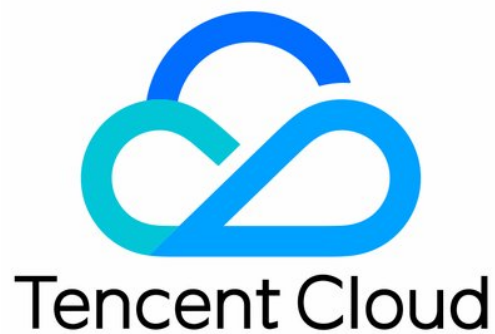


TencentDB for DBbrain

API Documentation

Product Documentation



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Last updated : 2024-07-26 11:07:56

Release 13

Release time: 2023-10-17 10:50:18

Release updates:

Improvement to existing documentation.

New APIs:

- [CloseAuditService](#)
- [CreateRedisBigKeyAnalysisTask](#)
- [DescribeAuditInstanceList](#)
- [ModifyAuditService](#)
- [OpenAuditService](#)

New data structures:

- [AuditInstance](#)
- [AuditInstanceFilter](#)
- [AuditInstanceInfo](#)

Release 12

Release time: 2023-06-21 16:09:40

Release updates:

Improvement to existing documentation.

Modified APIs:

- [DescribeSlowLogUserHostStats](#)
 - New output parameters:UserNameItems, UserTotalCount
- [KillMySqlThreads](#)
 - New input parameters:RecordHistory

New data structures:

- [SlowLogUser](#)

Modified data structures:

- [InstanceInfo](#)
 - New members:ClusterId, ClusterName

Release 11

Release time: 2023-04-27 11:42:10

Release updates:

Improvement to existing documentation.

New APIs:

- [DeleteDBDiagReportTasks](#)
- [DescribeSlowLogs](#)

New data structures:

- [SlowLogInfoItem](#)

Release 10

Release time: 2023-04-12 15:39:09

Release updates:

Improvement to existing documentation.

Modified data structures:

- [InstanceConfs](#)
 - New members:KeyDelimiters
- [InstanceInfo](#)
 - New members:InternalVip, InternalVport, CreateTime

Release 9

Release time: 2023-01-12 17:03:33

Release updates:

Improvement to existing documentation.

New APIs:

- [AddUserContact](#)
- [CreateDBDiagReportTask](#)
- [CreateDBDiagReportUrl](#)
- [CreateKillTask](#)
- [CreateMailProfile](#)
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Release 8

Release time: 2022-09-28 15:10:15

Release updates:

Improvement to existing documentation.

New APIs:

- [DescribeRedisTopKeyPrefixList](#)

Deleted APIs:

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- [CreateDBDiagReportTask](#)
- [CreateDBDiagReportUrl](#)

- CreateKillTask
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- CreateSecurityAuditLogExportTask
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- DescribeTopSpaceTableTimeSeries
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Deleted data structures:

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- ScoreItem
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- SlowLogTopSqlItem
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- TableSpaceTimeSeries
- TimeSlice
- UserProfile

Release 7

Release time: 2022-03-16 11:05:59

Release updates:

Improvement to existing documentation.

Modified APIs:

- [DescribeUserSqlAdvice](#)
 - New input parameters:Product

Release 6

Release time: 2022-02-24 16:03:23

Release updates:

Improvement to existing documentation.

New APIs:

- [DescribeProxySessionKillTasks](#)

New data structures:

- [TaskInfo](#)

Release 5

Release time: 2022-01-23 11:35:05

Release updates:

Improvement to existing documentation.

New APIs:

- [CreateKillTask](#)
- [CreateProxySessionKillTask](#)

Release 4

Release time: 2022-01-06 14:25:05

Release updates:

Improvement to existing documentation.

New APIs:

- [DescribeDBDiagEvents](#)

Release 3

Release time: 2021-09-14 10:28:45

Release updates:

Improvement to existing documentation.

New APIs:

- [KillMySqlThreads](#)

Release 2

Release time: 2021-08-09 10:45:56

Release updates:

Improvement to existing documentation.

Modified APIs:

- [DescribeSlowLogUserHostStats](#)
 - New input parameters: Md5

Modified data structures:

- [SlowLogTopSqlItem](#)
 - New members: Md5

Existing Release

Release time: 2021-07-13 17:23:48

Existing APIs/data structures are as follows:

Improvement to existing documentation.

Existing APIs:

- [AddUserContact](#)
- [CreateDBDiagReportTask](#)
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- [SlowLogTopSqlItem](#)
- [TableSpaceData](#)
- [TableSpaceTimeSeries](#)
- [TimeSlice](#)
- [UserProfile](#)

Introduction

Last updated : 2024-07-26 11:07:45

TencentDB for DBbrain (DBbrain) is an intelligent database diagnosis and optimization product that provides real-time performance diagnosis and security protection services. It troubleshoots efficiently, offers solutions to database exceptions, and helps you prevent exceptions at the source. It can also help improve the overall database performance with its AI-empowered parameter tuning capabilities. By leveraging machine learning and big data, it can quickly replicate sophisticated practices of senior database administrators to automate a large number of database diagnosis and optimization tasks, which facilitates operations of your database services both in and off the cloud.

You can operate on DBbrain by calling APIs described in this document. Before using these APIs, make sure you fully understand what DBbrain is and how it works.

API Category

Last updated : 2024-07-26 11:07:46

Health Report Email Sending APIs

API Name	Feature	Frequency Limit (maximum requests per second)
AddUserContact	Adds the recipient information	20
CreateDBDiagReportTask	Creates a health report generation task	20
CreateDBDiagReportUrl	Creates a URL for a health report	20
CreateMailProfile	Creates the email configuration	20
CreateSchedulerMailProfile	Creates the scheduled task email sending configuration	20
DescribeAllUserContact	Gets the information of the recipient in the email	20
DescribeAllUserGroup	Gets the information of the recipient group in the email	20
DescribeDBDiagReportTasks	Queries the list of health report generation tasks	20
DescribeMailProfile	Gets the email configuration	20
DeleteDBDiagReportTasks	Deletes health report generation tasks	20

Session Killing APIs

API Name	Feature	Frequency Limit (maximum requests per second)
CreateKillTask	Creates a session killing task	20
CreateProxySessionKillTask	Creates a task of killing proxy node sessions	20

DescribeProxyProcessStatistics	Gets the session statistics of a single proxy	20
DescribeProxySessionKillTasks	Queries the status of the session killing task executed by the proxy node	20
KillMySQLThreads	Kills a MySQL session thread	20

Security Audit APIs

API Name	Feature	Frequency Limit (maximum requests per second)
CreateSecurityAuditLogExportTask	Creates a security audit log export task	20
DeleteSecurityAuditLogExportTasks	Deletes a security audit log export task	20
DescribeSecurityAuditLogDownloadUrls	Queries the download link of a security audit log export file	20
DescribeSecurityAuditLogExportTasks	Queries the list of security audit log export tasks	20

Exception Detection APIs

API Name	Feature	Frequency Limit (maximum requests per second)
DescribeDBDiagEvent	Gets diagnosis event details	20
DescribeDBDiagEvents	Obtains diagnosis event list	20
DescribeDBDiagHistory	Gets the instance diagnosis history	20

Space Analysis APIs

API Name	Feature	Frequency Limit (maximum requests per second)
----------	---------	---

		second)
DescribeDBSpaceStatus	Gets the overview of instance space usage during the specified time period	20
DescribeTopSpaceSchemaTimeSeries	Gets the daily space statistics of top databases during the specified time period	20
DescribeTopSpaceSchemas	Gets the space statistics of top databases	20
DescribeTopSpaceTableTimeSeries	Gets the daily space statistics of top tables during the specified time period	20
DescribeTopSpaceTables	Gets the space statistics of top tables	20

Other APIs

API Name	Feature	Frequency Limit (maximum requests per second)
DescribeDiagDBInstances	Gets instance information list	20
DescribeHealthScore	Gets the health score	20
DescribeMySqlProcessList	Queries the list of real-time threads	20
ModifyDiagDBInstanceConf	Enables/Disables instance inspection	20
CreateRedisBigKeyAnalysisTask	Creates an ad hoc big key analysis task for Redis instances	20

Slow Log Analysis APIs

API Name	Feature	Frequency Limit (maximum requests per second)
DescribeSlowLogTimeSeriesStats	Gets the slow log statistics histogram	20
DescribeSlowLogUserHostStats	Gets the statistical distribution chart of slow log source addresses	20

DescribeUserSqlAdvice	Gets SQL statement optimization suggestions	20
DescribeSlowLogTopSqs	Obtains the list of slow SQL templates	20
DescribeSlowLogs	Obtains SQL template details in a specified time period	20

Database Audit APIs

API Name	Feature	Frequency Limit (maximum requests per second)
CloseAuditService	Disables database audit	20
ModifyAuditService	Modifies audit configurations	20
OpenAuditService	Enables database audit	20
DescribeAuditInstanceList	Queries the instance list	20

Redis related APIs

API Name	Feature	Frequency Limit (maximum requests per second)
DescribeRedisTopKeyPrefixList	Queries the list of top key prefixes for Redis instances	20

Making API Requests

Request Structure

Last updated : 2024-07-26 11:07:47

1. Service Address

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

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

2. Communications Protocol

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

3. Request Methods

Supported HTTP request methods:

- POST (recommended)
- GET

The Content-Type types supported by POST requests:

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

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

4. Character Encoding

Only UTF-8 encoding is used.

Common Params

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

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

Common parameters for Signature Algorithm v3

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

Parameter Name	Type	Required	Description
X-TC-Action	String	Yes	The name of the API for the desired operation. For the specific value, see description of common parameter <code>Action</code> in the input parameters in related API documentation. For example, the API for querying the CVM instance list is <code>DescribeInstances</code> .
X-TC-Region	String	Yes	Region parameter, which is used to identify the region to which the data you work with belongs. For values supported for an API, see the description of parameter <code>Region</code> in the input parameters in related API documentation. This parameter is not required for some APIs (which will be indicated in related documentation), and will not take effect even it is passed.
X-TC-Timestamp	Integer	Yes	The current UNIX timestamp that records the time when the API request is sent. For example, 1529223702. Note: If the difference between the UNIX timestamp and server time is greater than 5 minutes, a signature expiration error may occur.
X-TC-Version	String	Yes	API version of the action. For the valid values, see the description of the common parameter <code>Version</code> in the API documentation. For example, the version is 2017-03-12.
Authorization	String	Yes	The HTTP authentication request header, for example: TC3-HMAC-SHA256 Credential=AKIDEXAMPLE/Date/service/tc3_request/Signature=fe5f80f77d5fa3beca038a248ff027d0445342fe2855ddc96317 Here: - TC3-HMAC-SHA256: Signature method, currently fixed as this value; - Credential: Signature credential; AKIDEXAMPLE is the SecretId; Date is the UTC time, and this value must match the value of X-TC-Timestamp (a co

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

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

Example of an HTTP GET request structure:

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

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

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

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

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

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

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

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

```
Authorization: TC3-HMAC-SHA256 Credential=AKIDEXAMPLE/2018-05-30/cvm/tc3_request,
SignedHeaders=content-type;host, Signature=582c400e06b5924a6f2b5d7d672d79c15b1316
2d9279b0855cfba6789a8edb4c
```

```
Content-Type: multipart/form-data; boundary=58731222010402
```

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

```
X-TC-Action: DescribeInstances
```

```
X-TC-Version: 2017-03-12
```

```
X-TC-Timestamp: 1527672334
```

```
X-TC-Region: ap-guangzhou
```

```
--58731222010402
```

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

```
0
```

```
--58731222010402
```

```
Content-Disposition: form-data; name="Limit"
```

```
10
```

```
--58731222010402--
```

Common parameters for Signature Algorithm v1

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

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

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

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

Example of an HTTP GET request structure:

```
https://cvm.tencentcloudapi.com/?Action=DescribeInstances&Version=2017-03-12&SignatureMethod=HmacSHA256&Timestamp=1527672334&Signature=37ac2f4fde00b0ac9bd9eadeb459b1bb224158d66e7ae5fcadb70b2d181d02&Region=ap-guangzhou&Nonce=23823223&SecretId=AKIDEXAMPLE
```

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

Example of an HTTP POST request structure:

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

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

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

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


Signature v3

Last updated : 2024-07-26 11:07:51

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

Applying for Security Credentials

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

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

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

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

Using the Resources for Developers

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

TC3-HMAC-SHA256 Signature Algorithm

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

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

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

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

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

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

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

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

The signature calculation process is explained in detail below.

1. Concatenating the CanonicalRequest String

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

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

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

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

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

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

POST

/

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

host:cvm.tencentcloudapi.com

content-type;host

`99d58dfbc6745f6747f36bfca17dee5e6881dc0428a0a36f96199342bc5b4907`

2. Concatenating the String to Be Signed

The string to sign is concatenated as follows:

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

Field Name	Explanation
Algorithm	Signature algorithm, which is currently always <code>TC3-HMAC-SHA256</code> .
RequestTimestamp	Request timestamp, i.e., the value of the common parameter <code>X-TC-Timestamp</code> in request header, which is the UNIX timestamp of the current time in seconds, such as <code>1551113065</code> in this example.
CredentialScope	Scope of the credential in the format of <code>Date/service/tc3_request</code> , including date, requested service and termination string (tc3_request). Date is a date in UTC time, whose value should match the UTC date converted by the common parameter X-TC-Timestamp ; service is the product name, which should match the domain name of the product called. The calculation result in this example is <code>20180525/cvm/tc3_request</code> .

HashedCanonicalRequest

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

```
2815843035062fffd6f2a44ea8a34818b0dc46f024b8b3786976a3ad
```

Note:

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

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

```
TC3-HMAC-SHA256
1551113065
2019-02-25/cvm/tc3_request
2815843035062fffd6f2a44ea8a34818b0dc46f024b8b3786976a3adda7a
```

3. Calculating the Signature

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

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

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

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

2. Calculate the signature with the following pseudocode:

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

4. Concatenating the Authorization

The Authorization is concatenated as follows:

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

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

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

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

The following example shows a finished authorization header:

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

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

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

5. Signature Demo

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

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

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

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

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

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

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

Java

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

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

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

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

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

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



```

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

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

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

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

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

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

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

```

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

Python

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

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

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

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

```

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

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

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

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

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

```

Golang

```
package main

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

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

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

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

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

```

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

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

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

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

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

```

PHP

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

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

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

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

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

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

Ruby

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

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

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

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

```

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

puts canonical_request

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

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

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

puts 'curl -X POST ' + endpoint \

```



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

DotNet

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

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

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

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

```

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

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

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

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

```

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

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

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

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

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

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

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

NodeJS

```

const crypto = require('crypto');

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

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

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

function main() {

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

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

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

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

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

  const canonicalRequest = httpRequestMethod + "\n"

```

```

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

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

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

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

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

```

C++

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

using namespace std;

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

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

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

```
}  
  
string HmacSha256(const string &key, const string &input)  
{  
    unsigned char hash[32];  
  
    HMAC_CTX *h;  
    #if 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* lut = "0123456789abcdef";  
    size_t len = input.length();  
  
    string output;  
    output.reserve(2 * len);  
    for (size_t i = 0; i < len; ++i)  
    {  
        const unsigned char c = input[i];  
        output.push_back(lut[c >> 4]);  
        output.push_back(lut[c & 15]);  
    }  
}
```

```
return output;
}

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

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

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

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

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



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

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

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

Signature Failure

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

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

Signature

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

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

1. Applying for Security Credentials

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

Security credentials consist of SecretId and SecretKey:

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

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

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

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

2. Generating a Signature

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

Assume that the SecretId and SecretKey are:

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

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

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

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

2.1. Sorting Parameters

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

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

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

2.2. Concatenating a Request String

This step generates a request string.

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

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

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

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

2.3. Concatenating the Signature Original String

This step generates a signature original string.

The signature original string consists of the following parameters:

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

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

The concatenation result of the example is:

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

2.4. Generating a Signature String

This step generates a signature string.

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

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

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

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

The final signature is:

```
zmmjn35mikh6pM3V7sUEuX4wyYM=
```

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

3. Encoding a Signature String

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

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

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

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

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

4. Signature Failure

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

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

5. Signature Demo

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

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

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

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

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

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

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

Java

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

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

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

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

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

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

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

Python

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

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

import requests

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



```

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

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

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

```

Golang

```

package main

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

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

```

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

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

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

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

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

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

PHP

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

```

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

ksort($params);

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

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

```

Ruby

```

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

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

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

```

```

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

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

```

DotNet

```

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

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

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

```

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

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

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

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

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

```

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

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

```

NodeJS

```

const crypto = require('crypto');

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

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

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

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

```

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

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

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

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

strParam = sort_params(params)

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

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

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


Responses

Last updated : 2024-07-26 11:07:55

Response for Successful Requests

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

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

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

Response for Failed Requests

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

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

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

Common Error Codes

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

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

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

Redis related APIs

DescribeRedisTopKeyPrefixList

Last updated : 2024-07-26 11:07:57

1. API Description

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

This API is used to query the list of top key prefixes for Redis instances.

