弹性 MapReduce

API 文档

产品文档

腾讯云

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API 文档

History

最近更新时间：2024-04-20 14:35:56

Release 26

Release time: 2024-04-20 14:35:52

Release updates:

Improvement to existing documentation.

Modified APIs:

- ScaleOutCluster
  - New input parameters:ScaleOutServiceConfGroupsInfo

New data structures:

- ScaleOutServiceConfGroupsInfo

Release 25

Release time: 2024-01-09 10:47:05

Release updates:

Improvement to existing documentation.

New APIs:

- DescribeAutoScaleRecords
- DescribeHiveQueries
- ModifyResourcesTags
- ModifyUserManagerPwd

New data structures:

- AutoScaleRecord
- ClusterIDToFlowID
- HiveQuery

- KeyValue
- ModifyResourceTags

Modified data structures:

- NodeHardwareInfo
  - New members:ServicesStatus
- PreExecuteFileSettings
  - New members:Remark

Release 24

Release time: 2023-06-26 16:58:33

Release updates:

Improvement to existing documentation.

Modified APIs:

- StartStopServiceOrMonitor
  - New input parameters:StrategyConfig

New data structures:

- StrategyConfig

Release 23

Release time: 2023-04-17 17:11:20

Release updates:

Improvement to existing documentation.

New APIs:

- StartStopServiceOrMonitor
- TerminateClusterNodes

New data structures:

- ComponentBasicRestartInfo

- OpScope
- ServiceBasicRestartInfo

Release 22

Release time: 2023-04-07 14:15:21

Release updates:

Improvement to existing documentation.

Modified data structures:

- EmrListInstance
  - New members:IsSupportOutsideCluster

Release 21

Release time: 2023-02-22 15:32:06

Release updates:

Improvement to existing documentation.

Modified data structures:

- ClusterInstancesInfo
  - New members:IsCvmReplace

Release 20

Release time: 2023-01-10 16:44:24

Release updates:

Improvement to existing documentation.

Modified APIs:

- InquiryPriceCreateInstance
  - New output parameters:PriceList
- InquiryPriceScaleOutInstance
  - New output parameters:MultipleEmrPrice

New data structures:

- EmrPrice
- NodeDetailPriceResult
- PartDetailPriceItem
- SoftDependInfo
- ZoneDetailPriceResult

Modified data structures:

- EmrListInstance
  - New members:OutSideSoftInfo

Release 19

Release time: 2022-12-29 17:03:19

Release updates:

Improvement to existing documentation.

New APIs:

- CreateCluster
- ScaleOutCluster

New data structures:

- AllNodeResourceSpec
- CustomMetaDBInfo
- DependService
- DiskSpecInfo
- InstanceChargePrepaid
- NodeResourceSpec
- PodNewParameter
- PodNewSpec
- PodSpecInfo
- ScaleOutNodeConfig
- SceneSoftwareConfig
- ScriptBootstrapActionConfig
- VirtualPrivateCloud

- ZoneResourceConfiguration

Release 18

Release time: 2022-12-12 11:44:38

Release updates:

Improvement to existing documentation.

Modified APIs:

- InquiryPriceUpdateInstance
  - New input parameters:ResourceIdList
  - New output parameters:PriceDetail
- ModifyResourceScheduleConfig
  - New output parameters:Data

New data structures:

- PriceDetail

Modified data structures:

- NodeHardwareInfo
  - New members:DisableApiTermination, TradeVersion
- Placement
  - **Modified members:** ProjectId

Release 17

Release time: 2022-11-04 15:11:31

Release updates:

Improvement to existing documentation.

Modified APIs:

- ScaleOutInstance
  - New input parameters:AutoRenew

Modified data structures:

- EmrListInstance
  - New members:IsHandsCluster

Release 16

Release time: 2022-09-23 16:12:51

Release updates:

Improvement to existing documentation.

Modified APIs:

- DescribeClusterNodes
  - New input parameters:OrderField, Asc

Modified data structures:

- NodeHardwareInfo
  - New members:CurrentTime, IsFederation, DeviceName, ServiceClient

Release 15

Release time: 2022-08-02 11:35:51

Release updates:

Improvement to existing documentation.

New APIs:

- DescribeEmrApplicationStatics
- InquiryPriceScaleOutInstance
- ScaleOutInstance
- TerminateInstance

New data structures:

- ApplicationStatics
- DynamicPodSpec
- HostVolumeContext

- PersistentVolumeContext
- PodParameter
- PodSpec
- PodVolume
- PriceResource

Release 14

Release time: 2022-06-15 16:27:02

Release updates:

Improvement to existing documentation.

Modified APIs:

- AddUsersForUserManager
  - New input parameters:InstanceId
  - New output parameters:SuccessUserList, FailedUserList
- DescribeUsersForUserManager
  - New input parameters:InstanceId, PageNo, PageSize, UserManagerFilter
  - New output parameters:TotalCnt, UserManagerUserList

New data structures:

- UserManagerFilter
- UserManagerUserBriefInfo

Release 13

Release time: 2022-06-01 17:09:14

Release updates:

Improvement to existing documentation.

New APIs:

- AddUsersForUserManager
- DescribeInstancesList
- DescribeUsersForUserManager

Modified APIs:

- CreateInstance
  - New input parameters:VersionID, MultiZone, MultiZoneSettings
  - **Modified input parameters:** VPCSettings, ResourceSpec, Placement
- InquiryPriceCreateInstance
  - New input parameters:VersionID, MultiZoneSettings
  - **Modified input parameters:** ResourceSpec, Placement, VPCSettings

New data structures:

- EmrListInstance
- Filters
- MultiZoneSetting
- ShortNodeInfo
- SubnetInfo
- TopologyInfo
- UserInfoForUserManager

Modified data structures:

- ClusterInstancesInfo
  - New members:UniqVpcId, UniqSubnetId, TopologyInfoList, IsMultiZoneCluster
- NodeHardwareInfo
  - New members:RootStorageType, Zone, SubnetInfo, Clients

Release 12

Release time: 2022-05-18 16:09:04

Release updates:

Improvement to existing documentation.

New APIs:

- DescribeResourceSchedule
- ModifyResourceScheduleConfig
- ModifyResourceScheduler

Deleted APIs:

- InquiryPriceScaleOutInstance
- ScaleOutInstance
- TerminateInstance

Deleted data structures:

- DynamicPodSpec
- HostVolumeContext
- PersistentVolumeContext
- PodParameter
- PodSpec
- PodVolume
- PriceResource

Release 11

Release time: 2022-03-16 14:43:56

Release updates:

Improvement to existing documentation.

Modified APIs:

- CreateInstance
  - New input parameters:ExternalService

New data structures:

- ClusterExternalServiceInfo

Modified data structures:

- ClusterInstancesInfo
  - New members:ClusterExternalServiceInfo
- EmrProductConfigOutter
  - New members:PublicKeyId

Release 10

Release time: 2022-01-23 10:30:20

Release updates:

Improvement to existing documentation.

Modified APIs:

- InquiryPriceCreateInstance
  - New input parameters:ExternalService

New data structures:

- CustomServiceDefine
- ExternalService

Release 9

Release time: 2021-12-28 10:24:45

Release updates:

Improvement to existing documentation.

Modified APIs:

- CreateInstance
  - New input parameters:SceneName
- InquiryPriceCreateInstance
  - New input parameters:SceneName

Modified data structures:

- ClusterInstancesInfo
  - New members:SceneName, SceneServiceClass, SceneEmrVersion, DisplayName, VpcName, SubnetName

Release 8

Release time: 2021-08-03 10:38:47

Release updates:

Improvement to existing documentation.

Modified APIs:

- CreateInstance
  - New output parameters:InstanceId
- InquiryPriceRenewInstance
  - New input parameters:ModifyPayMode
- ScaleOutInstance
  - New input parameters:StartServiceAfterScaleOut

Modified data structures:

- NodeHardwareInfo
  - New members:SupportModifyPayMode
- PodSpec
  - New members:VpcId, SubnetId

Release 7

Release time: 2021-07-12 18:38:46

Release updates:

Improvement to existing documentation.

Modified data structures:

- ClusterInstancesInfo
  - New members:Zone
- EmrProductConfigOutter
  - New members:ApplicationRole, SecurityGroups

Release 6

Release time: 2021-05-25 16:29:20

Release updates:

Improvement to existing documentation.

Modified APIs:

- InquiryPriceScaleOutInstance
  - New input parameters:MasterCount

Release 5

Release time: 2021-04-15 17:14:15

Release updates:

Improvement to existing documentation.

Modified APIs:

- ScaleOutInstance
  - New input parameters:PodParameter, MasterCount

New data structures:

- DynamicPodSpec
- PodParameter

Modified data structures:

- NodeHardwareInfo
  - New members:IsDynamicSpec, DynamicPodSpec
- PodSpec
  - New members:IsDynamicSpec, DynamicPodSpec

Release 4

Release time: 2020-11-13 19:48:28

Release updates:

Improvement to existing documentation.

Modified APIs:

- CreateInstance
  - New input parameters:ApplicationRole

Release 3

Release time: 2020-10-16 18:31:57

Release updates:

Improvement to existing documentation.

Modified APIs:

- ScaleOutInstance
  - New input parameters:ClickHouseClusterName, ClickHouseClusterType, YarnNodeLabel

Release 2

Release time: 2020-09-25 11:36:56

Release updates:

Improvement to existing documentation.

Modified data structures:

- PersistentVolumeContext
  - New members:DiskNum

Existing Release

Release time: 2020-07-30 19:57:08

Existing APIs/data structures are as follows:

Improvement to existing documentation.

Existing APIs:

- CreateInstance
- DescribeClusterNodes
- DescribeInstances
- InquiryPriceCreateInstance
- InquiryPriceRenewInstance
- InquiryPriceScaleOutInstance
- InquiryPriceUpdateInstance
- ScaleOutInstance
- TerminateInstance
- TerminateTasks

Existing data structures:

- COSSettings
- CdbInfo
- ClusterInstancesInfo
- CustomMetaInfo
- EmrProductConfigOutter
- LoginSettings
- MultiDisk
- MultiDiskMC
- NewResourceSpec
- NodeHardwareInfo
- OutterResource
- Placement
- PodSpec
- PreExecuteFileSettings
- PriceResource
- Resource
- SearchItem
- Tag
- UpdateInstanceSettings
- VPCSettings

Introduction

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Tencent Cloud Elastic MapReduce (EMR) is a cloud-hosted Hadoop service that features Hadoop cluster deployment, software installation, configuration modification, monitoring and alarming, and auto-scaling, providing individual and enterprise users with a secure and stable big data processing solution.

API Category

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Cluster Resource Management APIs

API Name	Feature	Frequency Limit (maximum requests per second)
CreateCluster	Creates EMR cluster instances	20
CreateInstance	Creates EMR instance	20
DescribeClusterNodes	Queries the information of nodes in a cluster	20
DescribeInstances	Queries the information of instances in a cluster	20
DescribeInstancesList	Queries the cluster list	20
InquiryPriceCreateInstance	Queries price of instance creation	20
InquiryPriceRenewInstance	Queries the price for renewal	20
InquiryPriceScaleOutInstance	Queries price of scale-out	20
InquiryPriceUpdateInstance	Queries price of scaling	20
ScaleOutCluster	Scales out clusters	20
ScaleOutInstance	Scales out instances	20
TerminateInstance	Terminates EMR instances	20
TerminateTasks	Terminates a task node	20
TerminateClusterNodes	Terminates cluster nodes	20

Cluster Services APIs

API Name	Feature	Frequency Limit (maximum requests per second)

DescribeResourceSchedule	Queries the data of YARN Resource Scheduling	20
ModifyResourceScheduleConfig	Modifies the resource configuration of YARN Resource Scheduling	20
ModifyResourceScheduler	Changes the resource scheduler of YARN	20
StartStopServiceOrMonitor	Starts or stops the monitor or services.	20

User Management APIs

API Name	Feature	Frequency Limit (maximum requests per second)
AddUsersForUserManager	Adds the user list	20
DescribeUsersForUserManager	Queries the user list	20
ModifyUserManagerPwd	Changes user password (user management).	20

Data Inquiry APIs

API Name	Feature	Frequency Limit (maximum requests per second)
DescribeHiveQueries	Inquiries Hive query data	20

Autoscaling APIs

API Name	Feature	Frequency Limit (maximum requests per second)
DescribeAutoScaleRecords	Inquiries autoscaling records.	20

Other APIs

API Name	Feature	Frequency Limit (maximum requests per second)
DescribeEmrApplicationStatics	Queries the statistics of YARN tasks	20
ModifyResourcesTags	Forcibly modifies tags.	20

Making API Requests
Request Structure

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1. Service Address

The API supports access from either a nearby region (at emr.tencentcloudapi.com) or a specified region (at emr.ap-guangzhou.tencentcloudapi.com for Guangzhou, for example).

We recommend using the domain name to access the nearest server. When you call an API, the request is automatically resolved to a server in the region **nearest** to the location where the API is initiated. For example, when you initiate an API request in Guangzhou, this domain name is automatically resolved to a Guangzhou server, the result is the same as that of specifying the region in the domain like "emr.ap-guangzhou.tencentcloudapi.com".

Note: For latency-sensitive businesses, we recommend that you specify the region in the domain name.

Tencent Cloud currently supports the following regions:

Hosted region	Domain name
Local access region (recommended, only for non-financial availability zones)	emr.tencentcloudapi.com
South China (Guangzhou)	emr.ap-guangzhou.tencentcloudapi.com
East China (Shanghai)	emr.ap-shanghai.tencentcloudapi.com
North China (Beijing)	emr.ap-beijing.tencentcloudapi.com
Southwest China (Chengdu)	emr.ap-chengdu.tencentcloudapi.com
Southwest China (Chongqing)	emr.ap-chongqing.tencentcloudapi.com
Hong Kong, Macao, Taiwan (Hong Kong, China)	emr.ap-hongkong.tencentcloudapi.com
Southeast Asia (Singapore)	emr.ap-singapore.tencentcloudapi.com
Southeast Asia (Bangkok)	emr.ap-bangkok.tencentcloudapi.com

South Asia (Mumbai)	emr.ap-mumbai.tencentcloudapi.com
Northeast Asia (Seoul)	emr.ap-seoul.tencentcloudapi.com
Northeast Asia (Tokyo)	emr.ap-tokyo.tencentcloudapi.com
U.S. East Coast (Virginia)	emr.na-ashburn.tencentcloudapi.com
U.S. West Coast (Silicon Valley)	emr.na-siliconvalley.tencentcloudapi.com
North America (Toronto)	emr.na-toronto.tencentcloudapi.com
Europe (Frankfurt)	emr.eu-frankfurt.tencentcloudapi.com

2. Communications Protocol

All the Tencent Cloud APIs communicate via HTTPS, providing highly secure communication tunnels.

3. Request Methods

Supported HTTP request methods:

- POST (recommended)
- GET

The Content-Type types supported by POST requests:

- application/json (recommended). The TC3-HMAC-SHA256 signature algorithm must be used.
- application/x-www-form-urlencoded. The HmacSHA1 or HmacSHA256 signature algorithm must be used.
- multipart/form-data (only supported by certain APIs). You must use TC3-HMAC-SHA256 to calculate the signature.

The size of a GET request packet is up to 32 KB. The size of a POST request is up to 1 MB when the HmacSHA1 or HmacSHA256 signature algorithm is used, and up to 10 MB when TC3-HMAC-SHA256 is used.

4. Character Encoding

Only UTF-8 encoding is used.

Common Params

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Common parameters are used for all APIs authenticating requestors. Common parameters must be included in all API requests, and they will not be described in individual API documents.

The exact contents of the common parameters will vary depending on the version of the signature method you use.

Common parameters for Signature Algorithm v3

When the TC3-HMAC-SHA256 algorithm is used, the common parameters should be uniformly placed in the HTTP request header, as shown below:

Parameter Name	Type	Required	Description
X-TC-Action	String	Yes	The name of the API for the desired operation. For the specific value, see description of common parameter `Action` in the input parameters in r documentation. For example, the API for querying the CVM instance list i `DescribeInstances` .
X-TC-Region	String	Yes	Region parameter, which is used to identify the region to which the data y work with belongs. For values supported for an API, see the description c parameter `Region` in the input parameters in related API documentati parameter is not required for some APIs (which will be indicated in relate documentation), and will not take effect even it is passed.
X-TC-Timestamp	Integer	Yes	The current UNIX timestamp that records the time when the API request for example, 1529223702. Note: If the difference between the UNIX times server time is greater than 5 minutes, a signature expiration error may oc
X-TC-Version	String	Yes	API version of the action. For the valid values, see the description of the c parameter `Version` in the API documentation. For example, the versi 2017-03-12.
Authorization	String	Yes	The HTTP authentication request header, for example: TC3-HMAC-SHA256 Credential=AKIDEXAMPLE/Date/service/tc3_requ SignedHeaders=content-type;host, Signature=fe5f80f77d5fa3beca038a248ff027d0445342fe2855ddc96317 Here: - TC3-HMAC-SHA256: Signature method, currently fixed as this value; - Credential: Signature credential; AKIDEXAMPLE is the SecretId; Date i UTC time, and this value must match the value of X-TC-Timestamp (a co

			parameter) in UTC time format; service is the name of the product/service generally a domain name prefix. For example, a domain name cvm.tencen refers to the CVM product and the value would be cvm; - SignedHeaders: The headers that contains the authentication informatic type and host are the required headers; - Signature: Signature digest.
X-TC-Token	String	No	The token used for a temporary certificate. It must be used with a tempor can obtain the temporary key and token by calling a CAM API. No token i a long-term key.

Assuming you want to query the list of Cloud Virtual Machine instances in the Guangzhou region, the request structure in the form of request URL, request header and request body may be as follows:

Example of an HTTP GET request structure:

```
https://cvm.tencentcloudapi.com/?Limit=10&Offset=0

Authorization: TC3-HMAC-SHA256 Credential=AKIDz8krbsJ5yKBZQpn74WFkmLPx3EXAMPLE/20
18-10-09/cvm/tc3_request, SignedHeaders=content-type;host, Signature=5da7a33f6993
f0614b047e5df4582db9e9bf4672ba50567dba16c6ccf174c474
Content-Type: application/x-www-form-urlencoded
Host: cvm.tencentcloudapi.com
X-TC-Action: DescribeInstances
X-TC-Version: 2017-03-12
X-TC-Timestamp: 1539084154
X-TC-Region: ap-guangzhou
```

The following example shows you how to structure an HTTP POST (application/json) request:

```
https://cvm.tencentcloudapi.com/

Authorization: TC3-HMAC-SHA256 Credential=AKIDEXAMPLE/2018-05-30/cvm/tc3_request,
SignedHeaders=content-type;host, Signature=582c400e06b5924a6f2b5d7d672d79c15b1316
2d9279b0855cfba6789a8edb4c
Content-Type: application/json
Host: cvm.tencentcloudapi.com
X-TC-Action: DescribeInstances
X-TC-Version: 2017-03-12
X-TC-Timestamp: 1527672334
X-TC-Region: ap-guangzhou

{"Offset":0,"Limit":10}
```

Example of an HTTP POST (multipart/form-data) request structure (only supported by specific APIs):

```
https://cvm.tencentcloudapi.com/

Authorization: TC3-HMAC-SHA256 Credential=AKIDEXAMPLE/2018-05-30/cvm/tc3_request,
SignedHeaders=content-type;host, Signature=582c400e06b5924a6f2b5d7d672d79c15b1316
2d9279b0855cfba6789a8edb4c
Content-Type: multipart/form-data; boundary=58731222010402
Host: cvm.tencentcloudapi.com
X-TC-Action: DescribeInstances
X-TC-Version: 2017-03-12
X-TC-Timestamp: 1527672334
X-TC-Region: ap-guangzhou

--58731222010402
Content-Disposition: form-data; name="Offset"

0
--58731222010402
Content-Disposition: form-data; name="Limit"

10
--58731222010402--
```

Common parameters for Signature Algorithm v1

To adopt the HmacSHA1 and HmacSHA256 signature methods, common parameters must be put into the request string, as shown below:

Parameter Name	Type	Required	Description
Action	String	Yes	The name of the API for the desired operation. For the specific value, see the description of common parameter `Action` in the input parameters in related API documentation. For example, the API for querying the CVM instance list is `DescribeInstances`.
Region	String	Yes	Region parameter, which is used to identify the region to which the data you want to work with belongs. For values supported for an API, see the description of common parameter `Region` in the input parameters in related API documentation. Note: This parameter is not required for some APIs (which will be indicated in related API documentation), and will not take effect even if it is passed.

Timestamp	Integer	Yes	The current UNIX timestamp that records the time when the API request was initiated, for example, 1529223702. If the difference between the value and the current system time is too large, a signature expiration error may occur.
Nonce	Integer	Yes	A random positive integer used along with `Timestamp` to prevent replay attacks.
SecretId	String	Yes	The identifying SecretId obtained on the Cloud API Key page. A SecretId corresponds to a unique SecretKey which is used to generate the request signature (Signature).
Signature	String	Yes	Request signature used to verify the validity of this request. This is calculated based on the actual input parameters. For more information about how this is calculated, see the API authentication documentation.
Version	String	Yes	API version of the action. For the valid values, see the description of the common input parameter `Version` in the API documentation. For example, the version of CVM is 2017-03-12.
SignatureMethod	String	No	Signature method. Currently, only HmacSHA256 and HmacSHA1 are supported. The HmacSHA256 algorithm is used to verify the signature only when this parameter is specified as HmacSHA256. In other cases, the signature is verified with HmacSHA1.
Token	String	No	The token used for a temporary certificate. It must be used with a temporary key. You can obtain the temporary key and token by calling a CAM API. No token is required for a long-term key.

Assuming you want to query the list of Cloud Virtual Machine instances in the Guangzhou region, the request structure in the form of request URL, request header and request body may be as follows:

Example of an HTTP GET request structure:

```
https://cvm.tencentcloudapi.com/?Action=DescribeInstances&Version=2017-03-12&Sign
atureMethod=HmacSHA256&Timestamp=1527672334&Signature=37ac2f4fde00b0ac9bd9eadeb45
9b1bbee224158d66e7ae5fcadb70b2d181d02&Region=ap-guangzhou&Nonce=23823223&SecretId
=AKIDEXAMPLE

Host: cvm.tencentcloudapi.com
Content-Type: application/x-www-form-urlencoded
```

Example of an HTTP POST request structure:

```
https://cvm.tencentcloudapi.com/

Host: cvm.tencentcloudapi.com
Content-Type: application/x-www-form-urlencoded

Action=DescribeInstances&Version=2017-03-12&SignatureMethod=HmacSHA256&Timestamp=
1527672334&Signature=37ac2f4fde00b0ac9bd9eadeb459b1bbee224158d66e7ae5fcadb70b2d18
1d02&Region=ap-guangzhou&Nonce=23823223&SecretId=AKIDEXAMPLE
```

Signature v3

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TencentCloud API authenticates every single request, i.e., the request must be signed using the security credentials in the designated steps. Each request has to contain the signature information (Signature) in the common request parameters and be sent in the specified way and format.

Applying for Security Credentials

The security credential used in this document is a key, which includes a SecretId and a SecretKey. Each user can have up to two pairs of keys.

- SecretId: Used to identify the API caller, which is just like a username.
- SecretKey: Used to authenticate the API caller, which is just like a password.
- **You must keep your security credentials private and avoid disclosure; otherwise, your assets may be compromised. If they are disclosed, please disable them as soon as possible.**

You can apply for the security credentials through the following steps:

1. Log in to the Tencent Cloud Console.
2. Go to the TencentCloud API Key console page.
3. On the TencentCloud API Key page, click **Create** to create a SecretId/SecretKey pair.

Using the Resources for Developers

TencentCloud API comes with SDKs for seven commonly used programming languages, including Python, Java, PHP, Go, NodeJS and .NET. In addition, it provides API Explorer which enables online call, signature verification, and SDK code generation. If you have any troubles calculating a signature, consult these resources.

TC3-HMAC-SHA256 Signature Algorithm

Compatible with the previous HmacSHA1 and HmacSHA256 signature algorithms, the TC3-HMAC-SHA256 signature algorithm is more secure and supports larger requests and JSON format with better performance. We recommend using TC3-HMAC-SHA256 to calculate the signature.

TencentCloud API supports both GET and POST requests. For the GET method, only the Content-Type: application/x-www-form-urlencoded protocol format is supported. For the POST method, two protocol formats,

Content-Type: application/json and Content-Type: multipart/form-data, are supported. The JSON format is supported by default for all business APIs, and the multipart format is supported only for specific business APIs. In this case, the API cannot be called in JSON format. See the specific business API documentation for more information. The POST method is recommended, as there is no difference in the results of both the methods, but the GET method only supports request packets up to 32 KB.

The following uses querying the list of CVM instances in the Guangzhou region as an example to describe the steps of signature splicing. We chose this API because:

1. CVM is activated by default, and this API is often used;
2. It is read-only and does not change the status of existing resources;
3. It covers many types of parameters, which allows it to be used to demonstrate how to use arrays containing data structures.

In the example, we try to choose common parameters and API parameters that are prone to mistakes. When you actually call an API, please use parameters based on the actual conditions. The parameters vary by API. Do not copy the parameters and values in this example.

Assuming that your SecretId and SecretKey are `AKIDz8krbsJ5yKBZQpn74WFkmLPx3*******` and `Gu5t9xGARNpq86cd98joQYCN3*******`, respectively, if you want to view the status of the instance in the Guangzhou region whose CVM instance name is "unnamed" and have only one data entry returned, then the request may be:

```
curl -X POST https://cvm.tencentcloudapi.com \
-H "Authorization: TC3-HMAC-SHA256 Credential=AKIDz8krbsJ5yKBZQpn74WFkmLPx3******
*/2019-02-25/cvm/tc3_request, SignedHeaders=content-type;host, Signature=c492e8e4
1437e97a620b728c301bb8d17e7dc0c17eeabce80c20cd70fc3a78ff" \
-H "Content-Type: application/json; charset=utf-8" \
-H "Host: cvm.tencentcloudapi.com" \
-H "X-TC-Action: DescribeInstances" \
-H "X-TC-Timestamp: 1551113065" \
-H "X-TC-Version: 2017-03-12" \
-H "X-TC-Region: ap-guangzhou" \
-d '{"Limit": 1, "Filters": [{"Values": ["unnamed"], "Name": "instance-name"}]}'
```

The signature calculation process is explained in detail below.

1. Concatenating the CanonicalRequest String

Concatenate the canonical request string (CanonicalRequest) in the following pseudocode format:

```
CanonicalRequest =
HTTPRequestMethod + '\n' +
CanonicalURI + '\n' +
```

```
CanonicalQueryString + '\n' +
CanonicalHeaders + '\n' +
SignedHeaders + '\n' +
HashedRequestPayload
```

Field Name	Explanation
HTTPRequestMethod	HTTP request method (GET or POST). This example uses `POST` .
CanonicalURI	URI parameter. Slash ("/") is used for API 3.0.
CanonicalQueryString	The query string in the URL of the originating HTTP request. This is always an empty st “” for POST requests, and is the string after the question mark (?) for GET requests. Fo example: Limit=10&Offset=0。 Note: `CanonicalQueryString` must be URL-encoded, referencing RFC3986, the UTF8 character set. We recommend using the programming language library. All speci characters must be encoded and capitalized.
CanonicalHeaders	Header information for signature calculation, including at least two headers of `host` `content-type` . Custom headers can be added to participate in the signature proce improve the uniqueness and security of the request. Concatenation rules: 1. Both the key and value of the header should be converted to lowercase with the lead and trailing spaces removed, so they are concatenated in the format of key:value\n format; 2. If there are multiple headers, they should be sorted in ASCII ascending order by the header keys (lowercase). The calculation result in this example is `content-type:application/json; charset=utf-8\nhost:cvm.tencentcloudapi.com\n` . Note: `content-type` must match the actually sent content. In some programming languages, a charset value would be added even if it is not specified. In this case, the request sent is different from the one signed, and the sever will return an error indicating signature verification failed.
SignedHeaders	Header information for signature calculation, indicating which headers of the request participate in the signature process (they must each individually correspond to the heac in CanonicalHeaders). `Content-type` and `host` are required headers. Concatenation rules: 1. Both the key and value of the header should be converted to lowercase; 2. If there are multiple headers, they should be sorted in ASCII ascending order by the header keys (lowercase) and separated by semicolons (;). The value in this example is `content-type;host`
HashedRequestPayload	Hash value of the request payload (i.e., the body, such as `{"Limit": 1, "Filter`

	`[{"Values": ["unnamed"], "Name": "instance-name"}]` in this exampl The pseudocode for calculation is Lowercase(HexEncode(Hash.SHA256(RequestPayload))) by SHA256 hashing the pay of the HTTP request, performing hexadecimal encoding, and finally converting the enco string to lowercase letters. For GET requests, `RequestPayload` is always an empt string. The calculation result in this example is `99d58dfbc6745f6747f36bfca17dee5e6881dc0428a0a36f96199342bc5b49`

According to the rules above, the `CanonicalRequest` string obtained in the example is as follows:

```
POST
/

content-type:application/json; charset=utf-8
host:cvm.tencentcloudapi.com

content-type;host
99d58dfbc6745f6747f36bfca17dee5e6881dc0428a0a36f96199342bc5b4907
```

2. Concatenating the String to Be Signed

The string to sign is concatenated as follows:

```
StringToSign =
Algorithm + \n +
RequestTimestamp + \n +
CredentialScope + \n +
HashedCanonicalRequest
```

Field Name	Explanation
Algorithm	Signature algorithm, which is currently always `TC3-HMAC-SHA256`.
RequestTimestamp	Request timestamp, i.e., the value of the common parameter `X-TC-Timestamp` in request header, which is the UNIX timestamp of the current time in seconds, such as `1551113065` in this example.
CredentialScope	Scope of the credential in the format of `Date/service/tc3_request`, including date, requested service and termination string (tc3_request). **`Date` is a date in UT time, whose value should match the UTC date converted by the common parameter `X-TC-Timestamp`**; `service` is the product name, which should m the domain name of the product called. The calculation result in this example is `2019-02-25/cvm/tc3_request`.

HashedCanonicalRequest	Hash value of the CanonicalRequest string concatenated in the steps above. The pseudocode for calculation is Lowercase(HexEncode(Hash.SHA256(CanonicalRequ The calculation result in this example is `2815843035062fffda5fd6f2a44ea8a34818b0dc46f024b8b3786976a3ad`

Note:

1. Date has to be calculated from the timestamp "X-TC-Timestamp" and the time zone is UTC+0. If you add the system's local time zone information (such as UTC+8), calls can succeed both day and night but will definitely fail at 00:00. For example, if the timestamp is 1551113065 and the time in UTC+8 is 2019-02-26 00:44:25, the UTC+0 date in the calculated Date value should be 2019-02-25 instead of 2019-02-26.
2. Timestamp must be the same as your current system time, and your system time and standard time must be synced; if the difference between Timestamp and your current system time is larger than five minutes, the request will fail. If your system time is out of sync with the standard time for a while, the request will fail and return a signature expiration error.

According to the preceding rules, the string to be signed obtained in the example is as follows:

```
TC3-HMAC-SHA256
1551113065
2019-02-25/cvm/tc3_request
2815843035062fffda5fd6f2a44ea8a34818b0dc46f024b8b3786976a3adda7a
```

3. Calculating the Signature

1. Calculate the derived signature key with the following pseudocode:

```
SecretKey = "Gu5t9xGARNpq86cd98joQYCN3*******"
SecretDate = HMAC_SHA256("TC3" + SecretKey, Date)
SecretService = HMAC_SHA256(SecretDate, Service)
SecretSigning = HMAC_SHA256(SecretService, "tc3_request")
```

Field Name	Explanation
SecretKey	The original SecretKey, i.e., `Gu5t9xGARNpq86cd98joQYCN3*******` .
Date	The Date field information in `Credential` , such as `2019-02-25` in this example.

Service	Value in the Service field in `Credential`, such as `cvm` in this example.

2. Calculate the signature with the following pseudocode:

```
Signature = HexEncode(HMAC_SHA256(SecretSigning, StringToSign))
```

4. Concatenating the Authorization

The Authorization is concatenated as follows:

```
Authorization =
Algorithm + ' ' +
'Credential=' + SecretId + '/' + CredentialScope + ', ' +
'SignedHeaders=' + SignedHeaders + ', ' +
'Signature=' + Signature
```

Field Name	Explanation
Algorithm	Signature algorithm, which is always `TC3-HMAC-SHA256`.
SecretId	The SecretId in the key pair, i.e., `AKIDz8krbsJ5yKBZQpn74WFkmLPx3*******`.
CredentialScope	Credential scope (see above). The calculation result in this example is `2019-02-25/cvm/tc3_request`.
SignedHeaders	Header information for signature calculation (see above), such as `content-type;host` in this example.
Signature	Signature value. The calculation result in this example is `c492e8e41437e97a620b728c301bb8d17e7dc0c17eeabce80c20cd70fc3a78ff`.

According to the rules above, the value obtained in the example is:

```
TC3-HMAC-SHA256 Credential=AKIDz8krbsJ5yKBZQpn74WFkmLPx3*******/2019-02-25/cvm/tc3_request, SignedHeaders=content-type;host, Signature=c492e8e41437e97a620b728c301bb8d17e7dc0c17eeabce80c20cd70fc3a78ff
```

The following example shows a finished authorization header:

```
POST https://cvm.tencentcloudapi.com/
Authorization: TC3-HMAC-SHA256 Credential=AKIDz8krbsJ5yKBZQpn74WFkmLPx3*******/2019-02-25/cvm/tc3_request, SignedHeaders=content-type;host, Signature=c492e8e41437e97a620b728c301bb8d17e7dc0c17eeabce80c20cd70fc3a78ff
```

```
Content-Type: application/json; charset=utf-8
Host: cvm.tencentcloudapi.com
X-TC-Action: DescribeInstances
X-TC-Version: 2017-03-12
X-TC-Timestamp: 1551113065
X-TC-Region: ap-guangzhou

{"Limit": 1, "Filters": [{"Values": ["unnamed"], "Name": "instance-name"}]}
```

5. Signature Demo

When calling API 3.0, you are recommended to use the corresponding Tencent Cloud SDK 3.0 which encapsulates the signature process, enabling you to focus on only the specific APIs provided by the product when developing. See SDK Center for more information. Currently, the following programming languages are supported:

- Python
- Java
- PHP
- Go
- NodeJS
- .NET

To further explain the signing process, we will use a programming language to implement the process described above. The request domain name, API and parameter values in the sample are used here. This goal of this example is only to provide additional clarification for the signature process, please see the SDK for actual usage.

