Game Multimedia Engine

API Documentation

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Last updated: 2020-04-17 14:22:47

Application APIs

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<th>Feature</th>
</tr>
</thead>
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<td>CreateApp</td>
<td>Creates a GME application</td>
</tr>
<tr>
<td>ModifyAppStatus</td>
<td>Changes an application's status</td>
</tr>
</tbody>
</table>

Speech Analysis APIs

<table>
<thead>
<tr>
<th>API Name</th>
<th>Feature</th>
</tr>
</thead>
<tbody>
<tr>
<td>DescribeScanResultList</td>
<td>Queries speech detection result</td>
</tr>
<tr>
<td>ScanVoice</td>
<td>Submits speech detection task</td>
</tr>
</tbody>
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Usage APIs

<table>
<thead>
<tr>
<th>API Name</th>
<th>Feature</th>
</tr>
</thead>
<tbody>
<tr>
<td>DescribeAppStatistics</td>
<td>Gets application usage statistics</td>
</tr>
</tbody>
</table>
Making API Requests
Request Structure

1. Service Address

The API supports access from either a nearby region (at gme.tencentcloudapi.com) or a specified region (at gme.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 "gme.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:

<table>
<thead>
<tr>
<th>Hosted region</th>
<th>Domain name</th>
</tr>
</thead>
<tbody>
<tr>
<td>Local access region (recommended, only for non-financial availability zones)</td>
<td>gme.tencentcloudapi.com</td>
</tr>
<tr>
<td>South China (Guangzhou)</td>
<td>gme.ap-guangzhou.tencentcloudapi.com</td>
</tr>
<tr>
<td>East China (Shanghai)</td>
<td>gme.ap-shanghai.tencentcloudapi.com</td>
</tr>
<tr>
<td>North China (Beijing)</td>
<td>gme.ap-beijing.tencentcloudapi.com</td>
</tr>
<tr>
<td>Southwest China (Chengdu)</td>
<td>gme.ap-chengdu.tencentcloudapi.com</td>
</tr>
<tr>
<td>Southwest China (Chongqing)</td>
<td>gme.ap-chongqing.tencentcloudapi.com</td>
</tr>
<tr>
<td>Hong Kong, Macao, Taiwan (Hong Kong, China)</td>
<td>gme.ap-hongkong.tencentcloudapi.com</td>
</tr>
<tr>
<td>Southeast Asia (Singapore)</td>
<td>gme.ap-singapore.tencentcloudapi.com</td>
</tr>
<tr>
<td>Southeast Asia (Bangkok)</td>
<td>gme.ap-bangkok.tencentcloudapi.com</td>
</tr>
<tr>
<td>South Asia (Mumbai)</td>
<td>gme.ap-mumbai.tencentcloudapi.com</td>
</tr>
<tr>
<td>Northeast Asia (Seoul)</td>
<td>gme.ap-seoul.tencentcloudapi.com</td>
</tr>
<tr>
<td>Northeast Asia (Tokyo)</td>
<td>gme.ap-tokyo.tencentcloudapi.com</td>
</tr>
<tr>
<td>U.S. East Coast (Virginia)</td>
<td>gme.na-ashburn.tencentcloudapi.com</td>
</tr>
<tr>
<td>U.S. West Coast (Silicon Valley)</td>
<td>gme.na-siliconvalley.tencentcloudapi.com</td>
</tr>
<tr>
<td>North America (Toronto)</td>
<td>gme.na-toronto.tencentcloudapi.com</td>
</tr>
<tr>
<td>Europe (Frankfurt)</td>
<td>gme.eu-frankfurt.tencentcloudapi.com</td>
</tr>
<tr>
<td>Europe (Moscow)</td>
<td>gme.eu-moscow.tencentcloudapi.com</td>
</tr>
</tbody>
</table>

Note: As financial availability zones and non-financial availability zones are isolated, when accessing the services in a financial availability zone (with the common parameter Region specifying a financial availability zone), it is
necessary to specify a domain name of the financial availability zone, preferably in the same region as specified in
Region.

<table>
<thead>
<tr>
<th>Access region for financial availability zone</th>
<th>Domain name for financial availability zone</th>
</tr>
</thead>
<tbody>
<tr>
<td>East China (Shanghai Finance)</td>
<td>gme.ap-shanghai-fsi.tencentcloudapi.com</td>
</tr>
<tr>
<td>South China (Shenzhen Finance)</td>
<td>gme.ap-shenzhen-fsi.tencentcloudapi.com</td>
</tr>
</tbody>
</table>

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 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.

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:

<table>
<thead>
<tr>
<th>Parameter Name</th>
<th>Type</th>
<th>Required</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>X-TC-Action</td>
<td>String</td>
<td>Yes</td>
<td>The name of the API for the desired operation. For the specific value, see the description of common parameter <strong>Action</strong> in the input parameters in related API documentation. For example, the API for querying the CVM instance list is <strong>DescribeInstances</strong>.</td>
</tr>
<tr>
<td>X-TC-Region</td>
<td>String</td>
<td>Yes</td>
<td>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 <strong>Region</strong> 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 it is passed.</td>
</tr>
<tr>
<td>X-TC-Timestamp</td>
<td>Integer</td>
<td>Yes</td>
<td>The current UNIX timestamp that records the time when the API request was initiated, for example, 1529223702. Note: If the difference between the UNIX timestamp and the server time is greater than 5 minutes, a signature expiration error may occur.</td>
</tr>
<tr>
<td>X-TC-Version</td>
<td>String</td>
<td>Yes</td>
<td>API version of the action. For the valid values, see the description of the common input parameter <strong>Version</strong> in the API documentation. For example, the version of CVM is 2017-03-12.</td>
</tr>
<tr>
<td>Authorization</td>
<td>String</td>
<td>Yes</td>
<td>The HTTP authentication request header, for example: TC3-HMAC-SHA256 Credential=AKIDEXAMPLE/Date/service/tc3_request, SignedHeaders=content-type;host, Signature=fe5f80f77d5fa3beca039a248ff027d0445342fe2855d6c963176630326f1024 Here: - TC3-HMAC-SHA256: Signature method, currently fixed as this value; - Credential: Signature credential; AKIDEXAMPLE is the SecretId; Date is a date in UTC time, and this value must match the value of X-TC-Timestamp (a common parameter) in UTC time format; service is the name of the product/service, and is generally a domain name prefix. For example, a domain name cvm.tencentcloudapi.com refers to the CVM product and the value would be cvm; - SignedHeaders: The headers that contains the authentication information; content-type and host are the required headers; - Signature: Signature digest.</td>
</tr>
<tr>
<td>X-TC-Token</td>
<td>String</td>
<td>No</td>
<td>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.</td>
</tr>
</tbody>
</table>

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:
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=582c400e06b5924a6f2b5d7d672d79c15b13162d9279b0555fba6789a9eb4c
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=582c400e06b5924a6f2b5d7d672d79c15b13162d9279b0555fba6789a9eb4c
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--
```

**Signature Algorithm v1**

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

<table>
<thead>
<tr>
<th>Parameter Name</th>
<th>Type</th>
<th>Required</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Parameter Name</td>
<td>Type</td>
<td>Required</td>
<td>Description</td>
</tr>
<tr>
<td>---------------</td>
<td>----------</td>
<td>----------</td>
<td>---------------------------------------------------------------------------------------------------------------------------------------------</td>
</tr>
<tr>
<td>Action</td>
<td>String</td>
<td>Yes</td>
<td>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>.</td>
</tr>
<tr>
<td>Region</td>
<td>String</td>
<td>Yes</td>
<td>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.</td>
</tr>
<tr>
<td>Timestamp</td>
<td>Integer</td>
<td>Yes</td>
<td>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.</td>
</tr>
<tr>
<td>Nonce</td>
<td>Integer</td>
<td>Yes</td>
<td>A random positive integer used along with <code>Timestamp</code> to prevent replay attacks.</td>
</tr>
<tr>
<td>SecretId</td>
<td>String</td>
<td>Yes</td>
<td>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).</td>
</tr>
<tr>
<td>Signature</td>
<td>String</td>
<td>Yes</td>
<td>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.</td>
</tr>
<tr>
<td>Version</td>
<td>String</td>
<td>Yes</td>
<td>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.</td>
</tr>
<tr>
<td>SignatureMethod</td>
<td>String</td>
<td>No</td>
<td>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.</td>
</tr>
<tr>
<td>Token</td>
<td>String</td>
<td>No</td>
<td>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.</td>
</tr>
</tbody>
</table>

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=37ac2f4fdede0b0ac9bd9eadeb459b1bbee224158d66e7ae5fcdadb70b2d181d02 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=37ac2f4fdede0b0ac9bd9eadeb459b1bbee224158d66e7ae5fcdadb70b2d181d02&Region=ap-guangzhou&Nonce=23823223&SecretId=AKIDEXAMPLE
```
Signature v3
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 AKIDz8krbsJ5yKBZQpn74WFkmLPx3EXAMPLE and Gu5t9xGARNpd86cd98)jo8YCN3EXAMPLE, 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:

```bash
curl -X POST https://cvm.tencentcloudapi.com 
  -H "Authorization: TC3-HMAC-SHA256 Credential=AKIDz8krbsJ5yKBZQpn74WFkmLPx3EXAMPLE/2019-02-25/cvm/tc3_request, SignedHeaders=content-type;host, Signature=72e494ea889ad7a8c817a4507b9b8dca86e681f65196e6862f65e2c5996525168" 
  -H "Content-Type: application/json; charset=utf-8" 
  -H "Host: cvm.tencentcloudapi.com" 
  -H "X-TC-Action: DescribeInstances" 
  -H "X-TC-Timestamp: 1551111365" 
  -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 + '
' + 
CanonicalURI + '
' + 
CanonicalQueryString + '
' + 
CanonicalHeaders + '
' + 
SignedHeaders + '
' + 
HashedRequestPayload
```