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

We recommend you to use API Explorer

[Try it](#)

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

2. Input Parameters

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

Parameter Name	Required	Type	Description
Action	Yes	String	Common Params . The value used for this API: DescribeRedisTopKeyPrefixList.
Version	Yes	String	Common Params . The value used for this API: 2021-05-27.
Region	No	String	Common Params . This parameter is not required for this API.
InstanceId	Yes	String	Instance ID
Date	Yes	Date	Date for query, such as <code>2021-05-27</code> . You can select a date as early as in the last 30 days for query.
Product	Yes	String	Service type. Valid value: <code>redis</code> (TencentDB for Redis).
Limit	No	Integer	The number of queried items. Default value: <code>20</code> . Max value: <code>100</code> .

3. Output Parameters

Parameter Name	Type	Description
Items	Array of RedisPreKeySpaceData	List of top key prefixes
Timestamp	Integer	Data collection timestamp in seconds
RequestId	String	The unique request ID, generated by the server, will be returned for every request (if the request fails to reach the server for other reasons, the request will not obtain a RequestId). RequestId is required for locating a problem.

4. Example

Example1 Querying the list of top key prefixes for Redis instances

Input Example

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

{
  "InstanceId": "cdb-test",
  "Date": "2022-04-12",
  "Product": "redis"
}
```

Output Example

```
{
  "Response": {
    "RequestId": "8108c1c0-bbcc-11ec-adb9-eb9c1358e03a",
    "Items": [
      {
        "AveElementSize": 44,
        "Length": 864,
        "KeyPreIndex": "2028567046",
```

```
"ItemCount": 5,
"Count": 5,
"MaxElementSize": 66
},
{
  "Timestamp": 162072183
}
}
```

5. Developer Resources

SDK

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

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

Command Line Interface

- [Tencent Cloud CLI 3.0](#)

6. Error Code

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

Error Code	Description
AuthFailure	Error with CAM signature/authentication.
FailedOperation	Operation failed.
InternalError	Internal error.
InvalidParameter	Incorrect parameter.

InvalidParameterValue	Incorrect parameter value.
LimitExceeded	The quota limit is exceeded.
MissingParameter	Missing parameter.
OperationDenied	Operation denied.
OperationDenied.UserHasNoStrategy	Error with CAM authentication.
ResourceNotFound	The resource does not exist.
UnauthorizedOperation	The operation is unauthorized.
UnknownParameter	Unknown parameter.
UnsupportedOperation	Unsupported operation.

Health Report Email Sending APIs

AddUserContact

Last updated : 2023-10-17 10:51:58

1. API Description

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

This API is used to add the recipient name and email. The returned value is the ID of the successfully added recipient.

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: AddUserContact.
Version	Yes	String	Common Params . The value used for this API: 2021-05-27.
Region	No	String	Common Params . This parameter is not required for this API.
Name	Yes	String	Recipient name, which can contain up to 20 letters, digits, spaces, and symbols <code>!@#\$%^&*()_+==()</code> and cannot begin with an underscore.
ContactInfo	Yes	String	Email address, which can contain letters, digits, underscores, and the @ symbol, cannot begin with an underscore, and must be unique.
Product	Yes	String	Service type, which is fixed to <code>mysql</code> .

3. Output Parameters

Parameter Name	Type	Description
Id	Integer	ID of the successfully added recipient.
RequestId	String	The unique request ID, which is returned for each request. RequestId is required for locating a problem.

4. Example

Example1 Adding an email recipient

Input Example

```
https://dbbrain.tencentcloudapi.com/?Action=AddUserContact
&Name=John Smith
&ContactInfo=test@qq.com
&Product=mysql
&<Common request parameters>
```

Output Example

```
{
  "Response": {
    "Id": 1,
    "RequestId": "77db16d7-bbe8-48a7-868b-ed776a96f1ab"
  }
}
```

5. Developer Resources

SDK

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

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

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

Command Line Interface

- [Tencent Cloud CLI 3.0](#)

6. Error Code

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

Error Code	Description
AuthFailure	Error with CAM signature/authentication.
FailedOperation	Operation failed.
InternalError	Internal error.
InvalidParameter	Incorrect parameter.
InvalidParameterValue	Incorrect parameter value.
LimitExceeded	The quota limit is exceeded.
MissingParameter	Missing parameter.
OperationDenied	Operation denied.
OperationDenied.UserHasNoStrategy	Error with CAM authentication.
RequestLimitExceeded	The number of requests exceeds the frequency limit.
ResourceNotFound	The resource does not exist.
UnauthorizedOperation	The operation is unauthorized.
UnknownParameter	Unknown parameter.
UnsupportedOperation	Unsupported operation.

CreateDBDiagReportTask

Last updated : 2023-10-17 10:51:58

1. API Description

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

This API is used to create a health report and send it via email as configured.

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: CreateDBDiagReportTask.
Version	Yes	String	Common Params . The value used for this API: 2021-05-27.
Region	No	String	Common Params . This parameter is not required for this API.
InstanceId	Yes	String	Instance ID.
StartTime	Yes	Timestamp ISO8601	Start time, such as "2020-11-08T14:00:00+08:00".
EndTime	Yes	Timestamp ISO8601	End time, such as "2020-11-09T14:00:00+08:00".
SendMailFlag	Yes	Integer	Whether to send an email. Valid values: ☐ 0 (yes), ☐ 1 (no).
ContactPerson.N	No	Array of Integer	Array of the IDs of recipients to receive email.

ContactGroup.N	No	Array of Integer	Array of IDs of recipient groups to receive email.
Product	No	String	Service type. Valid values: <code>mysql</code> (TencentDB for MySQL), <code>cynosdb</code> (TDSQL-C for MySQL). Default value: <code>mysql</code> .

3. Output Parameters

Parameter Name	Type	Description
AsyncRequestId	Integer	Async task request ID, which can be used to query the execution result of an async task. Note: This field may return null, indicating that no valid values can be obtained.
RequestId	String	The unique request ID, which is returned for each request. RequestId is required for locating a problem.

4. Example

Example1 Creating a health report and sending it via email (optional)

Input Example

```
https://dbbrain.tencentcloudapi.com/?Action=CreateDBDiagReportTask
&InstanceId=test
&StartTime=2019-01-01T00:00:00+08:00
&EndTime=2019-01-02T00:00:00+08:00
&SendMailFlag=1
&ContactPerson.0=1
&ContactGroup.0=1
&<Common request parameters>
```

Output Example

```
{
  "Response": {
    "AsyncRequestId": 129632,
    "RequestId": "77db16d7-bbe8-48a7-868b-ed776a96f1ab"
```

```
}  
}
```

5. Developer Resources

SDK

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

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

Command Line Interface

- [Tencent Cloud CLI 3.0](#)

6. Error Code

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

Error Code	Description
AuthFailure	Error with CAM signature/authentication.
FailedOperation	Operation failed.
InternalError	Internal error.
InvalidParameter	Incorrect parameter.
InvalidParameterValue	Incorrect parameter value.
LimitExceeded	The quota limit is exceeded.
MissingParameter	Missing parameter.

OperationDenied	Operation denied.
OperationDenied.UserHasNoStrategy	Error with CAM authentication.
ResourceNotFound	The resource does not exist.
UnauthorizedOperation	The operation is unauthorized.
UnknownParameter	Unknown parameter.
UnsupportedOperation	Unsupported operation.

CreateDBDiagReportUrl

Last updated : 2023-10-17 10:51:57

1. API Description

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

This API is used to create a URL for a health report.

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: CreateDBDiagReportUrl.
Version	Yes	String	Common Params . The value used for this API: 2021-05-27.
Region	No	String	Common Params . This parameter is not required for this API.
InstanceId	Yes	String	Instance ID.
AsyncRequestId	Yes	Integer	Health report task ID, which can be queried through <code>DescribeDBDiagReportTasks</code> .
Product	No	String	Service type. Valid values: <code>mysql</code> (TencentDB for MySQL), <code>cynosdb</code> (TDSQL-C for MySQL). Default value: <code>mysql</code> .

3. Output Parameters

Parameter Name	Type	Description
ReportUrl	String	Health report URL.
ExpireTime	Integer	Expiration timestamp of the health report URL (in seconds).
RequestId	String	The unique request ID, which is returned for each request. RequestId is required for locating a problem.

4. Example

Example1 Creating a URL for a health report

Input Example

```
https://dbbrain.tencentcloudapi.com/?Action=CreateDBDiagReportUrl
&Product=mysql
&InstanceId=cdb-c1nl9rpv
&AsyncRequestId=63452
&<Common request parameters>
```

Output Example

```
{
  "Response": {
    "ReportUrl": "https://dbbrain-sh-1256569818.cos.ap-guangzhou.myqcloud.com/report_
cdb-c1nl9rpv_10947711_1618851196690.pdf?sign=q-sign-algorithm",
    "ExpireTime": 1618890295,
    "RequestId": "24665720-8c93-11eb-bee6-e98cea0e6794"
  }
}
```

5. Developer Resources

SDK

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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
AuthFailure	Error with CAM signature/authentication.
FailedOperation	Operation failed.
InternalError	Internal error.
InvalidParameter	Incorrect parameter.
InvalidParameterValue	Incorrect parameter value.
LimitExceeded	The quota limit is exceeded.
MissingParameter	Missing parameter.
OperationDenied	Operation denied.
OperationDenied.UserHasNoStrategy	Error with CAM authentication.
ResourceNotFound	The resource does not exist.
UnauthorizedOperation	The operation is unauthorized.
UnknownParameter	Unknown parameter.
UnsupportedOperation	Unsupported operation.

CreateMailProfile

Last updated : 2023-10-17 10:51:57

1. API Description

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

This API is used to create the email configuration. The input parameter `ProfileType` represents the type of the email configuration. Valid values: `dbScan_mail_configuration` (email configuration of database inspection report) and `scheduler_mail_configuration` (email sending configuration of scheduled task health report). Always select Guangzhou for `Region`, regardless of the region where the instance resides.

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: CreateMailProfile.
Version	Yes	String	Common Params . The value used for this API: 2021-05-27.
Region	No	String	Common Params . This parameter is not required for this API.
ProfileInfo	Yes	ProfileInfo	Email configuration.
ProfileLevel	Yes	String	Configuration level. Valid values: <code>User</code> (user-level), <code>Instance</code> (instance-level). For database inspection emails, it should be <code>User</code> . For scheduled task emails, it should be <code>Instance</code> .
ProfileName	Yes	String	Configuration name, which needs to be unique. For database

			inspection emails, this name can be customized as needed. For scheduled task emails, the name should be in the format of "scheduler_" + {instanceId}, such as "scheduler_cdb-test".
ProfileType	Yes	String	Configuration type. Valid values: <code>dbScan_mail_configuration</code> (email configuration of the database inspection report), <code>scheduler_mail_configuration</code> (email configuration of the scheduled task report).
Product	Yes	String	Service type. Valid values: <code>mysql</code> (TencentDB for MySQL), <code>cynosdb</code> (TDSQL-C for MySQL).
BindInstanceIds.N	No	Array of String	Instance ID bound with the configuration, which is set when the configuration level is <code>Instance</code> . Only one instance can be bound at a time. When the configuration level is <code>User</code> , leave this parameter empty.

3. Output Parameters

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

4. Example

Example1 Creating an email sending template for scheduled task emails/database inspection emails

Input Example

```
https://dbbrain.tencentcloudapi.com/?Action=CreateMailProfile
&Product=mysql
&ProfileLevel=Instance
&ProfileName=scheduler_cdb-test
&ProfileType= scheduler_mail_configuration
&BindInstanceIds.0=cdb-test
&ProfileInfo.Language=zh
&ProfileInfo.MailConfiguration.SendMail=1
&ProfileInfo.MailConfiguration.Region.0=ap-guangzhou
```

```
&ProfileInfo.MailConfiguration.HealthStatus.0=HEALTH
&ProfileInfo.MailConfiguration.ContactPerson.0=1
&ProfileInfo.MailConfiguration.ContactGroup.0=1
&<Common request parameters>
```

Output Example

```
{
  "Response": {
    "RequestId": "77db16d7-bbe8-48a7-868b-ed776a96f1ab"
  }
}
```

5. Developer Resources

SDK

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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
AuthFailure	Error with CAM signature/authentication.

FailedOperation	Operation failed.
InternalError	Internal error.
InvalidParameter	Incorrect parameter.
InvalidParameterValue	Incorrect parameter value.
LimitExceeded	The quota limit is exceeded.
MissingParameter	Missing parameter.
OperationDenied	Operation denied.
OperationDenied.UserHasNoStrategy	Error with CAM authentication.
ResourceNotFound	The resource does not exist.
UnauthorizedOperation	The operation is unauthorized.
UnknownParameter	Unknown parameter.
UnsupportedOperation	Unsupported operation.

CreateSchedulerMailProfile

Last updated : 2023-10-17 10:51:57

1. API Description

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

This API is used to create the regular generation time of health reports and the regular email sending configuration. Pass in the regular generation time of health reports as a parameter (Monday to Sunday) to set the regular generation time, and save the corresponding regular email sending configuration.

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: CreateSchedulerMailProfile.
Version	Yes	String	Common Params . The value used for this API: 2021-05-27.
Region	No	String	Common Params . This parameter is not required for this API.
WeekConfiguration.N	Yes	Array of Integer	Value range: 1-7, representing Monday to Sunday respectively.
ProfileInfo	Yes	ProfileInfo	Email configuration.
ProfileName	Yes	String	Configuration name, which needs to be unique. For scheduled task emails, the name should be in the format of

			"scheduler_" + {instanceId}, such as "scheduler_cdb-test".
BindInstanceId	Yes	String	ID of the instance for which to configure subscription.
Product	Yes	String	Service type. Valid values: <code>mysql</code> (TencentDB for MySQL), <code>cynosdb</code> (TDSQL-C for MySQL). Default value: <code>mysql</code> .

3. Output Parameters

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

4. Example

Example1 Creating the scheduled task email sending configuration

This example shows you how to create the regular generation time of health reports and the regular email sending configuration. Pass in the regular generation time of health reports as a parameter (Monday to Sunday) to set the regular generation time, and save the corresponding regular email sending configuration.

Input Example

```
https://dbbrain.tencentcloudapi.com/?Action=CreateSchedulerMailProfile
&WeekConfiguration.0=1
&Product=mysql
&ProfileName=scheduler_cdb-test
&BindInstanceId=cdb-test
&ProfileInfo.Language=zh
&ProfileInfo.MailConfiguration.SendMail=1
&ProfileInfo.MailConfiguration.Region.0=ap-guangzhou
&ProfileInfo.MailConfiguration.HealthStatus.0=HEALTH
&ProfileInfo.MailConfiguration.ContactPerson.0=1
&ProfileInfo.MailConfiguration.ContactGroup.0=1
&<Common request parameters>
```

Output Example

```
{
  "Response": {
    "RequestId": "77db16d7-bbe8-48a7-868b-ed776a96f1ab"
  }
}
```

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
AuthFailure	Error with CAM signature/authentication.
FailedOperation	Operation failed.
InternalError	Internal error.
InvalidParameter	Incorrect parameter.
InvalidParameterValue	Incorrect parameter value.

LimitExceeded	The quota limit is exceeded.
MissingParameter	Missing parameter.
OperationDenied	Operation denied.
OperationDenied.UserHasNoStrategy	Error with CAM authentication.
RequestLimitExceeded	The number of requests exceeds the frequency limit.
ResourceNotFound	The resource does not exist.
UnauthorizedOperation	The operation is unauthorized.
UnknownParameter	Unknown parameter.
UnsupportedOperation	Unsupported operation.

DescribeAllUserContact

Last updated : 2023-10-17 10:51:57

1. API Description

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

This API is used to get the information of the recipient in the email.

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: DescribeAllUserContact.
Version	Yes	String	Common Params . The value used for this API: 2021-05-27.
Region	No	String	Common Params . This parameter is not required for this API.
Product	Yes	String	Service type, which is fixed to <code>mysql</code> .
Names.N	No	Array of String	Array of recipient names. Fuzzy search is supported.

3. Output Parameters

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

Name		
TotalCount	Integer	Total number of recipients.
Contacts	Array of ContactItem	Recipient information. Note: This field may return null, indicating that no valid values can be obtained.
RequestId	String	The unique request ID, which is returned for each request. RequestId is required for locating a problem.

4. Example

Example1 Getting the recipient information

Input Example

```
https://dbbrain.tencentcloudapi.com/?Action=DescribeAllUserContact
&Product=mysql
&Names.0=zhangsan
&<Common request parameters>
```

Output Example

```
{
  "Response": {
    "TotalCount": 2,
    "Contacts": [
      {
        "Mail": "zhangsan@qq.com",
        "Id": 1,
        "Name": "zhangsan"
      },
      {
        "Mail": "zhangsan2@qq.com",
        "Id": 2,
        "Name": "zhangsan2"
      }
    ],
    "RequestId": "b2d08895-1cfe-48bc-b7f7-87fd7cb5d6f1"
  }
}
```

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
AuthFailure	Error with CAM signature/authentication.
FailedOperation	Operation failed.
InternalError	Internal error.
InvalidParameter	Incorrect parameter.
InvalidParameterValue	Incorrect parameter value.
LimitExceeded	The quota limit is exceeded.
MissingParameter	Missing parameter.
OperationDenied	Operation denied.
OperationDenied.UserHasNoStrategy	Error with CAM authentication.

ResourceNotFound	The resource does not exist.
UnauthorizedOperation	The operation is unauthorized.
UnknownParameter	Unknown parameter.
UnsupportedOperation	Unsupported operation.

DescribeAllUserGroup

Last updated : 2023-10-17 10:51:57

1. API Description

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

This API is used to get the information of the recipient group in the email.

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: DescribeAllUserGroup.
Version	Yes	String	Common Params . The value used for this API: 2021-05-27.
Region	No	String	Common Params . This parameter is not required for this API.
Product	Yes	String	Service type, which is fixed to <code>mysql</code> .
Names.N	No	Array of String	Array of recipient group names. Fuzzy search is supported.

3. Output Parameters

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

Name		
TotalCount	Integer	Total number of groups.
Groups	Array of GroupItem	Group information. Note: This field may return null, indicating that no valid values can be obtained.
RequestId	String	The unique request ID, which is returned for each request. RequestId is required for locating a problem.

4. Example

Example1 Getting the recipient group information

Input Example

