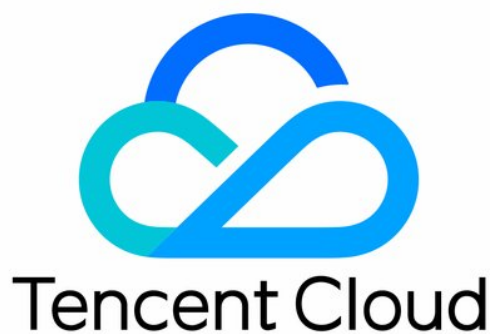


Customer Identity and Access Management

API Documentation

Product Documentation



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API Documentation

History

Last updated : 2022-10-18 10:24:55

Release 2

Release time: 2022-10-18 10:23:55

Release updates:

Improvement to existing documentation.

New APIs:

- [DescribeUser](#)

Modified APIs:

- [CreateUser](#)
 - New input parameters: IndexedAttribute1, IndexedAttribute2, IndexedAttribute3, IndexedAttribute4, IndexedAttribute5
- [UpdateUser](#)
 - New input parameters: IndexedAttribute1, IndexedAttribute2, IndexedAttribute3, IndexedAttribute4, IndexedAttribute5

New data structures:

- [QueryUserFilter](#)
- [Sort](#)

Modified data structures:

- [ImportUser](#)
 - New members: IndexedAttribute1, IndexedAttribute2, IndexedAttribute3, IndexedAttribute4, IndexedAttribute5
- [User](#)
 - New members: IndexedAttribute1, IndexedAttribute2, IndexedAttribute3, IndexedAttribute4, IndexedAttribute5

Release 1

Release time: 2022-08-10 11:55:42

Release updates:

Improvement to existing documentation.

New APIs:

- [CreateApiImportUserJob](#)
- [CreateFileExportUserJob](#)
- [CreateUser](#)
- [DeleteUsers](#)
- [DescribeUserById](#)
- [LinkAccount](#)
- [ListJobs](#)
- [ListLogMessageByCondition](#)
- [ListUser](#)
- [ListUserByProperty](#)
- [ResetPassword](#)
- [SetPassword](#)
- [UpdateUser](#)
- [UpdateUserStatus](#)

New data structures:

- [ErrorDetails](#)
- [ExportPropertyMap](#)
- [FailedUsers](#)
- [Filter](#)
- [ImportUser](#)
- [Job](#)
- [LogMessage](#)
- [MemberMap](#)
- [Pageable](#)
- [Salt](#)
- [SaltLocation](#)
- [SaltLocationRule](#)
- [User](#)

Introduction

Last updated : 2022-08-16 11:15:19

Customer Identity Access Management (CIAM) delivers a convenient and secure signup, login, and access experience to your users. It prevents malicious users from signing up and logging in to improve the user retention of your business platform. It also helps you build a unified user account data and user consent management system, where user OneID data can be created to optimize user management.

API Category

Last updated : 2022-10-18 10:24:54

User Management APIs

API Name	Feature
CreateUser	Creates a user
DeleteUsers	Deletes users in batches
DescribeUser	Queries user information
DescribeUserById	Queries a user by ID
LinkAccount	Merges accounts
ListUser	Queries the list of users
ListUserByProperty	Queries the list of users by attribute
ResetPassword	Resets the password for a user
SetPassword	Sets the password for a user
UpdateUser	Updates a user
UpdateUserStatus	Updates the status of a user

Data Sync APIs

API Name	Feature
CreateApiImportUserJob	Creates an API for user import task
CreateFileExportUserJob	Creates a file for user export task
ListJobs	Queries the details of a task

Audit Management APIs

API Name	Feature
ListLogMessageByCondition	Queries a specified log

Making API Requests

Request Structure

Last updated : 2022-08-16 11:15:19

1. Service Address

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

Southeast Asia (Bangkok)	ciam.ap-bangkok.tencentcloudapi.com
South Asia (Mumbai)	ciam.ap-mumbai.tencentcloudapi.com
Northeast Asia (Seoul)	ciam.ap-seoul.tencentcloudapi.com
Northeast Asia (Tokyo)	ciam.ap-tokyo.tencentcloudapi.com
U.S. East Coast (Virginia)	ciam.na-ashburn.tencentcloudapi.com
U.S. West Coast (Silicon Valley)	ciam.na-siliconvalley.tencentcloudapi.com
North America (Toronto)	ciam.na-toronto.tencentcloudapi.com
Europe (Frankfurt)	ciam.eu-frankfurt.tencentcloudapi.com
Europe (Moscow)	ciam.eu-moscow.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 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 documentation), and will not take effect even it is passed.
X-TC-Timestamp	Integer	Yes	The current UNIX timestamp that records the time when the API request is sent. For example, 1529223702. Note: If the difference between the UNIX timestamp and server time is greater than 5 minutes, a signature expiration error may occur.
X-TC-Version	String	Yes	API version of the action. For the valid values, see the description of the common parameter <code>Version</code> in the API documentation. For example, the version is 2017-03-12.
Authorization	String	Yes	The HTTP authentication request header, for example: TC3-HMAC-SHA256 Credential=AKIDEXAMPLE/Date/service/tc3_request/Region, SignedHeaders=content-type;host, Signature=fe5f80f77d5fa3beca038a248ff027d0445342fe2855ddc96317 Here: - TC3-HMAC-SHA256: Signature method, currently fixed as this value; - Credential: Signature credential; AKIDEXAMPLE is the SecretId; Date is the UNIX timestamp, and this value must match the value of X-TC-Timestamp (a co

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

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

Example of an HTTP GET request structure:

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

Authorization: TC3-HMAC-SHA256 Credential=AKIDz8krbsJ5yKBZQpn74WFkmLPx3EXAMPLE/2018-10-09/cvm/tc3_request, SignedHeaders=content-type;host, Signature=5da7a33f6993f0614b047e5df4582db9e9bf4672ba50567dba16c6ccf174c474
Content-Type: application/x-www-form-urlencoded
Host: cvm.tencentcloudapi.com
X-TC-Action: DescribeInstances
X-TC-Version: 2017-03-12
X-TC-Timestamp: 1539084154
X-TC-Region: ap-guangzhou
```

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

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

Authorization: TC3-HMAC-SHA256 Credential=AKIDEXAMPLE/2018-05-30/cvm/tc3_request, SignedHeaders=content-type;host, Signature=582c400e06b5924a6f2b5d7d672d79c15b13162d9279b0855cfba6789a8edb4c
Content-Type: application/json
Host: cvm.tencentcloudapi.com
X-TC-Action: DescribeInstances
X-TC-Version: 2017-03-12
X-TC-Timestamp: 1527672334
X-TC-Region: ap-guangzhou

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

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

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

```
Authorization: TC3-HMAC-SHA256 Credential=AKIDEXAMPLE/2018-05-30/cvm/tc3_request, SignedHeaders=content-type;host, Signature=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=37ac2f4fde00b0ac9bd9eadeb459b1bb224158d66e7ae5fcadb70b2d181d02&Region=ap-guangzhou&Nonce=23823223&SecretId=AKIDEXAMPLE
```

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

Example of an HTTP POST request structure:

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

```
Host: cvm.tencentcloudapi.com
```

```
Content-Type: application/x-www-form-urlencoded
```

```
Action=DescribeInstances&Version=2017-03-12&SignatureMethod=HmacSHA256&Timestamp=1527672334&Signature=37ac2f4fde00b0ac9bd9eadeb459b1bbec224158d66e7ae5fcadb70b2d181d02&Region=ap-guangzhou&Nonce=23823223&SecretId=AKIDEXAMPLE
```

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
South China (Guangzhou)	ap-guangzhou
Southeast Asia Pacific (Singapore)	ap-singapore

Signature v3

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

Applying for Security Credentials

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

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

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

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

Using the Resources for Developers

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

TC3-HMAC-SHA256 Signature Algorithm

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

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

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

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

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

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

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

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

The signature calculation process is explained in detail below.

1. Concatenating the CanonicalRequest String

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

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

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

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

`[{"Values": ["unnamed"], "Name": "instance-name"}]}` in this example

The pseudocode for calculation is

Lowercase(HexEncode(Hash.SHA256(RequestPayload))) by SHA256 hashing the payload of the HTTP request, performing hexadecimal encoding, and finally converting the encoded string to lowercase letters. For GET requests, `RequestPayload` is always an empty string. The calculation result in this example is

`99d58dfbc6745f6747f36bfca17dee5e6881dc0428a0a36f96199342bc5b4907`

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

POST

/

content-type:application/json; charset=utf-8

host:cvm.tencentcloudapi.com

content-type;host

`99d58dfbc6745f6747f36bfca17dee5e6881dc0428a0a36f96199342bc5b4907`

2. Concatenating the String to Be Signed

The string to sign is concatenated as follows:

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

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

HashedCanonicalRequest

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

```
2815843035062fffd6f2a44ea8a34818b0dc46f024b8b3786976a3ad
```

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

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

Service	Value in the Service field in <code>Credential</code> , such as <code>cvm</code> in this example.
---------	---

2. Calculate the signature with the following pseudocode:

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

4. Concatenating the Authorization

The Authorization is concatenated as follows:

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

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

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

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

The following example shows a finished authorization header:

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

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

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

5. Signature Demo

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

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

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

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

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

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

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

Java

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

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

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

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

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

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



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

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

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

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

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

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

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

```

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

```

Python

```

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

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

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

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

```

```

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

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

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

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

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

```

Golang

```
package main

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

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

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

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

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

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

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

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

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

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

PHP

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

// step 1: build canonical request string
$httpRequestMethod = "POST";
$canonicalUri = "/";
$canonicalQueryString = "";
$canonicalHeaders = "content-type:application/json; charset=utf-8\n"."host:". $host. "\n";
$signedHeaders = "content-type;host";
$payload = '{"Limit": 1, "Filters": [{"Values": ["unnamed"], "Name": "instance-name"}]}';
$hashedRequestPayload = hash("SHA256", $payload);
$canonicalRequest = $httpRequestMethod. "\n"
. $canonicalUri. "\n"
. $canonicalQueryString. "\n"
. $canonicalHeaders. "\n"
. $signedHeaders. "\n"
. $hashedRequestPayload;
echo $canonicalRequest. PHP_EOL;

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

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

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

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

Ruby

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

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

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

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

```

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

puts canonical_request

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

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

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

puts 'curl -X POST ' + endpoint \

