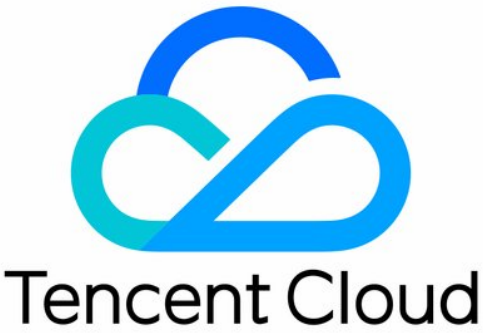
StreamLink

API Documentation

Product Documentation



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API Documentation History

Last updated：2023-11-16 14:56:46

Release 6

Release time: 2023-11-16 14:49:17

Release updates:

Improvement to existing documentation.

New data structures:

- CreateInputHLSPullSettings
- CreateInputRTMPPullSettings
- CreateInputRTSPPullSettings
- DescribeHLSPullSourceAddress
- DescribeInputHLSPullSettings
- DescribeInputRTMPPullSettings
- DescribeInputRTSPPullSettings
- DescribeOutputHLSPullServerUrl
- DescribeOutputHLSPullSettings
- DescribeOutputRTSPPullServerUrl
- DescribeOutputRTSPPullSettings
- DescribeRTMPPullSourceAddress
- DescribeRTSPPullSourceAddress
- HLSPullSourceAddress
- RTMPPullSourceAddress
- RTSPPullSourceAddress
- ResilientStreamConf

Modified data structures:

- CreateInput
  - New members:RTMPPullSettings, RTSPPullSettings, HLSPullSettings, ResilientStream, SecurityGroupIds
- CreateOutputInfo
  - New members:MaxConcurrent, SecurityGroupIds

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- DescribeInput
  - New members:RTMPPullSettings, RTSPPullSettings, HLSPullSettings, ResilientStream, SecurityGroupIds
- DescribeOutput
  - New members:RTSPPullSettings, HLSPullSettings, MaxConcurrent, SecurityGroupIds
- ModifyInput
  - New members:RTMPPullSettings, RTSPPullSettings, HLSPullSettings, ResilientStream, SecurityGroupIds
- ModifyOutputInfo
  - New members:MaxConcurrent, SecurityGroupIds

Release 5

Release time: 2022-05-13 10:26:50

Release updates:

Improvement to existing documentation.

New APIs:

- CreateStreamLinkOutputInfo
- DescribeStreamLinkFlowLogs
- DescribeStreamLinkFlowMediaStatistics
- DescribeStreamLinkFlowRealtimeStatus
- DescribeStreamLinkFlowSRTStatistics
- DescribeStreamLinkFlowStatistics
- ModifyStreamLinkInput
- ModifyStreamLinkOutputInfo

New data structures:

- CreateOutputInfo
- CreateOutputInfoRTPSettings
- CreateOutputRTMPSettings
- CreateOutputRTPSettingsDestinations
- CreateOutputRtmpSettingsDestinations
- CreateOutputSrtSettings
- CreateOutputSrtSettingsDestinations
- FlowAudio
- FlowLogInfo
- FlowMediaAudio

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- FlowMediaInfo
- FlowMediaVideo
- FlowRealtimeStatusCommon
- FlowRealtimeStatusItem
- FlowRealtimeStatusRTMP
- FlowRealtimeStatusRTP
- FlowRealtimeStatusSRT
- FlowSRTInfo
- FlowStatistics
- FlowStatisticsArray
- FlowVideo
- ModifyInput
- ModifyOutputInfo
- OutputSRTSourceAddressResp
- SRTSourceAddressReq
- SRTSourceAddressResp

Modified data structures:

- CreateInputSRTSettings
  - New members:Mode, SourceAddresses
- DescribeInputSRTSettings
  - New members:Mode, SourceAddresses
- DescribeOutputSRTSettings
  - New members:Mode, SourceAddresses

Release 4

Release time: 2021-10-25 15:53:08

Release updates:

Improvement to existing documentation.

New APIs:

- DescribeStreamLinkRegions

New data structures:

- RegionInfo

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- StreamLinkRegionInfo

Release 3

Release time: 2021-10-22 17:59:05

Release updates:

Improvement to existing documentation.

New data structures:

- DescribeOutputRTMPPullServerUrl
- DescribeOutputRTMPPullSettings

Modified data structures:

- DescribeOutput
  - New members:RTMPPullSettings, AllowIpList

Release 2

Release time: 2021-08-20 17:35:04

Release updates:

Improvement to existing documentation.

New APIs:

- CreateStreamLinkFlow
- DeleteStreamLinkFlow
- DeleteStreamLinkOutput
- DescribeStreamLinkFlow
- DescribeStreamLinkFlows
- ModifyStreamLinkFlow
- StartStreamLinkFlow
- StopStreamLinkFlow

Deleted APIs:

- CreateMediaConnectFlow

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- CreateMediaConnectOutput
- DeleteMediaConnectFlow
- DeleteMediaConnectOutput
- DescribeMediaConnectFlow
- DescribeMediaConnectFlows
- ModifyMediaConnectFlow
- ModifyMediaConnectInput
- ModifyMediaConnectOutput
- StartMediaConnectFlow
- StopMediaConnectFlow

New data structures:

- DescribeInputRTMPSettings

Deleted data structures:

- CreateOutput
- CreateOutputRTMPSettings
- CreateOutputRTPSettings
- CreateOutputRTPSettingsDestinations
- CreateOutputRtmpSettingsDestinations
- CreateOutputSrtSettings
- CreateOutputSrtSettingsDestinations
- ModifyInput
- ModifyOutput

Modified data structures:

- CreateInput
  - New members:FailOver
- DescribeInput
  - New members:RTMPSettings, FailOver

Release 1

Release time: 2020-11-05 17:40:56

Release updates:

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Improvement to existing documentation.

New APIs:

- CreateMediaConnectFlow
- CreateMediaConnectOutput
- DeleteMediaConnectFlow
- DeleteMediaConnectOutput
- DescribeMediaConnectFlow
- DescribeMediaConnectFlows
- ModifyMediaConnectFlow
- ModifyMediaConnectInput
- ModifyMediaConnectOutput
- StartMediaConnectFlow
- StopMediaConnectFlow

New data structures:

- CreateInput
- CreateInputRTPSettings
- CreateInputSRTSettings
- CreateOutput
- CreateOutputRTMPSettings
- CreateOutputRTPSettings
- CreateOutputRTPSettingsDestinations
- CreateOutputRtmpSettingsDestinations
- CreateOutputSrtSettings
- CreateOutputSrtSettingsDestinations
- DescribeFlow
- DescribeInput
- DescribeInputRTPSettings
- DescribeInputSRTSettings
- DescribeOutput
- DescribeOutputRTMPSettings
- DescribeOutputRTPSettings
- DescribeOutputSRTSettings
- InputAddress
- ModifyInput
- ModifyOutput
- OutputAddress

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- RTMPAddressDestination
- RTPAddressDestination
- SRTAddressDestination

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API Category

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Flow APIs

API Name	Feature	Frequency Limit (maximum requests per second)
CreateStreamLinkFlow	Creates a StreamLink flow	20
CreateStreamLinkOutputInfo	Creates a StreamLink output	20
DeleteStreamLinkFlow	Deletes a StreamLink flow	20
DeleteStreamLinkOutput	Deletes a StreamLink output	20
DescribeStreamLinkFlow	Queries a StreamLink flow	20
DescribeStreamLinkFlowLogs	Queries the logs of a flow	20
DescribeStreamLinkFlowMediaStatistics	Queries the media quality.	20
DescribeStreamLinkFlowRealtimeStatus	Queries the current status of a flow.	20
DescribeStreamLinkFlowSRTStatistics	Queries SRT streaming performance	20
DescribeStreamLinkFlowStatistics	Queries the media quality of a flow	20
DescribeStreamLinkFlows	Queries StreamLink flows in batches	20
DescribeStreamLinkRegions	Queries StreamLink regions	20
ModifyStreamLinkFlow	Modifies a StreamLink flow	20
ModifyStreamLinkInput	Modifies an input	20
ModifyStreamLinkOutputInfo	Modifies an output	20

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StartStreamLinkFlow	Starts a StreamLink flow	20
StopStreamLinkFlow	Stops a StreamLink flow	20

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Making API Requests
Request Structure

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1. Service Address

The API supports access from either a nearby region (at mdc.tencentcloudapi.com) or a specified region (at mdc.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 "mdc.ap-guangzhou.tencentcloudapi.com".

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

Tencent Cloud currently supports the following regions:

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

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

2. Communications Protocol

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

3. Request Methods

Supported HTTP request methods:

- POST (recommended)
- GET

The Content-Type types supported by POST requests:

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

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

4. Character Encoding

Only UTF-8 encoding is used.

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Common Params

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

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

Common parameters for Signature Algorithm v3

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

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

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

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

Example of an HTTP GET request structure:

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

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

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

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

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

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

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

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

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

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

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

10
--58731222010402--
```

Common parameters for Signature Algorithm v1

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

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

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

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

Example of an HTTP GET request structure:

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

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

Example of an HTTP POST request structure:

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

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

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

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Signature v3

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

Applying for Security Credentials

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

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

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

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

Using the Resources for Developers

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

TC3-HMAC-SHA256 Signature Algorithm

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

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

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

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

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

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

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

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

The signature calculation process is explained in detail below.

1. Concatenating the CanonicalRequest String

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

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

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

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

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

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

```
POST
/

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

content-type;host
99d58dfbc6745f6747f36bfca17dee5e6881dc0428a0a36f96199342bc5b4907
```

2. Concatenating the String to Be Signed

The string to sign is concatenated as follows:

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

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

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

Note:

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

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

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

3. Calculating the Signature

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

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

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

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2) Calculate the signature with the following pseudocode:

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

4. Concatenating the Authorization

The Authorization is concatenated as follows:

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

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

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

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

The following example shows a finished authorization header:

```
POST https://cvm.tencentcloudapi.com/
Authorization: TC3-HMAC-SHA256 Credential=AKIDz8krbsJ5yKBZQpn74WFkmLPx3*******/2019-02-25/cvm/tc3_request, SignedHeaders=content-type;host, Signature=c492e8e41437e97a620b728c301bb8d17e7dc0c17eeabce80c20cd70fc3a78ff
Content-Type: application/json; charset=utf-8
Host: cvm.tencentcloudapi.com
```

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```
X-TC-Action: DescribeInstances
X-TC-Version: 2017-03-12
X-TC-Timestamp: 1551113065
X-TC-Region: ap-guangzhou

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

5. Signature Demo

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

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

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

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

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

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

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

Java

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

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

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

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

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

// ************ Step 1: Concatenate the CanonicalRequest string ************
String httpRequestMethod = "POST";
```

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

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

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

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

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

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

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

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

Python

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

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

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

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

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

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


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

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

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

Golang

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```
package main

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

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

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

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

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

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

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

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

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

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

PHP

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

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

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

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

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

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

Ruby

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

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

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

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

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

puts canonical_request

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

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

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

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

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

DotNet

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

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

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

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

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

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

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

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

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

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

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

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

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

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NodeJS

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

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

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

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

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

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

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

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

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

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

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

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

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

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C++

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

using namespace std;

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

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

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

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

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

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

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

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

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```
return output;
}

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

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

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

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

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

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

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

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

Signature Failure

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

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

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Signature

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

1. Applying for Security Credentials

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

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

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

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

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

2. Generating a Signature

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

Assume that the SecretId and SecretKey are:

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

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

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

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

2.1. Sorting Parameters

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

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

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

2.2. Concatenating a Request String

This step generates a request string.

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

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

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

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

2.3. Concatenating the Signature Original String

This step generates a signature original string.

The signature original string consists of the following parameters:

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

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

The concatenation result of the example is:

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

2.4. Generating a Signature String

This step generates a signature string.