<table>
<thead>
<tr>
<th>Field Name</th>
<th>Explanation</th>
</tr>
</thead>
<tbody>
<tr>
<td>HTTPRequestMethod</td>
<td>HTTP request method (GET or POST). This example uses POST.</td>
</tr>
<tr>
<td>CanonicalURI</td>
<td>URI parameter. Slash (/) is used for API 3.0.</td>
</tr>
<tr>
<td>CanonicalQueryString</td>
<td>The query string in the URL of the originating HTTP request. This is always an empty string &quot;&quot; for POST requests, and is the string after the question mark (?) for GET requests. For example: Limit=10&amp;Offset=0. Note: CanonicalQueryString 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.</td>
</tr>
<tr>
<td>CanonicalHeaders</td>
<td>Header information for signature calculation, including at least two headers of host and content-type. Custom headers can be added to participate in the signature process to improve the uniqueness and security of the request. Concatenation rules: 1. Both the key and value of the header should be converted to lowercase with the leading and trailing spaces removed, so they are concatenated in the format of key:value\n format; 2. If there are multiple headers, they should be sorted in ASCII ascending order by the header keys (lowercase). The calculation result in this example is content-type:application/json; charset=utf-8@host:cvm.tencentcloudapi.com\n. Note: content-type must match the actually sent content. In some programming languages, a charset value would be added even if it is not specified. In this case, the request sent is different from the one signed, and the sever will return an error indicating that signature verification failed.</td>
</tr>
<tr>
<td>Field Name</td>
<td>Explanation</td>
</tr>
<tr>
<td>---------------------</td>
<td>---------------------------------------------------------------------------------------------------------------------------------------------</td>
</tr>
<tr>
<td>SignedHeaders</td>
<td>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). Content-type and host are required headers. Concatenation rules: 1. Both the key and value of the header should be converted to lowercase; 2. If there are multiple headers, they should be sorted in ASCII ascending order by the header keys (lowercase) and separated by semicolons (;). The value in this example is content-type;host.</td>
</tr>
<tr>
<td>HashedRequestPayload</td>
<td>Hash value of the request payload (i.e., the body, such as {&quot;Limit&quot;: 1, &quot;Filters&quot;: [{&quot;Values&quot;: [&quot;Yu672aYu547dYu548d&quot;], &quot;Name&quot;: &quot;instance-name&quot;}]) 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 35e9c5b0e3ae67532d3c9f17ead6c90222632e5b1ff7f6e89887f1398934f064.</td>
</tr>
</tbody>
</table>

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 35e9c5b0e3ae67532d3c9f17ead6c90222632e5b1ff7f6e89887f1398934f064
```

2. Concatenating the String to Be Signed

The string to sign is concatenated as follows:

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

<table>
<thead>
<tr>
<th>Field Name</th>
<th>Explanation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Algorithm</td>
<td>Signature algorithm, which is currently always TC3-HMAC-SHA256.</td>
</tr>
<tr>
<td>RequestTimestamp</td>
<td>Request timestamp, i.e., the value of the common parameter X-TC-Timestamp in the request header, which is the UNIX timestamp of the current time in seconds, such as 1551113065 in this example.</td>
</tr>
<tr>
<td>CredentialScope</td>
<td>Scope of the credential in the format of Date/service/tc3_request, including the date, requested service and termination string (tc3_request). Date is a date in UTC time, whose value should match the UTC date converted by the common parameter X-TC-Timestamp; service is the product name, which should match the domain name of the product called. The calculation result in this example is 2019-02-25/cvm/tc3_request.</td>
</tr>
<tr>
<td>HashedCanonicalRequest</td>
<td>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 5ffe6a84c0664d6b969fb9a13bda8201d63ee709638e2749d62a9ca18d7031.</td>
</tr>
</tbody>
</table>
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
5f
fe6a04c0664d6b969fab9a13bdab201d63ee709638e2749d62a09ca18d7031
```

3. Calculating the Signature

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

```
SecretKey = "Gu5t9xGARNpq86cd98joQYN3EXAMPLE"
SecretDate = HMAC_SHA256("TC3" + SecretKey, Date)
SecretService = HMAC_SHA256(SecretDate, Service)
SecretSigning = HMAC_SHA256(SecretService, "tc3_request")
```

<table>
<thead>
<tr>
<th>Field Name</th>
<th>Explanation</th>
</tr>
</thead>
<tbody>
<tr>
<td>SecretKey</td>
<td>The original SecretKey, i.e., Gu5t9xGARNpq86cd98joQYN3EXAMPLE.</td>
</tr>
<tr>
<td>Date</td>
<td>The Date field information in Credential, such as 2019-02-25 in this example.</td>
</tr>
<tr>
<td>Service</td>
<td>Value in the Service field in Credential, such as cvm in this example.</td>
</tr>
</tbody>
</table>

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
```

<table>
<thead>
<tr>
<th>Field Name</th>
<th>Explanation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Algorithm</td>
<td>Signature algorithm, which is always TC3-HMAC-SHA256.</td>
</tr>
<tr>
<td>SecretId</td>
<td>The SecretId in the key pair, i.e., AKIDz8krbsJ5yK820pn74WFkmLPx3EXAMPLE.</td>
</tr>
<tr>
<td>Field Name</td>
<td>Explanation</td>
</tr>
<tr>
<td>------------</td>
<td>-------------</td>
</tr>
</tbody>
</table>
| CredentialScope | Credential scope (see above). The calculation result in this example is `2019-02-25/cvm/tc3_request`.
| SignedHeaders | Header information for signature calculation (see above), such as `content-type;host` in this example.
| Signature | Signature value. The calculation result in this example is `72e494ea889ad7a8c8f7a4507b9bdccbaa8e581f516e8da2f66e2c5a96525168`.

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

TC3-HMAC-SHA256 Credential=AKIDz8krbsJ5yKBZQpn74WFkmLPx3EXAMPLE/2019-02-25/cvm/tc3_request, SignedHeaders=content-type;host, Signature=72e494ea889ad7a8c8f7a4507b9bdccbaa8e581f516e8da2f66e2c5a96525168

The following example shows a finished authorization header:

```
POST https://cvm.tencentcloudapi.com/
Authorization: TC3-HMAC-SHA256 Credential=AKIDz8krbsJ5yKBZQpn74WFkmLPx3EXAMPLE/2019-02-25/cvm/tc3_request, SignedHeaders=content-type;host, Signature=72e494ea889ad7a8c8f7a4507b9bdccbaa8e581f516e8da2f66e2c5a96525168
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": ["Wu672aWu547dWu548d"], "Name": "instance-name"})
```

5. Signature Demo

Java

```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 = "AKIDz8krbsJ5yKBZQpn74WFkmLPx3EXAMPLE";
    private final static String SECRET_KEY = "Gu5t9xGARNpq86cd98joQYCN3EXAMPLE";
    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 = new SimpleDateFormat("yyyyMMddHHmmssSSS"SV).format(new Date(System.currentTimeMillis()));
    // 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 canonicalUri = "/";
    String canonicalQueryString = ";
    String canonicalHeaders = "host:"
    + host + ";Content-Type:application/json; charset=utf-8"
    System.out.println(canonicalRequest);
    // ************* Step 2: Concatenate the string to sign *************
    String stringToSign = algorithm
    + timestamp
    + credentialScope
    + hashedCanonicalRequest;
    System.out.println(stringToSign);
    // ************* Step 3: Calculate the signature *************
    byte[] secretSigning = hmac256(secretSigning, stringToSign);
    String signature = DatatypeConverter.printHexBinary(hmac256(secretSigning, stringToSign)).toLowerCase();
    System.out.println(signature);
    // ************* Step 4: Concatenate the Authorization *************
    String authorization = algorithm
    + ", "
    + "Content-Type: application/json; charset=utf-8"
    + "Host: "
    + host;
    System.out.println(authorization);
import hashlib, hmac, json, os, sys, time
from datetime import datetime

