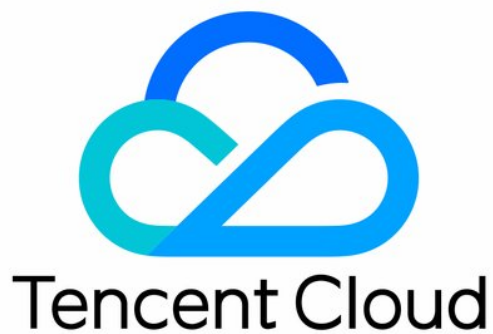


Batch Compute

API Documentation

Product Documentation



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Last updated : 2023-05-04 15:47:06

Release 8

Release time: 2023-05-04 15:43:06

Release updates:

Improvement to existing documentation.

New APIs:

- [AttachInstances](#)
- [CreateComputeEnv](#)
- [CreateTaskTemplate](#)
- [DeleteComputeEnv](#)
- [DeleteJob](#)
- [DeleteTaskTemplates](#)
- [DescribeComputeEnv](#)
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- [ModifyComputeEnv](#)
- [ModifyTaskTemplate](#)
- [RetryJobs](#)
- [TerminateComputeNode](#)
- [TerminateComputeNodes](#)
- [TerminateJob](#)

- [TerminateTaskInstance](#)

New data structures:

- [Activity](#)
- [AgentRunningMode](#)
- [AnonymousComputeEnv](#)
- [Application](#)
- [Authentication](#)
- [ComputeEnvCreateInfo](#)
- [ComputeEnvData](#)
- [ComputeEnvView](#)
- [ComputeNode](#)
- [ComputeNodeMetrics](#)
- [DataDisk](#)
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- [EventConfig](#)
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- [Instance](#)
- [InstanceMarketOptionsRequest](#)
- [InstanceTypeOptions](#)
- [InternetAccessible](#)
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- [NamedComputeEnv](#)
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- [RunAutomationServiceEnabled](#)
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- [RunSecurityServiceEnabled](#)
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- [SystemDisk](#)
- [Tag](#)
- [Task](#)
- [TaskInstanceLog](#)
- [TaskInstanceMetrics](#)
- [TaskInstanceView](#)
- [TaskMetrics](#)
- [TaskTemplateView](#)
- [TaskView](#)
- [VirtualPrivateCloud](#)

Modified data structures:

- [InstanceTypeQuotaItem](#)
 - New members: GpuCount, Frequency

Release 7

Release time: 2022-09-19 11:32:48

Release updates:

Improvement to existing documentation.

Deleted APIs:

- [AttachInstances](#)
- [CreateComputeEnv](#)
- [CreateTaskTemplate](#)
- [DeleteComputeEnv](#)
- [DeleteJob](#)
- [DeleteTaskTemplates](#)
- [DescribeComputeEnv](#)
- [DescribeComputeEnvActivities](#)
- [DescribeComputeEnvCreateInfo](#)
- [DescribeComputeEnvCreateInfos](#)

- DescribeComputeEnvs
- DescribeJob
- DescribeJobSubmitInfo
- DescribeJobs
- DescribeTask
- DescribeTaskLogs
- DescribeTaskTemplates
- DetachInstances
- ModifyComputeEnv
- ModifyTaskTemplate
- RetryJobs
- TerminateComputeNode
- TerminateComputeNodes
- TerminateJob
- TerminateTaskInstance

Deleted data structures:

- Activity
- AgentRunningMode
- AnonymousComputeEnv
- Application
- Authentication
- ComputeEnvCreateInfo
- ComputeEnvData
- ComputeEnvView
- ComputeNode
- ComputeNodeMetrics
- DataDisk
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- EnvData
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- InstanceMarketOptionsRequest
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- InternetAccessible
- JobView
- LoginSettings
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- NamedComputeEnv
- Notification
- OutputMapping
- OutputMappingConfig
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- RedirectInfo
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- RunAutomationServiceEnabled
- RunMonitorServiceEnabled
- RunSecurityServiceEnabled
- SpotMarketOptions
- SystemDisk
- Tag
- Task
- TaskInstanceLog
- TaskInstanceMetrics
- TaskInstanceView
- TaskMetrics
- TaskTemplateView
- TaskView
- VirtualPrivateCloud

Release 6

Release time: 2022-04-01 10:44:32

Release updates:

Improvement to existing documentation.

Deleted APIs:

- SubmitJob

Deleted data structures:

- Job

Release 5

Release time: 2021-09-09 11:37:02

Release updates:

Improvement to existing documentation.

New data structures:

- [RunAutomationServiceEnabled](#)

Modified data structures:

- [EnhancedService](#)
 - New members:AutomationService

Release 4

Release time: 2021-09-01 11:32:58

Release updates:

Improvement to existing documentation.

Modified data structures:

- [DataDisk](#)
 - New members:Cdclid
- [SystemDisk](#)
 - New members:Cdclid

Release 3

Release time: 2021-01-28 19:50:43

Release updates:

Improvement to existing documentation.

Modified data structures:

- [DataDisk](#)
 - New members:ThroughputPerformance
- [ItemPrice](#)
 - New members:OriginalPriceThreeYear, DiscountPriceThreeYear, DiscountThreeYear, OriginalPriceFiveYear, DiscountPriceFiveYear, DiscountFiveYear, OriginalPriceOneYear, DiscountPriceOneYear, DiscountOneYear

Release 2

Release time: 2020-10-20 15:58:04

Release updates:

Improvement to existing documentation.

Modified APIs:

- [CreateTaskTemplate](#)
 - New input parameters:Tags
- [DescribeComputeEnv](#)
 - New output parameters:Tags
- [DescribeComputeEnvCreateInfo](#)
 - New output parameters:Tags
- [DescribeJob](#)
 - New output parameters:Tags, NextAction
 - **Modified output parameters:**TaskInstanceMetrics
- [DescribeJobSubmitInfo](#)
 - New output parameters:Tags

New data structures:

- [Tag](#)

Modified data structures:

- [ComputeEnvCreateInfo](#)
 - New members:Tags
- [ComputeEnvView](#)
 - New members:Tags
- [Job](#)

- New members:Tags
- [JobView](#)
 - New members:Tags
- [NamedComputeEnv](#)
 - New members:Tags
- [TaskTemplateView](#)
 - New members:Tags

Existing Release

Release time: 2020-07-30 19:49:15

Existing APIs/data structures are as follows:

Improvement to existing documentation.

Existing APIs:

- [AttachInstances](#)
- [CreateComputeEnv](#)
- [CreateTaskTemplate](#)
- [DeleteComputeEnv](#)
- [DeleteJob](#)
- [DeleteTaskTemplates](#)
- [DescribeAvailableCvmInstanceTypes](#)
- [DescribeComputeEnv](#)
- [DescribeComputeEnvActivities](#)
- [DescribeComputeEnvCreateInfo](#)
- [DescribeComputeEnvCreateInfos](#)
- [DescribeComputeEnvs](#)
- [DescribeCvmZoneInstanceConfigInfos](#)
- [DescribeInstanceCategories](#)
- [DescribeJob](#)
- [DescribeJobSubmitInfo](#)
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- [TerminateComputeNodes](#)
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- [TerminateTaskInstance](#)

Existing data structures:

- [Activity](#)
- [AgentRunningMode](#)
- [AnonymousComputeEnv](#)
- [Application](#)
- [Authentication](#)
- [ComputeEnvCreateInfo](#)
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- [InstanceTypeQuotaItem](#)

- [InternetAccessible](#)
- [ItemPrice](#)
- [Job](#)
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- [LocalDiskType](#)
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- [MountDataDisk](#)
- [NamedComputeEnv](#)
- [Notification](#)
- [OutputMapping](#)
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- [StorageBlock](#)
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- [Task](#)
- [TaskInstanceLog](#)
- [TaskInstanceMetrics](#)
- [TaskInstanceView](#)
- [TaskMetrics](#)
- [TaskTemplateView](#)
- [TaskView](#)
- [VirtualPrivateCloud](#)

Introduction

Last updated : 2022-09-19 11:34:00

BatchCompute is a distributed computing platform for massive batch processing tasks. It's applicable to scenarios like gene sequencing, medical analysis, scientific research, video rendering, financial big data, and precision advertising.

Featured with intelligent resource assignment and job management, BatchCompute releases customers from complex manual operations, and helps save time and reduce costs.

API Category

Last updated : 2023-05-04 15:47:06

Compute Environment APIs

API Name	Feature	Frequency Limit
AttachInstances	Adds instances to the compute environment	20
CreateComputeEnv	Creates a compute environment	2
DeleteComputeEnv	Deletes a compute environment	2
DescribeComputeEnv	Gets compute environment details	2
DescribeComputeEnvActivities	Queries the information of activities in the compute environment	2
DescribeComputeEnvCreateInfo	Queries the creation information of a compute environment	2
DescribeComputeEnvCreateInfos	Queries the list of compute environment creation information	20
DescribeComputeEnvs	Gets the list of compute environments	2
DetachInstances	Removes instances from the compute environment	20
ModifyComputeEnv	Modifies a compute environment	2
TerminateComputeNode	Terminates a compute node	20
TerminateComputeNodes	Batch terminates the compute nodes	20

Task Template APIs

API Name	Feature	Frequency Limit
CreateTaskTemplate	Creates a task template	2
DeleteTaskTemplates	Deletes a task template	2

DescribeTaskTemplates	Queries task templates	2
ModifyTaskTemplate	Modifies a task template	2

Job APIs

API Name	Feature	Frequency Limit
DeleteJob	Deletes a job	30
DescribeJob	Queries job details	2
DescribeJobSubmitInfo	Queries job submission information	2
DescribeJobs	Queries the list of jobs	2
DescribeTask	Queries task details	3
DescribeTaskLogs	Queries task log details	20
RetryJobs	Retries jobs	2
TerminateJob	Terminates a job	2
TerminateTaskInstance	Terminates a task instance	2

Configuration Viewing APIs

API Name	Feature	Frequency Limit
DescribeAvailableCvmInstanceTypes	Gets the information of CVM model configurations available to BatchCompute	2
DescribeCvmZoneInstanceConfigInfos	Gets the model configuration information of the availability zone of BatchCompute	5
DescribeInstanceCategories	Queries instance category information	20

Making API Requests

Request Structure

Last updated : 2023-05-04 15:47:06

1. Service Address

The API supports access from either a nearby region (at `batch.tencentcloudapi.com`) or a specified region (at `batch.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 "`batch.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)	<code>batch.tencentcloudapi.com</code>
South China (Guangzhou)	<code>batch.ap-guangzhou.tencentcloudapi.com</code>
East China (Shanghai)	<code>batch.ap-shanghai.tencentcloudapi.com</code>
North China (Beijing)	<code>batch.ap-beijing.tencentcloudapi.com</code>
Southwest China (Chengdu)	<code>batch.ap-chengdu.tencentcloudapi.com</code>
Southwest China (Chongqing)	<code>batch.ap-chongqing.tencentcloudapi.com</code>
Hong Kong, Macao, Taiwan (Hong Kong, China)	<code>batch.ap-hongkong.tencentcloudapi.com</code>
Southeast Asia (Singapore)	<code>batch.ap-singapore.tencentcloudapi.com</code>

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

Last updated : 2023-05-04 15:47:06

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 <code>Action</code> in the input parameters in related API documentation. For example, the API for querying the CVM instance list is <code>DescribeInstances</code> .
X-TC-Region	String	Yes	Region parameter, which is used to identify the region to which the data you work with belongs. For values supported for an API, see the description of common parameter <code>Region</code> in the input parameters in related API documentation. This parameter is not required for some APIs (which will be indicated in related API 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 is sent. For example, 1529223702. Note: If the difference between the UNIX timestamp and server time is greater than 5 minutes, a signature expiration error may occur.
X-TC-Version	String	Yes	API version of the action. For the valid values, see the description of the common parameter <code>Version</code> in the API documentation. For example, the version is 2017-03-12.
Authorization	String	Yes	The HTTP authentication request header, for example: TC3-HMAC-SHA256 Credential=AKIDEXAMPLE/Date/service/tc3_request/Region, 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 is the UNIX timestamp, 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.tencentcloud.com refers to the CVM product and the value would be cvm; - SignedHeaders: The headers that contains the authentication information 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 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/?Limit=10&Offset=0

Authorization: TC3-HMAC-SHA256 Credential=AKIDz8krbsJ5yKBZQpn74WFkmLPx3EXAMPLE/2018-10-09/cvm/tc3_request, SignedHeaders=content-type;host, Signature=5da7a33f6993f0614b047e5df4582db9e9bf4672ba50567dba16c6ccf174c474
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=582c400e06b5924a6f2b5d7d672d79c15b13162d9279b0855cfba6789a8edb4c
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 <code>Action</code> in the input parameters in related API documentation. For example, the API for querying the CVM instance list is <code>DescribeInstances</code> .
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 <code>Region</code> 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 <code>Timestamp</code> 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 <code>Version</code> 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&SignatureMethod=HmacSHA256&Timestamp=1527672334&Signature=37ac2f4fde00b0ac9bd9eadeb459b1bb224158d66e7ae5fcadb70b2d181d02&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=37ac2f4fde00b0ac9bd9eadeb459b1bbec224158d66e7ae5fcadb70b2d181d02&Region=ap-guangzhou&Nonce=23823223&SecretId=AKIDEXAMPLE
```

Signature v3

Last updated : 2020-09-17 17:52:09

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=c492e8e41437e97a620b728c301bb8d17e7dc0c17eeabce80c20cd70fc3a78ff" \
-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 <code>POST</code> .
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 string for POST requests, and is the string after the question mark (?) for GET requests. For example: <code>Limit=10&Offset=0</code>. Note: <code>CanonicalQueryString</code> must be URL-encoded, referencing RFC3986, the UTF8 character set. We recommend using the programming language library. All special characters must be encoded and capitalized.
CanonicalHeaders	Header information for signature calculation, including at least two headers of <code>host</code> and <code>content-type</code>. Custom headers can be added to participate in the signature process to improve the uniqueness and security of the request. Concatenation rules: - Both the key and value of the header should be converted to lowercase with the leading and trailing spaces removed, so they are concatenated in the format of <code>key:value\n</code> format; - 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 <code>content-type:application/json; charset=utf-8\nhost:cvm.tencentcloudapi.com\n</code>. Note: <code>content-type</code> 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 server 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 headers in CanonicalHeaders). <code>Content-type</code> and <code>host</code> are required headers. Concatenation rules: - Both the key and value of the header should be converted to lowercase; - 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 <code>content-type;host</code>
HashedRequestPayload	Hash value of the request payload (i.e., the body, such as <code>{"Limit": 1, "Filter</code>

`[{"Values": ["unnamed"], "Name": "instance-name"}]}` in this example
 The pseudocode for calculation is
 Lowercase(HexEncode(Hash.SHA256(RequestPayload))) by SHA256 hashing the payload of the HTTP request, performing hexadecimal encoding, and finally converting the encoded string to lowercase letters. For GET requests, `RequestPayload` is always an empty string. The calculation result in this example is
`99d58dfbc6745f6747f36bfca17dee5e6881dc0428a0a36f96199342bc5b4907`

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 <code>TC3-HMAC-SHA256</code> .
RequestTimestamp	Request timestamp, i.e., the value of the common parameter <code>X-TC-Timestamp</code> in request header, which is the UNIX timestamp of the current time in seconds, such as <code>1551113065</code> in this example.
CredentialScope	Scope of the credential in the format of <code>Date/service/tc3_request</code> , including date, requested service and termination string (tc3_request). Date is a date in UTC time, whose value should match the UTC date converted by the common parameter X-TC-Timestamp ; <code>service</code> is the product name, which should be the domain name of the product called. The calculation result in this example is <code>2018-05-25/cvm/tc3_request</code> .

HashedCanonicalRequest

Hash value of the CanonicalRequest string concatenated in the steps above. The pseudocode for calculation is Lowercase(HexEncode(Hash.SHA256(CanonicalRequest))). The calculation result in this example is

```
2815843035062ffffda5fd6f2a44ea8a34818b0dc46f024b8b3786976a3ad
```

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
2815843035062ffffda5fd6f2a44ea8a34818b0dc46f024b8b3786976a3adda7a
```

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., <code>Gu5t9xGARNpq86cd98joQYCN3*****</code> .
Date	The Date field information in <code>Credential</code> , such as <code>2019-02-25</code> in this example.
Service	Value in the Service field in <code>Credential</code> , such as <code>cvm</code> 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 <code>TC3-HMAC-SHA256</code> .
SecretId	The SecretId in the key pair, i.e., <code>AKIDz8krbsJ5yKBZQpn74WFkmLPx3*****</code> .
CredentialScope	Credential scope (see above). The calculation result in this example is <code>2019-02-25/cvm/tc3_request</code> .
SignedHeaders	Header information for signature calculation (see above), such as <code>content-type;host</code> in this example.
Signature	Signature value. The calculation result in this example is <code>c492e8e41437e97a620b728c301bb8d17e7dc0c17eeabce80c20cd70fc3a78ff</code> .