The final output URL might be: https://cvm.tencentcloudapi.com/?Action=DescribeInstances&InstanceIds.0=ins-09dx96dg&Limit=20&Nonce=11886&Offset=0&Region=ap-guangzhou&SecretId=AKIDz8krbsJ5yKBZQpn74WFkmLPx3*******&Signature=EliP9YW3pW28FpsEdkXt%2F%2BWcGeI%3D&Timestamp=1465185768&Version=2017-03-12.

Note: The key in the example is fictitious, and the timestamp is not the current time of the system, so if this URL is opened in the browser or called using commands such as curl, an authentication error will be returned: Signature expired. In order to get a URL that can work properly, you need to replace the SecretId and SecretKey in the example with your real credentials and use the current time of the system as the Timestamp.

Note: In the example below, even if you use the same programming language, the order of the parameters in the URL may be different for each execution. However, the order does not matter, as long as all the parameters are included in the URL and the signature is calculated correctly.

Note: The following code is only applicable to API 3.0. It cannot be directly used in other signature processes. Even with an older API, signature calculation errors may occur due to the differences in details. Please refer to the corresponding documentation.

Java

```
import java.nio.charset.Charset;
import java.nio.charset.StandardCharsets;
import java.security.MessageDigest;
import java.text.SimpleDateFormat;
import java.util.Date;
import java.util.TimeZone;
import java.util.TreeMap;
import javax.crypto.Mac;
import javax.crypto.spec.SecretKeySpec;
import javax.xml.bind.DatatypeConverter;

public class TencentCloudAPITC3Demo {
private final static Charset UTF8 = StandardCharsets.UTF_8;
private final static String SECRET_ID = "AKIDz8krbsJ5yKBZQpn74WFkmLPx3*******";
private final static String SECRET_KEY = "Gu5t9xGARNpq86cd98joQYCN3*******";
private final static String CT_JSON = "application/json; charset=utf-8";

public static byte[] hmac256(byte[] key, String msg) throws Exception {
Mac mac = Mac.getInstance("HmacSHA256");
SecretKeySpec secretKeySpec = new SecretKeySpec(key, mac.getAlgorithm());
mac.init(secretKeySpec);
return mac.doFinal(msg.getBytes(UTF8));
}

public static String sha256Hex(String s) throws Exception {
MessageDigest md = MessageDigest.getInstance("SHA-256");
byte[] d = md.digest(s.getBytes(UTF8));
return DatatypeConverter.printHexBinary(d).toLowerCase();
}

public static void main(String[] args) throws Exception {
String service = "cvm";
String host = "cvm.tencentcloudapi.com";
String region = "ap-guangzhou";
String action = "DescribeInstances";
String version = "2017-03-12";
String algorithm = "TC3-HMAC-SHA256";
String timestamp = "1551113065";
//String timestamp = String.valueOf(System.currentTimeMillis() / 1000);
SimpleDateFormat sdf = new SimpleDateFormat("yyyy-MM-dd");
// Pay attention to the time zone; otherwise, errors may occur
sdf.setTimeZone(TimeZone.getTimeZone("UTC"));
String date = sdf.format(new Date(Long.valueOf(timestamp + "000")));

// ************ Step 1: Concatenate the CanonicalRequest string ************
```

```
String httpRequestMethod = "POST";
String canonicalUri = "/";
String canonicalQueryString = "";
String canonicalHeaders = "content-type:application/json; charset=utf-8\n" + "hos
t:" + host + "\n";
String signedHeaders = "content-type;host";

String payload = "{\"Limit\": 1, \"Filters\": [{\"Values\": [\"unnamed\"], \"Name
\": \"instance-name\"}]}";
String hashedRequestPayload = sha256Hex(payload);
String canonicalRequest = httpRequestMethod + "\n" + canonicalUri + "\n" + canoni
calQueryString + "\n"
+ canonicalHeaders + "\n" + signedHeaders + "\n" + hashedRequestPayload;
System.out.println(canonicalRequest);

// ************* Step 2: Concatenate the string to sign *************
String credentialScope = date + "/" + service + "/" + "tc3_request";
String hashedCanonicalRequest = sha256Hex(canonicalRequest);
String stringToSign = algorithm + "\n" + timestamp + "\n" + credentialScope +
"\n" + hashedCanonicalRequest;
System.out.println(stringToSign);

// ************* Step 3: Calculate the signature *************
byte[] secretDate = hmac256(("TC3" + SECRET_KEY).getBytes(UTF8), date);
byte[] secretService = hmac256(secretDate, service);
byte[] secretSigning = hmac256(secretService, "tc3_request");
String signature = DatatypeConverter.printHexBinary(hmac256(secretSigning, string
ToSign)).toLowerCase();
System.out.println(signature);

// ************* Step 4: Concatenate the Authorization *************
String authorization = algorithm + " " + "Credential=" + SECRET_ID + "/" + creden
tialScope + ", "
+ "SignedHeaders=" + signedHeaders + ", " + "Signature=" + signature;
System.out.println(authorization);

TreeMap<String, String> headers = new TreeMap<String, String>();
headers.put("Authorization", authorization);
headers.put("Content-Type", CT_JSON);
headers.put("Host", host);
headers.put("X-TC-Action", action);
headers.put("X-TC-Timestamp", timestamp);
headers.put("X-TC-Version", version);
headers.put("X-TC-Region", region);

StringBuilder sb = new StringBuilder();
sb.append("curl -X POST https://").append(host)
```

```
.append(" -H \"Authorization: ").append(authorization).append("\"")
.append(" -H \"Content-Type: application/json; charset=utf-8\"")
.append(" -H \"Host: ").append(host).append("\"")
.append(" -H \"X-TC-Action: ").append(action).append("\"")
.append(" -H \"X-TC-Timestamp: ").append(timestamp).append("\"")
.append(" -H \"X-TC-Version: ").append(version).append("\"")
.append(" -H \"X-TC-Region: ").append(region).append("\"")
.append(" -d '").append(payload).append("'");
System.out.println(sb.toString());
}
}
```

Python

```
# -*- coding: utf-8 -*-
import hashlib, hmac, json, os, sys, time
from datetime import datetime

# Key Parameters
secret_id = "AKIDz8krbsJ5yKBZQpn74WFkmLPx3*******"
secret_key = "Gu5t9xGARNpq86cd98joQYCN3*******"

service = "cvm"
host = "cvm.tencentcloudapi.com"
endpoint = "https://" + host
region = "ap-guangzhou"
action = "DescribeInstances"
version = "2017-03-12"
algorithm = "TC3-HMAC-SHA256"
#timestamp = int(time.time())
timestamp = 1551113065
date = datetime.utcfromtimestamp(timestamp).strftime("%Y-%m-%d")
params = {"Limit": 1, "Filters": [{"Name": "instance-name", "Values": ["unnamed"
]}]}

# ************* Step 1: Concatenate the CanonicalRequest string *************
http_request_method = "POST"
canonical_uri = "/"
canonical_querystring = ""
ct = "application/json; charset=utf-8"
payload = json.dumps(params)
canonical_headers = "content-type:%s\nhost:%s\n" % (ct, host)
signed_headers = "content-type;host"
hashed_request_payload = hashlib.sha256(payload.encode("utf-8")).hexdigest()
canonical_request = (http_request_method + "\n" +
canonical_uri + "\n" +
```

```
canonical_querystring + "\n" +
canonical_headers + "\n" +
signed_headers + "\n" +
hashed_request_payload)
print(canonical_request)

# ************* Step 2: Concatenate the string to sign *************
credential_scope = date + "/" + service + "/" + "tc3_request"
hashed_canonical_request = hashlib.sha256(canonical_request.encode("utf-8")).hexd
igest()
string_to_sign = (algorithm + "\n" +
str(timestamp) + "\n" +
credential_scope + "\n" +
hashed_canonical_request)
print(string_to_sign)


# ************* Step 3: Calculate the Signature *************
# Function for computing signature digest
def sign(key, msg):
return hmac.new(key, msg.encode("utf-8"), hashlib.sha256).digest()
secret_date = sign(("TC3" + secret_key).encode("utf-8"), date)
secret_service = sign(secret_date, service)
secret_signing = sign(secret_service, "tc3_request")
signature = hmac.new(secret_signing, string_to_sign.encode("utf-8"), hashlib.sha2
56).hexdigest()
print(signature)

# ************* Step 4: Concatenate the Authorization *************
authorization = (algorithm + " " +
"Credential=" + secret_id + "/" + credential_scope + ", " +
"SignedHeaders=" + signed_headers + ", " +
"Signature=" + signature)
print(authorization)

print('curl -X POST ' + endpoint
+ ' -H "Authorization: ' + authorization + '"'
+ ' -H "Content-Type: application/json; charset=utf-8"'
+ ' -H "Host: ' + host + '"'
+ ' -H "X-TC-Action: ' + action + '"'
+ ' -H "X-TC-Timestamp: ' + str(timestamp) + '"'
+ ' -H "X-TC-Version: ' + version + '"'
+ ' -H "X-TC-Region: ' + region + '"'
+ " -d '" + payload + "'")
```

Golang

```
package main

import (
"crypto/hmac"
"crypto/sha256"
"encoding/hex"
"fmt"
"time"
)

func sha256hex(s string) string {
b := sha256.Sum256([]byte(s))
return hex.EncodeToString(b[:])
}

func hmacsha256(s, key string) string {
hashed := hmac.New(sha256.New, []byte(key))
hashed.Write([]byte(s))
return string(hashed.Sum(nil))
}

func main() {
secretId := "AKIDz8krbsJ5yKBZQpn74WFkmLPx3*******"
secretKey := "Gu5t9xGARNpq86cd98joQYCN3*******"
host := "cvm.tencentcloudapi.com"
algorithm := "TC3-HMAC-SHA256"
service := "cvm"
version := "2017-03-12"
action := "DescribeInstances"
region := "ap-guangzhou"
//var timestamp int64 = time.Now().Unix()
var timestamp int64 = 1551113065

// step 1: build canonical request string
httpRequestMethod := "POST"
canonicalURI := "/"
canonicalQueryString := ""
canonicalHeaders := "content-type:application/json; charset=utf-8\n" + "host:" +
host + "\n"
signedHeaders := "content-type;host"
payload := `{"Limit": 1, "Filters": [{"Values": ["unnamed"], "Name": "instance-na
me"}]}`
hashedRequestPayload := sha256hex(payload)
canonicalRequest := fmt.Sprintf("%s\n%s\n%s\n%s\n%s\n%s",
httpRequestMethod,
canonicalURI,
```

```
canonicalQueryString,
canonicalHeaders,
signedHeaders,
hashedRequestPayload)
fmt.Println(canonicalRequest)

// step 2: build string to sign
date := time.Unix(timestamp, 0).UTC().Format("2006-01-02")
credentialScope := fmt.Sprintf("%s/%s/tc3_request", date, service)
hashedCanonicalRequest := sha256hex(canonicalRequest)
string2sign := fmt.Sprintf("%s\n%d\n%s\n%s",
algorithm,
timestamp,
credentialScope,
hashedCanonicalRequest)
fmt.Println(string2sign)

// step 3: sign string
secretDate := hmacsha256(date, "TC3"+secretKey)
secretService := hmacsha256(service, secretDate)
secretSigning := hmacsha256("tc3_request", secretService)
signature := hex.EncodeToString([]byte(hmacsha256(string2sign, secretSigning)))
fmt.Println(signature)

// step 4: build authorization
authorization := fmt.Sprintf("%s Credential=%s/%s, SignedHeaders=%s, Signature=%
s",
algorithm,
secretId,
credentialScope,
signedHeaders,
signature)
fmt.Println(authorization)

curl := fmt.Sprintf(`curl -X POST https://%s\
-H "Authorization: %s"\
-H "Content-Type: application/json; charset=utf-8"\
-H "Host: %s" -H "X-TC-Action: %s"\
-H "X-TC-Timestamp: %d"\
-H "X-TC-Version: %s"\
-H "X-TC-Region: %s"\
-d '%s'`, host, authorization, host, action, timestamp, version, region, payload)
fmt.Println(curl)
}
```

PHP

```php
<?php
$secretId = "AKIDz8krbsJ5yKBZQpn74WFkmLPx3*******";
$secretKey = "Gu5t9xGARNpq86cd98joQYCN3*******";
$host = "cvm.tencentcloudapi.com";
$service = "cvm";
$version = "2017-03-12";
$action = "DescribeInstances";
$region = "ap-guangzhou";
// $timestamp = time();
$timestamp = 1551113065;
$algorithm = "TC3-HMAC-SHA256";

// step 1: build canonical request string
$httpRequestMethod = "POST";
$canonicalUri = "/";
$canonicalQueryString = "";
$canonicalHeaders = "content-type:application/json; charset=utf-8\n"."host:".$hos
t."\n";
$signedHeaders = "content-type;host";
$payload = '{"Limit": 1, "Filters": [{"Values": ["unnamed"], "Name": "instance-na
me"}]}';
$hashedRequestPayload = hash("SHA256", $payload);
$canonicalRequest = $httpRequestMethod."\n"
.$canonicalUri."\n"
.$canonicalQueryString."\n"
.$canonicalHeaders."\n"
.$signedHeaders."\n"
.$hashedRequestPayload;
echo $canonicalRequest.PHP_EOL;

// step 2: build string to sign
$date = gmdate("Y-m-d", $timestamp);
$credentialScope = $date."/".$service."/tc3_request";
$hashedCanonicalRequest = hash("SHA256", $canonicalRequest);
$stringToSign = $algorithm."\n"
.$timestamp."\n"
.$credentialScope."\n"
.$hashedCanonicalRequest;
echo $stringToSign.PHP_EOL;

// step 3: sign string
$secretDate = hash_hmac("SHA256", $date, "TC3".$secretKey, true);
$secretService = hash_hmac("SHA256", $service, $secretDate, true);
$secretSigning = hash_hmac("SHA256", "tc3_request", $secretService, true);
$signature = hash_hmac("SHA256", $stringToSign, $secretSigning);
echo $signature.PHP_EOL;
```

```
// step 4: build authorization
$authorization = $algorithm
." Credential=".$secretId."/".$credentialScope
.", SignedHeaders=content-type;host, Signature=".$signature;
echo $authorization.PHP_EOL;

$curl = "curl -X POST https://".$host
.' -H "Authorization: '.$authorization.'"'
.' -H "Content-Type: application/json; charset=utf-8"'
.' -H "Host: '.$host.'"'
.' -H "X-TC-Action: '.$action.'"'
.' -H "X-TC-Timestamp: '.$timestamp.'"'
.' -H "X-TC-Version: '.$version.'"'
.' -H "X-TC-Region: '.$region.'"'
." -d '".$payload."'";
echo $curl.PHP_EOL;
```

Ruby

```
# -*- coding: UTF-8 -*-
# require ruby>=2.3.0
require 'digest'
require 'json'
require 'time'
require 'openssl'

# Key Parameters
secret_id = 'AKIDz8krbsJ5yKBZQpn74WFkmLPx3*******'
secret_key = 'Gu5t9xGARNpq86cd98joQYCN3*******'

service = 'cvm'
host = 'cvm.tencentcloudapi.com'
endpoint = 'https://' + host
region = 'ap-guangzhou'
action = 'DescribeInstances'
version = '2017-03-12'
algorithm = 'TC3-HMAC-SHA256'
# timestamp = Time.now.to_i
timestamp = 1551113065
date = Time.at(timestamp).utc.strftime('%Y-%m-%d')

# ************* Step 1: Concatenate the CanonicalRequest string *************
http_request_method = 'POST'
canonical_uri = '/'
canonical_querystring = ''
```

```
canonical_headers = "content-type:application/json; charset=utf-8\nhost:#{host}
\n"
signed_headers = 'content-type;host'
# params = { 'Limit' => 1, 'Filters' => [{ 'Name' => 'instance-name', 'Values' =>
['unnamed'] }] }
# payload = JSON.generate(params, { 'ascii_only' => true, 'space' => ' ' })
# json will generate in random order, to get specified result in example, we hard
-code it here.
payload = '{"Limit": 1, "Filters": [{"Values": ["unnamed"], "Name": "instance-nam
e"}]}'
hashed_request_payload = Digest::SHA256.hexdigest(payload)
canonical_request = [
http_request_method,
canonical_uri,
canonical_querystring,
canonical_headers,
signed_headers,
hashed_request_payload,
].join("\n")

puts canonical_request

# ************* Step 2: Concatenate the string to sign *************
credential_scope = date + '/' + service + '/' + 'tc3_request'
hashed_request_payload = Digest::SHA256.hexdigest(canonical_request)
string_to_sign = [
algorithm,
timestamp.to_s,
credential_scope,
hashed_request_payload,
].join("\n")
puts string_to_sign

# ************* Step 3: Calculate the Signature *************
digest = OpenSSL::Digest.new('sha256')
secret_date = OpenSSL::HMAC.digest(digest, 'TC3' + secret_key, date)
secret_service = OpenSSL::HMAC.digest(digest, secret_date, service)
secret_signing = OpenSSL::HMAC.digest(digest, secret_service, 'tc3_request')
signature = OpenSSL::HMAC.hexdigest(digest, secret_signing, string_to_sign)
puts signature

# ************* Step 4: Concatenate the Authorization *************
authorization = "#{algorithm} Credential=#{secret_id}/#{credential_scope}, Signed
Headers=#{signed_headers}, Signature=#{signature}"
puts authorization

puts 'curl -X POST ' + endpoint \
```

```
+ ' -H "Authorization: ' + authorization + '"' \
+ ' -H "Content-Type: application/json; charset=utf-8"' \
+ ' -H "Host: ' + host + '"' \
+ ' -H "X-TC-Action: ' + action + '"' \
+ ' -H "X-TC-Timestamp: ' + timestamp.to_s + '"' \
+ ' -H "X-TC-Version: ' + version + '"' \
+ ' -H "X-TC-Region: ' + region + '"' \
+ " -d '" + payload + "'"
```

DotNet

```
using System;
using System.Collections.Generic;
using System.Security.Cryptography;
using System.Text;

public class Application
{
public static string SHA256Hex(string s)
{
using (SHA256 algo = SHA256.Create())
{
byte[] hashbytes = algo.ComputeHash(Encoding.UTF8.GetBytes(s));
StringBuilder builder = new StringBuilder();
for (int i = 0; i < hashbytes.Length; ++i)
{
builder.Append(hashbytes[i].ToString("x2"));
}
return builder.ToString();
}
}
public static byte[] HmacSHA256(byte[] key, byte[] msg)
{
using (HMACSHA256 mac = new HMACSHA256(key))
{
return mac.ComputeHash(msg);
}
}

public static Dictionary<String, String> BuildHeaders(string secretid,
string secretkey, string service, string endpoint, string region,
string action, string version, DateTime date, string requestPayload)
{
string datestr = date.ToString("yyyy-MM-dd");
DateTime startTime = new DateTime(1970, 1, 1, 0, 0, 0, 0, DateTimeKind.Utc);
long requestTimestamp = (long)Math.Round((date - startTime).TotalMilliseconds, Mi
```

```
dpointRounding.AwayFromZero) / 1000;
// ************* Step 1: Concatenate the CanonicalRequest string *************
string algorithm = "TC3-HMAC-SHA256";
string httpRequestMethod = "POST";
string canonicalUri = "/";
string canonicalQueryString = "";
string contentType = "application/json";
string canonicalHeaders = "content-type:" + contentType + "; charset=utf-8\n" +
"host:" + endpoint + "\n";
string signedHeaders = "content-type;host";
string hashedRequestPayload = SHA256Hex(requestPayload);
string canonicalRequest = httpRequestMethod + "\n"
+ canonicalUri + "\n"
+ canonicalQueryString + "\n"
+ canonicalHeaders + "\n"
+ signedHeaders + "\n"
+ hashedRequestPayload;
Console.WriteLine(canonicalRequest);
Console.WriteLine("-----------------------------------");

// ************* Step 2: Concatenate the string to sign *************
string credentialScope = datestr + "/" + service + "/" + "tc3_request";
string hashedCanonicalRequest = SHA256Hex(canonicalRequest);
string stringToSign = algorithm + "\n" + requestTimestamp.ToString() + "\n" + cre
dentialScope + "\n" + hashedCanonicalRequest;
Console.WriteLine(stringToSign);
Console.WriteLine("-----------------------------------");

// ************* Step 3: Calculate the signature *************
byte[] tc3SecretKey = Encoding.UTF8.GetBytes("TC3" + secretkey);
byte[] secretDate = HmacSHA256(tc3SecretKey, Encoding.UTF8.GetBytes(datestr));
byte[] secretService = HmacSHA256(secretDate, Encoding.UTF8.GetBytes(service));
byte[] secretSigning = HmacSHA256(secretService, Encoding.UTF8.GetBytes("tc3_requ
est"));
byte[] signatureBytes = HmacSHA256(secretSigning, Encoding.UTF8.GetBytes(stringTo
Sign));
string signature = BitConverter.ToString(signatureBytes).Replace("-", "").ToLower
();
Console.WriteLine(signature);
Console.WriteLine("-----------------------------------");

// ************* Step 4: Concatenate the Authorization *************
string authorization = algorithm + " "
+ "Credential=" + secretid + "/" + credentialScope + ", "
+ "SignedHeaders=" + signedHeaders + ", "
+ "Signature=" + signature;
Console.WriteLine(authorization);
```

```
Console.WriteLine("-----------------------------------");

Dictionary<string, string> headers = new Dictionary<string, string>();
headers.Add("Authorization", authorization);
headers.Add("Host", endpoint);
headers.Add("Content-Type", contentType + "; charset=utf-8");
headers.Add("X-TC-Timestamp", requestTimestamp.ToString());
headers.Add("X-TC-Version", version);
headers.Add("X-TC-Action", action);
headers.Add("X-TC-Region", region);
return headers;
}
public static void Main(string[] args)
{
// SecretID and SecretKey
string SECRET_ID = "AKIDz8krbsJ5yKBZQpn74WFkmLPx3*******";
string SECRET_KEY = "Gu5t9xGARNpq86cd98joQYCN3*******";

string service = "cvm";
string endpoint = "cvm.tencentcloudapi.com";
string region = "ap-guangzhou";
string action = "DescribeInstances";
string version = "2017-03-12";

// The timestamp `2019-02-26 00:44:25` used here is only for reference. In a proj
ect, use the following parameter:
// DateTime date = DateTime.UtcNow;
// Enter the correct time zone. We recommend using UTC timestamp to avoid errors.
DateTime date = new DateTime(1970, 1, 1, 0, 0, 0, 0, DateTimeKind.Utc).AddSeconds
(1551113065);
string requestPayload = "{\"Limit\": 1, \"Filters\": [{\"Values\": [\"\\u672a\\u5
47d\\u540d\"], \"Name\": \"instance-name\"}]}";

Dictionary<string, string> headers = BuildHeaders(SECRET_ID, SECRET_KEY, service
, endpoint, region, action, version, date, requestPayload);

Console.WriteLine("POST https://cvm.tencentcloudapi.com");
foreach (KeyValuePair<string, string> kv in headers)
{
Console.WriteLine(kv.Key + ": " + kv.Value);
}
Console.WriteLine();
Console.WriteLine(requestPayload);
}
}
```

NodeJS

```
const crypto = require('crypto');

function sha256(message, secret = '', encoding) {
const hmac = crypto.createHmac('sha256', secret)
return hmac.update(message).digest(encoding)
}
function getHash(message, encoding = 'hex') {
const hash = crypto.createHash('sha256')
return hash.update(message).digest(encoding)
}
function getDate(timestamp) {
const date = new Date(timestamp * 1000)
const year = date.getUTCFullYear()
const month = ('0' + (date.getUTCMonth() + 1)).slice(-2)
const day = ('0' + date.getUTCDate()).slice(-2)
return `${year}-${month}-${day}`
}
function main(){

const SECRET_ID = "AKIDz8krbsJ5yKBZQpn74WFkmLPx3*******"
const SECRET_KEY = "Gu5t9xGARNpq86cd98joQYCN3*******"

const endpoint = "cvm.tencentcloudapi.com"
const service = "cvm"
const region = "ap-guangzhou"
const action = "DescribeInstances"
const version = "2017-03-12"
//const timestamp = getTime()
const timestamp = 1551113065
const date = getDate(timestamp)

// ************* Step 1: Concatenate the CanonicalRequest string *************
const signedHeaders = "content-type;host"

const payload = "{\"Limit\": 1, \"Filters\": [{\"Values\": [\"unnamed\"], \"Name
\": \"instance-name\"}]}"

const hashedRequestPayload = getHash(payload);
const httpRequestMethod = "POST"
const canonicalUri = "/"
const canonicalQueryString = ""
const canonicalHeaders = "content-type:application/json; charset=utf-8\n" + "hos
t:" + endpoint + "\n"

const canonicalRequest = httpRequestMethod + "\n"
```

```
+ canonicalUri + "\n"
+ canonicalQueryString + "\n"
+ canonicalHeaders + "\n"
+ signedHeaders + "\n"
+ hashedRequestPayload
console.log(canonicalRequest)
console.log("----------------------------")

// ************* Step 2: Concatenate the string to sign *************
const algorithm = "TC3-HMAC-SHA256"
const hashedCanonicalRequest = getHash(canonicalRequest);
const credentialScope = date + "/" + service + "/" + "tc3_request"
const stringToSign = algorithm + "\n" +
timestamp + "\n" +
credentialScope + "\n" +
hashedCanonicalRequest
console.log(stringToSign)
console.log("----------------------------")

// ************* Step 3: Calculate the signature *************
const kDate = sha256(date, 'TC3' + SECRET_KEY)
const kService = sha256(service, kDate)
const kSigning = sha256('tc3_request', kService)
const signature = sha256(stringToSign, kSigning, 'hex')
console.log(signature)
console.log("----------------------------")

// ************* Step 4: Concatenate the Authorization *************
const authorization = algorithm + " " +
"Credential=" + SECRET_ID + "/" + credentialScope + ", " +
"SignedHeaders=" + signedHeaders + ", " +
"Signature=" + signature
console.log(authorization)
console.log("----------------------------")

const Call_Information = 'curl -X POST ' + "https://" + endpoint
+ ' -H "Authorization: ' + authorization + '"'
+ ' -H "Content-Type: application/json; charset=utf-8"'
+ ' -H "Host: ' + endpoint + '"'
+ ' -H "X-TC-Action: ' + action + '"'
+ ' -H "X-TC-Timestamp: ' + timestamp.toString() + '"'
+ ' -H "X-TC-Version: ' + version + '"'
+ ' -H "X-TC-Region: ' + region + '"'
+ " -d '" + payload + "'"
console.log(Call_Information)
}
main()
```

C++

```
#include <iostream>
#include <iomanip>
#include <sstream>
#include <string>
#include <stdio.h>
#include <time.h>
#include <openssl/sha.h>
#include <openssl/hmac.h>

using namespace std;

string get_data(int64_t &timestamp)
{
string utcDate;
char buff[20] = {0};
// time_t timenow;
struct tm sttime;
sttime = *gmtime(&timestamp);
strftime(buff, sizeof(buff), "%Y-%m-%d", &sttime);
utcDate = string(buff);
return utcDate;
}
string int2str(int64_t n)
{
std::stringstream ss;
ss << n;
return ss.str();
}
string sha256Hex(const string &str)
{
char buf[3];
unsigned char hash[SHA256_DIGEST_LENGTH];
SHA256_CTX sha256;
SHA256_Init(&sha256);
SHA256_Update(&sha256, str.c_str(), str.size());
SHA256_Final(hash, &sha256);
std::string NewString = "";
for(int i = 0; i < SHA256_DIGEST_LENGTH; i++)
{
snprintf(buf, sizeof(buf), "%02x", hash[i]);
NewString = NewString + buf;
}
return NewString;
```

```
}
string HmacSha256(const string &key, const string &input)
{
unsigned char hash[32];

HMAC_CTX *h;
#if OPENSSL_VERSION_NUMBER < 0x10100000L
HMAC_CTX hmac;
HMAC_CTX_init(&hmac);
h = &hmac;
#else
h = HMAC_CTX_new();
#endif

HMAC_Init_ex(h, &key[0], key.length(), EVP_sha256(), NULL);
HMAC_Update(h, ( unsigned char* )&input[0], input.length());
unsigned int len = 32;
HMAC_Final(h, hash, &len);

#if OPENSSL_VERSION_NUMBER < 0x10100000L
HMAC_CTX_cleanup(h);
#else
HMAC_CTX_free(h);
#endif

std::stringstream ss;
ss << std::setfill('0');
for (int i = 0; i < len; i++)
{
ss << hash[i];
}

return (ss.str());
}
string HexEncode(const string &input)
{
static const char* const lut = "0123456789abcdef";
size_t len = input.length();

string output;
output.reserve(2 * len);
for (size_t i = 0; i < len; ++i)
{
const unsigned char c = input[i];
output.push_back(lut[c >> 4]);
output.push_back(lut[c & 15]);
}
```

```
return output;
}

int main()
{
string SECRET_ID = "AKIDz8krbsJ5yKBZQpn74WFkmLPx3*******";
string SECRET_KEY = "Gu5t9xGARNpq86cd98joQYCN3*******";

string service = "cvm";
string host = "cvm.tencentcloudapi.com";
string region = "ap-guangzhou";
string action = "DescribeInstances";
string version = "2017-03-12";
int64_t timestamp = 1551113065;
string date = get_data(timestamp);

// ************* Step 1: Concatenate the CanonicalRequest string *************
string httpRequestMethod = "POST";
string canonicalUri = "/";
string canonicalQueryString = "";
string canonicalHeaders = "content-type:application/json; charset=utf-8\nhost:" +
host + "\n";
string signedHeaders = "content-type;host";
string payload = "{\"Limit\": 1, \"Filters\": [{\"Values\": [\"unnamed\"], \"Name
\": \"instance-name\"}]}";
string hashedRequestPayload = sha256Hex(payload);
string canonicalRequest = httpRequestMethod + "\n" + canonicalUri + "\n" + canoni
calQueryString + "\n"
+ canonicalHeaders + "\n" + signedHeaders + "\n" + hashedRequestPayload;
cout << canonicalRequest << endl;
cout << "-----------------------" << endl;

// ************* Step 2: Concatenate the string to sign *************
string algorithm = "TC3-HMAC-SHA256";
string RequestTimestamp = int2str(timestamp);
string credentialScope = date + "/" + service + "/" + "tc3_request";
string hashedCanonicalRequest = sha256Hex(canonicalRequest);
string stringToSign = algorithm + "\n" + RequestTimestamp + "\n" + credentialScop
e + "\n" + hashedCanonicalRequest;
cout << stringToSign << endl;
cout << "-----------------------" << endl;

// ************* Step 3: Calculate the signature ***************
string kKey = "TC3" + SECRET_KEY;
string kDate = HmacSha256(kKey, date);
string kService = HmacSha256(kDate, service);
string kSigning = HmacSha256(kService, "tc3_request");
```

```
string signature = HexEncode(HmacSha256(kSigning, stringToSign));
cout << signature << endl;
cout << "-----------------------" << endl;

// ************* Step 4: Concatenate the Authorization *************
string authorization = algorithm + " " + "Credential=" + SECRET_ID + "/" + creden
tialScope + ", "
+ "SignedHeaders=" + signedHeaders + ", " + "Signature=" + signature;
cout << authorization << endl;
cout << "-----------------------" << endl;

string headers = "curl -X POST https://" + host + "\n"
+ " -H \"Authorization: " + authorization + "\n"
+ " -H \"Content-Type: application/json; charset=utf-8\"" + "\n"
+ " -H \"Host: " + host + "\n"
+ " -H \"X-TC-Action: " + action + "\n"
+ " -H \"X-TC-Timestamp: " + RequestTimestamp + "\n"
+ " -H \"X-TC-Version: " + version + "\n"
+ " -H \"X-TC-Region: " + region + "\n"
+ " -d '" + payload;
cout << headers << endl;
return 0;
};
```

Signature Failure

The following situational error codes for signature failure may occur. Please resolve the errors accordingly.

Error Code	Description
AuthFailure.SignatureExpire	Signature expired. Timestamp and server time cannot differ by more than five minutes.
AuthFailure.SecretIdNotFound	The key does not exist. Please go to the console to check whether it is disabled or you copied fewer or more characters.
AuthFailure.SignatureFailure	Signature error. It is possible that the signature was calculated incorrectly, the signature does not match the content actually sent, or the SecretKey is incorrect.
AuthFailure.TokenFailure	Temporary certificate token error.
AuthFailure.InvalidSecretId	Invalid key (not a TencentCloud API key type).

Signature

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Tencent Cloud API authenticates each access request, i.e. each request needs to include authentication information (Signature) in the common parameters to verify the identity of the requester.
The Signature is generated by the security credentials which include SecretId and SecretKey. If you don't have the security credentials yet, go to the TencentCloud API Key page to apply for them; otherwise, you cannot invoke the TencentCloud API.

1. Applying for Security Credentials

Before using the TencentCloud API for the first time, go to the TencentCloud API Key page to apply for security credentials.
Security credentials consist of SecretId and SecretKey:

- SecretId is used to identify the API requester.
- SecretKey is used to encrypt the signature string and verify it on the server.
- **You must keep your security credentials private and avoid disclosure.**

You can apply for the security credentials through the following steps:

1. Log in to the Tencent Cloud Console.
2. Go to the TencentCloud API Key page.
3. On the API Key Management page, click **Create Key** to create a SecretId/SecretKey pair.

Note: Each account can have up to two pairs of SecretId/SecretKey.

2. Generating a Signature

With the SecretId and SecretKey, a signature can be generated. The following describes how to generate a signature:

Assume that the SecretId and SecretKey are:

- SecretId: `AKIDz8krbsJ5yKBZQpn74WFkmLPx3*******`
- SecretKey: `Gu5t9xGARNpq86cd98joQYCN3*******`

Note: This is just an example. For actual operations, please use your own SecretId and SecretKey.

Take the Cloud Virtual Machine's request to view the instance list (DescribeInstances) as an example. When you invoke this API, the request parameters may be as follows:

Parameter name	Description	Parameter value
Action	Method name	DescribeInstances
SecretId	Key ID	`AKIDz8krbsJ5yKBZQpn74WFkmLPx3*******`
Timestamp	Current timestamp	1465185768
Nonce	Random positive integer	11886
Region	Region where the instance is located	ap-guangzhou
InstanceIds.0	ID of the instance to query	ins-09dx96dg
Offset	Offset	0
Limit	Allowed maximum output	20
Version	API version number	2017-03-12

2.1. Sorting Parameters

First, sort all the request parameters in an ascending lexicographical order (ASCII code) by their names. Notes: (1) Parameters are sorted by their names instead of their values; (2) The parameters are sorted based on ASCII code, not in an alphabetical order or by values. For example, InstanceIds.2 should be arranged after InstanceIds.12. You can complete the sorting process using a sorting function in a programming language, such as the ksort function in PHP. The parameters in the example are sorted as follows:

```
{
'Action' : 'DescribeInstances',
'InstanceIds.0' : 'ins-09dx96dg',
'Limit' : 20,
'Nonce' : 11886,
'Offset' : 0,
'Region' : 'ap-guangzhou',
'SecretId' : 'AKIDz8krbsJ5yKBZQpn74WFkmLPx3*******',
'Timestamp' : 1465185768,
'Version': '2017-03-12',
}
```

When developing in another programming language, you can sort these sample parameters and it will work as long as you obtain the same results.