```
https://dbbrain.tencentcloudapi.com/?Action=DescribeAllUserGroup
&Product=mysql
&Names.0=group1
&<Common request parameters>
```

Output Example

```
{
  "Response": {
    "TotalCount": 2,
    "RequestId": "31dd9325-792f-4d76-89ad-ca8902cbe4d9",
    "Groups": [
      {
        "MemberCount": 0,
        "Id": 1,
        "Name": "group1"
      },
      {
        "MemberCount": 2,
        "Id": 2,
        "Name": "group11"
      }
    ]
  }
}
```

5. Developer Resources

SDK

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- [Tencent Cloud SDK 3.0 for .NET](#)
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Command Line Interface

- [Tencent Cloud CLI 3.0](#)

6. Error Code

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

Error Code	Description
AuthFailure	Error with CAM signature/authentication.
FailedOperation	Operation failed.
InternalError	Internal error.
InvalidParameter	Incorrect parameter.
InvalidParameterValue	Incorrect parameter value.
LimitExceeded	The quota limit is exceeded.
MissingParameter	Missing parameter.
OperationDenied	Operation denied.
OperationDenied.UserHasNoStrategy	Error with CAM authentication.

ResourceNotFound	The resource does not exist.
UnauthorizedOperation	The operation is unauthorized.
UnknownParameter	Unknown parameter.
UnsupportedOperation	Unsupported operation.

DescribeDBDiagReportTasks

Last updated : 2023-10-17 10:51:56

1. API Description

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

This API is used to query the list of health report generation tasks.

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: DescribeDBDiagReportTasks.
Version	Yes	String	Common Params . The value used for this API: 2021-05-27.
Region	No	String	Common Params . This parameter is not required for this API.
StartTime	No	Timestamp ISO8601	Start time of the first task in the format of yyyy-MM-dd HH:mm:ss, such as 2019-09-10 12:13:14. It is used for queries by time range.
EndTime	No	Timestamp ISO8601	End time of the last task in the format of yyyy-MM-dd HH:mm:ss, such as 2019-09-10 12:13:14. It is used for queries by time range.
InstanceIds.N	No	Array of String	Array of instance IDs, which is used to filter the task list of the specified instance.

Sources.N	No	Array of String	Source that triggers the task. Valid values: <code>DAILY_INSPECTION</code> (instance inspection), <code>SCHEDULED</code> (scheduled task), and <code>MANUAL</code> (manual trigger).
HealthLevels	No	String	Health level. Valid values: <code>HEALTH</code> (healthy), <code>SUB_HEALTH</code> (suboptimal), <code>RISK</code> (risky), and <code>HIGH_RISK</code> (critical).
TaskStatuses	No	String	Task status. Valid values: <code>created</code> (created), <code>chosen</code> (to be executed), <code>running</code> (being executed), <code>failed</code> (failed), and <code>finished</code> (completed).
Offset	No	Integer	Offset. Default value: <code>0</code> .
Limit	No	Integer	Number of returned results. Default value: <code>20</code> . Maximum value: <code>100</code> .
Product	No	String	Service type. Valid values: <code>mysql</code> (TencentDB for MySQL), <code>cynosdb</code> (TDSQL-C for MySQL). Default value: <code>mysql</code> .

3. Output Parameters

Parameter Name	Type	Description
TotalCount	Integer	Total number of tasks.
Tasks	Array of HealthReportTask	List of tasks.
RequestId	String	The unique request ID, which is returned for each request. RequestId is required for locating a problem.

4. Example

Example1 Querying the list of health report generation tasks

Input Example

```
https://dbbrain.tencentcloudapi.com/?Action=DescribeDBDiagReportTasks
&Product=mysql
&StartTime=2020-09-21T00:00:00+00:00
&EndTime=2020-09-22T00:00:00+00:00
```

```
&Sources.0=DAILY_INSPECTION
&<Common request parameters>
```

Output Example

```
{
  "Response": {
    "TotalCount": 1,
    "Tasks": [
      {
        "AsyncRequestId": 63452,
        "Source": "DAILY_INSPECTION",
        "Progress": 100,
        "CreateTime": "2020-09-21 00:00:00",
        "StartTime": "2020-09-21 00:00:00",
        "EndTime": "2020-09-21 00:00:00",
        "InstanceInfo": {
          "InstanceId": "cdb-c9orjpes",
          "InstanceName": "dbbbrain-test",
          "EngineVersion": "5.7",
          "Vip": "10.207.0.10",
          "Vport": 3306,
          "Product": "MySQL"
        },
        "HealthStatus": {
          "HealthScore": 100,
          "HealthLevel": "HEALTH",
          "ScoreLost": 0,
          "ScoreDetails": []
        }
      }
    ],
    "RequestId": "24665720-8c93-11eb-bee6-e98cea0e6794"
  }
}
```

5. Developer Resources

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

Command Line Interface

- [Tencent Cloud CLI 3.0](#)

6. Error Code

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

Error Code	Description
AuthFailure	Error with CAM signature/authentication.
FailedOperation	Operation failed.
InternalError	Internal error.
InvalidParameter	Incorrect parameter.
InvalidParameterValue	Incorrect parameter value.
LimitExceeded	The quota limit is exceeded.
MissingParameter	Missing parameter.
OperationDenied	Operation denied.
OperationDenied.UserHasNoStrategy	Error with CAM authentication.
ResourceNotFound	The resource does not exist.
UnauthorizedOperation	The operation is unauthorized.
UnknownParameter	Unknown parameter.
UnsupportedOperation	Unsupported operation.

DescribeMailProfile

Last updated : 2023-10-17 10:51:56

1. API Description

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

This API is used to get the email sending configuration, including the email configuration for database inspection and the email sending configuration for scheduled task health reports.

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: DescribeMailProfile.
Version	Yes	String	Common Params . The value used for this API: 2021-05-27.
Region	No	String	Common Params . This parameter is not required for this API.
ProfileType	Yes	String	Configuration type. Valid values: <code>dbScan_mail_configuration</code> (email configuration of the database inspection report), <code>scheduler_mail_configuration</code> (email configuration of the scheduled task report).
Product	Yes	String	Service type. Valid values: <code>mysql</code> (TencentDB for MySQL), <code>cynosdb</code> (TDSQL-C for MySQL). Default value: <code>mysql</code> .
Offset	Yes	Integer	Pagination offset.
Limit	Yes	Integer	Number of results per page in paginated queries. Maximum value:

			50 .
ProfileName	No	String	Query by email configuration name. The name of the scheduled task email configuration should be in the format of "scheduler_"+{instanceId}.

3. Output Parameters

Parameter Name	Type	Description
ProfileList	Array of UserProfile	Email configuration details. Note: This field may return null, indicating that no valid values can be obtained.
TotalCount	Integer	Total number of the configured emails. Note: This field may return null, indicating that no valid values can be obtained.
RequestId	String	The unique request ID, which is returned for each request. RequestId is required for locating a problem.

4. Example

Example1 Getting the email configuration

Input Example

```
https://dbbrain.tencentcloudapi.com/?Action=DescribeMailProfile
&Product=mysql
&ProfileType=scheduler_mail_configuration
&Offset=0
&Limit=20
&<Common request parameters>
```

Output Example

```
{
  "Response": {
    "TotalCount": 1,
    "RequestId": "c7324330-5fc8-11eb-a3f4-96666666",
  }
```

```
"ProfileList": [  
  {  
    "ProfileId": "12345",  
    "ProfileType": "dbScan_mail_configuration",  
    "ProfileLevel": "User",  
    "ProfileName": "Test uin",  
    "ProfileInfo": {  
      "MailConfiguration": {  
        "HealthStatus": [  
          "HEALTH",  
          "SUB_HEALTH",  
          "RISK",  
          "HIGH_RISK"  
        ],  
        "Region": [  
          "eu-moscow"  
        ],  
        "ContactGroup": [],  
        "SendMail": 0,  
        "ContactPerson": [  
          123  
        ]  
      },  
      "Language": "zh"  
    }  
  }  
]
```

5. Developer Resources

SDK

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

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

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

Command Line Interface

- [Tencent Cloud CLI 3.0](#)

6. Error Code

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

Error Code	Description
AuthFailure	Error with CAM signature/authentication.
FailedOperation	Operation failed.
InternalError	Internal error.
InvalidParameter	Incorrect parameter.
InvalidParameterValue	Incorrect parameter value.
LimitExceeded	The quota limit is exceeded.
MissingParameter	Missing parameter.
OperationDenied	Operation denied.
OperationDenied.UserHasNoStrategy	Error with CAM authentication.
ResourceNotFound	The resource does not exist.
UnauthorizedOperation	The operation is unauthorized.
UnknownParameter	Unknown parameter.
UnsupportedOperation	Unsupported operation.

DeleteDBDiagReportTasks

Last updated : 2023-10-17 10:51:57

1. API Description

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

This API is used to delete health report generation tasks by task ID.

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

We recommend you to use API Explorer

[Try it](#)

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

2. Input Parameters

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

Parameter Name	Required	Type	Description
Action	Yes	String	Common Params . The value used for this API: DeleteDBDiagReportTasks.
Version	Yes	String	Common Params . The value used for this API: 2021-05-27.
Region	No	String	Common Params . This parameter is not required for this API.
AsyncRequestIds.N	Yes	Array of Integer	List of IDs of tasks to be deleted
InstanceId	Yes	String	Instance ID
Product	No	String	Service type. Valid values: <code>mysql</code> (TencentDB for MySQL), <code>cynosdb</code> (TDSQL-C for MySQL). Default value: <code>mysql</code> .

3. Output Parameters

Parameter Name	Type	Description
Status	Integer	Task deletion status (0 : Successful)
RequestId	String	The unique request ID, which is returned for each request. RequestId is required for locating a problem.

4. Example

Example1 Deleting health report generation tasks

This example shows you how to delete health report generation tasks.

Input Example

```
https://dbbrain.tencentcloudapi.com/?Action= DeleteDBDiagReportTasks
&InstanceId=cdb-inste123
&Product=mysql
&AsyncRequestIds.0=1
&<Common request parameters>
```

Output Example

```
{
  "Response": {
    "RequestId": "5fdab910-5c9e-11eb-a610-8717ee1b1000",
    "Status": 0
  }
}
```

5. Developer Resources

SDK

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

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

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

Command Line Interface

- [Tencent Cloud CLI 3.0](#)

6. Error Code

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

Error Code	Description
AuthFailure	Error with CAM signature/authentication.
FailedOperation	Operation failed.
InternalError	Internal error.
InvalidParameter	Incorrect parameter.
InvalidParameterValue	Incorrect parameter value.
LimitExceeded	The quota limit is exceeded.
MissingParameter	Missing parameter.
OperationDenied	Operation denied.
OperationDenied.UserHasNoStrategy	Error with CAM authentication.
RequestLimitExceeded	The number of requests exceeds the frequency limit.
ResourceNotFound	The resource does not exist.
UnauthorizedOperation	The operation is unauthorized.
UnknownParameter	Unknown parameter.
UnsupportedOperation	Unsupported operation.

Exception Detection APIs

DescribeDBDiagHistory

Last updated : 2023-10-17 10:51:58

1. API Description

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

This API is used to get the list of instance diagnosis events.

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: DescribeDBDiagHistory.
Version	Yes	String	Common Params . The value used for this API: 2021-05-27.
Region	No	String	Common Params . This parameter is not required for this API.
InstanceId	Yes	String	Instance ID.
StartTime	Yes	Timestamp	Start time, such as "2019-09-10 12:13:14".
EndTime	Yes	Timestamp	End time, such as "2019-09-11 12:13:14". The interval between the end time and the start time can be up to 2 days.
Product	No	String	Service type. Valid values: <code>mysql</code> (TencentDB for MySQL), <code>cynosdb</code> (TDSQL-C for MySQL). Default value: <code>mysql</code> .

3. Output Parameters

Parameter Name	Type	Description
Events	Array of DiagHistoryEventItem	Event description.
RequestId	String	The unique request ID, which is returned for each request. RequestId is required for locating a problem.

4. Example

Example1 Getting the list of instance diagnosis events

Input Example

```
https://dbbrain.tencentcloudapi.com/?Action=DescribeDBDiagHistory
&StartTime=2019-01-01 00:00:00
&EndTime=2019-01-01 01:00:00
&InstanceId=cdb-test
&<Common request parameters>
```

Output Example

```
{
  "Response": {
    "RequestId": "ed279d8b-a9d9-48d6-9429-e0fde000994a",
    "Events": [
      {
        "DiagType": "Row lock",
        "StartTime": "2019-01-01 00:00:20",
        "EndTime": "2019-01-01 00:00:30",
        "InstanceId": "cdb-test",
        "Region": "ap-beijing",
        "Metric": "",
        "EventId": 5,
        "Severity": 4,
        "Outline": "Monitoring metric \"innodb_row_lock_waits\" triggered an alarm. Current value: 131",
        "DiagItem": "UPDATE statement row lock wait"
      }
    ]
  }
}
```

```
}  
]  
}  
}
```

5. Developer Resources

SDK

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

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

Command Line Interface

- [Tencent Cloud CLI 3.0](#)

6. Error Code

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

Error Code	Description
AuthFailure	Error with CAM signature/authentication.
FailedOperation	Operation failed.
InternalError	Internal error.
InvalidParameter	Incorrect parameter.
InvalidParameterValue	Incorrect parameter value.
LimitExceeded	The quota limit is exceeded.

MissingParameter	Missing parameter.
OperationDenied	Operation denied.
OperationDenied.UserHasNoStrategy	Error with CAM authentication.
ResourceNotFound	The resource does not exist.
UnauthorizedOperation	The operation is unauthorized.
UnknownParameter	Unknown parameter.
UnsupportedOperation	Unsupported operation.

DescribeDBDiagEvent

Last updated : 2023-10-17 10:51:58

1. API Description

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

This API is used to get the details of an instance exception diagnosis event.

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: DescribeDBDiagEvent.
Version	Yes	String	Common Params . The value used for this API: 2021-05-27.
Region	No	String	Common Params . This parameter is not required for this API.
InstanceId	Yes	String	Instance ID.
EventId	No	Integer	Event ID, which can be obtained through the <code>DescribeDBDiagHistory</code> API.
Product	No	String	Service type. Valid values: <code>mysql</code> (TencentDB for MySQL), <code>cynosdb</code> (TDSQL-C for MySQL). Default value: <code>mysql</code> .

3. Output Parameters

Parameter Name	Type	Description
DiagItem	String	Diagnosis item.
DiagType	String	Diagnosis type.
EventId	Integer	Event ID.
Explanation	String	Diagnosis event details. If there is no additional explanation information, the output will be empty.
Outline	String	Diagnosis summary.
Problem	String	Found problem.
Severity	Integer	Severity, which can be divided into 5 levels: <code>1</code> (Critical), <code>2</code> (Severe), <code>3</code> (Alarm), <code>4</code> (Reminder), <code>5</code> (healthy).
StartTime	Timestamp	Start time
Suggestions	String	Suggestions. If there are no suggestions, the output will be empty.
Metric	String	Reserved field. Note: This field may return null, indicating that no valid values can be obtained.
EndTime	Timestamp	End time.
RequestId	String	The unique request ID, which is returned for each request. RequestId is required for locating a problem.

4. Example

Example1 Getting diagnosis event details

Input Example

```
https://dbbrain.tencentcloudapi.com/?Action=DescribeDBDiagEvent
&InstanceId=test
&EventId=5
&<Common request parameters>
```

Output Example

