud regions.

Response parameters

Parameter	Type	Example	Description
Data	Boolean	true	The execution results are returned, including the following: • true: the workflow is restored. • false: The workflow failed to be restored.
RequestId	String	B46F8A2A-B46B-415C-8A9C-B01B99B775A2	The ID of the request.

Examples

Sample requests

```
http(s)://[Endpoint]/?Action=ResumeFlow
&FlowInstanceId=FI-9DDAAA3ADA5F****
&ProjectId=FP-3535FE0BE522****
&RegionId=cn-hangzhou
&<common request parameters>
```

Sample success responses

`XML` format

```
<RequestId>B46F8A2A-B46B-415C-8A9C-B01B99B775A2</RequestId>
<Data>true</Data>
```

JSON Syntax

```
{
        "RequestId": "B46F8A2A-B46B-415C-8A9C-B01B99B775A2",
        "Data": true
}
```

8.49. Submit a running workflow

You can call SubmitFlow operation to submit and run a workflow.

Debugging

OpenAPI Explorer automatically calculates the signature value. For your convenience, we recommend that you call this operation in OpenAPI Explorer. You can use OpenAPI Explorer to search for API operations, call API operations, and dynamically generate SDK sample code.

Request parameters

Parameter	Type	Required	Example	Description
Action	String	Yes	SubmitFlow	The operation that you want to perform. This parameter is required for API requests that you create by piecing together HTTP or HTTPS URLs. Set the value to SubmitFlow.
FlowId	String	Yes	F-FD06A29AF6D2****	The ID of the workflow. You can call ListFlowInstance View the workflow ID.
ProjectId	String	Yes	FP-AC84F265C8E4****	The ID of the project. You can call ListFlowProject View the ID of the project.
RegionId	String	Yes	cn-hangzhou	The region ID of the instance. You can call DescribeRegions To view the latest list of Alibaba Cloud regions.
Conf	String	No	{"cyctime":"1542783967503"}	The configuration information in the {"key":"value"} format. In this example, cyctime indicates the actual scheduled running time (long integer timestamp).

Response parameters

Parameter	Type	Example	Description
Data	String	FI-7A39731FE719****	A deprecated parameter.
Id	String	FI-7A39731FE719****	The ID of the workflow instance.
InstanceId	String	FI-7A39731FE719****	A deprecated parameter.
RequestId	String	243D5A48-96A5-4C0C-8966-93CBF65635ED	The ID of the request.

Examples

Sample requests

```
http(s)://[Endpoint]/?Action=SubmitFlow
&FlowId=F-FD06A29AF6D2****
&ProjectId=257A173659F5****
&RegionId=cn-hangzhou
&<common request parameters>
```

Sample success responses

`XML` format

```
<RequestId>2670BCFB-925D-4C3E-9994-8D12F7A9F538</RequestId>
<Id>FI-7A39731FE719****</Id>
<InstanceId>FI-7A39731FE719****</InstanceId>
<Data>FI-7A39731FE719****</Data>
```

`JSON` Syntax

```
{
    "RequestId": "2670BCFB-925D-4C3E-9994-8D12F7A9F538",
    "Id": "FI-7A39731FE719****",
    "InstanceId": "FI-7A39731FE719****",
    "Data": "FI-7A39731FE719****"
}
```

8.50. Submit and run a job

Call the SubmitFlowJob interface to submit a running job. Only one running instance is allowed at a time.

Debugging

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

Request parameters

Parameter	Type	Required	Example	Description
Action	String	Yes	SubmitFlowJob	The operation that you want to perform. Set the value to SubmitFlowJob.
ClusterId	String	Yes	C-F32FB31D8295****	The ID of the cluster. You can call the ListClusters to view the ID of the cluster.
JobId	String	Yes	FJ-1A2FB31D8295****	The ID of the job. You can call the ListFlowJob to view the job ID.
ProjectId	String	Yes	FP-3535FE0BE5228****	The ID of the project. You can call the ListFlowProject to view the ID of the project.
RegionId	String	Yes	cn-hangzhou	The ID of the region. You can call the DescribeRegions operation to query the most recent region list.
JobInstanceId	String	No	FJI-9DDAAA3ADA5F****	The ID of the job instance. You can call the DescribeFlowJob to view the job instance ID.
HostName	String	No	emr-header-1.cluster-12345	The host name of the server where the workflow runs. You can log on to the master node and run `hostname` commands to view the corresponding values.
Namespace	String	No	default	The K8s namespace used when the EMR cluster is on ACK.
Conf	String	No	{"key":"value"}	The configuration parameters of the job, for example, {"key1":"value1"}. The value of the parameter that is key to params overwrites what is running in the actual job.

Response parameters

Parameter	Type	Example	Description
Id	String	FJI-9DDAAA3ADA5F****	The ID of the job instance.
RequestId	String	B46F8A2A-B46B-415C-8A9C-B01B99B775A2	The ID of the request.

Examples

Sample requests

```
http(s)://[Endpoint]/?Action=SubmitFlowJob
&ClusterId=C-F32FB31D8295****
&JobId=FJ-1A2FB31D8295****
&ProjectId=FP-3535FE0BE522****
&RegionId=cn-hangzhou
&<Common request parameters>|
```

Sample success responses

`XML` format

```
<RequestId>B46F8A2A-B46B-415C-8A9C-B01B99B775A2</RequestId>
<Id>FJI-9DDAAA3ADA5F****</Id>
```

`JSON` format

```
{
    "RequestId": "B46F8A2A-B46B-415C-8A9C-B01B99B775A2",
    "Id": "FJI-9DDAAA3ADA5F****"
}
```

8.51. Suspend a workflow

You can call SuspendFlow operation to suspend a workflow.

Debugging

OpenAPI Explorer automatically calculates the signature value. For your convenience, we recommend that you call this operation in OpenAPI Explorer. You can use OpenAPI Explorer to search for API operations, call API operations, and dynamically generate SDK sample code.

Request parameters

Parameter	Type	Required	Example	Description

Parameter	Type	Required	Example	Description
Action	String	Yes	SuspendFlow	The operation that you want to perform. This parameter is required for API requests that you create by piecing together HTTP or HTTPS URLs. Set the value to SuspendFlow.
FlowInstanceId	String	Yes	FI-9DDAAA3ADA5F****	The ID of the workflow instance. You can call ListFlowInstance View the workflow ID.
ProjectId	String	Yes	FP-3535FE0BE522****	The ID of the project. You can call ListFlowProject View the ID of the project.
RegionId	String	Yes	cn-hangzhou	The ID of the region to which the cluster belongs. You can call DescribeRegions To view the latest list of Alibaba Cloud regions.

Response parameters

Parameter	Type	Example	Description
Data	Boolean	true	The execution results are returned, including the following: • true: the workflow is successfully paused. • false: The workflow fails to be paused.
RequestId	String	B46F8A2A-B46B-415C-8A9C-B01B99B775A2	The ID of the request.

Examples

Sample requests

```
http(s)://[Endpoint]/?Action=SuspendFlow
&FlowInstanceId=FI-9DDAAA3ADA5F****
&ProjectId=FP-3535FE0BE522****
&RegionId=cn-hangzhou
&<common request parameters>
```

Sample success responses

`XML` format

```
<SuspendFlowResponse>
  <RequestId>B46F8A2A-B46B-415C-8A9C-B01B99B775A2</RequestId>
      <Data>true</Data>
</SuspendFlowResponse>
```

JSON Syntax

```
{
        "RequestId": "B46F8A2A-B46B-415C-8A9C-B01B99B775A2",
        "Data": true
}
```

9.Common APIs

9.1. Create a cluster

This topic describes how to call the E-MapReduce (EMR) API to create a semi-hosted Hadoop cluster.

Prerequisites

The required SDK is obtained. To obtain SDK for Java, see Download SDKs. To obtain SDK for Python, see Install SDK.

Basic cluster information

You must configure the following information about a cluster:

- Zone: Hangzhou Zone I
- Billing method: pay-as-you-go
- Cluster name: emr_openapi_demo
- High availability enabled. Instance details:
  - Two master instances of the ecs.g5.xlarge type, one 120 GiB Enhanced SSD as the system disk, and one 80 GiB ultra disk as the data disk.
  - Two core instances of the ecs.g5.2xlarge type, one 120 GiB Enhanced SSD as the system disk, and four 80 GiB ultra disks as data disks.
  - Two task instances of the ecs.c5.2xlarge type, one 120 GiB Enhanced SSD as the system disk, and four 80 GiB ultra disks as data disks.
- Public IP address assignment
- Logon password
- Component configurations

Component	Configuration file	Key	Value
Yarn	*yarn-site.xml*	yarn_nodemanager_heapsize	1234
Hive	*hive-site.xml*	hive.metastore.warehouse.dir	/user/hive/warehouse_emr

Examples:

- Python

```
#!/usr/bin/env python
#coding=utf-8
from aliyunsdkcore.client import AcsClient
from aliyunsdkcore.acs_exception.exceptions import ClientException
from aliyunsdkcore.acs_exception.exceptions import ServerException
from aliyunsdkemr.request.v20160408.CreateClusterV2Request import CreateClusterV2Request
client = AcsClient('<accessKeyId>', '<accessSecret>', 'cn-hangzhou')
request = CreateClusterV2Request()
request.set_accept_format('json')
request.set_Name("emr_openapi_demo")
```

```
request.set_ZoneId("cn-hangzhou-i")
request.set_EmrVer("EMR-3.23.0")
request.set_ClusterType("HADOOP")
request.set_HostGroups([
  {
    "HostGroupName": "master_group",
    "HostGroupType": "MASTER",
    "ChargeType": "PostPaid",
    "NodeCount": 2,
    "InstanceType": "ecs.g5.xlarge",
    "DiskType": "CLOUD_EFFICIENCY",
    "DiskCapacity": 80,
    "DiskCount": 1,
    "SysDiskType": "CLOUD_ESSD",
    "SysDiskCapacity": 120,
    "VSwitchId": "vsw-bp11t4amri1iuj*****"
  },
  {
    "HostGroupName": "core_group",
    "HostGroupType": "CORE",
    "ChargeType": "PostPaid",
    "NodeCount": 2,
    "InstanceType": "ecs.g5.2xlarge",
    "DiskType": "CLOUD_EFFICIENCY",
    "DiskCapacity": 80,
    "DiskCount": 4,
    "SysDiskType": "CLOUD_ESSD",
    "SysDiskCapacity": 120,
    "VSwitchId": "vsw-bp11t4amri1iuj*****"
  },
  {
    "HostGroupName": "task_group",
    "HostGroupType": "TASK",
    "ChargeType": "PostPaid",
    "NodeCount": 2,
    "InstanceType": "ecs.c5.xlarge",
    "DiskType": "CLOUD_EFFICIENCY",
    "DiskCapacity": 80,
    "DiskCount": 4,
    "SysDiskType": "CLOUD_ESSD",
    "SysDiskCapacity": 120,
    "VSwitchId": "vsw-bp11t4amri1iuj*****"
  }
])
request.set_SecurityGroupId("sg-bp13cqwumhn7x*****")
request.set_IsOpenPublicIp(True)
request.set_SecurityGroupName("newgroup")
request.set_ChargeType("PostPaid")
request.set_VpcId("vpc-bp1gjl3y9fezuk*****")
request.set_VSwitchId("vsw-bp11t4amri1iuj*****")
request.set_NetType("vpc")
request.set_UserDefinedEmrEcsRole("AliyunEmrEcsDefaultRole")
request.set_HighAvailabilityEnable(True)
request.set_IoOptimized(True)
```

```
request.set_SshEnable(True)
request.set_MasterPwd("EMRtest12345!")
request.set_DepositType("HALF_MANAGED")
request.set_MachineType("ECS")
request.set_Configs([
  {
    "ServiceName": "YARN",
    "FileName": "yarn-site",
    "ConfigKey": "yarn_nodemanager_heapsize",
    "ConfigValue": "1234"
  },
  {
    "ServiceName": "HIVE",
    "FileName": "hive-site",
    "ConfigKey": "hive.metastore.warehouse.dir",
    "ConfigValue": "/user/hive/warehouse_emr"
  }
])
response = client.do_action_with_exception(request)
# python2:  print(response)
print(str(response, encoding='utf-8'))
```

- Java

```
import com.aliyuncs.DefaultAcsClient;
import com.aliyuncs.IAcsClient;
import com.aliyuncs.exceptions.ClientException;
import com.aliyuncs.exceptions.ServerException;
import com.aliyuncs.profile.DefaultProfile;
import com.google.gson.Gson;
import java.util.*;
import com.aliyuncs.emr.model.v20160408.*;
public class CreateClusterV2 {
    public static void main(String[] args) {
        DefaultProfile profile = DefaultProfile.getProfile("cn-hangzhou", "<accessKeyId>"
, "<accessSecret>");
        IAcsClient client = new DefaultAcsClient(profile);
        CreateClusterV2Request request = new CreateClusterV2Request();
        request.setRegionId("cn-hangzhou");
        request.setName("emr_openapi_demo");
        request.setZoneId("cn-hangzhou-i");
        request.setEmrVer("EMR-3.23.0");
        request.setClusterType("HADOOP");
        List<CreateClusterV2Request.HostGroup> hostGroupList = new ArrayList<CreateCluste
rV2Request.HostGroup>();
        CreateClusterV2Request.HostGroup hostGroup1 = new CreateClusterV2Request.HostGrou
p();
        hostGroup1.setHostGroupName("master_group");
        hostGroup1.setHostGroupType("MASTER");
        hostGroup1.setChargeType("PostPaid");
        hostGroup1.setNodeCount(2);
        hostGroup1.setInstanceType("ecs.g5.xlarge");
        hostGroup1.setDiskType("CLOUD_EFFICIENCY");
        hostGroup1.setDiskCapacity(80);
        hostGroup1.setDiskCount(1);
```

```
        hostGroup1.setDiskCount(1);
        hostGroup1.setSysDiskType("CLOUD_ESSD");
        hostGroup1.setSysDiskCapacity(120);
        hostGroup1.setVSwitchId("vsw-bp11t4amri1iuj*****");
        hostGroupList.add(hostGroup1);
        CreateClusterV2Request.HostGroup hostGroup2 = new CreateClusterV2Request.HostGrou
p();
        hostGroup2.setHostGroupName("core_group");
        hostGroup2.setHostGroupType("CORE");
        hostGroup2.setChargeType("PostPaid");
        hostGroup2.setNodeCount(2);
        hostGroup2.setInstanceType("ecs.g5.2xlarge");
        hostGroup2.setDiskType("CLOUD_EFFICIENCY");
        hostGroup2.setDiskCapacity(80);
        hostGroup2.setDiskCount(4);
        hostGroup2.setSysDiskType("CLOUD_ESSD");
        hostGroup2.setSysDiskCapacity(120);
        hostGroup2.setVSwitchId("vsw-bp11t4amri1iuj*****");
        hostGroupList.add(hostGroup2);
        CreateClusterV2Request.HostGroup hostGroup3 = new CreateClusterV2Request.HostGrou
p();
        hostGroup3.setHostGroupName("task_group");
        hostGroup3.setHostGroupType("TASK");
        hostGroup3.setChargeType("PostPaid");
        hostGroup3.setNodeCount(2);
        hostGroup3.setInstanceType("ecs.c5.xlarge");
        hostGroup3.setDiskType("CLOUD_EFFICIENCY");
        hostGroup3.setDiskCapacity(80);
        hostGroup3.setDiskCount(4);
        hostGroup3.setSysDiskType("CLOUD_ESSD");
        hostGroup3.setSysDiskCapacity(120);
        hostGroup3.setVSwitchId("vsw-bp11t4amri1iuj*****");
        hostGroupList.add(hostGroup3);
        request.setHostGroups(hostGroupList);
        request.setSecurityGroupId("sg-bp13cqwumhn7x*****");
        request.setIsOpenPublicIp(true);
        request.setSecurityGroupName("newgroup");
        request.setChargeType("PostPaid");
        request.setVpcId("vpc-bp1gjl3y9fezukq*****");
        request.setVSwitchId("vsw-bp11t4amri1iuj*****");
        request.setNetType("vpc");
        request.setUserDefinedEmrEcsRole("AliyunEmrEcsDefaultRole");
        request.setHighAvailabilityEnable(true);
        request.setIoOptimized(true);
        request.setSshEnable(true);
        request.setMasterPwd("EMRtest12345!");
        request.setDepositType("HALF_MANAGED");
        request.setMachineType("ECS");
        List<CreateClusterV2Request.Config> configList = new ArrayList<CreateClusterV2Req
uest.Config>();
        CreateClusterV2Request.Config config1 = new CreateClusterV2Request.Config();
        config1.setServiceName("YARN");
        config1.setFileName("yarn-site");
        config1.setConfigKey("yarn_nodemanager_heapsize");
        config1.setConfigValue("1234");
```

```
        configList.add(config1);
        CreateClusterV2Request.Config config2 = new CreateClusterV2Request.Config();
        config2.setServiceName("HIVE");
        config2.setFileName("hive-site");
        config2.setConfigKey("hive.metastore.warehouse.dir");
        config2.setConfigValue("/user/hive/warehouse_emr");
        configList.add(config2);
        request.setConfigs(configList);
        try {
            CreateClusterV2Response response = client.getAcsResponse(request);
            System.out.println(new Gson().toJson(response));
        } catch (ServerException e) {
            e.printStackTrace();
        } catch (ClientException e) {
            System.out.println("ErrCode:" + e.getErrCode());
            System.out.println("ErrMsg:" + e.getErrMsg());
            System.out.println("RequestId:" + e.getRequestId());
        }
    }
}
```

More configurations

For information about other configurations, see Create an ASK cluster.

> **Note**
>
> Two groups of parameters are used to specify billing methods and subscription periods:
>
> - ChargeType and Period: specify the billing method and subscription period when HostGroupType is Master or Core.
> - HostGroup.N.ChargeType and HostGroup.N.Period: specify the billing method and subscription period when HostGroupType is Task.

- The following table describes the parameters of a subscription cluster.

Parameter	Description
ChargeType	The billing method. PrePaid specifies the subscription billing method.
Period	The subscription period. Valid values: 1, 2, 3, 4, 5, 6, 7, 8, 9, 12, 24, and 36. Unit: months. Specify this parameter when ChargeType is set to PrePaid.
HostGroup.N.ChargeType	The billing method of host group N.
HostGroup.N.Period	The subscription period. Valid values: 1, 2, 3, 4, 5, 6, 7, 8, 9, 12, 24, and 36. Unit: months. Specify this parameter when HostGroup.n.ChargeType is set to PrePaid.

- The following table describes the parameters of a gateway cluster.

When you create a gateway instance in a gateway cluster, you must set HostGroup.N.HostGroupType to GATEWAY to define the instance.

Parameter	Description
ClusterType	Set this parameter to GATEWAY.
HostGroup.N.HostGroupType	Set this parameter to GATEWAY.
RelatedClusterId	The ID of the EMR cluster that is associated with the gateway cluster.

9.2. Modify the configurations of a cluster

This topic describes how to call the E-MapReduce (EMR) API to modify the configurations of a cluster.

Prerequisites

- An EMR cluster is created. For more information, see Create a cluster.
- The cluster ID is obtained. For more information, see View the cluster list and cluster details.
- An AccessKey pair is created. For more information, see Obtain an AccessKey pair.
- The required SDK is obtained. To obtain SDK for Java, see Download SDKs. To obtain SDK for Python, see Install SDK.

Modify the configurations of a cluster

Call the ModifyClusterServiceConfig operation to modify existing configurations or add parameters.

- Modify existing configurations.

Parameter	Type	Required	Example	Description
RegionId	String	Yes	cn-hangzhou	The ID of the region.
ClusterId	String	Yes	C-C0D50B0FA24A****	The ID of the cluster.
ServiceName	String	Yes	HDFS	The name of the service. For more information, see Service details.
ConfigParams	String	Yes	null	The specific modifications. Set this parameter to a JSON string.
Comment	String	No	modify hdfs config	The comment about the modifications.

Sample code:

```
#!/usr/bin/env python
#coding=utf-8
from aliyunsdkcore.client import AcsClient
from aliyunsdkcore.acs_exception.exceptions import ClientException
from aliyunsdkcore.acs_exception.exceptions import ServerException
from aliyunsdkemr.request.v20160408.ModifyClusterServiceConfigRequest import ModifyCluste
rServiceConfigRequest
client = AcsClient('<accessKeyId>', '<accessSecret>', 'cn-hangzhou')
request = ModifyClusterServiceConfigRequest()
request.set_accept_format('json')
request.set_ClusterId("C-C0D50B0FA24A****")
request.set_ServiceName("HDFS")
request.set_ConfigParams("{\"hdfs-site\":{\"dfs.namenode.resource.check.interval\":\"6000
\"}}")
request.set_Comment("modify hdfs config")
response = client.do_action_with_exception(request)
# python2:  print(response)
print(str(response, encoding='utf-8'))
```

- Add parameters.