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

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

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

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

The final signature is:

```
zmmjn35mikh6pM3V7sUEuX4wyYM=
```

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

3. Encoding a Signature String

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

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

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

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

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

4. Signature Failure

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

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

5. Signature Demo

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

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

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

The final output URL might be:

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

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

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

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

Java

```
import java.io.UnsupportedEncodingException;
import java.net.URLEncoder;
import java.util.Random;
import java.util.TreeMap;
import javax.crypto.Mac;
import javax.crypto.spec.SecretKeySpec;
import javax.xml.bind.DatatypeConverter;
public class TencentCloudAPIDemo {
private final static String CHARSET = "UTF-8";
public static String sign(String s, String key, String method) throws Exception {
Mac mac = Mac.getInstance(method);
SecretKeySpec secretKeySpec = new SecretKeySpec(key.getBytes(CHARSET), mac.getAlg
orithm());
mac.init(secretKeySpec);
byte[] hash = mac.doFinal(s.getBytes(CHARSET));
return DatatypeConverter.printBase64Binary(hash);
}
public static String getStringToSign(TreeMap<String, Object> params) {
StringBuilder s2s = new StringBuilder("GETcvm.tencentcloudapi.com/?");
// When signing, the parameters need to be sorted in lexicographical order. TreeM
ap is used here to guarantee the correct order.
for (String k : params.keySet()) {
s2s.append(k).append("=").append(params.get(k).toString()).append("&");
}
return s2s.toString().substring(0, s2s.length() - 1);
}
public static String getUrl(TreeMap<String, Object> params) throws UnsupportedEnc
odingException {
StringBuilder url = new StringBuilder("https://cvm.tencentcloudapi.com/?");
// There is no requirement for the order of the parameters in the actual request
URL.
for (String k : params.keySet()) {
// The request string needs to be URL encoded. As the Key is all in English lette
rs, only the value is URL encoded here.
url.append(k).append("=").append(URLEncoder.encode(params.get(k).toString(), CHAR
SET)).append("&");
```

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```
}
return url.toString().substring(0, url.length() - 1);
}
public static void main(String[] args) throws Exception {
TreeMap<String, Object> params = new TreeMap<String, Object>(); // TreeMap enable
s automatic sorting
// A random number should be used when actually calling, for example: params.put
("Nonce", new Random().nextInt(java.lang.Integer.MAX_VALUE));
params.put("Nonce", 11886); // Common parameter
// The current time of the system should be used when actually calling, for examp
le: params.put("Timestamp", System.currentTimeMillis() / 1000);
params.put("Timestamp", 1465185768); // Common parameter
params.put("SecretId", "AKIDz8krbsJ5yKBZQpn74WFkmLPx3*******"); // Common paramet
er
params.put("Action", "DescribeInstances"); // Common parameter
params.put("Version", "2017-03-12"); // Common parameter
params.put("Region", "ap-guangzhou"); // Common parameter
params.put("Limit", 20); // Business parameter
params.put("Offset", 0); // Business parameter
params.put("InstanceIds.0", "ins-09dx96dg"); // Business parameter
params.put("Signature", sign(getStringToSign(params), "Gu5t9xGARNpq86cd98joQYCN3*
******", "HmacSHA1")); // Common parameter
System.out.println(getUrl(params));
}
}
```

Python

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

```
# -*- coding: utf8 -*-
import base64
import hashlib
import hmac
import time
import requests
secret_id = "AKIDz8krbsJ5yKBZQpn74WFkmLPx3*******"
secret_key = "Gu5t9xGARNpq86cd98joQYCN3*******"
def get_string_to_sign(method, endpoint, params):
s = method + endpoint + "/?"
query_str = "&".join("%s=%s" % (k, params[k]) for k in sorted(params))
return s + query_str
def sign_str(key, s, method):
hmac_str = hmac.new(key.encode("utf8"), s.encode("utf8"), method).digest()
return base64.b64encode(hmac_str)
```

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

Golang

```
package main
import (
"bytes"
"crypto/hmac"
"crypto/sha1"
"encoding/base64"
"fmt"
"sort"
)
func main() {
secretId := "AKIDz8krbsJ5yKBZQpn74WFkmLPx3*******"
secretKey := "Gu5t9xGARNpq86cd98joQYCN3*******"
params := map[string]string{
"Nonce": "11886",
"Timestamp": "1465185768",
"Region": "ap-guangzhou",
"SecretId": secretId,
"Version": "2017-03-12",
"Action": "DescribeInstances",
"InstanceIds.0": "ins-09dx96dg",
"Limit": "20",
"Offset": "0",
}
var buf bytes.Buffer
```

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```
buf.WriteString("GET")
buf.WriteString("cvm.tencentcloudapi.com")
buf.WriteString("/")
buf.WriteString("?")
// sort keys by ascii asc order
keys := make([]string, 0, len(params))
for k, _ := range params {
keys = append(keys, k)
}
sort.Strings(keys)
for i := range keys {
k := keys[i]
buf.WriteString(k)
buf.WriteString("=")
buf.WriteString(params[k])
buf.WriteString("&")
}
buf.Truncate(buf.Len() - 1)
hashed := hmac.New(sha1.New, []byte(secretKey))
hashed.Write(buf.Bytes())
fmt.Println(base64.StdEncoding.EncodeToString(hashed.Sum(nil)))
}
```

PHP

```
<?php
$secretId = "AKIDz8krbsJ5yKBZQpn74WFkmLPx3*******";
$secretKey = "Gu5t9xGARNpq86cd98joQYCN3*******";
$param["Nonce"] = 11886;//rand();
$param["Timestamp"] = 1465185768;//time();
$param["Region"] = "ap-guangzhou";
$param["SecretId"] = $secretId;
$param["Version"] = "2017-03-12";
$param["Action"] = "DescribeInstances";
$param["InstanceIds.0"] = "ins-09dx96dg";
$param["Limit"] = 20;
$param["Offset"] = 0;
ksort($param);
$signStr = "GETcvm.tencentcloudapi.com/?";
foreach ( $param as $key => $value ) {
$signStr = $signStr . $key . "=" . $value . "&";
}
$signStr = substr($signStr, 0, -1);
$signature = base64_encode(hash_hmac("sha1", $signStr, $secretKey, true));
echo $signature.PHP_EOL;
// need to install and enable curl extension in php.ini
```

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```
// $param["Signature"] = $signature;
// $url = "https://cvm.tencentcloudapi.com/?".http_build_query($param);
// echo $url.PHP_EOL;
// $ch = curl_init();
// curl_setopt($ch, CURLOPT_URL, $url);
// $output = curl_exec($ch);
// curl_close($ch);
// echo json_decode($output);
```

Ruby

```
# -*- coding: UTF-8 -*-
# require ruby>=2.3.0
require 'time'
require 'openssl'
require 'base64'
secret_id = "AKIDz8krbsJ5yKBZQpn74WFkmLPx3*******"
secret_key = "Gu5t9xGARNpq86cd98joQYCN3*******"
method = 'GET'
endpoint = 'cvm.tencentcloudapi.com'
data = {
'Action' => 'DescribeInstances',
'InstanceIds.0' => 'ins-09dx96dg',
'Limit' => 20,
'Nonce' => 11886,
'Offset' => 0,
'Region' => 'ap-guangzhou',
'SecretId' => secret_id,
'Timestamp' => 1465185768, # Time.now.to_i
'Version' => '2017-03-12',
}
sign = method + endpoint + '/?'
params = []
data.sort.each do |item|
params << "#{item[0]}=#{item[1]}"
end
sign += params.join('&')
digest = OpenSSL::Digest.new('sha1')
data['Signature'] = Base64.encode64(OpenSSL::HMAC.digest(digest, secret_key, sig
n))
puts data['Signature']
# require 'net/http'
# uri = URI('https://' + endpoint)
# uri.query = URI.encode_www_form(data)
# p uri
```

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```
# res = Net::HTTP.get_response(uri)
# puts res.body
```

DotNet

```
using System;
using System.Collections.Generic;
using System.Net;
using System.Security.Cryptography;
using System.Text;
public class Application {
public static string Sign(string signKey, string secret)
{
string signRet = string.Empty;
using (HMACSHA1 mac = new HMACSHA1(Encoding.UTF8.GetBytes(signKey)))
{
byte[] hash = mac.ComputeHash(Encoding.UTF8.GetBytes(secret));
signRet = Convert.ToBase64String(hash);
}
return signRet;
}
public static string MakeSignPlainText(SortedDictionary<string, string> requestPa
rams, string requestMethod, string requestHost, string requestPath)
{
string retStr = "";
retStr += requestMethod;
retStr += requestHost;
retStr += requestPath;
retStr += "?";
string v = "";
foreach (string key in requestParams.Keys)
{
v += string.Format("{0}={1}&", key, requestParams[key]);
}
retStr += v.TrimEnd('&');
return retStr;
}
public static void Main(string[] args)
{
string SECRET_ID = "AKIDz8krbsJ5yKBZQpn74WFkmLPx3*******";
string SECRET_KEY = "Gu5t9xGARNpq86cd98joQYCN3*******";
string endpoint = "cvm.tencentcloudapi.com";
string region = "ap-guangzhou";
string action = "DescribeInstances";
string version = "2017-03-12";
double RequestTimestamp = 1465185768;
```

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```
// long timestamp = ToTimestamp() / 1000;
// string requestTimestamp = timestamp.ToString();
Dictionary<string, string> param = new Dictionary<string, string>();
param.Add("Limit", "20");
param.Add("Offset", "0");
param.Add("InstanceIds.0", "ins-09dx96dg");
param.Add("Action", action);
param.Add("Nonce", "11886");
// param.Add("Nonce", Math.Abs(new Random().Next()).ToString());
param.Add("Timestamp", RequestTimestamp.ToString());
param.Add("Version", version);
param.Add("SecretId", SECRET_ID);
param.Add("Region", region);
SortedDictionary<string, string> headers = new SortedDictionary<string, string>(p
aram, StringComparer.Ordinal);
string sigInParam = MakeSignPlainText(headers, "GET", endpoint, "/");
Console.WriteLine(sigInParam);
string sigOutParam = Sign(SECRET_KEY, sigInParam);
Console.WriteLine("GET https://cvm.tencentcloudapi.com");
foreach (KeyValuePair<string, string> kv in headers)
{
Console.WriteLine(kv.Key + ": " + kv.Value);
}
Console.WriteLine("Signature" + ": " + WebUtility.UrlEncode(sigOutParam));
Console.WriteLine();
string result = "https://cvm.tencentcloudapi.com/?";
foreach (KeyValuePair<string, string> kv in headers)
{
result += WebUtility.UrlEncode(kv.Key) + "=" + WebUtility.UrlEncode(kv.Value) +
"&";
}
result += WebUtility.UrlEncode("Signature") + "=" + WebUtility.UrlEncode(sigOutPa
ram);
Console.WriteLine("GET " + result);
}
}
```

NodeJS

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

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```
let strSign = reqMethod + endpoint + path + "?" + strParam.slice(1);
return strSign;
}
function sha1(secretKey, strsign){
let signMethodMap = {'HmacSHA1': "sha1"};
let hmac = crypto.createHmac(signMethodMap['HmacSHA1'], secretKey || "");
return hmac.update(Buffer.from(strsign, 'utf8')).digest('base64')
}
function sort_params(params){
let strParam = "";
let keys = Object.keys(params);
keys.sort();
for (let k in keys) {
//k = k.replace(/_/g, '.');
strParam += ("&" + keys[k] + "=" + params[keys[k]]);
}
return strParam
}
function main(){
const SECRET_ID = "AKIDz8krbsJ5yKBZQpn74WFkmLPx3*******"
const SECRET_KEY = "Gu5t9xGARNpq86cd98joQYCN3*******"
const endpoint = "cvm.tencentcloudapi.com"
const Region = "ap-guangzhou"
const Version = "2017-03-12"
const Action = "DescribeInstances"
const Timestamp = 1465185768
// const Timestamp = Math.round(Date.now() / 1000)
const Nonce = 11886
//const nonce = Math.round(Math.random() * 65535)
let params = {};
params['Action'] = Action;
params['InstanceIds.0'] = 'ins-09dx96dg';
params['Limit'] = 20;
params['Offset'] = 0;
params['Nonce'] = Nonce;
params['Region'] = Region;
params['SecretId'] = SECRET_ID;
params['Timestamp'] = Timestamp;
params['Version'] = Version;
strParam = sort_params(params)
const reqMethod = "GET";
const path = "/";
strSign = formatSignString(reqMethod, endpoint, path, strParam)
console.log(strSign)
console.log("-----------------------")
params['Signature'] = sha1(SECRET_KEY, strSign)
console.log(params['Signature'])
```

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

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Responses

Last updated：2021-08-20 17:40:47

Response for Successful Requests

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

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

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

Response for Failed Requests

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

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

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

Common Error Codes

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

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

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

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Flow APIs
ModifyStreamLinkInput

Last updated：2023-11-16 14:56:47

1. API Description

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

This API is used to modify an input of a StreamLink flow.