```



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

DotNet

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

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

    public static byte[] HmacSHA256(byte[] key, byte[] msg)
    {
        using (HMACSHA256 mac = new HMACSHA256(key))
        {
            return mac.ComputeHash(msg);
        }
    }

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

```

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

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

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

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

```

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

Dictionary<string, string> headers = new Dictionary<string, string>();
headers.Add("Authorization", authorization);
headers.Add("Host", endpoint);
headers.Add("Content-Type", contentType + "; charset=utf-8");
headers.Add("X-TC-Timestamp", requestTimestamp.ToString());
headers.Add("X-TC-Version", version);
headers.Add("X-TC-Action", action);
headers.Add("X-TC-Region", region);
return headers;
}

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

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

    // The timestamp `2019-02-26 00:44:25` used here is only for reference. In a project, use the following parameter:
    // DateTime date = DateTime.UtcNow;
    // Enter the correct time zone. We recommend using UTC timestamp to avoid errors.
    DateTime date = new DateTime(1970, 1, 1, 0, 0, 0, 0, DateTimeKind.Utc).AddSeconds(1551113065);
    string requestPayload = "{\"Limit\": 1, \"Filters\": [{\"Values\": [\"\\u672a\\u547d\\u540d\"], \"Name\": \"instance-name\"}]}";

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

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

NodeJS

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

function sha256(message, secret = '', encoding) {
  const hmac = crypto.createHmac('sha256', secret)
  return hmac.update(message).digest(encoding)
}

function getHash(message, encoding = 'hex') {
  const hash = crypto.createHash('sha256')
  return hash.update(message).digest(encoding)
}

function getDate(timestamp) {
  const date = new Date(timestamp * 1000)
  const year = date.getUTCFullYear()
  const month = ('0' + (date.getUTCMonth() + 1)).slice(-2)
  const day = ('0' + date.getUTCDate()).slice(-2)
  return `${year}-${month}-${day}`
}

function main(){

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

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

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

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

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

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

```

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

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

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

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

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

```

C++

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

using namespace std;

string get_data(int64_t &timestamp)
{
    string utcDate;
    char buff[20] = {0};
    // time_t timenow;
    struct tm sttime;
    sttime = *gmtime(&timestamp);
    strftime(buff, sizeof(buff), "%Y-%m-%d", &sttime);
    utcDate = string(buff);
    return utcDate;
}

string int2str(int64_t n)
{
    std::stringstream ss;
    ss << n;
    return ss.str();
}

string sha256Hex(const string &str)
{
    char buf[3];
    unsigned char hash[SHA256_DIGEST_LENGTH];
    SHA256_CTX sha256;
    SHA256_Init(&sha256);
    SHA256_Update(&sha256, str.c_str(), str.size());
    SHA256_Final(hash, &sha256);
    std::string NewString = "";
    for(int i = 0; i < SHA256_DIGEST_LENGTH; i++)
    {
        sprintf(buf, sizeof(buf), "%02x", hash[i]);
        NewString = NewString + buf;
    }
    return NewString;
}
```

```
}  
  
string HmacSha256(const string &key, const string &input)  
{  
    unsigned char hash[32];  
  
    HMAC_CTX *h;  
    #if OPENSSSL_VERSION_NUMBER < 0x10100000L  
    HMAC_CTX hmac;  
    HMAC_CTX_init(&hmac);  
    h = &hmac;  
    #else  
    h = HMAC_CTX_new();  
    #endif  
  
    HMAC_Init_ex(h, &key[0], key.length(), EVP_sha256(), NULL);  
    HMAC_Update(h, ( unsigned char* )&input[0], input.length());  
    unsigned int len = 32;  
    HMAC_Final(h, hash, &len);  
  
    #if OPENSSSL_VERSION_NUMBER < 0x10100000L  
    HMAC_CTX_cleanup(h);  
    #else  
    HMAC_CTX_free(h);  
    #endif  
  
    std::stringstream ss;  
    ss << std::setfill('0');  
    for (int i = 0; i < len; i++)  
    {  
        ss << hash[i];  
    }  
  
    return (ss.str());  
}  
  
string HexEncode(const string &input)  
{  
    static const char* const lut = "0123456789abcdef";  
    size_t len = input.length();  
  
    string output;  
    output.reserve(2 * len);  
    for (size_t i = 0; i < len; ++i)  
    {  
        const unsigned char c = input[i];  
        output.push_back(lut[c >> 4]);  
        output.push_back(lut[c & 15]);  
    }  
}
```

```
return output;
}

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

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

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

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

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



```

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

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

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

```

Signature Failure

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

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

Signature

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Tencent Cloud API authenticates each access request, i.e. each request needs to include authentication information (Signature) in the common parameters to verify the identity of the requester.

The Signature is generated by the security credentials which include SecretId and SecretKey. If you don't have the security credentials yet, go to the [TencentCloud API Key](#) page to apply for them; otherwise, you cannot invoke the TencentCloud API.

1. Applying for Security Credentials

Before using the TencentCloud API for the first time, go to the [TencentCloud API Key](#) page to apply for security credentials.

Security credentials consist of SecretId and SecretKey:

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

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

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

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

2. Generating a Signature

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

Assume that the SecretId and SecretKey are:

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

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

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

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

2.1. Sorting Parameters

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

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

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

2.2. Concatenating a Request String

This step generates a request string.

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

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

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

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

2.3. Concatenating the Signature Original String

This step generates a signature original string.

The signature original string consists of the following parameters:

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

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

The concatenation result of the example is:

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

2.4. Generating a Signature String

This step generates a signature string.

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

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

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

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

The final signature is:

```
zmmjn35mikh6pM3V7sUEuX4wyYM=
```

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

3. Encoding a Signature String

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

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

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

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

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

4. Signature Failure

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

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

5. Signature Demo

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

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

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

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

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

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

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

Java

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

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

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

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

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

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

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

Python

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

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

import requests

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



```

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

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

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

```

Golang

```

package main

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

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

```

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

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

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

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

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

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

PHP

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

```

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

ksort($params);

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

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

```

Ruby

```

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

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

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

```

```

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

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

```

DotNet

```

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

public class Application {
  public static string Sign(string signKey, string secret)
  {
    string signRet = string.Empty;
    using (HMACSHA1 mac = new HMACSHA1(Encoding.UTF8.GetBytes(signKey)))
    {
      byte[] hash = mac.ComputeHash(Encoding.UTF8.GetBytes(secret));
      signRet = Convert.ToBase64String(hash);
    }
    return signRet;
  }

  public static string MakeSignPlainText(SortedDictionary<string, string> requestParams, string requestMethod, string requestHost, string requestPath)

```

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

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

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

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

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

```

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

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

```

NodeJS

```

const crypto = require('crypto');

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

function formatSignString(reqMethod, endpoint, path, strParam){
    let strSign = reqMethod + endpoint + path + "?" + strParam.slice(1);
    return strSign;
}

function sha1(secretKey, strsign){
    let signMethodMap = {'HmacSHA1': "sha1"};
    let hmac = crypto.createHmac(signMethodMap['HmacSHA1'], secretKey || "");
    return hmac.update(Buffer.from(strsign, 'utf8')).digest('base64')
}

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

```

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

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

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

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

strParam = sort_params(params)

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

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

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


Responses

Last updated : 2022-08-16 11:15:20

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.

User Management APIs

ResetPassword

Last updated : 2022-10-18 10:24:55

1. API Description

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

This API is used to reset the password for a user.

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: ResetPassword.
Version	Yes	String	Common Params . The value used for this API: 2022-03-31.
Region	Yes	String	Common Params . For more information, please see the list of regions supported by the product. This API only supports: ap-singapore.
UserId	Yes	String	User ID
UserStoreId	Yes	String	User directory ID

3. Output Parameters

--	--	--

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

4. Example

Example1 Resetting the password for a user

Input Example

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

{
  "UserStoreId": "xx",
  "UserId": "xx"
}
```

Output Example

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

5. Developer Resources

SDK

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

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

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

Command Line Interface

- [Tencent Cloud CLI 3.0](#)

6. Error Code

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

Error Code	Description
AuthFailure	A CAM signature/authentication error occurred.
DryRunOperation	<code>DryRun</code> Operation. It means that the request would have succeeded, but the <code>DryRun</code> parameter was used.
FailedOperation	The operation failed.
FailedOperation.InvalidTenant	The tenant is invalid.
FailedOperation.InvalidUserStore	The user pool is invalid.
FailedOperation.QuotaLimitExceeded	The quota is exceeded. Contact customer service.
FailedOperation.UserIsFreeze	The user account is frozen.
FailedOperation.UserNotFound	The user does not exist.
InternalError	An internal error occurred.
InternalError.UnknownError	An unknown error occurred.
InvalidParameter	The parameter is incorrect.
InvalidParameter.ParameterIllegal	The request parameter is invalid.
InvalidParameterValue	The parameter value is incorrect.

LimitExceeded	The quota limit is exceeded.
MissingParameter	The parameter is missing.
OperationDenied	The operation was denied.
RequestLimitExceeded	The number of requests exceeds the frequency limit.
RequestLimitExceeded.FrequentRequest	Too many requests. Try again later.
RequestLimitExceeded.RepeatRequest	Repeated request. Try again later.
ResourceInUse	The resource is in use.
ResourceInsufficient	The resource is insufficient.
ResourceNotFound	The resource does not exist.
ResourceUnavailable	The resource is unavailable.
ResourcesSoldOut	The resources have been sold out.
UnauthorizedOperation	The operation is unauthorized.
UnauthorizedOperation.TenantNotActivated	The service is not activated.
UnknownParameter	The parameter is unknown.
UnsupportedOperation	The operation is not supported.

UpdateUserStatus

Last updated : 2022-10-18 10:24:55

1. API Description

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

This API is used to update the status of a user.

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: UpdateUserStatus.
Version	Yes	String	Common Params . The value used for this API: 2022-03-31.
Region	Yes	String	Common Params . For more information, please see the list of regions supported by the product. This API only supports: ap-singapore.
UserStoreId	Yes	String	User directory ID
UserId	Yes	String	User ID
Status	Yes	String	User status • NORMAL Normal • LOCK Locked • FREEZE

			Frozen
--	--	--	--------

3. Output Parameters

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

4. Example

Example1 Updating the status of a user

Input Example

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

{
  "UserId": "xxx",
  "Status": "xxx",
  "UserStoreId": "xxx"
}
```

Output Example

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

5. Developer Resources

SDK

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

Command Line Interface

- [Tencent Cloud CLI 3.0](#)

6. Error Code

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

Error Code	Description
AuthFailure	A CAM signature/authentication error occurred.
DryRunOperation	<code>DryRun</code> Operation. It means that the request would have succeeded, but the <code>DryRun</code> parameter was used.
FailedOperation	The operation failed.
FailedOperation.InvalidTenant	The tenant is invalid.
FailedOperation.InvalidUserStatusEnum	The status enumerated value is wrong. See the API documentation.
FailedOperation.InvalidUserStore	The user pool is invalid.
FailedOperation.QuotaLimitExceeded	The quota is exceeded. Contact customer service.
FailedOperation.UserNotFound	The user does not exist.
FailedOperation.UserStatusRequired	The updated status is required.
InternalError	An internal error occurred.