  Add parameters to a specific instance of a cluster.

Parameter	Type	Required	Example	Description
RegionId	String	Yes	cn-hangzhou	The ID of the region.
ClusterId	String	Yes	C-2FD9050E78C8****	The ID of the cluster.
ServiceName	String	Yes	HDFS	The name of the service. For more information, see Service details.
ConfigParams	String	Yes	null	{} indicates that new parameters are added.
Comment	String	No	add new config	The comment about the added parameters.
CustomConfigParams	String	No	null	Configurations added to custom configuration items.

Parameter	Type	Required	Example	Description
HostInstanceId	String	No	i-bp146tnrkq4tcso2****	The ID of the instance. In most cases, this parameter is set to the ID of an ECS instance.

Sample code:

```
#!/usr/bin/env python
#coding=utf-8
from aliyunsdkcore.client import AcsClient
from aliyunsdkcore.acs_exception.exceptions import ClientException
from aliyunsdkcore.acs_exception.exceptions import ServerException
from aliyunsdkemr.request.v20160408.ModifyClusterServiceConfigRequest import ModifyCluste
rServiceConfigRequest
client = AcsClient('<accessKeyId>', '<accessSecret>', 'cn-hangzhou')
request = ModifyClusterServiceConfigRequest()
request.set_accept_format('json')
request.set_ClusterId("C-2FD9050E78C8****")
request.set_ServiceName("HDFS")
request.set_ConfigParams("{}")
request.set_Comment("add new config")
request.set_CustomConfigParams("{\"hdfs-site\":{\"newkey\":{\"Value\":\"customValue\"}}}"
)
request.set_HostInstanceId("i-bp146tnrkq4tcso2****")
response = client.do_action_with_exception(request)
# python2:  print(response)
print(str(response, encoding='utf-8'))
```

Make the configurations of a cluster take effect

- Service parameters

  After you modify service parameters, you must restart the related service for the modifications to take effect. You can restart the service in the EMR console or call the RunClusterServiceAction operation to restart the service.

Parameter	Type	Required	Example	Description
RegionId	String	Yes	cn-hangzhou	The ID of the region.
ClusterId	String	Yes	C-C0D50B0FA24A****	The ID of the cluster.
ServiceName	String	Yes	HDFS	The name of the service. For more information, see Service details.

Parameter	Type	Required	Example	Description
ServiceActionName	String	Yes	RESTART	The name of the action. Valid values: ○ START: Start the service. ○ RESTART: Restart the service. ○ STOP: Stop the service. ○ CONFIGURE: Send configurations to a specific instance.

Sample code:

```
#!/usr/bin/env python
#coding=utf-8
from aliyunsdkcore.client import AcsClient
from aliyunsdkcore.acs_exception.exceptions import ClientException
from aliyunsdkcore.acs_exception.exceptions import ServerException
from aliyunsdkemr.request.v20160408.RunClusterServiceActionRequest import RunClusterServi
ceActionRequest
client = AcsClient('<accessKeyId>', '<accessSecret>', 'cn-hangzhou')
request = RunClusterServiceActionRequest()
request.set_accept_format('json')
request.set_ClusterId("C-C0D50B0FA24A****")
request.set_ServiceName("HDFS")
request.set_ServiceActionName("RESTART")
response = client.do_action_with_exception(request)
# python2:  print(response)
print(str(response, encoding='utf-8'))
```

- Client parameters

  After you modify client parameters, you must call the RunClusterServiceAction operation to send the configurations to a specific instance of the cluster and then deploy the configurations.

Parameter	Type	Required	Example	Description
RegionId	String	Yes	cn-hangzhou	The ID of the region.
ClusterId	String	Yes	C-ADB1FDB7AA82****	The ID of the cluster.

Parameter	Type	Required	Example	Description
ServiceName	String	Yes	HDFS	The name of the service. For more information, see Service details.
ServiceActionName	String	Yes	CONFIGURE	The name of the action. Valid values: ○ START: Start the service. ○ RESTART: Restart the service. ○ STOP: Stop the service. ○ CONFIGURE: Send configurations to a specific instance.

Sample code:

```
#!/usr/bin/env python
#coding=utf-8
from aliyunsdkcore.client import AcsClient
from aliyunsdkcore.acs_exception.exceptions import ClientException
from aliyunsdkcore.acs_exception.exceptions import ServerException
from aliyunsdkemr.request.v20160408.RunClusterServiceActionRequest import RunClusterServi
ceActionRequest
client = AcsClient('<accessKeyId>', '<accessSecret>', 'cn-hangzhou')
request = RunClusterServiceActionRequest()
request.set_accept_format('json')
request.set_ClusterId("C-ADB1FDB7AA82A****")
request.set_ServiceName("HDFS")
request.set_ServiceActionName("CONFIGURE")
response = client.do_action_with_exception(request)
# python2:  print(response)
print(str(response, encoding='utf-8'))
```

Related API operations

- ModifyClusterServiceConfig: For more information, see Modifies the configuration of a specified service of a cluster.
- RunClusterServiceAction: For more information, see Run specified actions.

Service details

- Services

```
SPARK
KAFKA
HIVE
TEZ
STORM
ZEPPELIN
HBASE
YARN
HDFS
PRESTO
IMPALA
DRUID
KNOX
KAFKA-MANAGER
GANGLIA
HUE
PHOENIX
FLINK
RANGER
APACHEDS
HAS
SQOOP
PIG
ZOOKEEPER
OOZIE
TENSORFLOW
SUPERSET
TENSORFLOW-ON-YARN
LIVY
JUPYTER
ANALYTICS-ZOO
FLUME
SMARTDATA
BIGBOOT
HIVE-CDH
KUDU
OPENLDAP
TENSORFLOW-ON-SPARK
GRAFANA
PROMETHEUS
ALERTMANAGER
CLICKHOUSE
```

- Service components

```
ANALYTICS-ZOO
        AnalyticsZooPython
        AnalyticsZooScala
GANGLIA
        GMETAD
        GMOND
HBASE
        HMaster
        HRegionServer
        ThriftServer
HDFS
        KMS
        HttpFS
        NameNode
        DataNode
        SecondaryNameNode
HIVE
        HiveServer
        HiveMetaStore
IMPALA
        ImpalaRuntime
        ImpalaCatalogd
        ImpalaStatestored
        Impalad
KUDU
        KuduMaster
        KuduTserver
PRESTO
        PrestoMaster
        PrestoWorker
RANGER
        RangerAdmin
        RangerUserSync
        RangerPlugin
SPARK
        SparkHistory
YARN
        ResourceManager
        JobHistory
        TimeLineServer
        WebAppProxyServer
        NodeManager
```

9.3. Scale out a cluster

You cannot call an EMR API operation to enable auto scaling by time or load. However, you can configure trigger conditions to call API operations to scale out a cluster.

Prerequisites

- An EMR cluster is created. For more information, see Create a cluster.
- The cluster ID is obtained. For more information, see View the cluster list and cluster details.

- An AccessKey pair is created. For more information, see Obtain an AccessKey pair.
- The required SDK is obtained. To obtain SDK for Java, see Download SDKs. To obtain SDK for Python, see Install SDK.

Scenarios

You have created a Hadoop cluster, which consists of master, core, and task instances. You want to use an EMR API to add task instances.

Basic configurations of the cluster and the instances to be added:

- Cluster name: emr_openapi_demo, cluster ID: C-69CB0546800F****.
- Instances to be added: four task instances, ecs.c5.xlarge, one 120 GiB Enhanced SSD as the system disk, four 80 GiB ultra disks as data disks.

  After you scale out the cluster, perform the following steps to view the added instances:

  i.
  ii. Click the **Cluster Management** tab.
  iii. Find the target cluster and click **Details** in the **Actions** column.
  iv. In the left-side navigation pane, click **Instances**.

  On the **Instances** page, view the added instances.
- HostGroupId of the task host group: G-C73605CF4382****.

> **Note** When you scale out a cluster, you must obtain HostGroupId of the target host group. You can call an EMR API operation to obtain HostGroupId from the returned cluster information.

Examples

This section provides Java and Python sample code.

- Java

  i. Obtain HostGroupId of the target host group based on the region ID and cluster ID.

```
import com.aliyuncs.DefaultAcsClient;
import com.aliyuncs.IAcsClient;
import com.aliyuncs.exceptions.ClientException;
import com.aliyuncs.exceptions.ServerException;
import com.aliyuncs.profile.DefaultProfile;
import com.google.gson.Gson;
import java.util.*;
import com.aliyuncs.emr.model.v20160408.*;
public class DescribeClusterV2 {
    public static void main(String[] args) {
        DefaultProfile profile = DefaultProfile.getProfile("cn-hangzhou", "<accessKey
Id>", "<accessSecret>");
        IAcsClient client = new DefaultAcsClient(profile);
        DescribeClusterV2Request request = new DescribeClusterV2Request();
        request.setRegionId("cn-hangzhou");
        request.setId("C-69CB0546800F****");
        try {
            DescribeClusterV2Response response = client.getAcsResponse(request);
            System.out.println(new Gson().toJson(response));
        } catch (ServerException e) {
            e.printStackTrace();
        } catch (ClientException e) {
            System.out.println("ErrCode:" + e.getErrCode());
            System.out.println("ErrMsg:" + e.getErrMsg());
            System.out.println("RequestId:" + e.getRequestId());
        }
    }
}
```

Find HostGroupId of the target host group in the returned cluster information.