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

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

2. Input Parameters

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

Parameter Name	Required	Type	Description
Action	Yes	String	Common Params. The value used for this API: ModifyStreamLinkInput.
Version	Yes	String	Common Params. The value used for this API: 2020-08-28.
Region	No	String	Common Params. This parameter is not required for this API.
FlowId	Yes	String	The flow ID.
Input	Yes	ModifyInput	The input information to modify.

3. Output Parameters

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Parameter Name	Type	Description
Info	DescribeInput	The input information after modification.
RequestId	String	The unique request ID, which is returned for each request. RequestId is required for locating a problem.

4. Example

Example1 Request Sample

Input Example

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

{
"FlowId": "01746cfeda560956b92d34d30445",
"Input": {
"InputId": "01746cfeda570956b92d34d30446",
"InputName": "inputname",
"Description": "inputnameDescription",
"AllowIpList": [
"0.0.0.0/0"
],
"SRTSettings": {
"Latency": 1000,
"RecvLatency": 1000,
"PeerLatency": 0,
"PeerIdleTimeout": 1000,
"Passphrase": "aaaaaaaaaa",
"PbKeyLen": 32
},
"RTPSettings": {
"FEC": "",
"IdleTimeout": 0
}
}
}
```

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Output Example


```
{
"Response": {
"Info": {
"AllowIpList": [
"0.0.0.0/0"
],
"Protocol": "xx",
"Description": "xx",
"RTPSettings": {
"IdleTimeout": 0,
"FEC": "xx"
},
"InputName": "xx",
"SRTSettings": {
"Latency": 1000,
"PeerLatency": 0,
"PbKeyLen": 32,
"RecvLatency": 1000,
"Passphrase": "xx",
"StreamId": "xx",
"PeerIdleTimeout": 1000
},
"RTMPSettings": {
"StreamKey": "xx",
"AppName": "xx"
},
"InputRegion": "xx",
"InputId": "xx",
"InputAddressList": [
{
"Ip": "xx",
"Port": 1
},
{
"Ip": "xx",
"Port": 1
}
]
},
"RequestId": "xx"
}
}
```


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5. Developer Resources

SDK

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

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

Command Line Interface

- Tencent Cloud CLI 3.0

6. Error Code

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

Error Code	Description
InternalError	Internal error.
InvalidParameter.Id	Invalid ID.
InvalidParameter.Input	Invalid input.
InvalidParameter.Protocol	Invalid `Protocol`.
InvalidParameter.State	Unexpected status.

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ModifyStreamLinkOutputInfo

Last updated：2023-11-16 14:56:47

1. API Description

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

This API is used to modify an output of a StreamLink flow.

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

We recommend you to use API Explorer

Try it

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

2. Input Parameters

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

Parameter Name	Required	Type	Description
Action	Yes	String	Common Params. The value used for this API: ModifyStreamLinkOutputInfo.
Version	Yes	String	Common Params. The value used for this API: 2020-08-28.
Region	No	String	Common Params. This parameter is not required for this API.
FlowId	Yes	String	The flow ID.
Output	Yes	ModifyOutputInfo	The output configuration to modify.

3. Output Parameters

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Parameter Name	Type	Description
Info	DescribeOutput	The output configuration after modification.
RequestId	String	The unique request ID, which is returned for each request. RequestId is required for locating a problem.

4. Example

Example1 Request Sample

Input Example

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

{
"FlowId": "xx",
"Output": {
"OutputName": "xx",
"Protocol": "xx",
"Description": "xx",
"RTPSettings": {
"IdleTimeout": 1000,
"FEC": "xx",
"Destinations": [
{
"Ip": "xx",
"Port": 0
}
]
},
"SRTSettings": {
"Latency": 1000,
"PeerLatency": 1000,
"PbKeyLen": 0,
"RecvLatency": 1000,
"Passphrase": "xx",
"StreamId": "xx",
"PeerIdleTimeout": 1000,
"Destinations": [
```

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```
{
"Ip": "xx",
"Port": 10000
},
{
"Ip": "xx",
"Port": 10000
}
]
},
"OutputId": "xx",
"RTMPSettings": {
"ChunkSize": 4096,
"Destinations": [
{
"Url": "xx",
"StreamKey": "xx"
},
{
"Url": "xx",
"StreamKey": "xx"
}
]
}
}
}
```


Output Example


```
{
"Response": {
"Info": {
"OutputId": "01746d03dd8c0956b92d34d30447",
"OutputName": "bbbb",
"OutputType": "Internet",
"Description": "description",
"Protocol": "SRT",
"OutputAddressList": [
{
"Ip": "1.1.1.1"
},
{
"Ip": "2.2.2.2"
}
],
"OutputRegion": "ap-mumbai",
```


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```
"SRTSettings": {
"Destinations": [
{
"Ip": "1.1.1.1",
"Port": 10000
},
{
"Ip": "1.1.1.1",
"Port": 10000
}
],
"StreamId": "#!::u=johnny,t=file,m=publish,r=results.csv",
"Latency": 1000,
"RecvLatency": 1000,
"PeerLatency": 1000,
"PeerIdleTimeout": 1000,
"Passphrase": "",
"PbKeyLen": 0
},
"RTPSettings": {
"Destinations": [],
"FEC": "",
"IdleTimeout": 0
},
"RTMPSettings": {
"Destinations": [],
"IdleTimeout": 0,
"ChunkSize": 0
}
},
"RequestId": "aaaaa"
}
}
```


5. Developer Resources

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

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

Command Line Interface

- Tencent Cloud CLI 3.0

6. Error Code

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

Error Code	Description
InternalError	Internal error.
InvalidParameter.Id	Invalid ID.
InvalidParameter.Output	Invalid `Output`.
InvalidParameter.OutputId	Invalid `OutputId`.
InvalidParameter.Protocol	Invalid `Protocol`.
InvalidParameter.State	Unexpected status.

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DescribeStreamLinkFlowStatistics

Last updated：2023-11-16 14:56:47

1. API Description

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

This API is used to query the media quality of a StreamLink flow.

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

We recommend you to use API Explorer

Try it

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

2. Input Parameters

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

Parameter Name	Required	Type	Description
Action	Yes	String	Common Params. The value used for this API: DescribeStreamLinkFlowStatistics.
Version	Yes	String	Common Params. The value used for this API: 2020-08-28.
Region	No	String	Common Params. This parameter is not required for this API.
FlowId	Yes	String	The flow ID.
Type	Yes	String	Whether to query the inputs or outputs. Valid values: input, output.
InputOutputId	Yes	String	The input or output ID.
Pipeline	Yes	String	Whether to query the primary or backup pipeline. Valid values: 0, 1.
Period	Yes	String	The query interval. Valid values: 5s, 1min, 5min, 15min.
StartTime	Yes	String	The start time for query, which is 1 hour ago by default. You can query

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			statistics in the last 7 days. It must be in UTC format, such as `2020-01-01T12:00:00Z` .
EndTime	Yes	String	The end time for query, which is 1 hour after the start time by default. The longest time range allowed for query is 24 hours. It must be in UTC format, such as `2020-01-01T12:00:00Z` .

3. Output Parameters

Parameter Name	Type	Description
Infos	Array of FlowStatisticsArray	A list of the media data.
RequestId	String	The unique request ID, which is returned for each request. RequestId is required for locating a problem.

4. Example

Example1 Request Sample

Input Example

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

{
"FlowId": "0175723949ba0956b92d0bf40cfe",
"StartTime": "2020-12-10T11:00:00Z",
"EndTime": "2020-12-10T12:00:00Z",
"Period": "1min",
"Type": "input",
"Pipeline": "0",
"InputOutputId": "0175723949bb0956b92d0bf40cff"
}
```

Output Example

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```
{
"Response": {
"Infos": [
{
"Timestamp": 1610953200,
"FlowStatistics": [
{
"SessionId": "562328572",
"ClientIp": "134.175.180.167",
"Network": 1748053,
"Video": [
{
"Fps": 17,
"Rate": 1458950,
"Pid": 256
}
],
"Audio": [
{
"Fps": 28,
"Rate": 114462,
"Pid": 257
},
{
"Fps": 30,
"Rate": 116787,
"Pid": 258
}
]
}
]
}
],
"RequestId": "4d9bcf8e-32c5-49ed-b145-875ad65c3d46"
}
}
```


5. Developer Resources

SDK

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

Command Line Interface

- Tencent Cloud CLI 3.0

6. Error Code

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

Error Code	Description
InternalError	Internal error.
InvalidParameter.EndTime	Invalid `EndTime`.
InvalidParameter.Id	Invalid ID.
InvalidParameter.InputOutputId	Invalid `InputOutputId`.
InvalidParameter.NotFound	No information found.
InvalidParameter.Period	Invalid `Period`.
InvalidParameter.Pipeline	Invalid `Pipeline`.
InvalidParameter.StartTime	Invalid `StartTime`.
InvalidParameter.Type	Invalid `Type`.

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DescribeStreamLinkFlowSRTStatistics

Last updated：2023-11-16 14:56:48

1. API Description

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

This API is used to query the SRT streaming performance of a StreamLink flow.

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

We recommend you to use API Explorer

Try it

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

2. Input Parameters

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

Parameter Name	Required	Type	Description
Action	Yes	String	Common Params. The value used for this API: DescribeStreamLinkFlowSRTStatistics.
Version	Yes	String	Common Params. The value used for this API: 2020-08-28.
Region	No	String	Common Params. This parameter is not required for this API.
FlowId	Yes	String	The flow ID.
Type	Yes	String	Whether to query the inputs or outputs. Valid values: input, output.
InputOutputId	Yes	String	The input or output ID.
Pipeline	Yes	String	Whether to query the primary or backup pipeline. Valid values: 0, 1.
StartTime	Yes	String	The start time for query, which is 1 hour ago by default. You can query statistics in the last 7 days. It must be in UTC format, such as `2020-01-01T12:00:00Z` .

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EndTime	Yes	String	The end time for query, which is 1 hour after the start time by default. The longest time range allowed for query is 24 hours. It must be in UTC format, such as `2020-01-01T12:00:00Z`.
Period	Yes	String	The query interval. Valid values: 5s, 1min, 5min, 15min.

3. Output Parameters

Parameter Name	Type	Description
Infos	Array of FlowSRTInfo	A list of the SRT streaming performance data.
RequestId	String	The unique request ID, which is returned for each request. RequestId is required for locating a problem.