InternalError.UnknownError	An unknown error occurred.
InvalidParameter	The parameter is incorrect.
InvalidParameter.ParameterIllegal	The request parameter is invalid.
InvalidParameterValue	The parameter value is incorrect.
LimitExceeded	The quota limit is exceeded.
MissingParameter	The parameter is missing.
OperationDenied	The operation was denied.
RequestLimitExceeded	The number of requests exceeds the frequency limit.
RequestLimitExceeded.FrequentRequest	Too many requests. Try again later.
RequestLimitExceeded.RepeatRequest	Repeated request. Try again later.
ResourceInUse	The resource is in use.
ResourceInsufficient	The resource is insufficient.
ResourceNotFound	The resource does not exist.
ResourceUnavailable	The resource is unavailable.
ResourcesSoldOut	The resources have been sold out.
UnauthorizedOperation	The operation is unauthorized.
UnauthorizedOperation.TenantNotActivated	The service is not activated.
UnknownParameter	The parameter is unknown.
UnsupportedOperation	The operation is not supported.

UpdateUser

Last updated : 2022-10-18 10:24:55

1. API Description

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

This API is used to update a user.

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: UpdateUser.
Version	Yes	String	Common Params . The value used for this API: 2022-03-31.
Region	Yes	String	Common Params . For more information, please see the list of regions supported by the product. This API only supports: ap-singapore.
UserId	Yes	String	User ID
UserStoreId	Yes	String	User directory ID
UserName	No	String	Username
PhoneNumber	No	String	Mobile number
Email	No	String	Email address

Nickname	No	String	Nickname
Address	No	String	Address
UserGroup.N	No	Array of String	User group
Birthdate	No	Integer	Date of birth
CustomizationAttributes.N	No	Array of MemberMap	Custom attribute
IndexedAttribute1	No	String	Index field 1
IndexedAttribute2	No	String	Index field 2
IndexedAttribute3	No	String	Index field 3
IndexedAttribute4	No	String	Index field 4
IndexedAttribute5	No	String	Index field 5

3. Output Parameters

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

4. Example

Example1 Updating a user

Input Example

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

<Common request parameters>

```
{
  "UserName": "xx",
  "UserStoreId": "xx",
  "UserGroup": [
    "xxx"
  ],
  "UserId": "xx",
  "Birthdate": 0,
  "PhoneNumber": "xx",
  "Address": "xx",
  "Nickname": "xx",
  "Email": "xx",
  "CustomizationAttributes": [
    {
      "Name": "xx",
      "Value": "xx",
      "Type": "xx"
    }
  ]
}
```

Output Example

```
{
  "Response": {
    "RequestId": "xxx",
    "User": null
  }
}
```

5. Developer Resources

SDK

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

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

Command Line Interface

- [Tencent Cloud CLI 3.0](#)

6. Error Code

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

Error Code	Description
AuthFailure	A CAM signature/authentication error occurred.
DryRunOperation	<code>DryRun</code> Operation. It means that the request would have succeeded, but the <code>DryRun</code> parameter was used.
FailedOperation	The operation failed.
FailedOperation.AttributeFormatError	The user attribute format is abnormal.
FailedOperation.EmailAlreadyExists	The email address has already been bound to a user.
FailedOperation.IndexedAttributeTooLong	<code>indexedAttribute</code> can contain up to 512 characters.
FailedOperation.InvalidTenant	The tenant is invalid.
FailedOperation.InvalidUserStore	The user pool is invalid.
FailedOperation.PhoneNumberAlreadyExists	The mobile number has already been bound to a user.
FailedOperation.QuotaLimitExceeded	The quota is exceeded. Contact customer service.
FailedOperation.UserGroupNotFound	The user group does not exist.
FailedOperation.UserNameAlreadyExists	The user name already exists.
FailedOperation.UserNotFound	The user does not exist.
InternalError	An internal error occurred.
InternalError.UnknownError	An unknown error occurred.

InvalidParameter	The parameter is incorrect.
InvalidParameter.ParameterIllegal	The request parameter is invalid.
InvalidParameterValue	The parameter value is incorrect.
LimitExceeded	The quota limit is exceeded.
MissingParameter	The parameter is missing.
OperationDenied	The operation was denied.
RequestLimitExceeded	The number of requests exceeds the frequency limit.
RequestLimitExceeded.FrequentRequest	Too many requests. Try again later.
RequestLimitExceeded.RepeatRequest	Repeated request. Try again later.
ResourceInUse	The resource is in use.
ResourceInsufficient	The resource is insufficient.
ResourceNotFound	The resource does not exist.
ResourceUnavailable	The resource is unavailable.
ResourcesSoldOut	The resources have been sold out.
UnauthorizedOperation	The operation is unauthorized.
UnauthorizedOperation.TenantNotActivated	The service is not activated.
UnknownParameter	The parameter is unknown.
UnsupportedOperation	The operation is not supported.

SetPassword

Last updated : 2022-10-18 10:24:55

1. API Description

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

This API is used to set the password for a user.

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: SetPassword.
Version	Yes	String	Common Params . The value used for this API: 2022-03-31.
Region	Yes	String	Common Params . For more information, please see the list of regions supported by the product. This API only supports: ap-singapore.
UserStoreId	Yes	String	User directory ID
UserId	Yes	String	User ID
Password	Yes	String	Password

3. Output Parameters

--	--	--

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

4. Example

Example1 Setting the password for a user

Input Example

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

{
  "UserStoreId": "xx",
  "Password": "xx",
  "UserId": "xx"
}
```

Output Example

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

5. Developer Resources

SDK

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

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

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

Command Line Interface

- [Tencent Cloud CLI 3.0](#)

6. Error Code

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

Error Code	Description
AuthFailure	A CAM signature/authentication error occurred.
DryRunOperation	<code>DryRun</code> Operation. It means that the request would have succeeded, but the <code>DryRun</code> parameter was used.
FailedOperation	The operation failed.
FailedOperation.InvalidTenant	The tenant is invalid.
FailedOperation.InvalidUserStore	The user pool is invalid.
FailedOperation.PasswordIsNull	The password cannot be empty.
FailedOperation.QuotaLimitExceeded	The quota is exceeded. Contact customer service.
FailedOperation.UserIsFreeze	The user account is frozen.
FailedOperation.UserNotFound	The user does not exist.
InternalError	An internal error occurred.
InternalError.UnknownError	An unknown error occurred.
InvalidParameter	The parameter is incorrect.
InvalidParameter.ParameterIllegal	The request parameter is invalid.
InvalidParameterValue	The parameter value is incorrect.

LimitExceeded	The quota limit is exceeded.
MissingParameter	The parameter is missing.
OperationDenied	The operation was denied.
RequestLimitExceeded	The number of requests exceeds the frequency limit.
RequestLimitExceeded.FrequentRequest	Too many requests. Try again later.
RequestLimitExceeded.RepeatRequest	Repeated request. Try again later.
ResourceInUse	The resource is in use.
ResourceInsufficient	The resource is insufficient.
ResourceNotFound	The resource does not exist.
ResourceUnavailable	The resource is unavailable.
ResourcesSoldOut	The resources have been sold out.
UnauthorizedOperation	The operation is unauthorized.
UnauthorizedOperation.TenantNotActivated	The service is not activated.
UnknownParameter	The parameter is unknown.
UnsupportedOperation	The operation is not supported.

ListUserByProperty

Last updated : 2022-10-18 10:24:56

1. API Description

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

This API is used to query the list of users by attribute.

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: ListUserByProperty.
Version	Yes	String	Common Params . The value used for this API: 2022-03-31.
Region	Yes	String	Common Params . For more information, please see the list of regions supported by the product. This API only supports: ap-singapore.
UserStoreId	Yes	String	User directory ID
PropertyCode	Yes	String	Query attribute • phoneNumber Mobile number • email Email
PropertyValue	Yes	String	Attribute value

Original	No	Boolean	Whether the content is passed through
----------	----	---------	---------------------------------------

3. Output Parameters

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

4. Example

Example1 Querying the list of users

Input Example

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

{
  "UserStoreId": "xx",
  "PropertyCode": "xx",
  "PropertyValue": "xx"
}
```

Output Example

```
{
  "Response": {
    "Users": [
      {
        "UserName": "xx",
        "Zone": "xx",
        "UserId": "xx",
        "ResidentIdentityCard": "xx",

```

```
"TenantId": "xx",
"CustomAttributes": [
{
  "Type": "xx",
  "Name": "xx",
  "Value": "xx"
}
],
"Version": 0,
"WechatOpenId": "xx",
"Email": "xx",
"Status": "xx",
"Description": "xx",
"LastModifiedDate": 0,
"AlreadyFirstLogin": true,
"Job": "xx",
"Address": "xx",
"Nationality": "xx",
"Nickname": "xx",
"UserStoreId": "xx",
"QqOpenId": "xx",
"Name": "xx",
"UserDataSourceEnum": "xx",
"Gender": "xx",
"IdentityVerificationMethod": "xx",
"AlipayUserId": "xx",
"LastSignOn": 0,
"PhoneNumber": "xx",
"Birthdate": 0,
"QqUnionId": "xx",
"UserGroups": [
  "xx"
],
"Locale": "xx",
"Primary": true,
"IdentityVerified": true,
"CreatedDate": 0,
"LockTime": 0,
"LockType": "xx",
"WechatUnionId": "xx"
}
],
"RequestId": "xx"
}
```

5. Developer Resources

SDK

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

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

Command Line Interface

- [Tencent Cloud CLI 3.0](#)

6. Error Code

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

Error Code	Description
AuthFailure	A CAM signature/authentication error occurred.
DryRunOperation	<code>DryRun</code> Operation. It means that the request would have succeeded, but the <code>DryRun</code> parameter was used.
FailedOperation	The operation failed.
FailedOperation.InvalidTenant	The tenant is invalid.
FailedOperation.InvalidUserStore	The user pool is invalid.
FailedOperation.QuotaLimitExceeded	The quota is exceeded. Contact customer service.
InternalError	An internal error occurred.
InternalError.UnknownError	An unknown error occurred.
InvalidParameter	The parameter is incorrect.