For example, if the cluster information is returned in the JSON format, find HostGroupId based on the following path:

```
ClusterInfo -> HostGroupList -> HostGroup -> HostGroupType=TASK -> HostGroupId
```

ii. Scale out the cluster.

```
import com.aliyuncs.DefaultAcsClient;
import com.aliyuncs.IAcsClient;
import com.aliyuncs.exceptions.ClientException;
import com.aliyuncs.exceptions.ServerException;
import com.aliyuncs.profile.DefaultProfile;
import com.google.gson.Gson;
import java.util.*;
import com.aliyuncs.emr.model.v20160408.*;
public class ResizeClusterV2 {
    public static void main(String[] args) {
        DefaultProfile profile = DefaultProfile.getProfile("cn-hangzhou", "<accessKey
Id>", "<accessSecret>");
        IAcsClient client = new DefaultAcsClient(profile);
        ResizeClusterV2Request request = new ResizeClusterV2Request();
        request.setRegionId("cn-hangzhou");
        request.setClusterId("C-69CB0546800F****");
        List<ResizeClusterV2Request.HostGroup> hostGroupList = new ArrayList<ResizeCl
usterV2Request.HostGroup>();
        ResizeClusterV2Request.HostGroup hostGroup1 = new ResizeClusterV2Request.Host
Group();
        hostGroup1.setClusterId("C-69CB0546800F****");
        hostGroup1.setHostGroupId("G-C73605CF4382****");
        hostGroup1.setHostGroupName("task_group");
        hostGroup1.setHostGroupType("TASK");
        hostGroup1.setNodeCount(4);
        hostGroup1.setInstanceType("ecs.c5.xlarge");
        hostGroupList.add(hostGroup1);
        request.setHostGroups(hostGroupList);
        try {
            ResizeClusterV2Response response = client.getAcsResponse(request);
            System.out.println(new Gson().toJson(response));
        } catch (ServerException e) {
            e.printStackTrace();
        } catch (ClientException e) {
            System.out.println("ErrCode:" + e.getErrCode());
            System.out.println("ErrMsg:" + e.getErrMsg());
            System.out.println("RequestId:" + e.getRequestId());
        }
    }
}
```

- Python
  i. Obtain HostGroupId of the target host group based on the region ID and cluster ID.

```
#! /usr/bin/env python
#coding=utf-8
from aliyunsdkcore.client import AcsClient
from aliyunsdkcore.acs_exception.exceptions import ClientException
from aliyunsdkcore.acs_exception.exceptions import ServerException
from aliyunsdkemr.request.v20160408.DescribeClusterV2Request import DescribeClusterV2
Request
client = AcsClient('<accessKeyId>', '<accessSecret>', 'cn-hangzhou')
request = DescribeClusterV2Request()
request.set_accept_format('json')
request.set_Id("C-69CB0546800F****")
response = client.do_action_with_exception(request)
# python2:  print(response)
print(str(response, encoding='utf-8'))
```

Find HostGroupId of the target host group in the returned cluster information.

For example, if the cluster information is returned in the JSON format, find HostGroupId based on the following path:

```
ClusterInfo -> HostGroupList -> HostGroup -> HostGroupType=TASK -> HostGroupId
```

ii. Scale out the cluster.

```
#! /usr/bin/env python
#coding=utf-8
from aliyunsdkcore.client import AcsClient
from aliyunsdkcore.acs_exception.exceptions import ClientException
from aliyunsdkcore.acs_exception.exceptions import ServerException
from aliyunsdkemr.request.v20160408.ResizeClusterV2Request import ResizeClusterV2Requ
est
client = AcsClient('<accessKeyId>', '<accessSecret>', 'cn-hangzhou')
request = ResizeClusterV2Request()
request.set_accept_format('json')
request.set_ClusterId("C-69CB0546800F****")
request.set_HostGroups([
  {
    "ClusterId": "C-69CB0546800F****",
    "HostGroupId": "G-C73605CF4382****",
    "HostGroupName": "task_group",
    "HostGroupType": "TASK",
    "NodeCount": 4,
    "InstanceType": "ecs.c5.xlarge"
  }
])
response = client.do_action_with_exception(request)
# python2:  print(response)
print(str(response, encoding='utf-8'))
```

Related API operations

- Queries the basic information of a cluster
- Scale out or scale up an instance

9.4. Create and manage a project

This topic describes how to call EMR API operations to create and manage a project.

Prerequisites

- An EMR cluster is created. For more information, see Create a cluster.
- The cluster ID is obtained. For more information, see View the cluster list and cluster details.
- An AccessKey pair is created. For more information, see Obtain an AccessKey pair.
- The required SDK is obtained. To obtain SDK for Java, see Download SDKs. To obtain SDK for Python, see Install SDK.

Scenarios

If you want to create and edit jobs for an EMR cluster, you must first create a project in Data Platform. Then, you can create, edit, and schedule jobs in the project. After you create a project, you can associate cluster resources with the project and add members to it.

Examples

- Java
  i. Create a project named emr_openapi_demo_project in the China (Hangzhou) region.

```
import com.aliyuncs.DefaultAcsClient;
import com.aliyuncs.IAcsClient;
import com.aliyuncs.exceptions.ClientException;
import com.aliyuncs.exceptions.ServerException;
import com.aliyuncs.profile.DefaultProfile;
import com.google.gson.Gson;
import java.util.*;
import com.aliyuncs.emr.model.v20160408.*;
public class CreateFlowProject {
    public static void main(String[] args) {
        DefaultProfile profile = DefaultProfile.getProfile("cn-hangzhou", "<accessKey
Id>", "<accessSecret>");
        IAcsClient client = new DefaultAcsClient(profile);
        CreateFlowProjectRequest request = new CreateFlowProjectRequest();
        request.setRegionId("cn-hangzhou");
        request.setName("emr_openapi_demo_project");
        request.setDescription("Create flow project via CreateFlowProject");
        try {
            CreateFlowProjectResponse response = client.getAcsResponse(request);
            System.out.println(new Gson().toJson(response));
        } catch (ServerException e) {
            e.printStackTrace();
        } catch (ClientException e) {
            System.out.println("ErrCode:" + e.getErrCode());
            System.out.println("ErrMsg:" + e.getErrMsg());
            System.out.println("RequestId:" + e.getRequestId());
        }
    }
}
```

Find the ID of the project in the returned information.

```
{
    "RequestId": "BF47231B-29AE-4A4F-A1A3-10205ECD9634",
    "Id": "FP-D18E9976D5A5****"
}
```

ii. Query the clusters that can be associated with the project in the current region.

```
import com.aliyuncs.DefaultAcsClient;
import com.aliyuncs.IAcsClient;
import com.aliyuncs.exceptions.ClientException;
import com.aliyuncs.exceptions.ServerException;
import com.aliyuncs.profile.DefaultProfile;
import com.google.gson.Gson;
import java.util.*;
import com.aliyuncs.emr.model.v20160408.*;
public class ListFlowClusterAll {
    public static void main(String[] args) {
        DefaultProfile profile = DefaultProfile.getProfile("cn-hangzhou", "<accessKey
Id>", "<accessSecret>");
        IAcsClient client = new DefaultAcsClient(profile);
        ListFlowClusterAllRequest request = new ListFlowClusterAllRequest();
        request.setRegionId("cn-hangzhou");
        try {
            ListFlowClusterAllResponse response = client.getAcsResponse(request);
            System.out.println(new Gson().toJson(response));
        } catch (ServerException e) {
            e.printStackTrace();
        } catch (ClientException e) {
            System.out.println("ErrCode:" + e.getErrCode());
            System.out.println("ErrMsg:" + e.getErrMsg());
            System.out.println("RequestId:" + e.getRequestId());
        }
    }
}
```

Find the ID of the target cluster in the returned information. For example, if the cluster information is returned in the JSON format, find the cluster ID based on the following path:

```
Clusters -> ClusterInfo -> Id -> Cluster ID
```

iii. Associate the target cluster with the emr_openapi_demo_project project. This way, workflows in the project run in the cluster. You can also set the queue to which jobs are submitted, the users who can submit jobs, and the instances on which jobs run. Jobs can run only on gateway and master instances.

```
import com.aliyuncs.DefaultAcsClient;
import com.aliyuncs.IAcsClient;
import com.aliyuncs.exceptions.ClientException;
import com.aliyuncs.exceptions.ServerException;
import com.aliyuncs.profile.DefaultProfile;
import com.google.gson.Gson;
import java.util.*;
import com.aliyuncs.emr.model.v20160408.*;
public class CreateFlowProjectClusterSetting {
    public static void main(String[] args) {
        DefaultProfile profile = DefaultProfile.getProfile("cn-hangzhou", "<accessKey
Id>", "<accessSecret>");
        IAcsClient client = new DefaultAcsClient(profile);
        CreateFlowProjectClusterSettingRequest request = new CreateFlowProjectCluster
SettingRequest();
        request.setRegionId("cn-hangzhou");
        request.setProjectId("FP-D18E9976D5A5****");
        request.setClusterId("C-B503DDB15B34****");
        try {
            CreateFlowProjectClusterSettingResponse response = client.getAcsResponse(
request);
            System.out.println(new Gson().toJson(response));
        } catch (ServerException e) {
            e.printStackTrace();
        } catch (ClientException e) {
            System.out.println("ErrCode:" + e.getErrCode());
            System.out.println("ErrMsg:" + e.getErrMsg());
            System.out.println("RequestId:" + e.getRequestId());
        }
    }
}
```

iv. Add a RAM user to the project.