4. Example

Example1 Request Sample

Input Example

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

{
"FlowId": "0175723949ba0956b92d0bf40cfe",
"StartTime": "2020-12-10T11:00:00Z",
"EndTime": "2020-12-10T12:00:00Z",
"Period": "1min",
"Type": "input",
"Pipeline": "0",
"InputOutputId": "0175723949bb0956b92d0bf40cff"
}
```

Output Example

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```
{
"Response": {
"Infos": [
{
"SendRetransmissionRate": 0,
"RecvPacketLossRate": 0,
"Timestamp": 1607606280,
"SendPacketDropNumber": 0,
"RecvPacketDropNumber": 0,
"RTT": 17,
"SessionId": "xx",
"SendPacketLossRate": 0,
"RecvRetransmissionRate": 0
}
],
"RequestId": "137253816"
}
}
```


5. Developer Resources

SDK

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

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

Command Line Interface

- Tencent Cloud CLI 3.0

6. Error Code

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

Error Code	Description
InternalError	Internal error.
InvalidParameter.EndTime	Invalid `EndTime`.
InvalidParameter.Id	Invalid ID.
InvalidParameter.InputOutputId	Invalid `InputOutputId`.
InvalidParameter.NotFound	No information found.
InvalidParameter.Period	Invalid `Period`.
InvalidParameter.Pipeline	Invalid `Pipeline`.
InvalidParameter.StartTime	Invalid `StartTime`.
InvalidParameter.Type	Invalid `Type`.

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DescribeStreamLinkFlowRealtimeStatus

Last updated：2023-11-16 14:56:48

1. API Description

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

This API is used to query the current status of a flow.

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

We recommend you to use API Explorer

Try it

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

2. Input Parameters

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

Parameter Name	Required	Type	Description
Action	Yes	String	Common Params. The value used for this API: DescribeStreamLinkFlowRealtimeStatus.
Version	Yes	String	Common Params. The value used for this API: 2020-08-28.
Region	No	String	Common Params. This parameter is not required for this API.
FlowId	Yes	String	The flow ID.
InputIds.N	No	Array of String	The IDs of the inputs to query. If this parameter and `OutputIds` are both empty, all inputs and outputs are queried.
OutputIds.N	No	Array of String	The IDs of the outputs to query. If this parameter and `OutputIds` are both empty, all inputs and outputs are queried.

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3. Output Parameters

Parameter Name	Type	Description
Timestamp	Integer	The timestamp (seconds) of the query.
Datas	Array of FlowRealtimeStatusItem	A list of the real-time data.
RequestId	String	The unique request ID, which is returned for each request. RequestId is required for locating a problem.

4. Example

Example1 Request Sample

Input Example

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

{
"FlowId": "0176ac7f1af20956b92d2aad1e6d",
"InputIds": [
"0176ac7f1af30956b92d2aad1e6e"
],
"OutputIds": [
"0178c3f4bceb0956b92d149e1b5d"
]
}
```

Output Example

```
{
"Response": {
"Timestamp": 1618543864,
"RequestId": "xx",
"Datas": [
{
```

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```
"Protocol": "xx",
"ConnectServerIP": "xx",
"RTMPStatus": [
{}
],
"OutputId": "xx",
"FlowId": "xx",
"InputId": "xx",
"CommonStatus": {
"State": "xx",
"Reconnections": 0,
"Bitrate": 0,
"Mode": "xx",
"ConnectedTime": 0
},
"SRTStatus": [
{}
],
"Type": "xx",
"RTPStatus": {
"Packets": 0
}
},
{
"Protocol": "xx",
"ConnectServerIP": "xx",
"RTMPStatus": [
{}
],
"OutputId": "xx",
"FlowId": "xx",
"InputId": "xx",
"CommonStatus": {
"State": "xx",
"Reconnections": 0,
"Bitrate": 0,
"Mode": "xx",
"ConnectedTime": 0
},
"SRTStatus": [
{}
],
"Type": "xx",
"RTPStatus": {
"Packets": 0
}
}
```


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```
]
}
}
```

5. Developer Resources

SDK

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

Command Line Interface

- Tencent Cloud CLI 3.0

6. Error Code

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

Error Code	Description
InternalError	Internal error.
InvalidParameter.Id	Invalid ID.
InvalidParameter.NotFound	No information found.

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DescribeStreamLinkFlowMediaStatistics

Last updated：2023-11-16 14:56:48

1. API Description

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

This API is used to query the media quality of a StreamLink flow.

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

We recommend you to use API Explorer

Try it

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

2. Input Parameters

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

Parameter Name	Required	Type	Description
Action	Yes	String	Common Params. The value used for this API: DescribeStreamLinkFlowMediaStatistics.
Version	Yes	String	Common Params. The value used for this API: 2020-08-28.
Region	No	String	Common Params. This parameter is not required for this API.
FlowId	Yes	String	The flow ID.
Type	Yes	String	Whether to query the inputs or outputs. Valid values: input, output.
InputOutputId	Yes	String	The input or output ID.
Pipeline	Yes	String	Whether to query the primary or backup pipeline. Valid values: 0, 1.
Period	Yes	String	The query interval. Valid values: 5s, 1min, 5min, 15min.
StartTime	Yes	String	The start time for query, which is 1 hour ago by default. You can query

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			statistics in the last 7 days. It must be in UTC format, such as `2020-01-01T12:00:00Z`.
EndTime	Yes	String	The end time for query, which is 1 hour after the start time by default. The longest time range allowed for query is 24 hours. It must be in UTC format, such as `2020-01-01T12:00:00Z`.

3. Output Parameters

Parameter Name	Type	Description
Infos	Array of FlowMediaInfo	A list of the media data.
RequestId	String	The unique request ID, which is returned for each request. RequestId is required for locating a problem.

4. Example

Example1 Request Sample

Input Example

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

{
"FlowId": "0175723949ba0956b92d0bf40cfe",
"StartTime": "2020-12-10T11:00:00Z",
"EndTime": "2020-12-10T12:00:00Z",
"Period": "1min",
"Type": "input",
"Pipeline": "0",
"InputOutputId": "0175723949bb0956b92d0bf40cff"
}
```

Output Example

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```
{
"Response": {
"Infos": [
{
"Network": 1208588,
"Timestamp": 1607598000,
"SessionId": "xx",
"Video": [
{
"Rate": 1038884,
"Pid": 256,
"SessionId": "xx",
"Fps": 62
}
],
"Audio": [
{
"Rate": 169704,
"Pid": 257,
"SessionId": "xx",
"Fps": 45
}
]
}
],
"RequestId": "xx"
}
}
```


5. Developer Resources

SDK

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- Tencent Cloud SDK 3.0 for .NET

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- Tencent Cloud SDK 3.0 for C++

Command Line Interface

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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.

Error Code	Description
InternalError	Internal error.
InvalidParameter.EndTime	Invalid `EndTime`.
InvalidParameter.Id	Invalid ID.
InvalidParameter.InputOutputId	Invalid `InputOutputId`.
InvalidParameter.NotFound	No information found.
InvalidParameter.Period	Invalid `Period`.
InvalidParameter.Pipeline	Invalid `Pipeline`.
InvalidParameter.StartTime	Invalid `StartTime`.
InvalidParameter.Type	Invalid `Type`.

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DescribeStreamLinkFlowLogs

Last updated：2023-11-16 14:56:48

1. API Description

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

This API is used to query the logs of a StreamLink flow.

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

We recommend you to use API Explorer

Try it

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

2. Input Parameters

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

Parameter Name	Required	Type	Description
Action	Yes	String	Common Params. The value used for this API: DescribeStreamLinkFlowLogs.
Version	Yes	String	Common Params. The value used for this API: 2020-08-28.
Region	No	String	Common Params. This parameter is not required for this API.
FlowId	Yes	String	The flow ID.
StartTime	Yes	String	The start time for query, which is 1 hour ago by default. You can query statistics in the last 7 days. It must be in UTC format, such as `2020-01-01T12:00:00Z`.
EndTime	Yes	String	The end time for query, which is 1 hour after the start time by default. The longest time range allowed for query is 24 hours. It must be in UTC format, such as `2020-01-01T12:00:00Z`.
Type.N	Yes	Array	Whether to query the inputs or outputs. Valid values: input, output.

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		of String	
Pipeline.N	Yes	Array of String	Whether to query the primary or backup pipeline. Valid values: 0, 1.
PageSize	Yes	Integer	The page size. Value range: [1, 1000]. Default: 100.
SortType	No	String	Whether to sort the records by timestamp in descending or ascending order. Valid values: desc (default), asc.
PageNum	No	Integer	The page number. Value range: [1, 1000]. Default: 1.

3. Output Parameters

Parameter Name	Type	Description
Infos	Array of FlowLogInfo	A list of the logs.
PageNum	Integer	The current page number.
PageSize	Integer	The number of records per page.
TotalNum	Integer	The total number of records.
TotalPage	Integer	The total number of pages.
RequestId	String	The unique request ID, which is returned for each request. RequestId is required for locating a problem.

4. Example

Example1 Request Sample

Input Example

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

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```
<Common request parameters>

{
"FlowId": "0175723949ba0956b92d0bf40cfe",
"StartTime": "2020-12-10T13:00:00Z",
"EndTime": "2020-12-10T13:27:00Z",
"Type": [
"Input",
"Output"
],
"Pipeline": [
"0",
"1"
],
"PageNum": 1,
"PageSize": 100
}
```

Output Example

```
{
"Response": {
"Infos": [
{
"Timestamp": 1607605513,
"Type": "input",
"InputOutputId": "0175723949bb0956b92d0bf40cff",
"Protocol": "srt",
"EventCode": "1000",
"EventMessage": "Access Granted",
"RemoteIp": "42.194.229.84",
"RemotePort": "29000",
"Pipeline": "xx",
"InputOutputName": "xx"
}
],
"PageNum": 1,
"PageSize": 100,
"RequestId": "137253816",
"TotalNum": 3,
"TotalPage": 1
}
}
```

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5. Developer Resources

SDK

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

Command Line Interface

- Tencent Cloud CLI 3.0

6. Error Code

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

Error Code	Description
InternalError	Internal error.
InvalidParameter.EndTime	Invalid `EndTime`.
InvalidParameter.Id	Invalid ID.
InvalidParameter.NotFound	No information found.
InvalidParameter.PageNum	Invalid `PageNum`.
InvalidParameter.PageSize	Invalid `PageSize`.
InvalidParameter.Pipeline	Invalid `Pipeline`.
InvalidParameter.SortType	Invalid `SortType`.
InvalidParameter.StartTime	Invalid `StartTime`.

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InvalidParameter.Type	Invalid `Type` .

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CreateStreamLinkOutputInfo

Last updated：2023-11-16 14:56:49

1. API Description

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

This API is used to create a StreamLink output.

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

We recommend you to use API Explorer

Try it

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

2. Input Parameters

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

Parameter Name	Required	Type	Description
Action	Yes	String	Common Params. The value used for this API: CreateStreamLinkOutputInfo.
Version	Yes	String	Common Params. The value used for this API: 2020-08-28.
Region	No	String	Common Params. This parameter is not required for this API.
FlowId	Yes	String	The flow ID.
Output	Yes	CreateOutputInfo	The output configuration of the flow.

3. Output Parameters

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Parameter Name	Type	Description
Info	DescribeOutput	The information of the created output.
RequestId	String	The unique request ID, which is returned for each request. RequestId is required for locating a problem.

