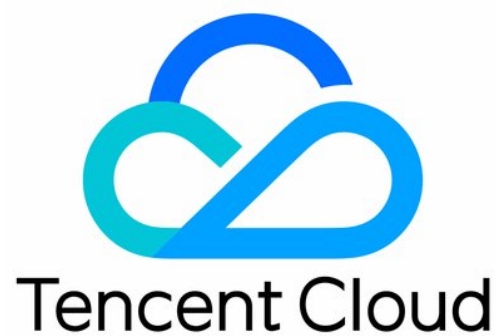


Tencent HealthCare Omics Platform

API

Product Documentation



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Release 2

Release time: 2024-11-26 16:47:22

Release updates:

Improvement to existing documentation.

Modified data structures:

- [ApplicationVersion](#)
 - **Deprecate members:** GitInfo
- [ExecutionTime](#)
 - **Modified members:** SubmitTime, StartTime, EndTime
- [ResourceIds](#)
 - **Modified members:** VPCId, SubnetId, SecurityGroupId, TDSQLCId, CFSId, CFSSStorageType, CVMId, EKSIId
- [RunStatusCount](#)
 - **Modified members:** Status, Count
- [Table](#)
 - **Modified members:** TableId, ProjectId, Name, Description, Columns, CreateTime, Creator
- [TableColumn](#)
 - **Modified members:** Header, DataType
- [TableRow](#)
 - **Modified members:** TableRowUuid, Content

Release 1

Release time: 2024-07-25 20:43:51

Release updates:

Improvement to existing documentation.

New APIs:

- [CreateEnvironment](#)
- [CreateVolume](#)
- [DeleteEnvironment](#)
- [DeleteVolume](#)
- [DeleteVolumeData](#)
- [DescribeEnvironments](#)
- [DescribeRunGroups](#)
- [DescribeRuns](#)
- [DescribeTables](#)
- [DescribeTablesRows](#)
- [DescribeVolumes](#)
- [GetRunCalls](#)
- [GetRunMetadataFile](#)
- [GetRunStatus](#)
- [ImportTableFile](#)
- [ModifyVolume](#)
- [RetryRuns](#)
- [RunApplication](#)
- [RunWorkflow](#)
- [TerminateRunGroup](#)

New data structures:

- [ApplicationVersion](#)
- [CVMOption](#)
- [CacheInfo](#)
- [ClusterOption](#)
- [DatabaseOption](#)
- [Environment](#)
- [EnvironmentConfig](#)
- [ExecutionTime](#)
- [Filter](#)
- [GitInfo](#)
- [LimitRange](#)
- [NFOption](#)
- [ResourceIds](#)
- [ResourceQuota](#)
- [Run](#)

- [RunGroup](#)
- [RunMetadata](#)
- [RunOption](#)
- [RunStatusCount](#)
- [SecurityGroupOption](#)
- [StorageOption](#)
- [Table](#)
- [TableColumn](#)
- [TableRow](#)
- [VPCOption](#)
- [Volume](#)

Introduction

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Tencent HealthCare Omics Platform

API Category

Last updated : 2024-07-26 15:25:42

Environment Management APIs

API Name	Feature	Frequency Limit (maximum requests per second)
CreateEnvironment	Creates an environment	20
DescribeEnvironments	Queries the environment list	20
DeleteEnvironment	Delete the environment	20
CreateVolume	Creates a volume	20
DeleteVolume	Deletes the volume	20
DeleteVolumeData	Deletes the volume data	20
ModifyVolume	Modifies the volume	20
DescribeVolumes	Queries the volume list	20

Tencent Healthcare Omics Platform APIs

API Name	Feature	Frequency Limit (maximum requests per second)
DescribeRunGroups	Queries the run group list	20
DescribeRuns	Queries the run list	20
GetRunCalls	Queries job details	20
GetRunMetadataFile	Gets the run details file	20
GetRunStatus	Queries run details	20
TerminateRunGroup	Terminates the run group	20
ImportTableFile	Imports the table file	20
RunApplication	Runs the application	20

RunWorkflow	Runs the workflow	20
DescribeTables	Queries the table	20
DescribeTablesRows	Queries the table row data	20
RetryRuns	Retries the run	20

Making API Requests

Request Structure

Last updated : 2024-11-26 16:47:25

1. Service Address

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

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

2. Communications Protocol

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

3. Request Methods

Supported HTTP request methods:

- POST (recommended)
- GET

The Content-Type types supported by POST requests:

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

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

4. Character Encoding

Only UTF-8 encoding is used.

Common Params

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

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

Common parameters for Signature Algorithm v3

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

Parameter Name	Type	Required	Description
X-TC-Action	String	Yes	The name of the API for the desired operation. For the specific value, see description of common parameter <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=AKID*****/Date/service/tc3_request, SignedHeaders=content-type;host, Signature=fe5f80f77d5fa3beca038a248ff027d0445342fe2855ddc96317 Here: - TC3-HMAC-SHA256: Signature method, currently fixed as this value; - Credential: Signature credential; AKID***** is the SecretId; Date is a date and time, and this value must match the value of X-TC-Timestamp (a common parameter).

			<p>UTC time format; service is the name of the product/service, and is general name prefix. For example, a domain name cvm.tencentcloudapi.com refers to product and the value would be cvm;</p> <ul style="list-style-type: none"> - 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=AKID*****/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=AKID*****/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=AKID*****/2018-05-30/cvm/tc3_request, SignedHeaders=content-type;host, Signature=582c400e06b5924a6f2b5d7d672d79c15b13162d9279b0855cfba6789a8edb4c
```

```
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=37ac2f4fde00b0ac9bd9eadeb459b1bbbee224158d66e7ae5fcadb70b2d181d02&Region=ap-guangzhou&Nonce=23823223&SecretId=AKID*****
```

```
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=37ac2f4fde00b0ac9bd9eadeb459b1bbee224158d66e7ae5fcadb70b2d181d02&Region=ap-guangzhou&Nonce=23823223&SecretId=AKID*****  
*****
```

Region List

The supported Region field values for all APIs in this product are listed as below. For any API that does not support any of the following regions, this field will be described additionally in the relevant API document.

Region	Value
North China (Beijing)	ap-beijing
South China (Guangzhou)	ap-guangzhou
Hong Kong/Macao/Taiwan (China) (Hong Kong (China))	ap-hongkong
East China (Shanghai)	ap-shanghai
Southeast Asia (Singapore)	ap-singapore
Europe (Frankfurt)	eu-frankfurt

Signature v3

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

Applying for Security Credentials

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

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

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

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

Using the Resources for Developers

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

TC3-HMAC-SHA256 Signature Algorithm

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

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

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

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

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

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

Assuming that your SecretId and SecretKey are `AKID*****` and `*****`, 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=AKID*****
*/2019-02-25/cvm/tc3_request, SignedHeaders=content-type;host, Signature=ca282b0a
56549857d53b2beb08b0c35871c892d42d09ae30b38d456e09ce291f" \
-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	<p>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>.</p> <p>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.</p>
CanonicalHeaders	<p>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.</p> <p>Concatenation rules:</p> <ol style="list-style-type: none"> 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). <p>The calculation result in this example is <code>content-type:application/json; charset=utf-8\nhost:cvm.tencentcloudapi.com\n</code>.</p> <p>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.</p>
SignedHeaders	<p>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.</p> <p>Concatenation rules:</p> <ol style="list-style-type: none"> 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 (;). <p>The value in this example is <code>content-type;host</code></p>
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 pay
of the HTTP request, performing hexadecimal encoding, and finally converting the encc
string to lowercase letters. For GET requests, RequestPayload is always an empt
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 TC3-HMAC-SHA256 .
RequestTimestamp	Request timestamp, i.e., the value of the common parameter X-TC-Timestamp in request header, which is the UNIX timestamp of the current time in seconds, such as 1551113065 in this example.
CredentialScope	Scope of the credential in the format of Date/service/tc3_request , including date, requested service and termination string (tc3_request). Date is a date in UTC time, whose value should match the UTC date converted by the common parameter X-TC-Timestamp ; service is the product name, which should match the domain name of the product called. The calculation result in this example is 2019-02-25/cvm/tc3_request .

HashedCanonicalRequest	<p>Hash value of the CanonicalRequest string concatenated in the steps above. The pseudocode for calculation is Lowercase(HexEncode(Hash.SHA256(CanonicalRequest)))</p> <p>The calculation result in this example is</p> <pre>2815843035062fffd6f2a44ea8a34818b0dc46f024b8b3786976a3ad</pre>
------------------------	----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------

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
2815843035062fffd6f2a44ea8a34818b0dc46f024b8b3786976a3adda7a
```

3. Calculating the Signature

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

```
SecretKey = "*****"
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., *****.
Date	The Date field information in Credential , such as 2019-02-25 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>AKID*****</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>ca282b0a56549857d53b2beb08b0c35871c892d42d09ae30b38d456e09ce291f</code> .

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

```
TC3-HMAC-SHA256 Credential=AKID*****/2019-02-25/cvm/tc3_request, SignedHeaders=content-type;host, Signature=ca282b0a56549857d53b2beb08b0c35871c892d42d09ae30b38d456e09ce291f
```

The following example shows a finished authorization header:

```
POST https://cvm.tencentcloudapi.com/
Authorization: TC3-HMAC-SHA256 Credential=AKID*****/2019-02-25/cvm/tc3_request, SignedHeaders=content-type;host, Signature=ca282b0a56549857d53b2beb08b0c35871c892d42d09ae30b38d456e09ce291f
```

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

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

5. Signature Demo

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

- [Python](#)
- [Java](#)
- [PHP](#)
- [Go](#)
- [NodeJS](#)
- [.NET](#)

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

The final output URL might be: `https://cvm.tencentcloudapi.com/?Action=DescribeInstances&InstanceIds.0=ins-09dx96dg&Limit=20&Nonce=11886&Offset=0&Region=ap-guangzhou&SecretId=AKID*****&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 = "AKID*****";
    private final static String SECRET_KEY = "*****";
    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 = "AKID*****"
secret_key = "*****"

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 := "AKID*****"
    secretKey := "*****"
    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 = "AKID*****";
$secretKey = "*****";
$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 = 'AKID*****'
secret_key = '*****'

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 = "AKID*****";
    string SECRET_KEY = "*****";

    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 = "AKID*****"
const SECRET_KEY = "*****"

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* 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 = "AKID*****";
string SECRET_KEY = "*****";

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: AKID*****
- SecretKey: *****

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

The final signature is:

```
9FzTQAN1UZ489+BqCg1fNBQaCqw=
```

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 9FzTQAN1UZ489+BqCg1fNBQaCqw=, the final signature string request parameter (Signature) is 9FzTQAN1UZ489%2BBqCg1fNBQaCqw%3D, which will be used to generate the final request URL.

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

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

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

4. Signature Failure

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

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

5. Signature Demo

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

- [Python](#)
- [Java](#)
- [PHP](#)
- [Go](#)
- [NodeJS](#)
- [.NET](#)

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

The final output URL might be: `https://cvm.tencentcloudapi.com/?Action=DescribeInstances&InstanceIds.0=ins-09dx96dg&Limit=20&Nonce=11886&Offset=0&Region=ap-guangzhou&SecretId=AKID*****&Signature=9FzTQAN1UZ489%2BBqCg1fNBQaCqw%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 enable s automatic sorting
    // A random number should be used when actually calling, for example: params.put ("Nonce", new Random().nextInt(java.lang.Integer.MAX_VALUE));
    params.put("Nonce", 11886); // Common parameter
    // The current time of the system should be used when actually calling, for example: params.put("Timestamp", System.currentTimeMillis() / 1000);
    params.put("Timestamp", 1465185768); // Common parameter
    params.put("SecretId", "AKID*****"); // 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), "*****", "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 = "AKID*****"
secret_key = "*****"
```



```

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 := "AKID*****"
    secretKey := "*****"

```

```
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 = "AKID*****";
$secretKey = "*****";
$params["Nonce"] = 11886;//rand();
```

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

ksort($param);

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

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

Ruby

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

secret_id = "AKID*****"
secret_key = "*****"

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 = "AKID*****";
string SECRET_KEY = "*****";

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 = "AKID*****"
const SECRET_KEY = "*****"

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 : 2024-07-26 15:25:50

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.
<code>MissingParameter</code>	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.