# Key Parameters
secret_id = "AKIDz8krbsJ5yKBZQpn74WFkmLPx3EXAMPLE"
secret_key = "Gu5t9xGARNpq86cd98joQYCN3EXAMPLE"
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

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

def sign(key, msg):
    return hmac.new(key, msg.encode("utf-8"), hashlib.sha256).digest()

# ************* 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
host:%s"
signed_headers = "content-type;host"
hashed_request_payload = hashlib.sha256(payload.encode("utf-8")).hexdigest()
canonical_request = (http_request_method + 
canonical_uri + 
canonical_querystring + 
canonical_headers + 
signed_headers + 
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 + 
str(timestamp) + 
credetial_scope + 
hashed_canonical_request)
print(string_to_sign)

# ************* Step 3: Calculate the Signature *************
def sign(key, msg):
    return hmac.new(key, msg.encode("utf-8"), hashlib.sha256).digest()
```python
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 + '"')
```

## Signature Failure

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

<table>
<thead>
<tr>
<th>Error Code</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>AuthFailure.SignatureExpire</td>
<td>Signature expired. Timestamp and server time cannot differ by more than five minutes.</td>
</tr>
<tr>
<td>AuthFailure.SecretIdNotFound</td>
<td>The key does not exist. Please go to the console to check whether it is disabled or you copied fewer or more characters.</td>
</tr>
<tr>
<td>AuthFailure.SignatureFailure</td>
<td>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.</td>
</tr>
<tr>
<td>AuthFailure.TokenFailure</td>
<td>Temporary certificate token error.</td>
</tr>
<tr>
<td>AuthFailure.InvalidSecretId</td>
<td>Invalid key (not a TencentCloud API key type).</td>
</tr>
</tbody>
</table>
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: AKIDz8krbsj5yKBZQpn74WFkmLPx3EXAMPLE
- SecretKey: Gu5t9xGARNpq86cd98joQYCN3EXAMPLE

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:

<table>
<thead>
<tr>
<th>Parameter name</th>
<th>Description</th>
<th>Parameter value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Action</td>
<td>Method name</td>
<td>DescribeInstances</td>
</tr>
<tr>
<td>SecretId</td>
<td>Key ID</td>
<td>AKIDz8krbsj5yKBZQpn74WFkmLPx3EXAMPLE</td>
</tr>
<tr>
<td>Timestamp</td>
<td>Current timestamp</td>
<td>1465185768</td>
</tr>
<tr>
<td>Nonce</td>
<td>Random positive integer</td>
<td>11886</td>
</tr>
<tr>
<td>Region</td>
<td>Region where the instance is located</td>
<td>ap-guangzhou</td>
</tr>
<tr>
<td>InstanceIds.0</td>
<td>ID of the instance to query</td>
<td>ins-09dx96dg</td>
</tr>
<tr>
<td>Offset</td>
<td>Offset</td>
<td>0</td>
</tr>
</tbody>
</table>
### 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:

```json
{
  'Action': 'DescribeInstances',
  'InstanceIds.0': 'ins-09dx96dg',
  'Limit': 20,
  'Nonce': 11886,
  'Offset': 0,
  'Region': 'ap-guangzhou',
  'SecretId': 'AKIDz8krbsJ5yKBZQpn74WFkmLPx3EXAMPLE',
  '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=AKIDz8krbsJ5yKBZQpn74WFkmLPx3EXAMPLE&Timestamp=1465185768&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:
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:

```php
$secretKey = 'Gu5t9xGARNpq86cd98joQYCN3EXAMPLE';
$srcStr = 'GETcvm.tencentcloudapi.com/?Action=DescribeInstances&InstanceIds.0=ins-09dx96dg&Limit=20&Nonce=11886&Offset=0&Region=ap-guangzhou&SecretId=AKIDz8krbsJ5yKBZQp74FMklP%3d&Timestamp=1465185768&Version=2017-03-12';
$signStr = base64_encode(hash_hmac('sha1', $srcStr, $secretKey, true));

echo $signStr;
```

The final signature is:

```
EliP9YW3pW28FpsEdkXt/+WcGeI=
```

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 `EliP9YW3pW28FpsEdkXt/+WcGeI=`, the final signature string request parameter (Signature) is `EliP9YW3pW28FpsEdkXt%2f%2bWcGeI%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](https://tools.ietf.org/html/rfc3986). 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.

<table>
<thead>
<tr>
<th>Error code</th>
<th>Error description</th>
</tr>
</thead>
<tbody>
<tr>
<td>AuthFailure.SignatureExpire</td>
<td>The signature is expired</td>
</tr>
<tr>
<td>AuthFailure.SecretIdNotFound</td>
<td>The key does not exist</td>
</tr>
<tr>
<td>AuthFailure.SignatureFailure</td>
<td>Signature error</td>
</tr>
</tbody>
</table>
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
- JavaScript
- .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=AKIDz8krbsJ5yKBZQpn74WFkmLPx3EXAMPLE&Signature=EliP9YW3pWzvFpsEdkXt%2F%28WcGeI%3B&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

```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 getSign(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()) {
    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(java.lang.Integer.MAX_VALUE));
    params.put("Nonce", 11886); // Common parameter
    // The current time of the system should be used when actually calling, for example: params.put("Timestamp", System.currentTimeMillis() / 1000);
    params.put("Timestamp", 1465185768); // Common parameter
    params.put("SecretId", "AKIDz8krbsJ5yKBZQpn74WFkmLPx3EXAMPLE"); // 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("InstanceId.8", "ins-09dx96dg"); // Business parameter
    params.put("Signature", sign(getStringToSign(params), "Gu5xGARNpq86cd98joQYCN3EXAMPLE", "HmacSHA1")); // Common parameter
    System.out.println(getUrl(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("utf-8"), s.encode("utf-8"), 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)
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:

```json
{
    "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:

```json
{
    "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.
<table>
<thead>
<tr>
<th>Error Code</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>AuthFailure.InvalidSecretId</td>
<td>Invalid key (not a TencentCloud API key type).</td>
</tr>
<tr>
<td>AuthFailure.MFAFailure</td>
<td>MFA failed.</td>
</tr>
<tr>
<td>AuthFailure.SecretIdNotFound</td>
<td>The key does not exist.</td>
</tr>
<tr>
<td>AuthFailure.SignatureExpire</td>
<td>Signature expired.</td>
</tr>
<tr>
<td>AuthFailure.SignatureFailure</td>
<td>Signature error.</td>
</tr>
<tr>
<td>AuthFailure.TokenFailure</td>
<td>Token error.</td>
</tr>
<tr>
<td>AuthFailure.UnauthorizedOperation</td>
<td>The request does not have CAM authorization.</td>
</tr>
<tr>
<td>DryRunOperation</td>
<td>DryRun Operation. It means that the request would have succeeded, but the DryRun parameter was used.</td>
</tr>
<tr>
<td>FailedOperation</td>
<td>Operation failed.</td>
</tr>
<tr>
<td>InternalError</td>
<td>Internal error.</td>
</tr>
<tr>
<td>InvalidAction</td>
<td>The API does not exist.</td>
</tr>
<tr>
<td>InvalidParameter</td>
<td>Incorrect parameter.</td>
</tr>
<tr>
<td>InvalidParameterValue</td>
<td>Invalid parameter value.</td>
</tr>
<tr>
<td>LimitExceeded</td>
<td>Quota limit exceeded.</td>
</tr>
<tr>
<td>MissingParameter</td>
<td>A parameter is missing.</td>
</tr>
<tr>
<td>NoSuchVersion</td>
<td>The API version does not exist.</td>
</tr>
<tr>
<td>RequestLimitExceeded</td>
<td>The number of requests exceeds the frequency limit.</td>
</tr>
<tr>
<td>ResourceInUse</td>
<td>Resource is in use.</td>
</tr>
<tr>
<td>ResourceInsufficient</td>
<td>Insufficient resource.</td>
</tr>
<tr>
<td>ResourceNotFound</td>
<td>The resource does not exist.</td>
</tr>
<tr>
<td>ResourceUnavailable</td>
<td>Resource is unavailable.</td>
</tr>
<tr>
<td>UnauthorizedOperation</td>
<td>Unauthorized operation.</td>
</tr>
<tr>
<td>UnknownParameter</td>
<td>Unknown parameter.</td>
</tr>
<tr>
<td>UnsupportedOperation</td>
<td>Unsupported operation.</td>
</tr>
<tr>
<td>UnsupportedRegion</td>
<td>API does not support the requested region.</td>
</tr>
<tr>
<td>UnsupportedProtocol</td>
<td>HTTPS request method error. Only GET and POST requests are supported.</td>
</tr>
</tbody>
</table>
Application APIs
CreateApp

Last updated : 2020-04-17 14:22:50

1. API Description

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

This API is used to create a GME application.