2.2. Concatenating a Request String

This step generates a request string.

Format the request parameters sorted in the previous step into the form of "parameter name"="parameter value". For example, for the Action parameter, its parameter name is "Action" and its parameter value is "DescribeInstances", so it will become Action=DescribeInstances after formatted.

Note: The "parameter value" is the original value but not the value after URL encoding.

Then, concatenate the formatted parameters with "&". The resulting request string is as follows:

```
Action=DescribeInstances&InstanceIds.0=ins-09dx96dg&Limit=20&Nonce=11886&Offset=0
&Region=ap-guangzhou&SecretId=AKIDz8krbsJ5yKBZQpn74WFkmLPx3*******&Timestamp=1465
185768&Version=2017-03-12
```

2.3. Concatenating the Signature Original String

This step generates a signature original string.

The signature original string consists of the following parameters:

1. HTTP method: POST and GET modes are supported, and GET is used here for the request. Please note that the method name should be in all capital letters.
2. Request server: the domain name of the request to view the list of instances (DescribeInstances) is cvm.tencentcloudapi.com. The actual request domain name varies by the module to which the API belongs. For more information, see the instructions of the specific API.
3. Request path: The request path in the current version of TencentCloud API is fixed to /.
4. Request string: the request string generated in the previous step.

The concatenation rule of the signature original string is: Request method + request host + request path + ? + request string

The concatenation result of the example is:

```
GETcvm.tencentcloudapi.com/?Action=DescribeInstances&InstanceIds.0=ins-09dx96dg&L
imit=20&Nonce=11886&Offset=0&Region=ap-guangzhou&SecretId=AKIDz8krbsJ5yKBZQpn74WF
kmLPx3*******&Timestamp=1465185768&Version=2017-03-12
```

2.4. Generating a Signature String

This step generates a signature string.

First, use the HMAC-SHA1 algorithm to sign the **signature original string** obtained in the previous step, and then

encode the generated signature using Base64 to obtain the final signature.

The specific code is as follows with the PHP language being used as an example:

```
$secretKey = 'Gu5t9xGARNpq86cd98joQYCN3*******';
$srcStr = 'GETcvm.tencentcloudapi.com/?Action=DescribeInstances&InstanceIds.0=ins-09dx96dg&Limit=20&Nonce=11886&Offset=0&Region=ap-guangzhou&SecretId=AKIDz8krbsJ5yKBZQpn74WFkmLPx3*******&Timestamp=1465185768&Version=2017-03-12';
$signStr = base64_encode(hash_hmac('sha1', $srcStr, $secretKey, true));
echo $signStr;
```

The final signature is:

```
zmmjn35mikh6pM3V7sUEuX4wyYM=
```

When developing in another programming language, you can sign and verify the original in the example above and it works as long as you get the same results.

3. Encoding a Signature String

The generated signature string cannot be directly used as a request parameter and must be URL encoded.

For example, if the signature string generated in the previous step is zmmjn35mikh6pM3V7sUEuX4wyYM=, the final signature string request parameter (Signature) is zmmjn35mikh6pM3V7sUEuX4wyYM%3D, which will be used to generate the final request URL.

Note: If your request method is GET, or the request method is POST and the Content-Type is application/x-www-form-urlencoded, then all the request parameter values need to be URL encoded (except the parameter key and the symbol of =) when sending the request. Non-ASCII characters need to be encoded with UTF-8 before URL encoding.

Note: The network libraries of some programming languages automatically URL encode all parameters, in which case there is no need to URL encode the signature string; otherwise, two rounds of URL encoding will cause the signature to fail.

Note: Other parameter values also need to be encoded using RFC 3986. Use %XY in percent-encoding for special characters such as Chinese characters, where "X" and "Y" are hexadecimal characters (0-9 and uppercase A-F), and using lowercase will cause an error.

4. Signature Failure

The following situational error codes for signature failure may occur. Please resolve the errors accordingly.

Error code	Error description
AuthFailure.SignatureExpire	The signature is expired
AuthFailure.SecretIdNotFound	The key does not exist
AuthFailure.SignatureFailure	Signature error
AuthFailure.TokenFailure	Token error
AuthFailure.InvalidSecretId	Invalid key (not a TencentCloud API key type)

5. Signature Demo

When calling API 3.0, you are recommended to use the corresponding Tencent Cloud SDK 3.0 which encapsulates the signature process, enabling you to focus on only the specific APIs provided by the product when developing. See SDK Center for more information. Currently, the following programming languages are supported:

- Python
- Java
- PHP
- Go
- NodeJS
- .NET

To further explain the signing process, we will use a programming language to implement the process described above. The request domain name, API and parameter values in the sample are used here. This goal of this example is only to provide additional clarification for the signature process, please see the SDK for actual usage.

The final output URL might be: `https://cvm.tencentcloudapi.com/?Action=DescribeInstances&InstanceIds.0=ins-09dx96dg&Limit=20&Nonce=11886&Offset=0&Region=ap-guangzhou&SecretId=AKIDz8krbsJ5yKBZQpn74WFkmLPx3*******&Signature=zmmjn35mikh6pM3V7sUEuX4wyYM%3D&Timestamp=1465185768&Version=2017-03-12` .

Note: The key in the example is fictitious, and the timestamp is not the current time of the system, so if this URL is opened in the browser or called using commands such as curl, an authentication error will be returned: Signature expired. In order to get a URL that can work properly, you need to replace the SecretId and SecretKey in the example with your real credentials and use the current time of the system as the Timestamp.

Note: In the example below, even if you use the same programming language, the order of the parameters in the URL may be different for each execution. However, the order does not matter, as long as all the parameters are included in the URL and the signature is calculated correctly.

Note: The following code is only applicable to API 3.0. It cannot be directly used in other signature processes. Even with an older API, signature calculation errors may occur due to the differences in details. Please refer to the corresponding documentation.

Java

```
import java.io.UnsupportedEncodingException;
import java.net.URLEncoder;
import java.util.Random;
import java.util.TreeMap;
import javax.crypto.Mac;
import javax.crypto.spec.SecretKeySpec;
import javax.xml.bind.DatatypeConverter;

public class TencentCloudAPIDemo {
private final static String CHARSET = "UTF-8";

public static String sign(String s, String key, String method) throws Exception {
Mac mac = Mac.getInstance(method);
SecretKeySpec secretKeySpec = new SecretKeySpec(key.getBytes(CHARSET), mac.getAlg
orithm());
mac.init(secretKeySpec);
byte[] hash = mac.doFinal(s.getBytes(CHARSET));
return DatatypeConverter.printBase64Binary(hash);
}

public static String getStringToSign(TreeMap<String, Object> params) {
StringBuilder s2s = new StringBuilder("GETcvm.tencentcloudapi.com/?");
// When signing, the parameters need to be sorted in lexicographical order. TreeM
ap is used here to guarantee the correct order.
for (String k : params.keySet()) {
s2s.append(k).append("=").append(params.get(k).toString()).append("&");
}
return s2s.toString().substring(0, s2s.length() - 1);
}

public static String getUrl(TreeMap<String, Object> params) throws UnsupportedEnc
odingException {
StringBuilder url = new StringBuilder("https://cvm.tencentcloudapi.com/?");
// There is no requirement for the order of the parameters in the actual request
URL.
for (String k : params.keySet()) {
```

```
// The request string needs to be URL encoded. As the Key is all in English lette
rs, only the value is URL encoded here.
url.append(k).append("=").append(URLEncoder.encode(params.get(k).toString(), CHAR
SET)).append("&");
}
return url.toString().substring(0, url.length() - 1);
}

public static void main(String[] args) throws Exception {
TreeMap<String, Object> params = new TreeMap<String, Object>(); // TreeMap enable
s automatic sorting
// A random number should be used when actually calling, for example: params.put
("Nonce", new Random().nextInt(java.lang.Integer.MAX_VALUE));
params.put("Nonce", 11886); // Common parameter
// The current time of the system should be used when actually calling, for examp
le: params.put("Timestamp", System.currentTimeMillis() / 1000);
params.put("Timestamp", 1465185768); // Common parameter
params.put("SecretId", "AKIDz8krbsJ5yKBZQpn74WFkmLPx3*******"); // Common paramet
er
params.put("Action", "DescribeInstances"); // Common parameter
params.put("Version", "2017-03-12"); // Common parameter
params.put("Region", "ap-guangzhou"); // Common parameter
params.put("Limit", 20); // Business parameter
params.put("Offset", 0); // Business parameter
params.put("InstanceIds.0", "ins-09dx96dg"); // Business parameter
params.put("Signature", sign(getStringToSign(params), "Gu5t9xGARNpq86cd98joQYCN3*
******", "HmacSHA1")); // Common parameter
System.out.println(getUrl(params));
}
}
```

Python

Note: If running in a Python 2 environment, the following requests dependency package must be installed first: `pip install requests` .

```
# -*- coding: utf8 -*-
import base64
import hashlib
import hmac
import time

import requests

secret_id = "AKIDz8krbsJ5yKBZQpn74WFkmLPx3*******"
secret_key = "Gu5t9xGARNpq86cd98joQYCN3*******"
```

```
def get_string_to_sign(method, endpoint, params):
s = method + endpoint + "/?"
query_str = "&".join("%s=%s" % (k, params[k]) for k in sorted(params))
return s + query_str

def sign_str(key, s, method):
hmac_str = hmac.new(key.encode("utf8"), s.encode("utf8"), method).digest()
return base64.b64encode(hmac_str)

if __name__ == '__main__':
endpoint = "cvm.tencentcloudapi.com"
data = {
'Action' : 'DescribeInstances',
'InstanceIds.0' : 'ins-09dx96dg',
'Limit' : 20,
'Nonce' : 11886,
'Offset' : 0,
'Region' : 'ap-guangzhou',
'SecretId' : secret_id,
'Timestamp' : 1465185768, # int(time.time())
'Version': '2017-03-12'
}
s = get_string_to_sign("GET", endpoint, data)
data["Signature"] = sign_str(secret_key, s, hashlib.sha1)
print(data["Signature"])
# An actual invocation would occur here, which may incur fees after success
# resp = requests.get("https://" + endpoint, params=data)
# print(resp.url)
```

Golang

```
package main

import (
"bytes"
"crypto/hmac"
"crypto/sha1"
"encoding/base64"
"fmt"
"sort"
)

func main() {
secretId := "AKIDz8krbsJ5yKBZQpn74WFkmLPx3*******"
secretKey := "Gu5t9xGARNpq86cd98joQYCN3*******"
```

```
params := map[string]string{
"Nonce": "11886",
"Timestamp": "1465185768",
"Region": "ap-guangzhou",
"SecretId": secretId,
"Version": "2017-03-12",
"Action": "DescribeInstances",
"InstanceIds.0": "ins-09dx96dg",
"Limit": "20",
"Offset": "0",
}

var buf bytes.Buffer
buf.WriteString("GET")
buf.WriteString("cvm.tencentcloudapi.com")
buf.WriteString("/")
buf.WriteString("?")

// sort keys by ascii asc order
keys := make([]string, 0, len(params))
for k, _ := range params {
keys = append(keys, k)
}
sort.Strings(keys)

for i := range keys {
k := keys[i]
buf.WriteString(k)
buf.WriteString("=")
buf.WriteString(params[k])
buf.WriteString("&")
}
buf.Truncate(buf.Len() - 1)

hashed := hmac.New(sha1.New, []byte(secretKey))
hashed.Write(buf.Bytes())

fmt.Println(base64.StdEncoding.EncodeToString(hashed.Sum(nil)))
}
```

PHP

```
<?php
$secretId = "AKIDz8krbsJ5yKBZQpn74WFkmLPx3*******";
$secretKey = "Gu5t9xGARNpq86cd98joQYCN3*******";
$param["Nonce"] = 11886;//rand();
```

```php
$param["Timestamp"] = 1465185768;//time();
$param["Region"] = "ap-guangzhou";
$param["SecretId"] = $secretId;
$param["Version"] = "2017-03-12";
$param["Action"] = "DescribeInstances";
$param["InstanceIds.0"] = "ins-09dx96dg";
$param["Limit"] = 20;
$param["Offset"] = 0;

ksort($param);

$signStr = "GETcvm.tencentcloudapi.com/?";
foreach ( $param as $key => $value ) {
$signStr = $signStr . $key . "=" . $value . "&";
}
$signStr = substr($signStr, 0, -1);

$signature = base64_encode(hash_hmac("sha1", $signStr, $secretKey, true));
echo $signature.PHP_EOL;
// need to install and enable curl extension in php.ini
// $param["Signature"] = $signature;
// $url = "https://cvm.tencentcloudapi.com/?".http_build_query($param);
// echo $url.PHP_EOL;
// $ch = curl_init();
// curl_setopt($ch, CURLOPT_URL, $url);
// $output = curl_exec($ch);
// curl_close($ch);
// echo json_decode($output);
```

Ruby

```ruby
# -*- coding: UTF-8 -*-
# require ruby>=2.3.0
require 'time'
require 'openssl'
require 'base64'

secret_id = "AKIDz8krbsJ5yKBZQpn74WFkmLPx3*******"
secret_key = "Gu5t9xGARNpq86cd98joQYCN3*******"

method = 'GET'
endpoint = 'cvm.tencentcloudapi.com'
data = {
'Action' => 'DescribeInstances',
'InstanceIds.0' => 'ins-09dx96dg',
'Limit' => 20,
```

```
'Nonce' => 11886,
'Offset' => 0,
'Region' => 'ap-guangzhou',
'SecretId' => secret_id,
'Timestamp' => 1465185768, # Time.now.to_i
'Version' => '2017-03-12',
}
sign = method + endpoint + '/?'
params = []
data.sort.each do |item|
params << "#{item[0]}=#{item[1]}"
end
sign += params.join('&')
digest = OpenSSL::Digest.new('sha1')
data['Signature'] = Base64.encode64(OpenSSL::HMAC.digest(digest, secret_key, sig
n))
puts data['Signature']

# require 'net/http'
# uri = URI('https://' + endpoint)
# uri.query = URI.encode_www_form(data)
# p uri
# res = Net::HTTP.get_response(uri)
# puts res.body
```

DotNet

```
using System;
using System.Collections.Generic;
using System.Net;
using System.Security.Cryptography;
using System.Text;

public class Application {
public static string Sign(string signKey, string secret)
{
string signRet = string.Empty;
using (HMACSHA1 mac = new HMACSHA1(Encoding.UTF8.GetBytes(signKey)))
{
byte[] hash = mac.ComputeHash(Encoding.UTF8.GetBytes(secret));
signRet = Convert.ToBase64String(hash);
}
return signRet;
}
public static string MakeSignPlainText(SortedDictionary<string, string> requestPa
rams, string requestMethod, string requestHost, string requestPath)
```

```
{
string retStr = "";
retStr += requestMethod;
retStr += requestHost;
retStr += requestPath;
retStr += "?";
string v = "";
foreach (string key in requestParams.Keys)
{
v += string.Format("{0}={1}&", key, requestParams[key]);
}
retStr += v.TrimEnd('&');
return retStr;
}

public static void Main(string[] args)
{
string SECRET_ID = "AKIDz8krbsJ5yKBZQpn74WFkmLPx3*******";
string SECRET_KEY = "Gu5t9xGARNpq86cd98joQYCN3*******";

string endpoint = "cvm.tencentcloudapi.com";
string region = "ap-guangzhou";
string action = "DescribeInstances";
string version = "2017-03-12";
double RequestTimestamp = 1465185768;
// long timestamp = ToTimestamp() / 1000;
// string requestTimestamp = timestamp.ToString();
Dictionary<string, string> param = new Dictionary<string, string>();
param.Add("Limit", "20");
param.Add("Offset", "0");
param.Add("InstanceIds.0", "ins-09dx96dg");
param.Add("Action", action);
param.Add("Nonce", "11886");
// param.Add("Nonce", Math.Abs(new Random().Next()).ToString());

param.Add("Timestamp", RequestTimestamp.ToString());
param.Add("Version", version);

param.Add("SecretId", SECRET_ID);
param.Add("Region", region);
SortedDictionary<string, string> headers = new SortedDictionary<string, string>(p
aram, StringComparer.Ordinal);
string sigInParam = MakeSignPlainText(headers, "GET", endpoint, "/");
Console.WriteLine(sigInParam);
string sigOutParam = Sign(SECRET_KEY, sigInParam);
```

```
Console.WriteLine("GET https://cvm.tencentcloudapi.com");
foreach (KeyValuePair<string, string> kv in headers)
{
Console.WriteLine(kv.Key + ": " + kv.Value);
}
Console.WriteLine("Signature" + ": " + WebUtility.UrlEncode(sigOutParam));
Console.WriteLine();

string result = "https://cvm.tencentcloudapi.com/?";
foreach (KeyValuePair<string, string> kv in headers)
{
result += WebUtility.UrlEncode(kv.Key) + "=" + WebUtility.UrlEncode(kv.Value) +
"&";
}
result += WebUtility.UrlEncode("Signature") + "=" + WebUtility.UrlEncode(sigOutPa
ram);
Console.WriteLine("GET " + result);
}
}
```

NodeJS

```
const crypto = require('crypto');

function get_req_url(params, endpoint){
params['Signature'] = escape(params['Signature']);
const url_strParam = sort_params(params)
return "https://" + endpoint + "/?" + url_strParam.slice(1);
}

function formatSignString(reqMethod, endpoint, path, strParam){
let strSign = reqMethod + endpoint + path + "?" + strParam.slice(1);
return strSign;
}
function sha1(secretKey, strsign){
let signMethodMap = {'HmacSHA1': "sha1"};
let hmac = crypto.createHmac(signMethodMap['HmacSHA1'], secretKey || "");
return hmac.update(Buffer.from(strsign, 'utf8')).digest('base64')
}

function sort_params(params){
let strParam = "";
let keys = Object.keys(params);
keys.sort();
for (let k in keys) {
//k = k.replace(/_/g, '.');
```

```
strParam += ("&" + keys[k] + "=" + params[keys[k]]);
}
return strParam
}

function main(){
const SECRET_ID = "AKIDz8krbsJ5yKBZQpn74WFkmLPx3*******"
const SECRET_KEY = "Gu5t9xGARNpq86cd98joQYCN3*******"

const endpoint = "cvm.tencentcloudapi.com"
const Region = "ap-guangzhou"
const Version = "2017-03-12"
const Action = "DescribeInstances"
const Timestamp = 1465185768
// const Timestamp = Math.round(Date.now() / 1000)
const Nonce = 11886
//const nonce = Math.round(Math.random() * 65535)

let params = {};
params['Action'] = Action;
params['InstanceIds.0'] = 'ins-09dx96dg';
params['Limit'] = 20;
params['Offset'] = 0;
params['Nonce'] = Nonce;
params['Region'] = Region;
params['SecretId'] = SECRET_ID;
params['Timestamp'] = Timestamp;
params['Version'] = Version;

strParam = sort_params(params)

const reqMethod = "GET";
const path = "/";
strSign = formatSignString(reqMethod, endpoint, path, strParam)
console.log(strSign)
console.log("-----------------------")

params['Signature'] = sha1(SECRET_KEY, strSign)
console.log(params['Signature'])
console.log("-----------------------")

const req_url = get_req_url(params, endpoint)
console.log(params['Signature'])
console.log("-----------------------")
console.log(req_url)
}
main()
```

Responses

最近更新时间：2024-04-20 14:35:56

Response for Successful Requests

For example, when calling CAM API (version: 2017-03-12) to view the status of instances (DescribeInstancesStatus), if the request has succeeded, you may see the response as shown below:

```
{
"Response": {
"TotalCount": 0,
"InstanceStatusSet": [],
"RequestId": "b5b41468-520d-4192-b42f-595cc34b6c1c"
}
}
```

- The API will return `Response`, which contains `RequestId`, as long as it processes the request. It does not matter if the request is successful or not.
- RequestId is the unique ID of an API request. Contact us with this ID when an exception occurs.
- Except for the fixed fields, all fields are action-specified. For the definitions of action-specified fields, see the corresponding API documentation. In this example, `TotalCount` and `InstanceStatusSet` are the fields specified by the API `DescribeInstancesStatus`. 0 `TotalCount` means that the requester owns 0 CVM instance so the `InstanceStatusSet` is empty.

Response for Failed Requests

If the request has failed, you may see the response as shown below:

```
{
"Response": {
"Error": {
"Code": "AuthFailure.SignatureFailure",
"Message": "The provided credentials could not be validated. Please ensure your s
ignature is correct."
},
"RequestId": "ed93f3cb-f35e-473f-b9f3-0d451b8b79c6"
}
}
```

- The presence of the `Error` field indicates that the request has failed. A response for a failed request will include `Error`, `Code` and `Message` fields.
- `Code` is the code of the error that helps you identify the cause and solution. There are two types of error codes so you may find the code in either common error codes or API-specified error codes.
- Message explains the cause of the error. Note that the returned messages are subject to service updates. The information the messages provide may not be up-to-date and should not be the only source of reference.
- RequestId is the unique ID of an API request. Contact us with this ID when an exception occurs.

Common Error Codes

If there is an Error field in the response, it means that the API call failed. The Code field in Error indicates the error code. The following table lists the common error codes that all actions can return.

Error Code	Description
AuthFailure.InvalidSecretId	Invalid key (not a TencentCloud API key type).
AuthFailure.MFAFailure	MFA failed.
AuthFailure.SecretIdNotFound	The key does not exist.
AuthFailure.SignatureExpire	Signature expired.
AuthFailure.SignatureFailure	Signature error.
AuthFailure.TokenFailure	Token error.
AuthFailure.UnauthorizedOperation	The request does not have CAM authorization.
DryRunOperation	DryRun Operation. It means that the request would have succeeded, but the DryRun parameter was used.
FailedOperation	Operation failed.
InternalError	Internal error.
InvalidAction	The API does not exist.
InvalidParameter	Incorrect parameter.
InvalidParameterValue	Invalid parameter value.
LimitExceeded	Quota limit exceeded.
MissingParameter	A parameter is missing.

NoSuchVersion	The API version does not exist.
RequestLimitExceeded	The number of requests exceeds the frequency limit.
ResourceInUse	Resource is in use.
ResourceInsufficient	Insufficient resource.
ResourceNotFound	The resource does not exist.
ResourceUnavailable	Resource is unavailable.
UnauthorizedOperation	Unauthorized operation.
UnknownParameter	Unknown parameter.
UnsupportedOperation	Unsupported operation.
UnsupportedProtocol	HTTPS request method error. Only GET and POST requests are supported.
UnsupportedRegion	API does not support the requested region.

Cluster Resource Management APIs ScaleOutCluster

最近更新时间：2024-04-20 14:36:00

1. API Description

Domain name for API request: emr.tencentcloudapi.com.

This API is used to scale out a cluster.

A maximum of 20 requests can be initiated per second for this API.

We recommend you to use API Explorer

Try it

API Explorer provides a range of capabilities, including online call, signature authentication, SDK code generation, and API quick search. It enables you to view the request, response, and auto-generated examples.

2. Input Parameters

The following request parameter list only provides API request parameters and some common parameters. For the complete common parameter list, see Common Request Parameters.

Parameter Name	Required	Type	Description
Action	Yes	String	Common Params. The v ScaleOutCluster.
Version	Yes	String	Common Params. The v 2019-01-03.
Region	No	String	Common Params. This p for this API.
InstanceChargeType	Yes	String	The node billing mode. V • `POSTPAID_BY_HOU` by hour. • `SPOTPAID` : The sp nodes only).
InstanceId	Yes	String	The cluster instance ID.

ScaleOutNodeConfig	Yes	ScaleOutNodeConfig	The type and number of
ClientToken	No	String	A unique random token, minutes and needs to be prevent the client from re resources. An example v `751a-41b6-aad6-fae`
InstanceChargePrepaid	No	InstanceChargePrepaid	The details of the monthl the instance period and a if the `InstanceCharg`
ScriptBootstrapActionConfig.N	No	Array of ScriptBootstrapActionConfig	The Bootstrap action scr
SoftDeployInfo.N	No	Array of Integer	The services to be deplo default, new nodes will ir the current node type, inc services. This parameter inclusion of optional serv HDFS, YARN, and Impa existing task nodes, whe node scale-out without d HDFS and YARN are inc parameter.
ServiceNodeInfo.N	No	Array of Integer	The processes to be dep services to be added are Deployed processes can HDFS, YARN, and Impa current task nodes, and DataNode, NodeManage you want to change depl set this parameter to DataNode,NodeManage or DataNode,NodeManage
DisasterRecoverGroupIds.N	No	Array of String	The list of spread placem can be specified. You can call the Describ API and obtain this para `DisasterRecoverGr` response.
Tags.N	No	Array of Tag	The list of tags bound to

HardwareSourceType	No	String	The type of resources to `host` (general CVM r (resources provided by a
PodSpecInfo	No	PodSpecInfo	The pod resource inform
ClickHouseClusterName	No	String	The server group name s cluster scale-out.
ClickHouseClusterType	No	String	The server group type se cluster scale-out. Valid v group) and `old` (selec
YarnNodeLabel	No	String	The YARN node label sp
EnableStartServiceFlag	No	Boolean	Whether to start services • `true` : Yes • `false` (default): N
ResourceSpec	No	NodeResourceSpec	The spec settings.
Zone	No	String	The ID of the AZ where t as `ap-guangzhou-1` DescribeZones API and `Zone` field in the respo
SubnetId	No	String	The subnet, which defau when the cluster is creat
ScaleOutServiceConfGroupsInfo.N	No	Array of ScaleOutServiceConfGroupsInfo	

3. Output Parameters

Parameter Name	Type	Description
InstanceId	String	The instance ID.
ClientToken	String	The client token. Note: This field may return null, indicating that no valid values can be obtained.
FlowId	Integer	The scale-out workflow ID. Note: This field may return null, indicating that no valid values can be obtained.

RequestId	String	The unique request ID, generated by the server, will be returned for every request (if the request fails to reach the server for other reasons, the request will not obtain a RequestId). RequestId is required for locating a problem.

4. Example

Example1 Scaling Out a Cluster

Input Example

```
POST / HTTP/1.1
Host: emr.tencentcloudapi.com
Content-Type: application/json
X-TC-Action: ScaleOutCluster
<Common request parameters>

{
"ClientToken": "",
"InstanceChargeType": "SPOTPAID",
"InstanceChargePrepaid": {
"Period": 0,
"RenewFlag": true
},
"ScriptBootstrapActionConfig": [
{
"CosFileURI": "https://devops-private-1251949819.cos.na-ashburn.myqcloud.com/emr/
shell/emr_init.sh",
"Args": [
"abc"
],
"CosFileName": "emr_init",
"ExecutionMoment": "resourceAfter"
}
],
"InstanceId": "emr-ge0vrqkl",
"SoftDeployInfo": [
1,
2
],
"ServiceNodeInfo": [
7
],
"DisasterRecoverGroupIds": [
"abc"
```

```
],
"Tags": [
{
"TagKey": "Team",
"TagValue": "data"
}
],
"HardwareSourceType": "host",
"PodSpecInfo": {
"PodSpec": {
"ResourceProviderIdentifier": "cls-a1cd23fa",
"ResourceProviderType": "tke",
"NodeFlag": "TASK",
"Cpu": 1,
"Memory": 1,
"CpuType": "intel",
"PodVolumes": [
{
"VolumeType": "abc",
"PVCVolume": {
"DiskSize": 1,
"DiskType": "abc",
"DiskNum": 0
},
"HostVolume": {
"VolumePath": "abc"
}
}
],
"EnableDynamicSpecFlag": true,
"DynamicPodSpec": {
"RequestCpu": 0,
"LimitCpu": 0,
"RequestMemory": 0,
"LimitMemory": 0
},
"VpcId": "vpc-d1c351hq",
"SubnetId": "subnet-lnejfj4p",
"PodName": "podeee"
},
"PodParameter": {
"InstanceId": "abc",
"Config": "abc",
"Parameter": "abc"
}
},
"ClickHouseClusterName": "abc",
```

```
"ClickHouseClusterType": "new",
"YarnNodeLabel": "abc",
"EnableStartServiceFlag": true,
"ResourceSpec": {
"Tags": [
{
"TagKey": "abc",
"TagValue": "abc"
}
],
"InstanceType": "SA2.4XLARGE64",
"SystemDisk": [
{
"Count": 1,
"DiskType": "CLOUD_PREMIUM",
"DiskSize": 70
}
],
"DataDisk": [
{
"Count": 1,
"DiskType": "CLOUD_HSSD",
"DiskSize": 70
}
],
"LocalDataDisk": [
{
"Count": 1,
"DiskType": "CLOUD_HSSD",
"DiskSize": 100
}
]
},
"Zone": "ap-shanghai-5",
"SubnetId": "subnet-lnejfj4p",
"ScaleOutNodeConfig": {
"NodeFlag": "CORE",
"NodeCount": 1
}
}
```

Output Example

```
{
"Response": {
"InstanceId": "xx",
```

```
"FlowId": 0,
"RequestId": "xx",
"ClientToken": "xx"
}
}
```

5. Developer Resources

SDK

TencentCloud API 3.0 integrates SDKs that support various programming languages to make it easier for you to call APIs.

- Tencent Cloud SDK 3.0 for Python
- Tencent Cloud SDK 3.0 for Java
- Tencent Cloud SDK 3.0 for PHP
- Tencent Cloud SDK 3.0 for Go
- Tencent Cloud SDK 3.0 for Node.js
- Tencent Cloud SDK 3.0 for .NET
- Tencent Cloud SDK 3.0 for C++

Command Line Interface

- Tencent Cloud CLI 3.0

6. Error Code

The following only lists the error codes related to the API business logic. For other error codes, see Common Error Codes.

Error Code	Description
FailedOperation	Operation failed.
FailedOperation.GetCvmConfigQuotaFailed	Failed to fetch the specifications of the CVM.
InvalidParameter.InvalidInstanceChargeType	Invalid instance billing mode.
InvalidParameter.InvalidInstanceType	Invalid model.
InvalidParameter.InvalidNodeFlag	Incorrect node type.

InvalidParameter.InvalidSoftDeployInfo	The `InvalidSoftDeployInfo` parameter is invalid or incorrect.
ResourceInUse.InstanceInProcess	The instance is under workflow.
ResourceInsufficient.DiskInsufficient	The disk specification is insufficient.
ResourceInsufficient.InstanceInsufficient	The node specification is unsupported or has been sold out.
ResourceNotFound.InstanceNotFound	The instance was not found.
ResourceUnavailable.ResourceSpecNotDefaultSpec	There is no default value of the current resource spec.

CreateCluster

最近更新时间：2024-01-09 10:47:35

1. API Description

Domain name for API request: emr.tencentcloudapi.com.

This API is used to create an EMR cluster instance.

A maximum of 20 requests can be initiated per second for this API.

We recommend you to use API Explorer

Try it

API Explorer provides a range of capabilities, including online call, signature authentication, SDK code generation, and API quick search. It enables you to view the request, response, and auto-generated examples.

2. Input Parameters

The following request parameter list only provides API request parameters and some common parameters. For the complete common parameter list, see Common Request Parameters.

Parameter Name	Required	Type	Description
Action	Yes	String	Common Params. The value used for this API: CreateCluster.
Version	Yes	String	Common Params. The value used for this API: 2019-01-03.
Region	No	String	Common Params. This parameter is not required for this API.
ProductVersion	Yes	String	The EMR version, such as `EMR-V2.3.0` that indicates the version 2.3.0 of EMR. You can query the EMR version here.
EnableSupportHAFlag	Yes	Boolean	Whether to enable high availability for nodes. Valid values:

			• `true` : Enable • `false` : Disable
InstanceName	Yes	String	The instance name. • Length limit: 6–36 characters. • Can contain only Chinese characters, letters, digits, hyphens (-), and underscores (_).
InstanceChargeType	Yes	String	The instance billing mode. Valid values: • `POSTPAID_BY_HOUR` : The postpaid mode by hour.
LoginSettings	Yes	LoginSettings	The instance login setting. This parameter allows you to set a login password or key for your purchased node. • If a key is set, the password will be used for login to the native component WebUI only. • If no key is set, the password will be used for login to all purchased nodes and the native component WebUI.
SceneSoftwareConfig	Yes	SceneSoftwareConfig	The configuration of cluster application scenario and supported components.
InstanceChargePrepaid	No	InstanceChargePrepaid	The details of the monthly subscription, including the instance period and auto-renewal. It is required if `InstanceChargeType` is `PREPAID` .
SecurityGroupIds.N	No	Array of String	The ID of the security group to which the instance belongs, in the format of `sg-xxxxxxxx` . You can call the DescribeSecurityGroups API and obtain this parameter from the `SecurityGroupId` field in the response.

ScriptBootstrapActionConfig.N	No	Array of ScriptBootstrapActionConfig	The Bootstrap action script settings.
ClientToken	No	String	A unique random token, which is valid for 5 minutes and needs to be specified by the caller to prevent the client from repeatedly creating resources. An example value is `a9a90aa6-751a-41b6-aad6-fae360632808`.
NeedMasterWan	No	String	Whether to enable public IP access for master nodes. Valid values: • `NEED_MASTER_WAN`: Enable public IP for master nodes. • `NOT_NEED_MASTER_WAN`: Disable. The public IP is enabled for master nodes by default.
EnableRemoteLoginFlag	No	Boolean	Whether to enable remote login over the public network. It is invalid if `SecurityGroupId` is passed in. It is disabled by default. Valid values: • `true`: Enable • `false`: Disable
EnableKerberosFlag	No	Boolean	Whether to enable Kerberos authentication. Valid values: • `true`: Enable • `false` (default): Disable
CustomConf	No	String	Custom software configuration
Tags.N	No	Array of Tag	The tag description list. This parameter is used to bind a tag to a resource instance.
DisasterRecoverGroupIds.N	No	Array of String	The list of spread placement group IDs. Only one can be specified. You can call the DescribeDisasterRecoverGroups

			API and obtain this parameter from the `DisasterRecoverGroupId` field in the response.
EnableCbsEncryptFlag	No	Boolean	Whether to enable the cluster-level CBS encryption. Valid values: • `true` : Enable • `false` (default): Disable
MetaDBInfo	No	CustomMetaDBInfo	The metadatabase information. If `MetaType` is `EMR_NEW_META` , `MetaDataJdbcUrl` , `MetaDataUser` , `MetaDataPass` , and `UnifyMetaInstanceId` are not required. If `MetaType` is `EMR_EXIT_META` , `UnifyMetaInstanceId` is required. If `MetaType` is `USER_CUSTOM_META` , `MetaDataJdbcUrl` , `MetaDataUser` , and `MetaDataPass` are required.
DependService.N	No	Array of DependService	The shared component information.
ZoneResourceConfiguration.N	No	Array of ZoneResourceConfiguration	The node resource specs. A spec is specified for each AZ, with the first spec for the primary AZ, the second for the backup AZ, and the third for the arbitrator AZ. If the multi-AZ mode is not enabled, only one spec is required.