Environment Management APIs

CreateEnvironment

Last updated : 2024-11-26 16:47:39

1. API Description

Domain name for API request: omics.intl.tencentcloudapi.com.

This API is used to create an environment for Tencent Healthcare Omics Platform.

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: CreateEnvironment.
Version	Yes	String	Common Params . The value used for this API: 2022-11-28.
Region	Yes	String	Common Params . For more information, please see the list of regions supported by the product.
Name	Yes	String	Environment name
Config	Yes	EnvironmentConfig	Environment configuration information
Description	No	String	Environment description
IsDefault	No	Boolean	Whether it is the default environment.

3. Output Parameters

Parameter Name	Type	Description
EnvironmentId	String	Environment ID
WorkflowUuid	String	Workflow UUID
RequestId	String	The unique request ID, generated by the server, will be returned for every request (if the request fails to reach the server for other reasons, the request will not obtain a RequestId). RequestId is required for locating a problem.

4. Example

Example1 Creating an Environment

This example shows you how to create an environment.

Input Example

```
POST / HTTP/1.1
Host: omics.intl.tencentcloudapi.com
Content-Type: application/json
X-TC-Action: CreateEnvironment

{
  "Name": "omics env",
  "Description": "env description",
  "Config": {
    "VPCOption": {
      "SubnetZone": "ap-guangzhou-6",
      "VPCCIDRBlock": "10.8.0.0/16",
      "SubnetCIDRBlock": "10.8.16.0/20"
    },
    "ClusterOption": {
      "Zone": "ap-guangzhou-6",
      "Type": "KUBERNETES"
    },
    "DatabaseOption": {
      "Zone": "ap-guangzhou-4"
    },
    "StorageOption": {
      "StorageType": "SD",
```

```
"Zone": "ap-guangzhou-6",
},
"CVMOption": {
  "Zone": "ap-guangzhou-6",
  "InstanceType": "SA3.MEDIUM8"
}
}
}
```

Output Example

```
{
  "Response": {
    "RequestId": "946e07f8-f487-46ab-b486-65e362b4a38b",
    "EnvironmentId": "env-1ljckw12",
    "WorkflowUuid": "bc5b790b-407e-42c7-b488-a252fee1dcc7"
  }
}
```

5. Developer Resources

SDK

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

- [Tencent Cloud SDK 3.0 for Python](#)
- [Tencent Cloud SDK 3.0 for Java](#)
- [Tencent Cloud SDK 3.0 for PHP](#)
- [Tencent Cloud SDK 3.0 for Go](#)
- [Tencent Cloud SDK 3.0 for Node.js](#)
- [Tencent Cloud SDK 3.0 for .NET](#)
- [Tencent Cloud SDK 3.0 for C++](#)

Command Line Interface

- [Tencent Cloud CLI 3.0](#)

6. Error Code

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

Error Code	Description
AuthFailure	CAM signature/authentication error.
FailedOperation	Operation failed.
InternalError	Internal error.
InvalidParameter	Parameter error.
InvalidParameterValue	Parameter value error.
InvalidParameterValue.DuplicateName	Duplicated name.
LimitExceeded	Exceeded the quota limit.
OperationDenied	Operation rejected.
ResourceInsufficient	Insufficient resources.

DescribeEnvironments

Last updated : 2024-11-26 16:47:37

1. API Description

Domain name for API request: omics.intl.tencentcloudapi.com.

This API is used to query the environment list.

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

We recommend you to use API Explorer

[Try it](#)

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

2. Input Parameters

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

Parameter Name	Required	Type	Description
Action	Yes	String	Common Params . The value used for this API: DescribeEnvironments.
Version	Yes	String	Common Params . The value used for this API: 2022-11-28.
Region	Yes	String	Common Params . For more information, please see the list of regions supported by the product.
Offset	No	Integer	Offset, which defaults to 0.
Limit	No	Integer	Quantity of returns. It is 20 by default, and the maximum value is 100.
Filters.N	No	Array of Filter	Filter, which supports filtering fields: - EnvironmentId: Environment ID - Name: Name - Status: Environmental status

3. Output Parameters

Parameter Name	Type	Description
TotalCount	Integer	Number of qualified items
Environments	Array of Environment	List of Environment details
RequestId	String	The unique request ID, generated by the server, will be returned for every request (if the request fails to reach the server for other reasons, the request will not obtain a RequestId). RequestId is required for locating a problem.

4. Example

Example1 Querying the Environment List

This example shows you how to query the environment list.

Input Example

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

{
  "Offset": 0,
  "Limit": 1
}
```

Output Example

```
{
  "Response": {
    "Environments": [
      {
        "Available": true,
        "CreationTime": "2022-12-14T16:14:49+08:00",
        "Description": "test description",
        "EnvironmentId": "env-lljckw12",

```

```
"LastWorkflowUuid": "94922fcd-107e-4220-9a0f-cc3cd84a9a27",
"Message": "",
"Name": "test name",
"Region": "ap-guangzhou",
"ResourceIds": {
  "CFSId": "cfs-iwee8gk3",
  "CFSStorageType": "SD",
  "CVMId": "ins-jcbptifa",
  "EKSIId": "cls-9j9zh13o",
  "SecurityGroupId": "sg-gzsfk3r5",
  "SubnetId": "subnet-qdkfn4xe",
  "TDSQLCId": "cynosdbmysql-kzwghvxj",
  "VPCId": "vpc-8yhq1v63"
},
"Status": "RUNNING",
"Type": "KUBERNETES",
"IsDefault": false,
"IsManaged": false
}
],
"RequestId": "1bc7ec7d-5fa9-42af-ac6d-1ef56f3bf625",
"TotalCount": 10
}
}
```

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](#)
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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
AuthFailure	CAM signature/authentication error.
InternalServerError	Internal error.
InvalidParameter	Parameter error.
InvalidParameterValue	Parameter value error.
OperationDenied	Operation rejected.

DeleteEnvironment

Last updated : 2024-11-26 16:47:38

1. API Description

Domain name for API request: omics.intl.tencentcloudapi.com.

This API is used to delete the 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: DeleteEnvironment.
Version	Yes	String	Common Params . The value used for this API: 2022-11-28.
Region	Yes	String	Common Params . For more information, please see the list of regions supported by the product.
EnvironmentId	Yes	String	Environment ID

3. Output Parameters

Parameter Name	Type	Description
WorkflowUuid	String	Workflow UUID

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

4. Example

Example1 Deleting the Environment

This example shows you how to delete the environment.

Input Example

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

{
  "EnvironmentId": "env-lljckw12"
}
```

Output Example

```
{
  "Response": {
    "RequestId": "a1de0885-6294-4176-9358-dc505fbfa42d",
    "WorkflowUuid": "bc5b790b-407e-42c7-b488-a252fee1dcc7"
  }
}
```

5. Developer Resources

SDK

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

- [Tencent Cloud SDK 3.0 for Go](#)
- [Tencent Cloud SDK 3.0 for Node.js](#)
- [Tencent Cloud SDK 3.0 for .NET](#)
- [Tencent Cloud SDK 3.0 for C++](#)

Command Line Interface

- [Tencent Cloud CLI 3.0](#)

6. Error Code

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

Error Code	Description
AuthFailure	CAM signature/authentication error.
FailedOperation	Operation failed.
InternalServerError	Internal error.
InvalidParameter	Parameter error.
OperationDenied	Operation rejected.
ResourceInUse	Resources are occupied.
ResourceNotFound	The resource does not exist.
ResourceUnavailable	Resource not available.
UnsupportedOperation	Unsupported operation.

CreateVolume

Last updated : 2024-11-26 16:47:38

1. API Description

Domain name for API request: omics.intl.tencentcloudapi.com.

This API is used to create a volume.

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: CreateVolume.
Version	Yes	String	Common Params . The value used for this API: 2022-11-28.
Region	Yes	String	Common Params . For more information, please see the list of regions supported by the product.
EnvironmentId	Yes	String	Environment ID
Name	Yes	String	Name
Type	Yes	String	Volume type. Valid values: * SHARED: Multi-point mount shared storage
Spec	Yes	String	Volume specifications. Valid values: - SD: standard - HP: high-performance

			- TB: standard Turbo - TP: high-performance Turbo
Description	No	String	Description
Capacity	No	Integer	Volume size (GB), which is required to be specified for the Turbo series.

3. Output Parameters

Parameter Name	Type	Description
Volumeld	String	Volume ID Note: This field may return null, indicating that no valid values can be obtained.
RequestId	String	The unique request ID, generated by the server, will be returned for every request (if the request fails to reach the server for other reasons, the request will not obtain a RequestId). RequestId is required for locating a problem.

4. Example

Example1 Creating a Volume

This example shows you how to create a volume.

Input Example

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

{
  "EnvironmentId": "menv-ry46eloh",
  "Name": "Test volume",
  "Type": "SHARED",
  "Spec": "HP",
  "Capacity": 0
}
```


Output Example

```
{
  "Response": {
    "RequestId": "d79c957c-adca-4e29-81ba-1add68284e09",
    "VolumeId": "vol-mpcb5xn1"
  }
}
```

5. Developer Resources

SDK

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- [Tencent Cloud SDK 3.0 for Go](#)
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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
AuthFailure	CAM signature/authentication error.
FailedOperation	Operation failed.
InternalError	Internal error.

InvalidParameter	Parameter error.
InvalidParameterValue	Parameter value error.
OperationDenied	Operation rejected.
ResourceInUse	Resources are occupied.
ResourceNotFound	The resource does not exist.
ResourceUnavailable	Resource not available.

DeleteVolume

Last updated : 2024-11-26 16:47:37

1. API Description

Domain name for API request: omics.intl.tencentcloudapi.com.

This API is used to delete the volume.

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: DeleteVolume.
Version	Yes	String	Common Params . The value used for this API: 2022-11-28.
Region	Yes	String	Common Params . For more information, please see the list of regions supported by the product.
VolumeId	Yes	String	Volume ID

3. Output Parameters

Parameter Name	Type	Description
RequestId	String	The unique request ID, generated by the server, will be returned for every request (if the

request fails to reach the server for other reasons, the request will not obtain a RequestId). RequestId is required for locating a problem.

4. Example

Example1 Deleting the Volume

This example shows you how to delete the volume.

Input Example

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

{
  "VolumeId": "vol-mpcb5xn1"
}
```

Output Example

```
{
  "Response": {
    "RequestId": "6b900d9e-26bc-4d91-83b8-f5ade6b3a594"
  }
}
```

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 Node.js](#)

- [Tencent Cloud SDK 3.0 for .NET](#)
- [Tencent Cloud SDK 3.0 for C++](#)

Command Line Interface

- [Tencent Cloud CLI 3.0](#)

6. Error Code

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

Error Code	Description
AuthFailure	CAM signature/authentication error.
FailedOperation	Operation failed.
InternalError	Internal error.
InvalidParameter	Parameter error.
InvalidParameterValue	Parameter value error.
OperationDenied	Operation rejected.
ResourceInUse	Resources are occupied.
ResourceNotFound	The resource does not exist.
ResourceUnavailable	Resource not available.

DeleteVolumeData

Last updated : 2024-11-26 16:47:37

1. API Description

Domain name for API request: omics.intl.tencentcloudapi.com.

This API is used to delete the volume data.

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: DeleteVolumeData.
Version	Yes	String	Common Params . The value used for this API: 2022-11-28.
Region	Yes	String	Common Params . For more information, please see the list of regions supported by the product.
Volumeld	Yes	String	Volume ID
Path	Yes	String	Path to be deleted

3. Output Parameters

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

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

4. Example

Example1 Deleting the Volume Data

This example shows you how to delete the volume data.