```
{
  "Response": {
    "Suggestions": "[]",
    "DiagType": "Database snapshot",
    "EndTime": "2019-11-06 12:05:50",
    "RequestId": "78cf7bb1-0608-11ea-a9ef-2736f0f7f829",
    "Explanation": "[]",
    "StartTime": "2019-11-06 12:05:40",
    "Severity": 4,
    "EventId": 5,
    "Outline": "1 problem found during database health check",
    "Problem": "[{\"DataType\":\"title\",\"Data\":{\"Name\":\"Session snapshot\"}}, {\"DataType\":\"title\",\"Data\":{\"Name\":\"Transaction snapshot\"}}, {\"DataType\":\"title\",\"Data\":{\"Name\":\"InnoDB status snapshot\"}}]",
    "Metric": "",
    "DiagItem": "Health check"
  }
}
```

5. Developer Resources

SDK

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

Command Line Interface

- [Tencent Cloud CLI 3.0](#)

6. Error Code

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

Error Code	Description
AuthFailure	Error with CAM signature/authentication.
FailedOperation	Operation failed.
InternalError	Internal error.
InvalidParameter	Incorrect parameter.
InvalidParameterValue	Incorrect parameter value.
LimitExceeded	The quota limit is exceeded.
MissingParameter	Missing parameter.
OperationDenied	Operation denied.
OperationDenied.UserHasNoStrategy	Error with CAM authentication.
ResourceNotFound	The resource does not exist.
UnauthorizedOperation	The operation is unauthorized.
UnknownParameter	Unknown parameter.
UnsupportedOperation	Unsupported operation.

DescribeDBDiagEvents

Last updated : 2023-10-17 10:51:58

1. API Description

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

This API is used to obtain the diagnosis event list in a specified time period by risk level, instance ID, etc.

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: DescribeDBDiagEvents.
Version	Yes	String	Common Params . The value used for this API: 2021-05-27.
Region	No	String	Common Params . This parameter is not required for this API.
StartTime	Yes	Timestamp ISO8601	Start time in the format of "2021-05-27 00:00:00". The earliest time that can be queried is 30 days before the current time.
EndTime	Yes	Timestamp ISO8601	End time in the format of "2021-05-27 01:00:00". The interval between the end time and the start time can be up to 7 days.
Severities.N	No	Array of Integer	Risk level list. Valid values in descending order of severity: 1 (critical), 2 (serious), 3 (alarm), 4 (warning), 5 (healthy).
InstanceIds.N	No	Array of	Instance ID list.

		String	
Offset	No	Integer	Offset. Default value: 0.
Limit	No	Integer	Number of returned results. Default value: 20. Maximum value: 50.

3. Output Parameters

Parameter Name	Type	Description
TotalCount	Integer	Total number of diagnosis events.
Items	Array of DiagHistoryEventItem	Diagnosis event list.
RequestId	String	The unique request ID, which is returned for each request. RequestId is required for locating a problem.

4. Example

Example1 Obtaining diagnosis event list

Input Example

```
https://dbbrain.tencentcloudapi.com/?Action=DescribeDBDiagEvents
&StartTime=2021-05-27T00:00:00+00:00
&EndTime=2021-05-27T01:00:00+00:00
&<Common request parameters>
```

Output Example

```
{
  "Response": {
    "RequestId": "7a9a6ba0-5893-11ec-8ad2-ff04c623cbd9",
    "TotalCount": 1,
    "Items": [
      {
        "InstanceId": "cdb-test",
        "EventId": 330858512,
        "StartTime": "2021-05-27 00:01:10",
```

```
"EndTime": "2021-05-27 00:01:20",
"DiagItem": "Transaction uncommitted",
"DiagType": "Transaction uncommitted",
"Severity": 1,
"Outline": "There are uncommitted transactions",
"Metric": "",
"Region": "ap-guangzhou"
}
]
}
}
```

5. Developer Resources

SDK

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

Command Line Interface

- [Tencent Cloud CLI 3.0](#)

6. Error Code

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

Error Code	Description
AuthFailure	Error with CAM signature/authentication.
FailedOperation	Operation failed.

InternalError	Internal error.
InvalidParameter	Incorrect parameter.
InvalidParameterValue	Incorrect parameter value.
LimitExceeded	The quota limit is exceeded.
MissingParameter	Missing parameter.
OperationDenied	Operation denied.
OperationDenied.UserHasNoStrategy	Error with CAM authentication.
ResourceNotFound	The resource does not exist.
UnauthorizedOperation	The operation is unauthorized.
UnknownParameter	Unknown parameter.
UnsupportedOperation	Unsupported operation.

Session Killing APIs

KillMySqlThreads

Last updated : 2023-10-17 10:51:54

1. API Description

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

This API is used to interrupt the current session by session ID. It needs to be called twice to commit the session interruption task in two stages. In the pre-commit stage, the stage value is `Prepare`, and the returned value is `SqlExecId`. In the commit stage, the stage value is `Commit`, and `SqlExecId` will be passed in as a parameter. Then, the session process will be terminated.

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: KillMySqlThreads.
Version	Yes	String	Common Params . The value used for this API: 2021-05-27.
Region	No	String	Common Params . This parameter is not required for this API.
InstanceId	Yes	String	Instance ID.
Stage	Yes	String	The stage of a session killing task. Valid values: <code>Prepare</code> (preparation stage), <code>Commit</code> (commit stage).
Threads.N	No	Array of	List of IDs of the MySQL sessions to be killed. This parameter is

		Integer	used in the <code>Prepare</code> stage.
SqlExecId	No	String	Execution ID. This parameter is used in the <code>Commit</code> stage.
Product	No	String	Service type. Valid values: <code>mysql</code> (TencentDB for MySQL), <code>cynosdb</code> (TDSQL-C for MySQL). Default value: <code>mysql</code> .
RecordHistory	No	Boolean	Whether to record the thread killing history. The default value is <code>true</code> , indicating "yes". You can set it to <code>false</code> ("no") to speed up the killing process.

3. Output Parameters

Parameter Name	Type	Description
Threads	Array of Integer	List of IDs of the MySQL sessions that have been killed.
SqlExecId	String	Execution ID, which is output in the <code>Prepare</code> stage and used to specify the ID of the session to be killed in the <code>Commit</code> stage. Note: This field may return null, indicating that no valid values can be obtained.
RequestId	String	The unique request ID, which is returned for each request. RequestId is required for locating a problem.

4. Example

Example1 Killing the current session by session ID

This example shows you how to interrupt the current session by session ID in the "commit" stage.

Input Example

```
POST / HTTP/1.1
Host: dbbrain.tencentcloudapi.com
Content-Type: application/json
X-TC-Action: KillMySqlThreads
<common request parameters>

{
  "InstanceId": "cdb-8jawylhf",
```

```
"SqlExecId": "2e2e2",
"Stage": "Commit",
"Product": "mysql"
}
```

Output Example

```
{
  "Response": {
    "SqlExecId": "ewfscd",
    "Threads": [
      0
    ],
    "RequestId": "sscrft"
  }
}
```

5. Developer Resources

SDK

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

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

Command Line Interface

- [Tencent Cloud CLI 3.0](#)

6. Error Code

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

Error Code	Description
AuthFailure	Error with CAM signature/authentication.
FailedOperation	Operation failed.
InternalError	Internal error.
InvalidParameter	Incorrect parameter.
InvalidParameterValue	Incorrect parameter value.
LimitExceeded	The quota limit is exceeded.
MissingParameter	Missing parameter.
OperationDenied	Operation denied.
OperationDenied.UserHasNoStrategy	Error with CAM authentication.
RequestLimitExceeded	The number of requests exceeds the frequency limit.
ResourceNotFound	The resource does not exist.
UnauthorizedOperation	The operation is unauthorized.
UnknownParameter	Unknown parameter.
UnsupportedOperation	Unsupported operation.

CreateProxySessionKillTask

Last updated : 2023-10-17 10:51:54

1. API Description

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

This API is used to create an async task of killing all proxy node connection sessions and is currently supported only for Redis. The async task ID is the returned value, which can be passed to the API

`DescribeProxySessionKillTasks` as a parameter to query the execution status of the session killing task.

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

We recommend you to use API Explorer

[Try it](#)

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

2. Input Parameters

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

Parameter Name	Required	Type	Description
Action	Yes	String	Common Params . The value used for this API: CreateProxySessionKillTask.
Version	Yes	String	Common Params . The value used for this API: 2021-05-27.
Region	No	String	Common Params . This parameter is not required for this API.
InstanceId	Yes	String	Instance ID.
Product	Yes	String	Service type. Valid value: <code>redis</code> (TencentDB for Redis).

3. Output Parameters

--	--	--

Parameter Name	Type	Description
AsyncRequestId	Integer	Async task ID that is returned after the session killing task is created.
RequestId	String	The unique request ID, which is returned for each request. RequestId is required for locating a problem.

4. Example

Example1 Creating an async task of killing all proxy node connection sessions based on instance ID

Input Example

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

{
  "InstanceId": "cdb-8jawylhf",
  "Product": "redis"
}
```

Output Example

```
{
  "Response": {
    "AsyncRequestId": 123456,
    "RequestId": "xx"
  }
}
```

5. Developer Resources

SDK

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

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- [Tencent Cloud SDK 3.0 for .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
FailedOperation	Operation failed.
OperationDenied.UserHasNoStrategy	Error with CAM authentication.

CreateKillTask

Last updated : 2023-10-17 10:51:54

1. API Description

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

This API is used to create a session killing task.

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

We recommend you to use API Explorer

[Try it](#)

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

2. Input Parameters

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

Parameter Name	Required	Type	Description
Action	Yes	String	Common Params . The value used for this API: CreateKillTask.
Version	Yes	String	Common Params . The value used for this API: 2021-05-27.
Region	No	String	Common Params . This parameter is not required for this API.
InstanceId	Yes	String	ID of the instance associated with the session killing task.
Duration	Yes	Integer	Task duration in seconds. Pass in <code>-1</code> to stop the task manually.
Host	No	String	Client IP, which is a task filter.
DB	No	String	Database name, which is a task filter. Multiple database names are separated by comma.
Command	No	String	Related command, which is a task filter. Multiple commands are separated by comma.

Info	No	String	Task filter. Filtering by single filter prefix is supported.
User	No	String	User type, which is a task filter.
Time	No	Integer	Session duration in seconds, which is a task filter.
Product	No	String	Service type. Valid values: <code>mysql</code> (TencentDB for MySQL), <code>cynosdb</code> (TDSQL-C for MySQL). Default value: <code>mysql</code> .

3. Output Parameters

Parameter Name	Type	Description
Status	Integer	Task status. <code>1</code> is returned if the session killing task is successfully created.
RequestId	String	The unique request ID, which is returned for each request. RequestId is required for locating a problem.

4. Example

Example1 Creating a session killing task

Input Example

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

{
  "InstanceId": "cdb-8jawylhf",
  "Product": "mysql",
  "Duration": -1
}
```

Output Example

```
{
  "Response": {
    "Status": 1,
```

```
"RequestId": "09299b00-b878-11eb-b0b4-959ba47770cf"
}
```

5. Developer Resources

SDK

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

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

Command Line Interface

- [Tencent Cloud CLI 3.0](#)

6. Error Code

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

Error Code	Description
AuthFailure	Error with CAM signature/authentication.
FailedOperation	Operation failed.
InternalError	Internal error.
InvalidParameter	Incorrect parameter.
InvalidParameterValue	Incorrect parameter value.
MissingParameter	Missing parameter.

OperationDenied	Operation denied.
OperationDenied.UserHasNoStrategy	Error with CAM authentication.
RequestLimitExceeded	The number of requests exceeds the frequency limit.
UnauthorizedOperation	The operation is unauthorized.
UnknownParameter	Unknown parameter.
UnsupportedOperation	Unsupported operation.

DescribeProxySessionKillTasks

Last updated : 2023-10-17 10:51:54

1. API Description

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

This API is used to query the result of the session killing task executed by the Redis proxy node. The async task ID (an input parameter) is obtained after the API `CreateProxySessionKillTask` is successfully called. Currently, the only valid value of `product` is `redis`.

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: DescribeProxySessionKillTasks.
Version	Yes	String	Common Params . The value used for this API: 2021-05-27.
Region	No	String	Common Params . This parameter is not required for this API.
InstanceId	Yes	String	Instance ID.
AsyncRequestIds.N	Yes	Array of Integer	The async session killing task ID, which is obtained after the API <code>CreateProxySessionKillTask</code> is successfully called.
Product	Yes	String	Service type. Valid value: <code>redis</code> (TencentDB for Redis).

3. Output Parameters

Parameter Name	Type	Description
Tasks	Array of TaskInfo	Session killing task details.
TotalCount	Integer	Total number of tasks.
RequestId	String	The unique request ID, which is returned for each request. RequestId is required for locating a problem.

4. Example

Example1 Querying the execution result of the session killing task

Input Example

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

{
  "InstanceId": "xx",
  "Product": "xx",
  "AsyncRequestIds": [
    0
  ]
}
```

Output Example

```
{
  "Response": {
    "RequestId": "xx",
    "TotalCount": 1,
    "Tasks": [
      {
        "Progress": 100,
        "InstProxyList": [
```

```
"6511ec503b047be913e30c1bbf1f2c8c861e8347",
"2ce994dad0e2b27e76ae13d04ab9eadd9665397",
"db0fcd29867e65eb999ce99383d7a06cd21ca077"
],
"AsyncRequestId": 7677678,
"EndTime": "2020-09-22T00:00:00+00:00",
"InstProxyCount": 3,
"InstanceId": "crs-o5chheqz",
"CreateTime": "2020-09-22T00:00:00+00:00",
"StartTime": "2020-09-22T00:00:00+00:00",
"TaskStatus": "finished",
"FinishedProxyList": [
"6511ec503b047be913e30c1bbf1f2c8c861e8347",
"2ce994dad0e2b27e76ae13d04ab9eadd9665397",
"db0fcd29867e65eb999ce99383d7a06cd21ca077"
],
"FailedProxyList": []
}
]
}
}
```

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

Command Line Interface

- [Tencent Cloud CLI 3.0](#)

6. Error Code

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

Error Code	Description
AuthFailure	Error with CAM signature/authentication.
DryRunOperation	DryRun operation, which means the DryRun parameter is passed in yet the request will still be successful.
FailedOperation	Operation failed.
InternalError	Internal error.
InvalidParameter	Incorrect parameter.
InvalidParameterValue	Incorrect parameter value.
LimitExceeded	The quota limit is exceeded.
MissingParameter	Missing parameter.
OperationDenied	Operation denied.
OperationDenied.UserHasNoStrategy	Error with CAM authentication.
RequestLimitExceeded	The number of requests exceeds the frequency limit.
ResourceInUse	The resource is occupied.
ResourceInsufficient	Insufficient resource.
ResourceNotFound	The resource does not exist.
ResourceUnavailable	The resource is unavailable.
ResourcesSoldOut	The resources have been sold out.
UnauthorizedOperation	The operation is unauthorized.
UnknownParameter	Unknown parameter.
UnsupportedOperation	Unsupported operation.

DescribeProxyProcessStatistics

Last updated : 2023-10-17 10:51:54

1. API Description

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

This API is used to get the session statistics of a single proxy under the current instance, and can only be called in particular environments.

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: DescribeProxyProcessStatistics.
Version	Yes	String	Common Params . The value used for this API: 2021-05-27.
Region	No	String	Common Params . This parameter is not required for this API.
InstanceId	Yes	String	Instance ID.
InstanceProxyId	Yes	String	The proxy ID you want to query under the instance
Limit	Yes	Integer	Number of returned results.
Product	Yes	String	Service type. Valid value: <code>redis</code> (TencentDB for Redis).
Offset	No	Integer	Offset. Default value: <code>0</code> .

SortBy	No	String	Sort by field. Valid values: AllConn , ActiveConn , Ip .
OrderDirection	No	String	Sorting order. Valid values: DESC , ASC .

3. Output Parameters

Parameter Name	Type	Description
ProcessStatistics	ProcessStatistic	Real-time session statistics.
RequestId	String	The unique request ID, which is returned for each request. RequestId is required for locating a problem.

4. Example

Example1 Getting the session statistics of a single proxy

This example shows you how to get the session statistics of a single proxy.