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&InstanceId=ins-09dx96dg&Limit=20&Nonce=11886&Offset=0&Region=ap-guangzhou&SecretId=AKIDz8krbsJ5yKBZQpn74WFkmLPx3*****&Signature=EliP9YW3pW28FpsEdkXt%2F%2BWcGel%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" + "host:" + 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" + canonicalQueryString + "\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, stringToSign)).toLowerCase();
System.out.println(signature);

// ***** Step 4: Concatenate the Authorization *****
String authorization = algorithm + " " + "Credential=" + SECRET_ID + "/" + credentialScope + ", "
+ "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")).hexdigest()
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.sha256).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
$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:". $host. "\n";
$signedHeaders = "content-type;host";
$payload = '{"Limit": 1, "Filters": [{"Values": ["unnamed"], "Name": "instance-name"}]}';
$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 project, 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\\u547d\\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" + "host:" + 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++)
    {
        sprintf(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 OPENSSSL_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 OPENSSSL_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" + canonicalQueryString + "\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" + credentialScope + "\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&InstanceId=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.getAlgorithm());
        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. TreeMap 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 UnsupportedEncodingException {
        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 letters, only the value is URL encoded here.
            url.append(k).append("=").append(URLEncoder.encode(params.get(k).toString(), CHARSET)).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 enables automatic sorting
    // A random number should be used when actually calling, for example: params.put("Nonce", new Random().nextInt(Integer.MAX_VALUE));
    params.put("Nonce", 11886); // Common parameter
    // The current time of the system should be used when actually calling, for example: params.put("Timestamp", System.currentTimeMillis() / 1000);
    params.put("Timestamp", 1465185768); // Common parameter
    params.put("SecretId", "AKIDz8krbsJ5yKBZQpn74WFkmLPx3*****"); // Common parameter
    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*****";
$params["Nonce"] = 11886; // rand();
$params["Timestamp"] = 1465185768; // time();
$params["Region"] = "ap-guangzhou";
$params["SecretId"] = $secretId;
$params["Version"] = "2017-03-12";
$params["Action"] = "DescribeInstances";
$params["InstanceIds.0"] = "ins-09dx96dg";
$params["Limit"] = 20;
$params["Offset"] = 0;
ksort($params);
$signStr = "GETcvm.tencentcloudapi.com/?";
foreach ( $params 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

```
# -*- 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, sign))
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> requestParams, 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

Last updated : 2019-12-05 15:55:34

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

Error Code	Description
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.

Configuration Viewing-related APIs

DescribeAvailableCvmInstanceTypes

Last updated : 2023-05-04 15:47:09

1. API Description

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

This API is used to view the information of available CVM model configurations.

A maximum of 2 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: DescribeAvailableCvmInstanceTypes.
Version	Yes	String	Common Params . The value used for this API: 2017-03-12.
Region	No	String	Common Params . This parameter is not required for this API.
Filters.N	No	Array of Filter	Filter. - zone - String - Required: No - (Filter) Filter by availability zone. - instance-family - String - Required: No - (Filter) Filter by model family such as S1, I1, and M1.

3. Output Parameters

Parameter Name	Type	Description
InstanceTypeConfigSet	Array of InstanceTypeConfig	Array of model configurations
RequestId	String	The unique request ID, which is returned for each request. RequestId is required for locating a problem.

4. Example

Example1 Querying GN2 instances in Guangzhou Zone 3

Input Example

```
https://batch.tencentcloudapi.com/?Action=DescribeAvailableCvmInstanceTypes
&Filters.0.Name=zone
&Filters.0.Values.0=ap-guangzhou-3
&Filters.1.Name=instance-family
&Filters.1.Values.0=GN2
&<Common request parameters>
```

Output Example

```
{
  "Response": {
    "InstanceTypeConfigSet": [
      {
        "Mem": 56,
        "Cpu": 28,
        "InstanceType": "GN2.7XLARGE56",
        "Zone": "ap-guangzhou-3",
        "InstanceFamily": "GN2"
      },
      {
        "Mem": 112,
        "Cpu": 56,
        "InstanceType": "GN2.14XLARGE112",
        "Zone": "ap-guangzhou-3",
        "InstanceFamily": "GN2"
      }
    ],
    "RequestId": "59f5b671-c492-4536-bbed-e5fbf78619dd"
  }
}
```

```
}  
}
```

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 NodeJS](#)
- [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.CallCvm	An error is returned for the CVM API call.
InvalidFilter	The specified filter is not supported.
InvalidParameterValue	Incorrect parameter value.
InvalidParameterValue.InvalidFilter	Incorrect <code>Filter</code> parameter.
InvalidParameterValue.InvalidZoneMismatchRegion	The availability zone and the region do not match.
InvalidParameterValue.LimitExceeded	The number of filter parameter values exceeds the limit.

InvalidZone.MismatchRegion	The specified zone does not exist.
----------------------------	------------------------------------

DescribeCvmZoneInstanceConfigInfos

Last updated : 2023-05-04 15:47:09

1. API Description

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

This API is used to get the model configuration information of the availability zone of BatchCompute.

A maximum of 5 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: DescribeCvmZoneInstanceConfigInfos.
Version	Yes	String	Common Params . The value used for this API: 2017-03-12.
Region	No	String	Common Params . This parameter is not required for this API.
Filters.N	No	Array of Filter	Filter. - zone - String - Required: No - (Filter) Filter by availability zone. - instance-family - String - Required: No - (Filter) Filter by model family such as S1, I1, and M1. - instance-type - String - Required: No - (Filter) Filter by model. - instance-charge-type - String - Required: No - (Filter) Filter by instance billing method. (POSTPAID_BY_HOUR: pay-as-you-go SPOTPAID: bidding.)

3. Output Parameters

Parameter Name	Type	Description
InstanceTypeQuotaSet	Array of InstanceTypeQuotaItem	List of model configurations in the availability zone.
RequestId	String	The unique request ID, which is returned for each request. RequestId is required for locating a problem.

4. Example

Example1 Querying the configuration information of pay-as-you-go models in Chongqing Zone 1

Input Example

```
https://batch.tencentcloudapi.com/?Action=DescribeCvmZoneInstanceConfigInfos
&Filters.0.Name=zone
&Filters.0.Values.0=ap-chongqing-1
&Filters.1.Name=instance-charge-type
&Filters.1.Values.0=POSTPAID_BY_HOUR
&<Common request parameters>
```

Output Example

```
{
  "Response": {
    "InstanceTypeQuotaSet": [
      {
        "Status": "SELL",
        "Zone": "ap-chongqing-1",
        "NetworkCard": 0,
        "Price": {
          "UnitPrice": 0.18,
          "ChargeUnit": "HOUR"
        },
        "InstanceFamily": "S3",
        "Externals": {},
        "Cpu": 1,
        "TypeName": "Standard S3",
        "InstanceChargeType": "POSTPAID_BY_HOUR",
        "Memory": 1,

```

```
"LocalDiskTypeList": [],
"InstanceType": "S3.SMALL1",
},
{
  "Status": "SELL",
  "Zone": "ap-chongqing-1",
  "NetworkCard": 0,
  "Price": {
    "UnitPrice": 0.26,
    "ChargeUnit": "HOURLY"
  },
  "InstanceFamily": "S3",
  "Externals": {},
  "Cpu": 1,
  "TypeName": "Standard S3",
  "InstanceChargeType": "POSTPAID_BY_HOUR",
  "Memory": 2,
  "LocalDiskTypeList": [],
  "InstanceType": "S3.SMALL2"
}
],
"RequestId": "2fba5b9c-e4ee-47ad-a776-dabb79ff2c35"
}
```

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 NodeJS](#)
- [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.CallCvm	An error is returned for the CVM API call.
InvalidFilter	The specified filter is not supported.
InvalidParameterValue	Incorrect parameter value.
InvalidParameterValue.InvalidFilter	Incorrect <code>Filter</code> parameter.
InvalidParameterValue.InvalidZoneMismatchRegion	The availability zone and the region do not match.
InvalidParameterValue.LimitExceeded	The number of filter parameter values exceeds the limit.
InvalidParameterValue.UnsupportedBatchInstanceChargeType	The model billing type is not supported by BatchCompute.
InvalidZone.MismatchRegion	The specified zone does not exist.

DescribeInstanceCategories

Last updated : 2023-05-04 15:47:09

1. API Description

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

Currently, CVM instance families are classified into different category, and each category contains several instance families. This API is used to query the instance category information.

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: DescribeInstanceCategories.
Version	Yes	String	Common Params . The value used for this API: 2017-03-12.
Region	No	String	Common Params . This parameter is not required for this API.

3. Output Parameters

Parameter Name	Type	Description
InstanceCategorySet	Array of InstanceCategoryItem	List of CVM instance categories

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

4. Example

Example1 Querying instance types

This example shows you how to query CVM instance families and types.

Input Example

```
https://batch.tencentcloudapi.com/?Action=DescribeInstanceCategories
&<Common request parameters>
```

Output Example

```
{
  "Response": {
    "InstanceCategorySet": [
      {
        "InstanceFamilySet": [
          "C3",
          "CN3"
        ],
        "InstanceCategory": "COMPUTE_3"
      },
      {
        "InstanceFamilySet": [
          "C2"
        ],
        "InstanceCategory": "COMPUTE_2"
      },
      {
        "InstanceFamilySet": [
          "S2",
          "S2ne",
          "I2",
          "D1",
          "M2"
        ],
        "InstanceCategory": "GENERAL_2"
      },
      {
        "InstanceFamilySet": [
```

```
"S3",
"SN3ne",
"S4",
"I3",
"M3",
"M4"
],
"InstanceCategory": "GENERAL_3"
}
],
"RequestId": "166a2a24-888f-4fd5-82ef-f41e4754d994"
}
}
```

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 Java](#)
- [Tencent Cloud SDK 3.0 for PHP](#)
- [Tencent Cloud SDK 3.0 for Go](#)
- [Tencent Cloud SDK 3.0 for NodeJS](#)
- [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.

UnsupportedOperation	Unsupported operation.
----------------------	------------------------

Compute Environment APIs

DeleteComputeEnv

Last updated : 2023-05-04 15:47:11

1. API Description

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

This API is used to delete a compute environment.

A maximum of 2 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: DeleteComputeEnv.
Version	Yes	String	Common Params . The value used for this API: 2017-03-12.
Region	No	String	Common Params . This parameter is not required for this API.
EnvId	Yes	String	Compute environment ID

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 Deleting a compute environment

Input Example

```
https://batch.tencentcloudapi.com/?Action=DeleteComputeEnv
&EnvId=env-3dhmblr3
&<Common request parameters>
```

Output Example

```
{
  "Response": {
    "RequestId": "8b71050a-55c1-4f3b-bf66-5e4f8510a5a0"
  }
}
```

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 NodeJS](#)
- [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.
InvalidParameter.EnvIdMalformed	Invalid compute environment ID format.
ResourceNotFound.ComputeEnv	The specified compute environment does not exist.
UnsupportedOperation	Unsupported operation.
UnsupportedOperation.AcceptOtherRequest	Another request is being processed and deletion is prohibited.
UnsupportedOperation.ComputeEnvAcceptOtherRequest	The compute environment accepts other requests.
UnsupportedOperation.ComputeEnvOperation	Deletion is prohibited.
UnsupportedOperation.ComputeNodeForbidTerminate	Compute node termination is prohibited.

ModifyComputeEnv

Last updated : 2023-05-04 15:47:10

1. API Description

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

This API is used to modify the attributes of a compute environment.

A maximum of 2 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: ModifyComputeEnv.
Version	Yes	String	Common Params . The value used for this API: 2017-03-12.
Region	No	String	Common Params . This parameter is not required for this API.
EnvId	Yes	String	Compute environment ID
DesiredComputeNodeCount	No	Integer	Number of desired compute nodes
EnvName	No	String	Compute environment name
EnvDescription	No	String	Compute environment description
EnvData	No	ComputeEnvData	Compute environment attributes

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 Changing the desired number of nodes in a compute environment to 2

Input Example

```
https://batch.tencentcloudapi.com/?Action=ModifyComputeEnv
&EnvId=env-lcpcej85
&DesiredComputeNodeCount=2
&<Common request parameters>
```

Output Example

```
{
  "Response": {
    "RequestId": "147fbf83-f817-4528-a547-f5f313b673d2"
  }
}
```

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 Java](#)
- [Tencent Cloud SDK 3.0 for PHP](#)
- [Tencent Cloud SDK 3.0 for Go](#)
- [Tencent Cloud SDK 3.0 for NodeJS](#)

- [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
InternalServerError	Internal error.
InternalServerError.CallCpmAPI	The CPM API call returns an error.
InvalidParameter.EnvDescriptionTooLong	The compute environment description is too long.
InvalidParameter.EnvIdMalformed	Invalid compute environment ID format.
InvalidParameter.EnvNameTooLong	The compute environment name is too long.
InvalidParameterValue.InstanceType	The specified instance type is not supported.
InvalidParameterValue.InstanceTypeDuplicate	The instance type value must be unique.
InvalidParameterValue.InstanceTypesEmpty	The list of instance types cannot be empty.
InvalidParameterValue.LimitExceeded	The number of filter parameter values exceeds the limit.
InvalidParameterValue.Negative	Invalid negative parameter.
LimitExceeded.CpuQuota	Insufficient CPU quota.
ResourceNotFound.ComputeEnv	The specified compute environment does not exist.
UnsupportedOperation.AcceptOtherRequest	Another request is being processed and deletion is prohibited.
UnsupportedOperation.ComputeEnvAcceptOtherRequest	The compute environment accepts other requests.

UnsupportedOperation.ComputeNodeForbidTerminate	Compute node termination is prohibited.
UnsupportedOperation.NotEnoughComputeNodesToTerminate	The number of compute nodes to be removed for scale-in is greater than the number of existing compute nodes.

CreateComputeEnv

Last updated : 2023-05-04 15:47:11

1. API Description

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

This API is used to create a compute environment.

A maximum of 2 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: CreateComputeEnv.
Version	Yes	String	Common Params . The value used for this API: 2017-03-12.
Region	No	String	Common Params . This parameter is not required for this API.
ComputeEnv	Yes	NamedComputeEnv	Compute environment information
Placement	Yes	Placement	Location information
ClientToken	No	String	The string used to guarantee the idempotency of the request, which is generated by the user and must be unique for different requests. The maximum length is 64 ASCII characters. If this parameter is not specified, the idempotency of the request cannot be guaranteed.

3. Output Parameters

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

4. Example

Example1 Creating a compute environment

Input Example

```
https://batch.tencentcloudapi.com/?Action=CreateComputeEnv
&Placement.Zone=ap-guangzhou-2
&ComputeEnv.EnvName=test compute env
&ComputeEnv.EnvDescription=test compute env
&ComputeEnv.EnvType=MANAGED
&ComputeEnv.EnvData.InstanceType=S1.SMALL2
&ComputeEnv.EnvData.ImageId=img-bd78fy2t
&ComputeEnv.DesiredComputeNodeCount=1
&<Common request parameters>
```

Output Example

```
{
  "Response": {
    "EnvId": "env-3dhmb1r3",
    "RequestId": "b2ac2379-6453-4eab-8f63-7ade00cb67b0"
  }
}
```

5. Developer Resources

SDK

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- [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
InternalServerError	Internal error.
InternalServerError.CallCvm	An error is returned for the CVM API call.
InternalServerError.CallTagAPI	Error while obtaining the Tag component.
InvalidParameter.CvmParameters	Invalid CVM parameter.
InvalidParameter.EnvDescriptionTooLong	The compute environment description is too long.
InvalidParameter.EnvNameTooLong	The compute environment name is too long.
InvalidParameter.ImageIdMalformed	Incorrect image ID.
InvalidParameter.InvalidParameterCombination	Invalid parameter combination.
InvalidParameter.NotificationEventNameDuplicate	Duplicate message notification event name.
InvalidParameter.NotificationTopicName	Invalid topic name.
InvalidParameter.NotificationTopicNameTooLong	The topic name is too long.
InvalidParameterValue.ComputeEnv	Compute environment parameter validation failed.

InvalidParameterValue.InstanceType	The specified instance type is not supported.
InvalidParameterValue.InvalidDataTypeAny	The value of <code>DataTypeAny</code> is invalid.
InvalidParameterValue.InvalidZoneMismatchRegion	The availability zone and the region do not match.
InvalidParameterValue.LocalPath	Invalid local storage path.
InvalidParameterValue.Negative	Invalid negative parameter.
InvalidParameterValue.RemoteStoragePath	Invalid storage path format.
InvalidParameterValue.RemoteStorageSchemeType	Invalid storage type.
InvalidParameterValue.UnavailableZone	The availability zone is unavailable.
InvalidZone.MismatchRegion	The specified zone does not exist.
LimitExceeded.ComputeEnvQuota	Insufficient compute environment quota.
LimitExceeded.CpuQuota	Insufficient CPU quota.
UnauthorizedOperation.UserNotAllowedToUseBatch	It is prohibited to use the BatchCompute service.

DescribeComputeEnv

Last updated : 2023-05-04 15:47:11

1. API Description

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

This API is used to query compute environment details.

A maximum of 2 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: DescribeComputeEnv.
Version	Yes	String	Common Params . The value used for this API: 2017-03-12.
Region	No	String	Common Params . This parameter is not required for this API.
EnvId	Yes	String	Compute environment ID

3. Output Parameters

Parameter Name	Type	Description
EnvId	String	Compute environment ID

EnvName	String	Compute environment name
Placement	Placement	Location information
CreateTime	String	Compute environment creation time
ComputeNodeSet	Array of ComputeNode	List of compute nodes
ComputeNodeMetrics	ComputeNodeMetrics	Compute node statistical metrics
DesiredComputeNodeCount	Integer	Number of desired compute nodes
EnvType	String	Compute environment type
ResourceType	String	Compute environment resource type. Values: <code>CVM</code> , <code>CPM</code> (Bare Metal)
NextAction	String	Next action
AttachedComputeNodeCount	Integer	Number of compute nodes added to the compute environment
Tags	Array of Tag	Tag list bound to the compute environment. Note: This field may return <code>null</code> , indicating that no valid value was found.
RequestId	String	The unique request ID, which is returned for each request. RequestId is required for locating a problem.

4. Example

Example1 Querying the compute environment details

Input Example

```
https://batch.tencentcloudapi.com/?Action=DescribeComputeEnv
&EnvId=env-lcpcej85
&<Common request parameters>
```

Output Example

```
{
  "Response": {
```

```
"EnvId": "env-lcpcej85",
"ComputeNodeMetrics": {
  "CreatedCount": 0,
  "DeletingCount": 0,
  "CreationFailedCount": 0,
  "SubmittedCount": 0,
  "CreatingCount": 0,
  "AbnormalCount": 1,
  "RunningCount": 1
},
"ResourceType": "CVM",
"EnvType": "MANAGED",
"CreateTime": "2018-03-08T11:48:43Z",
"EnvName": "test compute env",
"NextAction": "",
"Placement": {
  "Zone": "ap-guangzhou-2"
},
"ComputeNodeSet": [
  {
    "ComputeNodeId": "node-noa8vefu",
    "ComputeNodeState": "ABNORMAL",
    "Mem": 2,
    "ResourceCreatedTime": "2018-03-08T11:49:17Z",
    "ResourceType": "CVM",
    "ResourceOrigin": "BATCH_CREATED",
    "ComputeNodeInstanceId": "ins-0kj3gz6s",
    "AgentVersion": "1.1.9",
    "TaskInstanceNumAvailable": 1,
    "Cpu": 1,
    "PublicIpAddresses": [
      "132.20.19.18"
    ],
    "PrivateIpAddresses": [
      "10.10.8.3"
    ]
  },
  {
    "ComputeNodeId": "node-9yzd5jei",
    "ComputeNodeState": "RUNNING",
    "Mem": 2,
    "ResourceCreatedTime": "2018-03-09T13:15:44Z",
    "ResourceType": "CVM",
    "ResourceOrigin": "BATCH_CREATED",
    "ComputeNodeInstanceId": "ins-jyafz2sk",
    "AgentVersion": "1.1.9",
    "TaskInstanceNumAvailable": 1,
```

```
"Cpu": 1,
"PublicIpAddresses": [
  "132.20.19.18"
],
"PrivateIpAddresses": [
  "10.10.8.3"
]
},
{
  "DesiredComputeNodeCount": 2,
  "AttachedComputeNodeCount": 0,
  "Tags": [
    {
      "Key": "batch-test-tag-env-key",
      "Value": "batch-test-tag-env-value1"
    }
  ],
  "RequestId": "274cbd4f-77d2-4bf6-9984-643318ed3ef8"
}
```

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 NodeJS](#)
- [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.
InvalidParameter.EnvIdMalformed	Invalid compute environment ID format.
ResourceNotFound.ComputeEnv	The specified compute environment does not exist.

DescribeComputeEnvs

Last updated : 2023-05-04 15:47:10

1. API Description

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

This API is used to get the list of compute environments.

A maximum of 2 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: DescribeComputeEnvs.
Version	Yes	String	Common Params . The value used for this API: 2017-03-12.
Region	No	String	Common Params . This parameter is not required for this API.
EnvIds.N	No	Array of String	List of compute environment IDs, which cannot be specified together with the <code>Filters</code> parameter.
Filters.N	No	Array of Filter	Filters <code>zone</code> - String - Optional - Availability zone. <code>env-id</code> - String - Optional - Compute environment ID. <code>env-name</code> - String - Optional - Compute environment name. <code>resource-type</code> - String - Optional - Compute resource type (<code>CVM</code> or <code>CPM</code>). <code>tag-key</code> - String - Optional - Tag key.

			<code>tag-value</code> - String - Optional - Tag value. <code>tag:tag-key</code> - String - Optional - Tag key-value pair. Replace <code>tag-key</code> with the actual tag key. It cannot be specified together with <code>EnvIds</code> .
Offset	No	Integer	Offset
Limit	No	Integer	Maximum number of returned items

3. Output Parameters

Parameter Name	Type	Description
ComputeEnvSet	Array of ComputeEnvView	List of compute environments
TotalCount	Integer	Number of compute environments
RequestId	String	The unique request ID, which is returned for each request. RequestId is required for locating a problem.

4. Example

Example1 Querying the list of compute environments

Input Example

```
https://batch.tencentcloudapi.com/?Action=DescribeComputeEnvs
&EnvIds.0=env-lcx7qbbr
&<Common request parameters>
```

Output Example