Input Example

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

{
  "VolumeId": "vol-mpcb5xn1",
  "Path": "/"
}
```

Output Example

```
{
  "Response": {
    "RequestId": "ef303ee0-8b7b-48e1-9663-272df381e93a"
  }
}
```

5. Developer Resources

SDK

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

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

- [Tencent Cloud SDK 3.0 for Go](#)
- [Tencent Cloud SDK 3.0 for Node.js](#)
- [Tencent Cloud SDK 3.0 for .NET](#)
- [Tencent Cloud SDK 3.0 for C++](#)

Command Line Interface

- [Tencent Cloud CLI 3.0](#)

6. Error Code

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

Error Code	Description
AuthFailure	CAM signature/authentication error.
FailedOperation	Operation failed.
InternalError	Internal error.
InvalidParameter	Parameter error.
InvalidParameterValue	Parameter value error.
OperationDenied	Operation rejected.
ResourceInUse	Resources are occupied.
ResourceNotFound	The resource does not exist.
ResourceUnavailable	Resource not available.

ModifyVolume

Last updated : 2024-11-26 16:47:36

1. API Description

Domain name for API request: omics.intl.tencentcloudapi.com.

This API is used to modify the volume.

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: ModifyVolume.
Version	Yes	String	Common Params . The value used for this API: 2022-11-28.
Region	Yes	String	Common Params . For more information, please see the list of regions supported by the product.
VolumeId	Yes	String	Volume ID
Name	No	String	Name
Description	No	String	Description

3. Output Parameters

--	--	--

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

4. Example

Example1 Modifying the Volume

This example shows you how to modify the volume.

Input Example

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

{
  "VolumeId": "vol-mpcb5xn1",
  "Name": "New name"
}
```

Output Example

```
{
  "Response": {
    "RequestId": "7ad01102-de15-43fb-8de3-02b0107cf08c"
  }
}
```

5. Developer Resources

SDK

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

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

- [Tencent Cloud SDK 3.0 for Java](#)
- [Tencent Cloud SDK 3.0 for PHP](#)
- [Tencent Cloud SDK 3.0 for Go](#)
- [Tencent Cloud SDK 3.0 for Node.js](#)
- [Tencent Cloud SDK 3.0 for .NET](#)
- [Tencent Cloud SDK 3.0 for C++](#)

Command Line Interface

- [Tencent Cloud CLI 3.0](#)

6. Error Code

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

Error Code	Description
AuthFailure	CAM signature/authentication error.
FailedOperation	Operation failed.
InternalError	Internal error.
InvalidParameter	Parameter error.
InvalidParameterValue	Parameter value error.
OperationDenied	Operation rejected.
ResourceInUse	Resources are occupied.
ResourceNotFound	The resource does not exist.
ResourceUnavailable	Resource not available.

DescribeVolumes

Last updated : 2024-11-26 16:47:36

1. API Description

Domain name for API request: omics.intl.tencentcloudapi.com.

This API is used to query the volume list.

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

We recommend you to use API Explorer

[Try it](#)

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

2. Input Parameters

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

Parameter Name	Required	Type	Description
Action	Yes	String	Common Params . The value used for this API: DescribeVolumes.
Version	Yes	String	Common Params . The value used for this API: 2022-11-28.
Region	Yes	String	Common Params . For more information, please see the list of regions supported by the product.
EnvironmentId	Yes	String	Environment ID
Limit	No	Integer	Quantity of returns. It is 20 by default, and the maximum value is 100.
Offset	No	Integer	Offset, defaults to 0
Filters.N	No	Array of Filter	Filter, supports filtering fields: - Name: Name - IsDefault: Whether it is the default.

3. Output Parameters

Parameter Name	Type	Description
Volumes	Array of Volume	Volume Note: This field may return null, indicating that no valid values can be obtained.
TotalCount	Integer	Number of qualified items Note: This field may return null, indicating that no valid values can be obtained.
RequestId	String	The unique request ID, generated by the server, will be returned for every request (if the request fails to reach the server for other reasons, the request will not obtain a RequestId). RequestId is required for locating a problem.

4. Example

Example1 Querying the Volume List

This example shows you how to query the volume list.

Input Example

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

{
  "EnvironmentId": "menv-ry46eloh"
}
```

Output Example

```
{
  "Response": {
    "RequestId": "f5020059-1511-4f45-ab7e-5188a78bda4b",
    "TotalCount": 1,
    "Volumes": [
      {
        "BandwidthLimit": 380,
```

```
"Capacity": 32768,
"DefaultMountPath": "/vol-8w7rfq4b",
"Description": "",
"EnvironmentId": "menv-ry46eloh",
"IsDefault": true,
"Name": "Default volume (menv-ry46eloh)",
"Spec": "HP",
"Status": "AVAILABLE",
"Type": "SHARED",
"Usage": 973150879744,
"VolumeId": "vol-8w7rfq4b"
}
]
}
}
```

5. Developer Resources

SDK

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

- [Tencent Cloud SDK 3.0 for Python](#)
- [Tencent Cloud SDK 3.0 for Java](#)
- [Tencent Cloud SDK 3.0 for PHP](#)
- [Tencent Cloud SDK 3.0 for Go](#)
- [Tencent Cloud SDK 3.0 for Node.js](#)
- [Tencent Cloud SDK 3.0 for .NET](#)
- [Tencent Cloud SDK 3.0 for C++](#)

Command Line Interface

- [Tencent Cloud CLI 3.0](#)

6. Error Code

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

Error Code	Description
------------	-------------

AuthFailure	CAM signature/authentication error.
FailedOperation	Operation failed.
InternalError	Internal error.
InvalidParameter	Parameter error.
InvalidParameterValue	Parameter value error.
LimitExceeded	Exceeded the quota limit.
OperationDenied	Operation rejected.
ResourceNotFound	The resource does not exist.

Tencent Healthcare Omics Platform APIs

DescribeRunGroups

Last updated : 2024-11-26 16:47:35

1. API Description

Domain name for API request: omics.intl.tencentcloudapi.com.

This API is used to query the run group list.

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

We recommend you to use API Explorer

[Try it](#)

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

2. Input Parameters

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

Parameter Name	Required	Type	Description
Action	Yes	String	Common Params . The value used for this API: DescribeRunGroups.
Version	Yes	String	Common Params . The value used for this API: 2022-11-28.
Region	Yes	String	Common Params . For more information, please see the list of regions supported by the product.
ProjectId	No	String	Project ID (If you leave it blank, the default item in the specified region will be used.)
Limit	No	Integer	Quantity of returns. It is 10 by default, and the maximum value is 100.
Offset	No	Integer	Offset, which defaults to 0.
Filters.N	No	Array of	Filter, which supports filtering fields:

		Filter	<ul style="list-style-type: none"> - Name: Run group name - RunGroupId: Run group ID - Status: Run group status
--	--	--------	--------------------------------------------------------------------------------------------------------------------------------------------------

3. Output Parameters

Parameter Name	Type	Description
TotalCount	Integer	Number of qualified items
RunGroups	Array of RunGroup	Run group list
RequestId	String	The unique request ID, generated by the server, will be returned for every request (if the request fails to reach the server for other reasons, the request will not obtain a RequestId). RequestId is required for locating a problem.

4. Example

Example1 Querying the Run Group List

This example shows you how to query the run group list.

Input Example

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

{
  "ProjectId": "prj-peaceful-pink-bird-631828",
  "Limit": 2,
  "Offset": 0
}
```

Output Example

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

```
"RequestId": "dfc17a50-4ff2-45b8-959d-86ab346b3d8c",
"RunGroups": [
  {
    "ApplicationId": "app-sweet-cerulean-frog-569111",
    "ApplicationName": "base64",
    "ApplicationType": "WDL",
    "CreateTime": "2023-03-15T20:52:56+08:00",
    "Description": "",
    "EnvironmentId": "env-05d0g0w2",
    "EnvironmentName": "Submit run environment",
    "ErrorMessage": "",
    "ExecutionTime": {
      "EndTime": "2023-03-15T20:53:23+08:00",
      "StartTime": "2023-03-15T20:53:13+08:00",
      "SubmitTime": "2023-03-15T20:52:56+08:00"
    },
    "Input": "omics/100000/project/prj-peaceful-pink-bird-631828/run-group/run-ashamed-turquoise-rooster-131773/inputs.json",
    "Name": "cloudapi-test",
    "Option": {
      "FailureMode": "",
      "UseCallCache": false,
      "UseErrorOnHold": false,
      "UseRelativeOutputPaths": true,
      "FinalWorkflowOutputsDir": "cos://bucket-10000/output"
    },
    "ProjectId": "prj-peaceful-pink-bird-631828",
    "ProjectName": "run test",
    "RunGroupId": "run-ashamed-turquoise-rooster-131773",
    "RunStatusCounts": [
      {
        "Count": 1,
        "Status": "SUCCESS"
      }
    ],
    "Status": "COMPLETE",
    "TableId": "",
    "TotalRun": 1,
    "UpdateTime": "2023-03-15T20:53:51+08:00"
  },
  {
    "ApplicationId": "app-sweet-cerulean-frog-569111",
    "ApplicationName": "base64",
    "ApplicationType": "WDL",
    "CreateTime": "2023-03-15T20:21:34+08:00",
    "Description": "Test description",
    "EnvironmentId": "env-05d0g0w2",
```

```
"EnvironmentName": "Submit run environment",
"ErrorMessage": "",
"ExecutionTime": {
  "EndTime": "2023-03-15T20:22:01+08:00",
  "StartTime": "2023-03-15T20:21:48+08:00",
  "SubmitTime": "2023-03-15T20:21:34+08:00"
},
"Input": "omics/100000/project/prj-peaceful-pink-bird-631828/run-group/run-hilarious-aqua-herring-857343/inputs.json",
"Name": "base64-20230315202115-0",
"Option": {
  "FailureMode": "",
  "UseCallCache": false,
  "UseErrorOnHold": false,
  "UseRelativeOutputPaths": true,
  "FinalWorkflowOutputsDir": "cos://bucket-10000/output"
},
"ProjectId": "prj-peaceful-pink-bird-631828",
"ProjectName": "run test",
"RunGroupId": "run-hilarious-aqua-herring-857343",
"RunStatusCounts": [
  {
    "Count": 1,
    "Status": "SUCCESS"
  }
],
"Status": "COMPLETE",
"TableId": "",
"TotalRun": 1,
"UpdateTime": "2023-03-15T20:22:28+08:00"
}
],
"TotalCount": 108
}
}
```

5. Developer Resources

SDK

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

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

- [Tencent Cloud SDK 3.0 for Java](#)
- [Tencent Cloud SDK 3.0 for PHP](#)
- [Tencent Cloud SDK 3.0 for Go](#)
- [Tencent Cloud SDK 3.0 for Node.js](#)
- [Tencent Cloud SDK 3.0 for .NET](#)
- [Tencent Cloud SDK 3.0 for C++](#)

Command Line Interface

- [Tencent Cloud CLI 3.0](#)

6. Error Code

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

Error Code	Description
AuthFailure	CAM signature/authentication error.
InternalServerError	Internal error.
InvalidParameter	Parameter error.
InvalidParameterValue	Parameter value error.
OperationDenied	Operation rejected.
ResourceNotFound	The resource does not exist.
ResourceNotFound.ProjectNotExist	The project does not exist.

DescribeRuns

Last updated : 2024-11-26 16:47:35

1. API Description

Domain name for API request: omics.intl.tencentcloudapi.com.

This API is used to query the run list.

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

We recommend you to use API Explorer

[Try it](#)

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

2. Input Parameters

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

Parameter Name	Required	Type	Description
Action	Yes	String	Common Params . The value used for this API: DescribeRuns.
Version	Yes	String	Common Params . The value used for this API: 2022-11-28.
Region	Yes	String	Common Params . For more information, please see the list of regions supported by the product.
ProjectId	No	String	Project ID (If you leave it blank, the default item in the specified region will be used.)
Limit	No	Integer	Quantity of returns. It is 10 by default, and the maximum value is 100.
Offset	No	Integer	Offset, which defaults to 0.
Filters.N	No	Array of Filter	Filter, which supports filtering fields: - RunGroupId: run group ID - Status: run status

- RunUuid: run UUID
- UserDefinedId: user-defined ID

3. Output Parameters

Parameter Name	Type	Description
TotalCount	Integer	Number of qualified items
Runs	Array of Run	Run list
RequestId	String	The unique request ID, generated by the server, will be returned for every request (if the request fails to reach the server for other reasons, the request will not obtain a RequestId). RequestId is required for locating a problem.