Input Example

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

{
  "InstanceId": "redis-test",
  "Product": "redis",
  "Limit": "20",
  "InstanceProxyId": "b237ff3c5f30b0"
}
```

Output Example

```
{
  "Response": {
    "RequestId": "099479c0-7b7c-11ed-8d71-fdsafda",
    "ProcessStatistics": {
      "Items": [
        {
```

```
"Ip": "127.0.0.1",
"ActiveConn": "1",
"AllConn": 10
},
{
"Ip": "127.0.0.2",
"ActiveConn": "3",
"AllConn": 5
}
],
"AllConnSum": 15,
"ActiveConnSum": 4
}
}
}
```

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

Command Line Interface

- [Tencent Cloud CLI 3.0](#)

6. Error Code

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

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

AuthFailure	Error with CAM signature/authentication.
DryRunOperation	DryRun operation, which means the DryRun parameter is passed in yet the request will still be successful.
FailedOperation	Operation failed.
InternalError	Internal error.
InvalidParameter	Incorrect parameter.
InvalidParameterValue	Incorrect parameter value.
LimitExceeded	The quota limit is exceeded.
MissingParameter	Missing parameter.
OperationDenied	Operation denied.
OperationDenied.UserHasNoStrategy	Error with CAM authentication.
RequestLimitExceeded	The number of requests exceeds the frequency limit.
UnauthorizedOperation	The operation is unauthorized.
UnknownParameter	Unknown parameter.
UnsupportedOperation	Unsupported operation.

Space Analysis APIs

DescribeTopSpaceTables

Last updated : 2023-10-17 10:51:52

1. API Description

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

This API is used to get the real-time space statistics of top tables of an instance. The returned results are sorted by size by default.

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: DescribeTopSpaceTables.
Version	Yes	String	Common Params . The value used for this API: 2021-05-27.
Region	No	String	Common Params . This parameter is not required for this API.
InstanceId	Yes	String	Instance ID.
Limit	No	Integer	Number of returned top tables. Maximum value: 100 . Default value: 20 .
SortBy	No	String	Field used to sort top tables. Valid values: DataLength , IndexLength , TotalLength , DataFree , FragRatio ,

			<code>TableRows</code> , <code>PhysicalFileSize</code> (only supported for TencentDB for MySQL instances). For TencentDB for MySQL instances, the default value is <code>PhysicalFileSize</code> . For other database instances, the default value is <code>TotalLength</code> .
Product	No	String	Service type. Valid values: <code>mysql</code> (TencentDB for MySQL), <code>cynosdb</code> (TDSQL-C for MySQL). Default value: <code>mysql</code> .

3. Output Parameters

Parameter Name	Type	Description
TopSpaceTables	Array of TableSpaceData	List of the returned space statistics of top tables.
Timestamp	Integer	Timestamp (in seconds) of tablespace data collection points
RequestId	String	The unique request ID, which is returned for each request. RequestId is required for locating a problem.

4. Example

Example1 Getting the space statistics of top tables

Input Example

```
https://dbbrain.tencentcloudapi.com/?Action=DescribeTopSpaceTables
&InstanceId=cdb-test
&Limit=2
&SortBy=TableRows
&<Common request parameters>
```

Output Example

```
{
  "Response": {
    "RequestId": "ed279d8b-a9d9-48d6-9429-e0fde000994a",
    "Timestamp": 1603819881,
    "TopSpaceTables": [
      {
        "DataFree": 0,
```

```
"TableName": "test",
"TotalLength": 0.1,
"TableSchema": "test_bak",
"FragRatio": 0,
"DataLength": 0.1,
"PhysicalFileSize": 0.1,
"TableRows": 9,
"Engine": "InnoDB",
"IndexLength": 0
},
{
  "DataFree": 0,
  "TableName": "test",
  "TotalLength": 0.1,
  "TableSchema": "test_bak",
  "FragRatio": 0,
  "DataLength": 0.1,
  "PhysicalFileSize": 0.1,
  "TableRows": 9,
  "Engine": "InnoDB",
  "IndexLength": 0
}
]
}
}
```

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

Command Line Interface

- [Tencent Cloud CLI 3.0](#)

6. Error Code

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

Error Code	Description
AuthFailure	Error with CAM signature/authentication.
FailedOperation	Operation failed.
InternalError	Internal error.
InvalidParameter	Incorrect parameter.
InvalidParameterValue	Incorrect parameter value.
LimitExceeded	The quota limit is exceeded.
MissingParameter	Missing parameter.
OperationDenied	Operation denied.
OperationDenied.UserHasNoStrategy	Error with CAM authentication.
ResourceNotFound	The resource does not exist.
UnauthorizedOperation	The operation is unauthorized.
UnknownParameter	Unknown parameter.
UnsupportedOperation	Unsupported operation.

DescribeTopSpaceTableTimeSeries

Last updated : 2023-10-17 10:51:52

1. API Description

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

This API is used to get the daily space data of top tables consuming the most instance space. The data is daily collected by DBbrain during a specified time period. The returned results are sorted by size by default.

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: DescribeTopSpaceTableTimeSeries.
Version	Yes	String	Common Params . The value used for this API: 2021-05-27.
Region	No	String	Common Params . This parameter is not required for this API.
InstanceId	Yes	String	Instance ID.
Limit	No	Integer	Number of returned top tables. Maximum value: 100 . Default value: 20 .
SortBy	No	String	Field used to sort top tables. Valid values: DataLength , IndexLength , TotalLength , DataFree , FragRatio , TableRows , PhysicalFileSize . Default value: PhysicalFileSize .

StartDate	No	Date	Start date, such as "2021-01-01". It can be as early as 29 days before the current date and is 6 days before the end date by default.
EndDate	No	Date	End date, such as "2021-01-01". It can be as early as 29 days before the current date and is the current date by default.
Product	No	String	Service type. Valid values: <code>mysql</code> (TencentDB for MySQL), <code>cynosdb</code> (TDSQL-C for MySQL). Default value: <code>mysql</code> .

3. Output Parameters

Parameter Name	Type	Description
TopSpaceTableTimeSeries	Array of TableSpaceTimeSeries	Time series list of the returned space statistics of top tables.
RequestId	String	The unique request ID, which is returned for each request. RequestId is required for locating a problem.

4. Example

Example1 Getting the daily space statistics of top tables during the specified time period

Input Example

```
https://dbbrain.tencentcloudapi.com/?Action=DescribeTopSpaceTableTimeSeries
&InstanceId=cdb-test
&Limit=2
&StartDate=2020-01-01
&EndDate=2020-01-01
&<Common request parameters>
```

Output Example

```
{
  "Response": {
    "RequestId": "d97eacb0-cebd-40b6-963b-579092454f05",
    "TopSpaceTableTimeSeries": [
      {
        "TableName": "test",
```

```
"TableSchema": "test_bak",
"SeriesData": {
  "Series": [
    {
      "Values": [
        0
      ],
      "Metric": "DataFree",
      "Unit": "MB"
    },
    {
      "Values": [
        0.1
      ],
      "Metric": "DataLength",
      "Unit": "MB"
    },
    {
      "Values": [
        0
      ],
      "Metric": "IndexLength",
      "Unit": "MB"
    },
    {
      "Values": [
        0.1
      ],
      "Metric": "TotalLength",
      "Unit": "MB"
    },
    {
      "Values": [
        0
      ],
      "Metric": "FragRatio",
      "Unit": "%"
    },
    {
      "Values": [
        9
      ],
      "Metric": "TableRows",
      "Unit": ""
    },
    {
      "Values": [
```

```
0.1
],
"Metric": "PhysicalFileSize",
"Unit": "MB"
}
],
"Timestamp": [
1588089600
]
},
"Engine": "InnoDB"
},
{
"TableName": "test22",
"TableSchema": "test_bak",
"SeriesData": {
"Series": [
{
"Values": [
0
],
"Metric": "DataFree",
"Unit": "MB"
},
{
"Values": [
0.1
],
"Metric": "DataLength",
"Unit": "MB"
},
{
"Values": [
0
],
"Metric": "IndexLength",
"Unit": "MB"
},
{
"Values": [
0.1
],
"Metric": "TotalLength",
"Unit": "MB"
},
{
"Values": [
```

```
0
],
"Metric": "FragRatio",
"Unit": "%"
},
{
  "Values": [
    6
  ],
  "Metric": "TableRows",
  "Unit": ""
},
{
  "Values": [
    0.1
  ],
  "Metric": "PhysicalFileSize",
  "Unit": "MB"
}
],
"Timestamp": [
  1588089600
]
},
"Engine": "InnoDB"
}
]
}
}
```

5. Developer Resources

SDK

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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
AuthFailure	Error with CAM signature/authentication.
FailedOperation	Operation failed.
InternalError	Internal error.
InvalidParameter	Incorrect parameter.
InvalidParameterValue	Incorrect parameter value.
LimitExceeded	The quota limit is exceeded.
MissingParameter	Missing parameter.
OperationDenied	Operation denied.
OperationDenied.UserHasNoStrategy	Error with CAM authentication.
ResourceNotFound	The resource does not exist.
UnauthorizedOperation	The operation is unauthorized.
UnknownParameter	Unknown parameter.
UnsupportedOperation	Unsupported operation.

DescribeTopSpaceSchemas

Last updated : 2023-10-17 10:51:52

1. API Description

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

This API is used to get the real-time space statistics of top databases of an instance. The returned results are sorted by size by default.

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: DescribeTopSpaceSchemas.
Version	Yes	String	Common Params . The value used for this API: 2021-05-27.
Region	No	String	Common Params . This parameter is not required for this API.
InstanceId	Yes	String	Instance ID.
Limit	No	Integer	Number of returned top databases. Maximum value: 100. Default value: 20.
SortBy	No	String	Field used to sort top databases. Valid values: DataLength, IndexLength, TotalLength, DataFree, FragRatio, TableRows, PhysicalFileSize (supported only by TencentDB for MySQL instances). For TencentDB for

			MySQL instances, the default value is <code>PhysicalFileSize</code> . For other database instances, the default value is <code>TotalLength</code> .
Product	No	String	Service type. Valid values: mysql (TencentDB for MySQL), cynosdb (TDSQL-C for MySQL). Default value: mysql.

3. Output Parameters

Parameter Name	Type	Description
TopSpaceSchemas	Array of SchemaSpaceData	List of the returned space statistics of top databases.
Timestamp	Integer	Timestamp (in seconds) of database space data collection points
RequestId	String	The unique request ID, which is returned for each request. RequestId is required for locating a problem.

4. Example

Example1 Obtaining space statistics of top databases

Input Example

```
https://dbbrain.tencentcloudapi.com/?Action=DescribeTopSpaceSchemas
&InstanceId=cdb-test
&Limit=2
&SortBy=TableRows
&<Common request parameters>
```

Output Example

```
{
  "Response": {
    "RequestId": "ed279d8b-a9d9-48d6-9429-e0fde000994a",
    "Timestamp": 1603819881,
    "TopSpaceSchemas": [
      {
        "DataFree": 0,
        "TotalLength": 0.1,

```

```
"TableSchema": "test_bak",
"FragRatio": 0,
"DataLength": 0.1,
"PhysicalFileSize": 0.1,
"TableRows": 9,
"IndexLength": 0
},
{
  "DataFree": 0,
  "TotalLength": 0.1,
  "TableSchema": "test_bak",
  "FragRatio": 0,
  "DataLength": 0.1,
  "PhysicalFileSize": 0.1,
  "TableRows": 9,
  "IndexLength": 0
}
]
}
}
```

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
AuthFailure	Error with CAM signature/authentication.
FailedOperation	Operation failed.
InternalError	Internal error.
InvalidParameter	Incorrect parameter.
InvalidParameterValue	Incorrect parameter value.
LimitExceeded	The quota limit is exceeded.
MissingParameter	Missing parameter.
OperationDenied	Operation denied.
OperationDenied.UserHasNoStrategy	Error with CAM authentication.
ResourceNotFound	The resource does not exist.
UnauthorizedOperation	The operation is unauthorized.
UnknownParameter	Unknown parameter.
UnsupportedOperation	Unsupported operation.

DescribeTopSpaceSchemaTimeSeries

Last updated : 2023-10-17 10:51:52

1. API Description

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

This API is used to get the daily space data of top databases consuming the most instance space. The data is daily collected by DBbrain during a specified time period. The returned results are sorted by size by default.

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: DescribeTopSpaceSchemaTimeSeries.
Version	Yes	String	Common Params . The value used for this API: 2021-05-27.
Region	No	String	Common Params . This parameter is not required for this API.
InstanceId	Yes	String	Instance ID.
Limit	No	Integer	Number of returned top databases. Maximum value: 100 . Default value: 20 .
SortBy	No	String	Field used to sort top databases. Valid values: DataLength , IndexLength , TotalLength , DataFree , FragRatio , TableRows , PhysicalFileSize (supported only by TencentDB for MySQL instances). For TencentDB for MySQL instances, the default

			value is <code>PhysicalFileSize</code> . For other database instances, the default value is <code>TotalLength</code> .
StartDate	No	Date	Start date, such as "2021-01-01". It can be as early as 29 days before the current date and is 6 days before the end date by default.
EndDate	No	Date	End date, such as "2021-01-01". It can be as early as 29 days before the current date and is the current date by default.
Product	No	String	Service type. Valid values: <code>mysql</code> (TencentDB for MySQL), <code>cynosdb</code> (TDSQL-C for MySQL). Default value: <code>mysql</code> .

3. Output Parameters

Parameter Name	Type	Description
TopSpaceSchemaTimeSeries	Array of SchemaSpaceTimeSeries	Time series list of the returned space statistics of top databases.
RequestId	String	The unique request ID, which is returned for each request. RequestId is required for locating a problem.

4. Example

Example1 Gets the daily space statistics of top databases during the specified time period

Input Example

```
https://dbbrain.tencentcloudapi.com/?Action=DescribeTopSpaceSchemaTimeSeries
&InstanceId=cdb-test
&Limit=2
&StartDate=2021-01-01
&EndDate=2021-01-01
&<Common request parameters>
```

Output Example

```
{
  "Response": {
    "RequestId": "d97eacb0-cebd-40b6-963b-579092454f05",
```

```
"TopSpaceSchemaTimeSeries": [  
  {  
    "TableSchema": "test_bak",  
    "SeriesData": {  
      "Series": [  
        {  
          "Values": [  
            0  
          ],  
          "Metric": "DataFree",  
          "Unit": "MB"  
        },  
        {  
          "Values": [  
            0.1  
          ],  
          "Metric": "DataLength",  
          "Unit": "MB"  
        },  
        {  
          "Values": [  
            0  
          ],  
          "Metric": "IndexLength",  
          "Unit": "MB"  
        },  
        {  
          "Values": [  
            0.1  
          ],  
          "Metric": "TotalLength",  
          "Unit": "MB"  
        },  
        {  
          "Values": [  
            0  
          ],  
          "Metric": "FragRatio",  
          "Unit": "%"  
        },  
        {  
          "Values": [  
            9  
          ],  
          "Metric": "TableRows",  
          "Unit": ""  
        },  
      ]  
    }  
  ]  
]
```

```
{
  "Values": [
    0.1
  ],
  "Metric": "PhysicalFileSize",
  "Unit": "MB"
},
{
  "Timestamp": [
    1588089600
  ]
},
{
  "TableSchema": "test_bak",
  "SeriesData": {
    "Series": [
      {
        "Values": [
          0
        ],
        "Metric": "DataFree",
        "Unit": "MB"
      },
      {
        "Values": [
          0.1
        ],
        "Metric": "DataLength",
        "Unit": "MB"
      },
      {
        "Values": [
          0
        ],
        "Metric": "IndexLength",
        "Unit": "MB"
      },
      {
        "Values": [
          0.1
        ],
        "Metric": "TotalLength",
        "Unit": "MB"
      },
      {
        "Values": [
```

```
0
],
"Metric": "FragRatio",
"Unit": "%"
},
{
"Values": [
6
],
"Metric": "TableRows",
"Unit": ""
},
{
"Values": [
0.1
],
"Metric": "PhysicalFileSize",
"Unit": "MB"
}
],
"Timestamp": [
1588089600
]
}
}
]
}
}
```

5. Developer Resources

SDK

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

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

Command Line Interface

- [Tencent Cloud CLI 3.0](#)

6. Error Code

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

Error Code	Description
AuthFailure	Error with CAM signature/authentication.
FailedOperation	Operation failed.
InternalError	Internal error.
InvalidParameter	Incorrect parameter.
InvalidParameterValue	Incorrect parameter value.
LimitExceeded	The quota limit is exceeded.
MissingParameter	Missing parameter.
OperationDenied	Operation denied.
OperationDenied.UserHasNoStrategy	Error with CAM authentication.
ResourceNotFound	The resource does not exist.
UnauthorizedOperation	The operation is unauthorized.
UnknownParameter	Unknown parameter.
UnsupportedOperation	Unsupported operation.

DescribeDBSpaceStatus

Last updated : 2023-10-17 10:51:52

1. API Description

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

This API is used to query the overview of instance space usage during a specified time period, including disk usage growth (MB), available disk space (MB), total disk space (MB), and estimated number of available days.

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: DescribeDBSpaceStatus.
Version	Yes	String	Common Params . The value used for this API: 2021-05-27.
Region	No	String	Common Params . This parameter is not required for this API.
InstanceId	Yes	String	Instance ID.
RangeDays	No	Integer	Query period in days. The end date is the current date, and the query period is 7 days by default.
Product	No	String	Service type. Valid values: <code>mysql</code> (TencentDB for MySQL), <code>cynosdb</code> (TDSQL-C for MySQL). Default value: <code>mysql</code> .

3. Output Parameters

Parameter Name	Type	Description
Growth	Integer	Disk usage growth in MB.
Remain	Integer	Available disk space in MB.
Total	Integer	Total disk space in MB.
AvailableDays	Integer	Estimated number of available days.
RequestId	String	The unique request ID, which is returned for each request. RequestId is required for locating a problem.

4. Example

Example1 Getting the overview of instance space usage during the specified time period

Input Example

```
https://dbbrain.tencentcloudapi.com/?Action=DescribeDBSpaceStatus
&InstanceId=cdb-test
&RangeDays=5
&<Common request parameters>
```

Output Example

```
{
  "Response": {
    "Remain": 23224,
    "RequestId": "78cf7bb1-0608-11ea-a9ef-2736f0f7f829",
    "Growth": 231,
    "Total": 50000,
    "AvailableDays": 35
  }
}
```

5. Developer Resources

SDK

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

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

Command Line Interface

- [Tencent Cloud CLI 3.0](#)

6. Error Code

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

Error Code	Description
AuthFailure	Error with CAM signature/authentication.
FailedOperation	Operation failed.
InternalError	Internal error.
InvalidParameter	Incorrect parameter.
InvalidParameterValue	Incorrect parameter value.
LimitExceeded	The quota limit is exceeded.
MissingParameter	Missing parameter.
OperationDenied	Operation denied.
OperationDenied.UserHasNoStrategy	Error with CAM authentication.
ResourceNotFound	The resource does not exist.
UnauthorizedOperation	The operation is unauthorized.

UnknownParameter	Unknown parameter.
UnsupportedOperation	Unsupported operation.

Slow Log Analysis APIs

DescribeSlowLogTimeSeriesStats

Last updated : 2023-10-17 10:51:53

1. API Description

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

This API is used to get the slow log statistics histogram.

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: DescribeSlowLogTimeSeriesStats.
Version	Yes	String	Common Params . The value used for this API: 2021-05-27.
Region	No	String	Common Params . This parameter is not required for this API.
InstanceId	Yes	String	Instance ID.
StartTime	Yes	Timestamp	Start time, such as "2019-09-10 12:13:14".
EndTime	Yes	Timestamp	End time, such as "2019-09-10 12:13:14". The interval between the end time and the start time can be up to 7 days.
Product	No	String	Service type. Valid values: <code>mysql</code> (TencentDB for MySQL), <code>cynosdb</code> (TDSQL-C for MySQL). Default value: <code>mysql</code> .

3. Output Parameters

Parameter Name	Type	Description
Period	Integer	Time range in seconds in histogram.
TimeSeries	Array of TimeSlice	Number of slow logs in the specified time range.
SeriesData	MonitorMetricSeriesData	Instance CPU utilization monitoring data in the specified time range.
RequestId	String	The unique request ID, which is returned for each request. RequestId is required for locating a problem.

4. Example

Example1 Getting the slow log statistics histogram

Input Example