```
{
  "Response": {
    "TotalCount": 1,
    "ComputeEnvSet": [
      {
```

```
"EnvId": "env-lcx7qbbr",
"ComputeNodeMetrics": {
  "CreatedCount": 0,
  "DeletingCount": 0,
  "CreationFailedCount": 0,
  "SubmittedCount": 0,
  "CreatingCount": 0,
  "AbnormalCount": 1,
  "RunningCount": 0
},
"Tags": [
{
  "Key": "batch-test-tag-env-key",
  "Value": "batch-test-tag-env-value"
}
],
"ResourceType": "CVM",
"EnvType": "MANAGED",
"AttachedComputeNodeCount": 0,
"DesiredComputeNodeCount": 1,
"EnvName": "test-compute-env",
"Placement": {
  "Zone": "ap-guangzhou-4"
},
"NextAction": "",
"CreateTime": "2020-09-22T06:51:42Z"
}
],
"RequestId": "bedb1750-a09f-4c4d-9f25-6afccda50dea"
}
}
```

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 NodeJS](#)

- [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.
InvalidFilter	The specified filter is not supported.
InvalidParameter.EnvIdMalformed	Invalid compute environment ID format.
InvalidParameter.InvalidParameterCombination	Invalid parameter combination.
InvalidParameterValue	Incorrect parameter value.
InvalidParameterValue.InvalidFilter	Incorrect <code>Filter</code> parameter.
InvalidParameterValue.ResourceType	The specified <code>ResourceType</code> is invalid.
InvalidZone.MismatchRegion	The specified zone does not exist.
UnknownParameter	Unknown parameter error.

DescribeComputeEnvCreateInfos

Last updated : 2023-05-04 15:47:10

1. API Description

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

This API is used to view the list of information of compute environment creation, including name, description, type, environment parameters, notifications, and number of desired 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: DescribeComputeEnvCreateInfos.
Version	Yes	String	Common Params . The value used for this API: 2017-03-12.
Region	No	String	Common Params . This parameter is not required for this API.
EnvIds.N	No	Array of String	List of compute environment IDs, which cannot be specified together with the <code>Filters</code> parameter.
Filters.N	No	Array of Filter	Filter conditions <code>zone</code> - String - Optional - Filter by the availability zone. <code>env-id</code> - String - Optional - Filter by the compute environment ID. <code>env-name</code> - String - Optional - Filter by the compute environment name.

			It cannot be specified together with <code>EnvIds</code> .
Offset	No	Integer	Offset
Limit	No	Integer	Maximum number of returned items

3. Output Parameters

Parameter Name	Type	Description
TotalCount	Integer	Number of compute environments
ComputeEnvCreateInfoSet	Array of ComputeEnvCreateInfo	List of compute environment creation information
RequestId	String	The unique request ID, which is returned for each request. RequestId is required for locating a problem.

4. Example

Example1 Querying the list of compute environment creation information

Input Example

```
https://batch.tencentcloudapi.com/?Action=DescribeComputeEnvCreateInfos
&EnvIds.0=env-lcx7qbbr
&<Common request parameters>
```

Output Example

```
{
  "Response": {
    "TotalCount": 1,
    "RequestId": "bb976df4-42a0-41cc-82d4-69bea1007083",
    "ComputeEnvCreateInfoSet": [
      {
        "EnvId": "env-lcx7qbbr",
        "Notifications": [
          {
            "EventConfigs": [
              {
```

```
"EventName": "COMPUTE_ENV_CREATED_SUCCESS",
"EventVars": [
{
  "Name": "COMPUTE_ENV_CREATED_SUCCESS",
  "Value": "COMPUTE_ENV_CREATED_SUCCESS"
}
],
"TopicName": "compute-env-topic"
},
"Tags": [
{
  "Value": "test",
  "Key": "test-env"
}
],
"Authentications": [
{
  "SecretKey": "xx",
  "SecretId": "xx",
  "Scene": "xx"
}
],
"EnvData": {
  "VirtualPrivateCloud": {
    "SubnetId": "subnet-23syenxk",
    "AsVpcGateway": true,
    "Ipv6AddressCount": 1,
    "VpcId": "vpc-1xnwrwxw2",
    "PrivateIpAddresses": [
      "10.10.2.29"
    ]
  },
  "LoginSettings": {
    "Password": "xx",
    "KeepImageLogin": "True",
    "KeyIds": [
      "xx"
    ]
  },
  "InstanceMarketOptions": {
    "SpotOptions": {
      "SpotInstanceType": "one-time",
      "MaxPrice": "1"
    }
  },
```

```
"MarketType": "spot",
},
"SystemDisk": {
  "DiskSize": 0,
  "CdcId": "xx",
  "DiskId": "disk-sdfk23nw",
  "DiskType": "CLOUD_SSD"
},
"InstanceTypes": [
  "S5.SMALL2"
],
"Zones": [
  "ap-guangzhou-2"
],
"InstanceChargeType": "POSTPAID_BY_HOUR",
"EnhancedService": {
  "SecurityService": {
    "Enabled": true
  },
  "MonitorService": {
    "Enabled": true
  },
  "AutomationService": {
    "Enabled": true
  }
},
"SecurityGroupIds": [
  "xx"
],
"InternetAccessible": {
  "PublicIpAssigned": true,
  "InternetChargeType": "POSTPAID_BY_HOUR",
  "BandwidthPackageId": "xx",
  "InternetMaxBandwidthOut": 0
},
"VirtualPrivateClouds": [
  {
    "SubnetId": "subnet-23syenxk",
    "AsVpcGateway": true,
    "Ipv6AddressCount": 1,
    "VpcId": "vpc-1xnwrwxw2",
    "PrivateIpAddresses": [
      "10.10.2.29"
    ]
  }
],
"ImageId": "img-3sdke3x2",
```

```
"InstanceName": "test-env",
"InstanceType": "S5.SMALL2",
"InstanceTypeOptions": {
  "Memory": 1,
  "CPU": 1,
  "InstanceCategories": [
    "ALL"
  ]
},
"DataDisks": [
  {
    "DeleteWithInstance": true,
    "Encrypt": true,
    "CdcId": "xx",
    "DiskType": "CLOUD_SSD",
    "ThroughputPerformance": 0,
    "KmsKeyId": "kms-213k73kx",
    "DiskSize": 0,
    "SnapshotId": "snap-fsdekxe2",
    "DiskId": "xx"
  }
],
"EnvDescription": "test-env",
"MountDataDisks": [
  {
    "FileSystemType": "ext4",
    "LocalPath": "/mnt"
  }
],
"DesiredComputeNodeCount": 1,
"EnvName": "test-env",
"InputMappings": [
  {
    "SourcePath": "cos://test-1111123424.cos.ap-guangzhou.myqcloud.com/batchtest/input/",
    "DestinationPath": "/opt/data",
    "MountOptionParameter": ""
  }
],
"EnvType": "MANAGED"
}
```


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 NodeJS](#)
- [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.EnvIdMalformed	Invalid compute environment ID format.
InvalidParameter.InvalidParameterCombination	Invalid parameter combination.
InvalidParameterValue	Incorrect parameter value.
InvalidZone.MismatchRegion	The specified zone does not exist.
UnknownParameter	Unknown parameter error.

TerminateComputeNode

Last updated : 2023-05-04 15:47:10

1. API Description

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

This API is used to terminate a compute node.

Termination is allowed for nodes in the CREATED, CREATION_FAILED, RUNNING or ABNORMAL state.

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: TerminateComputeNode.
Version	Yes	String	Common Params . The value used for this API: 2017-03-12.
Region	No	String	Common Params . This parameter is not required for this API.
EnvId	Yes	String	Compute environment ID
ComputeNodeId	Yes	String	Compute node ID

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 compute node

Input Example

```
https://batch.tencentcloudapi.com/?Action=TerminateComputeNode
&EnvId=env-lcx7qbbr
&ComputeNodeId=node-lcpcej85
&<Common request parameters>
```

Output Example

```
{
  "Response": {
    "RequestId": "c50bfbf1-d214-4e41-90f6-39270dc9f071"
  }
}
```

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 NodeJS](#)
- [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.ComputeNodeIdMalformed	Invalid compute node ID format.
InvalidParameter.EnvIdMalformed	Invalid compute environment ID format.
ResourceNotFound.ComputeEnv	The specified compute environment does not exist.
ResourceNotFound.ComputeNode	The specified compute node does not exist.
UnsupportedOperation.AcceptOtherRequest	Another request is being processed and deletion is prohibited.
UnsupportedOperation.ComputeEnvAcceptOtherRequest	The compute environment accepts other requests.
UnsupportedOperation.ComputeEnvOperation	Deletion is prohibited.
UnsupportedOperation.ComputeNodeForbidTerminate	Compute node termination is prohibited.
UnsupportedOperation.ComputeNodesTerminating	The compute node is terminating.

DescribeComputeEnvActivities

Last updated : 2023-05-04 15:47:11

1. API Description

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

This API is used to query the information of activities in the compute environment.

A maximum of 2 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: DescribeComputeEnvActivities.
Version	Yes	String	Common Params . The value used for this API: 2017-03-12.
Region	No	String	Common Params . This parameter is not required for this API.
EnvId	Yes	String	Compute environment ID
Offset	No	Integer	Offset
Limit	No	Integer	Maximum number of returned items
Filters	No	Filter	Filter <code>compute-node-id</code> - String - Optional - Filter by the compute node ID.

3. Output Parameters

Parameter Name	Type	Description
ActivitySet	Array of Activity	List of activities in the compute environment
TotalCount	Integer	Number of activities
RequestId	String	The unique request ID, which is returned for each request. RequestId is required for locating a problem.

4. Example

Example1 Querying the list of activities in the compute environment

Input Example

```
https://batch.tencentcloudapi.com/?Action=DescribeComputeEnvActivities
&EnvId=env-lcpcej85
&<Common request parameters>
```

Output Example

```
{
  "Response": {
    "TotalCount": 2,
    "ActivitySet": [
      {
        "ComputeNodeId": "node-9yzd5jei",
        "EnvId": "env-lcpcej85",
        "InstanceId": "ins-x23sd8xk",
        "ActivityState": "SUCCEED",
        "ActivityId": "act-83xvnt5p",
        "StartTime": "2018-03-09T13:14:34Z",
        "StateReason": "",
        "EndTime": "2018-03-09T13:15:44Z",
        "Cause": "ModifyComputeEnv: increase the capacity from 1 to 2",
        "ComputeNodeActivityType": "CREATE_COMPUTE_NODE"
      },
      {
        "ComputeNodeId": "node-noa8vefu",
```

```
"EnvId": "env-lcpcej85",
"InstanceId": "ins-x23sdiwd",
"ActivityState": "SUCCEED",
"ActivityId": "act-ezle9e7v",
"StartTime": "2018-03-08T11:48:43Z",
"StateReason": "",
"EndTime": "2018-03-08T11:49:17Z",
"Cause": "CreateComputeEnv: the capacity is 1",
"ComputeNodeActivityType": "CREATE_COMPUTE_NODE"
},
"RequestId": "ecfeec77-6ec1-4daf-8730-1dd00c742252"
}
```

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 NodeJS](#)
- [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.
InvalidParameter.ComputeNodeIdMalformed	Invalid compute node ID format.
InvalidParameter.EnvIdMalformed	Invalid compute environment ID format.
ResourceNotFound.ComputeEnv	The specified compute environment does not exist.
UnknownParameter	Unknown parameter error.

DescribeComputeEnvCreateInfo

Last updated : 2023-05-04 15:47:11

1. API Description

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

This API is used to query the compute environment creation information.

A maximum of 2 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: DescribeComputeEnvCreateInfo.
Version	Yes	String	Common Params . The value used for this API: 2017-03-12.
Region	No	String	Common Params . This parameter is not required for this API.
EnvId	Yes	String	Compute environment ID

3. Output Parameters

Parameter Name	Type	Description
EnvId	String	Compute environment ID

EnvName	String	Compute environment name
EnvDescription	String	Compute environment description Note: This field may return <code>null</code> , indicating that no valid value was found.
EnvType	String	Compute environment type. Only <code>MANAGED</code> is supported
EnvData	EnvData	Compute environment parameter
MountDataDisks	Array of MountDataDisk	Data disk mounting option
InputMappings	Array of InputMapping	Input mapping
Authentications	Array of Authentication	Authorization information
Notifications	Array of Notification	Notification information
DesiredComputeNodeCount	Integer	Number of desired compute nodes
Tags	Array of Tag	Tag list bound to the compute environment. Note: This field may return <code>null</code> , indicating that no valid value was found.
RequestId	String	The unique request ID, which is returned for each request. RequestId is required for locating a problem.

4. Example

Example1 Querying the creation information of the compute environment

Input Example

```
https://batch.tencentcloudapi.com/?Action=DescribeComputeEnvCreateInfo
&EnvId=env-lcpcej85
&<Common request parameters>
```

Output Example

```
{
  "Response": {
```

```
"EnvId": "env-qlawxzt",
"EnvType": "MANAGED",
"DesiredComputeNodeCount": 2,
"MountDataDisks": [
{
"FileSystemType": "xx",
"LocalPath": "xx"
}
],
"EnvName": "test compute env",
"EnvDescription": "test compute env",
"InputMappings": [
{
"SourcePath": "cos://bucket-appid.cos.ap-hongkong.myqcloud.com/",
"DestinationPath": "/mnt/disk/"
},
{
"SourcePath": "cos://bucket-appid.cos.ap-hongkong.myqcloud.com/test/",
"DestinationPath": "/mnt/input/"
}
],
"Notifications": [
{
"TopicName": "topic name",
"EventConfigs": [
{
"EventName": "ComputeEnvCreated",
"EventVars": [
{
"Name": "name1",
"Value": "value1"
},
{
"Name": "name2",
"Value": "value2"
}
]
}
]
}
],
"EnvData": {
"VirtualPrivateCloud": {
"SubnetId": "subnet-8axej2jc",
"VpcId": "vpc-cg18la4l"
},
"SystemDisk": {
```

```
"DiskSize": 50,
"DiskType": "CLOUD_BASIC"
},
"InternetAccessible": {
  "PublicIpAssigned": "TRUE",
  "InternetMaxBandwidthOut": 50
},
"ImageId": "img-bd78fy2t",
"InstanceType": "S1.SMALL2",
"DataDisks": [
  {
    "DiskSize": 50,
    "DiskType": "CLOUD_BASIC"
  }
],
"Tags": [
  {
    "Key": "batch-test-tag-env-key",
    "Value": "batch-test-tag-env-value1"
  }
],
"Authentications": [
  {
    "SecretKey": "xx",
    "SecretId": "xx",
    "Scene": "xx"
  }
],
"RequestId": "578f3fae-6908-4521-ac07-17c2cffcd5ae"
}
```

5. Developer Resources

SDK

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- [Tencent Cloud SDK 3.0 for NodeJS](#)
- [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.EnvIdMalformed	Invalid compute environment ID format.
ResourceNotFound.ComputeEnv	The specified compute environment does not exist.

TerminateComputeNodes

Last updated : 2023-05-04 15:47:09

1. API Description

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

This API is used to terminate compute nodes in batches. It is not allowed to repeatedly terminate the same 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: TerminateComputeNodes.
Version	Yes	String	Common Params . The value used for this API: 2017-03-12.
Region	No	String	Common Params . This parameter is not required for this API.
EnvId	Yes	String	Compute environment ID
ComputeNodeIds.N	Yes	Array of String	List of compute node IDs

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 Batch terminating the compute nodes

Input Example

```
https://batch.tencentcloudapi.com/?Action=TerminateComputeNodes
&EnvId=env-lcx7qbbr
&ComputeNodeIds.0=node-lcpcej85
&ComputeNodeIds.1=node-lcz8jkw
&<Common request parameters>
```

Output Example

```
{
  "Response": {
    "RequestId": "c50bfbf1-d214-4e41-90f6-39270dc9f071"
  }
}
```

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 Java](#)
- [Tencent Cloud SDK 3.0 for PHP](#)
- [Tencent Cloud SDK 3.0 for Go](#)
- [Tencent Cloud SDK 3.0 for NodeJS](#)
- [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.ComputeNodeIdMalformed	Invalid compute node ID format.
InvalidParameter.EnvIdMalformed	Invalid compute environment ID format.
ResourceNotFound.ComputeEnv	The specified compute environment does not exist.
ResourceNotFound.ComputeNode	The specified compute node does not exist.
UnsupportedOperation	Unsupported operation.
UnsupportedOperation.AcceptOtherRequest	Another request is being processed and deletion is prohibited.
UnsupportedOperation.ComputeEnvAcceptOtherRequest	The compute environment accepts other requests.
UnsupportedOperation.ComputeNodeForbidTerminate	Compute node termination is prohibited.

DetachInstances

Last updated : 2023-05-04 15:47:10

1. API Description

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

This API is used to remove instances that from compute environment.

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: DetachInstances.
Version	Yes	String	Common Params . The value used for this API: 2017-03-12.
Region	No	String	Common Params . This parameter is not required for this API.
EnvId	Yes	String	Compute environment ID
InstanceIds.N	Yes	Array of String	List of instance IDs

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 Removing instances from a compute environment

Input Example

```
https://batch.tencentcloudapi.com/?Action=DetachInstances
&EnvId=env-1mekuyxs
&InstanceIds.0=ins-kjoossv5
&<Common request parameters>
```

Output Example

```
{
  "Response": {
    "RequestId": "bd757b4d-9797-493e-b421-89873457a071"
  }
}
```

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 Java](#)
- [Tencent Cloud SDK 3.0 for PHP](#)
- [Tencent Cloud SDK 3.0 for Go](#)
- [Tencent Cloud SDK 3.0 for NodeJS](#)
- [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.CallCvm	An error is returned for the CVM API call.
InvalidParameter.EnvIdMalformed	Invalid compute environment ID format.
InvalidParameterValue.InstanceIdDuplicated	Instance IDs duplicate.
ResourceNotFound.ComputeEnv	The specified compute environment does not exist.
UnknownParameter	Unknown parameter error.
UnsupportedOperation	Unsupported operation.

AttachInstances

Last updated : 2023-05-04 15:47:12

1. API Description

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

This API is used to add existing instances to the compute environment.

Requirements:

1. The instance is not in the batch compute system.
2. The instance is in "Running" status.
3. Spot instances are not supported.

For instances added to the compute environment, their UserData will be reset, and the operating systems will be reinstalled.

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: AttachInstances.
Version	Yes	String	Common Params . The value used for this API: 2017-03-12.
Region	No	String	Common Params . This parameter is not required for

			this API.
EnvId	Yes	String	Compute environment ID
Instances.N	Yes	Array of Instance	List of instances that added to the compute environment

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 Adding an instance to the compute environment

Input Example

```
https://batch.tencentcloudapi.com/?Action=AttachInstances
&EnvId=env-nuydksjj
&Instances.0.InstanceId=ins-dus5t7tu
&Instances.0.ImageId=img-8toqc6s3
&Instances.0.LoginSettings.Password=xxxxxxxxx
&<Common request parameters>
```

Output Example

```
{
  "Response": {
    "RequestId": "a402b86a-5b45-4edf-b64c-d233c2984fbd"
  }
}
```

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 NodeJS](#)
- [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.CallCvm	An error is returned for the CVM API call.
InvalidParameter.EnvIdMalformed	Invalid compute environment ID format.
InvalidParameterValue.InstanceIdDuplicated	Instance IDs duplicate.
ResourceNotFound.ComputeEnv	The specified compute environment does not exist.
UnsupportedOperation	Unsupported operation.
UnsupportedOperation.InstancesNotAllowedToAttach	This instance cannot be added to the compute environment.

Task Template-related APIs

CreateTaskTemplate

Last updated : 2023-05-04 15:47:07

1. API Description

Domain name for API request: `batch.tencentcloudapi.com`.

This API is used to create a task template.

A maximum of 2 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: <code>CreateTaskTemplate</code> .
Version	Yes	String	Common Params . The value used for this API: <code>2017-03-12</code> .
Region	No	String	Common Params . This parameter is not required for this API.
TaskTemplateName	Yes	String	Task template name
TaskTemplateInfo	Yes	Task	Task template content with the same parameter requirements as the task
TaskTemplateDescription	No	String	Task template description
Tags.N	No	Array of Tag	Specifies the tags you want to bind to a task template. Each task template supports up to 10 tags.

3. Output Parameters

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

4. Example

Example1 Creating a task template

Input Example