3. Output Parameters

Parameter Name	Type	Description
InstanceId	String	The instance ID. Note: This field may return null, indicating that no valid values can be obtained.
RequestId	String	The unique request ID, which is returned for each request. RequestId is required for locating a problem.

4. Example

Example1 Creating an EMR cluster instance

Input Example

```
POST / HTTP/1.1
Host: emr.tencentcloudapi.com
Content-Type: application/json
X-TC-Action: CreateCluster
<Common request parameters>

{
"DisasterRecoverGroupIds": [
"xx"
],
"DependService": [
{
"InstanceId": "xx",
"ServiceName": "xx"
}
],
"ZoneResourceConfiguration": [
{
"VirtualPrivateCloud": {
"SubnetId": "xx",
"VpcId": "xx"
},
"AllNodeResourceSpec": {
"CoreResourceSpec": {
"DataDisk": [
{
"Count": 0,
"DiskSize": 0,
"DiskType": "xx"
}
```

```
],
"SystemDisk": [
{
"Count": 0,
"DiskSize": 0,
"DiskType": "xx"
}
],
"LocalDataDisk": [
{
"Count": 0,
"DiskSize": 0,
"DiskType": "xx"
}
],
"InstanceType": "xx",
"Tags": [
{
"TagKey": "xx",
"TagValue": "xx"
}
]
},
"CoreCount": 0,
"MasterResourceSpec": {
"InstanceType": "xx",
"Tags": [
{
"TagKey": "xx",
"TagValue": "xx"
}
]
},
"TaskCount": 0,
"TaskResourceSpec": {
"InstanceType": "xx"
},
"CommonCount": 0,
"MasterCount": 0
},
"Placement": {
"ProjectId": 0,
"Zone": "xx"
},
"ZoneTag": "xx"
}
],
```

```
"ScriptBootstrapActionConfig": [
{
"CosFileName": "xx",
"Args": [
"xx"
],
"CosFileURI": "xx",
"ExecutionMoment": "xx"
}
],
"Tags": [
{
"TagKey": "xx",
"TagValue": "xx"
}
],
"NeedMasterWan": "xx",
"EnableCbsEncryptFlag": true,
"MetaDBInfo": {
"MetaDataPass": "xx",
"MetaDataUser": "xx",
"UnifyMetaInstanceId": "xx",
"MetaDataJdbcUrl": "xx",
"MetaType": "xx"
},
"LoginSettings": {
"Password": "xx",
"PublicKeyId": "xx"
},
"SecurityGroupIds": [
"xx"
],
"InstanceChargeType": "xx",
"ProductVersion": "xx",
"ClientToken": "xx",
"SceneSoftwareConfig": {
"SceneName": "xx",
"Software": [
"xx"
]
},
"EnableKerberosFlag": true,
"CustomConf": "xx",
"InstanceChargePrepaid": {
"RenewFlag": true,
"Period": 0
},
```

```
"InstanceName": "xx",
"EnableRemoteLoginFlag": true,
"EnableSupportHAFlag": true
}
```

Output Example

```
{
"Response": {
"InstanceId": "xx",
"RequestId": "xx"
}
}
```

5. Developer Resources

SDK

TencentCloud API 3.0 integrates SDKs that support various programming languages to make it easier for you to call APIs.

- Tencent Cloud SDK 3.0 for Python
- Tencent Cloud SDK 3.0 for Java
- Tencent Cloud SDK 3.0 for PHP
- Tencent Cloud SDK 3.0 for Go
- Tencent Cloud SDK 3.0 for Node.js
- Tencent Cloud SDK 3.0 for .NET
- Tencent Cloud SDK 3.0 for C++

Command Line Interface

- Tencent Cloud CLI 3.0

6. Error Code

The following only lists the error codes related to the API business logic. For other error codes, see Common Error Codes.

Error Code	Description

FailedOperation	Operation failed.
FailedOperation.GetCvmServerFailed	Failed to call the CVM service.
InternalError.CdbError	An error occurred while calling another service API.
InternalError.CvmError	An error occurred while calling another service API.
InternalError.TradeCgwError	An error occurred while calling another service API.
InvalidParameter.HALessMasterCount	Parameter error.
InvalidParameter.IncorrectMasterCount	The number of master nodes is invalid.
InvalidParameter.InvalidAllNodeResourceSpec	Invalid `AllNodeResourceSpec` .
InvalidParameter.InvalidComponent	Invalid component.
InvalidParameter.InvalidCoreCount	The number of core nodes is invalid.
InvalidParameter.InvalidCoreDiskType	Parameter error.
InvalidParameter.InvalidDependServiceAndEnableKerberosConflict	Conflict between `DependService` and `EnableKerberos` .
InvalidParameter.InvalidDiskNum	Invalid number of disks.
InvalidParameter.InvalidInstanceChargeType	Invalid instance billing mode.
InvalidParameter.InvalidInstanceType	Invalid model.
InvalidParameter.InvalidMasterDiskType	Invalid parameter.
InvalidParameter.InvalidMetaType	Invalid metadata table type.
InvalidParameter.InvalidPassword	Invalid password.
InvalidParameter.InvalidProductVersion	Invalid product version.
InvalidParameter.InvalidRenewFlag	Invalid auto-renewal identifier.
InvalidParameter.InvalidResourceSpec	Invalid resource specification.
InvalidParameter.InvalidScriptBootstrapActionConfig	Invalid bootstrap script execution parameter.

InvalidParameter.InvalidSoftInfo	Invalid `SoftInfo`.
InvalidParameter.InvalidZone	Invalid AZ.
InvalidParameter.KerberosSupport	Invalid identifier for Kerberos support.
ResourceInsufficient.InstanceInsufficient	The node specification is unsupported or has been sold out.
ResourceNotFound.SubnetNotFound	No corresponding subnet found.
ResourcesSoldOut.CvmSoldOut	CVM instances have been sold out.

CreateInstance

最近更新时间：2024-01-09 10:47:34

1. API Description

Domain name for API request: emr.tencentcloudapi.com.

This API is used to create an EMR cluster instance.

A maximum of 20 requests can be initiated per second for this API.

We recommend you to use API Explorer

Try it

API Explorer provides a range of capabilities, including online call, signature authentication, SDK code generation, and API quick search. It enables you to view the request, response, and auto-generated examples.

2. Input Parameters

The following request parameter list only provides API request parameters and some common parameters. For the complete common parameter list, see Common Request Parameters.

Parameter Name	Required	Type	Description
Action	Yes	String	Common Params. The value used for this API: CreateInstance.
Version	Yes	String	Common Params. The value used for this API: 2019-01-03.
Region	No	String	Common Params. This parameter is not required for this API.
ProductId	Yes	Integer	Product ID. Different product IDs stand for different EMR product versions. Valid range: 51: STARROCKS-V1.4.0 54: STARROCKS-V2.0.0 27: KAFKA-V1.0.0 50: KAFKA-V2.0.0 16: EMR-V2.3.0 20: EMR-V2.5.0

			30: EMR-V2.6.0 38: EMR-V2.7.0 25: EMR-V3.1.0 33: EMR-V3.2.1 34: EMR-V3.3.0 37: EMR-V3.4.0 44: EMR-V3.5.0 53: EMR-V3.6.0
Software.N	Yes	Array of String	List of deployed components. The list of component options varies by EMR product ID (i.e., `ProductId` ; for specific meanings, please see the `ProductId` input parameter). For more information, please see Component Version. Enter an instance value: `hive` or `flink` .
SupportHA	Yes	Integer	Whether to enable high node availability. Valid values: • 0: does not enable high availability of node. • 1: enables high availability of node.
InstanceName	Yes	String	Instance name. • Length limit: 6-36 characters. • Only letters, numbers, dashes (-), and underscores (_) are supported.
PayMode	Yes	Integer	Instance billing mode. Valid values: • 0: pay-as-you-go.
TimeSpan	Yes	Integer	Purchase duration of instance, which needs to be used together with `TimeUnit` . • When `TimeUnit` is `s` , this parameter can only be filled with 3600, indicating a pay-as-you-go instance. • When `TimeUnit` is `m` , the number entered in this parameter indicates the purchase duration of the monthly-subscription instance; for example, 1 means one month

TimeUnit	Yes	String	Time unit of instance purchase duration. Valid values: • s: seconds. When `PayMode` is 0, `TimeUnit` can only be `s`. • m: month. When `PayMode` is 1, `TimeUnit` can only be `m`.
LoginSettings	Yes	LoginSettings	Instance login settings. This parameter allows you to set the login password or key for your purchased node. • If the key is set, the password will be only used for login to the native component WebUI. • If the key is not set, the password will be used for login to all purchased nodes and the native component WebUI.
VPCSettings	No	VPCSettings	Configuration information of VPC. This parameter is used to specify the VPC ID, subnet ID, etc.
ResourceSpec	No	NewResourceSpec	Node resource specification.
COSSettings	No	COSSettings	Parameter required for enabling COS access.
Placement	No	Placement	Instance location. This parameter is used to specify the AZ, project, and other attributes of the instance.
SgId	No	String	Security group to which an instance belongs in the format of `sg-xxxxxxxx`. This parameter can be obtained from the `SecurityGroupId` field in the return value of the DescribeSecurityGroups API.
PreExecutedFileSettings.N	No	Array of PreExecuteFileSettings	Bootstrap action script settings
AutoRenew	No	Integer	Whether auto-renewal is enabled. Valid values: • 0: auto-renewal not enabled. • 1: auto-renewal enabled.

ClientToken	No	String	Client token.
NeedMasterWan	No	String	Whether to enable public IP access for master node. Valid values: • NEED_MASTER_WAN: enables public IP for master node. • NOT_NEED_MASTER_WAN: does not enable. Public IP is enabled for master node by default.
RemoteLoginAtCreate	No	Integer	Whether to enable remote public network login, i.e., port 22. When `SgId` is not empty, this parameter does not take effect.
CheckSecurity	No	Integer	Whether to enable secure cluster. 0: no; other values: yes.
ExtendFsField	No	String	Accesses to external file system.
Tags.N	No	Array of Tag	Tag description list. This parameter is used to bind a tag to a resource instance.
DisasterRecoverGroupIds.N	No	Array of String	List of spread placement group IDs. Only one can be specified currently. This parameter can be obtained in the `SecurityGroupId` field in the return value of the DescribeSecurityGroups API.
CbsEncrypt	No	Integer	CBS disk encryption at the cluster level. 0: not encrypted, 1: encrypted
MetaType	No	String	Hive-shared metadatabase type. Valid values: • EMR_DEFAULT_META: the cluster creates one by default. • EMR_EXIST_META: the cluster uses the specified EMR-MetaDB instance. • USER_CUSTOM_META: the cluster uses a custom MetaDB instance.

UnifyMetaInstanceId	No	String	EMR-MetaDB instance
MetaDBInfo	No	CustomMetaInfo	Custom MetaDB instance information
ApplicationRole	No	String	Custom application role.
SceneName	No	String	Scenario-based values: Hadoop-Kudu Hadoop-Zookeeper Hadoop-Presto Hadoop-Hbase
ExternalService.N	No	Array of ExternalService	Shared component information
VersionID	No	Integer	
MultiZone	No	Boolean	`true` indicates that the multi-AZ deployment mode is enabled. This parameter is available only in cluster creation and cannot be changed after setting.
MultiZoneSettings.N	No	Array of MultiZoneSetting	Node resource specs. The actual number of AZs is set, with the first AZ as the primary AZ, the second as the backup AZ, and the third as the arbitrator AZ. If the multi-AZ mode is not enabled, set the value to `1` .

3. Output Parameters

Parameter Name	Type	Description
InstanceId	String	Instance ID Note: this field may return `null` , indicating that no valid values can be obtained.
RequestId	String	The unique request ID, which is returned for each request. RequestId is required for locating a problem.

4. Example

Example1 Creating an instance

Input Example

```
POST / HTTP/1.1
Host: emr.tencentcloudapi.com
Content-Type: application/json
X-TC-Action: CreateInstance
<Common request parameters>

{
"ResourceSpec": {
"MasterResourceSpec": {
"StorageType": "5",
"DiskType": "CLOUD_PREMIUM",
"Cpu": "4",
"DiskSize": "100",
"MemSize": "8192",
"RootSize": "100",
"Spec": "CVM.S2"
},
"CoreCount": "2",
"CoreResourceSpec": {
"StorageType": "5",
"DiskType": "CLOUD_PREMIUM",
"Cpu": "4",
"DiskSize": "100",
"MemSize": "8192",
"RootSize": "100",
"Spec": "CVM.S2"
},
"MasterCount": "1"
},
"Placement": {
"ProjectId": "0",
"Zone": "ap-guangzhou-3"
},
&SupportHA=0
"TimeSpan": "3600",
"VPCSettings": {
"SubnetId": "subnet-xxxxxxx",
"VpcId": "vpc-xxxxxx"
},
"LoginSettings": {
"Password": "tencent@cloud123"
},
"PayMode": "0",
```

```
"AutoRenew": "0",
"TimeUnit": "s",
"Software": [
"zookeeper-3.4.9",
"hadoop-2.8.4",
"knox-1.2.0"
],
"InstanceName": "emr test",
"ProductId": "4"
}
```

Output Example

```
{
"Response": {
"RequestId": "d830face-6587-4263-8ab0-56bda265787d",
"InstanceId": "emr-xxxx"
}
}
```

5. Developer Resources

SDK

TencentCloud API 3.0 integrates SDKs that support various programming languages to make it easier for you to call APIs.

- Tencent Cloud SDK 3.0 for Python
- Tencent Cloud SDK 3.0 for Java
- Tencent Cloud SDK 3.0 for PHP
- Tencent Cloud SDK 3.0 for Go
- Tencent Cloud SDK 3.0 for Node.js
- Tencent Cloud SDK 3.0 for .NET
- Tencent Cloud SDK 3.0 for C++

Command Line Interface

- Tencent Cloud CLI 3.0

6. Error Code

The following only lists the error codes related to the API business logic. For other error codes, see Common Error Codes.

Error Code	Description
FailedOperation	Operation failed.
FailedOperation.DuplicateOrderNotAllowed	Duplicate order. Please check the EMR console.
FailedOperation.GetCvmServerFailed	Failed to call the CVM service.
InternalError	Internal error.
InternalError.AccountCgwError	An error occurred while calling another service API.
InternalError.CamCgwError	An error occurred while calling another service API.
InternalError.CamError	An error occurred while calling another service API.
InternalError.CbsCgwError	An error occurred while calling another service API.
InternalError.CbsError	An error occurred while calling another service API.
InternalError.CdbCgwError	An error occurred while calling another service API.
InternalError.CdbError	An error occurred while calling another service API.
InternalError.CheckQuotaErr	CVM or CBS resources are insufficient, or the software is invalid.
InternalError.ConfigCgwError	An error occurred while calling another service API.
InternalError.CvmError	An error occurred while calling another service API.
InternalError.KmsError	An error occurred while calling another service API.
InternalError.ProjectCgwError	An error occurred while calling another service API.
InternalError.SgError	An error occurred when calling a security group API.
InternalError.TagError	An error occurred while calling another service API.
InternalError.TradeCgwError	An error occurred while calling another service API.
InternalError.VpcCgwError	An error occurred while calling another service API.
InternalError.VpcError	An error occurred while calling another service API.
InternalError.WoodServerError	An error occurred while calling another service API.

InvalidParameter	Invalid parameter.
InvalidParameter.HALessMasterCount	Parameter error.
InvalidParameter.IncorrectCommonCount	The number of common nodes is invalid.
InvalidParameter.IncorrectMasterCount	The number of master nodes is invalid.
InvalidParameter.InvalidAutoRenew	Invalid auto-renewal flag.
InvalidParameter.InvalidClientToken	Invalid `ClientToken`.
InvalidParameter.InvalidComponent	Invalid component.
InvalidParameter.InvalidCoreCount	The number of core nodes is invalid.
InvalidParameter.InvalidCosFileURI	
InvalidParameter.InvalidDiskSize	Invalid disk size.
InvalidParameter.InvalidExtendField	Invalid `CustomConfig`.
InvalidParameter.InvalidInstanceName	Invalid cluster name.
InvalidParameter.InvalidInstanceType	Invalid model.
InvalidParameter.InvalidLoginSetting	Invalid login settings.
InvalidParameter.InvalidMetaDataJdbcUrl	Invalid metadatabase URL.
InvalidParameter.InvalidMetaType	Invalid metadata table type.
InvalidParameter.InvalidPassword	Invalid password.
InvalidParameter.InvalidPaymode	Invalid billing mode.
InvalidParameter.InvalidPreExecutedFile	Invalid bootstrap script.
InvalidParameter.InvalidProductId	Invalid product ID.
InvalidParameter.InvalidProjectId	Invalid project ID.
InvalidParameter.InvalidResourceSpec	Invalid resource specification.
InvalidParameter.InvalidSecuritySupport	This EMR version does not support the security mode.
InvalidParameter.InvalidSercurityGrpupId	Invalid security group ID.
InvalidParameter.InvalidServiceName	The service name is invalid.

InvalidParameter.InvalidSoftDeployInfo	The `InvalidSoftDeployInfo` parameter is invalid or incorrect.
InvalidParameter.InvalidSoftInfo	Invalid `SoftInfo`.
InvalidParameter.InvalidSoftWare	Incorrect parameter.
InvalidParameter.InvalidSoftWareName	The software name is invalid.
InvalidParameter.InvalidSoftWareVersion	The software version is invalid.
InvalidParameter.InvalidSubnetId	Invalid subnet ID.
InvalidParameter.InvalidSupportHA	Invalid high availability parameter.
InvalidParameter.InvalidTimeSpan	Invalid `timespan`.
InvalidParameter.InvalidTimeUnit	Invalid `TimeUnit`.
InvalidParameter.InvalidUnifyMeta	Invalid unified metadatabase.
InvalidParameter.InvalidVpcId	Invalid VPC ID.
InvalidParameter.InvalidZone	Invalid AZ.
InvalidParameter.NotContainMustSelectSoftware	Invalid parameter. Necessary components are missing.
InvalidParameter.PayModeResourceNotMatch	The billing mode and resource do not match.
InvalidParameter.SoftwareNotInProduct	There is an invalid product component.
InvalidParameter.UngrantedPolicy	The policy is not authorized.
InvalidParameter.UngrantedRole	The role is not authorized.
InvalidParameter.ZoneResourceNotMatch	The AZ and resource do not match.
InvalidParameterValue	Incorrect parameter value.
LimitExceeded.SecurityGroupNumLimitExceeded	The number of security groups exceeds the limit.
MissingParameter	Missing parameter.
ResourceInsufficient.DiskInsufficient	The disk specification is insufficient.
ResourceInsufficient.InstanceInsufficient	The node specification is unsupported or has been sold out.
ResourceNotFound.SubnetNotFound	No corresponding subnet found.

ResourceNotFound.TagsNotFound	No specified tag found.
ResourcesSoldOut	The resources have been sold out.
ResourcesSoldOut.CbsSoldOut	The CBS resources have been sold out.
ResourcesSoldOut.CvmSoldOut	CVM instances have been sold out.
UnknownParameter	Unknown parameter.
UnsupportedOperation	Unsupported operation.

DescribeInstances

最近更新时间：2024-01-09 10:47:34

1. API Description

Domain name for API request: emr.tencentcloudapi.com.

This API is used to query the information of instances in a cluster.

A maximum of 20 requests can be initiated per second for this API.

We recommend you to use API Explorer

Try it

API Explorer provides a range of capabilities, including online call, signature authentication, SDK code generation, and API quick search. It enables you to view the request, response, and auto-generated examples.

2. Input Parameters

The following request parameter list only provides API request parameters and some common parameters. For the complete common parameter list, see Common Request Parameters.

Parameter Name	Required	Type	Description
Action	Yes	String	Common Params. The value used for this API: DescribeInstances.
Version	Yes	String	Common Params. The value used for this API: 2019-01-03.
Region	No	String	Common Params. This parameter is not required for this API.
DisplayStrategy	Yes	String	Cluster filtering policy. Valid values: • clusterList: queries the list of clusters except terminated ones. • monitorManage: queries the list of clusters except those that have been terminated, are being created, or failed to be created. • cloudHardwareManage/componentManage: reserved fields with the same meaning as `monitorManage` .
InstanceIds.N	No	Array of String	Queries by one or more instance IDs in the format of `emr-xxxxxxxx` . For the format of this parameter, please see the `id.N` section in API Overview. If no instance ID is entered, the list of all instances under this `APPID` will be returned.

Offset	No	Integer	Page number. Default value: 0, indicating the first page.
Limit	No	Integer	Number of returned results per page. Default value: 10. Maximum value: 100
ProjectId	No	Integer	ID of the project to which the instance belongs. This parameter can be obtained from the `projectId` field in the return value of the `DescribeProject` API. If this value is -1, the list of all instances will be returned.
OrderField	No	String	Sorting field. Valid values: • clusterId: sorts by cluster ID. • addTime: sorts by instance creation time. • status: sorts by instance status code.
Asc	No	Integer	Sorts according to `OrderField` in ascending or descending order. Valid values: • 0: descending order. • 1: ascending order. Default value: 0.

3. Output Parameters

Parameter Name	Type	Description
TotalCnt	Integer	Number of eligible instances.
ClusterList	Array of ClusterInstancesInfo	List of EMR instance details. Note: this field may return null, indicating that no valid values can be obtained.
TagKeys	Array of String	List of tag keys associated to an instance. Note: this field may return null, indicating that no valid values can be obtained.
RequestId	String	The unique request ID, which is returned for each request. RequestId is required for locating a problem.

4. Example

Example1 Querying Instance Details

Querying Instance Details

Input Example

```
POST / HTTP/1.1
Host: emr.tencentcloudapi.com
Content-Type: application/json
X-TC-Action: DescribeInstances
<Common request parameters>

{
"DisplayStrategy": "clusterList",
"ProjectId": "0",
"Asc": "0",
"Limit": "10",
"OrderField": "clusterid",
"Offset": "0",
"InstanceIds": [
"emr-p9f700x8"
]
}
```

Output Example

```
{
"Response": {
"ClusterList": [
{
"AddTime": "2021-01-20 21:28:05",
"AlarmInfo": "",
"AliasInfo": "eyJjb21tb24iOiJjb21tb24iLCJjb3JlIjoiY29yZSIsIm1hc3RlciI6Im1hc3RlciIsInRhc2siOiJ0YXNrIn0=",
"AppId": 1258469122,
"ChargeType": 1,
"ClusterId": "emr-myzhptk6",
"ClusterName": "ganlu-hdfs-study-do not delete",
"Config": {
"ApplicationRole": "",
"CbsEncrypt": 0,
"ChargeType": 1,
"ComNodeSize": 0,
"ComResource": {
"Cpu": 0,
"DiskSize": 0,
"DiskType": "",
"InstanceType": "",
```

```
"MemSize": 0,
"RootSize": 0,
"Spec": "",
"SpecName": "",
"StorageType": 0
},
"CoreNodeSize": 2,
"CoreResource": {
"Cpu": 4,
"DiskSize": 100,
"DiskType": "CLOUD_PREMIUM",
"InstanceType": "",
"MemSize": 8192,
"RootSize": 0,
"Spec": "CVM.S2",
"SpecName": "EMR Standard S2",
"StorageType": 5
},
"MasterNodeSize": 1,
"MasterResource": {
"Cpu": 4,
"DiskSize": 100,
"DiskType": "CLOUD_PREMIUM",
"InstanceType": "",
"MemSize": 8192,
"RootSize": 0,
"Spec": "CVM.S2",
"SpecName": "EMR Standard S2",
"StorageType": 5
},
"OnCos": false,
"RouterNodeSize": 0,
"SecurityGroup": "sg-9zhz084e",
"SecurityGroups": [
"sg-9zhz084e"
],
"SecurityOn": false,
"SoftInfo": [
"zookeeper-3.6.1",
"yarn-3.1.2",
"hdfs-3.1.2",
"knox-1.2.0",
"hive-3.1.1",
"tez-0.9.2"
],
"SupportHA": false,
"TaskNodeSize": 2,
```

```
"TaskResource": {
"Cpu": 4,
"DiskSize": 100,
"DiskType": "CLOUD_PREMIUM",
"InstanceType": "",
"MemSize": 8192,
"RootSize": 0,
"Spec": "CVM.S2",
"SpecName": "EMR Standard S2",
"StorageType": 5
}
},
"EmrVersion": "EMR-V3.1.0",
"Ftitle": "Installing components in the cluster",
"HiveMetaDb": "cdb-709c8dh9",
"Id": 150118,
"IsTradeCluster": 0,
"IsWoodpeckerCluster": 1,
"MasterIp": "170.106.101.90",
"MetaDb": "cdb-709c8dh9",
"ProductId": 25,
"ProjectId": 0,
"RegionId": 15,
"ResourceOrderId": 0,
"RunTime": "146 days 21 hours 50 minutes 30 seconds",
"ServiceClass": "HADOOP",
"Status": 6,
"SubnetId": 85503,
"Tags": [],
"TradeVersion": 1,
"Uin": "100008965662",
"VpcId": 848834,
"Zone": "na-siliconvalley-2",
"ZoneId": 150002
}
],
"RequestId": "7ee88474-b29a-45b8-9ecc-595d03c4ef95",
"TagKeys": [],
"TotalCnt": 1
}
}
```


5. Developer Resources

SDK

TencentCloud API 3.0 integrates SDKs that support various programming languages to make it easier for you to call APIs.

- Tencent Cloud SDK 3.0 for Python
- Tencent Cloud SDK 3.0 for Java
- Tencent Cloud SDK 3.0 for PHP
- Tencent Cloud SDK 3.0 for Go
- Tencent Cloud SDK 3.0 for Node.js
- Tencent Cloud SDK 3.0 for .NET
- Tencent Cloud SDK 3.0 for C++

Command Line Interface

- Tencent Cloud CLI 3.0

6. Error Code

The following only lists the error codes related to the API business logic. For other error codes, see Common Error Codes.

Error Code	Description
FailedOperation	Operation failed.
FailedOperation.DescribeResourceTagsFailed	Failed to fetch resource tag.
FailedOperation.GetCamRoleFailed	Failed to query the CAM role.
FailedOperation.GetCamServerFailed	Failed to call the CAM service.
InternalError	Internal error.
InternalError.AccountCgwError	An error occurred while calling another service API.
InternalError.CamCgwError	An error occurred while calling another service API.
InternalError.CamError	An error occurred while calling another service API.
InternalError.CbsCgwError	An error occurred while calling another service API.
InternalError.CbsError	An error occurred while calling another service API.
InternalError.CdbCgwError	An error occurred while calling another service API.

InternalError.CdbError	An error occurred while calling another service API.
InternalError.ConfigCgwError	An error occurred while calling another service API.
InternalError.CvmError	An error occurred while calling another service API.
InternalError.KmsError	An error occurred while calling another service API.
InternalError.ProjectCgwError	An error occurred while calling another service API.
InternalError.SgError	An error occurred when calling a security group API.
InternalError.TagError	An error occurred while calling another service API.
InternalError.TradeCgwError	An error occurred while calling another service API.
InternalError.VpcCgwError	An error occurred while calling another service API.
InternalError.VpcError	An error occurred while calling another service API.
InternalError.WoodServerError	An error occurred while calling another service API.
InvalidParameter	Invalid parameter.
InvalidParameter.DisplayStrategyNotMatch	Incorrect display policy.
InvalidParameter.InvalidClusterId	Invalid parameter: ClusterId.
InvalidParameter.InvalidInstanceName	Invalid cluster name.
InvalidParameter.OrderFieldNotMatch	Invalid sorting field.
ResourceNotFound.ClusterNotFound	The instance was not found.
ResourceNotFound.HardwareInfoNotFound	No hardware information found.
ResourceNotFound.InstanceNotFound	The instance was not found.
UnauthorizedOperation.CheckCamAuth	Unauthorized operation.

DescribeClusterNodes

最近更新时间：2024-01-09 10:47:34

1. API Description

Domain name for API request: emr.tencentcloudapi.com.

This API is used to query the information of nodes in a cluster.

A maximum of 20 requests can be initiated per second for this API.

We recommend you to use API Explorer

Try it

API Explorer provides a range of capabilities, including online call, signature authentication, SDK code generation, and API quick search. It enables you to view the request, response, and auto-generated examples.

2. Input Parameters

The following request parameter list only provides API request parameters and some common parameters. For the complete common parameter list, see Common Request Parameters.

Parameter Name	Required	Type	Description
Action	Yes	String	Common Params. The value used for this API: DescribeClusterNodes.
Version	Yes	String	Common Params. The value used for this API: 2019-01-03.
Region	No	String	Common Params. This parameter is not required for this API.
InstanceId	Yes	String	Cluster instance ID in the format of emr-xxxxxxxx
NodeFlag	Yes	String	Node flag. Valid values: • all: gets the information of nodes in all types except TencentDB information. • master: gets master node information. • core: gets core node information. • task: gets task node information. • common: gets common node information. • router: gets router node information.

			• db: gets TencentDB information in normal status. Note: only the above values are supported for the time being. Entering other values will cause errors.
Offset	No	Integer	Page number. Default value: 0, indicating the first page.
Limit	No	Integer	Number of returned results per page. Default value: 100. Maximum value: 100
HardwareResourceType	No	String	Resource type. Valid values: all, host, pod. Default value: all
SearchFields.N	No	Array of SearchItem	Searchable field
OrderField	No	String	None
Asc	No	Integer	None

3. Output Parameters

Parameter Name	Type	Description
TotalCnt	Integer	Total number of queried nodes
NodeList	Array of NodeHardwareInfo	List of node details Note: this field may return null, indicating that no valid values can be obtained.
TagKeys	Array of String	List of tag keys owned by user Note: this field may return null, indicating that no valid values can be obtained.
HardwareResourceTypeList	Array of String	Resource type list Note: this field may return null, indicating that no valid values can be obtained.
RequestId	String	The unique request ID, which is returned for each request. RequestId is required for locating a problem.

4. Example

Example1 Getting hardware node information

This example shows you how to get the information of a hardware node by EMR cluster ID.

Input Example

```
https://emr.tencentcloudapi.com/?Action=DescribeClusterNodes
&InstanceId=emr-6deluvd4
&NodeFlag=all
&Offset=0
&Limit=10
&<common request parameters>
```

Output Example


```
{
"Response": {
"NodeList": [
{
"AppId": 251008830,
"ApplyTime": "2020-02-24 20:31:06",
"CdbIp": "",
"CdbNodeInfo": null,
"CdbPort": 0,
"ChargeType": 0,
"CpuNum": 8,
"Destroyable": 0,
"DeviceClass": "VSELF_2",
"DiskSize": "100.00 GB",
"EmrResourceId": "emr-vm-6xyf2cb2",
"ExpireTime": "0000-00-00 00:00:00",
"Flag": 1,
"FreeTime": "0000-00-00 00:00:00",
"HwDiskSize": 107374182400,
"HwDiskSizeDesc": "100.00 GB",
"HwMemSize": 17179869184,
"HwMemSizeDesc": "16GB",
"Ip": "10.0.0.76",
"IsAutoRenew": 0,
"MCMultiDisk": [
{
"Count": 1,
"Type": 5,
"Volume": 107374182400
}
],
```

```
"MemDesc": "16GB",
"MemSize": 17179869184,
"Mutable": 1,
"NameTag": "master.0",
"OrderNo": "ins-20224atg",
"RegionId": 1,
"RootSize": 0,
"SerialNo": "83d977e5-fa68-4051-875e-ad30ff42534f",
"Services": "Zookeeper,NameNode,ResourceManager,JobHistoryServer,HMaster,HbaseThrift,HiveServer2,HiveMetaStore,HiveWebHcat,Spark,SparkJobHistoryServer,Presto-Coordinator,knox",
"Spec": "CVM.S2",
"StorageType": 5,
"Tags": [],
"WanIp": "--",
"ZoneId": 100002
},
{
"AppId": 251008830,
"ApplyTime": "2020-02-24 20:31:07",
"CdbIp": "",
"CdbNodeInfo": null,
"CdbPort": 0,
"ChargeType": 0,
"CpuNum": 8,
"Destroyable": 0,
"DeviceClass": "VSELF_2",
"DiskSize": "100.00 GB",
"EmrResourceId": "emr-vm-cinlo2wc",
"ExpireTime": "0000-00-00 00:00:00",
"Flag": 2,
"FreeTime": "0000-00-00 00:00:00",
"HwDiskSize": 107374182400,
"HwDiskSizeDesc": "100.00 GB",
"HwMemSize": 17179869184,
"HwMemSizeDesc": "16GB",
"Ip": "10.0.0.33",
"IsAutoRenew": 0,
"MCMultiDisk": [
{
"Count": 1,
"Type": 5,
"Volume": 107374182400
}
],
"MemDesc": "16GB",
"MemSize": 17179869184,
```

```
"Mutable": 1,
"NameTag": "core.0",
"OrderNo": "ins-20224gpk",
"RegionId": 1,
"RootSize": 0,
"SerialNo": "8ded940b-a579-4c81-be75-3aaf62137337",
"Services": "DataNode,NodeManager,RegionServer,Presto-Worker",
"Spec": "CVM.S2",
"StorageType": 5,
"Tags": [],
"WanIp": "",
"ZoneId": 100002
},
{
"AppId": 251008830,
"ApplyTime": "2020-02-24 20:31:08",
"CdbIp": "",
"CdbNodeInfo": null,
"CdbPort": 0,
"ChargeType": 0,
"CpuNum": 8,
"Destroyable": 0,
"DeviceClass": "VSELF_2",
"DiskSize": "100.00 GB",
"EmrResourceId": "emr-vm-b32qad6s",
"ExpireTime": "0000-00-00 00:00:00",
"Flag": 2,
"FreeTime": "0000-00-00 00:00:00",
"HwDiskSize": 107374182400,
"HwDiskSizeDesc": "100.00 GB",
"HwMemSize": 17179869184,
"HwMemSizeDesc": "16GB",
"Ip": "10.0.0.111",
"IsAutoRenew": 0,
"MCMultiDisk": [
{
"Count": 1,
"Type": 5,
"Volume": 107374182400
}
],
"MemDesc": "16GB",
"MemSize": 17179869184,
"Mutable": 1,
"NameTag": "core.1",
"OrderNo": "ins-202241if",
"RegionId": 1,
```

```
"RootSize": 0,
"SerialNo": "c045bcd7-571a-4c64-b0a5-9024c94d5c15",
"Services": "DataNode,NodeManager,RegionServer,Presto-Worker",
"Spec": "CVM.S2",
"StorageType": 5,
"Tags": [],
"WanIp": "",
"ZoneId": 100002
}
],
"RequestId": "bb22bafb-d2a4-4a02-879f-6ccf54a27892",
"TagKeys": [
"Test",
"alex_test",
"beckwuxingjia",
"ghghghg",
"tag_auth_test",
"test",
"beckwu",
"emr",
"lg",
"bk"
],
"TotalCnt": 3
}
}
```


5. Developer Resources

SDK

TencentCloud API 3.0 integrates SDKs that support various programming languages to make it easier for you to call APIs.