The following sample code shows how to add user test to the emr_openapi_demo_project project and grant user test the permissions to develop the project:

```
import com.aliyuncs.DefaultAcsClient;
import com.aliyuncs.IAcsClient;
import com.aliyuncs.exceptions.ClientException;
import com.aliyuncs.exceptions.ServerException;
import com.aliyuncs.profile.DefaultProfile;
import com.google.gson.Gson;
import java.util.*;
import com.aliyuncs.emr.model.v20160408.*;
public class CreateFlowProjectUser {
    public static void main(String[] args) {
        DefaultProfile profile = DefaultProfile.getProfile("cn-hangzhou", "<accessKey
Id>", "<accessSecret>");
        IAcsClient client = new DefaultAcsClient(profile);
        CreateFlowProjectUserRequest request = new CreateFlowProjectUserRequest();
        request.setRegionId("cn-hangzhou");
        request.setProjectId("FP-D18E9976D5A5****");
        List<CreateFlowProjectUserRequest.User> userList = new ArrayList<CreateFlowPr
ojectUserRequest.User>();
        CreateFlowProjectUserRequest.User user1 = new CreateFlowProjectUserRequest.Us
er();
        user1.setUserId(" 24339807068856****");
        user1.setUserName("test");
        userList.add(user1);
        request.setUsers(userList);
        try {
            CreateFlowProjectUserResponse response = client.getAcsResponse(request);
            System.out.println(new Gson().toJson(response));
        } catch (ServerException e) {
            e.printStackTrace();
        } catch (ClientException e) {
            System.out.println("ErrCode:" + e.getErrCode());
            System.out.println("ErrMsg:" + e.getErrMsg());
            System.out.println("RequestId:" + e.getRequestId());
        }
    }
}
```

- Python
  i. Create a project named emr_openapi_demo_project in the China (Hangzhou) region.

```
#! /usr/bin/env python
#coding=utf-8
from aliyunsdkcore.client import AcsClient
from aliyunsdkcore.acs_exception.exceptions import ClientException
from aliyunsdkcore.acs_exception.exceptions import ServerException
from aliyunsdkemr.request.v20160408.CreateFlowProjectRequest import CreateFlowProject
Request
client = AcsClient('<accessKeyId>', '<accessSecret>', 'cn-hangzhou')
request = CreateFlowProjectRequest()
request.set_accept_format('json')
request.set_Name("emr_openapi_demo_project")
request.set_Description("Create flow project via CreateFlowProject")
response = client.do_action_with_exception(request)
# python2:  print(response)
print(str(response, encoding='utf-8'))
```

Find the ID of the project in the returned information.

```
{
    "RequestId": "BF47231B-29AE-4A4F-A1A3-10205ECD9634",
    "Id": "FP-D18E9976D5A5****"
}
```

ii. Query the clusters that can be associated with the project in the current region.

```
#! /usr/bin/env python
#coding=utf-8
from aliyunsdkcore.client import AcsClient
from aliyunsdkcore.acs_exception.exceptions import ClientException
from aliyunsdkcore.acs_exception.exceptions import ServerException
from aliyunsdkemr.request.v20160408.ListFlowClusterRequest import ListFlowClusterRequ
est
client = AcsClient('<accessKeyId>', '<accessSecret>', 'cn-hangzhou')
request = ListFlowClusterRequest()
request.set_accept_format('json')
request.set_ProjectId("FP-D18E9976D5A5****")
response = client.do_action_with_exception(request)
# python2:  print(response)
print(str(response, encoding='utf-8'))
```

Find the ID of the target cluster in the returned information. For example, if the cluster information is returned in the JSON format, find the cluster ID based on the following path:

```
Clusters -> ClusterInfo -> Id -> Cluster ID
```

iii. Associate the target cluster with the emr_openapi_demo_project project. This way, workflows in the project run in the cluster. You can also set the queue to which jobs are submitted, the users who can submit jobs, and the instances on which jobs run. Jobs can run only on gateway and master instances.

```
#! /usr/bin/env python
#coding=utf-8
from aliyunsdkcore.client import AcsClient
from aliyunsdkcore.acs_exception.exceptions import ClientException
from aliyunsdkcore.acs_exception.exceptions import ServerException
from aliyunsdkemr.request.v20160408.CreateFlowProjectClusterSettingRequest import Cre
ateFlowProjectClusterSettingRequest
client = AcsClient('<accessKeyId>', '<accessSecret>', 'cn-hangzhou')
request = CreateFlowProjectClusterSettingRequest()
request.set_accept_format('json')
request.set_ProjectId("FP-D18E9976D5A5****")
request.set_ClusterId("C-B503DDB15B34****")
response = client.do_action_with_exception(request)
# python2:  print(response)
print(str(response, encoding='utf-8'))
```

iv. Add a RAM user to the project.

The following sample code shows how to add user test to the emr_openapi_demo_project project and grant user test the permissions to develop the project.

```
#! /usr/bin/env python
#coding=utf-8
from aliyunsdkcore.client import AcsClient
from aliyunsdkcore.acs_exception.exceptions import ClientException
from aliyunsdkcore.acs_exception.exceptions import ServerException
from aliyunsdkemr.request.v20160408.CreateFlowProjectUserRequest import CreateFlowPro
jectUserRequest
client = AcsClient('<accessKeyId>', '<accessSecret>', 'cn-hangzhou')
request = CreateFlowProjectUserRequest()
request.set_accept_format('json')
request.set_ProjectId("FP-D18E9976D5A5****")
request.set_Users([
  {
    "UserId": " 24339807068856****",
    "UserName": "test"
  }
])
response = client.do_action_with_exception(request)
# python2:  print(response)
print(str(response, encoding='utf-8'))
```

Related API operations

- Create a data development project
- Query the list of clusters available for data development
- Create project cluster settings
- Add a project user

9.5. Run a job

This topic describes how to call EMR API operations to create and run a job and view the running results.

Prerequisites

- An EMR cluster is created. For more information, see Create a cluster.
- The cluster ID is obtained. For more information, see View the cluster list and cluster details.
- An AccessKey pair is created. For more information, see Obtain an AccessKey pair.
- The required SDK is obtained. To obtain SDK for Java, see Download SDKs. To obtain SDK for Python, see Install SDK.

Scenarios

You have created a project in the China (Hangzhou) region. You want to create and run jobs in the project.

Basic configuration information of your project and cluster:

- The project name is emr_openapi_demo_project. The project ID is FP-D18E9976D5A****. If you do not have a project, create a project first. For more information, see Create and manage a project.
- The project is associated with the emr_openapi_demo cluster. The cluster ID is C-69CB0546800F****.

> **Note**
> - After you call the CreateFlowJob operation to create a job, you can obtain the project ID from the returned information.
> - You can call the ListFlowProject operation to query all projects in the current region and find the project ID in the returned information.

Examples

- Java
  i. Create a Hive_SQL job. When you call the CreateFlowJob operation, you must specify the parameters listed in the following table.

Parameter	Description
RegionId	The ID of the region, such as cn-hangzhou.
ProjectId	The ID of the project.
Name	The custom name of the job, such as emr_openapi_hivejob.
Type	The type of the job. Valid values: MR, Spark, Hive_SQL, Hive, Pig, Sqoop, Spark_SQL, Spark_Streaming, and Shell.
Description	The description of the job.

> **Note** The ClusterId parameter is optional.

```
import com.aliyuncs.DefaultAcsClient;
import com.aliyuncs.IAcsClient;
import com.aliyuncs.exceptions.ClientException;
import com.aliyuncs.exceptions.ServerException;
import com.aliyuncs.profile.DefaultProfile;
import com.google.gson.Gson;
import java.util.*;
import com.aliyuncs.emr.model.v20160408.*;
public class CreateFlowJob {
    public static void main(String[] args) {
        DefaultProfile profile = DefaultProfile.getProfile("cn-hangzhou", "<accessKey
Id>", "<accessSecret>");
        IAcsClient client = new DefaultAcsClient(profile);
        CreateFlowJobRequest request = new CreateFlowJobRequest();
        request.setRegionId("cn-hangzhou");
        request.setProjectId("FP-D18E9976D5A****");
        request.setName("emr_openapi_hivejob");
        request.setDescription("Hive_SQL job created by OpenAPI");
        request.setType("HIVE_SQL");
        request.setAdhoc(false);
        try {
            CreateFlowJobResponse response = client.getAcsResponse(request);
            System.out.println(new Gson().toJson(response));
        } catch (ServerException e) {
            e.printStackTrace();
        } catch (ClientException e) {
            System.out.println("ErrCode:" + e.getErrCode());
            System.out.println("ErrMsg:" + e.getErrMsg());
            System.out.println("RequestId:" + e.getRequestId());
        }
    }
}
```

The job ID is returned.

```
{
    "RequestId": "01B0A835-C6AB-4166-8E43-511514D8FAE0",
    "Id": "FJ-E4157D27791D****"
}
```

ii. Run the job. Call the SubmitFlowJob operation to submit the job. You can run jobs on only one instance at a time. You must specify the parameters listed in the following table.

Parameter	Description
ClusterId	The ID of the cluster in which the job runs.
JobId	The ID of the job. In this example, set this parameter to FJ-E4157D27791D****, which is returned in Step 1.
ProjectId	The ID of the project.

Parameter	Description
RegionId	The ID of the region, such as cn-hangzhou.

```
import com.aliyuncs.DefaultAcsClient;
import com.aliyuncs.IAcsClient;
import com.aliyuncs.exceptions.ClientException;
import com.aliyuncs.exceptions.ServerException;
import com.aliyuncs.profile.DefaultProfile;
import com.google.gson.Gson;
import java.util.*;
import com.aliyuncs.emr.model.v20160408.*;
public class SubmitFlowJob {
    public static void main(String[] args) {
        DefaultProfile profile = DefaultProfile.getProfile("cn-hangzhou", "<accessKey
Id>", "<accessSecret>");
        IAcsClient client = new DefaultAcsClient(profile);
        SubmitFlowJobRequest request = new SubmitFlowJobRequest();
        request.setRegionId("cn-hangzhou");
        request.setProjectId("FP-D18E9976D5A****");
        request.setJobId("FJ-E4157D27791D****");
        request.setClusterId("C-69CB0546800F****");
        try {
            SubmitFlowJobResponse response = client.getAcsResponse(request);
            System.out.println(new Gson().toJson(response));
        } catch (ServerException e) {
            e.printStackTrace();
        } catch (ClientException e) {
            System.out.println("ErrCode:" + e.getErrCode());
            System.out.println("ErrMsg:" + e.getErrMsg());
            System.out.println("RequestId:" + e.getRequestId());
        }
    }
}
```

The ID of the instance on which the job runs.

```
{
    "RequestId": "15BBB0DC-EEC5-4CE4-B4FA-A1D9827F8808",
    "Id": "FJI-54FEBB063136****"
}
```

iii. Call the ListFlowNodeSqlResult operation to query the SQL query results of the instance. You can call this operation only if the job type is Hive_SQL or Spark_SQL.

A maximum of 200 rows can be returned.

You must specify the parameters listed in the following table.

Parameter	Description
RegionId	The ID of the region, such as cn-hangzhou.
ProjectId	The ID of the project.