```
https://batch.tencentcloudapi.com/?Action=CreateTaskTemplate
&TaskTemplateName=A
&TaskTemplateDescription=test
&TaskTemplateInfo.TaskName=A
&TaskTemplateInfo.TaskInstanceNum=1
&TaskTemplateInfo.Application.DeliveryForm=LOCAL
&TaskTemplateInfo.Application.Command=python-c"fib=lambdan:1ifn<=2elsefib(n-1)+fib(n-2);print(fib(20))"
&TaskTemplateInfo.ComputeEnv.EnvType=MANAGED
&TaskTemplateInfo.ComputeEnv.EnvData.InstanceType=S1.SMALL1
&TaskTemplateInfo.ComputeEnv.EnvData.ImageId=img-bd78fy2t
&TaskTemplateInfo.RedirectInfo.StdoutRedirectPath=cos://bucket-appid.cosgz.myqcloud.com/hello2/logs/
&TaskTemplateInfo.RedirectInfo.StderrRedirectPath=cos://bucket-appid.cosgz.myqcloud.com/hello2/logs/
&<Common request parameters>
```

Output Example

```
{
  "Response": {
    "TaskTemplateId": "task-tmpl-7vtx96n2",
    "RequestId": "83cd875b-7ac0-4e5b-b150-0e69c59e5e52"
  }
}
```


5. Developer Resources

SDK

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- [Tencent Cloud SDK 3.0 for NodeJS](#)
- [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
AllowedOneAttributeInEnvIdAndComputeEnv	<code>ComputeEnv</code> and <code>EnvId</code> cannot be both specified.
InternalError	Internal error.
InternalError.CallTagAPI	Error while obtaining the Tag component.
InvalidParameter.CvmParameters	Invalid CVM parameter.
InvalidParameter.EnvIdMalformed	Invalid compute environment ID format.
InvalidParameter.ImageIdMalformed	Incorrect image ID.
InvalidParameter.TaskName	Invalid task name.
InvalidParameter.TaskNameTooLong	The task name is too long.

InvalidParameter.TaskTemplateName	Invalid task template name.
InvalidParameter.TaskTemplateNameTooLong	The task template name is too long.
InvalidParameterValue.ComputeEnv	Compute environment parameter validation failed.
InvalidParameterValue.DependenceNotFoundTaskName	The dependent task definition was not found.
InvalidParameterValue.DependenceUnfeasible	Loop task dependency is prohibited.
InvalidParameterValue.InvalidDataTypeAny	The value of <code>DataTypeAny</code> is invalid.
InvalidParameterValue.LocalPath	Invalid local storage path.
InvalidParameterValue.MaxRetryCount	Too many retry attempts
InvalidParameterValue.Negative	Invalid negative parameter.
InvalidParameterValue.RemoteStoragePath	Invalid storage path format.
InvalidParameterValue.RemoteStorageSchemeType	Invalid storage type.
LimitExceeded.TaskTemplateQuota	Insufficient task template quota.

DeleteTaskTemplates

Last updated : 2023-05-04 15:47:07

1. API Description

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

This API is used to delete task template information.

A maximum of 2 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: DeleteTaskTemplates.
Version	Yes	String	Common Params . The value used for this API: 2017-03-12.
Region	No	String	Common Params . This parameter is not required for this API.
TaskTemplateIds.N	Yes	Array of String	This API is used to delete task template information.

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 Deleting a task template

Input Example

```
https://batch.tencentcloudapi.com/?Action=DeleteTaskTemplates
&TaskTemplateIds.0=task-tmpl-7vtx96n2
&<Common request parameters>
```

Output Example

```
{
  "Response": {
    "RequestId": "1b68e632-c0eb-4e85-b9ef-a152aa3cc073"
  }
}
```

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 NodeJS](#)
- [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.
InvalidParameter.TaskTemplateIdMalformed	Invalid task template ID format.
ResourceNotFound.TaskTemplate	The specified task template ID does not exist.

ModifyTaskTemplate

Last updated : 2023-05-04 15:47:06

1. API Description

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

This API is used to modify a task template.

A maximum of 2 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: ModifyTaskTemplate.
Version	Yes	String	Common Params . The value used for this API: 2017-03-12.
Region	No	String	Common Params . This parameter is not required for this API.
TaskTemplateId	Yes	String	Task template ID
TaskTemplateName	No	String	Task template name
TaskTemplateDescription	No	String	Task template description
TaskTemplateInfo	No	Task	Task template information

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 Modifying a task template

Input Example

```
https://batch.tencentcloudapi.com/?Action=ModifyTaskTemplate
&TaskTemplateId=task-tmpl-606i415o
&TaskTemplateName=A
&TaskTemplateDescription=test
&TaskTemplateInfo.TaskName=A
&TaskTemplateInfo.TaskInstanceNum=1
&TaskTemplateInfo.Application.DeliveryForm=LOCAL
&TaskTemplateInfo.Application.Command=python -c "fib=lambda n:1 if n<=2 else fib
(n-1)+fib(n-2); print(fib(20))"
&TaskTemplateInfo.ComputeEnv.EnvType=MANAGED
&TaskTemplateInfo.ComputeEnv.EnvData.InstanceType=S1.SMALL1
&TaskTemplateInfo.ComputeEnv.EnvData.ImageId=img-bd78fy2t
&TaskTemplateInfo.RedirectInfo.StdoutRedirectPath=cos://bucket-appid.cos.ap-guang
zhou.myqcloud.com/hello2/logs/
&TaskTemplateInfo.RedirectInfo.StderrRedirectPath=cos://bucket-appid.ap-guangzho
u.myqcloud.com/hello2/logs/
&<Common request parameters>
```

Output Example

```
{
  "Response": {
    "RequestId": "8a56bd93-688e-41c3-bc8b-f9867ffb0dd0"
  }
}
```

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 NodeJS](#)
- [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
AllowedOneAttributeInEnvIdAndComputeEnv	<code>ComputeEnv</code> and <code>EnvId</code> cannot be both specified.
InternalError	Internal error.
InvalidParameter.CvmParameters	Invalid CVM parameter.
InvalidParameter.TaskName	Invalid task name.
InvalidParameter.TaskNameTooLong	The task name is too long.
InvalidParameter.TaskTemplateDescriptionTooLong	The task template description is too long.
InvalidParameter.TaskTemplateIdMalformed	Invalid task template ID format.
InvalidParameter.TaskTemplateName	Invalid task template name.

InvalidParameter.TaskTemplateNameTooLong	The task template name is too long.
InvalidParameterAtLeastOneAttribute	At least one of <code>TaskTemplateName</code> , <code>TaskTemplateDescription</code> , and <code>TaskTemplateInfo</code> must be specified.
InvalidParameterValue.ComputeEnv	Compute environment parameter validation failed.
InvalidParameterValue.DependenceNotFoundTaskName	The dependent task definition was not found.
InvalidParameterValue.DependenceUnfeasible	Loop task dependency is prohibited.
InvalidParameterValue.LocalPath	Invalid local storage path.
InvalidParameterValue.MaxRetryCount	Too many retry attempts
InvalidParameterValue.Negative	Invalid negative parameter.
InvalidParameterValue.RemoteStoragePath	Invalid storage path format.
InvalidParameterValue.RemoteStorageSchemeType	Invalid storage type.
ResourceNotFound.TaskTemplate	The specified task template ID does not exist.

DescribeTaskTemplates

Last updated : 2023-05-04 15:47:07

1. API Description

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

This API is used to query the information of task templates.

A maximum of 2 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: DescribeTaskTemplates.
Version	Yes	String	Common Params . The value used for this API: 2017-03-12.
Region	No	String	Common Params . This parameter is not required for this API.
TaskTemplateIds.N	No	Array of String	List of task template IDs. It cannot be specified together with <code>Filters</code> .
Filters.N	No	Array of Filter	Filter <code>task-template-name</code> - String - Optional - Task template name. <code>tag-key</code> - String - Optional - Tag key.

			<code>tag-value</code> - String - Optional - Tag value. <code>tag:tag-key</code> - String - Optional - Tag key-value pair. The tag-key should be replaced by a specified tag key. It cannot be specified together with <code>TaskTemplateIds</code> .
Offset	No	Integer	Offset
Limit	No	Integer	Maximum number of returned items

3. Output Parameters

Parameter Name	Type	Description
TaskTemplateSet	Array of TaskTemplateView	List of task templates
TotalCount	Integer	Number of task templates
RequestId	String	The unique request ID, which is returned for each request. RequestId is required for locating a problem.

4. Example

Example1 Querying the task templates

Input Example

```
https://batch.tencentcloudapi.com/?Action=DescribeTaskTemplates
&TaskTemplateIds.0=task-tmpl-pq24rq1e
&TaskTemplateIds.1=task-tmpl-606i415o
&<Common request parameters>
```

Output Example

```
{
  "Response": {
    "TotalCount": 2,
    "TaskTemplateSet": [
```

```
{
  "TaskTemplateName": "rendering",
  "TaskTemplateDescription": "3ds Max 2018 Demo",
  "TaskTemplateId": "task-tmpl-pq24rq1e",
  "CreateTime": "2018-03-08T03:27:43Z",
  "Tags": [
    {
      "Key": "batch-test-tag-tp-key",
      "Value": "batch-test-tag-tp-value"
    }
  ],
  "TaskTemplateInfo": {
    "OutputMappings": [
      {
        "SourcePath": "C:\\\\\\render\\\\\\",
        "DestinationPath": "cos://bucket-appid.cos.ap-guangzhou.myqcloud.com/"
      }
    ],
    "TaskInstanceNum": 1,
    "ComputeEnv": {
      "EnvType": "MANAGED",
      "EnvData": {
        "SystemDisk": {
          "DiskSize": "50",
          "DiskType": "CLOUD_BASIC"
        },
        "LoginSettings": {
          "Password": "B1habcdB1habcd"
        },
        "InternetAccessible": {
          "InternetMaxBandwidthOut": "10",
          "InternetChargeType": "TRAFFIC_POSTPAID_BY_HOUR"
        },
        "ImageId": "img-i64lx84h",
        "InstanceType": "S1.LARGE8",
        "DataDisks": [
          {
            "DiskSize": "0",
            "DiskType": "CLOUD_BASIC"
          }
        ]
      }
    },
    "RedirectInfo": {
      "StdoutRedirectPath": "cos://bucket-appid.cos.ap-guangzhou.myqcloud.com/wonderfile/logs/",
      "StderrRedirectPath": "cos://bucket-appid.cos.ap-guangzhou.myqcloud.com/wonderfile"
```

```
t/logs/"
},
"Application": {
"Command": "3dsmaxcmd Demo.max -outputName:c:\\\\render\\\\image.jpg",
"PackagePath": "cos://bucket-appid.cos.ap-guangzhou.myqcloud.com/render/max.tar.gz",
"DeliveryForm": "PACKAGE"
},
"MaxRetryCount": 0,
"Timeout": 259200,
"FailedAction": "TERMINATE",
"TaskName": "rendering"
}
},
{
"TaskTemplateName": "A",
"TaskTemplateDescription": "",
"TaskTemplateId": "task-tmpl-606i415o",
"CreateTime": "2018-01-25T07:46:12Z",
"Tags": [
{
"Key": "batch-test-tag-tp-key",
"Value": "batch-test-tag-tp-value"
}
],
"TaskTemplateInfo": {
"TaskInstanceNum": 2,
"ComputeEnv": {
"EnvType": "MANAGED",
"EnvData": {
"InstanceType": "S1.SMALL1",
"ImageId": "img-bq1gnde2"
}
}
},
"RedirectInfo": {
"StdoutRedirectPath": "cos://bucket-appid.cos.ap-guangzhou.myqcloud.com/hello2/logs/",
"StderrRedirectPath": "cos://bucket-appid.cos.ap-guangzhou.myqcloud.com/hello2/logs/"
},
"Application": {
"Command": "python -c \"fib=lambda n:1 if n<2 else fib(n-1)+fib(n-2); print(fib(20))\"",
"DeliveryForm": "LOCAL"
},
"MaxRetryCount": 0,
"FailedAction": "TERMINATE",
```

```
"TaskName": "A"
}
},
"RequestId": "23f7d202-1cd4-4658-a989-88ad4ed77aac"
}
```

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 Java](#)
- [Tencent Cloud SDK 3.0 for PHP](#)
- [Tencent Cloud SDK 3.0 for Go](#)
- [Tencent Cloud SDK 3.0 for NodeJS](#)
- [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.
InvalidParameter.InvalidParameterCombination	Invalid parameter combination.
InvalidParameter.TaskTemplateIdMalformed	Invalid task template ID format.
InvalidParameterValue	Incorrect parameter value.

UnknownParameter	Unknown parameter error.
------------------	--------------------------

Job-related APIs

DescribeJob

Last updated : 2023-05-04 15:47:08

1. API Description

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

This API is used to query the details of a job, including internal task (`Task`) and dependency (`Dependence`) information.

A maximum of 2 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: DescribeJob.
Version	Yes	String	Common Params . The value used for this API: 2017-03-12.
Region	No	String	Common Params . This parameter is not required for this API.
JobId	Yes	String	Job ID

3. Output Parameters

Parameter Name	Type	Description
JobId	String	Job ID
JobName	String	Job name
Zone	String	Availability zone information
Priority	Integer	Job priority
JobState	String	Job state
CreateTime	String	Creation Date
EndTime	String	End time
TaskSet	Array of TaskView	Task view information
DependenceSet	Array of Dependence	Information of the dependency among tasks
TaskMetrics	TaskMetrics	Task statistical metrics
TaskInstanceMetrics	TaskInstanceMetrics	Task instance statistical metrics
StateReason	String	Job failure reason
Tags	Array of Tag	List of tags bound with the job. Note: This field may return <code>null</code> , indicating that no valid value was found.
NextAction	String	Next action Note: This field may return <code>null</code> , indicating that no valid value was found.
RequestId	String	The unique request ID, which is returned for each request. RequestId is required for locating a problem.

4. Example

Example1 Querying details of a job

Input Example

```
https://batch.tencentcloudapi.com/?Action=DescribeJob
&JobId=job-97zcl3wt
&<Common request parameters>
```

Output Example

```
{
  "Response": {
    "JobState": "SUCCEED",
    "TaskSet": [
      {
        "EndTime": "2018-02-07T09:30:31Z",
        "TaskName": "A",
        "TaskState": "SUCCEED",
        "CreateTime": "2018-02-07T09:29:09Z"
      },
      {
        "EndTime": "2018-02-07T09:31:49Z",
        "TaskName": "B",
        "TaskState": "SUCCEED",
        "CreateTime": "2018-02-07T09:29:09Z"
      },
      {
        "EndTime": "2018-02-07T09:31:48Z",
        "TaskName": "C",
        "TaskState": "SUCCEED",
        "CreateTime": "2018-02-07T09:29:09Z"
      },
      {
        "EndTime": "2018-02-07T09:33:01Z",
        "TaskName": "D",
        "TaskState": "SUCCEED",
        "CreateTime": "2018-02-07T09:29:09Z"
      }
    ],
    "Zone": "ap-guangzhou-2",
    "TaskMetrics": {
      "PendingCount": 0,
      "FailedCount": 0,
      "StartingCount": 0,
      "SucceedCount": 4,
      "FailedInterruptedCount": 0,
      "SubmittedCount": 0,
      "RunnableCount": 0,
      "RunningCount": 0
    }
  }
}
```

```
},
"JobName": "test job",
"JobId": "job-97zcl3wt",
"Priority": 1,
"StateReason": "",
"TaskInstanceMetrics": {
  "PendingCount": 0,
  "FailedCount": 0,
  "StartingCount": 0,
  "SucceedCount": 4,
  "FailedInterruptedCount": 0,
  "SubmittedCount": 0,
  "RunnableCount": 0,
  "RunningCount": 0
},
"EndTime": "2018-02-07T09:33:01Z",
"DependenceSet": [
  {
    "StartTask": "A",
    "EndTask": "B"
  },
  {
    "StartTask": "A",
    "EndTask": "C"
  },
  {
    "StartTask": "B",
    "EndTask": "D"
  },
  {
    "StartTask": "C",
    "EndTask": "D"
  }
],
"CreateTime": "2018-02-07T09:29:09Z",
"Tags": [
  {
    "Key": "batch-test-tag-job-key",
    "Value": "batch-test-tag-job-value"
  }
],
"NextAction": "",
"RequestId": "d1b08863-b8ee-49d4-aa08-f464499f97a0"
}
```

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 NodeJS](#)
- [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.
InvalidParameter.JobIdMalformed	Invalid job ID format.
ResourceNotFound.Job	The specified job does not exist.

DescribeTask

Last updated : 2023-05-04 15:47:08

1. API Description

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

This API is used to query the details of a specified task, including information of the task instances inside the task.

A maximum of 3 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: DescribeTask.
Version	Yes	String	Common Params . The value used for this API: 2017-03-12.
Region	No	String	Common Params . This parameter is not required for this API.
JobId	Yes	String	Job ID
TaskName	Yes	String	Task name
Offset	No	Integer	Offset
Limit	No	Integer	Number of returned results. Default value: 100. Maximum value: 1,000.
Filters.N	No	Array	Filter as detailed below:

		of Filter	<code>task-instance-type</code> - String - Optional - Filter by the task instance state. (<code>SUBMITTED</code> , <code>PENDING</code> , <code>RUNNABLE</code> , <code>STARTING</code> , <code>RUNNING</code> , <code>SUCCEED</code> , <code>FAILED</code> , <code>FAILED_INTERRUPTED</code>).
--	--	---------------------	---

3. Output Parameters

Parameter Name	Type	Description
JobId	String	Job ID
TaskName	String	Task name
TaskState	String	Task status
CreateTime	String	Creation time
EndTime	String	End time
TaskInstanceTotalCount	Integer	Total number of task instances
TaskInstanceSet	Array of TaskInstanceView	Task instance information
TaskInstanceMetrics	TaskInstanceMetrics	Task instance statistical metrics
RequestId	String	The unique request ID, which is returned for each request. RequestId is required for locating a problem.

4. Example

Example1 Queries task details

Input Example

```
https://batch.tencentcloudapi.com/?Action=DescribeTask
&JobId=job-97zcl3wt
&TaskName=A
&Filters.0.Name=task-instance-state
&Filters.0.Values.0=SUCCEED
&<Common request parameters>
```

Output Example

```
{
  "Response": {
    "TaskInstanceSet": [
      {
        "TaskInstanceId": 1,
        "RedirectInfo": {
          "StderrRedirectFileName": "stderr.job-97zcl3wt.A.1.log",
          "StdoutRedirectFileName": "stdout.job-97zcl3wt.A.1.log",
          "StdoutRedirectPath": "cos://dondonbatch-1251783334.cosgz.myqcloud.com/hello2/logs/",
          "StderrRedirectPath": "cos://dondonbatch-1251783334.cosgz.myqcloud.com/hello2/logs/"
        },
        "RunningTime": "2018-02-07T09:29:55Z",
        "LaunchTime": "2018-02-07T09:29:09Z",
        "StateReason": "",
        "StateDetailedReason": "xx",
        "ComputeNodeInstanceId": null,
        "EndTime": "2018-02-07T09:30:23Z",
        "TaskInstanceState": "SUCCEED",
        "CreateTime": "2018-02-07T09:29:09Z",
        "ExitCode": 0
      },
      {
        "TaskInstanceId": 0,
        "RedirectInfo": {
          "StderrRedirectFileName": "stderr.job-97zcl3wt.A.0.log",
          "StdoutRedirectFileName": "stdout.job-97zcl3wt.A.0.log",
          "StdoutRedirectPath": "cos://dondonbatch-1251783334.cosgz.myqcloud.com/hello2/logs/",
          "StderrRedirectPath": "cos://dondonbatch-1251783334.cosgz.myqcloud.com/hello2/logs/"
        },
        "RunningTime": "2018-02-07T09:30:02Z",
        "LaunchTime": "2018-02-07T09:29:09Z",
        "StateReason": "",
        "StateDetailedReason": "xx",
        "ComputeNodeInstanceId": null,
        "EndTime": "2018-02-07T09:30:31Z",
        "TaskInstanceState": "SUCCEED",
        "CreateTime": "2018-02-07T09:29:09Z",
        "ExitCode": 0
      }
    ],
    "TaskState": "SUCCEED",
  }
}
```