InvalidParameter.ParameterIllegal	The request parameter is invalid.
InvalidParameterValue	The parameter value is incorrect.
LimitExceeded	The quota limit is exceeded.
MissingParameter	The parameter is missing.
OperationDenied	The operation was denied.
RequestLimitExceeded	The number of requests exceeds the frequency limit.
RequestLimitExceeded.FrequentRequest	Too many requests. Try again later.
RequestLimitExceeded.RepeatRequest	Repeated request. Try again later.
ResourceInUse	The resource is in use.
ResourceInsufficient	The resource is insufficient.
ResourceNotFound	The resource does not exist.
ResourceUnavailable	The resource is unavailable.
ResourcesSoldOut	The resources have been sold out.
UnauthorizedOperation	The operation is unauthorized.
UnauthorizedOperation.TenantNotActivated	The service is not activated.
UnknownParameter	The parameter is unknown.
UnsupportedOperation	The operation is not supported.

ListUser

Last updated : 2022-10-18 10:24:56

1. API Description

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

This API is used to query the list of users.

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: ListUser.
Version	Yes	String	Common Params . The value used for this API: 2022-03-31.
Region	Yes	String	Common Params . For more information, please see the list of regions supported by the product. This API only supports: ap-singapore.
UserStoreId	Yes	String	User directory ID
Pageable	Yes	Pageable	Pagination data
Filters.N	No	Array of Filter	Valid values of <code>Key</code> : <code>condition</code> , <code>userGroupId</code> . condition Values = Query condition, which can be user ID, username, mobile number, or email address. userGroupId

			Values = User group ID
Original	No	Boolean	Whether the content is passed through

3. Output Parameters

Parameter Name	Type	Description
Total	Integer	Total number Note: This field may return null, indicating that no valid values can be obtained.
Pageable	Pageable	Pagination object Note: This field may return null, indicating that no valid values can be obtained.
Content	Array of User	List of users Note: This field may return null, indicating that no valid values can be obtained.
RequestId	String	The unique request ID, which is returned for each request. RequestId is required for locating a problem.

4. Example

Example1 Querying the list of users

Input Example

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

{
  "UserStoreId": "xx",
  "Pageable": {
    "PageNumber": 0,
    "PageSize": 0
  },
  "Filters": [
    {
      "Values": [
```

```
"xx"
],
"Key": "xx",
"Logic": true
}
]
}
```

Output Example

```
{
  "Response": {
    "Content": [
      {
        "UserName": "xx",
        "Zone": "xx",
        "ResidentIdentityCard": "xx",
        "TenantId": "xx",
        "WechatOpenId": "xx",
        "Email": "xx",
        "Status": "xx",
        "Description": "xx",
        "UserId": "xx",
        "Job": "xx",
        "Address": "xx",
        "Nationality": "xx",
        "Nickname": "xx",
        "UserStoreId": "xx",
        "QqOpenId": "xx",
        "Name": "xx",
        "Gender": "xx",
        "IdentityVerificationMethod": "xx",
        "AlipayUserId": "xx",
        "LastSignOn": "xx",
        "PhoneNumber": "xx",
        "QqUnionId": "xx",
        "Locale": "xx",
        "Primary": true,
        "IdentityVerified": true,
        "WechatUnionId": "xx"
      }
    ],
    "Total": 0,
    "Pageable": {
      "PageNumber": 0,
      "PageSize": 0
    }
  }
}
```

```
},  
"RequestId": "xx"  
}  
}
```

5. Developer Resources

SDK

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

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

Command Line Interface

- [Tencent Cloud CLI 3.0](#)

6. Error Code

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

Error Code	Description
AuthFailure	A CAM signature/authentication error occurred.
DryRunOperation	<code>DryRun</code> Operation. It means that the request would have succeeded, but the <code>DryRun</code> parameter was used.
FailedOperation	The operation failed.
FailedOperation.InvalidTenant	The tenant is invalid.
FailedOperation.InvalidUserStore	The user pool is invalid.

FailedOperation.QuotaLimitExceeded	The quota is exceeded. Contact customer service.
InternalError	An internal error occurred.
InternalError.UnknownError	An unknown error occurred.
InvalidParameter	The parameter is incorrect.
InvalidParameter.ParameterIllegal	The request parameter is invalid.
InvalidParameterValue	The parameter value is incorrect.
LimitExceeded	The quota limit is exceeded.
MissingParameter	The parameter is missing.
OperationDenied	The operation was denied.
RequestLimitExceeded	The number of requests exceeds the frequency limit.
RequestLimitExceeded.FrequentRequest	Too many requests. Try again later.
RequestLimitExceeded.RepeatRequest	Repeated request. Try again later.
ResourceInUse	The resource is in use.
ResourceInsufficient	The resource is insufficient.
ResourceNotFound	The resource does not exist.
ResourceUnavailable	The resource is unavailable.
ResourcesSoldOut	The resources have been sold out.
UnauthorizedOperation	The operation is unauthorized.
UnauthorizedOperation.TenantNotActivated	The service is not activated.
UnknownParameter	The parameter is unknown.
UnsupportedOperation	The operation is not supported.

LinkAccount

Last updated : 2022-10-18 10:24:56

1. API Description

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

This API is used to merge accounts.

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: LinkAccount.
Version	Yes	String	Common Params . The value used for this API: 2022-03-31.
Region	Yes	String	Common Params . For more information, please see the list of regions supported by the product. This API only supports: ap-singapore.
UserStoreId	Yes	String	User directory ID
PrimaryUserId	Yes	String	Primary user ID
SecondaryUserId	Yes	String	Secondary user ID
UserLinkedOnAttribute	Yes	String	Fusion attribute • PHONENUMBER Mobile number • EMAIL

			Email
--	--	--	-------

3. Output Parameters

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

4. Example

Example1 Merging accounts

Input Example

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

{
  "UserStoreId": "xx",
  "PrimaryUserId": "xx",
  "UserLinkedOnAttribute": "xx",
  "SecondaryUserId": "xx"
}
```

Output Example

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

5. Developer Resources

SDK

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

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

Command Line Interface

- [Tencent Cloud CLI 3.0](#)

6. Error Code

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

Error Code	Description
AuthFailure	A CAM signature/authentication error occurred.
DryRunOperation	<code>DryRun</code> Operation. It means that the request would have succeeded, but the <code>DryRun</code> parameter was used.
FailedOperation	The operation failed.
FailedOperation.AccountAlreadyBeLinked	The secondary account has already been merged and cannot be merged again.
FailedOperation.InvalidTenant	The tenant is invalid.
FailedOperation.InvalidUserStatusEnum	The status enumerated value is wrong. See the API documentation.
FailedOperation.InvalidUserStore	The user pool is invalid.
FailedOperation.PrimaryUserNotFound	The primary user does not exist.
FailedOperation.QuotaLimitExceeded	The quota is exceeded. Contact customer service.

FailedOperation.SecondaryUserNotFound	The secondary user does not exist.
InternalError	An internal error occurred.
InternalError.UnknownError	An unknown error occurred.
InvalidParameter	The parameter is incorrect.
InvalidParameter.ParameterIllegal	The request parameter is invalid.
InvalidParameterValue	The parameter value is incorrect.
LimitExceeded	The quota limit is exceeded.
MissingParameter	The parameter is missing.
OperationDenied	The operation was denied.
RequestLimitExceeded	The number of requests exceeds the frequency limit.
RequestLimitExceeded.FrequentRequest	Too many requests. Try again later.
RequestLimitExceeded.RepeatRequest	Repeated request. Try again later.
ResourceInUse	The resource is in use.
ResourceInsufficient	The resource is insufficient.
ResourceNotFound	The resource does not exist.
ResourceUnavailable	The resource is unavailable.
ResourcesSoldOut	The resources have been sold out.
UnauthorizedOperation	The operation is unauthorized.
UnauthorizedOperation.TenantNotActivated	The service is not activated.
UnknownParameter	The parameter is unknown.
UnsupportedOperation	The operation is not supported.

DescribeUserById

Last updated : 2022-10-18 10:24:56

1. API Description

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

This API is used to query a user by ID.

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: DescribeUserById.
Version	Yes	String	Common Params . The value used for this API: 2022-03-31.
Region	Yes	String	Common Params . For more information, please see the list of regions supported by the product. This API only supports: ap-singapore.
UserStoreId	Yes	String	User directory ID
UserId	Yes	String	User ID
Original	No	Boolean	Whether the content is passed through false Default. The returned information is desensitized. true Return the original content.

3. Output Parameters

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

4. Example

Example1 Querying a user by ID

Input Example

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

{
  "UserStoreId": "xx",
  "UserId": "xx"
}
```

Output Example

```
{
  "Response": {
    "User": {
      "UserName": "xx",
      "Zone": "xx",
      "UserId": "xx",
      "ResidentIdentityCard": "xx",
      "TenantId": "xx",
      "CustomAttributes": [
        {
          "Type": "xx",
          "Name": "xx",
          "Value": "xx"
        }
      ]
    }
  }
}
```