Parameter	Description
NodeInstanceId	The ID of the instance. In this example, set this parameter to FJI-54FEBB063136****, which is returned in Step 2.

```
import com.aliyuncs.DefaultAcsClient;
import com.aliyuncs.IAcsClient;
import com.aliyuncs.exceptions.ClientException;
import com.aliyuncs.exceptions.ServerException;
import com.aliyuncs.profile.DefaultProfile;
import com.google.gson.Gson;
import java.util.*;
import com.aliyuncs.emr.model.v20160408.*;
public class ListFlowNodeSqlResult {
    public static void main(String[] args) {
        DefaultProfile profile = DefaultProfile.getProfile("cn-hangzhou", "<accessKey
Id>", "<accessSecret>");
        IAcsClient client = new DefaultAcsClient(profile);
        ListFlowNodeSqlResultRequest request = new ListFlowNodeSqlResultRequest();
        request.setRegionId("cn-hangzhou");
        request.setProjectId("FP-D18E9976D5A****");
        request.setNodeInstanceId("FJI-54FEBB063136****");
        try {
            ListFlowNodeSqlResultResponse response = client.getAcsResponse(request);
            System.out.println(new Gson().toJson(response));
        } catch (ServerException e) {
            e.printStackTrace();
        } catch (ClientException e) {
            System.out.println("ErrCode:" + e.getErrCode());
            System.out.println("ErrMsg:" + e.getErrMsg());
            System.out.println("RequestId:" + e.getRequestId());
        }
    }
}
```

iv. Call the DescribeFlowNodeInstance operation to view the details about job running, such as the running status, start and end time, and running duration. You must specify the parameters listed in the following table.

Parameter	Description
RegionId	The ID of the region, such as cn-hangzhou.
ProjectId	The ID of the project.
NodeInstanceId	The ID of the instance. In this example, set this parameter to FJI-54FEBB063136****, which is returned in Step 2.

```
import com.aliyuncs.DefaultAcsClient;
import com.aliyuncs.IAcsClient;
import com.aliyuncs.exceptions.ClientException;
import com.aliyuncs.exceptions.ServerException;
import com.aliyuncs.profile.DefaultProfile;
import com.google.gson.Gson;
import java.util.*;
import com.aliyuncs.emr.model.v20160408.*;
public class DescribeFlowNodeInstance {
    public static void main(String[] args) {
        DefaultProfile profile = DefaultProfile.getProfile("cn-hangzhou", "<accessKey
Id>", "<accessSecret>");
        IAcsClient client = new DefaultAcsClient(profile);
        DescribeFlowNodeInstanceRequest request = new DescribeFlowNodeInstanceRequest
();
        request.setRegionId("cn-hangzhou");
        request.setId("FJI-54FEBB063136****");
        request.setProjectId("FP-D18E9976D5A****");
        try {
            DescribeFlowNodeInstanceResponse response = client.getAcsResponse(request
);
            System.out.println(new Gson().toJson(response));
        } catch (ServerException e) {
            e.printStackTrace();
        } catch (ClientException e) {
            System.out.println("ErrCode:" + e.getErrCode());
            System.out.println("ErrMsg:" + e.getErrMsg());
            System.out.println("RequestId:" + e.getRequestId());
        }
    }
}
```

- Python
  i. Create a Hive_SQL job. You must specify the parameters listed in the following table.

Parameter	Description
RegionId	The ID of the region, such as cn-hangzhou.
ProjectId	The ID of the project.
Name	The custom name of the job, such as emr_openapi_hivejob.
Type	The type of the job. Valid values: MR, Spark, Hive_SQL, Hive, Pig, Sqoop, Spark_SQL, Spark_Streaming, and Shell.
Description	The description of the job.

Note The ClusterId parameter is optional.

```
#! /usr/bin/env python
#coding=utf-8
from aliyunsdkcore.client import AcsClient
from aliyunsdkcore.acs_exception.exceptions import ClientException
from aliyunsdkcore.acs_exception.exceptions import ServerException
from aliyunsdkemr.request.v20160408.CreateFlowJobRequest import CreateFlowJobRequest
client = AcsClient('<accessKeyId>', '<accessSecret>', 'cn-hangzhou')
request = CreateFlowJobRequest()
request.set_accept_format('json')
request.set_ProjectId("FP-D18E9976D5A****")
request.set_Name("emr_openapi_hivejob")
request.set_Description("Hive_SQL job created by OpenAPI")
request.set_Type("HIVE_SQL")
request.set_Adhoc(Flase)
response = client.do_action_with_exception(request)
# python2:  print(response)
print(str(response, encoding='utf-8'))
```

The job ID is returned.

```
{
    "RequestId": "01B0A835-C6AB-4166-8E43-511514D8FAE0",
    "Id": "FJ-E4157D27791D****"
}
```

ii. Run the job. Call the SubmitFlowJob operation to submit the job. You can run jobs on only one instance at a time. You must specify the parameters listed in the following table.

Parameter	Description
ClusterId	The ID of the cluster in which the job runs.
JobId	The ID of the job. In this example, set this parameter to FJ-E4157D27791D****, which is returned in Step 1.
ProjectId	The ID of the project.
RegionId	The ID of the region, such as cn-hangzhou.

```
#! /usr/bin/env python
#coding=utf-8
from aliyunsdkcore.client import AcsClient
from aliyunsdkcore.acs_exception.exceptions import ClientException
from aliyunsdkcore.acs_exception.exceptions import ServerException
from aliyunsdkemr.request.v20160408.SubmitFlowJobRequest import SubmitFlowJobRequest
client = AcsClient('<accessKeyId>', '<accessSecret>', 'cn-hangzhou')
request = SubmitFlowJobRequest()
request.set_accept_format('json')
request.set_ProjectId("FP-D18E9976D5A****")
request.set_JobId("FJ-E4157D27791D****")
request.set_ClusterId("C-69CB0546800F****")
response = client.do_action_with_exception(request)
# python2:  print(response)
print(str(response, encoding='utf-8'))
```

The ID of the instance on which the job runs.

```
{
    "RequestId": "15BBB0DC-EEC5-4CE4-B4FA-A1D9827F8808",
    "Id": "FJI-54FEBB063136****"
}
```

iii. Call the ListFlowNodeSqlResult operation to query the SQL query results of the instance. You can call this operation only if the job type is Hive_SQL or Spark_SQL.

A maximum of 200 rows can be returned.

You must specify the parameters listed in the following table.

Parameter	Description
RegionId	The ID of the region, such as cn-hangzhou.
ProjectId	The ID of the project.
NodeInstanceId	The ID of the instance. In this example, set this parameter to FJI-54FEBB063136****, which is returned in Step 2.

```
#! /usr/bin/env python
#coding=utf-8
from aliyunsdkcore.client import AcsClient
from aliyunsdkcore.acs_exception.exceptions import ClientException
from aliyunsdkcore.acs_exception.exceptions import ServerException
from aliyunsdkemr.request.v20160408.ListFlowNodeSqlResultRequest import ListFlowNodeS
qlResultRequest
client = AcsClient('<accessKeyId>', '<accessSecret>', 'cn-hangzhou')
request = ListFlowNodeSqlResultRequest()
request.set_accept_format('json')
request.set_ProjectId("FP-D18E9976D5A****")
request.set_NodeInstanceId("FJI-54FEBB063136****")
response = client.do_action_with_exception(request)
# python2:  print(response)
print(str(response, encoding='utf-8'))
```

iv. Call the DescribeFlowNodeInstance operation to view the details about job running, such as the running status, start and end time, and running duration. You must specify the parameters listed in the following table.

Parameter	Description
RegionId	The ID of the region, such as cn-hangzhou.
ProjectId	The ID of the project.
NodeInstanceId	The ID of the instance. In this example, set this parameter to FJI-54FEBB063136****, which is returned in Step 2.

```
#! /usr/bin/env python
#coding=utf-8
from aliyunsdkcore.client import AcsClient
from aliyunsdkcore.acs_exception.exceptions import ClientException
from aliyunsdkcore.acs_exception.exceptions import ServerException
from aliyunsdkemr.request.v20160408.DescribeFlowNodeInstanceRequest import DescribeFl
owNodeInstanceRequest
client = AcsClient('<accessKeyId>', '<accessSecret>', 'cn-hangzhou')
request = DescribeFlowNodeInstanceRequest()
request.set_accept_format('json')
request.set_Id("FJI-54FEBB063136****")
request.set_ProjectId("FP-D18E9976D5A****")
response = client.do_action_with_exception(request)
# python2:  print(response)
print(str(response, encoding='utf-8'))
```

Related API operations

- Create a job
- Submit and run a job
- Queries the SQL results of a node instance
- Queries the details of a node instance

9.6. Run a workflow

This topic describes how to call the E-MapReduce (EMR) API to create and run a workflow and view the running results and logs.

Prerequisites

- An EMR cluster is created. For more information, see Create a cluster.
- The cluster ID is obtained. For more information, see View the cluster list and cluster details.
- An AccessKey pair is created. For more information, see Obtain an AccessKey pair.
- The required SDK is obtained. To obtain SDK for Java, see Download SDKs. To obtain SDK for Python, see Install SDK.

Scenarios

You have created a project in the China (Hangzhou) region and created three Hive_SQL jobs that have dependencies with each other in the project.

Basic information of the project and jobs:

- The project name is emr_openapi_demo_project. The project ID is FP-D18E9976D5A****.
- Hive_SQL jobs:
  - customer_logs: The job ID is FJ-79B3F70E23D6****.
  - log_aggregation: The job ID is FJ-CECB36039155****.
  - customer_pic: The job ID is FJ-99CFAE652650****.

Examples:

- Java
  i. In the emr_openapi_demo_project project, create a workflow named new_flow. You can customize a workflow graph.

Parameter	Description
`CreateCluster`	Specifies whether to create a cluster for the workflow based on a cluster template. ■ true: Create a cluster based on a cluster template. In this case, set ClusterId to the ID of the cluster template. ■ false: Run the workflow in an existing cluster. In this case, set ClusterId to the ID of the existing cluster.
`graph`	The information of the workflow graph.