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

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.

<table>
<thead>
<tr>
<th>Parameter Name</th>
<th>Required</th>
<th>Type</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Action</td>
<td>Yes</td>
<td>String</td>
<td>Common parameter. The value used for this API: CreateApp.</td>
</tr>
<tr>
<td>Version</td>
<td>Yes</td>
<td>String</td>
<td>Common parameter. The value used for this API: 2018-07-11.</td>
</tr>
<tr>
<td>Region</td>
<td>No</td>
<td>String</td>
<td>Common parameter. This parameter is not required for this API.</td>
</tr>
<tr>
<td>AppName</td>
<td>Yes</td>
<td>String</td>
<td>Application name</td>
</tr>
<tr>
<td>ProjectId</td>
<td>No</td>
<td>Integer</td>
<td>Tencent Cloud project ID. Default value: 0, which means the default project</td>
</tr>
<tr>
<td>EngineList.N</td>
<td>No</td>
<td>Array of String</td>
<td>List of engines to be supported. All values are selected by default.</td>
</tr>
<tr>
<td>RegionList.N</td>
<td>No</td>
<td>Array of String</td>
<td>Service region list. All values are selected by default.</td>
</tr>
<tr>
<td>RealtimeSpeechConf</td>
<td>No</td>
<td>RealtimeSpeechConf</td>
<td>Configuration information of voice chat</td>
</tr>
<tr>
<td>VoiceMessageConf</td>
<td>No</td>
<td>VoiceMessageConf</td>
<td>Configuration information of voice messaging and speech-to-text</td>
</tr>
<tr>
<td>VoiceFilterConf</td>
<td>No</td>
<td>VoiceFilterConf</td>
<td>Configuration information of phrase analysis</td>
</tr>
<tr>
<td>Tags.N</td>
<td>No</td>
<td>Array of Tag</td>
<td>List of tags to be added</td>
</tr>
</tbody>
</table>

3. Output Parameters

<table>
<thead>
<tr>
<th>Parameter Name</th>
<th>Type</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>BizId</td>
<td>Integer</td>
<td>Application ID, which is automatically generated by the backend.</td>
</tr>
<tr>
<td>AppName</td>
<td>String</td>
<td>Application name, which is passed through from theAppName input parameter</td>
</tr>
<tr>
<td>ProjectId</td>
<td>Integer</td>
<td>Project ID, which is passed through from the entered ProjectId</td>
</tr>
<tr>
<td>SecretKey</td>
<td>String</td>
<td>Application key, which is used when the GME SDK is initialized</td>
</tr>
</tbody>
</table>

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4. Example

Example1 Creating a GME application by using default configuration

This example shows you how to create a GME application in the easiest way.

Input Example

https://gme.tencentcloudapi.com/?Action=CreateApplication
&AppName=simple_gme_application
&<common request parameters>

Output Example

```json
{
    "Response": {
        "Data": {
            "AppName": "simple_gme_application",
            "CreateTime": 1568945078,
            "ProjectId": 0,
            "BizId": 140000001,
            "SecretKey": "abcdefghijklmnop",
            "RealtimeSpeechConf": {
                "Status": "open",
                "quality": "ordinary"
            },
            "VoiceMessageConf": {
                "Status": "close",
                "language": "cnen"
            },
            "VoiceFilterConf": {
                "Status": "close"
            }
        }
    },
    "RequestId": "e2900289-f21e-43a8-a3bf-0b439cdbbbb8"
}
```

Example2 Creating a GME application by using custom configuration

This example shows you how to use project 10000, enable voice chat with high sound quality, disable voice messaging and speech-to-text, and enable phrase filtering.

Input Example

https://gme.tencentcloudapi.com/?Action=CreateApplication
&AppName=simple_gme_application
&ProjectId=10000,
Output Example

```
{
  "Response": {
    "Data": {
      "AppName": "simple_gme_application",
      "CreateTime": 1568945078,
      "ProjectId": 10000,
      "BizId": 140000002,
      "SecretKey": "abcdefghijklmnop",
      "RealtimeSpeechConf": {
        "Status": "open",
        "Quality": "high"
      },
      "VoiceMessageConf": {
        "Status": "open",
        "Language": "cnen"
      },
      "VoiceFilterConf": {
        "Status": "open"
      }
    },
    "RequestId": "d61be8ca-f010-11e9-af81-fa163ee00eb7"
  }
}
```

5. Developer Resources

**API Explorer**

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- API 3.0 Explorer

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- Tencent Cloud SDK 3.0 for NodeJS
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**Command Line Interface**

- Tencent Cloud CLI 3.0
6. Error Code

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

<table>
<thead>
<tr>
<th>Error Code</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>FailedOperation</td>
<td>Operation failed.</td>
</tr>
<tr>
<td>FailedOperation.UserFeeNegative</td>
<td>Operation not allowed as your account is in arrears.</td>
</tr>
<tr>
<td>InternalError</td>
<td>Internal error</td>
</tr>
<tr>
<td>InvalidParameter</td>
<td>Invalid parameter</td>
</tr>
<tr>
<td>InvalidParameter.TagKey</td>
<td>Invalid tag.</td>
</tr>
<tr>
<td>LimitExceeded.Application</td>
<td>The number of created applications has reached the upper limit.</td>
</tr>
<tr>
<td>UnauthorizedOperation</td>
<td>Unauthorized operation</td>
</tr>
<tr>
<td>UnauthorizedOperation.CreateAppDenied</td>
<td>Application creation is not authorized.</td>
</tr>
<tr>
<td>UnknownParameter</td>
<td>Unknown parameter</td>
</tr>
<tr>
<td>UnsupportedOperation</td>
<td>Unsupported operation</td>
</tr>
</tbody>
</table>
# ModifyAppStatus

Last updated: 2020-04-17 14:22:49

## 1. API Description

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

This API is used to change the status of an application's master switch.

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

## 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](#).

<table>
<thead>
<tr>
<th>Parameter Name</th>
<th>Required</th>
<th>Type</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Action</td>
<td>Yes</td>
<td>String</td>
<td>Common parameter. The value used for this API: ModifyAppStatus.</td>
</tr>
<tr>
<td>Version</td>
<td>Yes</td>
<td>String</td>
<td>Common parameter. The value used for this API: 2018-07-11.</td>
</tr>
<tr>
<td>Region</td>
<td>No</td>
<td>String</td>
<td>Common parameter. This parameter is not required for this API.</td>
</tr>
<tr>
<td>BizId</td>
<td>Yes</td>
<td>Integer</td>
<td>Application ID, which is generated and returned by the backend after application creation.</td>
</tr>
<tr>
<td>Status</td>
<td>Yes</td>
<td>String</td>
<td>Application status. Valid values: open, close</td>
</tr>
</tbody>
</table>

## 3. Output Parameters

<table>
<thead>
<tr>
<th>Parameter Name</th>
<th>Type</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>BizId</td>
<td>Integer</td>
<td>GME application ID</td>
</tr>
<tr>
<td>Status</td>
<td>String</td>
<td>Application status. Valid values: open, close</td>
</tr>
</tbody>
</table>

## 4. Example

**Example1 Turning off GME application 140000001**

**Input Example**

```
https://gme.tencentcloudapi.com/?Action=ModifyAppStatus
&BizId=140000001
&Status=close
&<common request parameters>
```

**Output Example**
5. Developer Resources

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**Command Line Interface**

- Tencent Cloud CLI 3.0

6. Error Code

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

<table>
<thead>
<tr>
<th>Error Code</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>FailedOperation</td>
<td>Operation failed.</td>
</tr>
<tr>
<td>FailedOperation.UserFeeNegative</td>
<td>Operation not allowed as your account is in arrears.</td>
</tr>
<tr>
<td>InternalError</td>
<td>Internal error</td>
</tr>
<tr>
<td>InvalidParameter</td>
<td>Invalid parameter</td>
</tr>
<tr>
<td>MissingParameter.</td>
<td>Missing parameter.</td>
</tr>
<tr>
<td>ResourceNotFound</td>
<td>The resource does not exist</td>
</tr>
<tr>
<td>ResourceNotFound.BizIdIsNotFound</td>
<td>The application ID does not exist.</td>
</tr>
<tr>
<td>UnauthorizedOperation</td>
<td>Unauthorized operation</td>
</tr>
<tr>
<td>UnknownParameter</td>
<td>Unknown parameter.</td>
</tr>
<tr>
<td>Error Code</td>
<td>Description</td>
</tr>
<tr>
<td>------------------</td>
<td>---------------------------</td>
</tr>
<tr>
<td>UnsupportedOperation</td>
<td>Unsupported operation</td>
</tr>
</tbody>
</table>
1. API Description

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

This API is used to get the usage statistics of a GME application, including those of voice chat, voice messaging and speech-to-text, phrase analysis, etc. The maximum query period is the past 30 days.