```
https://dbbrain.tencentcloudapi.com/?Action=DescribeSlowLogTimeSeriesStats
&InstanceId=test
&StartTime=2019-01-01 00:00:00
&EndTime=2019-01-01 01:00:00
&<Common request parameters>
```

Output Example

```
{
  "Response": {
    "TimeSeries": [
      {
        "Count": 0,
        "Timestamp": 1568113800
      },
      {
        "Count": 0,
        "Timestamp": 1568191680
      },
      {
        "Count": 0,
```

```
"Timestamp": 1568269560
},
{
  "Count": 0,
  "Timestamp": 1568347440
},
{
  "Count": 2,
  "Timestamp": 1568425320
},
{
  "Count": 0,
  "Timestamp": 1568503200
},
{
  "Count": 0,
  "Timestamp": 1568581080
},
{
  "Count": 0,
  "Timestamp": 1568658960
},
{
  "Count": 0,
  "Timestamp": 1568736840
},
{
  "Count": 0,
  "Timestamp": 1568814720
},
{
  "Count": 0,
  "Timestamp": 1568892600
},
{
  "Count": 0,
  "Timestamp": 1568970480
},
{
  "Count": 0,
  "Timestamp": 1569048360
},
{
  "Count": 0,
  "Timestamp": 1569126240
},
{
```

```
"Count": 0,  
"Timestamp": 1569204120  
,  
{  
"Count": 0,  
"Timestamp": 1569282000  
,  
{  
"Count": 0,  
"Timestamp": 1569359880  
,  
{  
"Count": 0,  
"Timestamp": 1569437760  
,  
{  
"Count": 0,  
"Timestamp": 1569515640  
,  
{  
"Count": 0,  
"Timestamp": 1569593520  
,  
{  
"Count": 0,  
"Timestamp": 1569671400  
,  
{  
"Count": 0,  
"Timestamp": 1569749280  
,  
{  
"Count": 0,  
"Timestamp": 1569827160  
,  
{  
"Count": 0,  
"Timestamp": 1569905040  
,  
{  
"Count": 0,  
"Timestamp": 1569982920  
,  
{  
"Count": 0,  
"Timestamp": 1570060800  
,
```

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```
-1,  
-1,  
-1,  
-1,  
-1,  
-1,  
-1,  
-1,  
-1  
],  
"Metric": "cpu_use_rate",  
"Unit": "%"  
}  
],  
"Timestamp": [  
1568113800,  
1568191680,  
1568269560,  
1568347440,  
1568425320,  
1568503200,  
1568581080,  
1568658960,  
1568736840,  
1568814720,  
1568892600,  
1568970480,  
1569048360,  
1569126240,  
1569204120,  
1569282000,  
1569359880,  
1569437760,  
1569515640,  
1569593520,  
1569671400,  
1569749280,  
1569827160,  
1569905040,  
1569982920,  
1570060800,  
1570138680,  
1570216560,  
1570294440,  
1570372320,  
1570450200  
]
```

```
} ,
"RequestId": "b445f8ee-9357-4d93-83c2-3596f9d1f27e",
"Period": 77880
}
}
```

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

Command Line Interface

- [Tencent Cloud CLI 3.0](#)

6. Error Code

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

Error Code	Description
AuthFailure	Error with CAM signature/authentication.
FailedOperation	Operation failed.
FailedOperation.SegmentLoading	
InternalError	Internal error.
InvalidParameter	Incorrect parameter.

InvalidParameterValue	Incorrect parameter value.
LimitExceeded	The quota limit is exceeded.
MissingParameter	Missing parameter.
OperationDenied	Operation denied.
OperationDenied.UserHasNoStrategy	Error with CAM authentication.
ResourceNotFound	The resource does not exist.
UnauthorizedOperation	The operation is unauthorized.
UnknownParameter	Unknown parameter.
UnsupportedOperation	Unsupported operation.

DescribeSlowLogUserHostStats

Last updated : 2023-10-17 10:51:53

1. API Description

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

This API is used to get the statistical distribution chart of slow log source addresses.

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: DescribeSlowLogUserHostStats.
Version	Yes	String	Common Params . The value used for this API: 2021-05-27.
Region	No	String	Common Params . This parameter is not required for this API.
InstanceId	Yes	String	Instance ID.
StartTime	Yes	Timestamp ISO8601	Start time of the time range in the format of yyyy-MM-dd HH:mm:ss, such as 2019-09-10 12:13:14.
EndTime	Yes	Timestamp ISO8601	End time of the time range in the format of yyyy-MM-dd HH:mm:ss, such as 2019-09-10 12:13:14.
Product	No	String	Service type. Valid values: mysql (TencentDB for MySQL), cynosdb (TDSQL-C for MySQL). Default value: mysql.

Md5	No	String	MD5 value of the SQL template
-----	----	--------	-------------------------------

3. Output Parameters

Parameter Name	Type	Description
TotalCount	Integer	Total number of source addresses.
Items	Array of SlowLogHost	Detailed list of the proportion of slow logs from each source address.
UserNameItems	Array of SlowLogUser	Detailed list of the percentages of slow logs from different source usernames
UserTotalCount	Integer	The number of source users
RequestId	String	The unique request ID, which is returned for each request. RequestId is required for locating a problem.

4. Example

Example1 Obtaining the statistical distribution chart of slow log source addresses

This example shows you how to obtain the statistical distribution chart of slow log source addresses.

Input Example

```
https://dbbrain.tencentcloudapi.com/?Action=DescribeSlowLogUserHostStats
&Product=mysql
&InstanceId=cdb-c1nl9rpv
&StartTime=2020-09-21T00:00:00+00:00
&EndTime=2020-09-22T00:00:00+00:00
&<common request parameters>
```

Output Example

```
{
  "Response": {
    "TotalCount": 2,
    "UserTotalCount": 1,
    "RequestId": "e2a51350-8c9f-11eb-bc0f-c9f5ab88d057",
```

```
"Items": [  
  {  
    "UserHost": "10.3.1.1",  
    "Ratio": 50,  
    "Count": 29  
  },  
  {  
    "UserHost": "10.3.1.2",  
    "Ratio": 50,  
    "Count": 29  
  }  
],  
"UserNameItems": [  
  {  
    "UserName": "root",  
    "Ratio": 100,  
    "Count": 58  
  }  
]  
}
```

5. Developer Resources

SDK

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

- [Tencent Cloud CLI 3.0](#)

6. Error Code

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

Error Code	Description
AuthFailure	Error with CAM signature/authentication.
FailedOperation	Operation failed.
InternalError	Internal error.
InvalidParameter	Incorrect parameter.
InvalidParameterValue	Incorrect parameter value.
LimitExceeded	The quota limit is exceeded.
MissingParameter	Missing parameter.
OperationDenied	Operation denied.
OperationDenied.UserHasNoStrategy	Error with CAM authentication.
ResourceNotFound	The resource does not exist.
UnauthorizedOperation	The operation is unauthorized.
UnknownParameter	Unknown parameter.
UnsupportedOperation	Unsupported operation.

DescribeUserSqlAdvice

Last updated : 2023-10-17 10:51:53

1. API Description

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

This API is used to get SQL statement optimization suggestions. It is free of charge for a limited time and will be charged after DBbrain is commercialized.

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: DescribeUserSqlAdvice.
Version	Yes	String	Common Params . The value used for this API: 2021-05-27.
Region	No	String	Common Params . This parameter is not required for this API.
InstanceId	Yes	String	Instance ID.
SqlText	Yes	String	SQL statement.
Schema	No	String	Database name.
Product	No	String	Service type. Valid values: <code>mysql</code> (TencentDB for MySQL), <code>cynosdb</code> (TDSQL-C for MySQL), <code>dbbrain-mysql</code> (self-built MySQL). Default value: <code>mysql</code> .

3. Output Parameters

Parameter Name	Type	Description
Advices	String	SQL statement optimization suggestions, which can be parsed into JSON arrays. If there is no need for optimization, the output will be empty.
Comments	String	Notes of SQL statement optimization suggestions, which can be parsed into String arrays. If there is no need for optimization, the output will be empty.
SqlText	String	SQL statement.
Schema	String	Database name.
Tables	String	DDL information of related tables, which can be parsed into JSON arrays.
SqlPlan	String	SQL execution plan, which can be parsed into JSON arrays. If there is no need for optimization, the output will be empty.
Cost	String	Cost saving details after SQL statement optimization, which can be parsed into JSON arrays. If there is no need for optimization, the output will be empty.
RequestId	String	The unique request ID, which is returned for each request. RequestId is required for locating a problem.

4. Example

Example1 Obtaining SQL statement optimization suggestions

Input Example

```
https://dbbrain.tencentcloudapi.com/?Action=DescribeUserSqlAdvice
&InstanceId=cdp-c1nl9rpv
&SqlText=select * from t1 where id in ( ? )
&<Common request parameters>
```

Output Example

```
{
  "Response": {
    "RequestId": "e2a51350-8c9f-11eb-bc0f-c9f5ab88d057",
    "Advices": "[{\"TableName\": \"t1\", \"TableSchema\": \"test\", \"Keys\": [{\"Sql
```

```
Text\": \"alter table `test`.`t1` add index index_0(`id`);\"}}}],
\"Comments\": \"[]\",
\"Schema\": \"test\",
\"Tables\": \"[{\\\"TableName\\\": \\\"t1\\\", \\\"TableSchema\\\": \\\"test\\\", \\\"TableDDL\\\": \\\"CR
EATE TABLE `test` (\n `id` varchar(36) NOT NULL) ENGINE=InnoDB DEFAULT CHARSET=utf
f8 ROW_FORMAT=DYNAMIC\\\"}]\",
\"SqlText\": \"select * from t1 where id in ( ? )\",
\"SqlPlan\": \"{\\\"Before\\\": [{\\\"Format\\\": \\\"Table\\\", \\\"Data\\\": {\\\"Names\\\": [\\\"id\\\",
\\\"select_type\\\", \\\"table\\\", \\\"partitions\\\", \\\"type\\\", \\\"possible_keys\\\", \\\"key\\\",
\\\"key_len\\\", \\\"ref\\\", \\\"rows\\\", \\\"filtered\\\", \\\"Extra\\\"], \\\"Data\\\": [ [1, \\\"SIMPL
E\\\", \\\"t1\\\", null, \\\"ALL\\\", null, null, null, null, 1530, 10, \\\"Using where\\\"
]]}], \\\"After\\\": [{ \\\"Format\\\": \\\"Table\\\", \\\"Data\\\": {\\\"Names\\\": [\\\"id\\\", \\\"sele
ct_type\\\", \\\"table\\\", \\\"partitions\\\", \\\"type\\\", \\\"possible_keys\\\", \\\"key\\\", \\\"key
_len\\\", \\\"ref\\\", \\\"rows\\\", \\\"filtered\\\", \\\"Extra\\\"], \\\"Data\\\": [[1, \\\"SIMPLE\\\",
\\\"t1\\\", null, \\\"ref\\\", \\\"index_0\\\", \\\"index_0\\\", 1056, \\\"const\\\", 51, 100.00, nul
l]]}}]}\",
\"Cost\": \"{\\\"Before\\\": 0.1, \\\"After\\\": 0.03, \\\"Ratio\\\": 90.61}\"
}
}
```

Example2 Obtaining a suggestion that there is no need to optimize SQL statements

Input Example

```
https://dbbrain.tencentcloudapi.com/?Action=DescribeUserSqlAdvice
&InstanceId=cdb-c1nl9rpv
&SqlText=select * from t1 where id = ?
&<Common request parameters>
```

Output Example

```
{
  \"Response\": {
    \"RequestId\": \"e2a51350-8c9f-11eb-bc0f-c9f5ab88d057\",
    \"Advices\": \"\",
    \"Comments\": \"\",
    \"Schema\": \"test\",
    \"Tables\": \"[{\\\"TableName\\\": \\\"t1\\\", \\\"TableSchema\\\": \\\"test\\\", \\\"TableDDL\\\": \\\"CR
EATE TABLE `test` (\n `id` varchar(36) NOT NULL) ENGINE=InnoDB DEFAULT CHARSET=utf
f8 ROW_FORMAT=DYNAMIC\\\"}]\",
    \"SqlText\": \"select * from t1 where id in ( ? )\",
    \"SqlPlan\": \"\",
    \"Cost\": \"\"
  }
}
```

5. Developer Resources

SDK

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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
AuthFailure	Error with CAM signature/authentication.
FailedOperation	Operation failed.
InternalError	Internal error.
InvalidParameter	Incorrect parameter.
InvalidParameterValue	Incorrect parameter value.
LimitExceeded	The quota limit is exceeded.
MissingParameter	Missing parameter.
OperationDenied	Operation denied.

OperationDenied.UserHasNoStrategy	Error with CAM authentication.
ResourceNotFound	The resource does not exist.
UnauthorizedOperation	The operation is unauthorized.
UnknownParameter	Unknown parameter.
UnsupportedOperation	Unsupported operation.

DescribeSlowLogTopSqls

Last updated : 2023-10-17 10:51:53

1. API Description

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

This API is used to get and sort the top slow SQL statements in a specified time period by the aggregation mode of SQL template plus schema.

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: DescribeSlowLogTopSqls.
Version	Yes	String	Common Params . The value used for this API: 2021-05-27.
Region	No	String	Common Params . This parameter is not required for this API.
InstanceId	Yes	String	Instance ID.
StartTime	Yes	Timestamp	Start time, such as "2019-09-10 12:13:14".
EndTime	Yes	Timestamp	End time in the format of "2019-09-11 10:13:14". The interval between the end time and the start time can be up to 7 days.
SortBy	No	String	Sorting key. Valid values: <code>QueryTime</code> , <code>ExecTimes</code> , <code>RowsSent</code> , <code>LockTime</code> , <code>RowsExamined</code> . Default value: <code>QueryTime</code> .

OrderBy	No	String	Sorting order. Valid values: <code>ASC</code> (ascending), <code>DESC</code> (descending). Default value: <code>DESC</code> .
Limit	No	Integer	Number of returned results. Default value: <code>20</code> . Maximum value: <code>100</code> .
Offset	No	Integer	Offset. Default value: <code>0</code> .
SchemaList.N	No	Array of SchemaItem	Database name array.
Product	No	String	Service type. Valid values: <code>mysql</code> (TencentDB for MySQL), <code>cynosdb</code> (TDSQL-C for MySQL). Default value: <code>mysql</code> .

3. Output Parameters

Parameter Name	Type	Description
TotalCount	Integer	Number of eligible entries.
Rows	Array of SlowLogTopSqlItem	List of top slow SQL statements
RequestId	String	The unique request ID, which is returned for each request. RequestId is required for locating a problem.

4. Example

Example1 Obtaining the list of slow SQL templates

This example shows you how to obtain and sort the top slow SQL statements in a specified time period by the aggregation mode of SQL template plus schema.

Input Example

```
https://dbbrain.tencentcloudapi.com/?Action=DescribeSlowLogTopSqls
&InstanceId=test
&SortBy=QueryTime
&OrderBy=ASC
&Limit=10
&Offset=0
```

```
&StartTime=2019-01-01 00:00:00
&EndTime=2019-01-01 01:00:00
&SchemaList.0.Schema=dbName
&<common request parameters>
```

Output Example

```
{
  "Response": {
    "RequestId": "ed279d8b-a9d9-48d6-9429-e0fde000994a",
    "TotalCount": 1,
    "Rows": [
      {
        "QueryTimeMin": 0.0,
        "LockTimeMin": 0.0,
        "QueryTimeMax": 14.086705,
        "QueryTimeRatio": 0.0,
        "RowsSentRatio": 0.0,
        "RowsSentMax": 0,
        "RowsExaminedMin": 0,
        "RowsSentMin": 0,
        "SqlText": "select * from user where name='sz'",
        "Schema": "test",
        "LockTimeMax": 0.0,
        "LockTimeRatio": 0.0,
        "ExecTimes": 2,
        "LockTimeAvg": 0.0,
        "RowsExamined": 0,
        "RowsSentAvg": 0.0,
        "QueryTime": 28.17341,
        "RowsExaminedAvg": 0.0,
        "RowsExaminedMax": 0,
        "RowsSent": 0,
        "RowsExaminedRatio": 0.0,
        "QueryTimeAvg": 0.0,
        "SqlTemplate": "select * from user where name=?",
        "LockTime": 0.0,
        "Md5": "2323847233"
      }
    ]
  }
}
```

5. Developer Resources

SDK

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

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

Command Line Interface

- [Tencent Cloud CLI 3.0](#)

6. Error Code

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

Error Code	Description
AuthFailure	Error with CAM signature/authentication.
FailedOperation	Operation failed.
FailedOperation.SegmentLoading	
InternalError	Internal error.
InvalidParameter	Incorrect parameter.
InvalidParameterValue	Incorrect parameter value.
LimitExceeded	The quota limit is exceeded.
MissingParameter	Missing parameter.
OperationDenied	Operation denied.
OperationDenied.UserHasNoStrategy	Error with CAM authentication.
ResourceNotFound	The resource does not exist.