4. Example

Example1 Request Sample

Input Example

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

{
"FlowId": "xx",
"Output": {
"OutputName": "xx",
"Protocol": "xx",
"Description": "xx",
"RTPSettings": {
"IdleTimeout": 1000,
"FEC": "xx",
"Destinations": [
{
"Ip": "xx",
"Port": 0
}
]
},
"SRTSettings": {
"Latency": 1000,
"PeerLatency": 1000,
"PbKeyLen": 0,
"RecvLatency": 1000,
"Passphrase": "xx",
"StreamId": "xx",
"PeerIdleTimeout": 1000,
"Destinations": [
```

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```
{
"Ip": "xx",
"Port": 10000
},
{
"Ip": "xx",
"Port": 10000
}
]
},
"RTMPSettings": {
"ChunkSize": 4096,
"Destinations": [
{
"Url": "xx",
"StreamKey": "xx"
},
{
"Url": "xx",
"StreamKey": "xx"
}
]
},
"OutputRegion": "xx"
}
}
```

Output Example

```
{
"Response": {
"Info": {
"OutputId": "01746d03dd8c0956b92d34d30447",
"OutputName": "bbbbaaa",
"OutputType": "Internet",
"Description": "description",
"Protocol": "SRT",
"OutputAddressList": [
{
"Ip": "1.1.1.1"
},
{
"Ip": "2.2.2.2"
}
],
"OutputRegion": "ap-mumbai",
```

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```
"SRTSettings": {
"Destinations": [
{
"Ip": "1.1.1.1",
"Port": 10000
},
{
"Ip": "1.1.1.1",
"Port": 10000
}
],
"StreamId": "#!::u=johnny,t=file,m=publish,r=results.csv",
"Latency": 1000,
"RecvLatency": 1000,
"PeerLatency": 1000,
"PeerIdleTimeout": 1000,
"Passphrase": "",
"PbKeyLen": 0
},
"RTPSettings": {
"Destinations": [],
"FEC": "",
"IdleTimeout": 0
},
"RTMPSettings": {
"Destinations": [],
"IdleTimeout": 0,
"ChunkSize": 0
}
},
"RequestId": "aaaaa"
}
}
```


5. Developer Resources

SDK

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

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

Command Line Interface

- Tencent Cloud CLI 3.0

6. Error Code

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

Error Code	Description
InternalError	Internal error.
InvalidParameter.ExceededQuantityLimit	The quantity exceeds the limit.
InvalidParameter.Id	Invalid ID.
InvalidParameter.Name	Invalid `Name`.
InvalidParameter.Output	Invalid `Output`.
InvalidParameter.Protocol	Invalid `Protocol`.
InvalidParameter.State	Unexpected status.

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CreateStreamLinkFlow

Last updated：2023-11-16 14:56:49

1. API Description

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

This API is used to create a StreamLink flow.

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

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

2. Input Parameters

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

Parameter Name	Required	Type	Description
Action	Yes	String	Common Params. The value used for this API: CreateStreamLinkFlow.
Version	Yes	String	Common Params. The value used for this API: 2020-08-28.
Region	No	String	Common Params. This parameter is not required for this API.
FlowName	Yes	String	Flow name
MaxBandwidth	Yes	Integer	Maximum bandwidth in bps. Valid values: `10000000`, `20000000`, `50000000`
InputGroup.N	Yes	Array of CreateInput	Flow input group

3. Output Parameters

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Parameter Name	Type	Description
Info	DescribeFlow	Information of the created flow
RequestId	String	The unique request ID, which is returned for each request. RequestId is required for locating a problem.

4. Example

Example1 Sample request

Input Example

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

{
"FlowName": "aaa",
"MaxBandwidth": 20000000,
"InputGroup": [
{
"InputName": "inputname",
"Description": "inputnameDescription",
"Protocol": "RTP",
"AllowIpList": [
"0.0.0.0/0"
],
"SRTSettings": {
"StreamId": "#!::u=johnny,t=file,m=publish,r=results.csv",
"Latency": 1000,
"RecvLatency": 1000,
"PeerLatency": 1000,
"PeerIdleTimeout": 1000,
"Passphrase": "aaa",
"PbKeyLen": 10
},
"RTPSettings": {
"FEC": "none",
"IdleTimeout": 1000
}
```

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```
}
]
}
```

Output Example


```
{
"Response": {
"Info": {
"FlowId": "01742ac4e2b90956b92d573b0443",
"FlowName": "aaa",
"State": "IDLE",
"MaxBandwidth": 0,
"InputGroup": [
{
"InputId": "01742ac4e2b90956b92d573b0444",
"InputName": "inputname",
"Description": "inputname Description",
"Protocol": "RTP",
"InputRegion": "xx",
"AllowIpList": [
"0.0.0.0/0"
],
"InputAddressList": [
{
"Ip": "0.0.0.0",
"Port": 0
}
],
"SRTSettings": {
"Latency": 0,
"RecvLatency": 0,
"PeerLatency": 0,
"PeerIdleTimeout": 0,
"Passphrase": ""
},
"RTPSettings": {
"FEC": "none",
"IdleTimeout": 1000
},
"RTMPSettings": {
"StreamKey": "",
"AppName": "1111"
}
}
],
```


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```
"OutputGroup": []
},
"RequestId": "aaaaa"
}
}
```

5. Developer Resources

SDK

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- Tencent Cloud SDK 3.0 for C++

Command Line Interface

- Tencent Cloud CLI 3.0

6. Error Code

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

Error Code	Description
InternalError	Internal error.
InvalidParameter	Invalid parameter.
InvalidParameter.ExceededQuantityLimit	The quantity exceeds the limit.
InvalidParameter.Input	Invalid input.
InvalidParameter.MaxBandwidth	Invalid maximum bandwidth value.

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InvalidParameter.Name	Invalid `Name` .

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DeleteStreamLinkFlow

Last updated：2023-11-16 14:56:49

1. API Description

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

This API is used to delete a StreamLink flow.

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

We recommend you to use API Explorer

Try it

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

2. Input Parameters

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

Parameter Name	Required	Type	Description
Action	Yes	String	Common Params. The value used for this API: DeleteStreamLinkFlow.
Version	Yes	String	Common Params. The value used for this API: 2020-08-28.
Region	No	String	Common Params. This parameter is not required for this API.
FlowId	Yes	String	Flow ID

3. Output Parameters

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

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		locating a problem.

4. Example

Example1 Sample request

Input Example

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

{
"FlowId": "aaa"
}
```

Output Example

```
{
"Response": {
"RequestId": "aaaaa"
}
}
```

5. Developer Resources

SDK

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

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- Tencent Cloud SDK 3.0 for Java
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Command Line Interface

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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.

Error Code	Description
InvalidParameter.Id	Invalid ID.
InvalidParameter.State	Unexpected status.

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DeleteStreamLinkOutput

Last updated：2023-11-16 14:56:48

1. API Description

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

This API is used to delete an output of a StreamLink flow.

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

We recommend you to use API Explorer

Try it

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

2. Input Parameters

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

Parameter Name	Required	Type	Description
Action	Yes	String	Common Params. The value used for this API: DeleteStreamLinkOutput.
Version	Yes	String	Common Params. The value used for this API: 2020-08-28.
Region	No	String	Common Params. This parameter is not required for this API.
FlowId	Yes	String	Flow ID
OutputId	Yes	String	Output ID

3. Output Parameters

Parameter Name	Type	Description

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

4. Example

Example1 Sample request

Input Example

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

{
"FlowId": "aaa",
"OutputId": "asd21dsa"
}
```

Output Example

```
{
"Response": {
"RequestId": "aaaaa"
}
}
```

5. Developer Resources

SDK

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

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

Command Line Interface

- Tencent Cloud CLI 3.0

6. Error Code

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

Error Code	Description
InternalError	Internal error.
InvalidParameter.Id	Invalid ID.
InvalidParameter.NotFound	No information found.
InvalidParameter.State	Unexpected status.

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DescribeStreamLinkFlow

Last updated：2023-11-16 14:56:48

1. API Description

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

This API is used to query the configuration information of a StreamLink flow.

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

We recommend you to use API Explorer

Try it

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

2. Input Parameters

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

Parameter Name	Required	Type	Description
Action	Yes	String	Common Params. The value used for this API: DescribeStreamLinkFlow.
Version	Yes	String	Common Params. The value used for this API: 2020-08-28.
Region	No	String	Common Params. This parameter is not required for this API.
FlowId	Yes	String	Flow ID

3. Output Parameters

Parameter Name	Type	Description
Info	DescribeFlow	Configuration information of a flow

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

4. Example

Example1 Sample request

Input Example

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

{
"FlowId": "aaa"
}
```

Output Example

```
{
"Response": {
"Info": {
"FlowName": "sacdsad",
"InputGroup": [
{
"AllowIpList": [
"0.0.0.0/0"
],
"Protocol": "SRT",
"Description": "description",
"RTPSettings": {
"IdleTimeout": 1000,
"FEC": "none"
},
"InputName": "sadsa",
"SRTSettings": {
"Latency": 1000,
"PeerLatency": 1000,
"PbKeyLen": 1000,
"RecvLatency": 1000,
"Passphrase": "aaaa",
"StreamId": "",
```

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```
"PeerIdleTimeout": 1000
},
"RTMPSettings": {
"StreamKey": "stream?a=b",
"AppName": "live"
},
"InputRegion": "ap-hongkong",
"InputId": "id",
"InputAddressList": [
{
"Ip": "2.2.2.2",
"Port": 2
}
]
}
],
"FlowId": "",
"State": "IDLE",
"OutputGroup": [
{
"OutputName": "sad231edqsq",
"OutputAddressList": [
{
"Ip": "1.1.1.1"
}
],
"Protocol": "RTP",
"Description": "description",
"RTPSettings": {
"IdleTimeout": 1000,
"FEC": "none",
"Destinations": [
{
"Ip": "3.3.3.3",
"Port": 3
}
]
},
"OutputType": "Internet",
"SRTSettings": {
"Latency": 1000,
"PeerLatency": 1000,
"PbKeyLen": 1000,
"RecvLatency": 1000,
"Passphrase": "aaaa",
"StreamId": "aaaa",
"PeerIdleTimeout": 1000,
```


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```
"Destinations": [
{
"Ip": "4.4.4.4",
"Port": 4
}
]
},
"OutputId": "asd21dsa",
"RTMPSettings": {
"IdleTimeout": 1000,
"ChunkSize": 4096,
"Destinations": [
{
"Url": "rtmp://domain/live",
"StreamKey": "streamid?a=b"
}
]
},
"OutputRegion": "ap-mumbai"
}
],
"MaxBandwidth": 10000000
},
"RequestId": "fsaasd"
}
}
```


5. Developer Resources

SDK

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Command Line Interface

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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.

Error Code	Description
InternalError	Internal error.
InvalidParameter.Id	Invalid ID.

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DescribeStreamLinkFlows

Last updated：2023-11-16 14:56:47

1. API Description

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

This API is used to query the configuration information of multiple StreamLink flows in batches.

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

We recommend you to use API Explorer

Try it

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

2. Input Parameters

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

Parameter Name	Required	Type	Description
Action	Yes	String	Common Params. The value used for this API: DescribeStreamLinkFlows.
Version	Yes	String	Common Params. The value used for this API: 2020-08-28.
Region	No	String	Common Params. This parameter is not required for this API.
PageNum	No	Integer	Number of the current page. Default value: `1`
PageSize	No	Integer	Number of entries per page. Default value: `10`

3. Output Parameters

Parameter Name	Type	Description

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Infos	Array of DescribeFlow	List of the configuration information of the flows
PageNum	Integer	Number of the current page
PageSize	Integer	Number of entries per page
TotalNum	Integer	Total number of entries
TotalPage	Integer	Total number of pages
RequestId	String	The unique request ID, which is returned for each request. RequestId is required for locating a problem.

4. Example

Example1 Sample request

Input Example

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

{
"PageNum": 1,
"PageSize": 10
}
```

Output Example

```
{
"Response": {
"TotalPage": 1,
"PageNum": 1,
"PageSize": 10,
"RequestId": "aaaaa",
"Infos": [
{
"FlowName": "sacdsad",
"InputGroup": [
{
```