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

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.

<table>
<thead>
<tr>
<th>Parameter Name</th>
<th>Required</th>
<th>Type</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Action</td>
<td>Yes</td>
<td>String</td>
<td>Common parameter. The value used for this API: DescribeAppStatistics.</td>
</tr>
<tr>
<td>Version</td>
<td>Yes</td>
<td>String</td>
<td>Common parameter. The value used for this API: 2018-07-11.</td>
</tr>
<tr>
<td>Region</td>
<td>No</td>
<td>String</td>
<td>Common parameter. This parameter is not required for this API.</td>
</tr>
<tr>
<td>BizId</td>
<td>Yes</td>
<td>Integer</td>
<td>GME application ID</td>
</tr>
<tr>
<td>StartDate</td>
<td>Yes</td>
<td>Date</td>
<td>Data start date (GMT+8) in the format of yyyy-mm-dd, such as 2018-07-13</td>
</tr>
<tr>
<td>EndDate</td>
<td>Yes</td>
<td>Date</td>
<td>Data end date (GMT+8) in the format of yyyy-mm-dd, such as 2018-07-13</td>
</tr>
<tr>
<td>Services.N</td>
<td>Yes</td>
<td>Array of String</td>
<td>List of services to be queried. Valid values: RealTimeSpeech, VoiceMessage, VoiceFilter</td>
</tr>
</tbody>
</table>

3. Output Parameters

<table>
<thead>
<tr>
<th>Parameter Name</th>
<th>Type</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>AppStatistics</td>
<td>Array of AppStatisticsItem</td>
<td>Application usage statistics</td>
</tr>
</tbody>
</table>

4. Example

Example1 Querying the usage statistics of voice chat and voice messaging and speech-to-text between August 1 and August 3, 2019

Input Example

https://gme.tencentcloudapi.com/?Action=DescribeAppStatistics&BizId=1400000001
&StartDate=2019-08-01
&EndDate=2019-08-03
&Services.0=RealTimeSpeech
&Services.1=VoiceMessage
&<common request parameters>

Output Example

```json
{
  "Response": {
    "Data": {
      "AppStatistics": {
        "Date": "2019-08-01",
        "RealtimeSpeechStatisticsItem": {
          "MainLandDau": 10000,
          "MainLandPcu": 5000,
          "MainLandDuration": 1000000,
          "OverseaDau": 5000,
          "OverseaPcu": 2000,
          "OverseaDuration": 500000
        },
        "VoiceMessageStatisticsItem": {
          "Dau": 68000
        },
        "VoiceFilterStatisticsItem": null
      },
      "Date": "2019-08-02",
      "RealtimeSpeechStatisticsItem": {
        "MainLandDau": 10000,
        "MainLandPcu": 5000,
        "MainLandDuration": 1000000,
        "OverseaDau": 5000,
        "OverseaPcu": 2000,
        "OverseaDuration": 500000
      },
      "VoiceMessageStatisticsItem": {
        "Dau": 68000
      },
      "VoiceFilterStatisticsItem": null
    },
    "Date": "2019-08-03",
    "RealtimeSpeechStatisticsItem": {
      "MainLandDau": 10000,
      "MainLandPcu": 5000,
      "MainLandDuration": 1000000,
      "OverseaDau": 5000,
      "OverseaPcu": 2000,
      "OverseaDuration": 500000
    },
    "VoiceMessageStatisticsItem": {
      "Dau": 68000
    },
    "VoiceFilterStatisticsItem": null
  }
},
"RequestId": "9b993045-9fa1-47f4-9d25-79160f305be8"
```
5. Developer Resources

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**Command Line Interface**

- Tencent Cloud CLI 3.0

6. Error Code

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

<table>
<thead>
<tr>
<th>Error Code</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>FailedOperation</td>
<td>Operation failed.</td>
</tr>
<tr>
<td>InternalError</td>
<td>Internal error</td>
</tr>
<tr>
<td>InvalidParameter</td>
<td>Invalid parameter</td>
</tr>
<tr>
<td>InvalidParameter.DateInvalid</td>
<td>Invalid date.</td>
</tr>
<tr>
<td>InvalidParameter.TimeRangeError</td>
<td>Incorrect query time range.</td>
</tr>
<tr>
<td>ResourceNotFound</td>
<td>The resource does not exist</td>
</tr>
<tr>
<td>ResourceNotFound.BizidIsNotFound</td>
<td>The application ID does not exist.</td>
</tr>
<tr>
<td>UnauthorizedOperation</td>
<td>Unauthorized operation</td>
</tr>
<tr>
<td>UnknownParameter</td>
<td>Unknown parameter.</td>
</tr>
<tr>
<td>UnsupportedOperation</td>
<td>Unsupported operation</td>
</tr>
</tbody>
</table>
Speech Analysis APIs
DescribeScanResultList

1. API Description

Domain name for API request: gme.tencentcloudapi.com.
This API is used to query the speech detection result. Up to 100 tasks can be added in the task query list.

If the `Callback` field is not set when a speech detection task is submitted, this API will be needed to get the detection result.

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

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.

<table>
<thead>
<tr>
<th>Parameter Name</th>
<th>Required</th>
<th>Type</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Action</td>
<td>Yes</td>
<td>String</td>
<td>Common parameter. The value used for this API: DescribeScanResultList.</td>
</tr>
<tr>
<td>Version</td>
<td>Yes</td>
<td>String</td>
<td>Common parameter. The value used for this API: 2018-07-11.</td>
</tr>
<tr>
<td>Region</td>
<td>No</td>
<td>String</td>
<td>Common parameter. This parameter is not required for this API.</td>
</tr>
<tr>
<td>BizId</td>
<td>Yes</td>
<td>Integer</td>
<td>Application ID, which is the AppID obtained when you create an application in the console</td>
</tr>
<tr>
<td>TaskIdList.N</td>
<td>Yes</td>
<td>Array of String</td>
<td>List of IDs of the tasks to be queried. Up to 100 entries can be added in the ID list.</td>
</tr>
<tr>
<td>Limit</td>
<td>No</td>
<td>Integer</td>
<td>Number of task results to be returned. Default value: 10. Maximum value: 500. This parameter will be ignored for large file tasks where all results will be returned</td>
</tr>
</tbody>
</table>

3. Output Parameters

<table>
<thead>
<tr>
<th>Parameter Name</th>
<th>Type</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Data</td>
<td>Array of DescribeScanResult</td>
<td>Result of the speech detection task to be queried Note: this field may return null, indicating that no valid values can be obtained.</td>
</tr>
<tr>
<td>RequestId</td>
<td>String</td>
<td>The unique request ID, which is returned for each request. RequestId is required for locating a problem.</td>
</tr>
</tbody>
</table>

4. Example
Example 1 Querying speech detection result

Input Example

https://gme.tencentcloudapi.com/?Action=DescribeScanResultList
&BizId=1400000000
&TaskIdList.0=xxx
&Limit=20
&<Common request parameters>