4. Example

Example1 Querying the Run List

This example shows you how to query the run list.

Input Example

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

{
  "ProjectId": "prj-peaceful-pink-bird-631828",
  "Limit": 2,
  "Offset": 0
}
```

Output Example

```
{
  "Response": {
    "RequestId": "52ca755d-be35-426a-bd2d-c8c7cf723240",
```

```
"Runs": [
  {
    "ApplicationId": "app-sweet-cerulean-frog-569111",
    "CreateTime": "2023-03-15T20:52:56+08:00",
    "EnvironmentId": "env-05d0g0w2",
    "ErrorMessage": "",
    "ExecutionTime": {
      "EndTime": "2023-03-15T20:53:23+08:00",
      "StartTime": "2023-03-15T20:53:13+08:00",
      "SubmitTime": "2023-03-15T20:53:11+08:00"
    },
    "Input": "omics/2721644692/project/prj-peaceful-pink-bird-631828/run-group/run-ashed-turquoise-rooster-131773/run/5a66a302-193b-4977-8a43-b4e2e5abd74c/input.json",
    "Option": {
      "FailureMode": "NoNewCalls",
      "UseCallCache": true,
      "UseErrorOnHold": true,
      "UseRelativeOutputPaths": true,
      "FinalWorkflowOutputsDir": "cos://bucket-10000/output"
    },
    "ProjectId": "prj-peaceful-pink-bird-631828",
    "RunGroupId": "run-ashed-turquoise-rooster-131773",
    "RunUuid": "5a66a302-193b-4977-8a43-b4e2e5abd74c",
    "Status": "SUCCESS",
    "TableId": "",
    "TableRowUuid": "",
    "UpdateTime": "2023-03-15T20:53:51+08:00",
    "UserDefinedId": ""
  },
  {
    "ApplicationId": "app-sweet-cerulean-frog-569111",
    "CreateTime": "2023-03-15T20:21:34+08:00",
    "EnvironmentId": "env-05d0g0w2",
    "ErrorMessage": "",
    "ExecutionTime": {
      "EndTime": "2023-03-15T20:22:01+08:00",
      "StartTime": "2023-03-15T20:21:48+08:00",
      "SubmitTime": "2023-03-15T20:21:48+08:00"
    },
    "Input": "omics/2721644692/project/prj-peaceful-pink-bird-631828/run-group/run-hilarious-aqua-herring-857343/run/90fae4b6-c891-473d-9e2e-ddbaf367a5bb/input.json",
    "Option": {
      "FailureMode": "NoNewCalls",
      "UseCallCache": true,
      "UseErrorOnHold": false,
      "UseRelativeOutputPaths": true,

```

```
"FinalWorkflowOutputsDir": "cos://bucket-10000/output "
},
"ProjectId": "prj-peaceful-pink-bird-631828",
"RunGroupId": "run-hilarious-aqua-herring-857343",
"RunUuid": "90fae4b6-c891-473d-9e2e-ddbaf367a5bb",
"Status": "SUCCESS",
"TableId": "",
"TableRowUuid": "",
"UpdateTime": "2023-03-15T20:22:28+08:00",
"UserDefinedId": ""
}
],
"TotalCount": 3661
}
}
```

5. Developer Resources

SDK

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

- [Tencent Cloud SDK 3.0 for Python](#)
- [Tencent Cloud SDK 3.0 for Java](#)
- [Tencent Cloud SDK 3.0 for PHP](#)
- [Tencent Cloud SDK 3.0 for Go](#)
- [Tencent Cloud SDK 3.0 for Node.js](#)
- [Tencent Cloud SDK 3.0 for .NET](#)
- [Tencent Cloud SDK 3.0 for C++](#)

Command Line Interface

- [Tencent Cloud CLI 3.0](#)

6. Error Code

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

Error Code	Description
------------	-------------

AuthFailure	CAM signature/authentication error.
InternalError	Internal error.
InvalidParameter	Parameter error.
InvalidParameterValue	Parameter value error.
OperationDenied	Operation rejected.
ResourceNotFound	The resource does not exist.
ResourceNotFound.ProjectNotExist	The project does not exist.

GetRunCalls

Last updated : 2024-11-26 16:47:33

1. API Description

Domain name for API request: omics.intl.tencentcloudapi.com.

This API is used to query job details.

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: GetRunCalls.
Version	Yes	String	Common Params . The value used for this API: 2022-11-28.
Region	Yes	String	Common Params . For more information, please see the list of regions supported by the product.
RunUuid	Yes	String	Run UUID
Path	Yes	String	Job path
ProjectId	No	String	Project ID (If you leave it blank, the default item in the specified region will be used.)

3. Output Parameters

Parameter Name	Type	Description
Calls	Array of RunMetadata	Job details
RequestId	String	The unique request ID, generated by the server, will be returned for every request (if the request fails to reach the server for other reasons, the request will not obtain a RequestId). RequestId is required for locating a problem.

4. Example

Example1 Querying Job Details

This example shows you how to query job details.

Input Example

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

{
  "RunUuid": "84232c68-a016-4668-b2e3-168a175d6f29",
  "ProjectId": "prj-peaceful-pink-bird-631828",
  "Path": "/"
}
```

Output Example

```
{
  "Response": {
    "Calls": [
      {
        "CallCached": false,
        "CallName": "sub_workflow",
        "Command": "",
        "EndTime": "2022-10-31T14:11:18+08:00",
        "ErrorMessage": "{\"key\": \"value\"}",
        "Input": "{\"base64_in\": \"/cfs-10-8-16-3/omics/file_cache/gene-1252949230/samples.csv\"}",
        "JobId": ""
      }
    ]
  }
}
```

```
"Output": "{\\"sub_workflow.sub_output\\": \"/cfs-10-8-16-3/cluster/omics-a6z22tn9/execution/main_workflow/84232c68-a016-4668-b2e3-168a175d6f29/call-sub_workflow/sub_workflow/ed4199e3-3513-444e-9090-3413fd6d3e44/call-base64/base64/87ab7713-6f0f-4452-8da9-fbaa40f7e567/call-encode_base64/execution/base64/samples.csv.base64\\"}"
,
"ParentId": "84232c68-a016-4668-b2e3-168a175d6f29",
"PostProcess": false,
"Preprocess": true,
"RunId": "ed4199e3-3513-444e-9090-3413fd6d3e44",
"RunType": "Workflow",
"Runtime": "{\\"key\\": \\"value\\"}",
"ScatterIndex": "",
"StartTime": "2022-10-31T14:10:15+08:00",
"Status": "COMPLETE",
"Stderr": "",
"Stdout": "",
"SubmitTime": "2020-09-22T00:00:00+00:00",
"Meta": ""
}
],
"RequestId": "e954d872-2955-4592-901e-38cb6678b88c"
}
}
```

Example2 Querying Sub-job Details

This example shows you how to query sub-job details. You need to specify the Path as the RunId whose RunType is Workflow or Scatter project in the previous level of GetRunCalls.

Input Example

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

{
  "RunUuid": "84232c68-a016-4668-b2e3-168a175d6f29",
  "ProjectId": "prj-peaceful-pink-bird-631828",
  "Path": "/ed4199e3-3513-444e-9090-3413fd6d3e44"
}
```

Output Example

```
{
  "Response": {
    "Calls": [
      {
        "CallCached": false,
        "CallName": "base64",
        "Command": "",
        "EndTime": "2022-10-31T14:11:15+08:00",
        "ErrorMessage": "{\"key\": \"value\"}",
        "Input": "{\"input_file\": \"/cfs-10-8-16-3/omics/file_cache/gene-1252949230/samples.csv\"}",
        "JobId": "",
        "Output": "{\"base64.output_file\": \"/cfs-10-8-16-3/cluster/omics-a6z22tn9/execution/main_workflow/84232c68-a016-4668-b2e3-168a175d6f29/call-sub_workflow/sub_workflow/ed4199e3-3513-444e-9090-3413fd6d3e44/call-base64/base64/87ab7713-6f0f-4452-8da9-fbaa40f7e567/call-encode_base64/execution/base64/samples.csv.base64\"}",
        "ParentId": "ed4199e3-3513-444e-9090-3413fd6d3e44",
        "PostProcess": false,
        "Preprocess": true,
        "RunId": "87ab7713-6f0f-4452-8da9-fbaa40f7e567",
        "RunType": "Workflow",
        "Runtime": "{\"key\": \"value\"}",
        "ScatterIndex": "",
        "StartTime": "2022-10-31T14:10:17+08:00",
        "Status": "COMPLETE",
        "Stderr": "",
        "Stdout": "",
        "SubmitTime": "2020-09-22T00:00:00+00:00",
        "Meta": ""
      }
    ],
    "RequestId": "35431cd8-6913-4c28-808f-290268cb9813"
  }
}
```

5. Developer Resources

SDK

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

- [Tencent Cloud SDK 3.0 for Python](#)
- [Tencent Cloud SDK 3.0 for Java](#)

- [Tencent Cloud SDK 3.0 for PHP](#)
- [Tencent Cloud SDK 3.0 for Go](#)
- [Tencent Cloud SDK 3.0 for Node.js](#)
- [Tencent Cloud SDK 3.0 for .NET](#)
- [Tencent Cloud SDK 3.0 for C++](#)

Command Line Interface

- [Tencent Cloud CLI 3.0](#)

6. Error Code

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

Error Code	Description
AuthFailure	CAM signature/authentication error.
InternalServerError	Internal error.
InvalidParameter	Parameter error.
InvalidParameterValue	Parameter value error.
OperationDenied	Operation rejected.
ResourceNotFound	The resource does not exist.
ResourceNotFound.EnvironmentNotExist	The environment does not exist.
ResourceNotFound.RunNotExist	The run does not exist.

GetRunMetadataFile

Last updated : 2024-11-26 16:47:33

1. API Description

Domain name for API request: omics.intl.tencentcloudapi.com.

This API is used to get the run details file.

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: GetRunMetadataFile.
Version	Yes	String	Common Params . The value used for this API: 2022-11-28.
Region	Yes	String	Common Params . For more information, please see the list of regions supported by the product.
RunUuid	Yes	String	Run UUID
ProjectId	No	String	Project ID (If you leave it blank, the default item in the specified region will be used.)
Key	No	String	File names to be get The following files are supported by default: - nextflow.log

			<p>When report is specified as true in NFOption during submission, the following files are additionally supported:</p> <ul style="list-style-type: none"> - execution_report.html - execution_timeline.html - execution_trace.txt - pipeline_dag.html
Keys.N	No	Array of String	<p>File names to be get in batch</p> <p>The following files are supported by default:</p> <ul style="list-style-type: none"> - nextflow.log <p>When report is specified as true in NFOption during submission, the following files are additionally supported:</p> <ul style="list-style-type: none"> - execution_report.html - execution_timeline.html - execution_trace.txt - pipeline_dag.html

3. Output Parameters

Parameter Name	Type	Description
CosSignedUrl	String	Document pre-signed link that works in a minute
CosSignedUrls	Array of String	Batch document pre-signed link that works in a minute Note: This field may return null, indicating that no valid values can be obtained.
RequestId	String	The unique request ID, generated by the server, will be returned for every request (if the request fails to reach the server for other reasons, the request will not obtain a RequestId). RequestId is required for locating a problem.

4. Example

Example1 Getting the Run Details File

Input Example

```
POST / HTTP/1.1
Host: omics.intl.tencentcloudapi.com
```



```
Content-Type: application/json
X-TC-Action: GetRunMetadataFile
<Common request parameters>

{
  "RunUuid": "fe92382a-9028-4e0f-8d12-fb11d9ad058c",
  "Key": "nextflow.log",
  "ProjectId": "prj-wise-blue-platypus-172468"
}
```

Output Example