- Tencent Cloud SDK 3.0 for Python
- Tencent Cloud SDK 3.0 for Java
- Tencent Cloud SDK 3.0 for PHP
- Tencent Cloud SDK 3.0 for Go
- Tencent Cloud SDK 3.0 for Node.js
- Tencent Cloud SDK 3.0 for .NET
- Tencent Cloud SDK 3.0 for C++

Command Line Interface

- Tencent Cloud CLI 3.0

6. Error Code

The following only lists the error codes related to the API business logic. For other error codes, see Common Error Codes.

Error Code	Description
FailedOperation	Operation failed.
FailedOperation.GetCamRoleFailed	Failed to query the CAM role.
FailedOperation.GetCamServerFailed	Failed to call the CAM service.
InternalError	Internal error.
InternalError.AccountCgwError	An error occurred while calling another service API.
InternalError.CamCgwError	An error occurred while calling another service API.
InternalError.CamError	An error occurred while calling another service API.
InternalError.CbsCgwError	An error occurred while calling another service API.
InternalError.CbsError	An error occurred while calling another service API.
InternalError.CdbCgwError	An error occurred while calling another service API.
InternalError.CdbError	An error occurred while calling another service API.
InternalError.ConfigCgwError	An error occurred while calling another service API.
InternalError.CvmError	An error occurred while calling another service API.
InternalError.KmsError	An error occurred while calling another service API.
InternalError.ProjectCgwError	An error occurred while calling another service API.
InternalError.SgError	An error occurred when calling a security group API.
InternalError.TagError	An error occurred while calling another service API.
InternalError.TradeCgwError	An error occurred while calling another service API.
InternalError.VpcCgwError	An error occurred while calling another service API.

InternalError.VpcError	An error occurred while calling another service API.
InternalError.WoodServerError	An error occurred while calling another service API.
InvalidParameter.InvalidAppId	Invalid `AppId`.
InvalidParameter.InvalidInstanceName	Invalid cluster name.
InvalidParameter.InvalidNodeType	Invalid `NodeType`.
ResourceNotFound.ClusterNotFound	The instance was not found.
ResourceNotFound.InstanceNotFound	The instance was not found.
UnauthorizedOperation.CheckCamAuth	Unauthorized operation.
UnsupportedOperation	Unsupported operation.

InquiryPriceCreateInstance

最近更新时间：2024-01-09 10:47:33

1. API Description

Domain name for API request: emr.tencentcloudapi.com.

This API is used to query price of instance creation.

A maximum of 20 requests can be initiated per second for this API.

We recommend you to use API Explorer

Try it

API Explorer provides a range of capabilities, including online call, signature authentication, SDK code generation, and API quick search. It enables you to view the request, response, and auto-generated examples.

2. Input Parameters

The following request parameter list only provides API request parameters and some common parameters. For the complete common parameter list, see Common Request Parameters.

Parameter Name	Required	Type	Description
Action	Yes	String	Common Params. The value used for this API: InquiryPriceCreateInstance.
Version	Yes	String	Common Params. The value used for this API: 2019-01-03.
Region	No	String	Common Params. This parameter is not required for this API.
TimeUnit	Yes	String	Time unit of instance purchase duration. Valid values: • s: seconds. When `PayMode` is 0, `TimeUnit` can only be `s`.
TimeSpan	Yes	Integer	Purchase duration of instance, which needs to be used together with `TimeUnit`. • When `TimeUnit` is `s`, this parameter can only be filled with 3600, indicating a pay-as-

			you-go instance. • When `TimeUnit` is `m`, the number entered in this parameter indicates the purchase duration of the monthly-subscription instance; for example, 1 means one month
Currency	Yes	String	Currency.
PayMode	Yes	Integer	Instance billing mode. Valid values: • 0: pay-as-you-go.
SupportHA	Yes	Integer	Whether to enable high availability of node. Valid values: • 0: does not enable high availability of node. • 1: enables high availability of node.
Software.N	Yes	Array of String	List of deployed components. Different required components need to be selected for different EMR product IDs (i.e., `ProductId`; for specific meanings, please see the `ProductId` field in the input parameter): • When `ProductId` is 1, the required components include hadoop-2.7.3, knox-1.2.0, and zookeeper-3.4.9 • When `ProductId` is 2, the required components include hadoop-2.7.3, knox-1.2.0, and zookeeper-3.4.9 • When `ProductId` is 4, the required components include hadoop-2.8.4, knox-1.2.0, and zookeeper-3.4.9 • When `ProductId` is 7, the required components include hadoop-3.1.2, knox-1.2.0, and zookeeper-3.4.9
ResourceSpec	No	NewResourceSpec	Node specification queried for price.
Placement	No	Placement	Instance location. This parameter is used to specify the AZ, project, and other attributes of the instance.
VPCSettings	No	VPCSettings	Configuration information of VPC. This parameter is used to specify the VPC ID, subnet ID, etc.
MetaType	No	String	Hive-shared metadatabase type. Valid values: • EMR_DEFAULT_META: the cluster creates one by default.

			• EMR_EXIST_META: the cluster uses the specified EMR-MetaDB instance. • USER_CUSTOM_META: the cluster uses a custom MetaDB instance.
UnifyMetaInstanceId	No	String	EMR-MetaDB instance
MetaDBInfo	No	CustomMetaInfo	Custom MetaDB instance information
ProductId	No	Integer	Product ID. Different product IDs represent different EMR product versions. Valid values: • 1: EMR v1.3.1. • 2: EMR v2.0.1. • 4: EMR v2.1.0. • 7: EMR v3.0.0.
SceneName	No	String	Scenario-based values: Hadoop-Kudu Hadoop-Zookeeper Hadoop-Presto Hadoop-Hbase
ExternalService.N	No	Array of ExternalService	Shared component information
VersionID	No	Integer	
MultiZoneSettings.N	No	Array of MultiZoneSetting	AZ specs

3. Output Parameters

Parameter Name	Type	Description
OriginalCost	Float	Original price. Note: this field may return null, indicating that no valid values can be obtained.
DiscountCost	Float	Discounted price. Note: this field may return null, indicating that no valid values can be obtained.
TimeUnit	String	Time unit of instance purchase duration. Valid values: • s: seconds.

		Note: this field may return null, indicating that no valid values can be obtained.
TimeSpan	Integer	Purchase duration of instance. Note: this field may return null, indicating that no valid values can be obtained.
PriceList	Array of ZoneDetailPriceResult	The price list. Note: This field may return null, indicating that no valid values can be obtained.
RequestId	String	The unique request ID, which is returned for each request. RequestId is required for locating a problem.

4. Example

Example1 Querying the price of creating an instance

Input Example

```
POST / HTTP/1.1
Host: emr.tencentcloudapi.com
Content-Type: application/json
X-TC-Action: InquiryPriceCreateInstance
<Common request parameters>

{
"ResourceSpec": {
"MasterResourceSpec": {
"StorageType": "5",
"DiskType": "CLOUD_PREMIUM",
"Cpu": "4",
"DiskSize": "100",
"MemSize": "16384",
"RootSize": "100",
"Spec": "CVM.S3"
},
"CoreCount": "2",
"CoreResourceSpec": {
"StorageType": "5",
"DiskType": "CLOUD_PREMIUM",
"Cpu": "4",
"DiskSize": "100",
"MemSize": "16384",
```

```
"RootSize": "100",
"Spec": "CVM.S3"
},
"MasterCount": "1"
},
"Placement": {
"ProjectId": "0",
"Zone": "ap-guangzhou-3"
},
"SupportHA": "0",
"TimeSpan": "3600",
"VPCSettings": {
"SubnetId": "subnet-jhgsahx0",
"VpcId": "vpc-ezt5qmqz"
},
"PayMode": "0",
"Currency": "USD",
"TimeUnit": "s",
"ProductId": "2",
"Software": [
"zookeeper-3.4.9",
"hadoop-2.7.3",
"knox-1.2.0",
"hive-2.3.2"
]
}
```


Output Example


```
{
"Response": {
"RequestId": "f329b63c-7cec-41f3-91ae-500cbf86b9eb",
"TimeSpan": 3600,
"TimeUnit": "s",
"DiscountCost": 25,
"OriginalCost": 25,
"PriceList": [
{
"NodeDetailPrice": [
{
"NodeType": "task",
"PartDetailPrice": [
{
"GoodsNum": 1,
"InstanceType": "rootDisk",
"Policy": 10,
```

```
"Price": 0.12,
"RealCost": 0.12,
"RealTotalCost": 0.12
},
{
"GoodsNum": 1,
"InstanceType": "node",
"Policy": 10,
"Price": 2.16,
"RealCost": 2.16,
"RealTotalCost": 2.16
},
{
"GoodsNum": 1,
"InstanceType": "dataDisk",
"Policy": 10,
"Price": 0.5,
"RealCost": 0.5,
"RealTotalCost": 0.5
}
]
},
{
"NodeType": "master",
"PartDetailPrice": [
{
"GoodsNum": 2,
"InstanceType": "rootDisk",
"Policy": 10,
"Price": 0.12,
"RealCost": 0.12,
"RealTotalCost": 0.25
},
{
"GoodsNum": 2,
"InstanceType": "node",
"Policy": 10,
"Price": 2.16,
"RealCost": 2.16,
"RealTotalCost": 4.31
},
{
"GoodsNum": 2,
"InstanceType": "dataDisk",
"Policy": 10,
"Price": 0.5,
"RealCost": 0.5,
```

```
"RealTotalCost": 1
}
]
},
{
"NodeType": "core",
"PartDetailPrice": [
{
"GoodsNum": 3,
"InstanceType": "rootDisk",
"Policy": 10,
"Price": 0.12,
"RealCost": 0.12,
"RealTotalCost": 0.37
},
{
"GoodsNum": 3,
"InstanceType": "node",
"Policy": 10,
"Price": 2.15,
"RealCost": 2.15,
"RealTotalCost": 6.46
},
{
"GoodsNum": 3,
"InstanceType": "dataDisk",
"Policy": 10,
"Price": 0.5,
"RealCost": 0.5,
"RealTotalCost": 1.5
}
]
},
{
"NodeType": "common",
"PartDetailPrice": [
{
"GoodsNum": 3,
"InstanceType": "rootDisk",
"Policy": 10,
"Price": 0.12,
"RealCost": 0.12,
"RealTotalCost": 0.37
},
{
"GoodsNum": 3,
"InstanceType": "node",
```

```
"Policy": 10,
"Price": 2.15,
"RealCost": 2.15,
"RealTotalCost": 6.46
},
{
"GoodsNum": 3,
"InstanceType": "dataDisk",
"Policy": 10,
"Price": 0.5,
"RealCost": 0.5,
"RealTotalCost": 1.5
}
]
}
],
"ZoneId": "100003"
}
]
}
}
```


5. Developer Resources

SDK

TencentCloud API 3.0 integrates SDKs that support various programming languages to make it easier for you to call APIs.

- Tencent Cloud SDK 3.0 for Python
- Tencent Cloud SDK 3.0 for Java
- Tencent Cloud SDK 3.0 for PHP
- Tencent Cloud SDK 3.0 for Go
- Tencent Cloud SDK 3.0 for Node.js
- Tencent Cloud SDK 3.0 for .NET
- Tencent Cloud SDK 3.0 for C++

Command Line Interface

- Tencent Cloud CLI 3.0

6. Error Code

The following only lists the error codes related to the API business logic. For other error codes, see Common Error Codes.

Error Code	Description
FailedOperation	Operation failed.
FailedOperation.GetCamServerFailed	Failed to call the CAM service.
FailedOperation.GetTradeServerFailed	Failed to call the price inquiry center service.
InternalError.AccountCgwError	An error occurred while calling another service API.
InternalError.CamCgwError	An error occurred while calling another service API.
InternalError.CamError	An error occurred while calling another service API.
InternalError.CbsCgwError	An error occurred while calling another service API.
InternalError.CbsError	An error occurred while calling another service API.
InternalError.CdbCgwError	An error occurred while calling another service API.
InternalError.CdbError	An error occurred while calling another service API.
InternalError.ConfigCgwError	An error occurred while calling another service API.
InternalError.CvmError	An error occurred while calling another service API.
InternalError.KmsError	An error occurred while calling another service API.
InternalError.ProjectCgwError	An error occurred while calling another service API.
InternalError.SgError	An error occurred when calling a security group API.
InternalError.TagError	An error occurred while calling another service API.
InternalError.TradeCgwError	An error occurred while calling another service API.
InternalError.VpcCgwError	An error occurred while calling another service API.
InternalError.VpcError	An error occurred while calling another service API.
InvalidParameter	Invalid parameter.
InvalidParameter.HALessMasterCount	Parameter error.
InvalidParameter.IncorrectCommonCount	The number of common nodes is invalid.

InvalidParameter.IncorrectMasterCount	The number of master nodes is invalid.
InvalidParameter.InvalidCommonDiskType	Invalid parameter.
InvalidParameter.InvalidCoreCount	The number of core nodes is invalid.
InvalidParameter.InvalidInstanceType	Invalid model.
InvalidParameter.InvalidMasterDiskType	Invalid parameter.
InvalidParameter.InvalidResourceSpec	Invalid resource specification.
InvalidParameter.InvalidSoftWareName	The software name is invalid.
InvalidParameter.InvalidTimeUnit	Invalid `TimeUnit` .
InvalidParameter.InvalidUnifyMeta	Invalid unified metadatabase.
InvalidParameter.InvalidZone	Invalid AZ.
InvalidParameter.NotContainMustSelectSoftware	Invalid parameter. Necessary components are missing.
InvalidParameter.SoftwareNotInProduct	There is an invalid product component.
InvalidParameterValue	Incorrect parameter value.
MissingParameter	Missing parameter.
ResourceInsufficient.DiskInsufficient	The disk specification is insufficient.
ResourceInsufficient.InstanceInsufficient	The node specification is unsupported or has been sold out.
ResourceNotFound.SubnetNotFound	No corresponding subnet found.
ResourcesSoldOut	The resources have been sold out.
ResourcesSoldOut.CbsSoldOut	The CBS resources have been sold out.
ResourcesSoldOut.CvmSoldOut	CVM instances have been sold out.
UnknownParameter	Unknown parameter.
UnsupportedOperation	Unsupported operation.

InquiryPriceRenewInstance

最近更新时间：2024-01-09 10:47:32

1. API Description

Domain name for API request: emr.tencentcloudapi.com.

This API is used to query the price for renewal.

A maximum of 20 requests can be initiated per second for this API.

We recommend you to use API Explorer

Try it

API Explorer provides a range of capabilities, including online call, signature authentication, SDK code generation, and API quick search. It enables you to view the request, response, and auto-generated examples.

2. Input Parameters

The following request parameter list only provides API request parameters and some common parameters. For the complete common parameter list, see Common Request Parameters.

Parameter Name	Required	Type	Description
Action	Yes	String	Common Params. The value used for this API: InquiryPriceRenewInstance.
Version	Yes	String	Common Params. The value used for this API: 2019-01-03.
Region	No	String	Common Params. This parameter is not required for this API.
TimeSpan	Yes	Integer	How long the instance will be renewed for, which needs to be used together with `TimeUnit` .
ResourceIds.N	Yes	Array of String	List of resource IDs of the node to be renewed. The resource ID is in the format of `emr-vm-xxxxxxxx` . A valid resource ID can be queried in the console.
Placement	Yes	Placement	Location of the instance. This parameter is used to specify the AZ, project, and other attributes of the instance.
PayMode	Yes	Integer	Instance billing mode.

TimeUnit	No	String	Unit of time for instance renewal.
Currency	No	String	Currency.
ModifyPayMode	No	Integer	Whether to change from pay-as-you-go billing to monthly subscription billing. `0` : no; `1` : yes

3. Output Parameters

Parameter Name	Type	Description
OriginalCost	Float	Original price. Note: this field may return null, indicating that no valid values can be obtained.
DiscountCost	Float	Discounted price. Note: this field may return null, indicating that no valid values can be obtained.
TimeUnit	String	Unit of time for instance renewal. Note: this field may return null, indicating that no valid values can be obtained.
TimeSpan	Integer	How long the instance will be renewed for. Note: this field may return null, indicating that no valid values can be obtained.
RequestId	String	The unique request ID, which is returned for each request. RequestId is required for locating a problem.

4. Example

Example1 Querying Price of Renewal

Querying Price of Renewal

Input Example

```
POST / HTTP/1.1
Host: emr.tencentcloudapi.com
Content-Type: application/json
X-TC-Action: InquiryPriceRenewInstance
<Common request parameters>

{
```

```
"Placement": {
"ProjectId": "0",
"Zone": "ap-guangzhou-4"
},
"Currency": "CNY",
"TimeSpan": "1",
"PayMode": "1",
"ResourceIds": [
"emr-vm-jv1s4zas"
],
"TimeUnit": "m"
}
```

Output Example

```
{
"Response": {
"DiscountCost": 596.54,
"OriginalCost": 898.9,
"RequestId": "223c838e-ce27-4adf-9a41-89661fe7ad21",
"TimeSpan": 1,
"TimeUnit": "m"
}
}
```

Example2 Querying Price of Renewal

Querying Price of Renewal

Input Example

```
POST / HTTP/1.1
Host: emr.tencentcloudapi.com
Content-Type: application/json
X-TC-Action: InquiryPriceRenewInstance
<Common request parameters>

{
"TimeUnit": "abc",
"TimeSpan": 1,
"ResourceIds": [
"abc"
],
"Currency": "abc",
"Placement": {
"ProjectId": 0,
```

```
"Zone": "abc"
},
"PayMode": 0,
"ModifyPayMode": 0
}
```

Output Example

```
{
"Response": {
"DiscountCost": 596.54,
"OriginalCost": 898.9,
"RequestId": "223c838e-ce27-4adf-9a41-89661fe7ad21",
"TimeSpan": 1,
"TimeUnit": "m"
}
}
```

5. Developer Resources

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- Tencent Cloud SDK 3.0 for Node.js
- Tencent Cloud SDK 3.0 for .NET
- Tencent Cloud SDK 3.0 for C++

Command Line Interface

- Tencent Cloud CLI 3.0

6. Error Code

The following only lists the error codes related to the API business logic. For other error codes, see Common Error Codes.

Error Code	Description
FailedOperation.GetCvmServerFailed	Failed to call the CVM service.
InternalError	Internal error.
InternalError.AccountCgwError	An error occurred while calling another service API.
InternalError.CamCgwError	An error occurred while calling another service API.
InternalError.CamError	An error occurred while calling another service API.
InternalError.CbsCgwError	An error occurred while calling another service API.
InternalError.CbsError	An error occurred while calling another service API.
InternalError.CdbCgwError	An error occurred while calling another service API.
InternalError.CdbError	An error occurred while calling another service API.
InternalError.CheckQuotaErr	CVM or CBS resources are insufficient, or the software is invalid.
InternalError.ConfigCgwError	An error occurred while calling another service API.
InternalError.CvmError	An error occurred while calling another service API.
InternalError.KmsError	An error occurred while calling another service API.
InternalError.ProjectCgwError	An error occurred while calling another service API.
InternalError.SgError	An error occurred when calling a security group API.
InternalError.TagError	An error occurred while calling another service API.
InternalError.TradeCgwError	An error occurred while calling another service API.
InternalError.VpcCgwError	An error occurred while calling another service API.
InternalError.VpcError	An error occurred while calling another service API.
InvalidParameter.InvalidResourceIds	Invalid resource ID.
InvalidParameter.InvalidResourceSpec	Invalid resource specification.
InvalidParameter.InvalidTimeSpan	Invalid `timespan`.

InvalidParameter.InvalidTimeUnit	Invalid `TimeUnit`.
InvalidParameter.PayModeResourceNotMatch	The billing mode and resource do not match.
InvalidParameter.ProjectResourceNotMatch	The project does not match the resource.
InvalidParameter.ZoneResourceNotMatch	The AZ and resource do not match.
ResourceInUse.InstanceInProcess	The instance is under workflow.
ResourceNotFound.InstanceNotFound	The instance was not found.
ResourceNotFound.ResourceNotFound	Unable to find the monitoring metadata.

InquiryPriceScaleOutInstance

最近更新时间：2024-01-09 10:47:32

1. API Description

Domain name for API request: emr.tencentcloudapi.com.

This API is used to query price of scale-out.

A maximum of 20 requests can be initiated per second for this API.

We recommend you to use API Explorer

Try it

API Explorer provides a range of capabilities, including online call, signature authentication, SDK code generation, and API quick search. It enables you to view the request, response, and auto-generated examples.

2. Input Parameters

The following request parameter list only provides API request parameters and some common parameters. For the complete common parameter list, see Common Request Parameters.

Parameter Name	Required	Type	Description
Action	Yes	String	Common Params. The value used for this API: InquiryPriceScaleOutInstance.
Version	Yes	String	Common Params. The value used for this API: 2019-01-03.
Region	No	String	Common Params. This parameter is not required for this API.
TimeUnit	Yes	String	Time unit of scale-out. Valid value: • s: Second. When `PayMode` is 0, `TimeUnit` can only be `s`.
TimeSpan	Yes	Integer	Time span of scale-out, which needs to be used together with `TimeUnit`. • When `PayMode` is 0, `TimeSpan` can only be 3,600.
ZoneId	Yes	Integer	ID of the AZ where an instance resides.
PayMode	Yes	Integer	Instance billing mode. Valid value:

			• 0: Pay-as-you-go.
InstanceId	Yes	String	Instance ID.
CoreCount	Yes	Integer	Number of core nodes to be added.
TaskCount	Yes	Integer	Number of task nodes to be added.
Currency	Yes	String	Currency.
RouterCount	No	Integer	Number of router nodes to be added.
MasterCount	No	Integer	Number of master nodes to be added.

3. Output Parameters

Parameter Name	Type	Description
OriginalCost	String	Original price. Note: This field may return null, indicating that no valid values can be obtained.
DiscountCost	String	Discounted price. Note: This field may return null, indicating that no valid values can be obtained.
Unit	String	Time unit of scale-out. Valid value: • s: Second. Note: This field may return null, indicating that no valid values can be obtained.
PriceSpec	PriceResource	Node spec queried for price. Note: This field may return null, indicating that no valid values can be obtained.
MultipleEmrPrice	Array of EmrPrice	The inquiry results corresponding to the specs specified by the input parameter `MultipleResources`, with the result of the first spec returned by other output parameters. Note: This field may return null, indicating that no valid values can be obtained.
RequestId	String	The unique request ID, which is returned for each request. RequestId is required for locating a problem.

4. Example

Example1 Querying Price of Scale-out

Querying Price of Scale-out

Input Example

```
POST / HTTP/1.1
Host: emr.tencentcloudapi.com
Content-Type: application/json
X-TC-Action: InquiryPriceScaleOutInstance
<Common request parameters>

{
"TimeSpan": "3600",
"InstanceId": "emr-3ida6zmi",
"CoreCount": "1",
"ZoneId": "100003",
"PayMode": "0",
"Currency": "CNY",
"TaskCount": "0",
"TimeUnit": "s",
"RouterCount": "0"
}
```

Output Example

```
{
"Response": {
"DiscountCost": "1.26",
"PriceSpec": {
"InstanceType": "S5",
"DiskCnt": 1,
"StorageType": 1,
"DiskNum": 1,
"DiskType": "2",
"LocalDiskNum": 0,
"Cpu": 0,
"DiskSize": 100,
"MemSize": 100,
"RootSize": 50,
"Spec": "S5.2XLARGE8"
},
"Unit": "s",
```

```
"OriginalCost": "1.74",
"MultipleEmrPrice": [
{
"DiscountCost": "1.26",
"PriceSpec": {
"InstanceType": "S5",
"DiskCnt": 1,
"StorageType": 1,
"DiskNum": 1,
"DiskType": "2",
"LocalDiskNum": 0,
"Cpu": 0,
"DiskSize": 100,
"MemSize": 100,
"RootSize": 50,
"Spec": "S5.2XLARGE8"
},
"Unit": "s",
"OriginalCost": "1.74"
}
],
"RequestId": "04daa603-e1e7-4243-b25d-31e6a6736528"
}
}
```


5. Developer Resources

SDK

TencentCloud API 3.0 integrates SDKs that support various programming languages to make it easier for you to call APIs.

- Tencent Cloud SDK 3.0 for Python
- Tencent Cloud SDK 3.0 for Java
- Tencent Cloud SDK 3.0 for PHP
- Tencent Cloud SDK 3.0 for Go
- Tencent Cloud SDK 3.0 for Node.js
- Tencent Cloud SDK 3.0 for .NET
- Tencent Cloud SDK 3.0 for C++

Command Line Interface

- Tencent Cloud CLI 3.0

6. Error Code

The following only lists the error codes related to the API business logic. For other error codes, see Common Error Codes.

Error Code	Description
FailedOperation	Operation failed.
InternalError.AccountCgwError	An error occurred while calling another service API.
InternalError.CamCgwError	An error occurred while calling another service API.
InternalError.CamError	An error occurred while calling another service API.
InternalError.CbsCgwError	An error occurred while calling another service API.
InternalError.CbsError	An error occurred while calling another service API.
InternalError.CdbCgwError	An error occurred while calling another service API.
InternalError.CdbError	An error occurred while calling another service API.
InternalError.CheckQuotaErr	CVM or CBS resources are insufficient, or the software is invalid.
InternalError.ConfigCgwError	An error occurred while calling another service API.
InternalError.CvmError	An error occurred while calling another service API.
InternalError.KmsError	An error occurred while calling another service API.
InternalError.ProjectCgwError	An error occurred while calling another service API.
InternalError.SgError	An error occurred when calling a security group API.
InternalError.TagError	An error occurred while calling another service API.
InternalError.TradeCgwError	An error occurred while calling another service API.
InternalError.VpcCgwError	An error occurred while calling another service API.
InternalError.VpcError	An error occurred while calling another service API.
InvalidParameter.InvalidAppId	Invalid `AppId`.
InvalidParameter.InvalidCoreCount	The number of core nodes is invalid.

InvalidParameter.InvalidCountNum	A scale-out request only applies to task nodes or core nodes.
InvalidParameter.InvalidInstanceType	Invalid model.
InvalidParameter.InvalidModifySpec	Invalid target specification.
InvalidParameter.InvalidPaymode	Invalid billing mode.
InvalidParameter.InvalidResourceSpec	Invalid resource specification.
InvalidParameter.InvalidTimeSpan	Invalid `timespan`.
InvalidParameter.InvalidTimeUnit	Invalid `TimeUnit`.
InvalidParameter.InvalidVpcId	Invalid VPC ID.
ResourceInsufficient.DiskInsufficient	The disk specification is insufficient.
ResourceInsufficient.InstanceInsufficient	The node specification is unsupported or has been sold out.
ResourceNotFound.InstanceNotFound	The instance was not found.
ResourceUnavailable.ResourceSpecNotDefaultSpec	There is no default value of the current resource spec.
ResourcesSoldOut.CvmSoldOut	CVM instances have been sold out.

DescribeInstancesList

最近更新时间：2024-01-09 10:47:33

1. API Description

Domain name for API request: emr.tencentcloudapi.com.

This API is used to query the cluster list.

A maximum of 20 requests can be initiated per second for this API.

We recommend you to use API Explorer

Try it

API Explorer provides a range of capabilities, including online call, signature authentication, SDK code generation, and API quick search. It enables you to view the request, response, and auto-generated examples.

2. Input Parameters

The following request parameter list only provides API request parameters and some common parameters. For the complete common parameter list, see Common Request Parameters.

Parameter Name	Required	Type	Description
Action	Yes	String	Common Params. The value used for this API: DescribeInstancesList.
Version	Yes	String	Common Params. The value used for this API: 2019-01-03.
Region	No	String	Common Params. This parameter is not required for this API.
DisplayStrategy	Yes	String	Cluster filtering policy. Valid values: • clusterList: Queries the list of clusters excluding terminated ones. • monitorManage: Queries the list of clusters excluding those terminated, under creation and not successfully created. • cloudHardwareManage/componentManage: Two reserved values, which have the same implications as those of `monitorManage`.
Offset	No	Integer	Page number. Default value: `0`, indicating the first page.

Limit	No	Integer	Number of returned results per page. Default value: `10` ; maximum value: `100` .
OrderField	No	String	Sorting field. Valid values: • clusterId: Sorting by instance ID. • addTime: Sorting by instance creation time. • status: Sorting by instance status code.
Asc	No	Integer	Sort according to OrderField in ascending or descending order. Valid range: • 0: Descending order. • 1: Ascending order. Default: 0.
Filters.N	No	Array of Filters	Custom query

3. Output Parameters

Parameter Name	Type	Description
TotalCnt	Integer	Number of eligible instances.
InstancesList	Array of EmrListInstance	Cluster instance list.
RequestId	String	The unique request ID, which is returned for each request. RequestId is required for locating a problem.

4. Example

Example1 Querying Instance Details

Querying Instance Details

Input Example

```
POST / HTTP/1.1
Host: emr.tencentcloudapi.com
Content-Type: application/json
X-TC-Action: DescribeInstancesList
```

```
<Common request parameters>

{
"Asc": "0",
"DisplayStrategy": "clusterList",
"Limit": "10",
"OrderField": "clusterid",
"Offset": "0"
}
```

Output Example

```
{
"Response": {
"TotalCnt": 1,
"InstancesList": [
{
"Zone": "xx",
"IsMultiZoneCluster": true,
"SubnetName": "xx",
"Status": 1,
"VpcId": 1,
"AlarmInfo": "xx",
"Tags": [
{
"TagKey": "xx",
"TagValue": "xx"
},
{
"TagKey": "xx",
"TagValue": "xx"
},
{
"TagKey": "xx",
"TagValue": "xx"
}
],
"RegionId": 1,
"ClusterId": "xx",
"IsHandsCluster": true,
"VpcName": "Test",
"AddTime": "xx",
"SubnetId": 1,
"MasterIp": "xx",
"ProjectId": 1,
"ZoneId": 1,
```

```
"StatusDesc": "xx",
"ProductId": 1,
"UniqVpcId": "xx",
"ClusterName": "xx",
"EmrVersion": "xx",
"IsWoodpeckerCluster": 1,
"UniqSubnetId": "xx",
"ChargeType": 1,
"AppId": 1,
"ClusterClass": "xx",
"Id": 1,
"OutSideSoftInfo": [
{
"SoftName": "hdfs-2.8.5",
"Required": true
}
]
}
],
"RequestId": "xx"
}
}
```


5. Developer Resources

SDK

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- Tencent Cloud SDK 3.0 for Java
- Tencent Cloud SDK 3.0 for PHP
- Tencent Cloud SDK 3.0 for Go
- Tencent Cloud SDK 3.0 for Node.js
- Tencent Cloud SDK 3.0 for .NET
- Tencent Cloud SDK 3.0 for C++

Command Line Interface

- Tencent Cloud CLI 3.0

6. Error Code

The following only lists the error codes related to the API business logic. For other error codes, see Common Error Codes.

Error Code	Description
FailedOperation	Operation failed.
FailedOperation.DescribeResourceTagsFailed	Failed to fetch resource tag.
FailedOperation.GetCamRoleFailed	Failed to query the CAM role.
FailedOperation.GetCamServerFailed	Failed to call the CAM service.
InternalError	Internal error.
InternalError.AccountCgwError	An error occurred while calling another service API.
InternalError.CamCgwError	An error occurred while calling another service API.
InternalError.CamError	An error occurred while calling another service API.
InternalError.CbsCgwError	An error occurred while calling another service API.
InternalError.CbsError	An error occurred while calling another service API.
InternalError.CdbCgwError	An error occurred while calling another service API.
InternalError.CdbError	An error occurred while calling another service API.
InternalError.ConfigCgwError	An error occurred while calling another service API.
InternalError.CvmError	An error occurred while calling another service API.
InternalError.KmsError	An error occurred while calling another service API.
InternalError.ProjectCgwError	An error occurred while calling another service API.
InternalError.SgError	An error occurred when calling a security group API.
InternalError.TagError	An error occurred while calling another service API.
InternalError.TradeCgwError	An error occurred while calling another service API.
InternalError.VpcCgwError	An error occurred while calling another service API.
InternalError.VpcError	An error occurred while calling another service API.

InternalError.WoodServerError	An error occurred while calling another service API.
InvalidParameter	Invalid parameter.
InvalidParameter.DisplayStrategyNotMatch	Incorrect display policy.
InvalidParameter.InvalidClusterId	Invalid parameter: ClusterId.
InvalidParameter.OrderFieldNotMatch	Invalid sorting field.
ResourceNotFound.InstanceNotFound	The instance was not found.
UnauthorizedOperation.CheckCamAuth	Unauthorized operation.
UnsupportedOperation.NotInWhiteList	This function is included in the allowlist.

InquiryPriceUpdateInstance

最近更新时间：2024-01-09 10:47:32

1. API Description

Domain name for API request: emr.tencentcloudapi.com.

This API is used to query price of scaling.

A maximum of 20 requests can be initiated per second for this API.

We recommend you to use API Explorer

Try it

API Explorer provides a range of capabilities, including online call, signature authentication, SDK code generation, and API quick search. It enables you to view the request, response, and auto-generated examples.

2. Input Parameters

The following request parameter list only provides API request parameters and some common parameters. For the complete common parameter list, see Common Request Parameters.

Parameter Name	Required	Type	Description
Action	Yes	String	Common Params. The value used for this API: InquiryPriceUpdateInstance.
Version	Yes	String	Common Params. The value used for this API: 2019-01-03.
Region	No	String	Common Params. This parameter is not required for this API.
TimeUnit	Yes	String	Time unit of scaling. Valid values: • s: seconds. When `PayMode` is 0, `TimeUnit` can only be `s`.
TimeSpan	Yes	Integer	Duration of scaling, which needs to be used together with `TimeUnit`. • When `PayMode` is 0, `TimeSpan` can only be 3,600.
UpdateSpec	Yes	UpdateInstanceSettings	Target node specification.