The following code shows the configurations of the graph parameters:

```
{
    "nodes":[
        {
            "shape":"startControlNode",
            "type":"node",
            "size":"80*34",
            "x":500.0,
            "y":250.0,
            "id":"48d474ea",
            "index":0.0,
            "attribute":{"type":"START"}
```

```
        },
        {
            "shape":"hiveSQLJobNode",\
            "type":"node",
            "size":"170*34",
            "x":498.0,
            "y":324.5,
            "id":"cd5eb72d",
            "index":1.0,
            "label":"customer_logs",
            "attribute":{
                "type":"JOB",
                "jobId":"FJ-79B3F70E23D6****",
                "jobType":"HIVE_SQL"
                }
        },
        {
            "shape":"hiveSQLJobNode",
            "type":"node",
            "size":"170*34",
            "trackerPath":"ec5a56bc4a261c22",
            "x":497.0,
            "y":416.5,
            "id":"b308995d",
            "index":2.0,
            "label":"log_aggregation;",
            "attribute":{
                "type":"JOB",
                "jobId":"FJ-CECB36039155****",
                "jobType":"HIVE_SQL"
                }
        },
        {
            "shape":"hiveSQLJobNode",
            "type":"node",
            "size":"170*34",
            "trackerPath":"ec5a56bc4a261c22",
            "x":501.0,
            "y":516.5,
            "id":"35c8d9c5",
            "index":3.0,
            "label":"customer_pic",
            "attribute":{
                "type":"JOB",
                "jobId":"FJ-99CFAE652650****",
                "jobType":"HIVE_SQL"
                },
        },
        {
            "shape":"endControlNode",
            "type":"node",
            "size":"80*34",
            "x":503.0,
            "y":612.5,
```

```
            "id":"65f9c9a4",
            "index":7.0,
            "attribute":{"type":"END"}
        }
    ],
    "edges":
    [
        {
            "source":"48d474ea",
            "sourceAnchor":0.0,
            "target":"cd5eb72d",
            "targetAnchor":0.0,
            "id":"3820959f",
            "index":4.0
        },
        {
            "source":"cd5eb72d",
            "sourceAnchor":1.0,
            "target":"b308995d",
            "targetAnchor":0.0,
            "id":"248f9dd5",
            "index":5.0
        },
        {
            "source":"b308995d",
            "sourceAnchor":1.0,
            "target":"35c8d9c5",
            "targetAnchor":0.0,
            "id":"dd21ddbf",
            "index":6.0
        },
        {
            "source":"35c8d9c5",
            "sourceAnchor":1.0,
            "target":"65f9c9a4",
            "targetAnchor":0.0,
            "id":"7ab0cd5e",
            "index":8.0
        }
        ]
}
```


Note

- The graph code consists of the `nodes` and `edges` parts. You can specify the id parameter based on your business requirements. Make sure that the IDs are unique. `x`, `y`, and `size` specify the position and size of the graph. Each graph must have a START node and an END node.
- You can create a workflow in the EMR console by dragging nodes to the canvas. For more information, see Edit a workflow. Then, you can call the DescribeFlow operation to obtain the graph information from the Graph parameter in the returned information.

Create a workflow.

```
import com.aliyuncs.DefaultAcsClient;
import com.aliyuncs.IAcsClient;
import com.aliyuncs.exceptions.ClientException;
import com.aliyuncs.exceptions.ServerException;
import com.aliyuncs.profile.DefaultProfile;
import com.google.gson.Gson;
import java.util.*;
import com.aliyuncs.emr.model.v20160408.*;
public class CreateFlowForWeb {
    public static void main(String[] args) {
        DefaultProfile profile = DefaultProfile.getProfile("cn-hangzhou", "<accessKey
Id>", "<accessSecret>");
        IAcsClient client = new DefaultAcsClient(profile);
        CreateFlowForWebRequest request = new CreateFlowForWebRequest();
        request.setRegionId("cn-hangzhou");
        request.setProjectId("FP-D18E9976D5A****");
        request.setName("new_flow1");
        request.setDescription("create flow by openAPI");
        request.setCreateCluster(false);
        request.setClusterId("C-B503DDB15B34****");
        request.setGraph("{\"nodes\":[{\"shape\":\"startControlNode\",\"type\":\"node
\",\"size\":\"80*34\",\"spmAnchorId\":\"0.0.0.i0.766645eb2cmNtQ\",\"x\":500.0,\"y\":2
50.0,\"id\":\"48d474ea\",\"index\":0.0,\"attribute\":{\"type\":\"START\"}},{\"shape\"
:\"hiveSQLJobNode\",\"type\":\"node\",\"size\":\"170*34\",\"trackerPath\":\"ec5a56bc4
a261c22\",\"x\":498.0,\"y\":324.5,\"id\":\"cd5eb72d\",\"index\":1.0,\"label\":\"custo
mer_logs\",\"attribute\":{\"type\":\"JOB\",\"jobId\":\"FJ-79B3F70E23D6****\",\"jobTyp
e\":\"HIVE_SQL\"},\"config\":{\"clusterId\":\"\",\"hostName\":\"\"}},{\"shape\":\"hiv
eSQLJobNode\",\"type\":\"node\",\"size\":\"170*34\",\"trackerPath\":\"ec5a56bc4a261c2
2\",\"x\":497.0,\"y\":416.5,\"id\":\"b308995d\",\"index\":2.0,\"label\":\"log_aggrega
tion;\",\"attribute\":{\"type\":\"JOB\",\"jobId\":\"FJ-CECB36039155****\",\"jobType\"
:\"HIVE_SQL\"},\"config\":{\"clusterId\":\"\",\"hostName\":\"\"}},{\"shape\":\"hiveSQ
LJobNode\",\"type\":\"node\",\"size\":\"170*34\",\"trackerPath\":\"ec5a56bc4a261c22\"
,\"x\":501.0,\"y\":516.5,\"id\":\"35c8d9c5\",\"index\":3.0,\"label\":\"customer_pic\"
,\"attribute\":{\"type\":\"JOB\",\"jobId\":\"FJ-99CFAE652650****\",\"jobType\":\"HIVE
_SQL\"},\"config\":{\"clusterId\":\"\",\"hostName\":\"\"}},{\"shape\":\"endControlNod
e\",\"type\":\"node\",\"size\":\"80*34\",\"trackerPath\":\"bb4b171fe9d130b4\",\"x\":5
03.0,\"y\":612.5,\"id\":\"65f9c9a4\",\"index\":7.0,\"attribute\":{\"type\":\"END\"}}]
,\"edges\":[{\"source\":\"48d474ea\",\"sourceAnchor\":0.0,\"target\":\"cd5eb72d\",\"t
argetAnchor\":0.0,\"id\":\"3820959f\",\"index\":4.0},{\"source\":\"cd5eb72d\",\"sourc
eAnchor\":1.0,\"target\":\"b308995d\",\"targetAnchor\":0.0,\"id\":\"248f9dd5\",\"inde
x\":5.0},{\"source\":\"b308995d\",\"sourceAnchor\":1.0,\"target\":\"35c8d9c5\",\"targ
etAnchor\":0.0,\"id\":\"dd21ddbf\",\"index\":6.0},{\"source\":\"35c8d9c5\",\"sourceAn
chor\":1.0,\"target\":\"65f9c9a4\",\"targetAnchor\":0.0,\"id\":\"7ab0cd5e\",\"index\"
:8.0}]}");
        try {
            CreateFlowForWebResponse response = client.getAcsResponse(request);
            System.out.println(new Gson().toJson(response));
        } catch (ServerException e) {
            e.printStackTrace();
        } catch (ClientException e) {
            System.out.println("ErrCode:" + e.getErrCode());
            System.out.println("ErrMsg:" + e.getErrMsg());
```

```
            System.out.println("RequestId:" + e.getRequestId());
        }
    }
}
```

The ID of the workflow is returned.

```
{
    "RequestId": "417BA643-0E5F-456E-8222-B3EB5DD800DF",
    "Id": "F-AC0915556C24****"
}
```

ii. Submit the workflow.

```
import com.aliyuncs.DefaultAcsClient;
import com.aliyuncs.IAcsClient;
import com.aliyuncs.exceptions.ClientException;
import com.aliyuncs.exceptions.ServerException;
import com.aliyuncs.profile.DefaultProfile;
import com.google.gson.Gson;
import java.util.*;
import com.aliyuncs.emr.model.v20160408.*;
public class SubmitFlow {
    public static void main(String[] args) {
        DefaultProfile profile = DefaultProfile.getProfile("cn-hangzhou", "<accessKey
Id>", "<accessSecret>");
        IAcsClient client = new DefaultAcsClient(profile);
        SubmitFlowRequest request = new SubmitFlowRequest();
        request.setRegionId("cn-hangzhou");
        request.setProjectId("FP-D18E9976D5A****");
        request.setFlowId("F-AC0915556C24****");
        try {
            SubmitFlowResponse response = client.getAcsResponse(request);
            System.out.println(new Gson().toJson(response));
        } catch (ServerException e) {
            e.printStackTrace();
        } catch (ClientException e) {
            System.out.println("ErrCode:" + e.getErrCode());
            System.out.println("ErrMsg:" + e.getErrMsg());
            System.out.println("RequestId:" + e.getRequestId());
        }
    }
}
```

The ID of the instance on which the workflow runs is returned.

```
{
    "Data": "FI-521925BE9816****",
    "InstanceId": "FI-521925BE9816****",
    "RequestId": "DBD1D138-C7F0-4D81-B3F2-0B4512E4A74C",
    "Id": "FI-521925BE9816****"
}
```

iii. Query the information of the instance on which the workflow runs. View the running status of the instance and that of each workflow node in the returned information.

```
import com.aliyuncs.DefaultAcsClient;
import com.aliyuncs.IAcsClient;
import com.aliyuncs.exceptions.ClientException;
import com.aliyuncs.exceptions.ServerException;
import com.aliyuncs.profile.DefaultProfile;
import com.google.gson.Gson;
import java.util.*;
import com.aliyuncs.emr.model.v20160408.*;
public class DescribeFlowInstance {
    public static void main(String[] args) {
        DefaultProfile profile = DefaultProfile.getProfile("cn-hangzhou", "<accessKey
Id>", "<accessSecret>");
        IAcsClient client = new DefaultAcsClient(profile);
        DescribeFlowInstanceRequest request = new DescribeFlowInstanceRequest();
        request.setRegionId("cn-hangzhou");
        request.setId("FI-521925BE9816****");
        request.setProjectId("FP-D18E9976D5A****");
        try {
            DescribeFlowInstanceResponse response = client.getAcsResponse(request);
            System.out.println(new Gson().toJson(response));
        } catch (ServerException e) {
            e.printStackTrace();
        } catch (ClientException e) {
            System.out.println("ErrCode:" + e.getErrCode());
            System.out.println("ErrMsg:" + e.getErrMsg());
            System.out.println("RequestId:" + e.getRequestId());
        }
    }
}
```

iv. You can call the following operations based on the obtained running status of each workflow node:
   - DescribeFlowNodeInstance: queries the details of the instance on which a workflow node runs.
   - DescribeFlowNodeInstanceLauncherLog: queries the launcher log of the instance on which a workflow node runs.
   - ListFlowNodeInstanceContainerStatus: queries the status of the container of the instance on which a workflow node runs.