```
}
],
"Version": 0,
"WechatOpenId": "xx",
"Email": "xx",
"Status": "xx",
"Description": "xx",
"LastModifiedDate": 0,
"AlreadyFirstLogin": true,
"Job": "xx",
"Address": "xx",
"Nationality": "xx",
"Nickname": "xx",
"UserStoreId": "xx",
"QqOpenId": "xx",
"Name": "xx",
"UserDataSourceEnum": "xx",
"Gender": "xx",
"IdentityVerificationMethod": "xx",
"AlipayUserId": "xx",
"LastSignOn": 0,
"PhoneNumber": "xx",
"Birthdate": 0,
"QqUnionId": "xx",
"UserGroups": [
  "xx"
],
"Locale": "xx",
"Primary": true,
"IdentityVerified": true,
"CreatedDate": 0,
"LockTime": 0,
"LockType": "xx",
"WechatUnionId": "xx"
},
"RequestId": "xx"
}
```

5. Developer Resources

SDK

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

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

Command Line Interface

- [Tencent Cloud CLI 3.0](#)

6. Error Code

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

Error Code	Description
AuthFailure	A CAM signature/authentication error occurred.
DryRunOperation	<code>DryRun</code> Operation. It means that the request would have succeeded, but the <code>DryRun</code> parameter was used.
FailedOperation	The operation failed.
FailedOperation.InvalidTenant	The tenant is invalid.
FailedOperation.InvalidUserStore	The user pool is invalid.
FailedOperation.QuotaLimitExceeded	The quota is exceeded. Contact customer service.
InternalError	An internal error occurred.
InternalError.UnknownError	An unknown error occurred.
InvalidParameter	The parameter is incorrect.
InvalidParameter.ParameterIllegal	The request parameter is invalid.
InvalidParameterValue	The parameter value is incorrect.

LimitExceeded	The quota limit is exceeded.
MissingParameter	The parameter is missing.
OperationDenied	The operation was denied.
RequestLimitExceeded	The number of requests exceeds the frequency limit.
RequestLimitExceeded.FrequentRequest	Too many requests. Try again later.
RequestLimitExceeded.RepeatRequest	Repeated request. Try again later.
ResourceInUse	The resource is in use.
ResourceInsufficient	The resource is insufficient.
ResourceNotFound	The resource does not exist.
ResourceUnavailable	The resource is unavailable.
ResourcesSoldOut	The resources have been sold out.
UnauthorizedOperation	The operation is unauthorized.
UnauthorizedOperation.TenantNotActivated	The service is not activated.
UnknownParameter	The parameter is unknown.
UnsupportedOperation	The operation is not supported.

DeleteUsers

Last updated : 2022-10-18 10:24:57

1. API Description

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

This API is used to delete users in batches.

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: DeleteUsers.
Version	Yes	String	Common Params . The value used for this API: 2022-03-31.
Region	Yes	String	Common Params . For more information, please see the list of regions supported by the product. This API only supports: ap-singapore.
UserStoreId	Yes	String	User directory ID
UserIds.N	Yes	Array of String	Array of user IDs

3. Output Parameters

--	--	--

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

4. Example

Example1 Deleting users in batches

Input Example

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

{
  "UserIds": [
    "xxx"
  ],
  "UserStoreId": "xxx"
}
```

Output Example

```
{
  "Response": {
    "RequestId": "xxx"
  }
}
```

5. Developer Resources

SDK

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

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

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

Command Line Interface

- [Tencent Cloud CLI 3.0](#)

6. Error Code

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

Error Code	Description
AuthFailure	A CAM signature/authentication error occurred.
DryRunOperation	<code>DryRun</code> Operation. It means that the request would have succeeded, but the <code>DryRun</code> parameter was used.
FailedOperation	The operation failed.
FailedOperation.InvalidTenant	The tenant is invalid.
FailedOperation.InvalidUserStore	The user pool is invalid.
FailedOperation.QuotaLimitExceeded	The quota is exceeded. Contact customer service.
InternalError	An internal error occurred.
InternalError.UnknownError	An unknown error occurred.
InvalidParameter	The parameter is incorrect.
InvalidParameter.ParameterIllegal	The request parameter is invalid.
InvalidParameterValue	The parameter value is incorrect.
LimitExceeded	The quota limit is exceeded.
MissingParameter	The parameter is missing.

OperationDenied	The operation was denied.
RequestLimitExceeded	The number of requests exceeds the frequency limit.
RequestLimitExceeded.FrequentRequest	Too many requests. Try again later.
RequestLimitExceeded.RepeatRequest	Repeated request. Try again later.
ResourceInUse	The resource is in use.
ResourceInsufficient	The resource is insufficient.
ResourceNotFound	The resource does not exist.
ResourceUnavailable	The resource is unavailable.
ResourcesSoldOut	The resources have been sold out.
UnauthorizedOperation	The operation is unauthorized.
UnauthorizedOperation.TenantNotActivated	The service is not activated.
UnknownParameter	The parameter is unknown.
UnsupportedOperation	The operation is not supported.

CreateUser

Last updated : 2022-10-18 10:24:57

1. API Description

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

This API is used to create a user.

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: CreateUser.
Version	Yes	String	Common Params . The value used for this API: 2022-03-31.
Region	Yes	String	Common Params . For more information, please see the list of regions supported by the product. This API only supports: ap-singapore.
UserStoreId	Yes	String	User directory ID
PhoneNumber	Yes	String	Mobile number
Email	Yes	String	Email address
Password	Yes	String	Password
UserName	Yes	String	Username

Nickname	No	String	Nickname
Address	No	String	Address
UserGroup.N	No	Array of String	User group ID
Birthdate	No	Integer	Date of birth
CustomizationAttributes.N	No	Array of MemberMap	Custom attribute
IndexedAttribute1	No	String	Index field 1
IndexedAttribute2	No	String	Index field 2
IndexedAttribute3	No	String	Index field 3
IndexedAttribute4	No	String	Index field 4
IndexedAttribute5	No	String	Index field 5

3. Output Parameters

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

4. Example

Example1 Creating a user

Input Example

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

<Common request parameters>

```
{
  "UserName": "xx",
  "UserStoreId": "xx",
  "UserGroup": [
    "xxx"
  ],
  "Birthdate": 0,
  "PhoneNumber": "xx",
  "Address": "xx",
  "Password": "xx",
  "Nickname": "xx",
  "Email": "xx",
  "CustomizationAttributes": [
    {
      "Name": "xx",
      "Value": "xx"
    }
  ]
}
```

Output Example

```
{
  "Response": {
    "RequestId": "xxx",
    "User": null
  }
}
```

5. Developer Resources

SDK

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

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

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

Command Line Interface

- [Tencent Cloud CLI 3.0](#)

6. Error Code

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

Error Code	Description
AuthFailure	A CAM signature/authentication error occurred.
DryRunOperation	<code>DryRun</code> Operation. It means that the request would have succeeded, but the <code>DryRun</code> parameter was used.
FailedOperation	The operation failed.
FailedOperation.AttributeFormatError	The user attribute format is abnormal.
FailedOperation.EmailAlreadyExists	The email address has already been bound to a user.
FailedOperation.EmailIsNull	The email address cannot be empty.
FailedOperation.IndexedAttributeTooLong	indexedAttribute can contain up to 512 characters.
FailedOperation.InvalidTenant	The tenant is invalid.
FailedOperation.InvalidUserStore	The user pool is invalid.
FailedOperation.PasswordIsNull	The password cannot be empty.
FailedOperation.PhoneNumberAlreadyExists	The mobile number has already been bound to a user.
FailedOperation.PhoneNumberIsNull	The mobile number cannot be empty.
FailedOperation.QuotaLimitExceeded	The quota is exceeded. Contact customer service.
FailedOperation.UserGroupNotFound	The user group does not exist.
FailedOperation.UserNameAlreadyExists	The user name already exists.
FailedOperation.UserNameIsNull	The username cannot be empty.

InternalError	An internal error occurred.
InternalError.UnknownError	An unknown error occurred.
InvalidParameter	The parameter is incorrect.
InvalidParameter.ParameterIllegal	The request parameter is invalid.
InvalidParameterValue	The parameter value is incorrect.
LimitExceeded	The quota limit is exceeded.
MissingParameter	The parameter is missing.
OperationDenied	The operation was denied.
RequestLimitExceeded	The number of requests exceeds the frequency limit.
RequestLimitExceeded.FrequentRequest	Too many requests. Try again later.
RequestLimitExceeded.RepeatRequest	Repeated request. Try again later.
ResourceInUse	The resource is in use.
ResourceInsufficient	The resource is insufficient.
ResourceNotFound	The resource does not exist.
ResourceUnavailable	The resource is unavailable.
ResourcesSoldOut	The resources have been sold out.
UnauthorizedOperation	The operation is unauthorized.
UnauthorizedOperation.TenantNotActivated	The service is not activated.
UnknownParameter	The parameter is unknown.
UnsupportedOperation	The operation is not supported.

DescribeUser

Last updated : 2022-10-18 10:24:56

1. API Description

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

This API is used to query the user information with multiple conditions.

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: DescribeUser.
Version	Yes	String	Common Params . The value used for this API: 2022-03-31.
Region	Yes	String	Common Params . For more information, please see the list of regions supported by the product. This API only supports: ap-guangzhou.
UserStoreId	Yes	String	User directory ID
Pageable	Yes	Pageable	Pagination data
Filters.N	No	Array of QueryUserFilter	Query condition (<code>propertycode</code> and <code>propertykey</code>)
Original	No	Boolean	Whether the plaintext is returned
Sort	No	Sort	Sorting configuration

3. Output Parameters

Parameter Name	Type	Description
Total	Integer	The total number of returned results. Note: this field may return null, indicating that no valid values can be obtained.
Pageable	Pageable	Pagination object Note: this field may return null, indicating that no valid values can be obtained.
Content	Array of User	User List Note: this field may return null, indicating that no valid values can be obtained.
RequestId	String	The unique request ID, which is returned for each request. RequestId is required for locating a problem.

4. Example

Example1 Querying the user information

Input Example

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

{
  "UserStoreId": "xx",
  "Pageable": {
    "PageNumber": 0,
    "PageSize": 0
  },
  "Filters": [
    {
      "PropertyKey": "xx",
      "PropertyValue": "xx",
      "Logic": true
    }
  ]
}
```

Output Example