```
{
  "Response": {
    "CosSignedUrl": "https://bucket-10000.cos.ap-guangzhou.myqcloud.com/omics/fe92382a-9028-4e0f-8d12-fb11d9ad058c/nextflow.log",
    "RequestId": "b6bc5888-9276-4865-a3dc-bcc11d762300"
  }
}
```

5. Developer Resources

SDK

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

- [Tencent Cloud SDK 3.0 for Python](#)
- [Tencent Cloud SDK 3.0 for Java](#)
- [Tencent Cloud SDK 3.0 for PHP](#)
- [Tencent Cloud SDK 3.0 for Go](#)
- [Tencent Cloud SDK 3.0 for Node.js](#)
- [Tencent Cloud SDK 3.0 for .NET](#)
- [Tencent Cloud SDK 3.0 for C++](#)

Command Line Interface

- [Tencent Cloud CLI 3.0](#)

6. Error Code

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

Error Code	Description
AuthFailure	CAM signature/authentication error.
InternalServerError	Internal error.
InvalidParameter	Parameter error.
InvalidParameterValue	Parameter value error.
InvalidParameterValue.InvalidCosKey	Incorrect COS path.
OperationDenied	Operation rejected.
ResourceNotFound	The resource does not exist.
ResourceNotFound.CosObjectNotExist	The storage object does not exist.
ResourceNotFound.EnvironmentNotExist	The environment does not exist.
ResourceNotFound.RunNotExist	The run does not exist.

GetRunStatus

Last updated : 2024-11-26 16:47:32

1. API Description

Domain name for API request: omics.intl.tencentcloudapi.com.

This API is used to query run details.

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: GetRunStatus.
Version	Yes	String	Common Params . The value used for this API: 2022-11-28.
Region	Yes	String	Common Params . For more information, please see the list of regions supported by the product.
RunUuid	Yes	String	Run UUID
ProjectId	No	String	Project ID (If you leave it blank, the default item in the specified region will be used.)

3. Output Parameters

--	--	--

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

4. Example

Example1 Querying Run Details

This example shows you how to query run details.

Input Example

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

{
  "RunUuid": "84232c68-a016-4668-b2e3-168a175d6f29",
  "ProjectId": "prj-peaceful-pink-bird-631828"
}
```

Output Example

```
{
  "Response": {
    "Metadata": {
      "CallCached": false,
      "CallName": "main_workflow",
      "Command": "",
      "EndTime": "2022-10-31T14:11:23+08:00",
      "ErrorMessage": "{\"key\": \"value\"}",
      "Input": "{\"main_workflow.base64_in\": \"cos://gene-1252949230/samples.csv\"}",
      "JobId": "",
      "Output": "{\"main_workflow.main_output\": \"cos://gene-1252949230/outputs/import/out/base64/samples.csv.base64\"}",
      "ParentId": "84232c68-a016-4668-b2e3-168a175d6f29",
      "PostProcess": false,

```

```
"Preprocess": true,
"RunId": "84232c68-a016-4668-b2e3-168a175d6f29",
"RunType": "Workflow",
"Runtime": "{\"key\": \"value\"}",
"ScatterIndex": "",
"StartTime": "2022-10-31T14:10:13+08:00",
"Status": "SUCCESS",
"Stderr": "",
"Stdout": "",
"SubmitTime": "2022-10-31T14:10:12+08:00",
"Meta": ""
},
"RequestId": "b970585c-c5bb-48e2-ac90-82c59dcadd48"
}
```

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 Node.js](#)
- [Tencent Cloud SDK 3.0 for .NET](#)
- [Tencent Cloud SDK 3.0 for C++](#)

Command Line Interface

- [Tencent Cloud CLI 3.0](#)

6. Error Code

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

Error Code	Description
------------	-------------

AuthFailure	CAM signature/authentication error.
InternalError	Internal error.
InvalidParameter	Parameter error.
InvalidParameterValue	Parameter value error.
OperationDenied	Operation rejected.
ResourceNotFound	The resource does not exist.
ResourceNotFound.EnvironmentNotExist	The environment does not exist.
ResourceNotFound.RunNotExist	The run does not exist.

TerminateRunGroup

Last updated : 2024-11-26 16:47:30

1. API Description

Domain name for API request: omics.intl.tencentcloudapi.com.

This API is used to terminate the run group.

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: TerminateRunGroup.
Version	Yes	String	Common Params . The value used for this API: 2022-11-28.
Region	Yes	String	Common Params . For more information, please see the list of regions supported by the product.
RunGroupId	Yes	String	Run group ID
ProjectId	No	String	Project ID (If you leave it blank, the default item in the specified region will be used.)

3. Output Parameters

--	--	--

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

4. Example

Example1 Terminating the Run Group

Input Example

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

{
  "RunGroupId": "run-greedy-cerise-swan-618086",
  "ProjectId": "prj-zealous-black-seagull-241194"
}
```

Output Example

```
{
  "Response": {
    "RequestId": "67d1c8b8-1f8f-4c24-acac-7194409a0a25"
  }
}
```

5. Developer Resources

SDK

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

- [Tencent Cloud SDK 3.0 for Python](#)
- [Tencent Cloud SDK 3.0 for Java](#)

- [Tencent Cloud SDK 3.0 for PHP](#)
- [Tencent Cloud SDK 3.0 for Go](#)
- [Tencent Cloud SDK 3.0 for Node.js](#)
- [Tencent Cloud SDK 3.0 for .NET](#)
- [Tencent Cloud SDK 3.0 for C++](#)

Command Line Interface

- [Tencent Cloud CLI 3.0](#)

6. Error Code

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

Error Code	Description
AuthFailure	CAM signature/authentication error.
InternalServerError	Internal error.
InvalidParameter	Parameter error.
InvalidParameterValue	Parameter value error.
OperationDenied	Operation rejected.
ResourceNotFound	The resource does not exist.
ResourceNotFound.EnvironmentNotExist	The environment does not exist.
ResourceNotFound.RunNotExist	The run does not exist.

ImportTableFile

Last updated : 2024-11-26 16:47:32

1. API Description

Domain name for API request: omics.intl.tencentcloudapi.com.

This API is used to import the table file.

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: ImportTableFile.
Version	Yes	String	Common Params . The value used for this API: 2022-11-28.
Region	Yes	String	Common Params . For more information, please see the list of regions supported by the product.
ProjectId	Yes	String	Project ID associated with the table
Name	Yes	String	Table name: Up to 200 characters in length is supported.
CosUri	Yes	String	Table file COS object path
DataType.N	Yes	Array of String	Data type of each column in the table file. Supported types include Int, Float, String, File, Boolean, Array[Int], Array[Float], Array[String], Array[File], and Array[Boolean].
Description	No	String	Table description: Up to 500 characters in length is supported.

3. Output Parameters

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

4. Example

Example1 Importing the Table File

This example shows you how to import the table file.

Input Example

```
POST / HTTP/1.1
Host: omics.intl.tencentcloudapi.com
Content-Type: application/json
X-TC-Action: ImportTableFile

{
  "ProjectId": "prj-aggressive-lime-porcupine-752427",
  "Name": "test_table",
  "Description": "Test table",
  "CosUri": "cos://bucket/test.csv",
  "DataType": [
    "String",
    "File"
  ]
}
```

Output Example

```
{
  "Response": {
    "TableId": "tab-fancy-saffron-slug-701244",
    "RequestId": "50d781c7-eab9-4339-93ed-c312a2452d9d"
  }
}
```

5. Developer Resources

SDK

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

- [Tencent Cloud SDK 3.0 for Python](#)
- [Tencent Cloud SDK 3.0 for Java](#)
- [Tencent Cloud SDK 3.0 for PHP](#)
- [Tencent Cloud SDK 3.0 for Go](#)
- [Tencent Cloud SDK 3.0 for Node.js](#)
- [Tencent Cloud SDK 3.0 for .NET](#)
- [Tencent Cloud SDK 3.0 for C++](#)

Command Line Interface

- [Tencent Cloud CLI 3.0](#)

6. Error Code

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

Error Code	Description
AuthFailure	CAM signature/authentication error.
FailedOperation.DuplicateTableHeader	Duplicate table headers.
FailedOperation.EmptyTableHeader	Empty table header.
FailedOperation.InvalidTableHeader	Incorrect table header.
FailedOperation.InvalidTableLength	Incorrect number of table rows.
FailedOperation.TableDataTypeMismatch	Mismatch exists between table data and type.
InternalServerError	Internal error.
InvalidParameter	Parameter error.

InvalidParameterValue	Parameter value error.
InvalidParameterValue.DuplicateName	Duplicated name.
InvalidParameterValue.InvalidCosKey	Incorrect COS path.
InvalidParameterValue.InvalidCsvFormat	Incorrect CSV file format.
InvalidParameterValue.InvalidDescription	Incorrect description.
InvalidParameterValue.InvalidName	Incorrect name.
InvalidParameterValue.TableDataTypeLengthMismatch	Length mismatch exists between table data and type.
InvalidParameterValue.UnsupportedTableDataType	Unsupported table data type.
OperationDenied	Operation rejected.
ResourceNotFound	The resource does not exist.
ResourceNotFound.CosBucketNotExist	The bucket does not exist.
ResourceNotFound.CosObjectNotExist	The storage object does not exist.
ResourceNotFound.ProjectNotExist	The project does not exist.
ResourceNotFound.TableNotExist	The table does not exist.

RunApplication

Last updated : 2024-11-26 16:47:31

1. API Description

Domain name for API request: omics.intl.tencentcloudapi.com.

This API is used to run the application.

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: RunApplication.
Version	Yes	String	Common Params . The value used for this API: 2022-11-28.
Region	Yes	String	Common Params . For more information, please see the list of regions supported by the product.
ApplicationId	Yes	String	Application ID
Name	Yes	String	Run group name
EnvironmentId	Yes	String	Delivery environment ID
ProjectId	No	String	Project ID. (If you leave it blank, the default item in the specified region will be used.)
Description	No	String	Run group description

InputCosUri	No	String	Run input COS path. (Either InputBase64 or InputCosUri must be selected.)
InputBase64	No	String	Run input JSON. Base64 encoding is required. (Either InputBase64 or InputCosUri must be selected.)
TableId	No	String	Batch deliver table ID. Leaving it blank indicates delivery in singleton mode.
TableRowUuids.N	No	Array of String	Batch deliver table row UUID. Leaving it blank indicates all rows of the table.
CacheClearDelay	No	Integer	Run cache cleanup time (hours). Leaving it blank or entering 0 indicates no cleanup.
ApplicationVersionId	No	String	Application version ID. Leaving it blank indicates that the latest version is used.
Option	No	RunOption	WDL running option
NFOption	No	NFOption	Nextflow running option
WorkDir	No	String	Working directory. You can fill in the absolute path in the specified volume. If you leave it blank, the default path in the default volume will be used. Currently, only Nextflow is supported.
AccessMode	No	String	Access mode. Leaving it blank indicates it is private by default. Valid values: - PRIVATE: Private application - PUBLIC: Public application
Volumelds.N	No	Array of String	Volume ID. If you leave it blank, the default volume will be used. Currently, only Nextflow is supported.

3. Output Parameters

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

4. Example

Example1 Running Applications in Singleton Mode

This example shows you how to run applications in singleton mode, and there is one run in the generated run group.

Input Example

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

{
  "ApplicationId": "app-sweet-cerulean-frog-569111",
  "ProjectId": "prj-peaceful-pink-bird-631828",
  "Name": "test",
  "Description": "test",
  "EnvironmentId": "env-05d0g0w2",
  "InputBase64": "e30K",
  "CacheClearDelay": 0,
  "Option": {
    "FailureMode": "NoNewCalls",
    "UseCallCache": true,
    "UseErrorOnHold": true
  }
}
```

Output Example

```
{
  "Response": {
    "RequestId": "2f867f15-a2a6-4d42-b6e0-6e06010782ac",
    "RunGroupId": "run-ashamed-turquoise-rooster-131773"
  }
}
```

Example2 Running Applications in Batches

This example shows you how to use the table feature to run applications in batches, and there is more than one run in the generated run group.