```
"JobId": "job-97zc13wt",
"TaskInstanceMetrics": {
  "PendingCount": 0,
  "FailedCount": 0,
  "StartingCount": 0,
  "SucceedCount": 2,
  "FailedInterruptedCount": 0,
  "SubmittedCount": 0,
  "RunnableCount": 0,
  "RunningCount": 0
},
"TaskInstanceTotalCount": 2,
"TaskName": "A",
"EndTime": "2018-02-07T09:30:31Z",
"CreateTime": "2018-02-07T09:29:09Z",
"RequestId": "f4723b24-e080-4599-b12d-b7eb657faefe"
}
```

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 Java](#)
- [Tencent Cloud SDK 3.0 for PHP](#)
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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.
InvalidParameter.JobIdMalformed	Invalid job ID format.
ResourceNotFound.Task	The specified job task does not exist.

DeleteJob

Last updated : 2023-05-04 15:47:09

1. API Description

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

This API is used to delete a job.

When a job is deleted, all related information is deleted and the job cannot be queried.

To delete a job, the job and all its task instances must be in SUCCEED or FAILED status.

A maximum of 30 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: DeleteJob.
Version	Yes	String	Common Params . The value used for this API: 2017-03-12.
Region	No	String	Common Params . This parameter is not required for this API.
JobId	Yes	String	Job ID

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 Deleting a job

Input Example

```
https://batch.tencentcloudapi.com/?Action=DeleteJob
&JobId=job-f5da1ed1
&<Common request parameters>
```

Output Example

```
{
  "Response": {
    "RequestId": "0ffc9347-a47a-43a6-a64a-aa77fda7ea13"
  }
}
```

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 NodeJS](#)
- [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.
InvalidParameter.JobIdMalformed	Invalid job ID format.
ResourceInUse.Job	The job is in use.
ResourceNotFound.Job	The specified job does not exist.
UnsupportedOperation	Unsupported operation.

SubmitJob

Last updated : 2022-02-23 15:31:57

1. API Description

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

This API is used to submit a instance.

A maximum of 7 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](#).

This document describes the parameters for Signature V1. It's recommended to use the V3 signature, which provides higher security. Note that for Signature V3, the common parameters need to be placed in the HTTP Header. [See details](#).

Parameter Name	Required	Type	Description
Action	Yes	String	Common parameter. The value used for this API: SubmitJob.
Version	Yes	String	Common parameter. The value used for this API: 2017-03-12.
Region	Yes	String	Common parameter. For more information, please see the list of regions supported by the product.
Placement	Yes	Placement	Location information of the submitted job. This parameter allows you to specify information such as the availability zone of the CVM instance with which the job is associated.

Job	Yes	Job	Job information
ClientToken	No	String	The string used to guarantee the idempotency of the request, which is generated by the user and must be unique for different requests. The maximum length is 64 ASCII characters. If this parameter is not specified, the idempotency of the request cannot be guaranteed.

3. Output Parameters

Parameter Name	Type	Description
JobId	String	When a job is submitted through this API, this parameter is returned and indicates the job ID. Returning the list of job IDs does not mean that the job is parsed/executed successfully. The job state can be queried using the DescribeJob API.
RequestId	String	The unique request ID, which is returned for each request. RequestId is required for locating a problem.

4. Example

Example1 Submitting a job

Input Example

```
https://batch.tencentcloudapi.com/?Action=SubmitJob
&Placement.Zone=ap-guangzhou-2
&Job.JobName=test
&Job.JobDescription=test
&Job.Priority=1
&Job.Tasks.0.TaskName=hello2
&Job.Tasks.0.TaskInstanceNum=1
&Job.Tasks.0.Application.DeliveryForm=LOCAL
&Job.Tasks.0.Application.Command=python -c "fib=lambda n:1 if n<=2 else fib(n-1)+
fib(n-2); print(fib(20))"
&Job.Tasks.0.ComputeEnv.EnvType=MANAGED
&Job.Tasks.0.ComputeEnv.EnvData.InstanceType=S1.SMALL1
&Job.Tasks.0.ComputeEnv.EnvData.ImageId=img-bd78fy2t
&Job.Tasks.0.RedirectInfo.StdoutRedirectPath=csc://dondonbatch-1251783334.cosgz.m
yqcloud.com/hello2/logs/
```

```
&Job.Tasks.0.RedirectInfo.StderrRedirectPath=cos://dondonbatch-1251783334.cosgz.m
yqcloud.com/hello2/logs/
&<Common request parameters>
```

Output Example

```
{
  "Response": {
    "JobId": "job-4yn0we13",
    "RequestId": "bf2a9734-e485-423f-9d73-a93f5e6c6a0c"
  }
}
```

Example2 Submitting a DAG-type job containing dependencies

Input Example

```
https://batch.tencentcloudapi.com/?Action=SubmitJob
&Placement.Zone=ap-beijing-2
&Job.JobName=dag
&Job.JobDescription=dag_demo
&Job.Tasks.0.TaskName=pre_task
&Job.Tasks.0.TaskInstanceNum=1
&Job.Tasks.0.Application.DeliveryForm=LOCAL
&Job.Tasks.0.Application.Command=echo pre_task
&Job.Tasks.0.ComputeEnv.EnvData.InstanceType=S2.SMALL1
&Job.Tasks.0.RedirectInfo.StdoutRedirectPath=cos://batch-demo-1251783334.cosbj.my
qcloud.com/logs/
&Job.Tasks.0.RedirectInfo.StderrRedirectPath=cos://batch-demo-1251783334.cosbj.my
qcloud.com/logs/
&Job.Tasks.1.TaskName=post_task
&Job.Tasks.1.TaskInstanceNum=1
&Job.Tasks.1.Application.DeliveryForm=LOCAL
&Job.Tasks.1.Application.Command=echo post_task
&Job.Tasks.1.ComputeEnv.EnvData.InstanceType=S2.SMALL1
&Job.Tasks.1.RedirectInfo.StdoutRedirectPath=cos://batch-demo-1251783334.cosbj.my
qcloud.com/logs/
&Job.Tasks.1.RedirectInfo.StderrRedirectPath=cos://batch-demo-1251783334.cosbj.my
qcloud.com/logs/
&Job.Dependences.0.StartTask=pre_task
&Job.Dependences.0.EndTask=post_task
&<Common request parameters>
```

Output Example

```
{
  "Response": {
    "JobId": "job-2bmv4p7o",
    "RequestId": "165dc518-52a4-4363-8ea4-14f1ee8dea1a"
  }
}
```

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 Java](#)
- [Tencent Cloud SDK 3.0 for PHP](#)
- [Tencent Cloud SDK 3.0 for Go](#)
- [Tencent Cloud SDK 3.0 for NodeJS](#)
- [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
AllowedOneAttributeInEnvIdAndComputeEnv	One (and only one) parameter must be specified for ComputeEnv and EnvId.
InternalError	Internal error.
InternalError.CallCvm	An error is returned for the CVM API call.
InternalError.CallTagAPI	Error while obtaining the Tag

	component.
InvalidParameter.CvmParameters	Invalid CVM parameter.
InvalidParameter.EnvIdMalformed	Invalid compute environment ID format.
InvalidParameter.ImageIdMalformed	Incorrect image ID.
InvalidParameter.InvalidParameterCombination	Invalid parameter combination.
InvalidParameter.JobDescriptionTooLong	The instance description is too long.
InvalidParameter.JobNameTooLong	The instance name is too long.
InvalidParameter.NotificationEventNameDuplicate	Duplicate message notification event name.
InvalidParameter.NotificationTopicName	Invalid topic name.
InvalidParameter.NotificationTopicNameTooLong	The topic name is too long.
InvalidParameter.TaskName	Invalid job name.
InvalidParameter.TaskNameTooLong	The task name is too long.
InvalidParameterValue.ComputeEnv	Compute environment parameter validation failed.
InvalidParameterValue.DependenceNotFoundTaskName	The dependent task definition was not found.
InvalidParameterValue.DependenceUnfeasible	Loop task dependency is prohibited.
InvalidParameterValue.InstanceTypeDuplicate	The instance type value must be unique.
InvalidParameterValue.LimitExceeded	The number of filter parameter values exceeds the limit.
InvalidParameterValue.LocalPath	Invalid local storage path.
InvalidParameterValue.MaxRetryCount	The number of retries is too large.
InvalidParameterValue.Negative	Invalid negative parameter.
InvalidParameterValue.NotFloat	The parameter value is not in float type.
InvalidParameterValue.RemoteStoragePath	Invalid storage path format.
InvalidParameterValue.RemoteStorageSchemeType	Invalid storage type.

InvalidZone.MismatchRegion	The specified zone does not exist.
LimitExceeded.JobQuota	Insufficient instance quota.
ResourceNotFound.ComputeEnv	The specified compute environment does not exist.
UnauthorizedOperation.UserNotAllowedToUseBatch	It is prohibited to use the BatchCompute service.

TerminateTaskInstance

Last updated : 2023-05-04 15:47:07

1. API Description

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

This API is used to terminate a task instance.

SUCCEED and **FAILED** task instances: No action

SUBMITTED , **PENDING** , and **RUNNABLE** task instances: Change status to **FAILED** .

STARTING , **RUNNING** and **FAILED_INTERRUPTED** task instances: If **EnvId** is not specified, the CVM instance is terminated, and then the task status goes to **FAILED** . If **EnvId** is specified, the task instance changes to **FAILED** , then the related CVM instance is restarted.

FAILED_INTERRUPTED task instances: The related resources and quotas will be released only after the termination actually succeeds.

A maximum of 2 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: TerminateTaskInstance.
Version	Yes	String	Common Params . The value used for this API: 2017-03-12.
Region	No	String	Common Params . This parameter is not required for this API.

JobId	Yes	String	Job ID
TaskName	Yes	String	Task name
TaskInstanceId	Yes	Integer	Task instance index

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 Terminating a task instance

Input Example

```
https://batch.tencentcloudapi.com/?Action=TerminateTaskInstance
&JobId=job-rybwp57
&TaskName=A
&TaskInstanceId=0
&<Common request parameters>
```

Output Example

```
{
  "Response": {
    "RequestId": "72e9a712-1fed-4b57-be72-62e71eefd4c3"
  }
}
```

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 NodeJS](#)
- [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.
InvalidParameter.JobIdMalformed	Invalid job ID format.
ResourceNotFound.TaskInstance	The specified task instance does not exist.
UnsupportedOperation.TerminateOperationWithEnvId	This operation is prohibited for the task instances in the specified compute environment.

DescribeJobs

Last updated : 2023-05-04 15:47:08

1. API Description

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

This API is used to query the overview information of several jobs.

A maximum of 2 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: DescribeJobs.
Version	Yes	String	Common Params . The value used for this API: 2017-03-12.
Region	No	String	Common Params . This parameter is not required for this API.
JobIds.N	No	Array of String	List of job IDs. It cannot be specified together with <code>Filters</code> .
Filters.N	No	Array of Filter	Filter <code>job-id</code> - String - Optional - Filter by the job ID. <code>job-name</code> - String - Optional - Filter by the job name. <code>job-state</code> - String - Optional - Filter by the job state. <code>zone</code> - String - Optional - Filter by the availability zone. <code>tag-key</code> - String - Optional - Tag key.

			<code>tag-value</code> - String - Optional - Tag value. <code>tag:tag-key</code> - String - Optional - Filter by the tag key-value pair. The tag-key should be replaced by a specified tag key. It cannot be specified together with <code>JobIds</code> .
Offset	No	Integer	Offset
Limit	No	Integer	Maximum number of returned items

3. Output Parameters

Parameter Name	Type	Description
JobSet	Array of JobView	List of jobs
TotalCount	Integer	Number of matched jobs
RequestId	String	The unique request ID, which is returned for each request. RequestId is required for locating a problem.

4. Example

Example1 Querying job information

Input Example

```
https://batch.tencentcloudapi.com/?Action=DescribeJobs
&JobIds.0=job-7e7evk2x
&JobIds.1=job-3n2weaqt
&<Common request parameters>
```

Output Example

```
{
  "Response": {
    "TotalCount": 2,
    "JobSet": [
```

```
{
  "EndTime": null,
  "JobState": "STARTING",
  "Tags": [
    {
      "Key": "batch-test-tag-job-key",
      "Value": "batch-test-tag-job-value"
    }
  ],
  "TaskMetrics": {
    "PendingCount": 0,
    "FailedCount": 0,
    "StartingCount": 1,
    "SucceedCount": 0,
    "FailedInterruptedCount": 0,
    "SubmittedCount": 0,
    "RunnableCount": 0,
    "RunningCount": 0
  },
  "JobId": "job-3n2weaqt",
  "Priority": 1,
  "Placement": {
    "Zone": "ap-guangzhou-4"
  },
  "JobName": "hello-test-job",
  "CreateTime": "2020-09-22T07:14:54Z"
},
{
  "EndTime": "2020-09-21T08:59:45Z",
  "JobState": "FAILED",
  "Tags": [
    {
      "Key": "job-key1",
      "Value": "job-value1"
    },
    {
      "Key": "job-key",
      "Value": "job-value"
    }
  ],
  "TaskMetrics": {
    "PendingCount": 0,
    "FailedCount": 1,
    "StartingCount": 0,
    "SucceedCount": 0,
    "FailedInterruptedCount": 0,
    "SubmittedCount": 0,
```



```
"RunnableCount": 0,
"RunningCount": 0
},
"JobId": "job-7e7evk2x",
"Priority": 1,
"Placement": {
  "Zone": "ap-guangzhou-4"
},
"JobName": "hello-test-job",
"CreateTime": "2020-09-21T08:57:01Z"
}
],
"RequestId": "ba5df388-51bd-434d-81aa-d640f284b4e7"
}
```

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](#)
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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.
InvalidFilter	The specified filter is not supported.
InvalidParameter.InvalidParameterCombination	Invalid parameter combination.
InvalidParameter.JobIdMalformed	Invalid job ID format.
InvalidParameterValue	Incorrect parameter value.
InvalidParameterValue.InvalidFilter	Incorrect <code>Filter</code> parameter.
InvalidParameterValue.LimitExceeded	The number of filter parameter values exceeds the limit.
InvalidZone.MismatchRegion	The specified zone does not exist.
UnknownParameter	Unknown parameter error.

DescribeJobSubmitInfo

Last updated : 2023-05-04 15:47:08

1. API Description

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

This API is used to query the submission information of the specified job, with the return including the job submission information used as input parameters in the JobId and SubmitJob APIs.

A maximum of 2 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: DescribeJobSubmitInfo.
Version	Yes	String	Common Params . The value used for this API: 2017-03-12.
Region	No	String	Common Params . This parameter is not required for this API.
JobId	Yes	String	Job ID

3. Output Parameters

Parameter Name	Type	Description
----------------	------	-------------

JobId	String	Job ID
JobName	String	Job name
JobDescription	String	Job description
Priority	Integer	Job priority. Tasks (Task) and task instances (TaskInstance) inherit the job priority
Tasks	Array of Task	Information of tasks in the job
Dependencies	Array of Dependence	Dependency information
Tags	Array of Tag	List of tags bound with the job. Note: This field may return <code>null</code> , indicating that no valid value was found.
RequestId	String	The unique request ID, which is returned for each request. RequestId is required for locating a problem.

4. Example

Example1 Obtaining job submission information

Input Example

```
https://batch.tencentcloudapi.com/?Action=DescribeJobSubmitInfo
&JobId=job-97zcl3wt
&<Common request parameters>
```

Output Example

```
{
  "Response": {
    "Tasks": [
      {
        "TaskInstanceNum": 2,
        "ComputeEnv": {
          "EnvType": "MANAGED",
          "EnvData": {
            "InstanceType": "S1.SMALL1",
            "ImageId": "img-bd78fy2t"
          }
        }
      }
    ]
  }
}
```

```
}
},
"RedirectInfo": {
  "StdoutRedirectPath": "cos://bucket-appid.cosgz.myqcloud.com/hello2/logs/",
  "StderrRedirectPath": "cos://bucket-appid..cosgz.myqcloud.com/hello2/logs/"
},
"Application": {
  "Command": "python -c \"fib=lambda n:1 if n<=2 else fib(n-1)+fib(n-2); print(fib(20))\"",
  "DeliveryForm": "LOCAL"
},
"MaxRetryCount": 0,
"FailedAction": "TERMINATE",
"TaskName": "A"
},
{
  "TaskInstanceNum": 2,
  "ComputeEnv": {
    "EnvType": "MANAGED",
    "EnvData": {
      "InstanceType": "S1.SMALL1",
      "ImageId": "img-bd78fy2t"
    }
  },
  "RedirectInfo": {
    "StdoutRedirectPath": "cos://bucket-appid.cosgz.myqcloud.com/hello2/logs/",
    "StderrRedirectPath": "cos://bucket-appid.cosgz.myqcloud.com/hello2/logs/"
  },
  "Application": {
    "Command": "python -c \"fib=lambda n:1 if n<=2 else fib(n-1)+fib(n-2); print(fib(20))\"",
    "DeliveryForm": "LOCAL"
  },
  "MaxRetryCount": 0,
  "FailedAction": "TERMINATE",
  "TaskName": "B"
},
{
  "TaskInstanceNum": 2,
  "ComputeEnv": {
    "EnvType": "MANAGED",
    "EnvData": {
      "InstanceType": "S1.SMALL1",
      "ImageId": "img-bd78fy2t"
    }
  },
  "RedirectInfo": {
```

```
"StdoutRedirectPath": "cos://bucket-appid.cosgz.myqcloud.com/hello2/logs/",
"StderrRedirectPath": "cos://bucket-appid.cosgz.myqcloud.com/hello2/logs/"
},
"Application": {
"Command": "python -c \"fib=lambda n:1 if n<=2 else fib(n-1)+fib(n-2); print(fib(20))\"",
"DeliveryForm": "LOCAL"
},
"MaxRetryCount": 0,
"FailedAction": "TERMINATE",
"TaskName": "C"
},
{
"TaskInstanceNum": 2,
"ComputeEnv": {
"EnvType": "MANAGED",
"EnvData": {
"InstanceType": "S1.SMALL1",
"ImageId": "img-bd78fy2t"
}
},
"RedirectInfo": {
"StdoutRedirectPath": "cos://bucket-appid.cosgz.myqcloud.com/hello2/logs/",
"StderrRedirectPath": "cos://bucket-appid.cosgz.myqcloud.com/hello2/logs/"
},
"Application": {
"Command": "python -c \"fib=lambda n:1 if n<=2 else fib(n-1)+fib(n-2); print(fib(20))\"",
"DeliveryForm": "LOCAL"
},
"MaxRetryCount": 0,
"FailedAction": "TERMINATE",
"TaskName": "D"
}
],
"Dependencies": [
{
"StartTask": "A",
"EndTask": "B"
},
{
"StartTask": "A",
"EndTask": "C"
},
{
"StartTask": "B",
"EndTask": "D"
}
```