```
{
  "Response": {
    "Content": [
      {
        "UserName": "xx",
        "Zone": "xx",
        "ResidentIdentityCard": "xx",
        "TenantId": "xx",
        "WechatOpenId": "xx",
        "Email": "xx",
        "Status": "xx",
        "Description": "xx",
        "UserId": "xx",
        "Job": "xx",
        "Address": "xx",
        "Nationality": "xx",
        "Nickname": "xx",
        "UserStoreId": "xx",
        "QqOpenId": "xx",
        "Name": "xx",
        "Gender": "xx",
        "IdentityVerificationMethod": "xx",
        "AlipayUserId": "xx",
        "LastSignOn": "xx",
        "PhoneNumber": "xx",
        "QqUnionId": "xx",
        "Locale": "xx",
        "Primary": true,
        "IdentityVerified": true,
        "WechatUnionId": "xx"
      }
    ],
    "Total": 0,
    "Pageable": {
      "PageNumber": 0,
      "PageSize": 0
    },
    "RequestId": "xx"
  }
}
```

5. Developer Resources

SDK

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

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

Command Line Interface

- [Tencent Cloud CLI 3.0](#)

6. Error Code

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

Error Code	Description
AuthFailure	A CAM signature/authentication error occurred.
DryRunOperation	<code>DryRun</code> Operation. It means that the request would have succeeded, but the <code>DryRun</code> parameter was used.
FailedOperation	The operation failed.
FailedOperation.InvalidTenant	The tenant is invalid.
FailedOperation.InvalidUserStore	The user pool is invalid.
FailedOperation.QueryUsersParameterMustInWhitelist	The query condition must contain at least one of the followings: userName, phoneNumber, email, userGroup, alipayUserId, wechatOpenId, wechatUnionId, qqOpenId, qqUnionId, lastModifiedDate, indexedAttribute1, indexedAttribute2, indexedAttribute3, indexedAttribute4, indexedAttribute5.

FailedOperation.QueryUsersParameterRepeat	The conditions can not duplicate.
FailedOperation.QueryUsersSortParameterMustInWhitelist	The <code>PropertyKey</code> of <code>Sort</code> must include one of the followings: id, userName, phoneNumber, email, userGroup, alipayUserId, wechatOpenId, wechatUnionId, qqOpenId, qqUnionId, lastModifiedDate, indexedAttribute1, indexedAttribute2, indexedAttribute3, indexedAttribute4, indexedAttribute5.
FailedOperation.QuotaLimitExceeded	The quota is exceeded. Contact customer service.
InternalError	An internal error occurred.
InternalError.UnknownError	An unknown error occurred.
InvalidParameter	The parameter is incorrect.
InvalidParameter.ParameterIllegal	The request parameter is invalid.
InvalidParameterValue	The parameter value is incorrect.
LimitExceeded	The quota limit is exceeded.
MissingParameter	The parameter is missing.
OperationDenied	The operation was denied.
RequestLimitExceeded	The number of requests exceeds the frequency limit.
RequestLimitExceeded.FrequentRequest	Too many requests. Try again later.
RequestLimitExceeded.RepeatRequest	Repeated request. Try again later.
ResourceInUse	The resource is in use.
ResourceInsufficient	The resource is insufficient.
ResourceNotFound	The resource does not exist.
ResourceUnavailable	The resource is unavailable.
ResourcesSoldOut	The resources have been sold out.
UnauthorizedOperation	The operation is unauthorized.
UnauthorizedOperation.TenantNotActivated	The service is not activated.

UnknownParameter	The parameter is unknown.
UnsupportedOperation	The operation is not supported.

Data Sync APIs

ListJobs

Last updated : 2022-10-18 10:24:57

1. API Description

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

This API is used to query the details of a task.

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: ListJobs.
Version	Yes	String	Common Params . The value used for this API: 2022-03-31.
Region	Yes	String	Common Params . For more information, please see the list of regions supported by the product. This API only supports: ap-singapore.
UserStoreId	Yes	String	User directory ID
JobIds.N	No	Array of String	List of task IDs. If this parameter is empty, all tasks will be returned.

3. Output Parameters

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

4. Example

Example1 Querying the details of a task

Input Example

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

{
  "UserStoreId": "xx",
  "JobIds": [
    "xx"
  ]
}
```

Output Example

```
{
  "Response": {
    "JobSet": [
      {
        "Status": "xx",
        "Format": "xx",
        "FailedUsers": [
          {
            "FailedUserIdentification": "xx",
            "FailedReason": "xx"
          }
        ]
      }
    ]
  }
}
```



```
] ,
  "Location": "xx",
  "Type": "xx",
  "Id": "xx"
}
],
"RequestId": "xx"
}
```

5. Developer Resources

SDK

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

Command Line Interface

- [Tencent Cloud CLI 3.0](#)

6. Error Code

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

Error Code	Description
AuthFailure	A CAM signature/authentication error occurred.
DryRunOperation	<code>DryRun</code> Operation. It means that the request would have succeeded, but the <code>DryRun</code> parameter was used.

FailedOperation	The operation failed.
FailedOperation.DataFlowTooManyRequests	There are already two valid tasks. Wait for one of them to complete and try again.
FailedOperation.ImportUserIsEmpty	The user is empty during user import.
FailedOperation.InvalidTenant	The tenant is invalid.
FailedOperation.InvalidUserStore	The user pool is invalid.
FailedOperation.QuotaLimitExceeded	The quota is exceeded. Contact customer service.
InternalError	An internal error occurred.
InternalError.UnknownError	An unknown error occurred.
InvalidParameter	The parameter is incorrect.
InvalidParameter.ParameterIllegal	The request parameter is invalid.
InvalidParameterValue	The parameter value is incorrect.
LimitExceeded	The quota limit is exceeded.
MissingParameter	The parameter is missing.
OperationDenied	The operation was denied.
RequestLimitExceeded	The number of requests exceeds the frequency limit.
RequestLimitExceeded.FrequentRequest	Too many requests. Try again later.
RequestLimitExceeded.RepeatRequest	Repeated request. Try again later.
ResourceInUse	The resource is in use.
ResourceInsufficient	The resource is insufficient.
ResourceNotFound	The resource does not exist.
ResourceUnavailable	The resource is unavailable.
ResourcesSoldOut	The resources have been sold out.
UnauthorizedOperation	The operation is unauthorized.
UnauthorizedOperation.TenantNotActivated	The service is not activated.
UnknownParameter	The parameter is unknown.

UnsupportedOperation	The operation is not supported.
----------------------	---------------------------------

CreateFileExportUserJob

Last updated : 2022-10-18 10:24:57

1. API Description

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

This API is used to create a file for user export task.

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: CreateFileExportUserJob.
Version	Yes	String	Common Params . The value used for this API: 2022-03-31.
Region	Yes	String	Common Params . For more information, please see the list of regions supported by the product. This API only supports: ap-singapore.
UserStoreId	Yes	String	User directory ID
Format	No	String	Exported data type • NDJSON New-line Delimited JSON • CSV Comma-Separated Values

Filters.N	No	Array of Filter	Valid values of <code>Key</code> : <code>condition</code> , <code>userGroupId</code> . • condition Values = Query condition, which can be user ID, username, mobile number, or email address. • userGroupId Values = User group ID
ExportPropertyMaps.N	No	Array of ExportPropertyMap	Attributes and mapping names included in the exported user information. If this parameter is empty, all attributes will be included.

3. Output Parameters

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

4. Example

Example1 Creating a file for user export task

Input Example

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

{
  "UserStoreId": "xx",
  "ExportPropertyMaps": [
    {
      "ColumnName": "xx",
      "UserPropertyCode": "xx"
```

```
}
],
"Filters": [
{
"Values": [
"xx"
],
"Key": "xx",
"Logic": true
}
],
"Format": "xx"
}
```

Output Example

```
{
"Response": {
"Job": {
"Status": "xx",
"Format": "xx",
"ErrorDetails": [
{
"UserId": "xx",
"Error": "xx"
}
],
"Location": "xx",
"CreateDate": 0,
"FailedUsers": [
{
"FailedUserIdentification": "xx",
"FailedReason": "xx"
}
],
"Type": "xx",
"Id": "xx"
},
"RequestId": "xx"
}
```

5. Developer Resources

SDK

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

Command Line Interface

- [Tencent Cloud CLI 3.0](#)

6. Error Code

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

Error Code	Description
AuthFailure	A CAM signature/authentication error occurred.
DryRunOperation	<code>DryRun</code> Operation. It means that the request would have succeeded, but the <code>DryRun</code> parameter was used.
FailedOperation	The operation failed.
FailedOperation.DataFlowTooManyRequests	There are already two valid tasks. Wait for one of them to complete and try again.
FailedOperation.ImportUserIsEmpty	The user is empty during user import.
FailedOperation.InvalidTenant	The tenant is invalid.
FailedOperation.InvalidUserStore	The user pool is invalid.
FailedOperation.QuotaLimitExceeded	The quota is exceeded. Contact customer service.
InternalError	An internal error occurred.
InternalError.UnknownError	An unknown error occurred.

InvalidParameter	The parameter is incorrect.
InvalidParameter.ParameterIllegal	The request parameter is invalid.
InvalidParameterValue	The parameter value is incorrect.
LimitExceeded	The quota limit is exceeded.
MissingParameter	The parameter is missing.
OperationDenied	The operation was denied.
RequestLimitExceeded	The number of requests exceeds the frequency limit.
RequestLimitExceeded.FrequentRequest	Too many requests. Try again later.
RequestLimitExceeded.RepeatRequest	Repeated request. Try again later.
ResourceInUse	The resource is in use.
ResourceInsufficient	The resource is insufficient.
ResourceNotFound	The resource does not exist.
ResourceUnavailable	The resource is unavailable.
ResourcesSoldOut	The resources have been sold out.
UnauthorizedOperation	The operation is unauthorized.
UnauthorizedOperation.TenantNotActivated	The service is not activated.
UnknownParameter	The parameter is unknown.
UnsupportedOperation	The operation is not supported.

CreateApiImportUserJob

Last updated : 2022-10-18 10:24:57

1. API Description

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

This API is used to create an API for user import task.

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: CreateApiImportUserJob.
Version	Yes	String	Common Params . The value used for this API: 2022-03-31.
Region	Yes	String	Common Params . For more information, please see the list of regions supported by the product. This API only supports: ap-singapore.
UserStoreId	Yes	String	User directory ID
DataFlowUserCreateList.N	Yes	Array of ImportUser	Imported user data

3. Output Parameters

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

4. Example

Example1 Creating an API for user import task

Input Example

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

```
{
  "UserStoreId": "xx",
  "DataFlowUserCreateList": [
    {
      "UserName": "xx",
      "Zone": "xx",
      "ResidentIdentityCard": "xx",
      "WechatOpenId": "xx",
      "Email": "xx",
      "CustomizationAttributes": [
        {
          "Type": "xx",
          "Name": "xx",
          "Value": "xx"
        }
      ],
      "Description": "xx",
      "Job": "xx",
      "Address": "xx",
      "Nationality": "xx",
      "Password": "xx",
      "Nickname": "xx",
      "QqOpenId": "xx",
      "Name": "xx",
```

```
"Gender": "xx",
"IdentityVerificationMethod": "xx",
"AlipayUserId": "xx",
"Birthdate": "2020-09-22",
"PhoneNumber": "xx",
"UserGroup": [
  "xx"
],
>PasswordEncryptTypeEnum": "xx",
"Salt": {
  "SaltLocation": {
    "SaltLocationRule": {
      "Regex": "xx"
    },
    "SaltLocationTypeEnum": "xx"
  },
  "SaltValue": "xx"
},
"QqUnionId": "xx",
"Locale": "xx",
"IdentityVerified": true,
"WechatUnionId": "xx"
}
]
```

Output Example