PayMode	Yes	Integer	Instance billing mode. Valid values: • 0: pay-as-you-go.
Placement	Yes	Placement	Instance location. This parameter is used to specify the AZ, project, and other attributes of the instance.
Currency	No	String	Currency.
ResourceIdList.N	No	Array of String	The resource ID list for batch configuration change.

3. Output Parameters

Parameter Name	Type	Description
OriginalCost	Float	Original price. Note: this field may return null, indicating that no valid values can be obtained.
DiscountCost	Float	Discounted price. Note: this field may return null, indicating that no valid values can be obtained.
TimeUnit	String	Time unit of scaling. Valid values: • s: seconds. Note: this field may return null, indicating that no valid values can be obtained.
TimeSpan	Integer	Duration of scaling. Note: this field may return null, indicating that no valid values can be obtained.
PriceDetail	Array of PriceDetail	Pricing details Note: This field may return null, indicating that no valid values can be obtained.
RequestId	String	The unique request ID, which is returned for each request. RequestId is required for locating a problem.

4. Example

Example1 Querying the price of a new configuration

Input Example

```
POST / HTTP/1.1
Host: emr.tencentcloudapi.com
Content-Type: application/json
X-TC-Action: InquiryPriceUpdateInstance
<Common request parameters>

{
"Placement": {
"ProjectId": "0",
"Zone": "100003"
},
"TimeSpan": "3600",
"UpdateSpec": {
"ResourceId": "emr-vm-a0xxx9on",
"CPUCores": "8",
"Memory": "16"
},
"PayMode": "0",
"Currency": "USD",
"TimeUnit": "s"
}
```

Output Example

```
{
"Response": {
"DiscountCost": 2.01,
"OriginalCost": 3.04,
"RequestId": "95eb9120-0883-407c-aa5a-43b4e2c250d1",
"TimeSpan": 3600,
"TimeUnit": "s",
"PriceDetail": [
{
"Formula": "(1). Order amount (2,870.4 USD) = Monthly rate of new resource (3,54
6.4 USD) × Duration (1 month) × Discount (100%) - Monthly rate of existing resour
ce (676 USD) × Duration (1 month) × Discount (100%) <br/>(2). Duration: 1 month"
"DiscountCost": 2870.4,
"ResourceId": "emr-vm-xxxxxxx",
"OriginalCost": 2870.4
```

```
}
]
}
}
```

5. Developer Resources

SDK

TencentCloud API 3.0 integrates SDKs that support various programming languages to make it easier for you to call APIs.

- Tencent Cloud SDK 3.0 for Python
- Tencent Cloud SDK 3.0 for Java
- Tencent Cloud SDK 3.0 for PHP
- Tencent Cloud SDK 3.0 for Go
- Tencent Cloud SDK 3.0 for Node.js
- Tencent Cloud SDK 3.0 for .NET
- Tencent Cloud SDK 3.0 for C++

Command Line Interface

- Tencent Cloud CLI 3.0

6. Error Code

The following only lists the error codes related to the API business logic. For other error codes, see Common Error Codes.

Error Code	Description
FailedOperation.GetTradeServerFailed	Failed to call the price inquiry center service.
InternalError.AccountCgwError	An error occurred while calling another service API.
InternalError.CamCgwError	An error occurred while calling another service API.
InternalError.CamError	An error occurred while calling another service API.
InternalError.CbsCgwError	An error occurred while calling another service API.
InternalError.CbsError	An error occurred while calling another service API.

InternalError.CdbCgwError	An error occurred while calling another service API.
InternalError.CdbError	An error occurred while calling another service API.
InternalError.CheckQuotaErr	CVM or CBS resources are insufficient, or the software is invalid.
InternalError.ConfigCgwError	An error occurred while calling another service API.
InternalError.CvmError	An error occurred while calling another service API.
InternalError.KmsError	An error occurred while calling another service API.
InternalError.ProjectCgwError	An error occurred while calling another service API.
InternalError.SgError	An error occurred when calling a security group API.
InternalError.TagError	An error occurred while calling another service API.
InternalError.TradeCgwError	An error occurred while calling another service API.
InternalError.VpcCgwError	An error occurred while calling another service API.
InternalError.VpcError	An error occurred while calling another service API.
InvalidParameter.InvalidAppId	Invalid `AppId`.
InvalidParameter.InvalidClusterId	Invalid parameter: ClusterId.
InvalidParameter.InvalidModifySpec	Invalid target specification.
InvalidParameter.InvalidResourceSpec	Invalid resource specification.
InvalidParameter.InvalidTimeSpan	Invalid `timespan`.
InvalidParameter.InvalidTimeUnit	Invalid `TimeUnit`.
InvalidParameter.InvalidVpcId	Invalid VPC ID.
InvalidParameter.InvalidZone	Invalid AZ.
InvalidParameter.ZoneResourceNotMatch	The AZ and resource do not match.
ResourceNotFound.InstanceNotFound	The instance was not found.
ResourceNotFound.ResourceNotFound	Unable to find the monitoring metadata.

ScaleOutInstance

最近更新时间：2024-01-09 10:47:31

1. API Description

Domain name for API request: emr.tencentcloudapi.com.

This API is used to scale out instances.

A maximum of 20 requests can be initiated per second for this API.

We recommend you to use API Explorer

Try it

API Explorer provides a range of capabilities, including online call, signature authentication, SDK code generation, and API quick search. It enables you to view the request, response, and auto-generated examples.

2. Input Parameters

The following request parameter list only provides API request parameters and some common parameters. For the complete common parameter list, see Common Request Parameters.

Parameter Name	Required	Type	Description
Action	Yes	String	Common Params. The value used for this API: ScaleOutInstance.
Version	Yes	String	Common Params. The value used for this API: 2019-01-03.
Region	No	String	Common Params. This parameter is not required for this API.
TimeUnit	Yes	String	Time unit of scale-out. Valid values: • s: Second. When `PayMode` is 0, `TimeUnit` can only be `s`. • m: Month. When `PayMode` is 1, `TimeUnit` can only be `m`.
TimeSpan	Yes	Integer	Time span of scale-out, which needs to be used together with `TimeUnit`.

InstanceId	Yes	String	Instance ID.
PayMode	Yes	Integer	Instance billing mode. Valid value: • 0: Pay-as-you-go.
ClientToken	No	String	Client token.
PreExecutedFileSettings.N	No	Array of PreExecuteFileSettings	Bootstrap script settings.
TaskCount	No	Integer	Number of task nodes to be added.
CoreCount	No	Integer	Number of core nodes to be added.
UnNecessaryNodeList.N	No	Array of Integer	Processes unnecessary for scale-out.
RouterCount	No	Integer	Number of router nodes to be added.
SoftDeployInfo.N	No	Array of Integer	Deployed service. • `SoftDeployInfo` and `ServiceNodeInfo` are in the same group and mutually exclusive with `UnNecessaryNodeList`. • The combination of `SoftDeployInfo` and `ServiceNodeInfo` is recommended.
ServiceNodeInfo.N	No	Array of Integer	Started process.
DisasterRecoverGroupIds.N	No	Array of String	List of spread placement group IDs. Only one can be specified currently.
Tags.N	No	Array of Tag	List of tags bound to added nodes.
HardwareResourceType	No	String	Resource type selected for scaling. Valid values: `host` (general CVM resource) and `pod` (resource provided by TKE or EKS cluster).
PodSpec	No	PodSpec	Specified information such as pod specification and source for scale-out with pod resources.
ClickHouseClusterName	No	String	Server group name selected for ClickHouse cluster scale-out.
ClickHouseClusterType	No	String	Server group type selected for

			ClickHouse cluster scale-out. Valid values: `new` (create a group) and `old` (select an existing group).
YarnNodeLabel	No	String	Yarn node label specified for rule-based scale-out.
PodParameter	No	PodParameter	Custom pod permission and parameter
MasterCount	No	Integer	Number of master nodes to be added. When a ClickHouse cluster is scaled, this parameter does not take effect. When a Kafka cluster is scaled, this parameter does not take effect. When `HardwareResourceType` is `pod`, this parameter does not take effect.
StartServiceAfterScaleOut	No	String	Whether to start the service after scale-out. `true`: Yes; `false`: No.
ZoneId	No	Integer	AZ, which defaults to the primary AZ of the cluster.
SubnetId	No	String	Subnet, which defaults to the subnet used when the cluster is created.
ScaleOutServiceConfAssign	No	String	Pre-defined configuration set
AutoRenew	No	Integer	Whether to enable auto-renewal. Valid values: `0` (no), `1` (yes).

3. Output Parameters

Parameter Name	Type	Description
InstanceId	String	Instance ID.
DealNames	Array of String	Order number. Note: This field may return null, indicating that no valid values can be obtained.
ClientToken	String	Client token.

		Note: This field may return null, indicating that no valid values can be obtained.
FlowId	Integer	Scale-out workflow ID. Note: This field may return null, indicating that no valid values can be obtained.
BillId	String	Big order ID. Note: This field may return null, indicating that no valid values can be obtained.
RequestId	String	The unique request ID, which is returned for each request. RequestId is required for locating a problem.

4. Example

Example1 Scaling out a cluster

Input Example

```
POST / HTTP/1.1
Host: emr.tencentcloudapi.com
Content-Type: application/json
X-TC-Action: ScaleOutInstance
<Common request parameters>

{
"InstanceId": "emr-5n315c83",
"TimeUnit": "s"
"CoreCount": "1",
"PayMode": "0",
"TimeSpan": "3600"
}
```

Output Example

```
{
"Response": {
"BillId": "",
"ClientToken": "",
"DealNames": [
"20200309357833",
"20200309357834",
"20200309357835",
"20200309357836"
],
"FlowId": 0,
```

```
"InstanceId": "emr-5n3l5c83",
"RequestId": "f0f11d21-6d0d-4f73-9177-8ae4ec456068"
}
}
```

5. Developer Resources

SDK

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- Tencent Cloud SDK 3.0 for Java
- Tencent Cloud SDK 3.0 for PHP
- Tencent Cloud SDK 3.0 for Go
- Tencent Cloud SDK 3.0 for Node.js
- Tencent Cloud SDK 3.0 for .NET
- Tencent Cloud SDK 3.0 for C++

Command Line Interface

- Tencent Cloud CLI 3.0

6. Error Code

The following only lists the error codes related to the API business logic. For other error codes, see Common Error Codes.

Error Code	Description
FailedOperation	Operation failed.
FailedOperation.CheckIfSupportPodStretch	Operation failed.
FailedOperation.DuplicateOrderNotAllowed	Duplicate order. Please check the EMR console.
FailedOperation.GetCvmConfigQuotaFailed	Failed to fetch the specifications of the CVM.
FailedOperation.GetCvmServerFailed	Failed to call the CVM service.
FailedOperation.NotSupportPod	Operation failed. The pods are not supported.

InternalError	Internal error.
InternalError.AccountCgwError	An error occurred while calling another service API.
InternalError.CamCgwError	An error occurred while calling another service API.
InternalError.CamError	An error occurred while calling another service API.
InternalError.CbsCgwError	An error occurred while calling another service API.
InternalError.CbsError	An error occurred while calling another service API.
InternalError.CdbCgwError	An error occurred while calling another service API.
InternalError.CdbError	An error occurred while calling another service API.
InternalError.ConfigCgwError	An error occurred while calling another service API.
InternalError.CvmError	An error occurred while calling another service API.
InternalError.EKSError	Error in calling EKS.
InternalError.KmsError	An error occurred while calling another service API.
InternalError.ProjectCgwError	An error occurred while calling another service API.
InternalError.SgError	An error occurred when calling a security group API.
InternalError.TKEError	An error occurred while calling TKE.
InternalError.TagError	An error occurred while calling another service API.
InternalError.TradeCgwError	An error occurred while calling another service API.
InternalError.VpcCgwError	An error occurred while calling another service API.
InternalError.VpcError	An error occurred while calling another service API.
InternalError.WoodServerError	An error occurred while calling another service API.
InvalidParameter	Invalid parameter.
InvalidParameter.AppIdResourceNotMatch	Parameter error.
InvalidParameter.InvalidAppId	Invalid `AppId`.
InvalidParameter.InvalidClickHouseCluster	Invalid ClickHouse cluster.
InvalidParameter.InvalidClientToken	Invalid `ClientToken`.

InvalidParameter.InvalidClusterId	Invalid parameter: ClusterId.
InvalidParameter.InvalidCoreCount	The number of core nodes is invalid.
InvalidParameter.InvalidCount	The count must be greater than 0.
InvalidParameter.InvalidCountNum	A scale-out request only applies to task nodes or core nodes.
InvalidParameter.InvalidCustomizedPodParam	Error message: Invalid PodParameter.
InvalidParameter.InvalidEksInstance	Invalid EKS instance.
InvalidParameter.InvalidInstanceName	Invalid cluster name.
InvalidParameter.InvalidJobFlow	Invalid process task.
InvalidParameter.InvalidPaymode	Invalid billing mode.
InvalidParameter.InvalidResourceSpec	Invalid resource specification.
InvalidParameter.InvalidSercurityGrpupId	Invalid security group ID.
InvalidParameter.InvalidServiceNodeInfo	The `ServiceNodeInfo` parameter is invalid or incorrect.
InvalidParameter.InvalidSoftDeployInfo	The `InvalidSoftDeployInfo` parameter is invalid or incorrect.
InvalidParameter.InvalidTaskCount	The number of task nodes cannot exceed 20.
InvalidParameter.InvalidTimeSpan	Invalid `timespan` .
InvalidParameter.InvalidTimeUnit	Invalid `TimeUnit` .
InvalidParameter.InvalidTkeInstance	The TKE cluster ID is invalid, or the TKE cluster is not eligible.
InvalidParameterValue.InvalidTkeInstance	The TKE cluster ID is invalid, or the TKE cluster is not eligible.
ResourceInUse.InstanceInProcess	The instance is under workflow.
ResourceInsufficient.DiskInsufficient	The disk specification is insufficient.
ResourceInsufficient.InstanceInsufficient	The node specification is unsupported or has been sold out.
ResourceNotFound.ClusterNotFound	The instance was not found.

ResourceNotFound.InstanceNotFound	The instance was not found.
ResourceNotFound.TKEPreconditionNotFound	Preset components of the TKE cluster are not deployed.
ResourceNotFound.TagsNotFound	No specified tag found.
ResourceUnavailable.ResourceSpecNotDefaultSpec	There is no default value of the current resource spec.
ResourcesSoldOut	The resources have been sold out.
ResourcesSoldOut.CbsSoldOut	The CBS resources have been sold out.
ResourcesSoldOut.CvmSoldOut	CVM instances have been sold out.

TerminateInstance

最近更新时间：2024-01-09 10:47:30

1. API Description

Domain name for API request: emr.tencentcloudapi.com.

This API is used to terminate EMR instances. It is only supported in the official paid edition of EMR.

A maximum of 20 requests can be initiated per second for this API.

We recommend you to use API Explorer

Try it

API Explorer provides a range of capabilities, including online call, signature authentication, SDK code generation, and API quick search. It enables you to view the request, response, and auto-generated examples.

2. Input Parameters

The following request parameter list only provides API request parameters and some common parameters. For the complete common parameter list, see Common Request Parameters.

Parameter Name	Required	Type	Description
Action	Yes	String	Common Params. The value used for this API: TerminateInstance.
Version	Yes	String	Common Params. The value used for this API: 2019-01-03.
Region	No	String	Common Params. This parameter is not required for this API.
InstanceId	Yes	String	Instance ID.
ResourceIds.N	No	Array of String	ID of terminated node. This parameter is reserved and does not need to be configured.

3. Output Parameters

Parameter	Type	Description

Name		
RequestId	String	The unique request ID, which is returned for each request. RequestId is required for locating a problem.

4. Example

Example1 Terminating an instance

This example shows you how to terminate a cluster.

Input Example

```
POST / HTTP/1.1
Host: emr.tencentcloudapi.com
Content-Type: application/json
X-TC-Action: TerminateInstance
<Common request parameters>

{
"InstanceId": "emr-4slr7ad7"
}
```

Output Example

```
{
"Response": {
"RequestId": "4d701c1e-8507-47e1-8c69-a8f06a236f24"
}
}
```

5. Developer Resources

SDK

TencentCloud API 3.0 integrates SDKs that support various programming languages to make it easier for you to call APIs.

- Tencent Cloud SDK 3.0 for Python
- Tencent Cloud SDK 3.0 for Java
- Tencent Cloud SDK 3.0 for PHP

- Tencent Cloud SDK 3.0 for Go
- Tencent Cloud SDK 3.0 for Node.js
- Tencent Cloud SDK 3.0 for .NET
- Tencent Cloud SDK 3.0 for C++

Command Line Interface

- Tencent Cloud CLI 3.0

6. Error Code

The following only lists the error codes related to the API business logic. For other error codes, see Common Error Codes.

Error Code	Description
FailedOperation	Operation failed.
FailedOperation.RefundCvmFailed	Operation failed.
InternalError	Internal error.
InternalError.CamCgwError	An error occurred while calling another service API.
InternalError.CvmError	An error occurred while calling another service API.
InvalidParameter	Invalid parameter.
InvalidParameter.InvalidAppId	Invalid `AppId`.
InvalidParameter.InvalidClusterId	Invalid parameter: ClusterId.
InvalidParameter.InvalidInstanceName	Invalid cluster name.
ResourceInUse.InstanceInProcess	The instance is under workflow.
ResourceNotFound.ClusterNotFound	The instance was not found.
ResourceNotFound.InstanceNotFound	The instance was not found.
UnauthorizedOperation.CheckCamAuth	Unauthorized operation.
UnsupportedOperation.ServiceNotSupport	This operation is not supported.

TerminateTasks

最近更新时间：2024-01-09 10:47:30

1. API Description

Domain name for API request: emr.tencentcloudapi.com.

This API is used to terminate a task node.

A maximum of 20 requests can be initiated per second for this API.

We recommend you to use API Explorer

Try it

API Explorer provides a range of capabilities, including online call, signature authentication, SDK code generation, and API quick search. It enables you to view the request, response, and auto-generated examples.

2. Input Parameters

The following request parameter list only provides API request parameters and some common parameters. For the complete common parameter list, see Common Request Parameters.

Parameter Name	Required	Type	Description
Action	Yes	String	Common Params. The value used for this API: TerminateTasks.
Version	Yes	String	Common Params. The value used for this API: 2019-01-03.
Region	No	String	Common Params. This parameter is not required for this API.
InstanceId	Yes	String	Instance ID.
ResourceIds.N	Yes	Array of String	List of resource IDs of the node to be terminated. The resource ID is in the format of `emr-vm-xxxxxxxx`. A valid resource ID can be queried in the console.

3. Output Parameters

Parameter	Type	Description

Name		
RequestId	String	The unique request ID, which is returned for each request. RequestId is required for locating a problem.

4. Example

Example1 Terminating a node

This example shows you how to terminate a task node.

Input Example

```
POST / HTTP/1.1
Host: emr.tencentcloudapi.com
Content-Type: application/json
X-TC-Action: TerminateTasks
<Common request parameters>

{
"InstanceId": "emr-4slr7ad7",
"ResourceIds": [
"emr-vm-xxx33tg"
]
}
```

Output Example

```
{
"Response": {
"RequestId": "4d701c1e-8507-47e1-8c69-a8f06a236f24"
}
}
```

5. Developer Resources

SDK

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- Tencent Cloud SDK 3.0 for PHP
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- Tencent Cloud SDK 3.0 for Node.js
- Tencent Cloud SDK 3.0 for .NET
- Tencent Cloud SDK 3.0 for C++

Command Line Interface

- Tencent Cloud CLI 3.0

6. Error Code

The following only lists the error codes related to the API business logic. For other error codes, see Common Error Codes.

Error Code	Description
InternalError	Internal error.
InternalError.AccountCgwError	An error occurred while calling another service API.
InternalError.CamCgwError	An error occurred while calling another service API.
InternalError.CamError	An error occurred while calling another service API.
InternalError.CbsCgwError	An error occurred while calling another service API.
InternalError.CbsError	An error occurred while calling another service API.
InternalError.CdbCgwError	An error occurred while calling another service API.
InternalError.CdbError	An error occurred while calling another service API.
InternalError.ConfigCgwError	An error occurred while calling another service API.
InternalError.CvmError	An error occurred while calling another service API.
InternalError.KmsError	An error occurred while calling another service API.
InternalError.ProjectCgwError	An error occurred while calling another service API.
InternalError.SgError	An error occurred when calling a security group API.
InternalError.TagError	An error occurred while calling another service API.

InternalError.TradeCgwError	An error occurred while calling another service API.
InternalError.VpcCgwError	An error occurred while calling another service API.
InternalError.VpcError	An error occurred while calling another service API.
InternalError.WoodServerError	An error occurred while calling another service API.
InvalidParameter	Invalid parameter.
InvalidParameter.InvalidAppId	Invalid `AppId`.
InvalidParameter.InvalidInstanceName	Invalid cluster name.
InvalidParameter.InvalidJobFlow	Invalid process task.
InvalidParameter.InvalidResourceIds	Invalid resource ID.
ResourceInUse.InstanceInProcess	The instance is under workflow.
ResourceNotFound.ClusterNotFound	The instance was not found.
ResourceNotFound.InstanceNotFound	The instance was not found.
ResourceNotFound.ResourceNotFound	Unable to find the monitoring metadata.
UnknownParameter	Unknown parameter.
UnsupportedOperation	Unsupported operation.

TerminateClusterNodes

最近更新时间：2024-01-09 10:47:30

1. API Description

Domain name for API request: emr.tencentcloudapi.com.

This API is used to terminate cluster nodes.

A maximum of 20 requests can be initiated per second for this API.

We recommend you to use API Explorer

Try it

API Explorer provides a range of capabilities, including online call, signature authentication, SDK code generation, and API quick search. It enables you to view the request, response, and auto-generated examples.

2. Input Parameters

The following request parameter list only provides API request parameters and some common parameters. For the complete common parameter list, see Common Request Parameters.

Parameter Name	Required	Type	Description
Action	Yes	String	Common Params. The value used for this API: TerminateClusterNodes.
Version	Yes	String	Common Params. The value used for this API: 2019-01-03.
Region	No	String	Common Params. This parameter is not required for this API.
InstanceId	Yes	String	The instance ID.
CvmInstanceIds.N	Yes	Array of String	The list of resources to be terminated.
NodeFlag	Yes	String	Valid values of node type: • MASTER • TASK • CORE

			• ROUTER
GraceDownFlag	No	Boolean	The graceful scale-in feature. Valid values: • `true` : Enabled. • `false` : Disabled.
GraceDownTime	No	Integer	The graceful scale-in wait time in seconds. Value range: 60–1800.

3. Output Parameters

Parameter Name	Type	Description
FlowId	Integer	The scale-in process ID.
RequestId	String	The unique request ID, which is returned for each request. RequestId is required for locating a problem.

4. Example

Example1 Terminating cluster nodes

This example shows you how to terminate cluster nodes.

Input Example

```
POST / HTTP/1.1
Host: emr.tencentcloudapi.com
Content-Type: application/json
X-TC-Action: TerminateClusterNodes
<Common request parameters>

{
"InstanceId": "emr-4zvc5mul",
"CvmInstanceIds": [
"ins-42u6moui"
],
"NodeFlag": "MASTER",
"GraceDownTime": 0,
```

```
"GraceDownFlag": true
}
```

Output Example

```
{
"Response": {
"FlowId": 1000,
"RequestId": "4d701c1e-8507-47e1-8c69-a8f06a236f24"
}
}
```

5. Developer Resources

SDK

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- Tencent Cloud SDK 3.0 for .NET
- Tencent Cloud SDK 3.0 for C++

Command Line Interface

- Tencent Cloud CLI 3.0

6. Error Code

The following only lists the error codes related to the API business logic. For other error codes, see Common Error Codes.

Error Code	Description
InvalidParameter.InvalidNodeFlag	Incorrect node type.
InvalidParameter.InvalidResourceIds	Invalid resource ID.

ResourceInUse.InstanceInProcess	The instance is under workflow.
ResourceNotFound.CvmInstanceNotFound	Unable to find the specified CVM instance.
ResourceNotFound.InstanceNotFound	The instance was not found.

Cluster Services APIs
ModifyResourceScheduleConfig

最近更新时间：2024-01-09 10:47:29

1. API Description

Domain name for API request: emr.tencentcloudapi.com.

This API is used to modify the resource configuration of YARN Resource Scheduling.

A maximum of 20 requests can be initiated per second for this API.

We recommend you to use API Explorer

Try it

API Explorer provides a range of capabilities, including online call, signature authentication, SDK code generation, and API quick search. It enables you to view the request, response, and auto-generated examples.

2. Input Parameters

The following request parameter list only provides API request parameters and some common parameters. For the complete common parameter list, see Common Request Parameters.

Parameter Name	Required	Type	Description
Action	Yes	String	Common Params. The value used for this API: ModifyResourceScheduleConfig.
Version	Yes	String	Common Params. The value used for this API: 2019-01-03.
Region	No	String	Common Params. This parameter is not required for this API.
InstanceId	Yes	String	EMR cluster ID
Key	Yes	String	Business identifier. `fair` : Edit fair configuration items; `fairPlan` : Edit the execution plan; `capacity` : Edit capacity configuration items.
Value	Yes	String	Modified module information

3. Output Parameters

Parameter Name	Type	Description
IsDraft	Boolean	`true` : Draft, indicating the resource pool is not refreshed.
ErrorMsg	String	Verification error information. If it is not null, the verification fails and thus the configuration fails. Note: This field may return `null` , indicating that no valid value can be obtained.
Data	String	The response data. Note: This field may return null, indicating that no valid values can be obtained.
RequestId	String	The unique request ID, which is returned for each request. RequestId is required for locating a problem.

4. Example

Example1 Modifying the resource configuration of YARN Resource Scheduling

Input Example

```
POST / HTTP/1.1
Host: emr.tencentcloudapi.com
Content-Type: application/json
X-TC-Action: ModifyResourceScheduleConfig
<Common request parameters>

{
"InstanceId": "emr-buy439fq",
"Key": "capacity",
"Value": "{\"queueMappings\":[{\"mapping-type\":\"u\",\"name\":\"1331\",\"full-qu
eue-name\":\"132\",\"special-name\":true,\"special-queue\":true}],\"queue\":{\"na
me\":\"root\",\"capacity\":100,\"maximum-capacity\":100,\"minimum-user-limit-perc
ent\":0,\"user-limit-factor\":0,\"maximum-allocation-mb\":0,\"maximum-allocation-
vcores\":0,\"state\":null,\"maximum-applications\":0,\"maximum-am-resource-percen
t\":0,\"acl_submit_applications\":null,\"acl_administer_queue\":null,\"queues\":
[{\"name\":\"121\",\"capacity\":12,\"maximum-capacity\":12,\"minimum-user-limit-p
ercent\":12,\"user-limit-factor\":12,\"maximum-allocation-mb\":12,\"maximum-alloc
ation-vcores\":12,\"state\":\"RUNNING\",\"maximum-applications\":10000,\"maximum-
am-resource-percent\":25,\"acl_submit_applications\":{\"user\":\"*\",\"group\":\"
*\"},\"acl_administer_queue\":{\"user\":\"*\",\"group\":\"*\"},\"queues\":null},{
\"name\":\"12\",\"capacity\":12,\"maximum-capacity\":12,\"minimum-user-limit-perc
```

```
ent\":12,\"user-limit-factor\":12,\"maximum-allocation-mb\":12,\"maximum-allocati
on-vcores\":12,\"state\":\"RUNNING\",\"maximum-applications\":10000,\"maximum-am-
resource-percent\":25,\"acl_submit_applications\":{\"user\":\"*\",\"group\":\"*\"
},\"acl_administer_queue\":{\"user\":\"*\",\"group\":\"*\"},\"queues\":null},{\"n
ame\":\"default\",\"capacity\":76,\"maximum-capacity\":100,\"minimum-user-limit-p
ercent\":12,\"user-limit-factor\":1,\"maximum-allocation-mb\":12,\"maximum-alloca
tion-vcores\":12,\"state\":\"RUNNING\",\"maximum-applications\":12,\"maximum-am-r
esource-percent\":12,\"acl_submit_applications\":{\"user\":\"*\",\"group\":\"*\"
},\"acl_administer_queue\":{\"user\":\"*\",\"group\":\"*\"},\"queues\":[{\"name\"
:\"d1\",\"capacity\":100,\"maximum-capacity\":100,\"minimum-user-limit-percent\":
null,\"user-limit-factor\":null,\"maximum-allocation-mb\":null,\"maximum-allocati
on-vcores\":null,\"state\":\"RUNNING\",\"maximum-applications\":10000,\"maximum-a
m-resource-percent\":25,\"acl_submit_applications\":{\"user\":\"*\",\"group\":\"*
\"},\"acl_administer_queue\":{\"user\":\"*\",\"group\":\"*\"},\"queues\":nul
l}]}]},\"queueMappingsOverride\":true}"
}
```


Output Example


```
{
"Response": {
"ErrorMsg": "xx",
"Data": "xx",
"RequestId": "xx",
"IsDraft": true,
}
}
```


5. Developer Resources

SDK

TencentCloud API 3.0 integrates SDKs that support various programming languages to make it easier for you to call APIs.

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- Tencent Cloud SDK 3.0 for Node.js
- Tencent Cloud SDK 3.0 for .NET
- Tencent Cloud SDK 3.0 for C++

Command Line Interface

- Tencent Cloud CLI 3.0

6. Error Code

The following only lists the error codes related to the API business logic. For other error codes, see Common Error Codes.

Error Code	Description
FailedOperation	Operation failed.
InternalError	Internal error.
InternalError.CamCgwError	An error occurred while calling another service API.
InternalError.WoodServerError	An error occurred while calling another service API.
InvalidParameter	Invalid parameter.
ResourceNotFound.InstanceNotFound	The instance was not found.
UnauthorizedOperation.CheckCamAuth	Unauthorized operation.

DescribeResourceSchedule

最近更新时间：2024-01-09 10:47:29

1. API Description

Domain name for API request: emr.tencentcloudapi.com.

This API is used to query the data of YARN Resource Scheduling.

A maximum of 20 requests can be initiated per second for this API.

We recommend you to use API Explorer

Try it

API Explorer provides a range of capabilities, including online call, signature authentication, SDK code generation, and API quick search. It enables you to view the request, response, and auto-generated examples.

2. Input Parameters

The following request parameter list only provides API request parameters and some common parameters. For the complete common parameter list, see Common Request Parameters.

Parameter Name	Required	Type	Description
Action	Yes	String	Common Params. The value used for this API: DescribeResourceSchedule.
Version	Yes	String	Common Params. The value used for this API: 2019-01-03.
Region	No	String	Common Params. This parameter is not required for this API.
InstanceId	Yes	String	EMR cluster ID

3. Output Parameters

Parameter Name	Type	Description
OpenSwitch	Boolean	Whether to enable the resource scheduling feature

Scheduler	String	The resource scheduler in service
FSInfo	String	Fair Scheduler information
CSInfo	String	Capacity Scheduler information
RequestId	String	The unique request ID, which is returned for each request. RequestId is required for locating a problem.

4. Example

Example1 test

Input Example

```
POST / HTTP/1.1
Host: emr.tencentcloudapi.com
Content-Type: application/json
X-TC-Action: DescribeResourceSchedule
<Common request parameters>

{
"InstanceId": "xx"
}
```

Output Example

```
{
"Response": {
"FSInfo": "xx",
"CSInfo": "xx",
"Scheduler": "xx",
"OpenSwitch": true,
"RequestId": "xx"
}
}
```

5. Developer Resources

SDK

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- Tencent Cloud SDK 3.0 for PHP
- Tencent Cloud SDK 3.0 for Go
- Tencent Cloud SDK 3.0 for Node.js
- Tencent Cloud SDK 3.0 for .NET
- Tencent Cloud SDK 3.0 for C++

Command Line Interface

- Tencent Cloud CLI 3.0

6. Error Code

The following only lists the error codes related to the API business logic. For other error codes, see Common Error Codes.

Error Code	Description
InternalError	Internal error.
InternalError.CamCgwError	An error occurred while calling another service API.
InternalError.WoodServerError	An error occurred while calling another service API.
InvalidParameter	Invalid parameter.
InvalidParameter.InvalidInstanceName	Invalid cluster name.
ResourceNotFound.InstanceNotFound	The instance was not found.

ModifyResourceScheduler

最近更新时间：2024-01-09 10:47:28

1. API Description

Domain name for API request: emr.tencentcloudapi.com.

This API is used to modify the YARN resource scheduler (the change will take effect after you click Apply).

A maximum of 20 requests can be initiated per second for this API.

We recommend you to use API Explorer

Try it

API Explorer provides a range of capabilities, including online call, signature authentication, SDK code generation, and API quick search. It enables you to view the request, response, and auto-generated examples.

2. Input Parameters

The following request parameter list only provides API request parameters and some common parameters. For the complete common parameter list, see Common Request Parameters.

Parameter Name	Required	Type	Description
Action	Yes	String	Common Params. The value used for this API: ModifyResourceScheduler.
Version	Yes	String	Common Params. The value used for this API: 2019-01-03.
Region	No	String	Common Params. This parameter is not required for this API.
InstanceId	Yes	String	EMR cluster ID
OldValue	Yes	String	The original scheduler: `fair`
NewValue	Yes	String	The new scheduler: `capacity`

3. Output Parameters

Parameter Name	Type	Description
RequestId	String	The unique request ID, which is returned for each request. RequestId is required for locating a problem.

4. Example

Example1 test

Input Example

```
POST / HTTP/1.1
Host: emr.tencentcloudapi.com
Content-Type: application/json
X-TC-Action: ModifyResourceScheduler
<Common request parameters>

{
"InstanceId": "xx",
"NewValue": "xx",
"OldValue": "xx"
}
```

Output Example

```
{
"Response": {
"RequestId": "xx"
}
}
```

5. Developer Resources

SDK

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- Tencent Cloud SDK 3.0 for .NET
- Tencent Cloud SDK 3.0 for C++

Command Line Interface

- Tencent Cloud CLI 3.0

6. Error Code

The following only lists the error codes related to the API business logic. For other error codes, see Common Error Codes.

Error Code	Description
InternalError	Internal error.
InternalError.CamCgwError	An error occurred while calling another service API.
InvalidParameter	Invalid parameter.
ResourceNotFound.InstanceNotFound	The instance was not found.

StartStopServiceOrMonitor

最近更新时间：2024-01-09 10:47:28

1. API Description

Domain name for API request: emr.tencentcloudapi.com.

This API is used to start, stop, or restart services.

A maximum of 20 requests can be initiated per second for this API.

We recommend you to use API Explorer

Try it

API Explorer provides a range of capabilities, including online call, signature authentication, SDK code generation, and API quick search. It enables you to view the request, response, and auto-generated examples.