```
},
{
  "StartTask": "C",
  "EndTask": "D"
},
{
  "JobName": "test job",
  "Priority": 1,
  "JobDescription": "xxx",
  "JobId": "job-97zcl3wt",
  "Tags": [
    {
      "Key": "batch-test-tag-job-key",
      "Value": "batch-test-tag-job-value"
    }
  ],
  "RequestId": "1a69db97-95ff-4bf7-9eb2-875ea6e5737b"
}
```

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.
InvalidParameter.JobIdMalformed	Invalid job ID format.
ResourceNotFound.Job	The specified job does not exist.

TerminateJob

Last updated : 2023-05-04 15:47:07

1. API Description

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

This API is used to terminate a job.

Termination is prohibited if a job is in the **SUBMITTED** state and does not take effect if it is in the **SUCCEED** state.

Job termination is an asynchronous process, and the time it takes to complete the entire process is directly proportional to the total number of tasks. The effect of terminating a job is equivalent to performing the **TerminateTaskInstance** operation on all the task instances contained in the job. For more information on the specific effect and usage, see **TerminateTaskInstance**.

A maximum of 2 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: TerminateJob .
Version	Yes	String	Common Params . The value used for this API: 2017-03-12.
Region	No	String	Common Params . This parameter is not required for this API.
JobId	Yes	String	Job ID

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 Terminating a job

Input Example

```
https://batch.tencentcloudapi.com/?Action=TerminateJob
&JobId=job-rybewp57
&<Common request parameters>
```

Output Example

```
{
  "Response": {
    "RequestId": "970e5a9f-2963-436c-8dad-4847360676f7"
  }
}
```

5. Developer Resources

SDK

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- [Tencent Cloud SDK 3.0 for Go](#)

- [Tencent Cloud SDK 3.0 for NodeJS](#)
- [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.
InvalidParameter.JobIdMalformed	Invalid job ID format.
ResourceInUse.Job	The job is in use.
ResourceNotFound.Job	The specified job does not exist.
UnsupportedOperation	Unsupported operation.
UnsupportedOperation.TerminateOperationWithEnvId	This operation is prohibited for the task instances in the specified compute environment.

DescribeTaskLogs

Last updated : 2023-05-04 15:47:08

1. API Description

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

This API is used to get the standard outputs and standard error logs of multiple task 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: DescribeTaskLogs.
Version	Yes	String	Common Params . The value used for this API: 2017-03-12.
Region	No	String	Common Params . This parameter is not required for this API.
JobId	Yes	String	Job ID
TaskName	Yes	String	Task name
TaskInstanceIndexes.N	No	Array of Integer	Set of task instances
Offset	No	Integer	The start point of query

Limit	No	Integer	Maximum number of task instances returned
-------	----	---------	---

3. Output Parameters

Parameter Name	Type	Description
TotalCount	Integer	Total number of task instances
TaskInstanceLogSet	Array of TaskInstanceLog	Set of task instance log details
RequestId	String	The unique request ID, which is returned for each request. RequestId is required for locating a problem.

4. Example

Example1 Obtaining task log details

Input Example

```
https://batch.tencentcloudapi.com/?Action=DescribeTaskLogs
&JobId=job-mawzp3ja
&TaskName=task
&TaskInstanceIndexes.0=0
&TaskInstanceIndexes.1=1
&<Common request parameters>
```

Output Example

```
{
  "Response": {
    "TotalCount": 1,
    "TaskInstanceLogSet": [
      {
        "StdoutLog": "data:text/plain;charset=utf-8;base64,bWFpbGpjbJ2RlbW8ucHknLCAnMyCsIC
cvbW50L2lucHV0JywgJy9tbnQvb3V0cHV0JywgJzEnXWZsdXNoIHRvIC9tbnQvb3V0cHV0LzE1MzU3MjY
wMDQuOTEKZmx1c2ggdG8gL2ludC9vdXRwdXQvMTUzNTcyNjAwNi4zOQpmbHVzaCB0byAvbW50L291dHB1
dC8xNTM1NzI2MDA3LjcK",
        "TaskInstanceIndex": 0,
        "StderrLog": "data:text/plain;charset=utf-8;base64,Zmx1c2ggdG8gL2ludC9vdXRwdXQvMT
UzNTcyNjAwNC45MQpmbHVzaCB0byAvbW50L291dHB1dC8xNTM1NzI2MDA2LjM5MzsdXNoIHRvIC9tbnQ
```

```
vb3V0cHV0LzE1MzU3MjYwMDcuNwo=",
"StdoutRedirectPath": "",
"StderrRedirectPath": "",
"StdoutRedirectFileName": "",
"StderrRedirectFileName": ""
},
],
"RequestId": "3b1ba3bf-a315-42ec-9e8e-af8def768f8a"
}
```

5. Developer Resources

SDK

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- [Tencent Cloud SDK 3.0 for Go](#)
- [Tencent Cloud SDK 3.0 for NodeJS](#)
- [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.
InvalidParameter.JobIdMalformed	Invalid job ID format.
InvalidParameter.TaskName	Invalid task name.

InvalidParameter.TaskNameTooLong	The task name is too long.
InvalidParameterValue	Incorrect parameter value.
InvalidParameterValue.Negative	Invalid negative parameter.
ResourceNotFound.Job	The specified job does not exist.
ResourceNotFound.Task	The specified job task does not exist.
ResourceNotFound.TaskInstance	The specified task instance does not exist.
UnknownParameter	Unknown parameter error.

RetryJobs

Last updated : 2023-05-04 15:47:07

1. API Description

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

This API is used to retry the failed task instances in a job.

Job retry is supported only if a job is in the "FAILED" state. After the retry operation succeeds, the job will retry the failing task instances in each task in turn according to the task dependencies specified in the "DAG". The history information of the task instances will be reset, the instances will participate in subsequent scheduling and execution as if they are run for the first time.

A maximum of 2 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: RetryJobs.
Version	Yes	String	Common Params . The value used for this API: 2017-03-12.
Region	No	String	Common Params . This parameter is not required for this API.
JobIds.N	Yes	Array of String	List of job IDs.

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 Retrying jobs

This example shows you how to retry the task instances that were failed in a job.

Input Example

```
https://batch.tencentcloudapi.com/?Action=RetryJobs
&JobIds.0=job-rybewp57
&JobIds.1=job-97zcl3wt
&<Common request parameters>
```

Output Example

```
{
  "Response": {
    "RequestId": "970e5a9f-2963-436c-8dad-4847360676f7"
  }
}
```

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 NodeJS](#)
- [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.
InvalidParameter.JobIdMalformed	Invalid job ID format.
ResourceNotFound.Job	The specified job does not exist.
UnsupportedOperation	Unsupported operation.

Data Types

Last updated : 2023-05-09 15:39:21

Activity

Information of the creation/termination activity of a compute node

Used by actions: DescribeComputeEnvActivities.

Name	Type	Description
ActivityId	String	Activity ID
ComputeNodeId	String	Compute node ID
ComputeNodeActivityType	String	Activity type. Values: <code>CREATE_COMPUTE_NODE</code> , <code>TERMINATE_COMPUTE_NODE</code>
EnvId	String	Compute environment ID
Cause	String	Cause of the activity
ActivityState	String	Activity state
StateReason	String	Reason of going to this state
StartTime	String	Activity start time
EndTime	String	Activity end time Note: This field may return <code>null</code> , indicating that no valid value was found.
InstanceId	String	CVM instance ID Note: This field may return <code>null</code> , indicating that no valid value was found.

AgentRunningMode

Agent running mode

Used by actions: CreateComputeEnv, CreateTaskTemplate, DescribeJobSubmitInfo, ModifyTaskTemplate.

Name	Type	Required	Description
Scene	String	Yes	Scenario type. Windows is supported
User	String	Yes	The user that runs the Agent
Session	String	Yes	The session that runs the Agent

AnonymousComputeEnv

Compute environment

Used by actions: `CreateTaskTemplate`, `DescribeJobSubmitInfo`, `ModifyTaskTemplate`.

Name	Type	Required	Description
EnvType	String	No	Compute environment management type
EnvData	EnvData	No	Compute environment's parameters
MountDataDisks	Array of MountDataDisk	No	Data disk mounting option
AgentRunningMode	AgentRunningMode	No	Agent running mode; applicable for Windows

Application

Application information

Used by actions: `CreateTaskTemplate`, `DescribeJobSubmitInfo`, `ModifyTaskTemplate`.

Name	Type	Required	Description
Command	String	Yes	Task execution command
DeliveryForm	String	Yes	Delivery form of the application. Values: <code>PACKAGE</code> (package stored in a remote location), <code>LOCAL</code> (local computer).
PackagePath	String	No	Remote storage path of the application package

Name	Type	Required	Description
Docker	Docker	No	Relevant configuration of the Docker used by the application. In case that the Docker configuration is used, "LOCAL" DeliveryForm means that the application software inside the Docker image is used directly and run in Docker mode; "PACKAGE" DeliveryForm means that the remote application package is run in Docker mode after being injected into the Docker image. To avoid compatibility issues with different versions of Docker, the Docker installation package and relevant dependencies are taken care of by BatchCompute. For custom images where Docker has already been installed, uninstall Docker first and then use the Docker feature.

Authentication

Authentication information

Used by actions: CreateComputeEnv, CreateTaskTemplate, DescribeComputeEnvCreateInfo, DescribeComputeEnvCreateInfos, DescribeJobSubmitInfo, ModifyTaskTemplate.

Name	Type	Required	Description
Scene	String	Yes	Authentication scenario such as COS
SecretId	String	Yes	SecretId
SecretKey	String	Yes	SecretKey

ComputeEnvCreateInfo

Compute environment creation information

Used by actions: DescribeComputeEnvCreateInfos.

Name	Type	Description
EnvId	String	Compute environment ID

Name	Type	Description
EnvName	String	Compute environment name Note: This field may return <code>null</code> , indicating that no valid value was found.
EnvDescription	String	Compute environment description Note: This field may return <code>null</code> , indicating that no valid value was found.
EnvType	String	Compute environment type. Only "MANAGED" type is supported
EnvData	EnvData	Compute environment parameter
MountDataDisks	Array of MountDataDisk	Data disk mounting option Note: This field may return <code>null</code> , indicating that no valid value was found.
InputMappings	Array of InputMapping	Input mapping Note: This field may return <code>null</code> , indicating that no valid value was found.
Authentications	Array of Authentication	Authorization information Note: This field may return <code>null</code> , indicating that no valid value was found.
Notifications	Array of Notification	Notification information Note: This field may return <code>null</code> , indicating that no valid value was found.
DesiredComputeNodeCount	Integer	Number of desired compute nodes
Tags	Array of Tag	Tag list of the compute environment. Note: This field may return <code>null</code> , indicating that no valid value was found.

ComputeEnvData

Compute environment attributes

Used by actions: ModifyComputeEnv.

Name	Type	Required	Description
------	------	----------	-------------

Name	Type	Required	Description
InstanceTypes	Array of String	Yes	List of CVM instance types

ComputeEnvView

Compute environment information

Used by actions: **DescribeComputeEnvs**.

Name	Type	Description
EnvId	String	Compute environment ID
EnvName	String	Compute environment name
Placement	Placement	Location information
CreateTime	String	Creation time
ComputeNodeMetrics	ComputeNodeMetrics	Compute node statistical metrics
EnvType	String	Compute environment type
DesiredComputeNodeCount	Integer	Number of desired compute nodes
ResourceType	String	Compute environment resource type. Values: <code>CVM</code> , <code>CPM</code> (Bare Metal)
NextAction	String	Next action
AttachedComputeNodeCount	Integer	Number of compute nodes added to the compute environment
Tags	Array of Tag	Tag list bound to the compute environment. Note: This field may return <code>null</code> , indicating that no valid value was found.

ComputeNode

Compute node

Used by actions: **DescribeComputeEnv**.

Name	Type	Description
ComputeNodeId	String	Compute node ID
ComputeNodeInstanceId	String	Compute node instance ID. In a CVM scenario, this parameter is the CVM InstanceId
ComputeNodeState	String	Compute node state
Cpu	Integer	Number of CPU cores
Mem	Integer	Memory size in GiB
ResourceCreatedTime	String	Resource creation time
TaskInstanceNumAvailable	Integer	Available capacity of the compute node when running TaskInstance. 0 means that the compute node is busy.
AgentVersion	String	BatchCompute Agent version
PrivateIpAddresses	Array of String	Private IP of the instance
PublicIpAddresses	Array of String	Public IP of the instance
ResourceType	String	Compute environment resource type. Values: <code>CVM</code> , <code>CPM</code> (Bare Metal)
ResourceOrigin	String	Source of compute environment resources. <code>BATCH_CREATED</code> : Instances created by BatchCompute. <code>USER_ATTACHED</code> : Instances added to the compute environment by the user.

ComputeNodeMetrics

Compute node statistical metrics

Used by actions: `DescribeComputeEnv`, `DescribeComputeEnvs`.

Name	Type	Description
------	------	-------------

Name	Type	Description
SubmittedCount	Integer	Number of compute nodes that have been submitted
CreatingCount	Integer	Number of compute nodes that are being created
CreationFailedCount	Integer	Number of compute nodes that failed to be created
CreatedCount	Integer	Number of compute nodes that have been created
RunningCount	Integer	Number of running compute nodes
DeletingCount	Integer	Number of compute nodes that are being terminated
AbnormalCount	Integer	Number of exceptional compute nodes

DataDisk

Describes data disk information.

Used by actions: **CreateComputeEnv**, **DescribeComputeEnvCreateInfo**.

Name	Type	Required	Description
DiskSize	Integer	Yes	Data disk size (in GB). The minimum adjustment increment is 10 GB. The value range varies by data disk type. For more information on limits, see Storage Overview. The default value is 0, indicating that no data disk is purchased. For more information, see the product documentation.

Name	Type	Required	Description
DiskType	String	No	Data disk type. For more information about limits on different data disk types, see Storage Overview. Valid values: - LOCAL_BASIC: local disk - LOCAL_SSD: local SSD disk - LOCAL_NVME: local NVME disk, specified in the <code>InstanceType</code> - LOCAL_PRO: local HDD disk, specified in the <code>InstanceType</code> - CLOUD_BASIC: HDD cloud disk - CLOUD_PREMIUM: Premium Cloud Storage - CLOUD_SSD: SSD - CLOUD_HSSD: Enhanced SSD - CLOUD_TSSD: Tremendous SSD - CLOUD_BSSD: Balanced SSD Default value: LOCAL_BASIC. This parameter is invalid for the <code>ResizeInstanceDisk</code> API.
DiskId	String	No	Data disk ID. Note that it's not available for <code>LOCAL_BASIC</code> and <code>LOCAL_SSD</code> disks. It is only used as a response parameter for APIs such as <code>DescribeInstances</code>, and cannot be used as a request parameter for APIs such as <code>RunInstances</code>.
DeleteWithInstance	Boolean	No	Whether to terminate the data disk when its CVM is terminated. Valid values: - TRUE: terminate the data disk when its CVM is terminated. This value only supports pay-as-you-go cloud disks billed on an hourly basis. - FALSE: retain the data disk when its CVM is terminated. Default value: TRUE Currently this parameter is only used in the <code>RunInstances</code> API. Note: This field may return null, indicating that no valid value is found.

Name	Type	Required	Description
SnapshotId	String	No	Data disk snapshot ID. The size of the selected data disk snapshot must be smaller than that of the data disk. Note: This field may return null, indicating that no valid value is found.
Encrypt	Boolean	No	Specifies whether the data disk is encrypted. Valid values: • TRUE: encrypted • FALSE: not encrypted Default value: FALSE This parameter is only used with <code>RunInstances</code> . Note: this field may return <code>null</code> , indicating that no valid value is obtained.
KmsKeyId	String	No	ID of the custom CMK in the format of UUID or “kms-abcd1234”. This parameter is used to encrypt cloud disks. Currently, this parameter is only used in the <code>RunInstances</code> API. Note: this field may return null, indicating that no valid values can be obtained.
ThroughputPerformance	Integer	No	Cloud disk performance, in MB/s Note: this field may return <code>null</code> , indicating that no valid values can be obtained.
CdId	String	No	ID of the dedicated cluster to which the instance belongs. Note: this field may return <code>null</code> , indicating that no valid values can be obtained.

Dependence

Dependency

Used by actions: DescribeJob, DescribeJobSubmitInfo.

Name	Type	Required	Description
StartTask	String	Yes	Dependency start task name
EndTask	String	Yes	Dependency end task name

Docker

Docker container information

Used by actions: `CreateTaskTemplate`, `DescribeJobSubmitInfo`, `ModifyTaskTemplate`.

Name	Type	Required	Description
User	String	Yes	Docker Hub username or Tencent Registry username
Password	String	Yes	Docker Hub password or Tencent Registry password
Image	String	Yes	For Docker Hub, enter "[user/repo]:[tag]"; for Tencent Registry, enter "ccr.ccs.tencentyun.com/[namespace/repo]:[tag]"
Server	String	No	For Docker Hub, this can be left blank, but please ensure public network access is present. For Tencent Registry, the server address is "ccr.ccs.tencentyun.com"
MaxRetryCount	Integer	No	Maximum retry attempts to load docket images. Range: 0 - 10. Default: 0
DelayOnRetry	Integer	No	Docker image loading timeout period (in seconds). Range: 1 - 360
DockerRunOption	String	No	Docker command execution parameter Note: This field may return <code>null</code> , indicating that no valid value was found.

EnhancedService

Describes the configuration of enhanced services, such as Cloud Security and Cloud Monitor.

Used by actions: `CreateComputeEnv`, `DescribeComputeEnvCreateInfo`.

Name	Type	Required	Description
SecurityService	RunSecurityServiceEnabled	No	Enables cloud security service. If this parameter is not specified, the cloud security service will be enabled by default.
MonitorService	RunMonitorServiceEnabled	No	Enables cloud monitor service. If this parameter is not specified, the cloud monitor service will be enabled by default.
AutomationService	RunAutomationServiceEnabled	No	Whether to enable the TAT service. If this parameter is not specified, the TAT service is enabled for public images and disabled for other images by default.

EnvData

Compute environment information

Used by actions: [CreateComputeEnv](#), [CreateTaskTemplate](#), [DescribeComputeEnvCreateInfo](#), [DescribeComputeEnvCreateInfos](#), [DescribeJobSubmitInfo](#), [ModifyTaskTemplate](#).

Name	Type	Required	Description
InstanceType	String	No	CVM instance type. It cannot be specified together with <code>InstanceTypes</code> or <code>InstanceTypeOptions</code> .
ImageId	String	No	CVM image ID
SystemDisk	SystemDisk	No	System disk configuration of the instance
DataDisks	Array of DataDisk	No	Data disk configuration of the instance

Name	Type	Required	Description
VirtualPrivateCloud	VirtualPrivateCloud	No	Information of the VPC configuration. It cannot be specified together with <code>Zones</code> and <code>VirtualPrivateClouds</code> .
InternetAccessible	InternetAccessible	No	Public network bandwidth configuration
InstanceName	String	No	CVM instance display name
LoginSettings	LoginSettings	No	Instance login settings
SecurityGroupIds	Array of String	No	Security groups associated with the instance
EnhancedService	EnhancedService	No	Whether to activate CWPP agent and Cloud Monitor. CWPP agent and Cloud Monitor are activated by default.
InstanceChargeType	String	No	CVM instance billing method <code>POSTPAID_BY_HOUR</code> (default): Hourly-billed pay-as-you-go <code>SPOTPAID</code> : Spot instance
InstanceMarketOptions	InstanceMarketOptionsRequest	No	Market-related options for instances, such as parameters related to spot instances.

Name	Type	Required	Description
InstanceTypes	Array of String	No	Types of CVM instances to create (up to 10). The system creates compute nodes of types specified in this list from top to down till the creation is successful. It cannot be specified together with <code>InstanceType</code> or <code>InstanceTypeOptions</code> .
InstanceTypeOptions	InstanceTypeOptions	No	CVM instance model configuration. It cannot be specified together with <code>InstanceType</code> or <code>InstanceTypes</code> .
Zones	Array of String	No	List of availability zones. You can create CVM cross AZs in the same region. It cannot be specified together with <code>VirtualPrivateCloud</code> or <code>VirtualPrivateClouds</code> .
VirtualPrivateClouds	Array of VirtualPrivateCloud	No	List of VPCs (creation of CVM instances across VPCs is supported). It cannot be specified together with <code>VirtualPrivateCloud</code> or <code>Zones</code> .

EnvVar

Environment variable

Used by actions: `CreateTaskTemplate`, `DescribeJobSubmitInfo`, `ModifyTaskTemplate`.

Name	Type	Required	Description
------	------	----------	-------------

Name	Type	Required	Description
Name	String	Yes	Environment variable name
Value	String	Yes	Environment variable value

EventConfig

Event configuration

Used by actions: **CreateComputeEnv**, **DescribeComputeEnvCreateInfo**.

Name	Type	Required	Description
EventName	String	Yes	Event type. Value range: JOB_RUNNING : The job is running, applicable to <code>SubmitJob</code> . JOB_SUCCEED : The job succeeded, applicable to <code>SubmitJob</code> . JOB_FAILED : The job failed, applicable to <code>SubmitJob</code> . JOB_FAILED_INTERRUPTED : The job failed and the instance is retained, applicable to <code>SubmitJob</code> . TASK_RUNNING : The task is running, applicable to <code>SubmitJob</code> . TASK_SUCCEED : The task succeeded, applicable to <code>SubmitJob</code> . TASK_FAILED : The task failed, applicable to <code>SubmitJob</code> . TASK_FAILED_INTERRUPTED : The task failed and the instance is retained, applicable to <code>SubmitJob</code> . TASK_INSTANCE_RUNNING : The task instance is running, applicable to <code>SubmitJob</code> . TASK_INSTANCE_SUCCEED : The task instance succeeded, applicable to <code>SubmitJob</code> . TASK_INSTANCE_FAILED : The task instance failed, applicable to <code>SubmitJob</code> . TASK_INSTANCE_FAILED_INTERRUPTED : The task instance failed and the instance is retained, applicable to <code>SubmitJob</code> . COMPUTE_ENV_CREATED : the compute environment has been created, applicable to "CreateComputeEnv".

Name	Type	Required	Description
			<code>COMPUTE_ENV_DELETED</code> : The compute environment has been deleted, applicable to <code>CreateComputeEnv</code> . <code>COMPUTE_NODE_CREATED</code> : The compute node has been created, applicable to <code>CreateComputeEnv</code> and <code>SubmitJob</code> . <code>COMPUTE_NODE_CREATION_FAILED</code> : The compute node creation failed, applicable to <code>CreateComputeEnv</code> and <code>SubmitJob</code> . <code>COMPUTE_NODE_RUNNING</code> : The compute node is running, applicable to <code>CreateComputeEnv</code> and <code>SubmitJob</code> . <code>COMPUTE_NODE_ABNORMAL</code> : The compute node is exceptional, applicable to "CreateComputeEnv" and "SubmitJob". <code>COMPUTE_NODE_DELETING</code> : The compute node has been deleted, applicable to <code>CreateComputeEnv</code> and <code>SubmitJob</code> .
EventVars	Array of EventVar	Yes	Custom key-value pair

EventVar

Custom key-value pair

Used by actions: `CreateComputeEnv`, `DescribeComputeEnvCreateInfo`.

Name	Type	Required	Description
Name	String	Yes	Custom key
Value	String	Yes	Custom value

Externals

Additional data

Used by actions: `DescribeCvmZoneInstanceConfigInfos`.

Name	Type	Required	Description
------	------	----------	-------------

Name	Type	Required	Description
ReleaseAddress	Boolean	No	Release address Note: This field may return null, indicating that no valid value is found.
UnsupportNetworks	Array of String	No	Not supported network. Value: - BASIC: classic network - VPC1.0: VPC1.0 Note: This field may return null, indicating that no valid value was found.
StorageBlockAttr	StorageBlock	No	Attributes of local HDD storage Note: This field may return null, indicating that no valid value is found.

Filter

Key-value pair filters used for conditional queries, such as filtering results by ID, name, and state.

- If there are multiple `Filter` parameters, they are evaluated using the logical `AND` operator.
- If a `Filter` contains multiple `Values`, they are evaluated using the logical `OR` operator.

Take `DescribeInstances` as an example. You can use the following filters to query the instances in availability zone (`zone`) Guangzhou Zone 1 *and* whose billing plan (`instance-charge-type`) is pay-as-you-go:

```
Filters.0.Name=zone
&Filters.0.Values.0=ap-guangzhou-1
&Filters.1.Name=instance-charge-type
&Filters.1.Values.0=POSTPAID_BY_HOUR
```

Used by actions: `DescribeAvailableCvmInstanceTypes`, `DescribeComputeEnvActivities`, `DescribeComputeEnvCreateInfos`, `DescribeComputeEnvs`, `DescribeCvmZoneInstanceConfigInfos`, `DescribeJobs`, `DescribeTask`, `DescribeTaskTemplates`.

Name	Type	Required	Description
Name	String	Yes	Filters.

Name	Type	Required	Description
Values	Array of String	Yes	Filter values.

InputMapping

Input mapping

Used by actions: **CreateComputeEnv**, **CreateTaskTemplate**, **DescribeComputeEnvCreateInfo**, **DescribeComputeEnvCreateInfos**, **DescribeJobSubmitInfo**, **ModifyTaskTemplate**.

Name	Type	Required	Description
SourcePath	String	Yes	Source path
DestinationPath	String	Yes	Destination path
MountOptionParameter	String	No	Mounting configuration item parameter

Instance

Describes information of an instance

Used by actions: **AttachInstances**.

Name	Type	Required	Description
InstanceId	String	Yes	Instance ID.
ImageId	String	No	Image ID
LoginSettings	LoginSettings	No	Instance login settings.

InstanceCategoryItem

List of instance categories

Used by actions: **DescribeInstanceCategories**.

Name	Type	Description
------	------	-------------

Name	Type	Description
InstanceCategory	String	Instance type name
InstanceFamilySet	Array of String	List of instance families

InstanceMarketOptionsRequest

Options related to bidding requests

Used by actions: **CreateComputeEnv**, **DescribeComputeEnvCreateInfo**.

Name	Type	Required	Description
SpotOptions	SpotMarketOptions	Yes	Spot-related options Note: This field may return <code>null</code> , indicating that no valid values can be obtained.
MarketType	String	No	Market type. Valid value: <code>spot</code> . Note: This field may return <code>null</code> , indicating that no valid values can be obtained.

InstanceTypeConfig

Information of InstanceTypeConfig available to BatchCompute

Used by actions: **DescribeAvailableCvmInstanceTypes**.

Name	Type	Description
Mem	Integer	Memory size in GB.
Cpu	Integer	Number of CPU cores.
InstanceType	String	Instance model.
Zone	String	Availability zone.
InstanceFamily	String	Instance model family.

InstanceTypeOptions

Instance model configuration.

Used by actions: `CreateComputeEnv`, `DescribeComputeEnvCreateInfo`.

Name	Type	Required	Description
CPU	Integer	Yes	Number of CPU cores
Memory	Integer	Yes	Memory size in GB.
InstanceCategories	Array of String	No	Instance model category. Values: <code>ALL</code> (default), <code>GENERAL</code> , <code>GENERAL_2</code> , <code>GENERAL_3</code> , <code>COMPUTE</code> , <code>COMPUTE_2</code> , and <code>COMPUTE_3</code> .

InstanceTypeQuotaItem

Describes instance model quota.

Used by actions: `DescribeCvmZoneInstanceConfigInfos`.

Name	Type	Description
Zone	String	Availability zone.
InstanceType	String	Instance model.
InstanceChargeType	String	Instance billing plan. Valid values: <code>POSTPAID_BY_HOUR</code>: pay after use. You are billed for your traffic by the hour. <code>CDHPAID</code> : <code>CDH</code> billing plan. Applicable to <code>CDH</code> only, not the instances on the host.
NetworkCard	Integer	ENI type. For example, 25 represents an ENI of 25 GB.
Externals	Externals	Additional data. Note: This field may return null, indicating that no valid value is found.
Cpu	Integer	Number of CPU cores of an instance model.
Memory	Integer	Instance memory capacity; unit: <code>GB</code> .
InstanceFamily	String	Instance model family.
TypeName	String	Model name.

Name	Type	Description
LocalDiskTypeList	Array of LocalDiskType	List of local disk specifications. If the parameter returns null, it means that local disks cannot be created.
Status	String	Whether an instance model is available. Valid values: • SELL: available • SOLD_OUT: sold out
Price	ItemPrice	Price of an instance model.
SoldOutReason	String	Details of out-of-stock items Note: this field may return null, indicating that no valid value is obtained.
InstanceBandwidth	Float	Private network bandwidth, in Gbps.
InstancePps	Integer	The max packet sending and receiving capability (in 10k PPS).
StorageBlockAmount	Integer	Number of local storage blocks.
CpuType	String	CPU type.
Gpu	Integer	Number of GPUs of the instance.
Fpga	Integer	Number of FPGAs of the instance.
Remark	String	Descriptive information of the instance.
GpuCount	Float	
Frequency	String	CPU clock rate of the instance

InternetAccessible

Describes the accessibility of an instance in the public network, including its network billing method, maximum bandwidth, etc.

Used by actions: [CreateComputeEnv](#), [DescribeComputeEnvCreateInfo](#).

Name	Type	Required	Description
------	------	----------	-------------

Name	Type	Required	Description
InternetChargeType	String	No	Network connection billing plan. Valid value: • TRAFFIC_POSTPAID_BY_HOUR: pay after use. You are billed for your traffic, by the hour.
InternetMaxBandwidthOut	Integer	No	The maximum outbound bandwidth of the public network, in Mbps. The default value is 0 Mbps. The upper limit of bandwidth varies for different models. For more information, see Purchase Network Bandwidth.
PublicIpAssigned	Boolean	No	Whether to assign a public IP. Valid values: • TRUE: Assign a public IP • FALSE: Do not assign a public IP If the public network bandwidth is greater than 0 Mbps, you can choose whether to assign a public IP; by default a public IP will be assigned. If the public network bandwidth is 0 Mbps, you will not be able to assign a public IP.
BandwidthPackageId	String	No	Bandwidth package ID. To obtain the IDs, you can call DescribeBandwidthPackages and look for the <code>BandwidthPackageId</code> fields in the response.

ItemPrice

Describes pricing information.

Used by actions: **DescribeCvmZoneInstanceConfigInfos**.

Name	Type	Description
------	------	-------------

Name	Type	Description
UnitPrice	Float	The original unit price for pay-as-you-go mode in USD. When a billing tier is returned, it indicates the price for the returned billing tier. For example, if <code>UnitPriceSecondStep</code> is returned, it refers to the unit price for the usage between 0 to 96 hours. Otherwise, it refers to that the unit price for unlimited usage. Note: this field may return null, indicating that no valid value is obtained.
ChargeUnit	String	Billing unit for pay-as-you-go mode. Valid values: • HOUR: billed on an hourly basis. It's used for hourly postpaid instances (<code>POSTPAID_BY_HOUR</code>). • GB: bill by traffic in GB. It's used for postpaid products that are billed by the hourly traffic (<code>TRAFFIC_POSTPAID_BY_HOUR</code>). Note: this field may return null, indicating that no valid value is obtained.
OriginalPrice	Float	The original price of a pay-in-advance instance, in USD. Note: this field may return null, indicating that no valid value is obtained.
DiscountPrice	Float	Discount price of a prepaid instance, in USD. Note: this field may return null, indicating that no valid value is obtained.
Discount	Float	Percentage of the original price. For example, if you enter "20.0", the discounted price will be 20% of the original price. Note: this field may return null, indicating that no valid values can be obtained.
UnitPriceDiscount	Float	The discounted unit price for pay-as-you-go mode in USD. When a billing tier is returned, it indicates the price for the returned billing tier. For example, if <code>UnitPriceSecondStep</code> is returned, it refers to the unit price for the usage between 0 to 96 hours. Otherwise, it refers to that the unit price for unlimited usage. Note: this field may return null, indicating that no valid value is obtained.

Name	Type	Description
UnitPriceSecondStep	Float	Original unit price for the usage between 96 to 360 hours in USD. It's applicable to pay-as-you-go mode. Note: this field may return null, indicating that no valid value is obtained.
UnitPriceDiscountSecondStep	Float	Discounted unit price for the usage between 96 to 360 hours in USD. It's applicable to pay-as-you-go mode. Note: this field may return null, indicating that no valid value is obtained.
UnitPriceThirdStep	Float	Original unit price for the usage after 360 hours in USD. It's applicable to pay-as-you-go mode. Note: this field may return null, indicating that no valid value is obtained.
UnitPriceDiscountThirdStep	Float	Discounted unit price for the usage after 360 hours in USD. It's applicable to pay-as-you-go mode. Note: this field may return null, indicating that no valid value is obtained.
OriginalPriceThreeYear	Float	Original 3-year payment, in USD. This parameter is only available to upfront payment mode. Note: this field may return <code>null</code> , indicating that no valid value was found. Note: this field may return <code>null</code> , indicating that no valid value was found.
DiscountPriceThreeYear	Float	Discounted 3-year upfront payment, in USD. This parameter is only available to upfront payment mode. Note: this field may return <code>null</code> , indicating that no valid value was found. Note: this field may return <code>null</code> , indicating that no valid value was found.
DiscountThreeYear	Float	Discount for 3-year upfront payment. For example, 20.0 indicates 80% off. Note: this field may return <code>null</code> , indicating that no valid value was found. Note: this field may return <code>null</code> , indicating that no valid value was found.

Name	Type	Description
OriginalPriceFiveYear	Float	Original 5-year payment, in USD. This parameter is only available to upfront payment mode. Note: this field may return <code>null</code> , indicating that no valid value was found. Note: this field may return <code>null</code> , indicating that no valid value was found.
DiscountPriceFiveYear	Float	Discounted 5-year upfront payment, in USD. This parameter is only available to upfront payment mode. Note: this field may return <code>null</code> , indicating that no valid value was found. Note: this field may return <code>null</code> , indicating that no valid value was found.
DiscountFiveYear	Float	Discount for 5-year upfront payment. For example, 20.0 indicates 80% off. Note: this field may return <code>null</code> , indicating that no valid value was found. Note: this field may return <code>null</code> , indicating that no valid value was found.
OriginalPriceOneYear	Float	Original 1-year payment, in USD. This parameter is only available to upfront payment mode. Note: this field may return <code>null</code> , indicating that no valid value was found. Note: this field may return <code>null</code> , indicating that no valid value was found.
DiscountPriceOneYear	Float	Discounted 1-year payment, in USD. This parameter is only available to upfront payment mode. Note: this field may return <code>null</code> , indicating that no valid value was found. Note: this field may return <code>null</code> , indicating that no valid value was found.
DiscountOneYear	Float	Discount for 1-year upfront payment. For example, 20.0 indicates 80% off. Note: this field may return <code>null</code> , indicating that no valid value was found. Note: this field may return <code>null</code> , indicating that no valid value was found.

JobView

Job information

Used by actions: DescribeJobs.

Name	Type	Description
JobId	String	Job ID
JobName	String	Job name
JobState	String	Job state
Priority	Integer	Job priority
Placement	Placement	Location information Note: This field may return <code>null</code> , indicating that no valid value was found.
CreateTime	String	Creation time
EndTime	String	End time Note: This field may return <code>null</code> , indicating that no valid value was found.
TaskMetrics	TaskMetrics	Task statistical metrics
Tags	Array of Tag	List of tags bound with the job. Note: This field may return <code>null</code> , indicating that no valid value was found.

LocalDiskType

Describes local disk specifications.

Used by actions: DescribeCvmZoneInstanceConfigInfos.

Name	Type	Description
Type	String	Type of a local disk.
PartitionType	String	Attributes of a local disk.
MinSize	Integer	Minimum size of a local disk.

Name	Type	Description
MaxSize	Integer	Maximum size of a local disk.
Required	String	Whether a local disk is required during purchase. Valid values: REQUIRED: required OPTIONAL: optional

LoginSettings

Describes login settings of an instance.

Used by actions: **AttachInstances**, **CreateComputeEnv**, **DescribeComputeEnvCreateInfo**.

Name	Type	Required	Description
Password	String	No	Login password of the instance. Linux instances: 8-16 characters, containing at least two of the following categories: [a-z, A-Z], [0-9] and [()~!@#\$\$%^&*~+=
KeyIds	Array of String	No	List of key IDs. After an instance is associated with a key, you can access the instance with the private key in the key pair. You can call <code>DescribeKeyPairs</code> to obtain <code>KeyId</code> . Key and password cannot be specified at the same time. Windows instances do not support keys. Currently, you can only specify one key when purchasing an instance.
KeepImageLogin	String	No	Whether to keep the original settings of an image. Values: <code>TRUE</code> (default), <code>FALSE</code> . It cannot be specified together with <code>Password</code> or <code>KeyIds.N</code> . You can specify this parameter as <code>TRUE</code> only when you create an instance using a custom image, a shared image, or an imported image.

MountDataDisk

Data disk mounting option

Used by actions: **CreateComputeEnv**, **CreateTaskTemplate**, **DescribeComputeEnvCreateInfo**, **DescribeComputeEnvCreateInfos**, **DescribeJobSubmitInfo**, **ModifyTaskTemplate**.

Name	Type	Required	Description
LocalPath	String	Yes	Mounting point. A valid path (for Linux) for a drive (for Windows, such as "H:\")
FileSystemType	String	No	File system type. Linux: <code>EXT3</code> (default) and <code>EXT4</code> . Windows: <code>NTFS</code>

NamedComputeEnv

Compute environment

Used by actions: **CreateComputeEnv**.

Name	Type	Required	Description
EnvName	String	Yes	Compute environment name
DesiredComputeNodeCount	Integer	Yes	Number of desired compute nodes
EnvDescription	String	No	Compute environment description
EnvType	String	No	Compute environment management type
EnvData	EnvData	No	Compute environment's specific parameters
MountDataDisks	Array of MountDataDisk	No	Data disk mounting option
Authentications	Array of Authentication	No	Authorization information
InputMappings	Array of InputMapping	No	Input mapping information
AgentRunningMode	AgentRunningMode	No	Agent running mode; applicable for Windows
Notifications	Array of Notification	No	Notification information

Name	Type	Required	Description
ActionIfComputeNodeInactive	String	No	Policy for inactive nodes. Default: <code>RECREATE</code> , which means that instance resources will be re-created periodically for compute nodes where instance creation fails or is abnormally returned.
ResourceMaxRetryCount	Integer	No	When the instances are failed to be created or returned because of exceptions, the related compute node will retry to create instances periodically. This parameter specifies the maximum retry attempts. The max value is 100 and the default value is <code>7</code> .
Tags	Array of Tag	No	List of tags to bind with a compute environment. Each compute environment can have up to 10 tags.
NotificationTarget	String	No	Target of the notification Values: <code>CMQ</code> , <code>TDMQ_CMQ</code> <code>CMQ</code> : Tencent Cloud CMQ (default) <code>TDMQ_CMQ</code> : Tencent Cloud TDMQ_CMQ. Note: CMQ has been discontinued. Please use <code>TDMQ_CMQ</code> . See CMQ Queue Migration to TDMQ for CMQ

Notification

Notification information

Used by actions: `CreateComputeEnv`, `DescribeComputeEnvCreateInfo`, `DescribeComputeEnvCreateInfos`.

Name	Type	Required	Description
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Name	Type	Required	Description
TopicName	String	Yes	CMQ topic name which should be valid and associated with a subscription
EventConfigs	Array of EventConfig	Yes	Event configuration

OutputMapping

Output mapping

Used by actions: **CreateTaskTemplate**, **DescribeJobSubmitInfo**, **ModifyTaskTemplate**.

Name	Type	Required	Description
SourcePath	String	Yes	Source path
DestinationPath	String	Yes	Destination path
OutputMappingOption	OutputMappingOption	No	Output mapping options Note: This field may return <code>null</code> , indicating that no valid value was found.

OutputMappingConfig

Output mapping configuration

Used by actions: **CreateTaskTemplate**, **DescribeJobSubmitInfo**, **ModifyTaskTemplate**.

Name	Type	Required	Description
Scene	String	Yes	Storage type. Only <code>cos</code> is supported.
WorkerNum	Integer	Yes	Number of concurrent workers
WorkerPartSize	Integer	Yes	Size of a worker part, in MB.

OutputMappingOption

Output mapping options

Used by actions: `CreateTaskTemplate`, `DescribeJobSubmitInfo`, `ModifyTaskTemplate`.

Name	Type	Required	Description
Workspace	String	No	The mapped output workspace on the container side for the instance. <code>BATCH_WORKSPACE</code> (Default): The workspace is the workspace defined for the usage of Batch Compute. Batch Compute ensures the isolation between jobs. <code>GLOBAL_WORKSPACE</code> : The workspace is the instance OS space.. Note: This field may return <code>null</code> , indicating that no valid value was found.

Placement

Placement of an instance, including its availability zone, project, host (for CDH products only), master host IP, etc.

Used by actions: `CreateComputeEnv`, `DescribeComputeEnv`, `DescribeComputeEnvs`, `DescribeJobs`.

Name	Type	Required	Description
Zone	String	Yes	ID of the availability zone where the instance resides. You can call the DescribeZones API and obtain the ID in the returned <code>Zone</code> field.
ProjectId	Integer	No	ID of the project to which the instance belongs. This parameter can be obtained from the <code>projectId</code> returned by DescribeProject . If this is left empty, the default project is used.
HostIds	Array of String	No	ID list of CDHs from which the instance can be created. If you have purchased CDHs and specify this parameter, the instances you purchase will be randomly deployed on the CDHs.