```
{
  "Response": {
    "Job": {
      "Status": "xx",
      "Format": "xx",
      "ErrorDetails": [
        {
          "UserId": "xx",
          "Error": "xx"
        }
      ],
      "Location": "xx",
      "CreatedDate": 0,
      "FailedUsers": [
        {
          "FailedUserIdentification": "xx",
          "FailedReason": "xx"
        }
      ]
    }
  }
}
```

```
] ,
  "Type": "xx",
  "Id": "xx"
},
  "RequestId": "xx"
}
```

5. Developer Resources

SDK

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

Command Line Interface

- [Tencent Cloud CLI 3.0](#)

6. Error Code

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

Error Code	Description
AuthFailure	A CAM signature/authentication error occurred.
DryRunOperation	<code>DryRun</code> Operation. It means that the request would have succeeded, but the <code>DryRun</code> parameter was used.
FailedOperation	The operation failed.
FailedOperation.DataFlowTooManyRequests	There are already two valid tasks. Wait for one of them to

	complete and try again.
FailedOperation.ImportUserIsEmpty	The user is empty during user import.
FailedOperation.InvalidTenant	The tenant is invalid.
FailedOperation.InvalidUserStore	The user pool is invalid.
FailedOperation.QuotaLimitExceeded	The quota is exceeded. Contact customer service.
InternalError	An internal error occurred.
InternalError.UnknownError	An unknown error occurred.
InvalidParameter	The parameter is incorrect.
InvalidParameter.ParameterIllegal	The request parameter is invalid.
InvalidParameterValue	The parameter value is incorrect.
LimitExceeded	The quota limit is exceeded.
MissingParameter	The parameter is missing.
OperationDenied	The operation was denied.
RequestLimitExceeded	The number of requests exceeds the frequency limit.
RequestLimitExceeded.FrequentRequest	Too many requests. Try again later.
RequestLimitExceeded.RepeatRequest	Repeated request. Try again later.
ResourceInUse	The resource is in use.
ResourceInsufficient	The resource is insufficient.
ResourceNotFound	The resource does not exist.
ResourceUnavailable	The resource is unavailable.
ResourcesSoldOut	The resources have been sold out.
UnauthorizedOperation	The operation is unauthorized.
UnauthorizedOperation.TenantNotActivated	The service is not activated.
UnknownParameter	The parameter is unknown.
UnsupportedOperation	The operation is not supported.

Audit Management APIs

ListLogMessageByCondition

Last updated : 2022-10-18 10:24:57

1. API Description

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

This API is used to query a specified log.

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: <code>ListLogMessageByCondition</code> .
Version	Yes	String	Common Params . The value used for this API: <code>2022-03-31</code> .
Region	Yes	String	Common Params . For more information, please see the list of regions supported by the product. This API only supports: ap-singapore.
UserStoreId	Yes	String	User pool ID
Pageable	Yes	Pageable	Pagination data
StartTime	Yes	Integer	Start timestamp accurate to the millisecond
Filters.N	No	Array of	Valid values of <code>Key</code> : <code>events</code> .

		Filter	• events Values can be one or multiple items in ["SIGNUP", "USER_UPDATE", "USER_DELETE", "USER_CREATE", "ACCOUNT_LINKING"].
--	--	--------	--

3. Output Parameters

Parameter Name	Type	Description
Total	Integer	Total number
Pageable	Pageable	Pagination object
Content	Array of LogMessage	List of logs Note: This field may return null, indicating that no valid values can be obtained.
RequestId	String	The unique request ID, which is returned for each request. RequestId is required for locating a problem.

4. Example

Example1 Querying a specified log

Input Example

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

{
  "UserStoreId": "xx",
  "StartTime": 0,
  "Pageable": {
    "PageNumber": 0,
    "PageSize": 0
  },
  "Filters": [
```

```
{
  "Values": [
    "xx"
  ],
  "Key": "xx",
  "Logic": true
}
]
```

Output Example

```
{
  "Response": {
    "Content": [
      {
        "UserStoreId": "xx",
        "ApplicationName": "xx",
        "Participant": "xx",
        "Description": "xx",
        "EventCode": "xx",
        "Ip": "xx",
        "ApplicationClientId": "xx",
        "UserId": "xx",
        "Detail": "xx",
        "AuthSourceName": "xx",
        "TenantId": "xx",
        "LogId": "xx",
        "AuthSourceId": "xx",
        "AuthSourceType": "xx",
        "UserAgent": "xx",
        "AuthSourceCategory": "xx",
        "EventDate": 0
      }
    ],
    "Total": 0,
    "Pageable": {
      "PageNumber": 0,
      "PageSize": 0
    },
    "RequestId": "xx"
  }
}
```


5. Developer Resources

SDK

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- [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	A CAM signature/authentication error occurred.
DryRunOperation	<code>DryRun</code> Operation. It means that the request would have succeeded, but the <code>DryRun</code> parameter was used.
FailedOperation	The operation failed.
FailedOperation.InvalidTenant	The tenant is invalid.
FailedOperation.InvalidUserStore	The user pool is invalid.
FailedOperation.QuotaLimitExceeded	The quota is exceeded. Contact customer service.
InternalError	An internal error occurred.
InternalError.UnknownError	An unknown error occurred.
InvalidParameter	The parameter is incorrect.

InvalidParameter.ParameterIllegal	The request parameter is invalid.
InvalidParameterValue	The parameter value is incorrect.
LimitExceeded	The quota limit is exceeded.
MissingParameter	The parameter is missing.
OperationDenied	The operation was denied.
RequestLimitExceeded	The number of requests exceeds the frequency limit.
RequestLimitExceeded.FrequentRequest	Too many requests. Try again later.
RequestLimitExceeded.RepeatRequest	Repeated request. Try again later.
ResourceInUse	The resource is in use.
ResourceInsufficient	The resource is insufficient.
ResourceNotFound	The resource does not exist.
ResourceUnavailable	The resource is unavailable.
ResourcesSoldOut	The resources have been sold out.
UnauthorizedOperation	The operation is unauthorized.
UnauthorizedOperation.TenantNotActivated	The service is not activated.
UnknownParameter	The parameter is unknown.
UnsupportedOperation	The operation is not supported.

Data Types

Last updated : 2022-10-18 10:24:58

ErrorDetails

Failure details

Used by actions: CreateApiImportUserJob, CreateFileExportUserJob, ListJobs.

Name	Type	Description
UserId	String	User information Note: This field may return null, indicating that no valid values can be obtained.
Error	String	Failure cause

ExportPropertyMap

Exported attribute mapping

Used by actions: CreateFileExportUserJob.

Name	Type	Required	Description
UserPropertyCode	String	Yes	User attribute code
ColumnName	String	Yes	User attribute mapping name

FailedUsers

Failed user

Used by actions: CreateApiImportUserJob, CreateFileExportUserJob, ListJobs.

Name	Type	Description
FailedUserIdentification	String	ID of the failed user Note: This field may return null, indicating that no valid values can be obtained.

FailedReason	String	Failure cause for user import Note: This field may return null, indicating that no valid values can be obtained.
--------------	--------	---

Filter

Query condition

Used by actions: CreateFileExportUserJob, ListLogMessageByCondition, ListUser.

Name	Type	Required	Description
Key	String	No	Key value
Values	Array of String	No	Value
Logic	Boolean	No	Logical value

ImportUser

Imported user information

- One of the eight attributes of `UserName` , `PhoneNumber` , `Email` , `WechatOpenId` , `WechatUnionId` , `AlipayUserId` , `QqOpenId` , and `QqUnionId` must be included during import and comply with the regular expression rules for initializing custom attributes. The regular expressions for `UserName` , `PhoneNumber` , and `Email` can be queried in the custom attributes in the console.
- For password import, the imported password supports plaintext import, MD5 ciphertext import, SHA1 ciphertext import, and BCrypt ciphertext import. This needs to be specified in the `PasswordEncryptTypeEnum` field.
- `IdentityVerified` and `IdentityVerificationMethod` can be imported.
If `IdentityVerified` is `true` , `IdentityVerificationMethod` is required.
If `IdentityVerificationMethod` is `nameAndIdCard` , `Name` and `ResidentIdentityCard` are required.
If `IdentityVerificationMethod` is `nameIdCardAndPhone` , `Name` , `PhoneNumber` , and `ResidentIdentityCard` are required.

Used by actions: CreateApiImportUserJob.

Name	Type	Required	Description
UserName	String	No	Username

PhoneNumber	String	No	Mobile number
Email	String	No	Email address
ResidentIdentityCard	String	No	ID card number
Nickname	String	No	Nickname
Address	String	No	Address
UserGroup	Array of String	No	User group ID
QqOpenId	String	No	<code>qqOpenId</code> on QQ
QqUnionId	String	No	<code>qqUnionId</code> on QQ
WechatOpenId	String	No	<code>wechatOpenId</code> on WeChat
WechatUnionId	String	No	<code>wechatUnionId</code> on WeChat
AlipayUserId	String	No	<code>alipayUserId</code> on Alipay
Description	String	No	Description
Birthdate	Date	No	Date of birth
Name	String	No	Name
Locale	String	No	Coordinate
Gender	String	No	Gender. Valid values: <code>MALE</code> , <code>FEMALE</code> , <code>UNKNOWN</code> .
IdentityVerificationMethod	String	No	Identity verification method
IdentityVerified	Boolean	No	Whether the identity is verified
Job	String	No	Job
Nationality	String	No	Country/Region
Zone	String	No	Time zone
Password	String	No	Password ciphertext
CustomizationAttributes	Array of MemberMap	No	Custom attribute
Salt	Salt	No	Password salt

PasswordEncryptTypeEnum	String	No	Password encryption method. Valid values: <code>SHA1</code> , <code>BCRYPT</code> .
IndexedAttribute1	String	No	Index field 1
IndexedAttribute2	String	No	Index field 2
IndexedAttribute3	String	No	Index field 3
IndexedAttribute4	String	No	Index field 4
IndexedAttribute5	String	No	Index field 5

Job

Task details

Used by actions: CreateApiImportUserJob, CreateFileExportUserJob, ListJobs.

Name	Type	Description
Id	String	Task ID
Status	String	Task status • PENDING Pending • PROCESSING Executing • COMPLETED Completed • FAILED Failed
Type	String	Task type • IMPORT_USER User import • EXPORT_USER User export
CreatedDate	Integer	Task creation time
Format	String	Data type of the task

		• NDJSON New-line Delimited JSON • CSV Comma-Separated Values Note: this field may return null, indicating that no valid values can be obtained.
Location	String	Task result download address Note: This field may return null, indicating that no valid values can be obtained.
ErrorDetails	Array of ErrorDetails	Failure details Note: This field may return null, indicating that no valid values can be obtained.
FailedUsers	Array of FailedUsers	Failed user Note: This field may return null, indicating that no valid values can be obtained.