UnauthorizedOperation	The operation is unauthorized.
UnknownParameter	Unknown parameter.
UnsupportedOperation	Unsupported operation.

DescribeSlowLogs

Last updated : 2023-10-17 10:51:53

1. API Description

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

This API is used to obtain the slow log details of a SQL template in a specified time period.

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: DescribeSlowLogs.
Version	Yes	String	Common Params . The value used for this API: 2021-05-27.
Region	No	String	Common Params . This parameter is not required for this API.
Product	Yes	String	Service type. Valid values: <code>mysql</code> (TencentDB for MySQL), <code>cynosdb</code> (TDSQL-C for MySQL). Default value: <code>mysql</code> .
InstanceId	Yes	String	Instance ID
Md5	Yes	String	MD5 value of a SQL template
StartTime	Yes	Timestamp ISO8601	Start time in the format of "2019-09-10 12:13:14".
EndTime	Yes	Timestamp ISO8601	End time in the format of "2019-09-11 10:13:14". The interval between the end time and the start time can be up to 7 days.

Offset	Yes	Integer	The offset. Default value: <code>0</code> .
Limit	Yes	Integer	The number of queried items. Default value: <code>20</code> . Max value: <code>100</code> .
DB.N	No	Array of String	Database list
Key.N	No	Array of String	Keyword
User.N	No	Array of String	User
Ip.N	No	Array of String	IP
Time.N	No	Array of Integer	Duration range. The left and right borders of the range are the zeroth and first element of the array, respectively.

3. Output Parameters

Parameter Name	Type	Description
TotalCount	Integer	Number of eligible entries.
Rows	Array of SlowLogInfoItem	Slow log details
RequestId	String	The unique request ID, which is returned for each request. RequestId is required for locating a problem.

4. Example

Example1 Querying slow log details in a specified time period by SQL template

This example shows you how to query slow log details in a specified time period by SQL template.

Input Example

```
https://dbbrain.tencentcloudapi.com/?Action= DescribeSlowLogs
&Product=mysql
```

```
&InstanceId=test
&Md5=12323242323
&Limit=10
&Offset=0
&StartTime=2020-09-22T00:00:00+00:00
&EndTime=2020-09-22T00:00:00+00:00
&<Common request parameters>
```

Output Example

```
{
  "Response": {
    "TotalCount": 2,
    "RequestId": "ea7afb20-cf8d-11ed-9231-5be1865f5f0a",
    "Rows": [
      {
        "LockTime": 0,
        "UserHost": "169.254.128.9",
        "RowsSent": 1,
        "UserName": "root",
        "Database": "information_schema",
        "SqlText": "/* dbbrain user mark */select SLEEP(10)",
        "QueryTime": 10,
        "RowsExamined": 0,
        "Timestamp": "2023-03-31 10:47:35"
      },
      {
        "LockTime": 0,
        "UserHost": "169.254.128.9",
        "RowsSent": 1,
        "UserName": "root",
        "Database": "information_schema",
        "SqlText": "/* dbbrain user mark */select SLEEP(8)",
        "QueryTime": 8,
        "RowsExamined": 0,
        "Timestamp": "2023-03-31 10:47:45"
      }
    ]
  }
}
```

5. Developer Resources

SDK

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

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

Command Line Interface

- [Tencent Cloud CLI 3.0](#)

6. Error Code

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

Error Code	Description
AuthFailure	Error with CAM signature/authentication.
FailedOperation	Operation failed.
InternalError	Internal error.
InvalidParameter	Incorrect parameter.
InvalidParameterValue	Incorrect parameter value.
LimitExceeded	The quota limit is exceeded.
MissingParameter	Missing parameter.
OperationDenied	Operation denied.
OperationDenied.UserHasNoStrategy	Error with CAM authentication.
ResourceNotFound	The resource does not exist.
UnauthorizedOperation	The operation is unauthorized.

UnknownParameter	Unknown parameter.
UnsupportedOperation	Unsupported operation.

Security Audit APIs

DescribeSecurityAuditLogExportTasks

Last updated : 2023-10-17 10:51:55

1. API Description

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

This API is used to query the list of security audit log export tasks.

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: DescribeSecurityAuditLogExportTasks.
Version	Yes	String	Common Params . The value used for this API: 2021-05-27.
Region	No	String	Common Params . This parameter is not required for this API.
SecAuditGroupId	Yes	String	Security audit group ID.
Product	Yes	String	Service type. Valid value: <code>mysql</code> (TencentDB for MySQL).
AsyncRequestIds.N	No	Array of Integer	List of log export task IDs.
Offset	No	Integer	Offset. Default value: <code>0</code> .

Limit	No	Integer	Number of returned results. Default value: 20 . Maximum value: 100 .
-------	----	---------	--

3. Output Parameters

Parameter Name	Type	Description
Tasks	Array of SecLogExportTaskInfo	List of security audit log export tasks.
TotalCount	Integer	Total numbers of security audit log export tasks.
RequestId	String	The unique request ID, which is returned for each request. RequestId is required for locating a problem.

4. Example

Example1 Querying the list of security audit log export tasks

Input Example

```
https://dbbrain.tencentcloudapi.com/?Action=DescribeSecurityAuditLogExportTasks
&SecAuditGroupId=sag-01z37k3f
&Product=mysql
&<Common request parameters>
```

Output Example

```
{
  "Response": {
    "TotalCount": 1,
    "Tasks": [
      {
        "Status": "finished",
        "LogStartTime": "2021-01-21 00:00:00",
        "Progress": 100,
        "AsyncRequestId": 1,
        "DangerLevels": [
          1,
          2,
```



```
3
],
"EndTime": "2021-01-22 08:39:22",
"CreateTime": "2021-01-22 08:39:21",
"StartTime": "2021-01-22 08:39:22",
"LogEndTime": "2021-01-21 23:59:59",
"TotalSize": 1
}
],
"RequestId": "5fdab910-5c9e-11eb-a610-8717ee1b1000"
}
}
```

5. Developer Resources

SDK

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

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

Command Line Interface

- [Tencent Cloud CLI 3.0](#)

6. Error Code

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

Error Code	Description
AuthFailure	Error with CAM signature/authentication.

FailedOperation	Operation failed.
InternalError	Internal error.
InvalidParameter	Incorrect parameter.
InvalidParameterValue	Incorrect parameter value.
LimitExceeded	The quota limit is exceeded.
MissingParameter	Missing parameter.
OperationDenied	Operation denied.
OperationDenied.UserHasNoStrategy	Error with CAM authentication.
ResourceNotFound	The resource does not exist.
UnauthorizedOperation	The operation is unauthorized.
UnknownParameter	Unknown parameter.
UnsupportedOperation	Unsupported operation.

DescribeSecurityAuditLogDownloadUrls

Last updated : 2023-10-17 10:51:55

1. API Description

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

This API is used to query the download link of a security audit log export file. Currently, log file download only provides a Tencent Cloud private network address. Download it by using a CVM instance in the Guangzhou region.

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: DescribeSecurityAuditLogDownloadUrls.
Version	Yes	String	Common Params . The value used for this API: 2021-05-27.
Region	No	String	Common Params . This parameter is not required for this API.
SecAuditGroupId	Yes	String	Security audit group ID.
AsyncRequestId	Yes	Integer	Async task Id.
Product	Yes	String	Service type. Valid value: <code>mysql</code> (TencentDB for MySQL).

3. Output Parameters

--	--	--

Parameter Name	Type	Description
Urls	Array of String	List of COS URLs of the export results. If the result set is large, it may be divided into multiple URLs for download.
RequestId	String	The unique request ID, which is returned for each request. RequestId is required for locating a problem.

4. Example

Example1 Querying the download link of a security audit log export file

Input Example

```
https://dbbrain.tencentcloudapi.com/?Action=DescribeSecurityAuditLogDownloadUrls
&SecAuditGroupId=sag-01z37k3f
&Product=mysql
&AsyncRequestId=1
&<Common request parameters>
```

Output Example

```
{
  "Response": {
    "RequestId": "6ad536b0-5ee2-11eb-bc9a-9357e9eb1000",
    "Urls": [
      "https://xxx"
    ]
  }
}
```

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

Command Line Interface

- [Tencent Cloud CLI 3.0](#)

6. Error Code

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

Error Code	Description
AuthFailure	Error with CAM signature/authentication.
FailedOperation	Operation failed.
InternalError	Internal error.
InvalidParameter	Incorrect parameter.
InvalidParameterValue	Incorrect parameter value.
LimitExceeded	The quota limit is exceeded.
MissingParameter	Missing parameter.
OperationDenied	Operation denied.
OperationDenied.UserHasNoStrategy	Error with CAM authentication.
ResourceNotFound	The resource does not exist.
UnauthorizedOperation	The operation is unauthorized.
UnknownParameter	Unknown parameter.
UnsupportedOperation	Unsupported operation.

DeleteSecurityAuditLogExportTasks

Last updated : 2023-10-17 10:51:55

1. API Description

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

This API is used to delete a security audit log export task.

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

We recommend you to use API Explorer

[Try it](#)

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

2. Input Parameters

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

Parameter Name	Required	Type	Description
Action	Yes	String	Common Params . The value used for this API: DeleteSecurityAuditLogExportTasks.
Version	Yes	String	Common Params . The value used for this API: 2021-05-27.
Region	No	String	Common Params . This parameter is not required for this API.
SecAuditGroupId	Yes	String	Security audit group ID.
AsyncRequestIds.N	Yes	Array of Integer	List of log export task IDs. This API will ignore task IDs that do not exist or have been deleted.
Product	Yes	String	Service type. Valid value: <code>mysql</code> (TencentDB for MySQL).

3. Output Parameters

--	--	--

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

4. Example

Example1 Deleting a security audit log export task

Input Example

```
https://dbbrain.tencentcloudapi.com/?Action=DeleteSecurityAuditLogExportTasks
&SecAuditGroupId=sag-01z37k3f
&AsyncRequestIds.0=1
&Product=mysql
&<Common request parameters>
```

Output Example

```
{
  "Response": {
    "RequestId": "5fdab910-5c9e-11eb-a610-8717ee1b1000"
  }
}
```

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

Command Line Interface

- [Tencent Cloud CLI 3.0](#)

6. Error Code

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

Error Code	Description
AuthFailure	Error with CAM signature/authentication.
FailedOperation	Operation failed.
InternalError	Internal error.
InvalidParameter	Incorrect parameter.
InvalidParameterValue	Incorrect parameter value.
LimitExceeded	The quota limit is exceeded.
MissingParameter	Missing parameter.
OperationDenied	Operation denied.
OperationDenied.UserHasNoStrategy	Error with CAM authentication.
ResourceNotFound	The resource does not exist.
UnauthorizedOperation	The operation is unauthorized.
UnknownParameter	Unknown parameter.
UnsupportedOperation	Unsupported operation.

CreateSecurityAuditLogExportTask

Last updated : 2023-10-17 10:51:55

1. API Description

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

This API is used to create a security audit log export task.

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

We recommend you to use API Explorer

[Try it](#)

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

2. Input Parameters

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

Parameter Name	Required	Type	Description
Action	Yes	String	Common Params . The value used for this API: CreateSecurityAuditLogExportTask.
Version	Yes	String	Common Params . The value used for this API: 2021-05-27.
Region	No	String	Common Params . This parameter is not required for this API.
SecAuditGroupId	Yes	String	Security audit group ID.
StartTime	Yes	Timestamp ISO8601	Exported log start time, such as 2020-12-28 00:00:00.
EndTime	Yes	Timestamp ISO8601	Exported log end time, such as 2020-12-28 01:00:00.
Product	Yes	String	Service type. Valid value: <code>mysql</code> (TencentDB for MySQL).
DangerLevels.N	No	Array of Integer	List of log risk levels. Valid values: <code>0</code> (no risk), <code>1</code> (low risk), <code>2</code> (medium risk), <code>3</code> (high risk).

3. Output Parameters

Parameter Name	Type	Description
AsyncRequestId	Integer	Log export task Id.
RequestId	String	The unique request ID, which is returned for each request. RequestId is required for locating a problem.

4. Example

Example1 Creating a security audit log export task

Input Example

```
https://dbbrain.tencentcloudapi.com/?Action=CreateSecurityAuditLogExportTask
&SecAuditGroupId=sag-01z37k3f
&Product=mysql
&StartTime=2019-01-01T00:00:00+00:00
&EndTime=2019-01-02T00:00:00+00:00
&DangerLevels.0=1
&DangerLevels.1=2
&DangerLevels.2=3
&<Common request parameters>
```

Output Example

```
{
  "Response": {
    "AsyncRequestId": 1,
    "RequestId": "0c4959d0-5abb-11eb-862f-653dd83af000"
  }
}
```

5. Developer Resources

SDK

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

Command Line Interface

- [Tencent Cloud CLI 3.0](#)

6. Error Code

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

Error Code	Description
AuthFailure	Error with CAM signature/authentication.
FailedOperation	Operation failed.
InternalError	Internal error.
InvalidParameter	Incorrect parameter.
InvalidParameterValue	Incorrect parameter value.
LimitExceeded	The quota limit is exceeded.
MissingParameter	Missing parameter.
OperationDenied	Operation denied.
OperationDenied.UserHasNoStrategy	Error with CAM authentication.
ResourceNotFound	The resource does not exist.
UnauthorizedOperation	The operation is unauthorized.
UnknownParameter	Unknown parameter.

UnsupportedOperation	Unsupported operation.
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Database Audit APIs

CloseAuditService

Last updated : 2023-10-17 10:51:59

1. API Description

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

This API is used to disable database audit as needed.

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: CloseAuditService.
Version	Yes	String	Common Params . The value used for this API: 2021-05-27.
Region	No	String	Common Params . This parameter is not required for this API.
Product	Yes	String	Service type. Valid values: <code>dcdb</code> (TDSQL for MySQL), <code>mariadb</code> (TencentDB for MariaDB).
NodeRequestType	Yes	String	Use the value of <code>u200cProduct</code> for this parameter, such as <code>dcdb</code> and <code>mariadb</code> .
InstanceId	Yes	String	Instance ID

3. Output Parameters

Parameter Name	Type	Description
TaskId	Integer	If 0 is returned, audit is successfully disabled; otherwise, an exception will be returned, indicating that audit has failed to be disabled.
RequestId	String	The unique request ID, which is returned for each request. RequestId is required for locating a problem.

4. Example

Example1 Disabling database audit

This example shows you how to disable database audit as needed.

Input Example

```
https://dbbrain.tencentcloudapi.com/?Action= DescribeAuditInstanceList
&Product=dcdb
&NodeRequestType=dcdb
&InstanceId=tdsqlsdfsd
&<Common request parameters>
```

Output Example

```
{
  "Response": {
    "TaskId": 0,
    "RequestId": "b39db780-0b49-11ee-8525-17d65d16bdaf"
  }
}
```

5. Developer Resources

SDK

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

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

Command Line Interface

- [Tencent Cloud CLI 3.0](#)

6. Error Code

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

Error Code	Description
AuthFailure	Error with CAM signature/authentication.
FailedOperation	Operation failed.
InternalError	Internal error.
InvalidParameter	Incorrect parameter.
InvalidParameterValue	Incorrect parameter value.
LimitExceeded	The quota limit is exceeded.
MissingParameter	Missing parameter.
OperationDenied	Operation denied.
OperationDenied.UserHasNoStrategy	Error with CAM authentication.
ResourceNotFound	The resource does not exist.
UnauthorizedOperation	The operation is unauthorized.
UnknownParameter	Unknown parameter.

ModifyAuditService

Last updated : 2023-10-17 10:51:59

1. API Description

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

u200cThis API is used to modify audit configurations such as the frequent access storage period.

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: ModifyAuditService.
Version	Yes	String	Common Params . The value used for this API: 2021-05-27.
Region	No	String	Common Params . This parameter is not required for this API.
Product	Yes	String	Service type. Valid values: <code>dcdb</code> (TDSQL for MySQL), <code>mariadb</code> (TencentDB for MariaDB).
NodeRequestType	Yes	String	Use the value of <code>u200cProduct</code> for this parameter, such as <code>dcdb</code> and <code>mariadb</code> .
InstanceId	Yes	String	Instance ID
LogExpireDay	Yes	Integer	Total log retention period in days. Valid values: <code>7</code> , <code>30</code> , <code>90</code> , <code>180</code> , <code>365</code> , <code>1095</code> , <code>1825</code> .
HotLogExpireDay	Yes	Integer	Storage period of frequently accessed logs in days. Valid values:

7 , 30 , 90 , 180 , 365 , 1095 , 1825 .