Input Example


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

{
  "ApplicationId": "app-sweet-cerulean-frog-569111",
  "ProjectId": "prj-peaceful-pink-bird-631828",
  "Name": "test",
  "Description": "test",
  "EnvironmentId": "env-05d0g0w2",
  "InputBase64": "e30K",
  "TableId": "tab-rapid-silver-gerbil-971422",
  "TableRowUuids": [
    "df909e9b-1edf-4369-a9d4-71a733770034",
    "3c5f7840-3689-44f2-b6ae-9e223b996f83"
  ],
  "CacheClearDelay": 0,
  "Option": {
    "FailureMode": "NoNewCalls",
    "UseCallCache": true,
    "UseErrorOnHold": true
  }
}
```

Output Example

```
{
  "Response": {
    "RequestId": "2f867f15-a2a6-4d42-b6e0-6e06010782ac",
    "RunGroupId": "run-ashamed-turquoise-rooster-131773"
  }
}
```

5. Developer Resources

SDK

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

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

- [Tencent Cloud SDK 3.0 for Java](#)
- [Tencent Cloud SDK 3.0 for PHP](#)
- [Tencent Cloud SDK 3.0 for Go](#)
- [Tencent Cloud SDK 3.0 for Node.js](#)
- [Tencent Cloud SDK 3.0 for .NET](#)
- [Tencent Cloud SDK 3.0 for C++](#)

Command Line Interface

- [Tencent Cloud CLI 3.0](#)

6. Error Code

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

Error Code	Description
AuthFailure	CAM signature/authentication error.
FailedOperation.VersionNotReleased	Version not released.
InternalError	Internal error.
InvalidParameter	Parameter error.
InvalidParameterValue	Parameter value error.
InvalidParameterValue.DuplicateName	Duplicated name.
InvalidParameterValue.EntrypointNotSet	Entry file not specified.
InvalidParameterValue.EnvironmentNotAvailable	Environment not available.
InvalidParameterValue.InvalidBase64Encode	Base64 encoding error.
InvalidParameterValue.InvalidDescription	Incorrect description.
InvalidParameterValue.InvalidInputJsonFormat	Incorrect input JSON format.
InvalidParameterValue.InvalidInputPlaceholder	Incorrect input placeholder.
InvalidParameterValue.InvalidName	Incorrect name.
InvalidParameterValue.InvalidRunOption	Incorrect running parameters.

OperationDenied	Operation rejected.
ResourceNotFound	The resource does not exist.
ResourceNotFound.ApplicationNotExist	The application does not exist.
ResourceNotFound.ApplicationVersionNotExist	The application version does not exist.
ResourceNotFound.EnvironmentNotExist	The environment does not exist.
ResourceNotFound.ProjectNotExist	The project does not exist.
ResourceNotFound.TableNotExist	The table does not exist.
ResourceNotFound.TableRowNotExist	The table row does not exist.

RunWorkflow

Last updated : 2024-11-26 16:47:30

1. API Description

Domain name for API request: omics.intl.tencentcloudapi.com.

This API is used to run the workflow.

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: RunWorkflow.
Version	Yes	String	Common Params . The value used for this API: 2022-11-28.
Region	Yes	String	Common Params . For more information, please see the list of regions supported by the product.
Name	Yes	String	Run group name
EnvironmentId	Yes	String	Delivery environment ID
GitSource	Yes	GitInfo	Workflow Git repository information
Type	Yes	String	Workflow type Supported type: - NEXTFLOW
NFOption	Yes	NFOption	Nextflow option

ProjectId	No	String	Project ID (If you leave it blank, the default item in the specified region will be used.)
Description	No	String	Run group description
InputBase64	No	String	Run input JSON. Base64 encoding is required. (Either InputBase64 or InputCosUri must be selected.)
InputCosUri	No	String	Run input COS path (Either InputBase64 or InputCosUri must be selected.)
CacheClearDelay	No	Integer	Run cache cleanup time (hours). Leaving it blank or entering 0 indicates no cleanup.
WorkDir	No	String	Working directory. You can fill in the absolute path in the specified volume. If you leave it blank, the default path in the default volume will be used. Currently, only Nextflow is supported.
Volumes.N	No	Array of String	Volume ID. If you leave it blank, the default volume will be used. Currently, only Nextflow is supported.

3. Output Parameters

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

4. Example

Example1 Running the Workflow

Input Example

```
POST / HTTP/1.1
Host: omics.intl.tencentcloudapi.com
```

```
Content-Type: application/json
X-TC-Action: RunWorkflow
<Common request parameters>

{
  "ProjectId": "prj-zealous-black-seagull-241194",
  "Name": "taxprofiler",
  "EnvironmentId": "env-9gapsr23",
  "GitSource": {
    "GitHttpPath": "https://e.coding.net/omics/test/taxprofiler.git",
    "Branch": "master"
  },
  "Type": "NEXTFLOW",
  "NFOption": {
    "Config": "",
    "Profile": "test"
  },
  "InputCosUri": "cos://bucket-10000/nextflow/taxprofiler/input/input.json"
}
```

Output Example

```
{
  "Response": {
    "RunGroupId": "run-greedy-cerise-swan-618086",
    "RequestId": "5c4fc8c5-d8b1-4041-8198-b4154c0ed15f"
  }
}
```

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 Node.js](#)
- [Tencent Cloud SDK 3.0 for .NET](#)

- [Tencent Cloud SDK 3.0 for C++](#)

Command Line Interface

- [Tencent Cloud CLI 3.0](#)

6. Error Code

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

Error Code	Description
AuthFailure	CAM signature/authentication error.
FailedOperation.VersionNotReleased	Version not released.
InternalError	Internal error.
InvalidParameter	Parameter error.
InvalidParameterValue	Parameter value error.
InvalidParameterValue.DuplicateName	Duplicated name.
InvalidParameterValue.EntrypointNotSet	Entry file not specified.
InvalidParameterValue.EnvironmentNotAvailable	Environment not available.
InvalidParameterValue.InvalidBase64Encode	Base64 encoding error.
InvalidParameterValue.InvalidDescription	Incorrect description.
InvalidParameterValue.InvalidInputJsonFormat	Incorrect input JSON format.
InvalidParameterValue.InvalidInputPlaceholder	Incorrect input placeholder.
InvalidParameterValue.InvalidName	Incorrect name.
InvalidParameterValue.InvalidRunOption	Incorrect running parameters.
OperationDenied	Operation rejected.
ResourceNotFound	The resource does not exist.
ResourceNotFound.ApplicationNotExist	The application does not exist.

ResourceNotFound.ApplicationVersionNotExist	The application version does not exist.
ResourceNotFound.CosBucketNotExist	The bucket does not exist.
ResourceNotFound.EnvironmentNotExist	The environment does not exist.
ResourceNotFound.ProjectNotExist	The project does not exist.
ResourceNotFound.TableNotExist	The table does not exist.
ResourceNotFound.TableRowNotExist	The table row does not exist.

DescribeTables

Last updated : 2024-11-26 16:47:34

1. API Description

Domain name for API request: omics.intl.tencentcloudapi.com.

This API is used to query the table.

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: DescribeTables.
Version	Yes	String	Common Params . The value used for this API: 2022-11-28.
Region	Yes	String	Common Params . For more information, please see the list of regions supported by the product.
ProjectId	Yes	String	Project ID
Limit	No	Integer	Quantity of returns. It is 10 by default, and the maximum value is 100.
Offset	No	Integer	Offset, which defaults to 0
Filters.N	No	Array of Filter	Filter, which supports filtering fields: - Name: Table name - TableId: Table ID

3. Output Parameters

Parameter Name	Type	Description
TotalCount	Integer	Total number of results
Tables	Array of Table	Table list
RequestId	String	The unique request ID, generated by the server, will be returned for every request (if the request fails to reach the server for other reasons, the request will not obtain a RequestId). RequestId is required for locating a problem.

4. Example

Example1 Querying the Table

This example shows you how to query the table.

Input Example

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

{
  "ProjectId": "prj-aggressive-lime-porcupine-752427",
  "Filters": [
    {
      "Name": "Name",
      "Values": [
        "test"
      ]
    },
    {
      "Name": "TableId",
      "Values": [
        "tab-cold-purple-barnacle-251091"
      ]
    }
  ]
}
```

```
]
}
```

Output Example

```
{
  "Response": {
    "RequestId": "8baa213d-e5c5-4e38-a3a4-562e71b5210b",
    "Tables": [
      {
        "Columns": [
          {
            "DataType": "String",
            "Header": "runId"
          },
          {
            "DataType": "File",
            "Header": "fileName"
          }
        ],
        "CreateTime": "2023-03-16 16:44:24",
        "Creator": "100029430413",
        "Description": "cloudapi_test",
        "Name": "cloudapi_test_1",
        "ProjectId": "prj-aggressive-lime-porcupine-752427",
        "TableId": "tab-cold-purple-barnacle-251091"
      }
    ],
    "TotalCount": 1
  }
}
```

5. Developer Resources

SDK

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

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

- [Tencent Cloud SDK 3.0 for Node.js](#)
- [Tencent Cloud SDK 3.0 for .NET](#)
- [Tencent Cloud SDK 3.0 for C++](#)

Command Line Interface

- [Tencent Cloud CLI 3.0](#)

6. Error Code

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

Error Code	Description
AuthFailure	CAM signature/authentication error.
InternalError	Internal error.
InvalidParameter	Parameter error.
InvalidParameterValue	Parameter value error.
OperationDenied	Operation rejected.
ResourceNotFound	The resource does not exist.
ResourceNotFound.ProjectNotExist	The project does not exist.

DescribeTablesRows

Last updated : 2024-11-26 16:47:34

1. API Description

Domain name for API request: omics.intl.tencentcloudapi.com.

This API is used to query the table row data.

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: DescribeTablesRows.
Version	Yes	String	Common Params . The value used for this API: 2022-11-28.
Region	Yes	String	Common Params . For more information, please see the list of regions supported by the product.
ProjectId	Yes	String	Project ID
TableId	Yes	String	Table ID
Limit	No	Integer	Quantity of returns. It is 10 by default, and the maximum value is 100.
Offset	No	Integer	Offset, which defaults to 0.
Filters.N	No	Array of Filter	Filter, which supports filtering fields: - Tr: Table data, which supports fuzzy query. - TableRowUuid: table row UUID

3. Output Parameters

Parameter Name	Type	Description
TotalCount	Integer	Total number of results
Rows	Array of TableRow	Table row list
RequestId	String	The unique request ID, generated by the server, will be returned for every request (if the request fails to reach the server for other reasons, the request will not obtain a RequestId). RequestId is required for locating a problem.

4. Example

Example1 Querying the Table Row Data

This example shows you how to query the table row data.