Output Example

```json
{
  "Data": [
    {
      "Code": 0,
      "DataId": "1400000000_test_data_id",
      "ScanFinishTime": 1566720906,
      "HitFlag": true,
      "Live": false,
      "Msg": "",
      "ScanPiece": [
        {
          "DumpUrl": "",
          "HitFlag": true,
          "MainType": "abuse",
          "Info": "",
          "Offset": 0,
          "Duration": 3400,
          "PieceStartTime": 1574684231,
          "ScanDetail": [
            {
              "EndTime": 1110,
              "Keyword": "xxx",
              "Label": "abuse",
              "Rate": "90.00",
              "StartTime": 1110
            },
            {
              "EndTime": 1380,
              "Keyword": "xxx",
              "Label": "abuse",
              "Rate": "90.00",
              "StartTime": 930
            },
            {
              "EndTime": 1560,
              "Keyword": "xxx",
              "Label": "abuse",
              "Rate": "90.00",
              "StartTime": 930
            },
            {
              "EndTime": 2820,
              "Keyword": "xxx",
              "Label": "abuse",
              "Rate": "90.00",
              "StartTime": 2490
            }
          ]
        }
      ]
    }
  ]
}
```
5. Developer Resources

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6. Error Code

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

<table>
<thead>
<tr>
<th>Error Code</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>InternalError</td>
<td>Internal error</td>
</tr>
<tr>
<td>InvalidParameter</td>
<td>Invalid parameter</td>
</tr>
<tr>
<td>InvalidParameter.TagKey</td>
<td>Invalid tag.</td>
</tr>
<tr>
<td>MissingParameter.</td>
<td>Missing parameter.</td>
</tr>
<tr>
<td>ResourceNotFound</td>
<td>The resource does not exist</td>
</tr>
<tr>
<td>UnauthorizedOperation</td>
<td>Unauthorized operation</td>
</tr>
<tr>
<td>UnknownParameter</td>
<td>Unknown parameter.</td>
</tr>
<tr>
<td>Error Code</td>
<td>Description</td>
</tr>
<tr>
<td>---------------------</td>
<td>------------------------</td>
</tr>
<tr>
<td>UnsupportedOperation</td>
<td>Unsupported operation</td>
</tr>
</tbody>
</table>
1. API Description

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

This API is used to submit a speech detection task. Up to 100 tasks can be added in the detection task list. Before using this API, please enable the speech analysis service in Console > Service Configuration.

Feature trial description:
- You can try out the speech analysis service free of charge in Console > Product Trial.

API feature description:
- This API can check audio streams or files for non-compliant content.
- The detection result can be obtained by setting the callback address (`Callback`) or calling the `DescribeScanResultList` API for polling.
- The scenario can be specified, such as abusive, pornographic, or politically sensitive information.
- Detection tasks can be submitted in batches. Up to 100 tasks can be added in the detection task list.

Audio file limit description:
- Audio file size limit: 100 MB
- Audio file duration limit: 30 minutes
- Supported audio file formats: .wav, .m4a, .amr, .mp3, .aac, .wma, .ogg

Audio stream limit description:
- Supported audio stream formats: .m3u8, .flv
- Supported audio stream transfer protocols: RTMP, HTTP, HTTPS
- Audio stream duration limit: 4 hours
- Audio/video stream separation and audio stream analysis are supported

`Scenes` and `Label` parameter description:
When submitting a speech detection task, you need to specify the `Scenes` parameter. You are currently required to set the `Scenes` parameter to `"default"`. The detection result will contain the scenario specified at the time of request and detection result in the corresponding type.

<table>
<thead>
<tr>
<th>Scenario</th>
<th>Description</th>
<th>Label</th>
</tr>
</thead>
<tbody>
<tr>
<td>Speech</td>
<td>detection type</td>
<td>normal: normal</td>
</tr>
<tr>
<td></td>
<td></td>
<td>porn: pornographic</td>
</tr>
<tr>
<td></td>
<td></td>
<td>politics: politically</td>
</tr>
<tr>
<td></td>
<td></td>
<td>sensitive</td>
</tr>
<tr>
<td></td>
<td></td>
<td>abuse: abusive</td>
</tr>
<tr>
<td></td>
<td></td>
<td>ad: advertising</td>
</tr>
</tbody>
</table>
terrorism: terrorism
contraband: prohibited
customized: custom keyword library. This feature is only available to whitelisted users. To try it out, please contact us.

Callback description:

- If the callback address parameter `Callback` (i.e., the URL of an HTTP(S) API) is specified in the request parameters, then the POST method should be supported and transferred data should be encoded with UTF-8.
- After the callback data is pushed, if the HTTP status code received is 200, the push is successful.
- HTTP header parameter description:

<table>
<thead>
<tr>
<th>Name</th>
<th>Type</th>
<th>Required</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Signature</td>
<td>string</td>
<td>Yes</td>
<td>Signature. For more information, please see Signature generation description.</td>
</tr>
</tbody>
</table>

- Signature generation description:
  - The HMAC-SH1 algorithm should be used, and the result should be encoded with Base64;
  - The original signature string is the entire JSON content of POST and body (the length is subject to `Content-Length`);
  - The signature key is the `SecretKey` of the application, which can be viewed in the console.

- Below is a sample callback (for more information on the fields, please see the structure: DescribeScanResult):

```
{
    "Code": 0,
    "DataId": "1400000000_test_data_id",
    "ScanFinishTime": 1566720906,
    "HitFlag": true,
    "Live": false,
    "Msg": "",
    "ScanPiece": [
        { "DumpUrl": "",
          "HitFlag": true,
          "MainType": "abuse",
          "RoomId": "123",
          "OpenId": "xxx",
          "Info": "",
          "Offset": 0,
          "Duration": 3400,
          "PieceStartTime": 1574684231,
          "ScanDetail": [
              { "EndTime": 1110,
                "KeyWord": "xxx",
                "Label": "abuse",
                "Rate": "90.00",
                "StartTime": 1110
              },
              { "EndTime": 1380,
                "KeyWord": "xxx",
                "Label": "abuse",
                "Rate": "90.00",
                "StartTime": 930
              },
              { "EndTime": 1560,
                "KeyWord": "xxx",
                "Label": "abuse",
```
A maximum of 1000 requests can be initiated per second for this API.

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.

<table>
<thead>
<tr>
<th>Parameter Name</th>
<th>Required</th>
<th>Type</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Action</td>
<td>Yes</td>
<td>String</td>
<td>Common parameter. The value used for this API: ScanVoice.</td>
</tr>
<tr>
<td>Version</td>
<td>Yes</td>
<td>String</td>
<td>Common parameter. The value used for this API: 2018-07-11.</td>
</tr>
<tr>
<td>Region</td>
<td>No</td>
<td>String</td>
<td>Common parameter. This parameter is not required for this API.</td>
</tr>
<tr>
<td>BizId</td>
<td>Yes</td>
<td>Integer</td>
<td>Application ID, which is the AppID obtained when you create an application in Console &gt; Service Management</td>
</tr>
<tr>
<td>Scenes</td>
<td>Yes</td>
<td>Array of String</td>
<td>Speech detection scenario. The value of this parameter is currently required to be default. Preset scenarios: abusive, pornographic, politically sensitive, advertising, terrorism, and prohibited scenarios. For specific values, please see the Label description above.</td>
</tr>
<tr>
<td>Live</td>
<td>Yes</td>
<td>Boolean</td>
<td>Whether it is a live stream. false: audio file detection, true: audio stream detection.</td>
</tr>
</tbody>
</table>
| Tasks          | Yes      | Array of Task | Speech detection task list. Up to 100 tasks can be added in the list. The structure contains:  
  • DataId: unique data ID  
  • Url: URL-encoded data file URL, which is a pull address if the detected speech is a stream |
| Callback       | No       | String    | Async callback address for detection result. For more information, please see the callback description above. (Note: if this field is empty, the detection result can only be obtained by calling the DescribeScanResultList API.) |

3. Output Parameters
### Parameter Name  | Type  | Description
---  | ---  | ---
Data  | Array of ScanVoiceResult  | Speech detection return. The `Data` field is a JSON array where each element contains:
- `DataId`: corresponding `DataId` in request.
- `TaskId`: detection task ID, which is used to poll the speech detection result.
RequestId  | String  | The unique request ID, which is returned for each request. RequestId is required for locating a problem.

### 4. Example

**Example1 Submitting audio stream detection task**

This example shows you how to submit a speech detection task for an audio stream where the callback address is empty and the DescribeScanResultList API needs to be called to poll the detection result.

**Input Example**

```plaintext
https://gme.tencentcloudapi.com/?Action=ScanVoice
&BizId=1400000000
&Scenes.0=default
&Live=true
&Callback=
&Tasks.0.DataId=1400000000_test_data_id
&Tasks.0.Url=https://xxxx
&<Common request parameters>
```

**Output Example**

```json
{
  "Response": {
    "Data": [
      {
        "DataId": "1400000000_test_data_id",
        "TaskId": "xxx-xxx-xxx"
      },
      {
        "RequestId": "xxx-xxx-xxx"
      }
    ]
  }
}
```

**Example2 Submitting audio file detection task**

This example shows you how to submit a speech detection task for an audio file where the callback address (Callback) is set to get the detection result.