- Python
  i. In the emr_openapi_demo_project project, create a workflow named new_flow. You can customize a workflow graph.

Parameter	Description
`CreateCluster`	Specifies whether to create a cluster for the workflow based on a cluster template. ■ true: Create a cluster based on a cluster template. In this case, set ClusterId to the ID of the cluster template. The ID is in the format of C-xxx. ■ false: Run the workflow in an existing cluster. In this case, set ClusterId to the ID of the existing cluster. The ID is in the format of C-xxx.
`graph`	The information of the workflow graph.

The following code shows the configurations of the graph parameters:

```
{
    "nodes":[
        {
            "shape":"startControlNode",
            "type":"node",
            "size":"80*34",
            "x":500.0,
            "y":250.0,
            "id":"48d474ea",
```

```
            "index":0.0,
            "attribute":{"type":"START"}
        },
        {
            "shape":"hiveSQLJobNode",\
            "type":"node",
            "size":"170*34",
            "x":498.0,
            "y":324.5,
            "id":"cd5eb72d",
            "index":1.0,
            "label":"customer_logs",
            "attribute":{
                "type":"JOB",
                "jobId":"FJ-79B3F70E23D6****",
                "jobType":"HIVE_SQL"
                }
        },
        {
            "shape":"hiveSQLJobNode",
            "type":"node",
            "size":"170*34",
            "trackerPath":"ec5a56bc4a261c22",
            "x":497.0,
            "y":416.5,
            "id":"b308995d",
            "index":2.0,
            "label":"log_aggregation;",
            "attribute":{
                "type":"JOB",
                "jobId":"FJ-CECB36039155****",
                "jobType":"HIVE_SQL"
                }
        },
        {
            "shape":"hiveSQLJobNode",
            "type":"node",
            "size":"170*34",
            "trackerPath":"ec5a56bc4a261c22",
            "x":501.0,
            "y":516.5,
            "id":"35c8d9c5",
            "index":3.0,
            "label":"customer_pic",
            "attribute":{
                "type":"JOB",
                "jobId":"FJ-99CFAE652650****",
                "jobType":"HIVE_SQL"
                },
        },
        {
            "shape":"endControlNode",
            "type":"node",
            "size":"80*34",
```

```
            "x":503.0,
            "y":612.5,
            "id":"65f9c9a4",
            "index":7.0,
            "attribute":{"type":"END"}
        }
    ],
    "edges":
    [
        {
            "source":"48d474ea",
            "sourceAnchor":0.0,
            "target":"cd5eb72d",
            "targetAnchor":0.0,
            "id":"3820959f",
            "index":4.0
        },
        {
            "source":"cd5eb72d",
            "sourceAnchor":1.0,
            "target":"b308995d",
            "targetAnchor":0.0,
            "id":"248f9dd5",
            "index":5.0
        },
        {
            "source":"b308995d",
            "sourceAnchor":1.0,
            "target":"35c8d9c5",
            "targetAnchor":0.0,
            "id":"dd21ddbf",
            "index":6.0
        },
        {
            "source":"35c8d9c5",
            "sourceAnchor":1.0,
            "target":"65f9c9a4",
            "targetAnchor":0.0,
            "id":"7ab0cd5e",
            "index":8.0
        }
        ]
}
```

> **Note**
>
> - The graph code consists of the `nodes` and `edges` parts. You can specify the id parameter based on your business requirements. Make sure that the IDs are unique. `x`, `y`, and `size` specify the position and size of the graph. Each graph must have a START node and an END node.
> - You can create a workflow in the EMR console by dragging nodes to the canvas. For more information, see Edit a workflow. Then, you can call the DescribeFlow operation to obtain the graph information from the Graph parameter in the returned information.

Create a workflow.

```
#!/usr/bin/env python
#coding=utf-8
from aliyunsdkcore.client import AcsClient
from aliyunsdkcore.acs_exception.exceptions import ClientException
from aliyunsdkcore.acs_exception.exceptions import ServerException
from aliyunsdkemr.request.v20160408.CreateFlowForWebRequest import CreateFlowForWebRe
quest
client = AcsClient('<accessKeyId>', '<accessSecret>', 'cn-hangzhou')
request = CreateFlowForWebRequest()
request.set_accept_format('json')
request.set_ProjectId("FP-D18E9976D5A****")
request.set_Name("new_flow1")
request.set_Description("create flow by openAPI")
request.set_CreateCluster(False)
request.set_ClusterId("C-B503DDB15B34****")
request.set_Graph(" {\"nodes\":[{\"shape\":\"startControlNode\",\"type\":\"node\",\"s
ize\":\"80*34\",\"spmAnchorId\":\"0.0.0.i0.766645eb2cmNtQ\",\"x\":500.0,\"y\":250.0,\
"id\":\"48d474ea\",\"index\":0.0,\"attribute\":{\"type\":\"START\"}},{\"shape\":\"hiv
eSQLJobNode\",\"type\":\"node\",\"size\":\"170*34\",\"trackerPath\":\"ec5a56bc4a261c2
2\",\"x\":498.0,\"y\":324.5,\"id\":\"cd5eb72d\",\"index\":1.0,\"label\":\"customer_lo
gs\",\"attribute\":{\"type\":\"JOB\",\"jobId\":\"FJ-79B3F70E23D6****\",\"jobType\":\"
HIVE_SQL\"},\"config\":{\"clusterId\":\"\",\"hostName\":\"\"}},{\"shape\":\"hiveSQLJo
bNode\",\"type\":\"node\",\"size\":\"170*34\",\"trackerPath\":\"ec5a56bc4a261c22\",\"
x\":497.0,\"y\":416.5,\"id\":\"b308995d\",\"index\":2.0,\"label\":\"log_aggregation;\
",\"attribute\":{\"type\":\"JOB\",\"jobId\":\"FJ-CECB36039155****\",\"jobType\":\"HIV
E_SQL\"},\"config\":{\"clusterId\":\"\",\"hostName\":\"\"}},{\"shape\":\"hiveSQLJobNo
de\",\"type\":\"node\",\"size\":\"170*34\",\"trackerPath\":\"ec5a56bc4a261c22\",\"x\"
:501.0,\"y\":516.5,\"id\":\"35c8d9c5\",\"index\":3.0,\"label\":\"customer_pic\",\"att
ribute\":{\"type\":\"JOB\",\"jobId\":\"FJ-99CFAE652650****\",\"jobType\":\"HIVE_SQL\"
},\"config\":{\"clusterId\":\"\",\"hostName\":\"\"}},{\"shape\":\"endControlNode\",\"
type\":\"node\",\"size\":\"80*34\",\"trackerPath\":\"bb4b171fe9d130b4\",\"x\":503.0,\
"y\":612.5,\"id\":\"65f9c9a4\",\"index\":7.0,\"attribute\":{\"type\":\"END\"}}],\"edg
es\":[{\"source\":\"48d474ea\",\"sourceAnchor\":0.0,\"target\":\"cd5eb72d\",\"targetA
nchor\":0.0,\"id\":\"3820959f\",\"index\":4.0},{\"source\":\"cd5eb72d\",\"sourceAncho
r\":1.0,\"target\":\"b308995d\",\"targetAnchor\":0.0,\"id\":\"248f9dd5\",\"index\":5.
0},{\"source\":\"b308995d\",\"sourceAnchor\":1.0,\"target\":\"35c8d9c5\",\"targetAnch
or\":0.0,\"id\":\"dd21ddbf\",\"index\":6.0},{\"source\":\"35c8d9c5\",\"sourceAnchor\"
:1.0,\"target\":\"65f9c9a4\",\"targetAnchor\":0.0,\"id\":\"7ab0cd5e\",\"index\":8.0}]
}");
response = client.do_action_with_exception(request)
# python2:  print(response)
print(str(response, encoding='utf-8'))
```

The ID of the workflow is returned.

```
{
    "RequestId": "417BA643-0E5F-456E-8222-B3EB5DD800DF",
    "Id": "F-AC0915556C24****"
}
```

ii. Submit the workflow.

```
#!/usr/bin/env python
#coding=utf-8
from aliyunsdkcore.client import AcsClient
from aliyunsdkcore.acs_exception.exceptions import ClientException
from aliyunsdkcore.acs_exception.exceptions import ServerException
from aliyunsdkemr.request.v20160408.SubmitFlowRequest import SubmitFlowRequest
client = AcsClient('<accessKeyId>', '<accessSecret>', 'cn-hangzhou')
request = SubmitFlowRequest()
request.set_accept_format('json')
request.set_ProjectId("FP-D18E9976D5A****")
request.set_FlowId("F-AC0915556C24****")
response = client.do_action_with_exception(request)
# python2:  print(response)
print(str(response, encoding='utf-8'))
```

The ID of the instance on which the workflow runs is returned.

```
{
    "Data": "FI-521925BE9816****",
    "InstanceId": "FI-521925BE9816****",
    "RequestId": "DBD1D138-C7F0-4D81-B3F2-0B4512E4A74C",
    "Id": "FI-521925BE9816****"
}
```

iii. Query the information of the instance on which the workflow runs. View the running status of the instance and that of each workflow node in the returned information.

```
#!/usr/bin/env python
#coding=utf-8
from aliyunsdkcore.client import AcsClient
from aliyunsdkcore.acs_exception.exceptions import ClientException
from aliyunsdkcore.acs_exception.exceptions import ServerException
from aliyunsdkemr.request.v20160408.DescribeFlowInstanceRequest import DescribeFlowIn
stanceRequest
client = AcsClient('<accessKeyId>', '<accessSecret>', 'cn-hangzhou')
request = DescribeFlowInstanceRequest()
request.set_accept_format('json')
request.set_Id("FI-521925BE9816****")
request.set_ProjectId("FP-D18E9976D5A****")
response = client.do_action_with_exception(request)
# python2:  print(response)
print(str(response, encoding='utf-8'))
```

iv. You can call the following operations based on the obtained running status of each workflow node:

- DescribeFlowNodeInstance: queries the details of the instance on which a workflow node runs.
- DescribeFlowNodeInstanceLauncherLog: queries the launcher log of the instance on which a workflow node runs.
- ListFlowNodeInstanceContainerStatus: queries the status of the container of the instance on which a workflow node runs.

Related API operations

- Create a workflow
- Submit a running workflow
- Queries the information of a workflow
- Obtains the information about a workflow instance
- Queries the details of a node instance
- Query the initiator logs of a node instance
- Queries the container status details of a node instance