2. Input Parameters

The following request parameter list only provides API request parameters and some common parameters. For the complete common parameter list, see Common Request Parameters.

Parameter Name	Required	Type	Description
Action	Yes	String	Common Params. The value used for this API: StartStopServiceOrMonitor.
Version	Yes	String	Common Params. The value used for this API: 2019-01-03.
Region	No	String	Common Params. This parameter is not required for this API.
InstanceId	Yes	String	The cluster ID.
OpType	Yes	String	The operation type. Valid values: • StartService: Start service • StopService: Stop service • StartMonitor: Start maintenance • StopMonitor: Stop maintenance • RestartService: Restart service. If this type is selected, "StrategyConfig" is required.

OpScope	Yes	OpScope	The operation scope.
StrategyConfig	No	StrategyConfig	The operation policy.

3. Output Parameters

Parameter Name	Type	Description
RequestId	String	The unique request ID, which is returned for each request. RequestId is required for locating a problem.

4. Example

Example1 StartStopServiceOrMonitor

This example shows you how to start and stop cluster services.

Input Example

```
POST / HTTP/1.1
Host: emr.tencentcloudapi.com
Content-Type: application/json
X-TC-Action: StartStopServiceOrMonitor
<Common request parameters>

{
"InstanceId": "emr-4zvc5mul",
"OpType": "StartService",
"OpScope": {
"ServiceInfoList": [
{
"ServiceName": "abc",
"ComponentInfoList": [
{
"ComponentName": "ZKFailoverController",
"IpList": [
"172.16.114.126"
]
}
]
}
]
```

```
},
"StrategyConfig": {
"RollingRestartSwitch": 0,
"BatchSize": 1,
"TimeWait": 5,
"DealOnFail": 0
}
}
```

Output Example

```
{
"Response": {
"RequestId": "4c141dbb-b365-4c1b-a209-2c18e47fdb11"
}
}
```

5. Developer Resources

SDK

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- Tencent Cloud SDK 3.0 for Node.js
- Tencent Cloud SDK 3.0 for .NET
- Tencent Cloud SDK 3.0 for C++

Command Line Interface

- Tencent Cloud CLI 3.0

6. Error Code

The following only lists the error codes related to the API business logic. For other error codes, see Common Error Codes.

Error Code	Description
FailedOperation	Operation failed.
InternalError.CamCgwError	An error occurred while calling another service API.
InternalError.WoodServerError	An error occurred while calling another service API.
InvalidParameter.InvalidInstanceName	Invalid cluster name.
InvalidParameter.InvalidJobFlow	Invalid process task.
ResourceInUse.InstanceInProcess	The instance is under workflow.
ResourceNotFound.InstanceNotFound	The instance was not found.
UnauthorizedOperation.CheckCamAuth	Unauthorized operation.
UnsupportedOperation.ServiceNotSupport	This operation is not supported.

Data Types

最近更新时间：2024-04-20 14:35:58

AllNodeResourceSpec

Resource description

Used by actions: CreateCluster.

Name	Type	Required	Description
MasterResourceSpec	NodeResourceSpec	No	The description of master nodes. Note: This field may return null, indicating that no valid values can be obtained.
CoreResourceSpec	NodeResourceSpec	No	The description of core nodes. Note: This field may return null, indicating that no valid values can be obtained.
TaskResourceSpec	NodeResourceSpec	No	The description of task nodes. Note: This field may return null, indicating that no valid values can be obtained.
CommonResourceSpec	NodeResourceSpec	No	The description of common nodes. Note: This field may return null, indicating that no valid values can be obtained.
MasterCount	Integer	No	The number of master nodes. Note: This field may return null, indicating that no valid values can be obtained.
CoreCount	Integer	No	The number of core nodes. Note: This field may return null, indicating that no valid values can be obtained.
TaskCount	Integer	No	The number of task nodes. Note: This field may return null, indicating that no valid values can be obtained.
CommonCount	Integer	No	The number of common nodes. Note: This field may return null, indicating that no valid values can be obtained.

ApplicationStatics

Yarn application statistics

Used by actions: DescribeEmrApplicationStatics.

Name	Type	Description
Queue	String	Queue name
User	String	Username
ApplicationType	String	Application type
SumMemorySeconds	Integer	`SumMemorySeconds` meaning
SumVCoreSeconds	Integer	
SumHDFSBytesWritten	String	SumHDFSBytesWritten (with unit)
SumHDFSBytesRead	String	SumHDFSBytesRead (with unit)
CountApps	Integer	Application count

AutoScaleRecord

Elastic Scaling Record

Used by actions: DescribeAutoScaleRecords.

Name	Type	Description
StrategyName	String	Name of the scale-in or scale-out rule.
ScaleAction	String	"SCALE_OUT" and "SCALE_IN", representing expansion and reduction respectively.
ActionStatus	String	The values are "SUCCESS", "FAILED", "PART_SUCCESS", "IN_PROCESS", which indicate success, failure, partial success, and in-progress, respectively.
ActionTime	String	Process initiation time.
ScaleInfo	String	Description related to auto-scaling.
ExpectScaleNum	Integer	Valid only when ScaleAction is SCALE_OUT.

EndTime	String	Process termination time.
StrategyType	Integer	Policy type. Valid values: 1 (load-based scaling), 2 (time-based scaling).
SpecInfo	String	Specification information used during scale-out.
CompensateFlag	Integer	Compensatory scale-out. Valid values: 0 (disabled), 1 (enabled). Note: This field may return null, indicating that no valid values can be obtained.
CompensateCount	Integer	Number of compensations Note: This field may return null, indicating that no valid values can be obtained.
RetryCount	Integer	
RetryInfo	String	

COSSettings

COS-related configuration

Used by actions: CreateInstance.

Name	Type	Required	Description
CosSecretId	String	Yes	COS `SecretId`
CosSecretKey	String	Yes	COS `SecrectKey`
LogOnCosPath	String	No	COS path to log

CdbInfo

Output parameters

Used by actions: DescribeClusterNodes.

Name	Type	Description
InstanceName	String	Database instance Note: this field may return null, indicating that no valid values can be obtained.
Ip	String	Database IP Note: this field may return null, indicating that no valid values can be obtained.

Port	Integer	Database port Note: this field may return null, indicating that no valid values can be obtained.
MemSize	Integer	Database memory specification Note: this field may return null, indicating that no valid values can be obtained.
Volume	Integer	Database disk specification Note: this field may return null, indicating that no valid values can be obtained.
Service	String	Service flag Note: this field may return null, indicating that no valid values can be obtained.
ExpireTime	String	Expiration time Note: this field may return null, indicating that no valid values can be obtained.
ApplyTime	String	Application time Note: this field may return null, indicating that no valid values can be obtained.
PayType	Integer	Payment type Note: this field may return null, indicating that no valid values can be obtained.
ExpireFlag	Boolean	Expiration flag Note: this field may return null, indicating that no valid values can be obtained.
Status	Integer	Database status Note: this field may return null, indicating that no valid values can be obtained.
IsAutoRenew	Integer	Renewal flag Note: this field may return null, indicating that no valid values can be obtained.
SerialNo	String	Database string Note: this field may return null, indicating that no valid values can be obtained.
ZoneId	Integer	ZoneId Note: this field may return null, indicating that no valid values can be obtained.
RegionId	Integer	RegionId Note: this field may return null, indicating that no valid values can be obtained.

ClusterExternalServiceInfo

Relationship between shared components and the current cluster

Used by actions: DescribeInstances.

Name	Type	Description

DependType	Integer	Dependency. `0` : Other clusters depend on the current cluster. `1` : The current cluster depends on other clusters. Note: This field may return `null` , indicating that no valid values can be obtained.
Service	String	Shared component Note: This field may return `null` , indicating that no valid values can be obtained.
ClusterId	String	Sharing cluster Note: This field may return `null` , indicating that no valid values can be obtained.
ClusterStatus	Integer	Sharing cluster status Note: This field may return `null` , indicating that no valid values can be obtained.

ClusterIDToFlowID

Mapping of cluster ID and process ID

Used by actions: ModifyResourcesTags.

Name	Type	Description
ClusterId	String	Cluster IDNote: This field may return null, indicating that no valid values can be obtained.
FlowId	Integer	Process ID Note: This field may return null, indicating that no valid values can be obtained.

ClusterInstancesInfo

Cluster instance information

Used by actions: DescribeInstances.

Name	Type	Description
Id	Integer	ID Note: this field may return null, indicating that no valid values can be obtained.
ClusterId	String	Cluster ID Note: this field may return null, indicating that no valid values can be obtained.

Ftitle	String	Title Note: this field may return null, indicating that no valid values can be obtained.
ClusterName	String	Cluster name Note: this field may return null, indicating that no valid values can be obtained.
RegionId	Integer	Region ID Note: this field may return null, indicating that no valid values can be obtained.
ZoneId	Integer	Region ID Note: this field may return null, indicating that no valid values can be obtained.
AppId	Integer	User APPID Note: this field may return null, indicating that no valid values can be obtained.
Uin	String	User UIN Note: this field may return null, indicating that no valid values can be obtained.
ProjectId	Integer	Project ID Note: this field may return null, indicating that no valid values can be obtained.
VpcId	Integer	Cluster `VPCID` Note: this field may return null, indicating that no valid values can be obtained.
SubnetId	Integer	Subnet ID Note: this field may return null, indicating that no valid values can be obtained.
Status	Integer	Instance status code. Value range: • 2: cluster running • 3: creating cluster. • 4: scaling out cluster. • 5: adding router node in cluster. • 6: installing component in cluster. • 7: cluster executing command. • 8: restarting service. • 9: entering maintenance. • 10: suspending service. • 11: exiting maintenance.

		• 12: exiting suspension. • 13: delivering configuration. • 14: terminating cluster. • 15: terminating core node. • 16: terminating task node. • 17: terminating router node. • 18: changing webproxy password. • 19: isolating cluster. • 20: resuming cluster. • 21: repossessing cluster. • 22: waiting for configuration adjustment. • 23: cluster isolated. • 24: removing node. • 33: waiting for refund. • 34: refunded. • 301: creation failed. • 302: scale-out failed. Note: this field may return null, indicating that no valid values can be obtained.
AddTime	String	Creation time Note: this field may return null, indicating that no valid values can be obtained.
RunTime	String	Execution duration Note: this field may return null, indicating that no valid values can be obtained.
Config	EmrProductConfigOutter	Cluster product configuration information Note: this field may return null, indicating that no valid values can be obtained.
MasterIp	String	Public IP of master node Note: this field may return null, indicating that no valid values can be obtained.
EmrVersion	String	EMR version Note: this field may return null, indicating that no valid values can be obtained.
ChargeType	Integer	Billing mode Note: this field may return null, indicating that no valid values can be obtained.
TradeVersion	Integer	Transaction version Note: this field may return null, indicating that no

		valid values can be obtained.
ResourceOrderId	Integer	Resource order ID Note: this field may return null, indicating that no valid values can be obtained.
IsTradeCluster	Integer	Whether this is a paid cluster Note: this field may return null, indicating that no valid values can be obtained.
AlarmInfo	String	Alarm information for cluster error Note: this field may return null, indicating that no valid values can be obtained.
IsWoodpeckerCluster	Integer	Whether the new architecture is used Note: this field may return null, indicating that no valid values can be obtained.
MetaDb	String	Metadatabase information Note: this field may return null, indicating that no valid values can be obtained.
Tags	Array of Tag	Tag information Note: this field may return null, indicating that no valid values can be obtained.
HiveMetaDb	String	Hive metadata Note: this field may return null, indicating that no valid values can be obtained.
ServiceClass	String	Cluster type: EMR, CLICKHOUSE, DRUID Note: this field may return null, indicating that no valid values can be obtained.
AliasInfo	String	Alias serialization of all nodes in cluster Note: this field may return null, indicating that no valid values can be obtained.
ProductId	Integer	Cluster version ID Note: this field may return null, indicating that no valid values can be obtained.
Zone	String	Availability zone Note: this field may return `null`, indicating that no valid value can be obtained.
SceneName	String	Scenario name Note: This field may return `null`, indicating that

		no valid value was found.
SceneServiceClass	String	Scenario-based cluster type Note: This field may return `null` , indicating that no valid value was found.
SceneEmrVersion	String	Scenario-based EMR version Note: This field may return `null` , indicating that no valid value was found.
DisplayName	String	Scenario-based cluster type Note: This field may return `null` , indicating that no valid value was found.
VpcName	String	VPC name Note: This field may return `null` , indicating that no valid value was found.
SubnetName	String	Subnet name Note: This field may return `null` , indicating that no valid value was found.
ClusterExternalServiceInfo	Array of ClusterExternalServiceInfo	Cluster dependency Note: This field may return `null` , indicating that no valid value was found.
UniqVpcId	String	The VPC ID string type of the cluster Note: This field may return `null` , indicating that no valid values can be obtained.
UniqSubnetId	String	The subnet ID string type of the cluster Note: This field may return `null` , indicating that no valid values can be obtained.
TopologyInfoList	Array of TopologyInfo	Node information Note: This field may return `null` , indicating that no valid values can be obtained.
IsMultiZoneCluster	Boolean	Multi-AZ cluster Note: This field may return `null` , indicating that no valid values can be obtained.
IsCvmReplace	Boolean	Whether the feature of automatic abnormal node replacement is enabled. Note: This field may return null, indicating that no valid values can be obtained.

ComponentBasicRestartInfo

Target processes

Used by actions: StartStopServiceOrMonitor.

Name	Type	Required	Description
ComponentName	String	No	The process name (required), such as NameNode. Note: This field may return null, indicating that no valid values can be obtained.
IpList	Array of String	No	The target IP list. Note: This field may return null, indicating that no valid values can be obtained.

CustomMetaDBInfo

The user-created Hive-MetaDB instance information.

Used by actions: CreateCluster.

Name	Type	Required	Description
MetaDataJdbcUrl	String	No	The JDBC URL of the custom metadatabase instance. Example: jdbc:mysql://10.10.10.10:3306/dbname
MetaDataUser	String	No	The custom metadatabase instance username.
MetaDataPass	String	No	The custom metadatabase instance password.
MetaType	String	No	The Hive-shared metadatabase type. Valid values: • `EMR_DEFAULT_META` : The cluster creates one by default. • `EMR_EXIST_META` : The cluster uses the specified EMR metadatabase instance. • `USER_CUSTOM_META` : The cluster uses a custom metadatabase instance.
UnifyMetaInstanceId	String	No	The EMR-MetaDB instance.

CustomMetaInfo

User-created Hive-MetaDB instance information

Used by actions: CreateInstance, InquiryPriceCreateInstance.

Name	Type	Required	Description
MetaDataJdbcUrl	String	No	JDBC connection to custom MetaDB instance beginning with `jdbc:mysql://`
MetaDataUser	String	No	Custom MetaDB instance username
MetaDataPass	String	No	Custom MetaDB instance password

CustomServiceDefine

Shared self-built component parameters

Used by actions: CreateInstance, InquiryPriceCreateInstance.

Name	Type	Required	Description
Name	String	No	Custom parameter key
Value	String	No	Custom parameter value

DependService

Shared component information

Used by actions: CreateCluster.

Name	Type	Required	Description
ServiceName	String	Yes	The shared component name.
InstanceId	String	Yes	The cluster to which the shared component belongs.

DiskSpecInfo

Node disk information

Used by actions: ScaleOutCluster.

Name	Type	Required	Description
Count	Integer	Yes	The number of disks. Note: This field may return null, indicating that no valid values can be obtained.
DiskType	String	Yes	The system disk type. Valid values: • `CLOUD_SSD` : Cloud SSD • `CLOUD_PREMIUM` : Premium cloud disk • `CLOUD_BASIC` : Cloud HDD • `LOCAL_BASIC` : Local disk • `LOCAL_SSD` : Local SSD The data disk type. Valid values: • `CLOUD_SSD` : Cloud SSD • `CLOUD_PREMIUM` : Premium cloud disk • `CLOUD_BASIC` : Cloud HDD • `LOCAL_BASIC` : Local disk • `LOCAL_SSD` : Local SSD • `CLOUD_HSSD` : Enhanced SSD • `CLOUD_THROUGHPUT` : Throughput HDD • CLOUD_TSSD: ulTra SSD Note: This field may return null, indicating that no valid values can be obtained.
DiskSize	Integer	Yes	The disk capacity in GB. Note: This field may return null, indicating that no valid values can be obtained.

DynamicPodSpec

Pod floating specification

Used by actions: ScaleOutCluster, ScaleOutInstance.

Name	Type	Required	Description
RequestCpu	Float	No	Minimum number of CPUs
LimitCpu	Float	No	Maximum number of CPUs
RequestMemory	Float	No	Minimum memory in MB

LimitMemory	Float	No	Maximum memory in MB

EmrListInstance

Returned cluster list sample

Used by actions: DescribeInstancesList.

Name	Type	Description
ClusterId	String	Cluster ID
StatusDesc	String	Status description Note: This field may return `null`, indicating that no valid value can be obtained.
ClusterName	String	Cluster name
ZoneId	Integer	Cluster region
AppId	Integer	User APPID
AddTime	String	Creation time
RunTime	String	Running time
MasterIp	String	Cluster IP
EmrVersion	String	Cluster version
ChargeType	Integer	Cluster billing mode
Id	Integer	EMR ID
ProductId	Integer	Product ID Note: This field may return `null`, indicating that no valid value can be obtained.
ProjectId	Integer	Project ID Note: This field may return `null`, indicating that no valid value can be obtained.
RegionId	Integer	Region Note: This field may return `null`, indicating that no valid value can be obtained.

SubnetId	Integer	Subnet ID Note: This field may return `null`, indicating that no valid value can be obtained.
VpcId	Integer	VPC ID Note: This field may return `null`, indicating that no valid value can be obtained.
Zone	String	Region Note: This field may return `null`, indicating that no valid value can be obtained.
Status	Integer	Status code Note: This field may return `null`, indicating that no valid value can be obtained.
Tags	Array of Tag	Instance tag Note: This field may return `null`, indicating that no valid value can be obtained.
AlarmInfo	String	Alarm information Note: This field may return `null`, indicating that no valid value can be obtained.
IsWoodpeckerCluster	Integer	Whether it is a Woodpecker cluster Note: This field may return `null`, indicating that no valid value can be obtained.
VpcName	String	VPC name Note: This field may return `null`, indicating that no valid value can be obtained.
SubnetName	String	Subnet name Note: This field may return `null`, indicating that no valid value can be obtained.
UniqVpcId	String	VPC ID string Note: This field may return `null`, indicating that no valid value can be obtained.
UniqSubnetId	String	Subnet ID string Note: This field may return `null`, indicating that no valid value can be obtained.
ClusterClass	String	Cluster type Note: This field may return `null`, indicating that no valid value can be obtained.

IsMultiZoneCluster	Boolean	Whether it is a multi-AZ cluster Note: This field may return `null`, indicating that no valid value can be obtained.
IsHandsCluster	Boolean	Whether it is a manually deployed cluster Note: This field may return null, indicating that no valid value can be obtained.
OutSideSoftInfo	Array of SoftDependInfo	Client component information. Note: This field may return null, indicating that no valid values can be obtained.
IsSupportOutsideCluster	Boolean	Whether the current cluster supports external clients. Note: This field may return null, indicating that no valid values can be obtained.

EmrPrice

EMR inquiry description

Used by actions: InquiryPriceScaleOutInstance.

Name	Type	Description
OriginalCost	String	The published price. Note: This field may return null, indicating that no valid values can be obtained.
DiscountCost	String	The discounted price. Note: This field may return null, indicating that no valid values can be obtained.
Unit	String	The unit of the billable item. Note: This field may return null, indicating that no valid values can be obtained.
PriceSpec	PriceResource	The queried spec. Note: This field may return null, indicating that no valid values can be obtained.
SupportSpotPaid	Boolean	Whether spot instances are supported. Note: This field may return null, indicating that no valid values can be obtained.

EmrProductConfigOutter

EMR product configuration

Used by actions: DescribeInstances.

Name	Type	Description
SoftInfo	Array of String	Software information Note: this field may return null, indicating that no valid values can be obtained.
MasterNodeSize	Integer	Number of master nodes Note: this field may return null, indicating that no valid values can be obtained.
CoreNodeSize	Integer	Number of core nodes Note: this field may return null, indicating that no valid values can be obtained.
TaskNodeSize	Integer	Number of task nodes Note: this field may return null, indicating that no valid values can be obtained.
ComNodeSize	Integer	Number of common nodes Note: this field may return null, indicating that no valid values can be obtained.
MasterResource	OutterResource	Master node resource Note: this field may return null, indicating that no valid values can be obtained.
CoreResource	OutterResource	Core node resource Note: this field may return null, indicating that no valid values can be obtained.
TaskResource	OutterResource	Task node resource Note: this field may return null, indicating that no valid values can be obtained.
ComResource	OutterResource	Common node resource Note: this field may return null, indicating that no valid values can be obtained.
OnCos	Boolean	Whether COS is used Note: this field may return null, indicating that no valid values can be obtained.

ChargeType	Integer	Billing mode Note: this field may return null, indicating that no valid values can be obtained.
RouterNodeSize	Integer	Number of router nodes Note: this field may return null, indicating that no valid values can be obtained.
SupportHA	Boolean	Whether HA is supported Note: this field may return null, indicating that no valid values can be obtained.
SecurityOn	Boolean	Whether secure mode is supported Note: this field may return null, indicating that no valid values can be obtained.
SecurityGroup	String	Security group name Note: this field may return null, indicating that no valid values can be obtained.
CbsEncrypt	Integer	Whether to enable CBS encryption Note: this field may return null, indicating that no valid values can be obtained.
ApplicationRole	String	Custom application role Note: this field may return `null`, indicating that no valid value can be obtained.
SecurityGroups	Array of String	Security groups Note: this field may return `null`, indicating that no valid value can be obtained.
PublicKeyId	String	SSH key ID Note: This field may return `null`, indicating that no valid values can be obtained.

ExternalService

Shared component information

Used by actions: CreateInstance, InquiryPriceCreateInstance.

Name	Type	Required	Description
ShareType	String	Yes	Shared component type, which can be

			EMR or CUSTOM
CustomServiceDefineList	Array of CustomServiceDefine	Yes	Custom parameters
Service	String	Yes	Shared component name
InstanceId	String	Yes	Shared component cluster

Filters

Custom query filter of the EMR cluster instance list

Used by actions: DescribeInstancesList.

Name	Type	Required	Description
Name	String	Yes	Field name
Values	Array of String	Yes	Filters by the field value

HiveQuery

Hive query details

Used by actions: DescribeHiveQueries.

Name	Type	Description
Statement	String	Query statementNote: This field may return null, indicating that no valid values can be obtained.
Duration	String	Execution Duration Note: This field may return null, indicating that no valid values can be obtained.
StartTime	Integer	Start Time in Milliseconds Note: This field may return null, indicating that no valid values can be obtained.
EndTime	Integer	End Time in Milliseconds Note: This field may return null, indicating that no valid values can be obtained.

State	String	StatusNote: This field may return null, indicating that no valid values can be obtained.
User	String	UserNote: This field may return null, indicating that no valid values can be obtained.
JobIds	Array of String	AppId List Note: This field may return null, indicating that no valid values can be obtained.
ExecutionEngine	String	Execution Engine Note: This field may return null, indicating that no valid values can be obtained.
Id	String	Query ID Note: This field may return null, indicating that no valid values can be obtained.

HostVolumeContext

Description of `HostPath` mounting method in the pod

Used by actions: ScaleOutCluster, ScaleOutInstance.

Name	Type	Required	Description
VolumePath	String	Yes	The directory for mounting the host in the pod, which is the mount point of the host in the resource. A specified mount point corresponds to the host path and is used as the data storage directory in the pod. Note: This field may return null, indicating that no valid values can be obtained.

InstanceChargePrepaid

The instance prepayment parameter. It applies only when the billing type is `PREPAID` .

Used by actions: CreateCluster, ScaleOutCluster.

Name	Type	Required	Description
Period	Integer	Yes	The period of monthly subscription, which defaults to 1 and is expressed in month. Valid values: 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 24, 36, 48, 60.

RenewFlag	Boolean	Yes	Whether to enable auto-renewal. Valid values: • `true` : Enable • `false` (default): Disable

KeyValue

Key-value pair, primarily used for filtering

Used by actions: DescribeAutoScaleRecords.

Name	Type	Required	Description
Key	String	Yes	Key Note: This field may return null, indicating that no valid values can be obtained.
Value	String	Yes	ValueNote: This field may return null, indicating that no valid values can be obtained.

LoginSettings

Login settings

Used by actions: CreateCluster, CreateInstance.

Name	Type	Required	Description
Password	String	No	The login password of the instance, which contains 8 to 16 uppercase letters, lowercase letters, digits, and special characters (only !@%^*) and cannot start with a special character.
PublicKeyId	String	No	The key ID. After an instance is associated with a key, you can access it with the private key in the key pair. You can call DescribeKeyPairs to obtain `PublicKeyId` .

ModifyResourceTags

Forcibly Modifying Tags

Used by actions: ModifyResourcesTags.

Name	Type	Required	Description

ResourceId	String	Yes	Cluster ID or CVM ID
Resource	String	Yes	6-segment resource expression
ResourcePrefix	String	Yes	Resource prefix
ResourceRegion	String	Yes	ap-beijing
ServiceType	String	Yes	emr
DeleteTags	Array of Tag	No	List of deleted tags
AddTags	Array of Tag	No	List of added tags
ModifyTags	Array of Tag	No	List of modified tags

MultiDisk

Multi-cloud disk parameters

Used by actions: CreateInstance, InquiryPriceCreateInstance, InquiryPriceScaleOutInstance.

Name	Type	Required	Description
DiskType	String	No	Disk type • CLOUD_SSD: Cloud SSD. • CLOUD_PREMIUM: Premium cloud disk. • CLOUD_HSSD: Enhanced SSD. Note: This field may return null, indicating that no valid values can be obtained.
Volume	Integer	No	Cloud disk sizeNote: This field may return null, indicating that no valid values can be obtained.
Count	Integer	No	Number of cloud disks of this typeNote: This field may return null, indicating that no valid values can be obtained.

MultiDiskMC

Multi-cloud disk parameters

Used by actions: DescribeClusterNodes.

Name	Type	Required	Description
Count	Integer	Yes	Number of cloud disks in this type Note: this field may return null, indicating that no valid values can be obtained.
Type	Integer	No	Disk type Note: this field may return null, indicating that no valid values can be obtained.
Volume	Integer	No	Cloud disk size Note: this field may return null, indicating that no valid values can be obtained.

MultiZoneSetting

Parameter information of each AZ

Used by actions: CreateInstance, InquiryPriceCreateInstance.

Name	Type	Required	Description
ZoneTag	String	No	"master", "standby", "third-party" Note: This field may return `null`, indicating that no valid value can be obtained.
VPCSettings	VPCSettings	No	None
Placement	Placement	No	None
ResourceSpec	NewResourceSpec	No	None

NewResourceSpec

Resource description

Used by actions: CreateInstance, InquiryPriceCreateInstance.

Name	Type	Required	Description
MasterResourceSpec	Resource	No	Describes master node resource
CoreResourceSpec	Resource	No	Describes core node resource

TaskResourceSpec	Resource	No	Describes task node resource
MasterCount	Integer	No	Number of master nodes
CoreCount	Integer	No	Number of core nodes
TaskCount	Integer	No	Number of task nodes
CommonResourceSpec	Resource	No	Describes common node resource
CommonCount	Integer	No	Number of common nodes

NodeDetailPriceResult

Price details by node, used for creating the cluster price list

Used by actions: InquiryPriceCreateInstance.

Name	Type	Description
NodeType	String	The node type. Valid values: `master` , `core` , `task` , `common` , `router` , `mysql` Note: This field may return null, indicating that no valid values can be obtained.
PartDetailPrice	Array of PartDetailPriceItem	Price details by node part

NodeHardwareInfo

Node hardware information

Used by actions: DescribeClusterNodes.

Name	Type	Description
AppId	Integer	User `APPID` Note: this field may return null, indicating that no valid values can be obtained.
SerialNo	String	Serial number Note: this field may return null, indicating that no valid values can be obtained.

OrderNo	String	Machine instance ID Note: this field may return null, indicating that no valid values can be obtained.
WanIp	String	Public IP bound to master node Note: this field may return null, indicating that no valid values can be obtained.
Flag	Integer	Node type. 0: common node; 1: master node; 2: core node; 3: task node Note: this field may return null, indicating that no valid values can be obtained.
Spec	String	Node specification Note: this field may return null, indicating that no valid values can be obtained.
CpuNum	Integer	Number of node cores Note: this field may return null, indicating that no valid values can be obtained.
MemSize	Integer	Node memory size Note: this field may return null, indicating that no valid values can be obtained.
MemDesc	String	Node memory description Note: this field may return null, indicating that no valid values can be obtained.
RegionId	Integer	Node region Note: this field may return null, indicating that no valid values can be obtained.
ZoneId	Integer	Node AZ Note: this field may return null, indicating that no valid values can be obtained.
ApplyTime	String	Application time Note: this field may return null, indicating that no valid values can be obtained.
FreeTime	String	Release time Note: this field may return null, indicating that no valid values can be obtained.
DiskSize	String	Disk size Note: this field may return null, indicating that no valid values can

		be obtained.
NameTag	String	Node description Note: this field may return null, indicating that no valid values can be obtained.
Services	String	Services deployed on node Note: this field may return null, indicating that no valid values can be obtained.
StorageType	Integer	Disk type Note: this field may return null, indicating that no valid values can be obtained.
RootSize	Integer	System disk size Note: this field may return null, indicating that no valid values can be obtained.
ChargeType	Integer	Payment type Note: this field may return null, indicating that no valid values can be obtained.
CdbIp	String	Database IP Note: this field may return null, indicating that no valid values can be obtained.
CdbPort	Integer	Database port Note: this field may return null, indicating that no valid values can be obtained.
HwDiskSize	Integer	Disk capacity Note: this field may return null, indicating that no valid values can be obtained.
HwDiskSizeDesc	String	Disk capacity description Note: this field may return null, indicating that no valid values can be obtained.
HwMemSize	Integer	Memory capacity Note: this field may return null, indicating that no valid values can be obtained.
HwMemSizeDesc	String	Memory capacity description Note: this field may return null, indicating that no valid values can be obtained.
ExpireTime	String	Expiration time Note: this field may return null, indicating that no valid values can

		be obtained.
EmrResourceId	String	Node resource ID Note: this field may return null, indicating that no valid values can be obtained.
IsAutoRenew	Integer	Renewal flag Note: this field may return null, indicating that no valid values can be obtained.
DeviceClass	String	Device flag Note: this field may return null, indicating that no valid values can be obtained.
Mutable	Integer	Support for configuration adjustment Note: this field may return null, indicating that no valid values can be obtained.
MCMultiDisk	Array of MultiDiskMC	Multi-cloud disk Note: this field may return null, indicating that no valid values can be obtained.
CdbNodeInfo	CdbInfo	Database information Note: this field may return null, indicating that no valid values can be obtained.
Ip	String	Private IP Note: this field may return null, indicating that no valid values can be obtained.
Destroyable	Integer	Whether this node can be terminated. 1: yes, 0: no Note: this field may return null, indicating that no valid values can be obtained.
Tags	Array of Tag	Tags bound to node Note: this field may return null, indicating that no valid values can be obtained.
AutoFlag	Integer	Wether the node is auto-scaling. 0 means common node. 1 means auto-scaling node.
HardwareResourceType	String	Resource type. Valid values: host, pod Note: this field may return null, indicating that no valid values can be obtained.
IsDynamicSpec	Integer	Whether floating specification is used. `1` : yes; `0` : no Note: this field may return `null` , indicating that no valid values

		can be obtained.
DynamicPodSpec	String	Floating specification in JSON string Note: this field may return `null` , indicating that no valid values can be obtained.
SupportModifyPayMode	Integer	Whether to support billing mode change. `0` : no; `1` : yes Note: this field may return `null` , indicating that no valid values can be obtained.
RootStorageType	Integer	System disk type Note: this field may return `null` , indicating that no valid values can be obtained.
Zone	String	AZ information Note: this field may return `null` , indicating that no valid values can be obtained.
SubnetInfo	SubnetInfo	Subnet Note: This field may return `null` , indicating that no valid value can be obtained.
Clients	String	Client Note: This field may return `null` , indicating that no valid value can be obtained.
CurrentTime	String	The current system time. Note: This field may return null, indicating that no valid values can be obtained.
IsFederation	Integer	Whether it is used in a federation. Valid values: `0` (no), `1` (yes). Note: This field may return null, indicating that no valid values can be obtained.
DeviceName	String	Device name Note: This field may return null, indicating that no valid values can be obtained.
ServiceClient	String	Service Note: This field may return null, indicating that no valid values can be obtained.
DisableApiTermination	Boolean	Enabling instance protection for this instance. Valid values: `true` (enable) and `false` (disable). Note: This field may return null, indicating that no valid values can be obtained.

TradeVersion	Integer	The billing version. Valid values: `0` (original billing) and `1` (new billing) Note: This field may return null, indicating that no valid values can be obtained.
ServicesStatus	String	Status of each component. Zookeeper: STARTED; ResourceManager: STARTED. STARTED indicates "already in operation"; STOPPED indicates "ceased". Note: This field may return null, indicating that no valid values can be obtained.

NodeResourceSpec

Resource details

Used by actions: CreateCluster, ScaleOutCluster.

Name	Type	Required	Description
InstanceType	String	Yes	The spec type, such as `S2.MEDIUM8`. Note: This field may return null, indicating that no valid values can be obtained.
SystemDisk	Array of DiskSpecInfo	Yes	The system disk, which can be up to 1 PCS. Note: This field may return null, indicating that no valid values can be obtained.
Tags	Array of Tag	No	The list of tags to be bound. Note: This field may return null, indicating that no valid values can be obtained.
DataDisk	Array of DiskSpecInfo	No	The cloud data disk, which can be up to 15 PCS. Note: This field may return null, indicating that no valid values can be obtained.
LocalDataDisk	Array of DiskSpecInfo	No	The local data disk. Note: This field may return null, indicating that no valid values can be obtained.

OpScope

Operation scope

Used by actions: StartStopServiceOrMonitor.

Name	Type	Required	Description
ServiceInfoList	Array of ServiceBasicRestartInfo	No	The information of the services to operate on. Note: This field may return null, indicating that no valid values can be obtained.

OutterResource

Resource details

Used by actions: DescribeInstances.