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```
"AllowIpList": [
"0.0.0.0/0"
],
"Protocol": "SRT",
"Description": "asda",
"RTPSettings": {
"IdleTimeout": 1000,
"FEC": "none"
},
"InputName": "123sadsasada2",
"SRTSettings": {
"Latency": 1000,
"PeerLatency": 1000,
"PbKeyLen": 1000,
"RecvLatency": 1000,
"Passphrase": "aaaa",
"StreamId": "1111",
"PeerIdleTimeout": 1000
},
"RTMPSettings": {
"StreamKey": "streamid?a=b",
"AppName": "live_appid"
},
"InputRegion": "ap-mumbai",
"InputId": "1213",
"InputAddressList": [
{
"Ip": "0.0.0.0",
"Port": 0
}
]
}
],
"FlowId": "123ds12",
"State": "IDLE",
"OutputGroup": [
{
"OutputName": "sad231edqsq",
"OutputAddressList": [
{
"Ip": "2.2.2.2"
}
],
"Protocol": "RTP",
"Description": "aaaaasss",
"RTPSettings": {
"IdleTimeout": 1000,
```


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```
"FEC": "none",
"Destinations": [
{
"Ip": "3.3.3.3",
"Port": 0
}
]
},
"OutputType": "Internet",
"SRTSettings": {
"Latency": 10000,
"PeerLatency": 20000,
"PbKeyLen": 10000,
"RecvLatency": 30000,
"Passphrase": "aaaa",
"StreamId": "aaaa",
"PeerIdleTimeout": 40000,
"Destinations": [
{
"Ip": "4.4.4.4",
"Port": 0
}
]
},
"OutputId": "asd21dsa",
"RTMPSettings": {
"IdleTimeout": 1000,
"ChunkSize": 4096,
"Destinations": [
{
"Url": "rtmp://domain/live",
"StreamKey": "streamid?a=b"
}
]
},
"OutputRegion": "xx"
}
],
"MaxBandwidth": 10000000
}
],
"TotalNum": 1
}
}
```


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5. Developer Resources

SDK

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Command Line Interface

- Tencent Cloud CLI 3.0

6. Error Code

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

Error Code	Description
InternalError	Internal error.
InvalidParameter.Id	Invalid ID.
InvalidParameter.PageNum	Invalid `PageNum`.
InvalidParameter.PageSize	Invalid `PageSize`.

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DescribeStreamLinkRegions

Last updated：2023-11-16 14:56:47

1. API Description

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

This API is used to query all StreamLink regions.

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

We recommend you to use API Explorer

Try it

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

2. Input Parameters

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

Parameter Name	Required	Type	Description
Action	Yes	String	Common Params. The value used for this API: DescribeStreamLinkRegions.
Version	Yes	String	Common Params. The value used for this API: 2020-08-28.
Region	No	String	Common Params. This parameter is not required for this API.

3. Output Parameters

Parameter Name	Type	Description
Info	StreamLinkRegionInfo	StreamLink region information
RequestId	String	The unique request ID, which is returned for each request. RequestId

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		is required for locating a problem.

4. Example

Example1 Sample request

Input Example

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

{}
```

Output Example

```
{
"Response": {
"Info": {
"Regions": [
{
"Name": "ap-mumbai"
}
]
},
"RequestId": "aaaa"
}
}
```

5. Developer Resources

SDK

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- Tencent Cloud SDK 3.0 for C++

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- Tencent Cloud CLI 3.0

6. Error Code

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

Error Code	Description
InternalError	Internal error.

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ModifyStreamLinkFlow

Last updated：2023-11-16 14:56:47

1. API Description

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

This API is used to modify the configuration information of a StreamLink flow.

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

We recommend you to use API Explorer

Try it

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

2. Input Parameters

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

Parameter Name	Required	Type	Description
Action	Yes	String	Common Params. The value used for this API: ModifyStreamLinkFlow.
Version	Yes	String	Common Params. The value used for this API: 2020-08-28.
Region	No	String	Common Params. This parameter is not required for this API.
FlowId	Yes	String	Flow ID
FlowName	Yes	String	Name of the flow to modify

3. Output Parameters

Parameter Name	Type	Description

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

4. Example

Example1 Sample request

Input Example

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

{
"FlowId": "aaa",
"FlowName": "aaa"
}
```

Output Example

```
{
"Response": {
"RequestId": "aaaaa"
}
}
```

5. Developer Resources

SDK

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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.

Error Code	Description
InternalError	Internal error.
InvalidParameter.Id	Invalid ID.
InvalidParameter.Name	Invalid `Name` .
InvalidParameter.State	Unexpected status.

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StartStreamLinkFlow

Last updated：2023-11-16 14:56:46

1. API Description

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

This API is used to start a StreamLink flow.

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

We recommend you to use API Explorer

Try it

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

2. Input Parameters

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

Parameter Name	Required	Type	Description
Action	Yes	String	Common Params. The value used for this API: StartStreamLinkFlow.
Version	Yes	String	Common Params. The value used for this API: 2020-08-28.
Region	No	String	Common Params. This parameter is not required for this API.
FlowId	Yes	String	Flow ID

3. Output Parameters

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

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		locating a problem.

4. Example

Example1 Sample request

Input Example

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

{
"FlowId": "aaa"
}
```

Output Example

```
{
"Response": {
"RequestId": "aaaaa"
}
}
```

5. Developer Resources

SDK

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

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- Tencent Cloud SDK 3.0 for Java
- Tencent Cloud SDK 3.0 for PHP
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- Tencent Cloud SDK 3.0 for Node.js
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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.

Error Code	Description
InternalError	Internal error.
InvalidParameter.Id	Invalid ID.
InvalidParameter.OutputGroups	Invalid `OutputGroups` value
InvalidParameter.State	Unexpected status.

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StopStreamLinkFlow

Last updated：2023-11-16 14:56:46

1. API Description

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

This API is used to stop a StreamLink flow.

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

We recommend you to use API Explorer

Try it

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

2. Input Parameters

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

Parameter Name	Required	Type	Description
Action	Yes	String	Common Params. The value used for this API: StopStreamLinkFlow.
Version	Yes	String	Common Params. The value used for this API: 2020-08-28.
Region	No	String	Common Params. This parameter is not required for this API.
FlowId	Yes	String	Flow ID

3. Output Parameters

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

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		locating a problem.

4. Example

Example1 Sample request

Input Example

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

{
"FlowId": "aaa"
}
```

Output Example

```
{
"Response": {
"RequestId": "aaaaa"
}
}
```

5. Developer Resources

SDK

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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.

Error Code	Description
InternalError	Internal error.
InvalidParameter.Id	Invalid ID.
InvalidParameter.State	Unexpected status.

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Data Types

Last updated：2023-11-16 14:56:49

CreateInput

Configuration information of the created input.

Used by actions: CreateStreamLinkFlow.

Name	Type	Required	Description
InputName	String	Yes	Input name, which can contain 1 to 32 letters, digits, and underscores.
Protocol	String	Yes	Input protocol. Valid values: `SRT`, `RTP`, `RTMP`
Description	String	No	Input description. Length: [0, 255].
AllowIpList	Array of String	No	Allowlist of input IPs in CIDR format.
SRTSettings	CreateInputSRTSettings	No	SRT configuration information of input.
RTPSettings	CreateInputRTPSettings	No	RTP configuration information of input.
FailOver	String	No	Input failover. Valid values: `OPEN`, `CLOSE` (default)
RTMPPullSettings	CreateInputRTMPPullSettings	No	
RTSPPullSettings	CreateInputRTSPPullSettings	No	
HLSPullSettings	CreateInputHLSPullSettings	No	
ResilientStream	ResilientStreamConf	No	
SecurityGroupIds	Array of String	No	The bound security group IDs.

CreateInputHLSPullSettings

Used by actions: CreateStreamLinkFlow, ModifyStreamLinkInput.

Name	Type	Required	Description

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SourceAddresses	Array of HLSPullSourceAddress	Yes	

CreateInputRTMPPullSettings

Used by actions: CreateStreamLinkFlow, ModifyStreamLinkInput.

Name	Type	Required	Description
SourceAddresses	Array of RTMPPullSourceAddress	Yes	

CreateInputRTPSettings

RTP configuration information of the created input.

Used by actions: CreateStreamLinkFlow, ModifyStreamLinkInput.

Name	Type	Required	Description
FEC	String	No	Default value: none. Valid values: ['none'].
IdleTimeout	Integer	No	Idle timeout period in ms. Default value: 5000. Value range: [1000, 10000].

CreateInputRTSPPullSettings

Used by actions: CreateStreamLinkFlow, ModifyStreamLinkInput.

Name	Type	Required	Description
SourceAddresses	Array of RTSPPullSourceAddress	Yes	

CreateInputSRTSettings

SRT configuration information of the created input.

Used by actions: CreateStreamLinkFlow, ModifyStreamLinkInput.

Name	Type	Required	Description

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Mode	String	No	The SRT mode. Valid values: LISTENER (default), CALLER.
StreamId	String	No	Stream ID, which can contain 0 to 512 letters, digits, and special characters (.#!:&,=_-).
Latency	Integer	No	Latency in ms. Default value: 0. Value range: [0, 3000].
RecvLatency	Integer	No	Receive latency in ms. Default value: 120. Value range: [0, 3000].
PeerLatency	Integer	No	Peer latency in ms. Default value: 0. Value range: [0, 3000].
PeerIdleTimeout	Integer	No	Peer timeout period in ms. Default value: 5000. Value range: [1000, 10000].
Passphrase	String	No	Decryption key, which is empty by default, indicating not to encrypt. Only ASCII codes can be filled. Length: [10, 79].
PbKeyLen	Integer	No	Key length. Default value: 0. Valid values: 0, 16, 24, 32.
SourceAddresses	Array of SRTSourceAddressReq	No	The SRT peer address, which is required if `Mode` is `CALLER`. Only one address is allowed.

CreateOutputInfo

The information of the output to create.

Used by actions: CreateStreamLinkOutputInfo.

Name	Type	Required	Description
OutputName	String	Yes	The output name.
Description	String	Yes	Description of the output.
Protocol	String	Yes	The output protocol. Valid values: SRT, RTP, RTMP, RTMP_PULL.
OutputRegion	String	Yes	The output region.

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SRTSettings	CreateOutputSrtSettings	No	The SRT configuration.
RTMPSettings	CreateOutputRTMPSettings	No	The RTMP configuration.
RTPSettings	CreateOutputInfoRTPSettings	No	The RTP configuration.
AllowIpList	Array of String	No	The IP allowlist. The address must be in CIDR format, such as `0.0.0.0/0`. This parameter is valid if `Protocol` is set to `RTMP_PULL`. If it is left empty, there is no restriction on clients' IP addresses.
MaxConcurrent	Integer	No	
SecurityGroupIds	Array of String	No	The bound security group IDs.

CreateOutputInfoRTPSettings

The RTP configuration of the output to create.

Used by actions: CreateStreamLinkOutputInfo, ModifyStreamLinkOutputInfo.

Name	Type	Required	Description
Destinations	Array of CreateOutputRTPSettingsDestinations	Yes	The relay destination addresses. One or two addresses are allowed.
FEC	String	Yes	This parameter must be set to `none`.
IdleTimeout	Integer	Yes	The timeout period (ms).

CreateOutputRTMPSettings

The RTMP configuration of the output to create.

Used by actions: CreateStreamLinkOutputInfo, ModifyStreamLinkOutputInfo.

Name	Type	Required	Description
Destinations	Array of CreateOutputRtmpSettingsDestinations	Yes	The relay destination addresses. One or two addresses are allowed.

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ChunkSize	Integer	No	The RTMP chunk size. Value range: [4096, 40960].

CreateOutputRTPSettingsDestinations

The RTP destination address of the output to create.

Used by actions: CreateStreamLinkOutputInfo, ModifyStreamLinkOutputInfo.

Name	Type	Required	Description
Ip	String	Yes	The relay destination IP.
Port	Integer	Yes	The relay destination port.

CreateOutputRtmpSettingsDestinations

The RTMP destination address of the output to create.

Used by actions: CreateStreamLinkOutputInfo, ModifyStreamLinkOutputInfo.