**Input Example**

```plaintext
https://gme.tencentcloudapi.com/?Action=ScanVoice
&BizId=1400000000
&Scenes.0=default
&Live=false
&Callback=https://0.0.0.0/user_callback
&Tasks.0.DataId=1400000000_test_data_id
&Tasks.0.Url=http://xxxx/audio_store/xxxx.mp3
&<Common request parameters>
```
Output Example

```
{
  "Response": {
    "Data": [
      {
        "DataId": "1400000000_test_data_id",
        "TaskId": "xxx-xxx-xxx"
      },
      {
        "RequestId": "xxx-xxx-xxx"
      }
    ]
  }
}
```

Example3 Submitting audio file detection task

This example shows you how to submit a speech detection task for an audio file where the callback address is empty and the DescribeScanResultList API needs to be called to poll the detection result.

Input Example

```
https://gme.tencentcloudapi.com/?Action=ScanVoice
&BizId=1400000000
&Scenes.0=default
&Live=false
&Tasks.0.DataId=1400000000_test_data_id
&Tasks.0.Url=http://xxx/audio_store/xxxx.mp3
&Common request parameters
```

Output Example

```
{
  "Response": {
    "Data": [
      {
        "DataId": "1400000000_test_data_id",
        "TaskId": "xxx-xxx-xxx"
      },
      {
        "RequestId": "xxx-xxx-xxx"
      }
    ]
  }
}
```

5. Developer Resources

API Explorer

This tool allows online call, signature authentication, SDK code generation and quick search of APIs to greatly improve the efficiency of using TencentCloud APIs.

- API 3.0 Explorer

SDK

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

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

<table>
<thead>
<tr>
<th>Error Code</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>InternalError</td>
<td>Internal error</td>
</tr>
<tr>
<td>InvalidParameter</td>
<td>Invalid parameter</td>
</tr>
<tr>
<td>InvalidParameter.CallbackAddress</td>
<td>Invalid callback address.</td>
</tr>
<tr>
<td>MissingParameter</td>
<td>Missing parameter.</td>
</tr>
<tr>
<td>ResourceNotFound</td>
<td>The resource does not exist</td>
</tr>
<tr>
<td>UnauthorizedOperation</td>
<td>Unauthorized operation</td>
</tr>
<tr>
<td>UnknownParameter</td>
<td>Unknown parameter.</td>
</tr>
<tr>
<td>UnsupportedOperation</td>
<td>Unsupported operation</td>
</tr>
</tbody>
</table>
Data Types

AppStatisticsItem

Application usage statistics

Used by actions: DescribeAppStatistics.

<table>
<thead>
<tr>
<th>Name</th>
<th>Type</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>RealtimeSpeechStatisticsItem</td>
<td>RealTimeSpeechStatisticsItem</td>
<td>Voice chat statistics</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Note: This field may return null, indicating that no valid values can be obtained.</td>
</tr>
<tr>
<td>VoiceMessageStatisticsItem</td>
<td>VoiceMessageStatisticsItem</td>
<td>Voice messaging statistics</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Note: This field may return null, indicating that no valid values can be obtained.</td>
</tr>
<tr>
<td>VoiceFilterStatisticsItem</td>
<td>VoiceFilterStatisticsItem</td>
<td>Phrase filtering statistics</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Note: This field may return null, indicating that no valid values can be obtained.</td>
</tr>
<tr>
<td>Date</td>
<td>Date</td>
<td>Statistical period</td>
</tr>
</tbody>
</table>

DescribeScanResult

Returned speech detection result

Used by actions: DescribeScanResultList.

<table>
<thead>
<tr>
<th>Name</th>
<th>Type</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Code</td>
<td>Integer</td>
<td>Business return code</td>
</tr>
<tr>
<td>DataId</td>
<td>String</td>
<td>Unique data ID</td>
</tr>
<tr>
<td>ScanFinishTime</td>
<td>Integer</td>
<td>Detection completion timestamp</td>
</tr>
<tr>
<td>HitFlag</td>
<td>Boolean</td>
<td>Whether non-compliant information is detected</td>
</tr>
<tr>
<td>Live</td>
<td>Boolean</td>
<td>Whether it is a stream</td>
</tr>
<tr>
<td>Msg</td>
<td>String</td>
<td>Business return description</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Note: this field may return null, indicating that no valid values can be obtained.</td>
</tr>
<tr>
<td>ScanPiece</td>
<td>Array of ScanPiece</td>
<td>Detection result, which will be returned if Code is 0</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Note: this field may return null, indicating that no valid values can be obtained.</td>
</tr>
<tr>
<td>ScanStartTime</td>
<td>Integer</td>
<td>Detection task submission timestamp</td>
</tr>
<tr>
<td>Scenes</td>
<td>Array of String</td>
<td>Speech detection scenario, which corresponds to the Scene at the time of request</td>
</tr>
<tr>
<td>TaskId</td>
<td>String</td>
<td>Speech detection task ID, which is assigned by the backend</td>
</tr>
<tr>
<td>Url</td>
<td>String</td>
<td>File or stream address</td>
</tr>
</tbody>
</table>

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### Status

**Name**: Status  
**Type**: String  
**Description**: Detection task execution result task. Valid values:  
- Start: task started  
- Success: task ended successfully  
- Error: exceptional

### RealTimeSpeechStatisticsItem

**Voice chat usage statistics**

**Used by actions**: DescribeAppStatistics.

<table>
<thead>
<tr>
<th>Name</th>
<th>Type</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>MainLandDau</td>
<td>Integer</td>
<td>DAU in Mainland China</td>
</tr>
<tr>
<td>MainLandPcu</td>
<td>Integer</td>
<td>PCU in Mainland China</td>
</tr>
<tr>
<td>MainLandDuration</td>
<td>Integer</td>
<td>Total duration of use in Mainland China in minutes</td>
</tr>
<tr>
<td>OverseaDau</td>
<td>Integer</td>
<td>DAU outside Mainland China</td>
</tr>
<tr>
<td>OverseaPcu</td>
<td>Integer</td>
<td>PCU outside Mainland China</td>
</tr>
<tr>
<td>OverseaDuration</td>
<td>Integer</td>
<td>Total duration of use outside Mainland China in minutes</td>
</tr>
</tbody>
</table>

### RealtimeSpeechConf

**Configuration information of voice chat**

**Used by actions**: CreateApp.

<table>
<thead>
<tr>
<th>Name</th>
<th>Type</th>
<th>Required</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Status</td>
<td>String</td>
<td>No</td>
<td>Voice chat status. Valid values: open, close</td>
</tr>
<tr>
<td>Quality</td>
<td>String</td>
<td>No</td>
<td>Voice chat sound quality type. Valid values: high (HD), ordinary (SD). Default value: high. SD sound quality is only available to whitelisted users. To try it out, please contact your Tencent Cloud rep.</td>
</tr>
</tbody>
</table>

### ScanDetail

**Speech detection details**

**Used by actions**: DescribeScanResultList.

<table>
<thead>
<tr>
<th>Name</th>
<th>Type</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Label</td>
<td>String</td>
<td>Violation scenario. For more information, please see the definition of Label</td>
</tr>
<tr>
<td>Rate</td>
<td>String</td>
<td>Confidence score in scenario. Value range: [0.00,100.00]. The higher the score, the more likely the content is non-compliant</td>
</tr>
<tr>
<td>KeyWord</td>
<td>String</td>
<td>Non-compliant keyword</td>
</tr>
</tbody>
</table>
### ScanPiece

Speech detection result, which will be returned if `Code` is 0

Used by actions: DescribeScanResultList.