Input Example

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

{
  "ProjectId": "prj-aggressive-lime-porcupine-752427",
  "TableId": "tab-cold-purple-barnacle-251091",
  "Offset": 0,
  "Limit": 10,
  "Filters": [
    {
      "Name": "Tr",
      "Values": [
        ".txt"
      ]
    },
    {
      "Name": "TableRowUuid",
      "Values": [
        "d3154292-9305-42cb-99ab-a0fc1f5112ac",

```

```
"41363765-71e4-42ad-bbf8-bed9e70cd85e"  
]  
}  
]  
}
```

Output Example

```
{  
  "Response": {  
    "RequestId": "288e5644-82c2-445f-b852-198bd6242b0c",  
    "Rows": [  
      {  
        "Content": [  
          "10",  
          "cos://gene-1252949230/batch_base_test/input/10.txt"  
        ],  
        "TableRowUuid": "41363765-71e4-42ad-bbf8-bed9e70cd85e"  
      },  
      {  
        "Content": [  
          "11",  
          "cos://gene-1252949230/batch_base_test/input/11.txt"  
        ],  
        "TableRowUuid": "d3154292-9305-42cb-99ab-a0fc1f5112ac"  
      }  
    ],  
    "TotalCount": 2  
  }  
}
```

5. Developer Resources

SDK

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

- [Tencent Cloud SDK 3.0 for Python](#)
- [Tencent Cloud SDK 3.0 for Java](#)
- [Tencent Cloud SDK 3.0 for PHP](#)
- [Tencent Cloud SDK 3.0 for Go](#)
- [Tencent Cloud SDK 3.0 for Node.js](#)

- [Tencent Cloud SDK 3.0 for .NET](#)
- [Tencent Cloud SDK 3.0 for C++](#)

Command Line Interface

- [Tencent Cloud CLI 3.0](#)

6. Error Code

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

Error Code	Description
AuthFailure	CAM signature/authentication error.
InternalError	Internal error.
InvalidParameter	Parameter error.
InvalidParameterValue	Parameter value error.
OperationDenied	Operation rejected.
ResourceNotFound	The resource does not exist.
ResourceNotFound.ProjectNotExist	The project does not exist.
ResourceNotFound.TableNotExist	The table does not exist.

RetryRuns

Last updated : 2024-11-26 16:47:31

1. API Description

Domain name for API request: omics.intl.tencentcloudapi.com.

This API is used to retry the run.

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: RetryRuns.
Version	Yes	String	Common Params . The value used for this API: 2022-11-28.
Region	Yes	String	Common Params . For more information, please see the list of regions supported by the product.
ProjectId	No	String	Project ID. (If you leave it blank, the default item in the specified region will be used.)
RunGroupId	No	String	The run group ID that needs to be retried
RunUids.N	No	Array of String	The run UUID that needs to be retried
WDLOption	No	RunOption	WDL running option. If you leave it blank, the retried run group running option will be used.

NFOption	No	NFOption	Nextflow running option. If you leave it blank, the retried run group running option will be used.
----------	----	--------------------------	----------------------------------------------------------------------------------------------------

3. Output Parameters

Parameter Name	Type	Description
RunGroupId	String	New run group ID Note: This field may return null, indicating that no valid values can be obtained.
RequestId	String	The unique request ID, generated by the server, will be returned for every request (if the request fails to reach the server for other reasons, the request will not obtain a RequestId). RequestId is required for locating a problem.

4. Example

Example1 Retrying the Run Group

This example shows you how to retry the run group.

Input Example

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

{
  "ProjectId": "prj-aggressive-lime-porcupine-752427",
  "RunGroupId": "run-ashamed-bleak-doggy-247963"
}
```

Output Example

```
{
  "Response": {
    "RequestId": "46520c37-4d28-49e1-a738-01f64ae1b06b",
    "RunGroupId": "run-greedy-ecru-bonobo-459181"
  }
}
```

Example2 Retrying a Single Run

This example shows you how to retry a single run.

Input Example

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

{
  "ProjectId": "prj-aggressive-lime-porcupine-752427",
  "RunUuids": [
    "7b501b32-4e42-456a-9d54-aa3c9791beb0"
  ]
}
```

Output Example

```
{
  "Response": {
    "RequestId": "e2fe59bb-21e3-45de-9289-9d22a5b1bdff",
    "RunGroupId": "run-lonely-orange-dodo-410909"
  }
}
```

Example3 Retrying the Specified Run in the Run Group

This example shows you how to retry the specified run within the run group.

Input Example

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

{
  "ProjectId": "prj-aggressive-lime-porcupine-752427",
  "RunGroupId": "run-ashamed-bleak-doggy-247963",
  "RunUuids": [
```

```
"7b501b32-4e42-456a-9d54-aa3c9791beb0",  
"38b860fa-65d3-4adc-8000-4c0c31d2ff51"  
]  
}
```

Output Example

```
{  
  "Response": {  
    "RequestId": "e5dc747d-7ad2-44de-afe5-569c9a342db8",  
    "RunGroupId": "run-pretty-yellow-mastiff-141933"  
  }  
}
```

5. Developer Resources

SDK

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

- [Tencent Cloud SDK 3.0 for Python](#)
- [Tencent Cloud SDK 3.0 for Java](#)
- [Tencent Cloud SDK 3.0 for PHP](#)
- [Tencent Cloud SDK 3.0 for Go](#)
- [Tencent Cloud SDK 3.0 for Node.js](#)
- [Tencent Cloud SDK 3.0 for .NET](#)
- [Tencent Cloud SDK 3.0 for C++](#)

Command Line Interface

- [Tencent Cloud CLI 3.0](#)

6. Error Code

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

Error Code	Description

AuthFailure	CAM signature/authentication error.
FailedOperation.RetryLimitExceeded	Retry count exceeds the upper limit.
FailedOperation.StatusNotSupported	Unsupported status.
InternalError	Internal error.
InvalidParameter	Parameter error.
InvalidParameterValue	Parameter value error.
InvalidParameterValue.EnvironmentNotAvailable	Environment not available.
OperationDenied	Operation rejected.
ResourceNotFound	The resource does not exist.
ResourceNotFound.EnvironmentNotExist	The environment does not exist.
ResourceNotFound.ProjectNotExist	The project does not exist.
ResourceNotFound.RunGroupNotExist	The run group does not exist.
ResourceNotFound.RunNotExist	The run does not exist.

Data Types

Last updated : 2024-11-26 16:47:39

ApplicationVersion

Application version

Used by actions: DescribeRunGroups.

Name	Type	Description
Type	String	Version type Note: This field may return null, indicating that no valid values can be obtained.
ApplicationVersionId	String	Version ID Note: This field may return null, indicating that no valid values can be obtained.
Name	String	Release name Note: This field may return null, indicating that no valid values can be obtained.
Description	String	Release description Note: This field may return null, indicating that no valid values can be obtained.
Entrypoint	String	Entry file Note: This field may return null, indicating that no valid values can be obtained.
CreateTime	String	Creation time Note: This field may return null, indicating that no valid values can be obtained.
CreatorName	String	Creator name Note: This field may return null, indicating that no valid values can be obtained.
CreatorId	String	Creator ID Note: This field may return null, indicating that no valid values can be obtained.

CVMOption

CVM configuration

Used by actions: CreateEnvironment.

Name	Type	Required	Description
Zone	String	Yes	CVM availability zone
InstanceType	String	Yes	CVM instance specifications

CacheInfo

Cache information

Used by actions: DescribeRuns.

Name	Type	Description
CacheClearDelay	Integer	Cache cleanup time (hours) Note: This field may return null, indicating that no valid values can be obtained.
CacheClearTime	Timestamp ISO8601	Cache cleanup schedule time Note: This field may return null, indicating that no valid values can be obtained.
CacheCleared	Boolean	Whether the cache has been cleaned up Note: This field may return null, indicating that no valid values can be obtained.

ClusterOption

Computing cluster configuration

Used by actions: CreateEnvironment.

Name	Type	Required	Description
Zone	String	Yes	Computing cluster availability zone
Type	String	Yes	Computing cluster type. Valid values:

			- KUBERNETES
ServiceCidr	String	No	Computing cluster Service CIDR. It must not overlap with the VPC IP range.
ResourceQuota	ResourceQuota	No	Resource quota
LimitRange	LimitRange	No	Limit scope

DatabaseOption

Database configuration

Used by actions: CreateEnvironment.

Name	Type	Required	Description
Zone	String	Yes	Database availability zone

Environment

Tencent Healthcare Omics Platform environment details

Used by actions: DescribeEnvironments.

Name	Type	Description
EnvironmentId	String	Environment ID
Name	String	Environment name
Description	String	Environment description information
Region	String	Environment region
Type	String	Environment type. Valid values: - KUBERNETES: Kubernetes container cluster - HPC:HPC HCC
Status	String	Environment status. Valid values: - INITIALIZING: Creating - INITIALIZATION_ERROR: Creation failed - RUNNING: Running - ERROR: Exceptional

		- DELETING: Deleting - DELETE_ERROR: Deletion failed.
Available	Boolean	Whether the environment is available. The environment needs to be available before computing runs can be delivered.
IsDefault	Boolean	Whether the environment is the default environment.
IsManaged	Boolean	Whether the environment is a managed environment.
Message	String	Environment information
ResourceIds	ResourceIds	Cloud resource ID
LastWorkflowUuid	String	The UUID of the previous workflow Note: This field may return null, indicating that no valid values can be obtained.
CreationTime	Timestamp ISO8601	Creation time Note: This field may return null, indicating that no valid values can be obtained.

EnvironmentConfig

Environment configuration

Used by actions: CreateEnvironment.

Name	Type	Required	Description
VPCOption	VPCOption	Yes	VPC configuration
ClusterOption	ClusterOption	Yes	Computing cluster configuration
DatabaseOption	DatabaseOption	Yes	Database configuration
StorageOption	StorageOption	Yes	Storage configuration
CVMOption	CVMOption	Yes	CVM configuration
SecurityGroupOption	SecurityGroupOption	No	Security group configuration

ExecutionTime

Execution time

Used by actions: DescribeRunGroups, DescribeRuns.

Name	Type	Description
SubmitTime	Timestamp ISO8601	Submission time Note: This field may return null, indicating that no valid values can be obtained.
StartTime	Timestamp ISO8601	Start time Note: This field may return null, indicating that no valid values can be obtained.
EndTime	Timestamp ISO8601	End time Note: This field may return null, indicating that no valid values can be obtained.

Filter

Description key-value pair filter, which is used for conditional filtering queries.

- If there are multiple Filters, the logical relationship between them is AND.
- If there are multiple Values in the same Filter, the logical relationship between the Values under the same Filter is OR.

Used by actions: DescribeEnvironments, DescribeRunGroups, DescribeRuns, DescribeTables, DescribeTablesRows, DescribeVolumes.

Name	Type	Required	Description
Name	String	Yes	Filtering fields
Values	Array of String	Yes	Filtering field values

GitInfo

Git information

Used by actions: RunWorkflow.

Name	Type	Required	Description
GitHttpPath	String	Yes	Git URL
GitUserName	String	No	Git username .
GitTokenOrPassword	String	No	Git password or Token
Branch	String	No	Branch
Tag	String	No	Tag

LimitRange

Resource limit scope

Used by actions: CreateEnvironment.

Name	Type	Required	Description
MaxCPU	String	No	Maximum CPU setting Note: This field may return null, indicating that no valid values can be obtained.
MaxMemory	String	No	Maximum memory setting (unit: Mi, Gi, Ti, M, G, and T) Note: This field may return null, indicating that no valid values can be obtained.

NFOption

Nextflow option

Used by actions: DescribeRunGroups, RetryRuns, RunApplication, RunWorkflow.

Name	Type	Required	Description
Config	String	No	Config. Note: This field may return null, indicating that no valid values can be obtained.
Profile	String	No	Profile. Note: This field may return null, indicating that no valid values can be obtained.

Report	Boolean	No	Report. Note: This field may return null, indicating that no valid values can be obtained.
Resume	Boolean	No	Resume. Note: This field may return null, indicating that no valid values can be obtained.
NFVersion	String	No	Nextflow engine version. Valid values: - 22.10.4 - 22.10.8 - 23.10.1 Note: This field may return null, indicating that no valid values can be obtained.

ResourceIds

Cloud resource ID

Used by actions: DescribeEnvironments.

Name	Type	Description
VPCId	String	VPC ID Note: This field may return null, indicating that no valid values can be obtained.
SubnetId	String	Subnet ID Note: This field may return null, indicating that no valid values can be obtained.
SecurityGroupId	String	Security group ID Note: This field may return null, indicating that no valid values can be obtained.
TDSQLCId	String	TDSQL-C for MySQL database ID Note: This field may return null, indicating that no valid values can be obtained.
CFSId	String	CFS ID. Note: This field may return null, indicating that no valid values can be obtained.
CFSSStorageType	String	CFS type. Valid values: - SD: standard - HP: high-performance - TB: standard Turbo - TP: high-performance Turbo Note: This field may return null, indicating that no valid values can be obtained.

CVMId	String	Cloud Virtual Machine ID. Note: This field may return null, indicating that no valid values can be obtained.
EKSId	String	Elastic container cluster ID Note: This field may return null, indicating that no valid values can be obtained.

ResourceQuota

Resource quota

Used by actions: CreateEnvironment.