LogMessage

Log details

Used by actions: ListLogMessageByCondition.

Name	Type	Description
LogId	String	Log ID
TenantId	String	Tenant ID Note: This field may return null, indicating that no valid values can be obtained.
UserStoreId	String	User pool ID Note: This field may return null, indicating that no valid values can be obtained.
EventCode	String	Event code Note: This field may return null, indicating that no valid values can be obtained.
EventDate	Integer	Event timestamp in milliseconds 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.
Participant	String	Event participant • TENANT Tenant • USER User Note: This field may return null, indicating that no valid values can be obtained.
ApplicationClientId	String	Application <code>clientId</code> Note: This field may return null, indicating that no valid values can be obtained.
ApplicationName	String	Application name Note: This field may return null, indicating that no valid values can be obtained.
AuthSourceId	String	Authentication source ID Note: This field may return null, indicating that no valid values can be obtained.
AuthSourceName	String	Authentication source name Note: This field may return null, indicating that no valid values can be obtained.
AuthSourceType	String	Authentication source type Note: This field may return null, indicating that no valid values can be obtained.
AuthSourceCategory	String	Authentication source category Note: This field may return null, indicating that no valid values can be obtained.
Ip	String	IP address Note: This field may return null, indicating that no valid values can be obtained.
UserAgent	String	User agent Note: This field may return null, indicating that no valid values can be obtained.
UserId	String	User ID Note: This field may return null, indicating that no valid values can be

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

MemberMap

Map data type

Used by actions: CreateApiImportUserJob, CreateUser, DescribeUser, DescribeUserById, ListUser, ListUserByProperty, UpdateUser.

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

Pageable

Pagination object

Used by actions: DescribeUser, ListLogMessageByCondition, ListUser.

Name	Type	Required	Description
PageSize	Integer	Yes	Number of entries per page
PageNumber	Integer	Yes	Current page number

QueryUserFilter

Conditions to query the user information

Used by actions: DescribeUser.

Name	Type	Required	Description
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PropertyKey	String	No	Property key
PropertyValue	String	No	Property value
Logic	Boolean	No	Logic value. <code>True</code> or <code>False</code>
OperateLogic	String	No	Operator. Values: <code>></code> , <code><</code> , <code>=</code> , <code>>=</code> , <code><=</code> , <code>!=</code> and <code>between</code> .

Salt

Password salt

Used by actions: CreateApilImportUserJob.

Name	Type	Required	Description
SaltValue	String	No	Salt value
SaltLocation	SaltLocation	No	Salt value location

SaltLocation

Salt location

Used by actions: CreateApilImportUserJob.

Name	Type	Required	Description
SaltLocationTypeEnum	String	No	Password salt type. Valid values: <code>HEAD</code> , <code>TAIL</code> , <code>OTHER</code> .
SaltLocationRule	SaltLocationRule	No	Salting rule

SaltLocationRule

Salt location rule

Used by actions: CreateApilImportUserJob.

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

Regex	String	No	Expression
-------	--------	----	------------

Sort

Sorting of the result of user query

Used by actions: DescribeUser.

Name	Type	Required	Description
PropertyKey	String	No	Key for sorting. See custom attributes
Order	String	No	ASC or DESC

User

User information

Used by actions: CreateUser, DescribeUser, DescribeUserById, ListUser, ListUserByProperty, UpdateUser.

Name	Type	Description
UserId	String	User ID
UserName	String	Username Note: This field may return null, indicating that no valid values can be obtained.
PhoneNumber	String	Mobile number Note: This field may return null, indicating that no valid values can be obtained.
Email	String	Email address Note: This field may return null, indicating that no valid values can be obtained.
LastSignIn	Integer	Last login time Note: This field may return null, indicating that no valid values can be obtained.
CreatedDate	Integer	Creation time
Status	String	Status

UserDataSourceEnum	String	User source
Nickname	String	Nickname Note: This field may return null, indicating that no valid values can be obtained.
Address	String	Address Note: This field may return null, indicating that no valid values can be obtained.
Birthdate	Integer	Date of birth Note: This field may return null, indicating that no valid values can be obtained.
UserGroups	Array of String	User group ID Note: This field may return null, indicating that no valid values can be obtained.
LastModifiedDate	Integer	Last modified time Note: This field may return null, indicating that no valid values can be obtained.
CustomAttributes	Array of MemberMap	Custom attribute Note: This field may return null, indicating that no valid values can be obtained.
ResidentIdentityCard	String	ID card number Note: This field may return null, indicating that no valid values can be obtained.
QqOpenId	String	<code>OpenId</code> on QQ Note: This field may return null, indicating that no valid values can be obtained.
QqUnionId	String	<code>UnionId</code> on QQ Note: This field may return null, indicating that no valid values can be obtained.
WechatOpenId	String	<code>WechatOpenId</code> on WeChat Note: This field may return null, indicating that no valid values can be obtained.
WechatUnionId	String	<code>WechatUnionId</code> on WeChat Note: This field may return null, indicating that no valid values can be obtained.
AlipayUserId	String	<code>AlipayUserId</code> on Alipay

		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.
Name	String	Name Note: This field may return null, indicating that no valid values can be obtained.
Locale	String	Coordinate Note: This field may return null, indicating that no valid values can be obtained.
Gender	String	Gender Note: This field may return null, indicating that no valid values can be obtained.
IdentityVerificationMethod	String	Identity verification method Note: This field may return null, indicating that no valid values can be obtained.
IdentityVerified	Boolean	Whether the identity is verified Note: This field may return null, indicating that no valid values can be obtained.
Job	String	Job Note: This field may return null, indicating that no valid values can be obtained.
Nationality	String	Country/Region Note: This field may return null, indicating that no valid values can be obtained.
Primary	Boolean	Whether the account is the primary account (after account merge, this parameter is <code>true</code> for primary accounts and <code>false</code> for secondary account). Note: This field may return null, indicating that no valid values can be obtained.
Zone	String	Time zone Note: This field may return null, indicating that no valid values can be obtained.
AlreadyFirstLogin	Boolean	Whether the account has ever logged in. Note: This field may return null, indicating that no valid values can

		be obtained.
TenantId	String	Tenant ID Note: This field may return null, indicating that no valid values can be obtained.
UserStoreId	String	User directory ID Note: This field may return null, indicating that no valid values can be obtained.
Version	Integer	Version Note: This field may return null, indicating that no valid values can be obtained.
LockType	String	Lock type (locked by admin or locked by login policy) Note: This field may return null, indicating that no valid values can be obtained.
LockTime	Integer	Lock time Note: This field may return null, indicating that no valid values can be obtained.
IndexedAttribute1	String	Index field 1 Note: this field may return null, indicating that no valid values can be obtained.
IndexedAttribute2	String	Index field 2 Note: this field may return null, indicating that no valid values can be obtained.
IndexedAttribute3	String	Index field 3 Note: this field may return null, indicating that no valid values can be obtained.
IndexedAttribute4	String	Index field 4 Note: this field may return null, indicating that no valid values can be obtained.
IndexedAttribute5	String	Index field 5 Note: this field may return null, indicating that no valid values can be obtained.

Error Codes

Last updated : 2022-10-18 10:24:58

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	A CAM signature/authentication error occurred.
FailedOperation.AccountAlreadyBeLinked	The secondary account has already been merged and cannot be merged again.
FailedOperation.AttributeFormatError	The user attribute format is abnormal.
FailedOperation.DataFlowTooManyRequests	There are already two valid tasks. Wait for one of them to complete and try again.
FailedOperation.EmailAlreadyExists	The email address has already been bound to a user.
FailedOperation.EmailsNull	The email address cannot be empty.
FailedOperation.ImportUserIsEmpty	The user is empty during user import.
FailedOperation.IndexedAttributeTooLong	indexedAttribute can contain up to 512

	characters.
FailedOperation.InvalidTenant	The tenant is invalid.
FailedOperation.InvalidUserStatusEnum	The status enumerated value is wrong. See the API documentation.
FailedOperation.InvalidUserStore	The user pool is invalid.
FailedOperation.PasswordIsNull	The password cannot be empty.
FailedOperation.PhoneNumberAlreadyExists	The mobile number has already been bound to a user.
FailedOperation.PhoneNumberIsNull	The mobile number cannot be empty.
FailedOperation.PrimaryUserNotFound	The primary user does not exist.
FailedOperation.QueryUsersParameterMustInWhitelist	The query condition must contain at least one of the followings: userName, phoneNumber, email, userGroup, alipayUserId, wechatOpenId, wechatUnionId, qqOpenId, qqUnionId, lastModifiedDate, indexedAttribute1, indexedAttribute2, indexedAttribute3, indexedAttribute4, indexedAttribute5.
FailedOperation.QueryUsersParameterRepeat	The conditions can not duplicate.
FailedOperation.QueryUsersSortParameterMustInWhitelist	The <code>PropertyKey</code> of <code>Sort</code> must include one of the followings: id, userName, phoneNumber, email, userGroup, alipayUserId, wechatOpenId, wechatUnionId, qqOpenId, qqUnionId, lastModifiedDate, indexedAttribute1, indexedAttribute2, indexedAttribute3, indexedAttribute4, indexedAttribute5.
FailedOperation.QuotaLimitExceeded	The quota is exceeded. Contact customer service.
FailedOperation.SecondaryUserNotFound	The secondary user does not exist.
FailedOperation.UserGroupNotFound	The user group does not exist.
FailedOperation.UserIsFreeze	The user account is frozen.
FailedOperation.UserNameAlreadyExists	The user name already exists.
FailedOperation.UserNameIsNull	The username cannot be empty.

FailedOperation.UserNotFound	The user does not exist.
FailedOperation.UserStatusRequired	The updated status is required.
InternalError.UnknownError	An unknown error occurred.
InvalidParameter.ParameterIllegal	The request parameter is invalid.
OperationDenied	The operation was denied.
RequestLimitExceeded.FrequentRequest	Too many requests. Try again later.
RequestLimitExceeded.RepeatRequest	Repeated request. Try again later.
ResourcesSoldOut	The resources have been sold out.
UnauthorizedOperation.TenantNotActivated	The service is not activated.