HostIps	Array of String	No	IPs of the hosts to create CVMs
HostId	String	No	The ID of the CDH to which the instance belongs, only used as an output parameter.

RedirectInfo

Redirection information

Used by actions: **CreateTaskTemplate**, **DescribeJobSubmitInfo**, **DescribeTask**, **ModifyTaskTemplate**.

Name	Type	Required	Description
StdoutRedirectPath	String	No	Standard output redirection path
StderrRedirectPath	String	No	Standard error redirection path
StdoutRedirectFileName	String	No	Standard output redirection file name, which supports three placeholders: <code>\${BATCH_JOB_ID}</code> , <code>\${BATCH_TASK_NAME}</code> , and <code>\${BATCH_TASK_INSTANCE_INDEX}</code>
StderrRedirectFileName	String	No	Standard error redirection file name, which supports three placeholders: <code>\${BATCH_JOB_ID}</code> , <code>\${BATCH_TASK_NAME}</code> , and <code>\${BATCH_TASK_INSTANCE_INDEX}</code>

RedirectLocalInfo

Local redirection information

Used by actions: **CreateTaskTemplate**, **DescribeJobSubmitInfo**, **ModifyTaskTemplate**.

Name	Type	Required	Description
StdoutLocalPath	String	No	Standard output redirection local path
StderrLocalPath	String	No	Standard error redirection local path
StdoutLocalFileName	String	No	Standard output redirection local file name, which supports three placeholders: <code>\${BATCH_JOB_ID}</code> , <code>\${BATCH_TASK_NAME}</code> , and <code>\${BATCH_TASK_INSTANCE_INDEX}</code>
StderrLocalFileName	String	No	Standard error redirection local file name, which supports three placeholders: <code>\${BATCH_JOB_ID}</code> , <code>\${BATCH_TASK_NAME}</code> , and <code>\${BATCH_TASK_INSTANCE_INDEX}</code>

RunAutomationServiceEnabled

Describes the TAT service information.

Used by actions: `CreateComputeEnv`, `DescribeComputeEnvCreateInfo`.

Name	Type	Required	Description
Enabled	Boolean	No	Whether to enable the TAT service. Valid values: <code>TRUE</code> : yes; <code>FALSE</code> : no Default: <code>FALSE</code> .

RunMonitorServiceEnabled

Describes information related to the Cloud Monitor service.

Used by actions: `CreateComputeEnv`, `DescribeComputeEnvCreateInfo`.

Name	Type	Required	Description
Enabled	Boolean	No	Whether to enable Cloud Monitor. Valid values: <code>TRUE</code>: enable Cloud Monitor <code>FALSE</code>: do not enable Cloud Monitor Default value: <code>TRUE</code>.

RunSecurityServiceEnabled

Describes information related to the Cloud Security service.

Used by actions: `CreateComputeEnv`, `DescribeComputeEnvCreateInfo`.

Name	Type	Required	Description
Enabled	Boolean	No	Whether to enable Cloud Security. Valid values: <code>TRUE</code>: enable Cloud Security <code>FALSE</code>: do not enable Cloud Security Default value: <code>TRUE</code>.

SpotMarketOptions

Options related to bidding.

Used by actions: `CreateComputeEnv`, `DescribeComputeEnvCreateInfo`.

Name	Type	Required	Description
MaxPrice	String	Yes	Bidding price
SpotInstanceType	String	No	Bidding request type. Currently only "one-time" is supported.

StorageBlock

Information on local HDD storage.

Used by actions: `DescribeCvmZoneInstanceConfigInfos`.

Name	Type	Description
Type	String	Local HDD storage type. Value: LOCAL_PRO. Note: This field may return null, indicating that no valid value is found.
MinSize	Integer	Minimum capacity of local HDD storage Note: This field may return null, indicating that no valid value is found.
MaxSize	Integer	Maximum capacity of local HDD storage Note: This field may return null, indicating that no valid value is found.

SystemDisk

Describes information on the block device where the operating system is stored, i.e., the system disk.

Used by actions: `CreateComputeEnv`, `DescribeComputeEnvCreateInfo`.

Name	Type	Required	Description
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Name	Type	Required	Description
DiskType	String	No	System disk type. For more information about the limits of system disk types, please see Storage Overview. Valid values: • LOCAL_BASIC: local disk • LOCAL_SSD: local SSD disk • CLOUD_BASIC: HDD cloud disk • CLOUD_SSD: SSD cloud disk • CLOUD_PREMIUM: Premium cloud storage • CLOUD_BSSD: Balanced SSD The disk currently in stock will be used by default.
DiskId	String	No	System disk ID. System disks whose type is <code>LOCAL_BASIC</code> or <code>LOCAL_SSD</code> do not have an ID and do not support this parameter. It is only used as a response parameter for APIs such as <code>DescribeInstances</code> , and cannot be used as a request parameter for APIs such as <code>RunInstances</code> .
DiskSize	Integer	No	System disk size; unit: GB; default value: 50 GB.
CdId	String	No	ID of the dedicated cluster to which the instance belongs.

Tag

Information on tags

Used by actions: `CreateComputeEnv`, `CreateTaskTemplate`, `DescribeComputeEnv`, `DescribeComputeEnvCreateInfo`, `DescribeComputeEnvCreateInfos`, `DescribeComputeEnvs`, `DescribeJob`, `DescribeJobSubmitInfo`, `DescribeJobs`, `DescribeTaskTemplates`.

Name	Type	Required	Description
Key	String	Yes	Tag key Note: This field may return <code>null</code> , indicating that no valid value was found.
Value	String	Yes	Tag value Note: This field may return <code>null</code> , indicating that no valid value was found.

Task

Task

Used by actions: `CreateTaskTemplate`, `DescribeJobSubmitInfo`, `DescribeTaskTemplates`, `ModifyTaskTemplate`.

Name	Type	Required	Description
Application	Application	Yes	Application information
TaskName	String	No	Task name, which should be unique within a job
TaskInstanceNum	Integer	No	Number of running task instances
ComputeEnv	AnonymousComputeEnv	No	Compute environment information. One (and only one) parameter must be specified for <code>ComputeEnv</code> and <code>EnvId</code> .
EnvId	String	No	Compute environment ID. One (and only one) parameter must be specified for <code>ComputeEnv</code> and <code>EnvId</code> .
RedirectInfo	RedirectInfo	No	Redirection information
RedirectLocalInfo	RedirectLocalInfo	No	Local redirection information
InputMappings	Array of InputMapping	No	Input mapping
OutputMappings	Array of OutputMapping	No	Output mapping
OutputMappingConfigs	Array of OutputMappingConfig	No	Output mapping configuration
EnvVars	Array of EnvVar	No	Custom environment variable
Authentications	Array of Authentication	No	Authorization information

Name	Type	Required	Description
FailedAction	String	No	The processing method after the TaskInstance fails; Value range: <code>TERMINATE</code> (default), <code>INTERRUPT</code> , <code>FAST_INTERRUPT</code> .
MaxRetryCount	Integer	No	The maximum number of retries after the task fails. Range: 0 - 5. Default value: 0
Timeout	Integer	No	Timeout period of the task in seconds. Defaults value: 86400
MaxConcurrentNum	Integer	No	The maximum number of concurrent tasks. Range: 0 - 200000. There is no limit by default.
RestartComputeNode	Boolean	No	Restarts the compute node after the task is completed. This is suitable for specifying the compute environment for task execution.
ResourceMaxRetryCount	Integer	No	Maximum number of retry attempts after failing to create computing resources such as the CVM in the task launch process. Default: 0 ; Maximum: 100 .

TaskInstanceLog

Task instance log details.

Used by actions: `DescribeTaskLogs`.

Name	Type	Description
TaskInstanceIndex	Integer	Task instance

Name	Type	Description
StdoutLog	String	Standard output log (Base64-encoded, up to 2048 bytes after decompression) Note: This field may return <code>null</code> , indicating that no valid value was found.
StderrLog	String	Standard error log (Base64-encoded, up to 2048 bytes after decompression) Note: This field may return <code>null</code> , indicating that no valid value was found.
StdoutRedirectPath	String	Standard output redirection path Note: This field may return <code>null</code> , indicating that no valid value was found.
StderrRedirectPath	String	Standard error redirection path Note: This field may return <code>null</code> , indicating that no valid value was found.
StdoutRedirectFileName	String	Standard output redirection file name Note: This field may return <code>null</code> , indicating that no valid value was found.
StderrRedirectFileName	String	Standard error redirection file name Note: This field may return <code>null</code> , indicating that no valid value was found.

TaskInstanceMetrics

Task instance statistical metrics

Used by actions: **DescribeJob**, **DescribeTask**.

Name	Type	Description
SubmittedCount	Integer	Number of submitted tasks
PendingCount	Integer	Number of pending tasks
RunnableCount	Integer	Number of Runnable tasks
StartingCount	Integer	Number of starting tasks
RunningCount	Integer	Number of running tasks

Name	Type	Description
SucceedCount	Integer	Number of successful tasks
FailedInterruptedCount	Integer	Number of failed and interrupted tasks
FailedCount	Integer	Number of failed tasks

TaskInstanceView

Task instance view information

Used by actions: **DescribeTask**.

Name	Type	Description
TaskInstanceIndex	Integer	Task instance index
TaskInstanceState	String	Task instance state
ExitCode	Integer	Exit code after application execution is completed Note: This field may return <code>null</code> , indicating that no valid value was found.
StateReason	String	Task instance state reason. If the task instance fails, the reason for the failure will be logged.
ComputeNodeInstanceId	String	The <code>InstanceId</code> of the compute node (e.g., CVM instance) where the task instance is running. This field is empty if the task instance is not running or has already been completed and will change when the task instance is retried. Note: This field may return <code>null</code> , indicating that no valid value was found.
CreateTime	String	Creation time
LaunchTime	String	Start time Note: This field may return <code>null</code> , indicating that no valid value was found.
RunningTime	String	Running start time Note: This field may return <code>null</code> , indicating that no valid value was found.

Name	Type	Description
EndTime	String	Task end time Note: This field may return <code>null</code> , indicating that no valid value was found.
RedirectInfo	RedirectInfo	Redirection information
StateDetailedReason	String	Task instance state reason details. If the task instance fails, the reason for the failure will be logged

TaskMetrics

Task statistical metrics

Used by actions: [DescribeJob](#), [DescribeJobs](#).

Name	Type	Description
SubmittedCount	Integer	Number of submitted tasks
PendingCount	Integer	Number of pending tasks
RunnableCount	Integer	Number of Runnable tasks
StartingCount	Integer	Number of starting tasks
RunningCount	Integer	Number of running tasks
SucceedCount	Integer	Number of successful tasks
FailedInterruptedCount	Integer	Number of failed and interrupted tasks
FailedCount	Integer	Failed count

TaskTemplateView

Task template information

Used by actions: [DescribeTaskTemplates](#).

Name	Type	Description
------	------	-------------

Name	Type	Description
TaskTemplateId	String	Task template ID
TaskTemplateName	String	Task template name
TaskTemplateDescription	String	Task template description
TaskTemplateInfo	Task	Task template information
CreateTime	String	Creation time
Tags	Array of Tag	Tag list bound to the task template. Note: This field may return <code>null</code> , indicating that no valid value was found.

TaskView

Task view information

Used by actions: **DescribeJob**.

Name	Type	Description
TaskName	String	Task name
TaskState	String	Task status
CreateTime	String	Start time
EndTime	String	End time Note: This field may return <code>null</code> , indicating that no valid value was found.

VirtualPrivateCloud

Describes information on VPC, including subnets, IP addresses, etc.

Used by actions: **CreateComputeEnv**, **DescribeComputeEnvCreateInfo**.

Name	Type	Required	Description
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Name	Type	Required	Description
VpcId	String	Yes	VPC ID in the format of <code>vpc-xxx</code> . To obtain valid VPC IDs, you can log in to the console or call the DescribeVpcEx API and look for the <code>unVpcId</code> fields in the response. If you specify <code>DEFAULT</code> for both <code>VpcId</code> and <code>SubnetId</code> when creating an instance, the default VPC will be used.
SubnetId	String	Yes	VPC subnet ID in the format <code>subnet-xxx</code> . To obtain valid subnet IDs, you can log in to the console or call DescribeSubnets and look for the <code>unSubnetId</code> fields in the response. If you specify <code>DEFAULT</code> for both <code>SubnetId</code> and <code>VpcId</code> when creating an instance, the default VPC will be used.
AsVpcGateway	Boolean	No	Whether to use a CVM instance as a public gateway. The public gateway is only available when the instance has a public IP and resides in a VPC. Valid values: <code>TRUE</code> : yes; <code>FALSE</code> : no Default: <code>FALSE</code> .
PrivateIpAddresses	Array of String	No	Array of VPC subnet IPs. You can use this parameter when creating instances or modifying VPC attributes of instances. Currently you can specify multiple IPs in one subnet only when creating multiple instances at the same time.
Ipv6AddressCount	Integer	No	Number of IPv6 addresses randomly generated for the ENI.

Error Codes

Last updated : 2023-05-04 15:47:12

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
AllowedOneAttributeInEnvIdAndComputeEnv	<code>ComputeEnv</code> and <code>EnvId</code> cannot be both specified.
InternalError.CallCpmAPI	The CPM API call returns an error.
InternalError.CallCvm	An error is returned for the CVM API call.
InternalError.CallTagAPI	Error while obtaining the Tag component.

InvalidFilter	The specified filter is not supported.
InvalidParameter.ComputeNodeIdMalformed	Invalid compute node ID format.
InvalidParameter.CvmParameters	Invalid CVM parameter.
InvalidParameter.EnvDescriptionTooLong	The compute environment description is too long.
InvalidParameter.EnvIdMalformed	Invalid compute environment ID format.
InvalidParameter.EnvNameTooLong	The compute environment name is too long.
InvalidParameter.ImageIdMalformed	Incorrect image ID.
InvalidParameter.InvalidParameterCombination	Invalid parameter combination.
InvalidParameter.JobIdMalformed	Invalid job ID format.
InvalidParameter.NotificationEventNameDuplicate	Duplicate message notification event name.
InvalidParameter.NotificationTopicName	Invalid topic name.
InvalidParameter.NotificationTopicNameTooLong	The topic name is too long.
InvalidParameter.TaskName	Invalid task name.
InvalidParameter.TaskNameTooLong	The task name is too long.
InvalidParameter.TaskTemplateDescriptionTooLong	The task template description is too long.
InvalidParameter.TaskTemplateIdMalformed	Invalid task template ID format.
InvalidParameter.TaskTemplateName	Invalid task template name.
InvalidParameter.TaskTemplateNameTooLong	The task template name is too long.
InvalidParameterAtLeastOneAttribute	At least one of <code>TaskTemplateName</code> , <code>TaskTemplateDescription</code> , and <code>TaskTemplateInfo</code> must be specified.

InvalidParameterValue.ComputeEnv	Compute environment parameter validation failed.
InvalidParameterValue.DependenceNotFoundTaskName	The dependent task definition was not found.
InvalidParameterValue.DependenceUnfeasible	Loop task dependency is prohibited.
InvalidParameterValue.InstanceIdDuplicated	Instance IDs duplicate.
InvalidParameterValue.InstanceType	The specified instance type is not supported.
InvalidParameterValue.InstanceTypeDuplicate	The instance type value must be unique.
InvalidParameterValue.InstanceTypesEmpty	The list of instance types cannot be empty.
InvalidParameterValue.InvalidDataTypeAny	The value of <code>DataTypeAny</code> is invalid.
InvalidParameterValue.InvalidFilter	Incorrect <code>Filter</code> parameter.
InvalidParameterValue.InvalidZoneMismatchRegion	The availability zone and the region do not match.
InvalidParameterValue.LimitExceeded	The number of filter parameter values exceeds the limit.
InvalidParameterValue.LocalPath	Invalid local storage path.
InvalidParameterValue.MaxRetryCount	Too many retry attempts
InvalidParameterValue.Negative	Invalid negative parameter.
InvalidParameterValue.RemoteStoragePath	Invalid storage path format.
InvalidParameterValue.RemoteStorageSchemeType	Invalid storage type.
InvalidParameterValue.ResourceType	The specified <code>ResourceType</code> is invalid.
InvalidParameterValue.UnavailableZone	The availability zone is unavailable.
InvalidParameterValue.UnsupportedBatchInstanceChargeType	The model billing type is not supported by BatchCompute.

InvalidZone.MismatchRegion	The specified zone does not exist.
LimitExceeded.ComputeEnvQuota	Insufficient compute environment quota.
LimitExceeded.CpuQuota	Insufficient CPU quota.
LimitExceeded.TaskTemplateQuota	Insufficient task template quota.
ResourceInUse.Job	The job is in use.
ResourceNotFound.ComputeEnv	The specified compute environment does not exist.
ResourceNotFound.ComputeNode	The specified compute node does not exist.
ResourceNotFound.Job	The specified job does not exist.
ResourceNotFound.Task	The specified job task does not exist.
ResourceNotFound.TaskInstance	The specified task instance does not exist.
ResourceNotFound.TaskTemplate	The specified task template ID does not exist.
UnauthorizedOperation.UserNotAllowedToUseBatch	It is prohibited to use the BatchCompute service.
UnsupportedOperation.AcceptOtherRequest	Another request is being processed and deletion is prohibited.
UnsupportedOperation.ComputeEnvAcceptOtherRequest	The compute environment accepts other requests.
UnsupportedOperation.ComputeEnvOperation	Deletion is prohibited.
UnsupportedOperation.ComputeNodeForbidTerminate	Compute node termination is prohibited.
UnsupportedOperation.ComputeNodesTerminating	The compute node is terminating.
UnsupportedOperation.InstancesNotAllowedToAttach	This instance cannot be added to the compute environment.

UnsupportedOperation.NotEnoughComputeNodesToTerminate	The number of compute nodes to be removed for scale-in is greater than the number of existing compute nodes.
UnsupportedOperation.TerminateOperationWithEnvId	This operation is prohibited for the task instances in the specified compute environment.