Name	Type	Required	Description
Url	String	Yes	The relay URL. Format: `rtmp://domain/live` .
StreamKey	String	Yes	The `StreamKey` for relay. Format: `stream?key=value` .

CreateOutputSrtSettings

The SRT configuration of the output to create.

Used by actions: CreateStreamLinkOutputInfo, ModifyStreamLinkOutputInfo.

Name	Type	Required	Description
Destinations	Array of CreateOutputSrtSettingsDestinations	Yes	The relay destination address, which is required if `Mode` is `CALLER` . Only one address is allowed.
StreamId	String	No	The stream ID for relay, which can

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			contain 0 to 512 letters, digits, and special characters (.#!:&,=_-).
Latency	Integer	No	The total latency (ms) of SRT relay. Value range: [0, 3000]. Default: 0.
RecvLatency	Integer	No	The receive latency (ms) of SRT relay. Value range: [0, 3000]. Default: 120.
PeerLatency	Integer	No	The peer-to-peer latency (ms) of SRT relay. Value range: [0, 3000]. Default: 0.
PeerIdleTimeout	Integer	No	The timeout period (ms) for the SRT relay peer. Value range: [1000, 10000]. Default: 5000.
Passphrase	String	No	The encryption key for SRT relay, which is empty by default, indicating not to encrypt. Only ASCII codes are allowed. Length: [10, 79].
PbKeyLen	Integer	No	The key length for SRT relay. Valid values: 0 (default), 16, 24, 32.
Mode	String	No	The SRT mode. Valid values: LISTENER, CALLER (default).

CreateOutputSrtSettingsDestinations

The SRT destination address of the output to create.

Used by actions: CreateStreamLinkOutputInfo, ModifyStreamLinkOutputInfo.

Name	Type	Required	Description
Ip	String	Yes	The output IP.
Port	Integer	Yes	The output port.

DescribeFlow

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Configuration information of the queried flow.

Used by actions: CreateStreamLinkFlow, DescribeStreamLinkFlow, DescribeStreamLinkFlows.

Name	Type	Description
FlowId	String	Flow ID.
FlowName	String	Flow name.
State	String	Flow status. Valid values: `IDLE` , `RUNNING`
MaxBandwidth	Integer	Maximum bandwidth value.
InputGroup	Array of DescribeInput	Input group.
OutputGroup	Array of DescribeOutput	Output group. Note: this field may return null, indicating that no valid values can be obtained.

DescribeHLSPullSourceAddress

Used by actions: ModifyStreamLinkInput.

Name	Type	Description
Url	String	

DescribeInput

Configuration information of the queried input.

Used by actions: CreateStreamLinkFlow, DescribeStreamLinkFlow, DescribeStreamLinkFlows, ModifyStreamLinkInput.

Name	Type	Description
InputId	String	Input ID.
InputName	String	Input name.
Description	String	Input description.

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		Note: this field may return null, indicating that no valid values can be obtained.
Protocol	String	Input protocol.
InputAddressList	Array of InputAddress	Input address list.
AllowIpList	Array of String	Input IP allowlist.
SRTSettings	DescribeInputSRTSettings	SRT configuration information of input. Note: this field may return null, indicating that no valid values can be obtained.
RTPSettings	DescribeInputRTPSettings	RTP configuration information of input. Note: this field may return null, indicating that no valid values can be obtained.
InputRegion	String	Input region.
RTMPSettings	DescribeInputRTMPSettings	RTMP configuration information of an input
FailOver	String	Input failover Note: this field may return `null`, indicating that no valid value was found.
RTMPPullSettings	DescribeInputRTMPPullSettings	
RTSPPullSettings	DescribeInputRTSPPullSettings	
HLSPullSettings	DescribeInputHLSPullSettings	
ResilientStream	ResilientStreamConf	
SecurityGroupIds	Array of String	The bound security group ID.

DescribeInputHLSPullSettings

Used by actions: ModifyStreamLinkInput.

Name	Type	Description
SourceAddresses	Array of DescribeHLSPullSourceAddress	

DescribeInputRTMPPullSettings

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Used by actions: ModifyStreamLinkInput.

Name	Type	Description
SourceAddresses	Array of DescribeRTMPPullSourceAddress	

DescribeInputRTMPSettings

RTMP configuration information of the queried input

Used by actions: ModifyStreamLinkInput.

Name	Type	Description
AppName	String	Path for RTMP stream pushing Note: this field may return `null` , indicating that no valid value was found.
StreamKey	String	StreamKey for RTMP stream pushing Format of an RTMP stream pushing URL: rtmp://IP address:1935/AppName/StreamKey

DescribeInputRTPSettings

RTP configuration information of the queried input.

Used by actions: ModifyStreamLinkInput.

Name	Type	Description
FEC	String	Whether it is FEC.
IdleTimeout	Integer	Idle timeout period.

DescribeInputRTSPPullSettings

Used by actions: ModifyStreamLinkInput.

Name	Type	Description
SourceAddresses	Array of DescribeRTSPPullSourceAddress	

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DescribeInputSRTSettings

SRT configuration information of the queried input.

Used by actions: ModifyStreamLinkInput.

Name	Type	Description
Mode	String	The SRT mode. Note: This field may return `null`, indicating that no valid value can be obtained.
StreamId	String	Stream ID.
Latency	Integer	Latency.
RecvLatency	Integer	Receive latency.
PeerLatency	Integer	Peer latency.
PeerIdleTimeout	Integer	Peer idle timeout period.
Passphrase	String	Decryption key.
PbKeyLen	Integer	Key length.
SourceAddresses	Array of SRTSourceAddressResp	The SRT peer address. Note: This field may return `null`, indicating that no valid value can be obtained.

DescribeOutput

Configuration information of the queried output.

Used by actions: CreateStreamLinkFlow, CreateStreamLinkOutputInfo, DescribeStreamLinkFlow, DescribeStreamLinkFlows, ModifyStreamLinkOutputInfo.

Name	Type	Description
OutputId	String	Output ID.
OutputName	String	Output name.
OutputType	String	Output type.

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Description	String	Output description. Note: this field may return null, indicating that no valid values can be obtained.
Protocol	String	Output protocol.
OutputAddressList	Array of OutputAddress	Output destination address information list.
OutputRegion	String	Output region. Note: this field may return null, indicating that no valid values can be obtained.
SRTSettings	DescribeOutputSRTSettings	SRT configuration information of output. Note: this field may return null, indicating that no valid values can be obtained.
RTPSettings	DescribeOutputRTPSettings	RTP configuration information of output. Note: this field may return null, indicating that no valid values can be obtained.
RTMPSettings	DescribeOutputRTMPSettings	RTMP configuration information of output. Note: this field may return null, indicating that no valid values can be obtained.
RTMPPullSettings	DescribeOutputRTMPPullSettings	RTMP pull configuration of the output Note: This field may return `null`, indicating that no valid value was found.
AllowIpList	Array of String	CIDR allowlist This parameter is valid if `Protocol` is set to `RTMP_PULL`. If this parameter is left empty, there is no restriction on clients' IP addresses. Note: This field may return `null`, indicating that no valid value was found.
RTSPPullSettings	DescribeOutputRTSPPullSettings	
HLSPullSettings	DescribeOutputHLSPullSettings	
MaxConcurrent	Integer	
SecurityGroupIds	Array of String	The bound security group IDs.

DescribeOutputHLSPullServerUrl

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Used by actions: CreateStreamLinkOutputInfo, ModifyStreamLinkOutputInfo.

Name	Type	Description
Url	String	

DescribeOutputHLSPullSettings

Used by actions: CreateStreamLinkOutputInfo, ModifyStreamLinkOutputInfo.

Name	Type	Description
ServerUrls	Array of DescribeOutputHLSPullServerUrl	

DescribeOutputRTMPPullServerUrl

RTMP pull URL of the output

Used by actions: CreateStreamLinkOutputInfo, ModifyStreamLinkOutputInfo.

Name	Type	Description
TcUrl	String	`tcUrl` of the RTMP pull URL
StreamKey	String	Stream key of the RTMP pull URL

DescribeOutputRTMPPullSettings

RTMP pull configuration of the output

Used by actions: CreateStreamLinkOutputInfo, ModifyStreamLinkOutputInfo.

Name	Type	Description
ServerUrls	Array of DescribeOutputRTMPPullServerUrl	List of pull URLs Note: This field may return `null` , indicating that no valid value was found.

DescribeOutputRTMPSettings

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RTMP configuration information of the queried output.

Used by actions: CreateStreamLinkOutputInfo, ModifyStreamLinkOutputInfo.

Name	Type	Description
IdleTimeout	Integer	Idle timeout period. Note: this field may return null, indicating that no valid values can be obtained.
ChunkSize	Integer	Chunk size. Note: this field may return null, indicating that no valid values can be obtained.
Destinations	Array of RTMPAddressDestination	Destination address information list of RTMP push. Note: this field may return null, indicating that no valid values can be obtained.

DescribeOutputRTPSettings

RTP configuration information of the queried output.

Used by actions: CreateStreamLinkOutputInfo, ModifyStreamLinkOutputInfo.

Name	Type	Description
Destinations	Array of RTPAddressDestination	Destination address information list of RTP push. Note: this field may return null, indicating that no valid values can be obtained.
FEC	String	Whether it is FEC. Note: this field may return null, indicating that no valid values can be obtained.
IdleTimeout	Integer	Idle timeout period. Note: this field may return null, indicating that no valid values can be obtained.

DescribeOutputRTSPPullServerUrl

Used by actions: CreateStreamLinkOutputInfo, ModifyStreamLinkOutputInfo.

Name	Type	Description

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Url	String	

DescribeOutputRTSPPullSettings

Used by actions: CreateStreamLinkOutputInfo, ModifyStreamLinkOutputInfo.

Name	Type	Description
ServerUrls	Array of DescribeOutputRTSPPullServerUrl	

DescribeOutputSRTSettings

SRT configuration information of the queried output.

Used by actions: CreateStreamLinkOutputInfo, ModifyStreamLinkOutputInfo.

Name	Type	Description
Destinations	Array of SRTAddressDestination	A list of the destination addresses for relay. This parameter is valid if `Mode` is `CALLER`. Note: This field may return `null`, indicating that no valid value can be obtained.
StreamId	String	Stream ID. Note: this field may return null, indicating that no valid values can be obtained.
Latency	Integer	Latency. Note: this field may return null, indicating that no valid values can be obtained.
RecvLatency	Integer	Receive latency. Note: this field may return null, indicating that no valid values can be obtained.
PeerLatency	Integer	Peer latency. Note: this field may return null, indicating that no valid values can be obtained.
PeerIdleTimeout	Integer	Peer idle timeout period. Note: this field may return null, indicating that no valid values can be obtained.

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Passphrase	String	Encryption key. Note: this field may return null, indicating that no valid values can be obtained.
PbKeyLen	Integer	Encryption key length. Note: this field may return null, indicating that no valid values can be obtained.
Mode	String	The SRT mode. Note: This field may return `null`, indicating that no valid value can be obtained.
SourceAddresses	Array of OutputSRTSourceAddressResp	The server's listen address, which is valid if `Mode` is `LISTENER`. Note: This field may return `null`, indicating that no valid value can be obtained.

DescribeRTMPPullSourceAddress

Used by actions: ModifyStreamLinkInput.

Name	Type	Description
TcUrl	String	
StreamKey	String	

DescribeRTSPPullSourceAddress

Used by actions: ModifyStreamLinkInput.

Name	Type	Description
Url	String	

FlowAudio

The audio data of the flow.

Used by actions: DescribeStreamLinkFlowStatistics.

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Name	Type	Description
Fps	Integer	The frame rate.
Rate	Integer	The bitrate (bps).
Pid	Integer	The audio PID.

FlowLogInfo

The logs of a flow.

Used by actions: DescribeStreamLinkFlowLogs.