Name	Type	Required	Description
CPULimit	String	No	CPU limit setting Note: This field may return null, indicating that no valid values can be obtained.
MemoryLimit	String	No	Memory limit setting (Unit: Mi, Gi, Ti, M, G, and T) Note: This field may return null, indicating that no valid values can be obtained.
Pods	String	No	Pod quantity setting Note: This field may return null, indicating that no valid values can be obtained.

Run

Run

Used by actions: DescribeRuns.

Name	Type	Description
RunUuid	String	Run UUID
ProjectId	String	Project ID
ApplicationId	String	Application ID
RunGroupId	String	Run group ID
EnvironmentId	String	Environment ID

UserDefinedId	String	User-defined ID. Null for running in singleton mode. Note: This field may return null, indicating that no valid values can be obtained.
TableId	String	Table ID. Null for running in singleton mode. Note: This field may return null, indicating that no valid values can be obtained.
TableRowUuid	String	Table row UUID. Null for running in singleton mode. Note: This field may return null, indicating that no valid values can be obtained.
Status	String	Run status
Input	String	Run input
ExecutionTime	ExecutionTime	Execution time
Cache	CacheInfo	Cache information Note: This field may return null, indicating that no valid values can be obtained.
ErrorMessage	String	Error message
CreateTime	Timestamp ISO8601	Creation time
UpdateTime	Timestamp ISO8601	Update time

RunGroup

Run

Used by actions: DescribeRunGroups.

Name	Type	Description
RunGroupId	String	Run group ID
ProjectId	String	Project ID
ProjectName	String	Project name
ApplicationId	String	Application ID

ApplicationName	String	Application name
ApplicationType	String	Application type
EnvironmentId	String	Environment ID
EnvironmentName	String	Environment name
TableId	String	Table ID. Null for running in singleton mode. Note: This field may return null, indicating that no valid values can be obtained.
Name	String	Run name
Description	String	Run description
Status	String	Run status
Input	String	Run input
Option	RunOption	WDL running option
NFOption	NFOption	Nextflow running option Note: This field may return null, indicating that no valid values can be obtained.
TotalRun	Integer	Total number of runs
RunStatusCounts	Array of RunStatusCount	Number of runs in various status
ExecutionTime	ExecutionTime	Execution time
ErrorMessage	String	Error message
CreateTime	Timestamp ISO8601	Creation time
UpdateTime	Timestamp ISO8601	Update time
Creator	String	Creator Note: This field may return null, indicating that no valid values can be obtained.
CreatorId	String	Creator ID Note: This field may return null, indicating that no valid values can be obtained.

ResultNotify	String	Running result notification method Note: This field may return null, indicating that no valid values can be obtained.
ApplicationVersion	ApplicationVersion	Application version Note: This field may return null, indicating that no valid values can be obtained.

RunMetadata

Run job details

Used by actions: [GetRunCalls](#), [GetRunStatus](#).

Name	Type	Description
RunType	String	Run type Note: This field may return null, indicating that no valid values can be obtained.
RunId	String	Run ID Note: This field may return null, indicating that no valid values can be obtained.
ParentId	String	Parent layer ID Note: This field may return null, indicating that no valid values can be obtained.
JobId	String	Job ID Note: This field may return null, indicating that no valid values can be obtained.
CallName	String	Job name Note: This field may return null, indicating that no valid values can be obtained.
ScatterIndex	String	Scatter index Note: This field may return null, indicating that no valid values can be obtained.
Input	String	Input Note: This field may return null, indicating that no valid values can be obtained.
Output	String	Output

		Note: This field may return null, indicating that no valid values can be obtained.
Status	String	Status Note: This field may return null, indicating that no valid values can be obtained.
ErrorMessage	String	Error message Note: This field may return null, indicating that no valid values can be obtained.
StartTime	Timestamp ISO8601	Start time Note: This field may return null, indicating that no valid values can be obtained.
SubmitTime	Timestamp ISO8601	Submission time Note: This field may return null, indicating that no valid values can be obtained.
EndTime	Timestamp ISO8601	End time Note: This field may return null, indicating that no valid values can be obtained.
Command	String	Command Line Note: This field may return null, indicating that no valid values can be obtained.
Runtime	String	Runtime Note: This field may return null, indicating that no valid values can be obtained.
Preprocess	Boolean	Preprocessing Note: This field may return null, indicating that no valid values can be obtained.
PostProcess	Boolean	Post-processing Note: This field may return null, indicating that no valid values can be obtained.
CallCached	Boolean	Cache hit Note: This field may return null, indicating that no valid values can be obtained.
Stdout	String	Standard output Note: This field may return null, indicating that no valid values can be obtained.
Stderr	String	Error output

		Note: This field may return null, indicating that no valid values can be obtained.
Meta	String	Other information Note: This field may return null, indicating that no valid values can be obtained.

RunOption

Application running option

Used by actions: DescribeRunGroups, RetryRuns, RunApplication.

Name	Type	Required	Description
FailureMode	String	Yes	Operation failure mode. Valid values: - ContinueWhilePossible - NoNewCalls
UseCallCache	Boolean	Yes	Whether to use the Call-Caching feature.
UseErrorOnHold	Boolean	Yes	Whether to use the error suspension feature.
FinalWorkflowOutputsDir	String	No	Output archive COS path Note: This field may return null, indicating that no valid values can be obtained.
UseRelativeOutputPaths	Boolean	No	Whether to use the relative directory archive output. Note: This field may return null, indicating that no valid values can be obtained.

RunStatusCount

Run running status

Used by actions: DescribeRunGroups.

Name	Type	Description
Status	String	Status
Count	Integer	Quantity

SecurityGroupOption

Security group configuration

Used by actions: CreateEnvironment.

Name	Type	Required	Description
SecurityGroupId	String	Yes	Security group ID

StorageOption

CFS configuration

Used by actions: CreateEnvironment.

Name	Type	Required	Description
StorageType	String	Yes	CFS type. Valid values: - SD: standard - HP: high-performance - TB: standard Turbo - TP: high-performance Turbo
Zone	String	Yes	CFS availability zone
Capacity	Integer	No	CFS capacity in GiB, required for the Turbo series - Standard Turbo has a minimum capacity of 40 TiB, or 40,960 GiB; the capacity expansion step is 20 TiB, or 20,480 GiB. - High-performance Turbo has a minimum capacity of 20 TiB, or 20,480 GiB; the capacity expansion step is 10 TiB, or 10,240 GiB.

Table

Table

Used by actions: DescribeTables.

Name	Type	Description
TableId	String	Table ID Note: This field may return null, indicating that no valid values can be

		obtained.
ProjectId	String	Associated project ID Note: This field may return null, indicating that no valid values can be obtained.
Name	String	Table name Note: This field may return null, indicating that no valid values can be obtained.
Description	String	Table description Note: This field may return null, indicating that no valid values can be obtained.
Columns	Array of TableColumn	Table column Note: This field may return null, indicating that no valid values can be obtained.
CreateTime	String	Creation time Note: This field may return null, indicating that no valid values can be obtained.
Creator	String	Creator Note: This field may return null, indicating that no valid values can be obtained.

TableColumn

Table column

Used by actions: DescribeTables.

Name	Type	Description
Header	String	Column name Note: This field may return null, indicating that no valid values can be obtained.
DataType	String	Column data type Note: This field may return null, indicating that no valid values can be obtained.

TableRow

Table row

Used by actions: DescribeTablesRows.

Name	Type	Description
TableRowUuid	String	Table row UUID Note: This field may return null, indicating that no valid values can be obtained.
Content	Array of String	Table row content Note: This field may return null, indicating that no valid values can be obtained.

VPCOption

VPC configuration

Used by actions: CreateEnvironment.

Name	Type	Required	Description
VPCId	String	No	VPC ID (Either VPCId or VPCCIDRBlock must be selected. If VPCId is selected, the existing VPCs will be used; if VPCCIDRBlock is selected, a new VPC will be created.)
SubnetId	String	No	Subnet ID (Either SubnetId or SubnetZone&SubnetCIDRBlock must be selected. If SubnetId is selected, the existing subnet will be used; if SubnetZone&SubnetCIDRBlock is selected, a new subnet will be created.)
SubnetZone	String	No	Subnet availability zone
VPCCIDRBlock	String	No	VPC CIDR.
SubnetCIDRBlock	String	No	Subnet CIDR

Volume

Volume

Used by actions: DescribeVolumes.

Name	Type	Description

Volumeld	String	Volume ID Note: This field may return null, indicating that no valid values can be obtained.
Name	String	Name Note: This field may return null, indicating that no valid values can be obtained.
Description	String	Description Note: This field may return null, indicating that no valid values can be obtained.
EnvironmentId	String	Environment ID Note: This field may return null, indicating that no valid values can be obtained.
Type	String	Volume type. Valid values: * SHARED: Multi-point mount shared storage Note: This field may return null, indicating that no valid values can be obtained.
Spec	String	Volume specifications. Valid values: - SD: standard - HP: high-performance - TB: standard Turbo - TP: high-performance Turbo Note: This field may return null, indicating that no valid values can be obtained.
Capacity	Integer	Volume size (GB) Note: This field may return null, indicating that no valid values can be obtained.
Usage	Integer	Volume usage (Byte) Note: This field may return null, indicating that no valid values can be obtained.
BandwidthLimit	Float	Volume throughput upper limit (MiB/s) Note: This field may return null, indicating that no valid values can be obtained.
DefaultMountPath	String	Default mount path Note: This field may return null, indicating that no valid values can be obtained.
IsDefault	Boolean	Whether it is the default volume.

		Note: This field may return null, indicating that no valid values can be obtained.
Status	String	Status Note: This field may return null, indicating that no valid values can be obtained.

Error Codes

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Feature Description

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

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

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

Error Code List

Common Error Codes

Error Code	Description
ActionOffline	This API has been deprecated.
AuthFailure.InvalidAuthorization	<code>Authorization</code> 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.
InternalServerError	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
AuthFailure	CAM signature/authentication error.
FailedOperation.DuplicateTableHeader	Duplicate table headers.
FailedOperation.EmptyTableHeader	Empty table header.
FailedOperation.InvalidTableHeader	Incorrect table header.
FailedOperation.InvalidTableLength	Incorrect number of table rows.
FailedOperation.RetryLimitExceeded	Retry count exceeds the upper limit.
FailedOperation.StatusNotSupported	Unsupported status.
FailedOperation.TableDataTypeMismatch	Mismatch exists between table data and type.
FailedOperation.VersionNotReleased	Version not released.

InvalidParameterValue.DuplicateName	Duplicated name.
InvalidParameterValue.EntrypointNotSet	Entry file not specified.
InvalidParameterValue.EnvironmentNotAvailable	Environment not available.
InvalidParameterValue.InvalidBase64Encode	Base64 encoding error.
InvalidParameterValue.InvalidCosKey	Incorrect COS path.
InvalidParameterValue.InvalidCsvFormat	Incorrect CSV file format.
InvalidParameterValue.InvalidDescription	Incorrect description.
InvalidParameterValue.InvalidInputJsonFormat	Incorrect input JSON format.
InvalidParameterValue.InvalidInputPlaceholder	Incorrect input placeholder.
InvalidParameterValue.InvalidName	Incorrect name.
InvalidParameterValue.InvalidRunOption	Incorrect running parameters.
InvalidParameterValue.TableDataTypeLengthMismatch	Length mismatch exists between table data and type.
InvalidParameterValue.UnsupportedTableDataType	Unsupported table data type.
OperationDenied	Operation rejected.
ResourceNotFound.ApplicationNotExist	The application does not exist.
ResourceNotFound.ApplicationVersionNotExist	The application version does not exist.
ResourceNotFound.CosBucketNotExist	The bucket does not exist.
ResourceNotFound.CosObjectNotExist	The storage object does not exist.
ResourceNotFound.EnvironmentNotExist	The environment does not exist.
ResourceNotFound.ProjectNotExist	The project does not exist.
ResourceNotFound.RunGroupNotExist	The run group does not exist.
ResourceNotFound.RunNotExist	The run does not exist.
ResourceNotFound.TableNotExist	The table does not exist.
ResourceNotFound.TableRowNotExist	The table row does not exist.