Name	Type	Description
Spec	String	Specification Note: this field may return null, indicating that no valid values can be obtained.
SpecName	String	Specification name Note: this field may return null, indicating that no valid values can be obtained.
StorageType	Integer	Disk type Note: this field may return null, indicating that no valid values can be obtained.
DiskType	String	Disk type Note: this field may return null, indicating that no valid values can be obtained.
RootSize	Integer	System disk size Note: this field may return null, indicating that no valid values can be obtained.
MemSize	Integer	Memory size Note: this field may return null, indicating that no valid values can be obtained.
Cpu	Integer	Number of CPUs Note: this field may return null, indicating that no valid values can be obtained.
DiskSize	Integer	Disk size Note: this field may return null, indicating that no valid values can be obtained.
InstanceType	String	Specification Note: this field may return null, indicating that no valid values can be obtained.

PartDetailPriceItem

Price details by node part, used for creating the cluster price list

Used by actions: InquiryPriceCreateInstance.

Name	Type	Description
InstanceType	String	The type. Valid values: `node` (node); `rootDisk` (system disk); `dataDisk` and `metaDB` (cloud data disk) Note: This field may return null, indicating that no valid values can be obtained.
Price	Float	Rate (original) Note: This field may return null, indicating that no valid values can be obtained.
RealCost	Float	Rate (discounted) Note: This field may return null, indicating that no valid values can be obtained.
RealTotalCost	Float	Total price (discounted) Note: This field may return null, indicating that no valid values can be obtained.
Policy	Float	Discount Note: This field may return null, indicating that no valid values can be obtained.
GoodsNum	Integer	Quantity Note: This field may return null, indicating that no valid values can be obtained.

PersistentVolumeContext

Description of Pod `PVC` storage method

Used by actions: ScaleOutCluster, ScaleOutInstance.

Name	Type	Required	Description
DiskSize	Integer	No	Disk size in GB. Note: This field may return null, indicating that no valid values can be obtained.
DiskType	String	No	Disk type. Valid values: `CLOUD_PREMIUM` and `CLOUD_SSD` . Note: This field may return null, indicating that no valid values can be obtained.
DiskNum	Integer	No	Number of disks. Note: This field may return null, indicating that no valid values can be

			obtained.

Placement

Location information of cluster instance

Used by actions: CreateCluster, CreateInstance, InquiryPriceCreateInstance, InquiryPriceRenewInstance, InquiryPriceUpdateInstance.

Name	Type	Required	Description
Zone	String	Yes	The ID of the availability zone where the instance resides, such as `ap-guangzhou-1` . You can call the DescribeZones API and obtain this ID from the `Zone` field in the response.
ProjectId	Integer	No	Project ID of the instance. If no ID is passed in, the default project ID is used.

PodNewParameter

The custom pod permission and parameter.

Used by actions: ScaleOutCluster.

Name	Type	Required	Description
InstanceId	String	Yes	The TKE or EKS cluster ID.

Config	String	Yes	Custom permissions
			Examples:
			{
			"apiVersion": "v1",
			"clusters": [
			{
			"cluster": {
			"certificate-authority-data": "xxxxxx==",
			"server": "https://xxxxx.com"
			},
			"name": "cls-xxxxx"
			}
			],
			"contexts": [

			{
			"context": {
			"cluster": "cls-xxxxx",
			"user": "100014xxxxx"
			},
			"name": "cls-a44yhcxxxxxxxxx"
			}
			],
			"current-context": "cls-a4xxxx-context-default",
			"kind": "Config",
			"preferences": {},
			"users": [
			{
			"name": "100014xxxxx",
			"user": {
			"client-certificate-data": "xxxxxx",
			"client-key-data": "xxxxxx"
			}
			}
			]
			}

Parameter	String	Yes	Custom parameters
			Examples:
			{
			"apiVersion": "apps/v1",
			"kind": "Deployment",
			"metadata": {
			"name": "test-deployment",
			"labels": {
			"app": "test"
			}
			},
			"spec": {
			"replicas": 3,
			"selector": {
			"matchLabels": {
			"app": "test-app"
			}
			},
			"template": {
			"metadata": {
			"annotations": {
			"your-organization.com/department-v1": "test-example-v1",
			"your-organization.com/department-v2": "test-example-v2"
			},

```
"labels": {
"app": "test-app",
"environment": "production"
}
},
"spec": {
"nodeSelector": {
"your-organization/node-test": "test-node"
},
"containers": [
{
"name": "nginx",
"image": "nginx:1.14.2",
"ports": [
{
"containerPort": 80
}
]
}
],
"affinity": {
"nodeAffinity": {
"requiredDuringSchedulingIgnoredDuringExecution": {
"nodeSelectorTerms": [
{
"matchExpressions": [
{
"key": "disk-type",
"operator": "In",
"values": [
"ssd",
"sas"
]
},
{
"key": "cpu-num",
"operator": "Gt",
"values": [
"6"
]
}
]
}
]
}
}
```

			} } } } } }

PodNewSpec

Resource descriptions for container resource scale-out

Used by actions: ScaleOutCluster.

Name	Type	Required	Description
ResourceProviderIdentifier	String	Yes	The identifier of an external resource provider, such as "cls-a1cd23fa".
ResourceProviderType	String	Yes	The type of the external resource provider, such as "tke". Currently, only "tke" is supported.
NodeFlag	String	Yes	The purpose of the resource, which means the node type and can only be "TASK".
Cpu	Integer	Yes	The number of CPUs.
Memory	Integer	Yes	The memory size in GB.
CpuType	String	No	The EKS cluster - CPU type. Valid values: `intel` and `amd`.
PodVolumes	Array of PodVolume	No	The data directory mounting information of the pod node.
EnableDynamicSpecFlag	Boolean	No	Whether the dynamic spec is used. Valid values: • `true`: Yes • `false` (default): No
DynamicPodSpec	DynamicPodSpec	No	The dynamic spec. Note: This field may return null, indicating that no valid values can be obtained.
VpcId	String	No	The unique VPC ID.

			Note: This field may return null, indicating that no valid values can be obtained.
SubnetId	String	No	The unique VPC subnet ID. Note: This field may return null, indicating that no valid values can be obtained.
PodName	String	No	The pod name. Note: This field may return null, indicating that no valid values can be obtained.

PodParameter

Custom pod permission and parameter

Used by actions: ScaleOutInstance.

Name	Type	Required	Description
ClusterId	String	Yes	ID of TKE or EKS cluster

Config	String	Yes	Custom permissions
			Example:
			{
			"apiVersion": "v1",
			"Clusters": [
			{
			"cluster": {
			"certificate-authority-data": "xxxxxx==",
			"server": "https://xxxxx.com"
			},
			"name": "cls-xxxxx"
			}
			],
			"contexts": [
			{
			"context": {
			"cluster": "cls-xxxxx",
			"user": "100014xxxxx"
			},
			"name": "cls-a44yhcxxxxxxxxx"
			}
			],
			"current-context": "cls-a4xxxx-context-default",

			"kind": "Config",
			"preferences": {},
			"users": [
			{
			"name": "100014xxxxx",
			"user": {
			"client-certificate-data": "xxxxxx",
			"client-key-data": "xxxxxx"
			}
			}
			]
			}

Parameter	String	Yes	Custom parameters
			Example:
			{
			"apiVersion": "apps/v1",
			"kind": "Deployment",
			"metadata": {
			"name": "test-deployment",
			"labels": {
			"app": "test"
			}
			},
			"spec": {
			"replicas": 3,
			"selector": {
			"matchLabels": {
			"app": "test-app"
			}
			},
			"template": {
			"metadata": {
			"annotations": {
			"your-organization.com/department-v1": "test-example-v1",
			"your-organization.com/department-v2": "test-example-v2"
			},
			"labels": {
			"app": "test-app",
			"environment": "production"
			}
			},
			"spec": {
			"nodeSelector": {
			"your-organization/node-test": "test-node"

```
},
"containers": [
{
"name": "nginx",
"image": "nginx:1.14.2",
"ports": [
{
"containerPort": 80
}
]
}
],
"affinity": {
"nodeAffinity": {
"requiredDuringSchedulingIgnoredDuringExecution": {
"nodeSelectorTerms": [
{
"matchExpressions": [
{
"key": "disk-type",
"operator": "In",
"values": [
"ssd",
"sas"
]
},
{
"key": "cpu-num",
"operator": "Gt",
"values": [
"6"
]
}
]
}
]
}
}
}
}
}
}
```

PodSpec

Resource description for container resource scale-out

Used by actions: ScaleOutInstance.

Name	Type	Required	Description
ResourceProviderIdentifier	String	Yes	Identifier of external resource provider, such as "cls-a1cd23fa".
ResourceProviderType	String	Yes	Type of external resource provider, such as "tke". Currently, only "tke" is supported.
NodeType	String	Yes	Purpose of the resource, which means the node type and can only be "TASK".
Cpu	Integer	Yes	Number of CPUs
Memory	Integer	Yes	Memory size in GB.
DataVolumes	Array of String	No	Mount point of resources for the host. A specified mount point corresponds to the host path and is used as the data storage directory in the pod. (This parameter has been disused)
CpuType	String	No	EKS cluster - CPU type. Valid values: `intel` and `amd`.
PodVolumes	Array of PodVolume	No	Data directory mounting information of the pod node.
IsDynamicSpec	Integer	No	Whether floating specification is used. `1`: Yes; `0`: No.
DynamicPodSpec	DynamicPodSpec	No	Floating specification Note: This field may return null, indicating that no valid values can be obtained.
VpcId	String	No	Unique VPC ID Note: This field may return null, indicating that no valid values can be obtained.
SubnetId	String	No	Unique VPC subnet ID Note: This field may return null, indicating that no valid values can be obtained.

PodName	String	No	pod name Note: This field may return null, indicating that no valid values can be obtained.

PodSpecInfo

Other pod information.

Used by actions: ScaleOutCluster.

Name	Type	Required	Description
PodSpec	PodNewSpec	No	The specified information such as pod spec and source for scale-out with pod resources.
PodParameter	PodNewParameter	No	The custom pod permission and parameter.

PodVolume

Description of Pod storage.

Used by actions: ScaleOutCluster, ScaleOutInstance.

Name	Type	Required	Description
VolumeType	String	Yes	Storage type. Valid values: `pvc` and `hostpath`. Note: This field may return null, indicating that no valid values can be obtained.
PVCVolume	PersistentVolumeContext	No	This field will take effect if `VolumeType` is `pvc`. Note: This field may return null, indicating that no valid values can be obtained.
HostVolume	HostVolumeContext	No	This field will take effect if `VolumeType` is `hostpath`. Note: This field may return null, indicating that no valid values can be obtained.

PreExecuteFileSettings

Pre-execution script configuration

Used by actions: CreateInstance, ScaleOutInstance.

Name	Type	Required	Description
Path	String	No	COS path to script, which has been disused
Args	Array of String	No	Execution script parameter
Bucket	String	No	COS bucket name, which has been disused
Region	String	No	COS region name, which has been disused
Domain	String	No	COS domain data, which has been disused
RunOrder	Integer	No	Execution sequence
WhenRun	String	No	`resourceAfter` or `clusterAfter`
CosFileName	String	No	Script name, which has been disused
CosFileURI	String	No	COS address of script
CosSecretId	String	No	COS `SecretId`
CosSecretKey	String	No	COS `SecretKey`
AppId	String	No	COS `appid` , which has been disused
Remark	String	No	Remarks

PriceDetail

Pricing details

Used by actions: InquiryPriceUpdateInstance.

Name	Type	Description
ResourceId	String	The node ID
Formula	String	The price formula

OriginalCost	Float	The original price
DiscountCost	Float	The discount price

PriceResource

Resource queried for price

Used by actions: InquiryPriceScaleOutInstance.

Name	Type	Description
Spec	String	Target specification Note: This field may return null, indicating that no valid values can be obtained.
StorageType	Integer	Disk type. Note: This field may return null, indicating that no valid values can be obtained.
DiskType	String	Disk type. Note: This field may return null, indicating that no valid values can be obtained.
RootSize	Integer	System disk size Note: This field may return null, indicating that no valid values can be obtained.
MemSize	Integer	Memory size. Note: This field may return null, indicating that no valid values can be obtained.
Cpu	Integer	Number of CPUs. Note: This field may return null, indicating that no valid values can be obtained.
DiskSize	Integer	Disk size. Note: This field may return null, indicating that no valid values can be obtained.
MultiDisks	Array of MultiDisk	List of cloud disks. Note: This field may return null, indicating that no valid values can be obtained.
DiskCnt	Integer	Number of disks. Note: This field may return null, indicating that no valid values can be

		obtained.
InstanceType	String	Specification Note: This field may return null, indicating that no valid values can be obtained.
Tags	Array of Tag	Tag Note: This field may return null, indicating that no valid values can be obtained.
DiskNum	Integer	Number of disks. Note: This field may return null, indicating that no valid values can be obtained.
LocalDiskNum	Integer	Number of local disks. Note: This field may return null, indicating that no valid values can be obtained.

Resource

Resource details

Used by actions: CreateInstance, InquiryPriceCreateInstance.

Name	Type	Required	Description
Spec	String	Yes	Node specification description, such as CVM.SA2 Note: this field may return `null` , indicating that no valid values can be obtained.
StorageType	Integer	Yes	Storage type Valid values: • 4: SSD • 5: Premium Cloud Storage • 6: Enhanced SSD • 11: High-Throughput cloud disk • 12: Tremendous SSD Note: this field may return `null` , indicating that no valid values can be obtained.
DiskType	String	Yes	Disk type Valid values: • `CLOUD_SSD` : SSD • `CLOUD_PREMIUM` : Premium Cloud Storage

			• `CLOUD_BASIC` : HDD Note: this field may return `null` , indicating that no valid values can be obtained.
MemSize	Integer	Yes	Memory capacity in MB Note: this field may return null, indicating that no valid values can be obtained.
Cpu	Integer	Yes	Number of CPU cores Note: this field may return null, indicating that no valid values can be obtained.
DiskSize	Integer	Yes	Data disk capacity Note: this field may return null, indicating that no valid values can be obtained.
RootSize	Integer	No	System disk capacity Note: this field may return null, indicating that no valid values can be obtained.
MultiDisks	Array of MultiDisk	No	List of cloud disks. When the data disk is a cloud disk, `DiskType` and `DiskSize` are used directly; `MultiDisks` will be used for the excessive part Note: this field may return null, indicating that no valid values can be obtained.
Tags	Array of Tag	No	List of tags to be bound Note: this field may return null, indicating that no valid values can be obtained.
InstanceType	String	No	Specification type, such as S2.MEDIUM8 Note: this field may return `null` , indicating that no valid values can be obtained.
LocalDiskNum	Integer	No	Number of local disks. This field has been disused. Note: this field may return `null` , indicating that no valid values can be obtained.
DiskNum	Integer	No	Number of local disks, such as 2 Note: this field may return `null` , indicating that no valid values can be obtained.

ScaleOutNodeConfig

The type and number of nodes to be added.

Used by actions: ScaleOutCluster.

Name	Type	Required	Description
NodeFlag	String	Yes	Valid values of node type: • MASTER • TASK • CORE • ROUTER
NodeCount	Integer	Yes	The number of nodes.

ScaleOutServiceConfGroupsInfo

Used by actions: ScaleOutCluster.

Name	Type	Required	Description
ServiceComponentName	String	No	
ConfGroupName	String	No	

SceneSoftwareConfig

The configuration of cluster application scenario and supported components.

Used by actions: CreateCluster.

Name	Type	Required	Description
Software	Array of String	Yes	The list of deployed components. The list of component options varies by `ProductVersion` (EMR version). For more information, see Component Version. The instance type, `hive` or `flink` .
SceneName	String	No	The scenario name, which defaults to `Hadoop-Default` . For more details, see here. Valid values: Hadoop-Kudu

			Hadoop-Zookeeper Hadoop-Presto Hadoop-Hbase Hadoop-Default

ScriptBootstrapActionConfig

The bootstrap action.

Used by actions: CreateCluster, ScaleOutCluster.

Name	Type	Required	Description
CosFileURI	String	Yes	The COS URL of the script, in the format of `https://beijing-111111.cos.ap-beijing.myqcloud.com/data/test.sh`. For the COS bucket list, see Bucket List.
ExecutionMoment	String	Yes	The execution time of the bootstrap action script. Valid values: • `resourceAfter`: After node initialization • `clusterAfter`: After cluster start • `clusterBefore`: Before cluster start
Args	Array of String	No	The execution script parameter. The parameter format must comply with standard shell specifications.
CosFileName	String	No	The script file name.

SearchItem

Search field

Used by actions: DescribeClusterNodes.

Name	Type	Required	Description
SearchType	String	Yes	Searchable type
SearchValue	String	Yes	Searchable value

ServiceBasicRestartInfo

The services to operate on

Used by actions: StartStopServiceOrMonitor.

Name	Type	Required	Description
ServiceName	String	No	The service name (required), such as HDFS.
ComponentInfoList	Array of ComponentBasicRestartInfo	No	If it is left empty, all processes will be operated on.

ShortNodeInfo

Node information

Used by actions: DescribeInstances.

Name	Type	Required	Description
NodeType	String	No	Node type: Master/Core/Task/Router/Common Note: This field may return `null` , indicating that no valid value can be obtained.
NodeSize	Integer	No	Number of nodes Note: This field may return `null` , indicating that no valid value can be obtained.

SoftDependInfo

Client component dependencies

Used by actions: DescribeInstancesList.

Name	Type	Description
SoftName	String	The component name.
Required	Boolean	Whether the component is required.

StrategyConfig

Restart, stop, or start of service/monitoring configurations

Used by actions: StartStopServiceOrMonitor.

Name	Type	Required	Description
RollingRestartSwitch	Integer	No	`0` : Disable rolling restart `1` : Enable rolling restart Note: This field may return null, indicating that no valid values can be obtained.
BatchSize	Integer	No	The quantity of restarts per batch during a rolling restart, with the maximum number of restarts being 99999 Note: This field may return null, indicating that no valid values can be obtained.
TimeWait	Integer	No	The wait time (in seconds) per batch in rolling restart, with a maximum value of 5 minutes. Note: This field may return null, indicating that no valid values can be obtained.
DealOnFail	Integer	No	The failure handling policy. Valid values: `0` (blocks the process) and `1` (skips). Note: This field may return null, indicating that no valid values can be obtained.

SubnetInfo

Subnet information

Used by actions: DescribeClusterNodes, DescribeInstances.

Name	Type	Required	Description
SubnetName	String	No	Subnet information (name) Note: This field may return `null` , indicating that no valid value can be obtained.
SubnetId	String	No	Subnet information (ID) Note: This field may return `null` , indicating that no valid value can be obtained.

Tag

Tag

Used by actions: CreateCluster, CreateInstance, DescribeClusterNodes, DescribeInstances, DescribeInstancesList, InquiryPriceCreateInstance, InquiryPriceScaleOutInstance, ModifyResourcesTags, ScaleOutCluster, ScaleOutInstance.

Name	Type	Required	Description
TagKey	String	No	Tag key
TagValue	String	No	Tag value

TopologyInfo

Cluster node topology information

Used by actions: DescribeInstances.

Name	Type	Required	Description
ZoneId	Integer	No	AZ ID Note: This field may return `null` , indicating that no valid value can be obtained.
Zone	String	No	AZ information Note: This field may return `null` , indicating that no valid value can be obtained.
SubnetInfoList	Array of SubnetInfo	No	Subnet information Note: This field may return `null` , indicating that no valid value can be obtained.
NodeInfoList	Array of ShortNodeInfo	No	Node information Note: This field may return `null` , indicating that no valid value can be obtained.

UpdateInstanceSettings

Target resource specification

Used by actions: InquiryPriceUpdateInstance.

Name	Type	Required	Description
Memory	Integer	Yes	Memory capacity in GB
CPUCores	Integer	Yes	Number of CPU cores
ResourceId	String	Yes	Machine resource ID (EMR resource identifier)
InstanceType	String	No	Target machine specification

UserInfoForUserManager

Added user information list

Used by actions: AddUsersForUserManager.

Name	Type	Required	Description
UserName	String	Yes	Username
UserGroup	String	Yes	The group to which the user belongs
PassWord	String	Yes	
ReMark	String	No	

UserManagerFilter

User management list filter

Used by actions: DescribeUsersForUserManager.

Name	Type	Required	Description
UserName	String	No	Username Note: This field may return null, indicating that no valid value can be obtained.

UserManagerUserBriefInfo

Brief user information in user management

Used by actions: DescribeUsersForUserManager.

Name	Type	Description
UserName	String	Username
UserGroup	String	The group to which the user belongs
UserType	String	`Manager` represents an admin, and `NormalUser` represents a general user.
CreateTime	String	Account creation time Note: This field may return null, indicating that no valid value can be obtained.
SupportDownLoadKeyTab	Boolean	Whether the corresponding Keytab file of the user is available for download. This parameter applies only to a Kerberos-enabled cluster.
DownLoadKeyTabUrl	String	Download link of the Keytab file Note: This field may return null, indicating that no valid value can be obtained.

VPCSettings

VPC parameters

Used by actions: CreateInstance, InquiryPriceCreateInstance.

Name	Type	Required	Description
VpcId	String	Yes	VPC ID
SubnetId	String	Yes	Subnet ID

VirtualPrivateCloud

VPC parameters

Used by actions: CreateCluster.

Name	Type	Required	Description

VpcId	String	Yes	The VPC ID.
SubnetId	String	Yes	The subnet ID.

ZoneDetailPriceResult

Price details by AZ, used for creating the cluster price list

Used by actions: InquiryPriceCreateInstance.

Name	Type	Description
ZoneId	String	AZ ID Note: This field may return null, indicating that no valid values can be obtained.
NodeDetailPrice	Array of NodeDetailPriceResult	Price details by node

ZoneResourceConfiguration

AZ configurations

Used by actions: CreateCluster.

Name	Type	Required	Description
VirtualPrivateCloud	VirtualPrivateCloud	No	The VPC configuration information. This parameter is used to specify the VPC ID, subnet ID and other information. Note: This field may return null, indicating that no valid values can be obtained.
Placement	Placement	No	The instance location. This parameter is used to specify the AZ, project, and other attributes of the instance. Note: This field may return null, indicating that no valid values can be obtained.
AllNodeResourceSpec	AllNodeResourceSpec	No	The specs of all nodes. Note: This field may return null, indicating that no valid values can be obtained.

ZoneTag	String	No	For a single AZ, `ZoneTag` can be left out. For a double-AZ mode, `ZoneTag` is set to `master` and `standby` for the first and second AZs, respectively. If there are three AZs, `ZoneTag` is set to `master` , `standby` , and `third-party` for the first, second, and third AZs, respectively. Valid values: • master • standby • third-party Note: This field may return null, indicating that no valid values can be obtained.

Error Codes

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Feature Description

If there is an Error field in the response, it means that the API call failed. For example:

```
{
"Response": {
"Error": {
"Code": "AuthFailure.SignatureFailure",
"Message": "The provided credentials could not be validated. Please check your signature is correct."
},
"RequestId": "ed93f3cb-f35e-473f-b9f3-0d451b8b79c6"
}
}
```

Code in Error indicates the error code, and Message indicates the specific information of the error.

Error Code List

Common Error Codes

Error Code	Description
ActionOffline	This API has been deprecated.
AuthFailure.InvalidAuthorization	`Authorization` in the request header is invalid.
AuthFailure.InvalidSecretId	Invalid key (not a TencentCloud API key type).
AuthFailure.MFAFailure	MFA failed.
AuthFailure.SecretIdNotFound	Key does not exist. Check if the key has been deleted or disabled in the console, and if not, check if the key is correctly entered. Note that whitespaces should not exist before or after the key.
AuthFailure.SignatureExpire	Signature expired. Timestamp and server time cannot differ by more than five minutes. Please

	ensure your current local time matches the standard time.
AuthFailure.SignatureFailure	Invalid signature. Signature calculation error. Please ensure you've followed the signature calculation process described in the Signature API documentation.
AuthFailure.TokenFailure	Token error.
AuthFailure.UnauthorizedOperation	The request is not authorized. For more information, see the CAM documentation.
DryRunOperation	DryRun Operation. It means that the request would have succeeded, but the DryRun parameter was used.
FailedOperation	Operation failed.
InternalError	Internal error.
InvalidAction	The API does not exist.
InvalidParameter	Incorrect parameter.
InvalidParameterValue	Invalid parameter value.
InvalidRequest	The multipart format of the request body is incorrect.
IpInBlacklist	Your IP is in uin IP blacklist.
IpNotInWhitelist	Your IP is not in uin IP whitelist.
LimitExceeded	Quota limit exceeded.
MissingParameter	A parameter is missing.
NoSuchProduct	The product does not exist.
NoSuchVersion	The API version does not exist.
RequestLimitExceeded	The number of requests exceeds the frequency limit.
RequestLimitExceeded.GlobalRegionUinLimitExceeded	Uin exceeds the frequency limit.
RequestLimitExceeded.IPLimitExceeded	The number of ip requests exceeds the frequency limit.
RequestLimitExceeded.UinLimitExceeded	The number of uin requests exceeds the frequency

	limit.
RequestSizeLimitExceeded	The request size exceeds the upper limit.
ResourceInUse	Resource is in use.
ResourceInsufficient	Insufficient resource.
ResourceNotFound	The resource does not exist.
ResourceUnavailable	Resource is unavailable.
ResponseSizeLimitExceeded	The response size exceeds the upper limit.
ServiceUnavailable	Service is unavailable now.
UnauthorizedOperation	Unauthorized operation.
UnknownParameter	Unknown parameter.
UnsupportedOperation	Unsupported operation.
UnsupportedProtocol	HTTP(S) request protocol error; only GET and POST requests are supported.
UnsupportedRegion	API does not support the requested region.

Service Error Codes

Error Code	Description
FailedOperation.CheckIfSupportPodStretch	Operation failed.
FailedOperation.DescribeResourceTagsFailed	Failed to fetch resource tag.
FailedOperation.DuplicateOrderNotAllowed	Duplicate order. Please check the EMR console.
FailedOperation.GetCamRoleFailed	Failed to query the CAM role.
FailedOperation.GetCamServerFailed	Failed to call the CAM service.
FailedOperation.GetCvmConfigQuotaFailed	Failed to fetch the specifications of the CVM.
FailedOperation.GetCvmServerFailed	Failed to call the CVM service.
FailedOperation.GetTradeServerFailed	Failed to call the price inquiry center service.

FailedOperation.NotSupportPod	Operation failed. The pods are not supported.
FailedOperation.RefundCvmFailed	Operation failed.
InternalError.AccountCgwError	An error occurred while calling another service API.
InternalError.CamCgwError	An error occurred while calling another service API.
InternalError.CamError	An error occurred while calling another service API.
InternalError.CbsCgwError	An error occurred while calling another service API.
InternalError.CbsError	An error occurred while calling another service API.
InternalError.CdbCgwError	An error occurred while calling another service API.
InternalError.CdbError	An error occurred while calling another service API.
InternalError.CheckQuotaErr	CVM or CBS resources are insufficient, or the software is invalid.
InternalError.ConfigCgwError	An error occurred while calling another service API.
InternalError.CvmError	An error occurred while calling another service API.
InternalError.DBQueryException	Database query error.
InternalError.EKSError	Error in calling EKS.
InternalError.KmsError	An error occurred while calling another service API.
InternalError.ProjectCgwError	An error occurred while calling another service API.
InternalError.SgError	An error occurred when calling a security group API.

InternalError.TKEError	An error occurred while calling TKE.
InternalError.TagError	An error occurred while calling another service API.
InternalError.TradeCgwError	An error occurred while calling another service API.
InternalError.VpcCgwError	An error occurred while calling another service API.
InternalError.VpcError	An error occurred while calling another service API.
InternalError.WoodServerError	An error occurred while calling another service API.
InvalidParameter.AppIdResourceNotMatch	Parameter error.
InvalidParameter.DisplayStrategyNotMatch	Incorrect display policy.
InvalidParameter.HALessMasterCount	Parameter error.
InvalidParameter.ImpalaQueryException	Impala query parameter error.
InvalidParameter.IncorrectCommonCount	The number of common nodes is invalid.
InvalidParameter.IncorrectMasterCount	The number of master nodes is invalid.
InvalidParameter.InvalidAllNodeResourceSpec	Invalid `AllNodeResourceSpec`.
InvalidParameter.InvalidAppId	Invalid `AppId`.
InvalidParameter.InvalidAutoRenew	Invalid auto-renewal flag.
InvalidParameter.InvalidClickHouseCluster	Invalid ClickHouse cluster.
InvalidParameter.InvalidClientToken	Invalid `ClientToken`.
InvalidParameter.InvalidClusterId	Invalid parameter: ClusterId.
InvalidParameter.InvalidCommonDiskType	Invalid parameter.
InvalidParameter.InvalidComponent	Invalid component.
InvalidParameter.InvalidCoreCount	The number of core nodes is invalid.
InvalidParameter.InvalidCoreDiskType	Parameter error.

InvalidParameter.InvalidCosFileURI	
InvalidParameter.InvalidCount	The count must be greater than 0.
InvalidParameter.InvalidCountNum	A scale-out request only applies to task nodes or core nodes.
InvalidParameter.InvalidCustomizedPodParam	Error message: Invalid PodParameter.
InvalidParameter.InvalidDependServiceAndEnableKerberosConflict	Conflict between `DependService` and `EnableKerberos` .
InvalidParameter.InvalidDiskNum	Invalid number of disks.
InvalidParameter.InvalidDiskSize	Invalid disk size.
InvalidParameter.InvalidEksInstance	Invalid EKS instance.
InvalidParameter.InvalidExtendField	Invalid `CustomConfig` .
InvalidParameter.InvalidFilterKey	Invalid filter parameter.
InvalidParameter.InvalidInstanceChargeType	Invalid instance billing mode.
InvalidParameter.InvalidInstanceName	Invalid cluster name.
InvalidParameter.InvalidInstanceType	Invalid model.
InvalidParameter.InvalidJobFlow	Invalid process task.
InvalidParameter.InvalidLoginSetting	Invalid login settings.
InvalidParameter.InvalidMasterDiskType	Invalid parameter.
InvalidParameter.InvalidMetaDataJdbcUrl	Invalid metadatabase URL.
InvalidParameter.InvalidMetaType	Invalid metadata table type.
InvalidParameter.InvalidModifySpec	Invalid target specification.
InvalidParameter.InvalidNodeFlag	Incorrect node type.
InvalidParameter.InvalidNodeType	Invalid `NodeType` .
InvalidParameter.InvalidPassword	Invalid password.
InvalidParameter.InvalidPaymode	Invalid billing mode.
InvalidParameter.InvalidPreExecutedFile	Invalid bootstrap script.

InvalidParameter.InvalidProductId	Invalid product ID.
InvalidParameter.InvalidProductVersion	Invalid product version.
InvalidParameter.InvalidProjectId	Invalid project ID.
InvalidParameter.InvalidRenewFlag	Invalid auto-renewal identifier.
InvalidParameter.InvalidResourceIds	Invalid resource ID.
InvalidParameter.InvalidResourceSpec	Invalid resource specification.
InvalidParameter.InvalidScriptBootstrapActionConfig	Invalid bootstrap script execution parameter.
InvalidParameter.InvalidSecuritySupport	This EMR version does not support the security mode.
InvalidParameter.InvalidSercurityGrpupId	Invalid security group ID.
InvalidParameter.InvalidServiceName	The service name is invalid.
InvalidParameter.InvalidServiceNodeInfo	The `ServiceNodeInfo` parameter is invalid or incorrect.
InvalidParameter.InvalidSoftDeployInfo	The `InvalidSoftDeployInfo` parameter is invalid or incorrect.
InvalidParameter.InvalidSoftInfo	Invalid `SoftInfo` .
InvalidParameter.InvalidSoftWare	Incorrect parameter.
InvalidParameter.InvalidSoftWareName	The software name is invalid.
InvalidParameter.InvalidSoftWareVersion	The software version is invalid.
InvalidParameter.InvalidStartTimeOrEndTime	Invalid `StartTime` or `EndTime` parameter.
InvalidParameter.InvalidSubnetId	Invalid subnet ID.
InvalidParameter.InvalidSupportHA	Invalid high availability parameter.
InvalidParameter.InvalidTaskCount	The number of task nodes cannot exceed 20.
InvalidParameter.InvalidTimeSpan	Invalid `timespan` .
InvalidParameter.InvalidTimeUnit	Invalid `TimeUnit` .

InvalidParameter.InvalidTkeInstance	The TKE cluster ID is invalid, or the TKE cluster is not eligible.
InvalidParameter.InvalidUnifyMeta	Invalid unified metadatabase.
InvalidParameter.InvalidVpcId	Invalid VPC ID.
InvalidParameter.InvalidZone	Invalid AZ.
InvalidParameter.KerberosSupport	Invalid identifier for Kerberos support.
InvalidParameter.NotContainMustSelectSoftware	Invalid parameter. Necessary components are missing.
InvalidParameter.OrderFieldNotMatch	Invalid sorting field.
InvalidParameter.PayModeResourceNotMatch	The billing mode and resource do not match.
InvalidParameter.ProjectResourceNotMatch	The project does not match the resource.
InvalidParameter.SoftwareNotInProduct	There is an invalid product component.
InvalidParameter.UngrantedPolicy	The policy is not authorized.
InvalidParameter.UngrantedRole	The role is not authorized.
InvalidParameter.ZoneResourceNotMatch	The AZ and resource do not match.
InvalidParameterValue.InvalidTkeInstance	The TKE cluster ID is invalid, or the TKE cluster is not eligible.
LimitExceeded.SecurityGroupNumLimitExceeded	The number of security groups exceeds the limit.
ResourceInUse.InstanceInProcess	The instance is under workflow.
ResourceInsufficient.DiskInsufficient	The disk specification is insufficient.
ResourceInsufficient.InstanceInsufficient	The node specification is unsupported or has been sold out.
ResourceNotFound.ClusterNotFound	The instance was not found.
ResourceNotFound.CvmInstanceNotFound	Unable to find the specified CVM instance.
ResourceNotFound.HardwareInfoNotFound	No hardware information found.

ResourceNotFound.InstanceNotFound	The instance was not found.
ResourceNotFound.ResourceNotFound	Unable to find the monitoring metadata.
ResourceNotFound.SubnetNotFound	No corresponding subnet found.
ResourceNotFound.TKEPreconditionNotFound	Preset components of the TKE cluster are not deployed.
ResourceNotFound.TagsNotFound	No specified tag found.
ResourceUnavailable.ResourceSpecNotDefaultSpec	There is no default value of the current resource spec.
ResourcesSoldOut	The resources have been sold out.
ResourcesSoldOut.CbsSoldOut	The CBS resources have been sold out.
ResourcesSoldOut.CvmSoldOut	CVM instances have been sold out.
UnauthorizedOperation.AppIdMismatched	The `appId` is inconsistent.
UnauthorizedOperation.CheckCamAuth	Unauthorized operation.
UnsupportedOperation.NotInWhiteList	This function is included in the allowlist.
UnsupportedOperation.ServiceNotSupport	This operation is not supported.