Name	Type	Description
Timestamp	Integer	The timestamp (seconds).
Type	String	Whether it is an input or output.
InputOutputId	String	The input or output ID.
Protocol	String	The protocol.
EventCode	String	The event code.
EventMessage	String	The event information.
RemoteIp	String	The peer IP.
RemotePort	String	The peer port.
Pipeline	String	Whether it is a primary or backup pipeline. Valid values: 0 (primary), 1 (backup).
InputOutputName	String	The input or output name.

FlowMediaAudio

The audio data of a flow.

Used by actions: DescribeStreamLinkFlowMediaStatistics.

Name	Type	Description

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Fps	Integer	The frame rate.
Rate	Integer	The bitrate (bps).
Pid	Integer	The audio PID.
SessionId	String	The ID of a push session.

FlowMediaInfo

The media data of a flow.

Used by actions: DescribeStreamLinkFlowMediaStatistics.

Name	Type	Description
Timestamp	Integer	The timestamp (seconds).
Network	Integer	The total bandwidth.
Video	Array of FlowMediaVideo	The video data of the flow.
Audio	Array of FlowMediaAudio	The audio data of the flow.
SessionId	String	The ID of a push session.
ClientIp	String	The client IP.

FlowMediaVideo

The video data of a flow.

Used by actions: DescribeStreamLinkFlowMediaStatistics.

Name	Type	Description
Fps	Integer	The frame rate.
Rate	Integer	The bitrate (bps).
Pid	Integer	The video PID.
SessionId	String	The ID of a push session.

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FlowRealtimeStatusCommon

The common real-time status information of a flow.

Used by actions: DescribeStreamLinkFlowRealtimeStatus.

Name	Type	Description
State	String	The connection status. Valid values: Connected, Waiting, Idle.
Mode	String	The connection mode. Valid values: Listener, Caller.
ConnectedTime	Integer	The connected time.
Bitrate	Integer	The real-time bitrate (bps).
Reconnections	Integer	The number of retries.

FlowRealtimeStatusItem

The real-time status information of a flow.

Used by actions: DescribeStreamLinkFlowRealtimeStatus.

Name	Type	Description
Type	String	Whether it is an input or output. Valid values: Input, Output.
InputId	String	The input ID, which is not empty if `Type` is `Input`.
OutputId	String	The output ID, which is not empty if `Type` is `Output`.
FlowId	String	The flow ID.
Protocol	String	The protocol used. Valid values: SRT, RTP, RTMP.
CommonStatus	FlowRealtimeStatusCommon	The common status information.
SRTStatus	FlowRealtimeStatusSRT	This parameter is returned if `Protocol` is `SRT`. Note: This field may return `null`, indicating that no valid value can be obtained.
RTMPStatus	FlowRealtimeStatusRTMP	This parameter is returned if `Protocol` is `RTMP`.

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		Note: This field may return `null`, indicating that no valid value can be obtained.
ConnectServerIP	String	The server IP.
RTPStatus	FlowRealtimeStatusRTP	This parameter is returned if the RTP protocol is used. Note: This field may return `null`, indicating that no valid value can be obtained.

FlowRealtimeStatusRTMP

The real-time RTMP streaming information of a flow.

Used by actions: DescribeStreamLinkFlowRealtimeStatus.

Name	Type	Description
VideoFPS	Integer	The video frame rate.
AudioFPS	Integer	The audio frame rate.

FlowRealtimeStatusRTP

The real-time RTP streaming information of a flow.

Used by actions: DescribeStreamLinkFlowRealtimeStatus.

Name	Type	Description
Packets	Integer	The number of packets transmitted.

FlowRealtimeStatusSRT

The real-time SRT streaming information of a flow.

Used by actions: DescribeStreamLinkFlowRealtimeStatus.

Name	Type	Description
Latency	Integer	The latency (ms).
RTT	Integer	RTT (ms).

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Packets	Integer	The number of packets sent or received.
PacketLossRate	Float	The packet loss rate.
RetransmitRate	Float	The retransmission rate.
DroppedPackets	Integer	The number of packets dropped.
Encryption	String	Whether to encrypt the stream. Valid values: On, Off.

FlowSRTInfo

The SRT streaming performance data.

Used by actions: DescribeStreamLinkFlowSRTStatistics.

Name	Type	Description
Timestamp	Integer	The timestamp (seconds).
SendPacketLossRate	Integer	The packet loss rate for sending.
SendRetransmissionRate	Integer	The retry rate for sending.
RecvPacketLossRate	Integer	The packet loss rate for receiving.
RecvRetransmissionRate	Integer	The retry rate for receiving.
RTT	Integer	The peer RTT.
SessionId	String	The ID of a push session.
SendPacketDropNumber	Integer	The number of dropped packets for sending.
RecvPacketDropNumber	Integer	The number of dropped packets for receiving.

FlowStatistics

The flow statistics.

Used by actions: DescribeStreamLinkFlowStatistics.

Name	Type	Description

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SessionId	String	The session ID.
ClientIp	String	The peer IP.
Network	Integer	The total bandwidth.
Video	Array of FlowVideo	The video data.
Audio	Array of FlowAudio	The audio data.

FlowStatisticsArray

A list of the flow statistics.

Used by actions: DescribeStreamLinkFlowStatistics.

Name	Type	Description
Timestamp	Integer	The timestamp.
FlowStatistics	Array of FlowStatistics	The statistics of all the sessions.

FlowVideo

The video data of a flow.

Used by actions: DescribeStreamLinkFlowStatistics.

Name	Type	Description
Fps	Integer	The frame rate.
Rate	Integer	The bitrate (bps).
Pid	Integer	The audio PID.

HLSPullSourceAddress

Used by actions: CreateStreamLinkFlow, ModifyStreamLinkInput.

Name	Type	Required	Description

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Url	String	Yes	

InputAddress

Input address information.

Used by actions: ModifyStreamLinkInput.

Name	Type	Description
Ip	String	Input address IP.
Port	Integer	Input address port.

ModifyInput

The new input configuration.

Used by actions: ModifyStreamLinkInput.

Name	Type	Required	Description
InputId	String	Yes	The input ID.
InputName	String	Yes	The input name.
Description	String	Yes	The description of the input.
AllowIpList	Array of String	Yes	The IP addresses (CIDR) allowed to push streams.
SRTSettings	CreateInputSRTSettings	Yes	The SRT configuration information.
RTPSettings	CreateInputRTPSettings	Yes	The RTP configuration information.
Protocol	String	No	The input protocol. Valid values: SRT, RTP, RTMP. If there is an RTP input, the output must be RTP. If there is an RTMP input, the output must be SRT or RTMP. If there is an SRT input, the output must be SRT.

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FailOver	String	No	Whether to enable input failover. Valid values: OPEN, CLOSE.
RTMPPullSettings	CreateInputRTMPPullSettings	No	
RTSPPullSettings	CreateInputRTSPPullSettings	No	
HLSPullSettings	CreateInputHLSPullSettings	No	
ResilientStream	ResilientStreamConf	No	
SecurityGroupIds	Array of String	No	The bound security group IDs.

ModifyOutputInfo

The new output configuration.

Used by actions: ModifyStreamLinkOutputInfo.

Name	Type	Required	Description
OutputId	String	Yes	The ID of the output to modify.
OutputName	String	Yes	The output name.
Description	String	Yes	The description of the output.
Protocol	String	Yes	The output protocol. Valid values: SRT, RTP, RTMP.
SRTSettings	CreateOutputSrtSettings	No	The SRT relay configuration.
RTPSettings	CreateOutputInfoRTPSettings	No	The RTP relay configuration.
RTMPSettings	CreateOutputRTMPSettings	No	The RTMP relay configuration.
AllowIpList	Array of String	No	The IP allowlist. The address must be in CIDR format, such as `0.0.0.0/0`. This parameter is valid if `Protocol` is set to `RTMP_PULL`. If it is left empty, there is no restriction on clients' IP addresses.
MaxConcurrent	Integer	No	
SecurityGroupIds	Array of String	No	The bound security group IDs.

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OutputAddress

Output destination address.

Used by actions: CreateStreamLinkOutputInfo, ModifyStreamLinkOutputInfo.

Name	Type	Description
Ip	String	Output destination IP.

OutputSRTSourceAddressResp

The listen address for an SRT output.

Used by actions: CreateStreamLinkOutputInfo, ModifyStreamLinkOutputInfo.

Name	Type	Required	Description
Ip	String	Yes	The listen IP.
Port	Integer	Yes	The listen port.

RTMPAddressDestination

Destination address information of RTMP push.

Used by actions: CreateStreamLinkOutputInfo, ModifyStreamLinkOutputInfo.

Name	Type	Description
Url	String	Destination URL of RTMP push in the format of 'rtmp://domain/live'.
StreamKey	String	Destination `StreamKey` of RTMP push in the format of 'streamid?key=value'.

RTMPPullSourceAddress

Used by actions: CreateStreamLinkFlow, ModifyStreamLinkInput.

Name	Type	Required	Description
TcUrl	String	Yes	

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StreamKey	String	Yes	

RTPAddressDestination

Destination address information of RTP push.

Used by actions: CreateStreamLinkOutputInfo, ModifyStreamLinkOutputInfo.

Name	Type	Description
Ip	String	Push destination address IP.
Port	Integer	Push destination address port.

RTSPPullSourceAddress

Used by actions: CreateStreamLinkFlow, ModifyStreamLinkInput.

Name	Type	Required	Description
Url	String	Yes	

RegionInfo

Region information

Used by actions: DescribeStreamLinkRegions.

Name	Type	Description
Name	String	Region name

ResilientStreamConf

Used by actions: CreateStreamLinkFlow, ModifyStreamLinkInput.

Name	Type	Required	Description

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Enable	Boolean	No	
BufferTime	Integer	No	

SRTAddressDestination

Push destination address information.

Used by actions: CreateStreamLinkOutputInfo, ModifyStreamLinkOutputInfo.

Name	Type	Description
Ip	String	Destination address IP.
Port	Integer	Destination address port.

SRTSourceAddressReq

The SRT input address.

Used by actions: CreateStreamLinkFlow, ModifyStreamLinkInput.

Name	Type	Required	Description
Ip	String	Yes	The peer IP.
Port	Integer	Yes	The peer port.

SRTSourceAddressResp

The SRT input address.

Used by actions: ModifyStreamLinkInput.

Name	Type	Required	Description
Ip	String	Yes	The peer IP.
Port	Integer	Yes	The peer port.

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StreamLinkRegionInfo

StreamLink region information

Used by actions: DescribeStreamLinkRegions.

Name	Type	Description
Regions	Array of RegionInfo	List of StreamLink regions

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Error Codes

Last updated：2022-05-13 10:28:13

Feature Description

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

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

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

Error Code List

Common Error Codes

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

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

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

Service Error Codes

Error Code	Description
InvalidParameter.EndTime	Invalid `EndTime`.
InvalidParameter.ExceededQuantityLimit	The quantity exceeds the limit.
InvalidParameter.Id	Invalid ID.
InvalidParameter.Input	Invalid input.
InvalidParameter.InputOutputId	Invalid `InputOutputId`.
InvalidParameter.MaxBandwidth	Invalid maximum bandwidth value.
InvalidParameter.Name	Invalid `Name`.
InvalidParameter.NotFound	No information found.
InvalidParameter.Output	Invalid `Output`.

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InvalidParameter.OutputGroups	Invalid `OutputGroups` value
InvalidParameter.OutputId	Invalid `OutputId` .
InvalidParameter.PageNum	Invalid `PageNum` .
InvalidParameter.PageSize	Invalid `PageSize` .
InvalidParameter.Period	Invalid `Period` .
InvalidParameter.Pipeline	Invalid `Pipeline` .
InvalidParameter.Protocol	Invalid `Protocol` .
InvalidParameter.SortType	Invalid `SortType` .
InvalidParameter.StartTime	Invalid `StartTime` .
InvalidParameter.State	Unexpected status.
InvalidParameter.Type	Invalid `Type` .

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