<table>
<thead>
<tr>
<th>Name</th>
<th>Type</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>DumpUrl</td>
<td>String</td>
<td>Audio retention address, which will be returned for stream detection. The audio will be retained for 30 minutes. Note: this field may return null, indicating that no valid values can be obtained.</td>
</tr>
<tr>
<td>HitFlag</td>
<td>Boolean</td>
<td>Whether non-compliant information is detected</td>
</tr>
<tr>
<td>MainType</td>
<td>String</td>
<td>Main non-compliant content type Note: this field may return null, indicating that no valid values can be obtained.</td>
</tr>
<tr>
<td>ScanDetail</td>
<td>Array of ScanDetail</td>
<td>Speech detection details</td>
</tr>
<tr>
<td>RoomId</td>
<td>String</td>
<td>GME voice chat room ID, which is the <code>RoomId</code> passed through when the task was submitted Note: this field may return null, indicating that no valid values can be obtained.</td>
</tr>
<tr>
<td>OpenId</td>
<td>String</td>
<td>GME voice chat user ID, which is the <code>OpenId</code> passed through when the task was submitted Note: this field may return null, indicating that no valid values can be obtained.</td>
</tr>
<tr>
<td>Info</td>
<td>String</td>
<td>Remarks Note: this field may return null, indicating that no valid values can be obtained.</td>
</tr>
<tr>
<td>Offset</td>
<td>Integer</td>
<td>Offset time in milliseconds of segment in stream during stream detection Note: this field may return null, indicating that no valid values can be obtained.</td>
</tr>
<tr>
<td>Duration</td>
<td>Integer</td>
<td>Segment duration during stream detection Note: this field may return null, indicating that no valid values can be obtained.</td>
</tr>
<tr>
<td>PieceStartTime</td>
<td>Integer</td>
<td>Segment detection start time Note: this field may return null, indicating that no valid values can be obtained.</td>
</tr>
</tbody>
</table>

### ScanVoiceResult

Returned result of speech detection

Used by actions: ScanVoice.

<table>
<thead>
<tr>
<th>Name</th>
<th>Type</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>DataId</td>
<td>String</td>
<td>Data ID</td>
</tr>
<tr>
<td>TaskId</td>
<td>String</td>
<td>Task ID</td>
</tr>
</tbody>
</table>
Tag

Tag list
Used by actions: CreateApp.

<table>
<thead>
<tr>
<th>Name</th>
<th>Type</th>
<th>Required</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>TagKey</td>
<td>String</td>
<td>No</td>
<td>Tag key</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Note: This field may return null, indicating that no valid values can be obtained.</td>
</tr>
<tr>
<td>TagValue</td>
<td>String</td>
<td>No</td>
<td>Tag value</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Note: This field may return null, indicating that no valid values can be obtained.</td>
</tr>
</tbody>
</table>

Task

Speech detection task list
Used by actions: ScanVoice.

<table>
<thead>
<tr>
<th>Name</th>
<th>Type</th>
<th>Required</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>DataId</td>
<td>String</td>
<td>Yes</td>
<td>Unique data ID</td>
</tr>
<tr>
<td>Url</td>
<td>String</td>
<td>Yes</td>
<td>URL-encoded data file URL, which is a pull address if the detected speech is a stream</td>
</tr>
<tr>
<td>RoomId</td>
<td>String</td>
<td>No</td>
<td>GME voice chat room ID, which is entered during speech detection by GME voice chat</td>
</tr>
<tr>
<td>OpenId</td>
<td>String</td>
<td>No</td>
<td>GME voice chat user ID, which is entered during speech detection by GME voice chat</td>
</tr>
</tbody>
</table>

VoiceFilterConf

Configuration information of phrase filtering
Used by actions: CreateApp.

<table>
<thead>
<tr>
<th>Name</th>
<th>Type</th>
<th>Required</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Status</td>
<td>String</td>
<td>No</td>
<td>Phrase filtering status. Valid values: open, close</td>
</tr>
</tbody>
</table>

VoiceFilterStatisticsItem

Phrase filtering usage statistics
Used by actions: DescribeAppStatistics.

<table>
<thead>
<tr>
<th>Name</th>
<th>Type</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Duration</td>
<td>Integer</td>
<td>Total duration of phrase filtering</td>
</tr>
</tbody>
</table>

VoiceMessageConf

Configuration information of voice messaging and speech-to-text
Used by actions: CreateApp.

<table>
<thead>
<tr>
<th>Name</th>
<th>Type</th>
<th>Required</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Status</td>
<td>String</td>
<td>No</td>
<td>Voice messaging and speech-to-text status. Valid values: open, close</td>
</tr>
<tr>
<td>Language</td>
<td>String</td>
<td>No</td>
<td>Language supported for voice messaging and speech-to-text. Valid values: all languages, cnen (Chinese and English). Default value: cnen</td>
</tr>
</tbody>
</table>

**VoiceMessageStatisticsItem**

Voice messaging usage statistics

Used by actions: DescribeAppStatistics.

<table>
<thead>
<tr>
<th>Name</th>
<th>Type</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dau</td>
<td>Integer</td>
<td>DAU of voice messaging and speech-to-text</td>
</tr>
</tbody>
</table>
Error Codes

Last updated: 2020-04-17 14:22:50

Feature Description

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

```json
{
  "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

<table>
<thead>
<tr>
<th>Error Code</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>UnsupportedOperation</td>
<td>Unsupported operation.</td>
</tr>
<tr>
<td>ResourceInUse</td>
<td>Resource is in use.</td>
</tr>
<tr>
<td>InternalError</td>
<td>Internal error.</td>
</tr>
<tr>
<td>RequestLimitExceeded</td>
<td>The number of requests exceeds the frequency limit.</td>
</tr>
<tr>
<td>AuthFailure.SecretIdNotFound</td>
<td>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.</td>
</tr>
<tr>
<td>LimitExceeded</td>
<td>Quota limit exceeded.</td>
</tr>
<tr>
<td>NoSuchVersion</td>
<td>The API version does not exist.</td>
</tr>
<tr>
<td>ResourceNotFound</td>
<td>The resource does not exist.</td>
</tr>
<tr>
<td>AuthFailure.SignatureFailure</td>
<td>Invalid signature. Signature calculation error. Please ensure you’ve followed the signature calculation process described in the Signature API documentation.</td>
</tr>
<tr>
<td>AuthFailure.SignatureExpire</td>
<td>Signature expired. Timestamp and server time cannot differ by more than five minutes. Please ensure your current local time matches the standard time.</td>
</tr>
<tr>
<td>UnsupportedRegion</td>
<td>API does not support the requested region.</td>
</tr>
<tr>
<td>UnauthorizedOperation</td>
<td>Unauthorized operation.</td>
</tr>
<tr>
<td>InvalidParameter</td>
<td>Incorrect parameter.</td>
</tr>
<tr>
<td>ResourceUnavailable</td>
<td>Resource is unavailable.</td>
</tr>
</tbody>
</table>
## Error Code

<table>
<thead>
<tr>
<th>Error Code</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>AuthFailure.MFAFailure</td>
<td>MFA failed.</td>
</tr>
<tr>
<td>AuthFailure.UnauthorizedOperation</td>
<td>The request is not authorized. For more information, see the CAM documentation.</td>
</tr>
<tr>
<td>AuthFailure.InvalidSecretId</td>
<td>Invalid key (not a TencentCloud API key type).</td>
</tr>
<tr>
<td>AuthFailure.TokenFailure</td>
<td>Token error.</td>
</tr>
<tr>
<td>DryRunOperation</td>
<td>DryRun Operation. It means that the request would have succeeded, but the DryRun parameter was used.</td>
</tr>
<tr>
<td>FailedOperation</td>
<td>Operation failed.</td>
</tr>
<tr>
<td>UnknownParameter</td>
<td>Unknown parameter.</td>
</tr>
<tr>
<td>UnsupportedProtocol</td>
<td>HTTP(S) request protocol error; only GET and POST requests are supported.</td>
</tr>
<tr>
<td>InvalidParameterValue</td>
<td>Invalid parameter value.</td>
</tr>
<tr>
<td>InvalidAction</td>
<td>The API does not exist.</td>
</tr>
<tr>
<td>MissingParameter</td>
<td>A parameter is missing.</td>
</tr>
<tr>
<td>ResourceInsufficient</td>
<td>Insufficient resource.</td>
</tr>
</tbody>
</table>

## Service Error Codes

<table>
<thead>
<tr>
<th>Error Code</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>FailedOperation.UserFeeNegative</td>
<td>Operation not allowed as your account is in arrears.</td>
</tr>
<tr>
<td>InvalidParameter.CallbackAddress</td>
<td>Invalid callback address.</td>
</tr>
<tr>
<td>InvalidParameter.Datelnvalid</td>
<td>Invalid date.</td>
</tr>
<tr>
<td>InvalidParameter.TagKey</td>
<td>Invalid tag.</td>
</tr>
<tr>
<td>InvalidParameter.TimeRangeError</td>
<td>Incorrect query time range.</td>
</tr>
<tr>
<td>LimitExceeded.Application</td>
<td>The number of created applications has reached the upper limit.</td>
</tr>
<tr>
<td>MissingParameter.</td>
<td>Missing parameter.</td>
</tr>
<tr>
<td>ResourceNotFound.BizidIsNotFound</td>
<td>The application ID does not exist.</td>
</tr>
<tr>
<td>UnauthorizedOperation.CreateAppDenied</td>
<td>Application creation is not authorized.</td>
</tr>
</tbody>
</table>