3. Output Parameters

Parameter Name	Type	Description
Success	Integer	Audit configuration modification result. If 0 is returned, the modification is successful; otherwise, an exception will be returned, indicating that the modification failed.
RequestId	String	The unique request ID, which is returned for each request. RequestId is required for locating a problem.

4. Example

Example1 Modifying audit configurations

This example shows you how to modify audit configurations such as the retention period of frequently accessed logs.

Input Example

```
https://dbbrain.tencentcloudapi.com/?Action=ModifyAuditService
&Product=dcdb
&NodeRequestType=dcdb
&InstanceId=tdsqlsertsd
&LogExpireDay=30
&HotLogExpireDay=7
&<Common request parameters>
```

Output Example

```
{
  "Response": {
    "Success": 0,
    "RequestId": "b39db780-0b49-11ee-8525-17d65d16bdaf"
  }
}
```

5. Developer Resources

SDK

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

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

Command Line Interface

- [Tencent Cloud CLI 3.0](#)

6. Error Code

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

Error Code	Description
AuthFailure	Error with CAM signature/authentication.
FailedOperation	Operation failed.
InternalError	Internal error.
InvalidParameter	Incorrect parameter.
InvalidParameterValue	Incorrect parameter value.
LimitExceeded	The quota limit is exceeded.
MissingParameter	Missing parameter.
OperationDenied	Operation denied.
OperationDenied.UserHasNoStrategy	Error with CAM authentication.

ResourceNotFound	The resource does not exist.
UnauthorizedOperation	The operation is unauthorized.
UnknownParameter	Unknown parameter.

OpenAuditService

Last updated : 2023-10-17 10:51:58

1. API Description

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

This API is used to enable database audit.

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: OpenAuditService.
Version	Yes	String	Common Params . The value used for this API: 2021-05-27.
Region	No	String	Common Params . This parameter is not required for this API.
Product	Yes	String	Service type. Valid values: <code>dcdb</code> (TDSQL for MySQL), <code>mariadb</code> (TencentDB for MariaDB).
NodeRequestType	Yes	String	Use the value of <code>u200cProduct</code> for this parameter, such as <code>dcdb</code> and <code>mariadb</code> .
InstanceId	Yes	String	Instance ID
LogExpireDay	Yes	Integer	Total log retention period in days. Valid values: <code>7</code> , <code>30</code> , <code>90</code> , <code>180</code> , <code>365</code> , <code>1095</code> , <code>1825</code> .
HotLogExpireDay	Yes	Integer	Storage period of frequently accessed logs in days. Valid values:

7 , 30 , 90 , 180 , 365 , 1095 , 1825 .

3. Output Parameters

Parameter Name	Type	Description
TaskId	Integer	Audit is successfully enabled only when the value of this parameter is 0 .
RequestId	String	The unique request ID, which is returned for each request. RequestId is required for locating a problem.

4. Example

Example1 Enabling database audit

This example shows you how to enable database audit. After it is enabled, audit logs will be reported.

Input Example

```
https://dbbrain.tencentcloudapi.com/?Action=OpenAuditService
&Product=dcdb
&NodeRequestType=dcdb
&InstanceId=tdsqlsertsd
&LogExpireDay=30
&HotLogExpireDay=7
&<Common request parameters>
```

Output Example

```
{
  "Response": {
    "TaskId": 0,
    "RequestId": "b39db780-0b49-11ee-8525-17d65d16bdaf"
  }
}
```

5. Developer Resources

SDK

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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
AuthFailure	Error with CAM signature/authentication.
FailedOperation	Operation failed.
InternalError	Internal error.
InvalidParameter	Incorrect parameter.
InvalidParameterValue	Incorrect parameter value.
LimitExceeded	The quota limit is exceeded.
MissingParameter	Missing parameter.
OperationDenied	Operation denied.
OperationDenied.UserHasNoStrategy	Error with CAM authentication.
ResourceNotFound	The resource does not exist.
UnauthorizedOperation	The operation is unauthorized.

UnknownParameter	Unknown parameter.
UnsupportedOperation	Unsupported operation.

DescribeAuditInstanceList

Last updated : 2024-07-26 11:07:58

1. API Description

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

This API is used to query the instance list.

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

We recommend you to use API Explorer

[Try it](#)

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

2. Input Parameters

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

Parameter Name	Required	Type	Description
Action	Yes	String	Common Params . The value used for this API: DescribeAuditInstanceList.
Version	Yes	String	Common Params . The value used for this API: 2021-05-27.
Region	No	String	Common Params . This parameter is not required for this API.
Product	Yes	String	Service type. Valid values: <code>dcdb</code> (TDSQL for MySQL), <code>mariadb</code> (TencentDB for MariaDB).
NodeRequestType	Yes	String	Use the value of <code>Product</code> for this parameter, such as <code>dcdb</code> and <code>mariadb</code> .
AuditSwitch	No	Integer	Audit status. Valid values: <code>0</code> (Not enabled), <code>1</code> (Enabled). Default value: <code>0</code> .
Offset	No	Integer	The offset. Default value: <code>0</code> .

Limit	No	Integer	The number of queried items. Default value: 20 . Max value: 100 .
Filters.N	No	Array of AuditInstanceFilter	Filters for querying instances

3. Output Parameters

Parameter Name	Type	Description
TotalCount	Integer	The number of eligible instances. Note: This field may return <code>null</code> , indicating that no valid values can be obtained.
Items	Array of AuditInstance	Instance details
RequestId	String	The unique request ID, generated by the server, will be returned for every request (if the request fails to reach the server for other reasons, the request will not obtain a RequestId). RequestId is required for locating a problem.

4. Example

Example1 Querying the instance list

This example shows you how to query the list of instances for which to enable audit.

Input Example

```
https://dbbrain.tencentcloudapi.com/?Action= DescribeAuditInstanceList
&Product=dcdb
&NodeRequestType=dcdb
&AuditSwitch=0
&Offset=0
&Limit=50
&<Common request parameters>
```

Output Example

```
{
  "Response": {
    "TotalCount": 1,
    "RequestId": "b39db780-0b49-11ee-8525-17d65d16bdaf",
    "Items": [
      {
        "BillingConfirmed": 1,
        "AuditStatus": "ON",
        "ColdLogExpireDay": 23,
        "InstanceId": "tdsql-lq5ue8p7",
        "LogExpireDay": 30,
        "CreateTime": "2023-06-08 19:48:19",
        "HotLogSize": 0,
        "HotLogExpireDay": 7,
        "BillingAmount": 0,
        "ColdLogSize": 0,
        "InstanceInfo": {
          "InstanceName": "DBbrainTest_fanzhi_MySQL8.0",
          "AuditStatus": 1,
          "AppId": 251009273,
          "InstanceId": "tdsql-lq5ue8p7",
          "ResourceTags": [
            "abc"
          ],
          "ProjectId": 0,
          "Region": "ap-guangzhou"
        }
      }
    ]
  }
}
```

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 Go](#)

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

Command Line Interface

- [Tencent Cloud CLI 3.0](#)

6. Error Code

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

Error Code	Description
AuthFailure	Error with CAM signature/authentication.
FailedOperation	Operation failed.
InternalError	Internal error.
InvalidParameter	Incorrect parameter.
InvalidParameterValue	Incorrect parameter value.
LimitExceeded	The quota limit is exceeded.
MissingParameter	Missing parameter.
OperationDenied	Operation denied.
OperationDenied.UserHasNoStrategy	Error with CAM authentication.
ResourceNotFound	The resource does not exist.
UnauthorizedOperation	The operation is unauthorized.
UnknownParameter	Unknown parameter.
UnsupportedOperation	Unsupported operation.

Other APIs

CreateRedisBigKeyAnalysisTask

Last updated : 2023-10-17 10:51:56

1. API Description

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

This API is used to create an ad hoc big key analysis task for Redis instances. By default, there can only be up to five running ad hoc analysis tasks.

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: CreateRedisBigKeyAnalysisTask.
Version	Yes	String	Common Params . The value used for this API: 2021-05-27.
Region	No	String	Common Params . This parameter is not required for this API.
InstanceId	Yes	String	Instance ID
Product	Yes	String	Service type. Valid value: <code>redis</code> (TencentDB for Redis).
ShardIds.N	No	Array of Integer	The list of the serial numbers of shard nodes. When the list is empty, all shard nodes will be selected.
KeyDelimiterList.N	No	Array	The list of separators of top key prefixes.

of
String

Currently, the following separators are supported: ",", ";", ":", "_", "-", "+", "@", "=", "|", "#", ".". When the list is empty, all separators will be selected by default.

3. Output Parameters

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

4. Example

Example1 Creating an ad hoc big key analysis task for Redis instances

This example shows you how to create an ad hoc big key analysis task for Redis instances.

Input Example

```
https://dbbrain.tencentcloudapi.com/?Action=CreateRedisBigKeyAnalysisTask
&InstanceId=cdb-test
&Product=redis
&<Common request parameters>
```

Output Example

```
{
  "Response": {
    "RequestId": "24665720-8c93-11eb-bee6-e98cea0e6794",
    "AsyncRequestId": 8011
  }
}
```

5. Developer Resources

SDK

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

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

Command Line Interface

- [Tencent Cloud CLI 3.0](#)

6. Error Code

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

Error Code	Description
AuthFailure	Error with CAM signature/authentication.
FailedOperation	Operation failed.
InvalidParameterValue	Incorrect parameter value.
MissingParameter	Missing parameter.
OperationDenied.UserHasNoStrategy	Error with CAM authentication.
UnknownParameter	Unknown parameter.
UnsupportedOperation	Unsupported operation.

ModifyDiagDBInstanceConf

Last updated : 2023-10-17 10:51:55

1. API Description

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

This API is used to enable/disable instance inspection.

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: ModifyDiagDBInstanceConf.
Version	Yes	String	Common Params . The value used for this API: 2021-05-27.
Region	No	String	Common Params . This parameter is not required for this API.
InstanceConfs	Yes	InstanceConfs	Instance configuration, including inspection and overview switch.
Regions	Yes	String	Target regions of the request. If the value is <code>All</code> , it is applied to all regions.
Product	Yes	String	Service type. Valid values: <code>mysql</code> (TencentDB for MySQL), <code>cynosdb</code> (TDSQL-C for MySQL).
InstanceIds.N	No	Array of String	ID of the instance to modify.

3. Output Parameters

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

4. Example

Example1 Modifying the inspection configuration of an instance

Input Example

```
https://dbbrain.tencentcloudapi.com/?Action=ModifyDiagDBInstanceConf
&InstanceIds.0=cdb-fyclrp7r
&InstanceConfs.DailyInspection=Yes
&Regions=All
&Product=mysql
&<Common request parameters>
```

Output Example

```
{
  "Response": {
    "RequestId": "77db16d7-bbe8-48a7-868b-ed776a96f1ab"
  }
}
```

5. Developer Resources

SDK

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

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

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

Command Line Interface

- [Tencent Cloud CLI 3.0](#)

6. Error Code

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

Error Code	Description
AuthFailure	Error with CAM signature/authentication.
FailedOperation	Operation failed.
InternalError	Internal error.
InvalidParameter	Incorrect parameter.
InvalidParameterValue	Incorrect parameter value.
LimitExceeded	The quota limit is exceeded.
MissingParameter	Missing parameter.
OperationDenied	Operation denied.
OperationDenied.UserHasNoStrategy	Error with CAM authentication.
ResourceNotFound	The resource does not exist.
UnauthorizedOperation	The operation is unauthorized.
UnknownParameter	Unknown parameter.
UnsupportedOperation	Unsupported operation.

DescribeHealthScore

Last updated : 2023-10-17 10:51:56

1. API Description

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

This API is used to get the health score and deduction for exceptions in the specified time period (30 minutes) based on the instance ID.

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

We recommend you to use API Explorer

[Try it](#)

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

2. Input Parameters

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

Parameter Name	Required	Type	Description
Action	Yes	String	Common Params . The value used for this API: DescribeHealthScore.
Version	Yes	String	Common Params . The value used for this API: 2021-05-27.
Region	No	String	Common Params . This parameter is not required for this API.
InstanceId	Yes	String	Instance ID for which to get the health score.
Time	Yes	Timestamp ISO8601	Time to get the health score in the format of <code>2019-09-10 12:13:14</code> .
Product	Yes	String	Service type. Valid values: <code>mysql</code> (TencentDB for MySQL), <code>cynosdb</code> (TDSQL-C for MySQL). Default value: <code>mysql</code> .

3. Output Parameters

Parameter Name	Type	Description
Data	HealthScoreInfo	Health score and deduction for exceptions.
RequestId	String	The unique request ID, which is returned for each request. RequestId is required for locating a problem.

4. Example

Example1 Requesting the health score

Input Example

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

{
  "InstanceId": "cdb-8jawylhf",
  "Product": "mysql",
  "Time": "2021-02-01T14:30:00+00:00"
}
```

Output Example

```
{
  "Response": {
    "RequestId": "0736b315-a9be-4991-92e6-28eccf3d31e3",
    "Data": {
      "IssueTypes": [
        {
          "TotalCount": 0,
          "Events": [],
          "IssueType": "AVAILABILITY"
        },
        {
          "TotalCount": 0,
          "Events": []
        }
      ]
    }
  }
}
```

```
"IssueType": "MAINTAINABILITY"
},
{
  "TotalCount": 0,
  "Events": [],
  "IssueType": "PERFORMANCE"
},
{
  "TotalCount": 0,
  "Events": [],
  "IssueType": "RELIABILITY"
}
],
"HealthScore": 100,
"EventsTotalCount": 0,
"HealthLevel": "HEALTH"
}
}
}
```

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
AuthFailure	Error with CAM signature/authentication.
FailedOperation	Operation failed.
InternalError	Internal error.
InvalidParameter	Incorrect parameter.
InvalidParameterValue	Incorrect parameter value.
LimitExceeded	The quota limit is exceeded.
MissingParameter	Missing parameter.
OperationDenied	Operation denied.
OperationDenied.UserHasNoStrategy	Error with CAM authentication.
RequestLimitExceeded	The number of requests exceeds the frequency limit.
ResourceNotFound	The resource does not exist.
UnauthorizedOperation	The operation is unauthorized.
UnknownParameter	Unknown parameter.
UnsupportedOperation	Unsupported operation.

DescribeDiagDBInstances

Last updated : 2023-10-17 10:51:56

1. API Description

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

This API is used to get the instance information list. Please always select Guangzhou for `Region` .

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: DescribeDiagDBInstances.
Version	Yes	String	Common Params . The value used for this API: 2021-05-27.
Region	No	String	Common Params . This parameter is not required for this API.
IsSupported	Yes	Boolean	Whether it is an instance supported by DBbrain. It is fixed to <code>true</code> .
Product	Yes	String	Service type. Valid values: mysql (TencentDB for MySQL), cynosdb (TDSQL-C for MySQL). Default value: mysql.
Offset	Yes	Integer	Pagination parameter indicating the offset.
Limit	Yes	Integer	Pagination parameter. Maximum value: 100.
InstanceNames.N	No	Array of String	Query by instance name.

InstanceIds.N	No	Array of String	Query by instance ID.
Regions.N	No	Array of String	Query by region.

3. Output Parameters

Parameter Name	Type	Description
TotalCount	Integer	Total number of instances.
DbScanStatus	Integer	Status of all instance inspection. 0: all instance inspection enabled, 1: all instance inspection disabled.
Items	Array of InstanceInfo	Instance information.
RequestId	String	The unique request ID, which is returned for each request. RequestId is required for locating a problem.

4. Example

Example1 Obtaining instance information list

This example shows you how to obtain the instance information list. You can query instance information by instance ID, instance name, and region.

Input Example

```
https://dbbrain.tencentcloudapi.com/?Action=DescribeDiagDBInstances
&IsSupported=true
&Offset=0
&Limit=50
&Product=mysql
&<Common request parameters>
```

Output Example

```
{
  "Response": {
    "TotalCount": 2,
    "DbScanStatus": 1,
    "Items": [
      {
        "GroupName": "Group of four regions",
        "EventCount": 0,
        "Memory": 4000,
        "Product": "MySQL",
        "Cpu": 2,
        "Source": "TENCENT_CLOUD",
        "UniqSubnetId": "subnet-test",
        "DeployMode": "CUSTOM",
        "InstanceType": 1,
        "AuditRunningStatus": "normal",
        "Status": 1,
        "EngineVersion": "5.6",
        "InstanceId": "cdb-test",
        "Vport": 63492,
        "InitFlag": 1,
        "TaskStatus": 0,
        "UniqVpcId": "vpc-fstest",
        "GroupId": "dg-0ttest",
        "InstanceName": "Long-term monitoring",
        "HealthScore": 100,
        "InstanceConf": {
          "OverviewDisplay": "Yes",
          "DailyInspection": "Yes"
        },
        "AuditPolicyStatus": "UNBOUND",
        "Volume": 100,
        "DeadlineTime": "2021-02-25 16:33:26",
        "SecAuditStatus": "ON",
        "Region": "ap-guangzhou",
        "Vip": "10.5.0.9",
        "IsSupported": true
      }
    ],
    "RequestId": "b2d08895-1cfe-48bc-b7f7-87fd7cb5d6f1"
  }
}
```

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

Command Line Interface

- [Tencent Cloud CLI 3.0](#)

6. Error Code

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

Error Code	Description
AuthFailure	Error with CAM signature/authentication.
FailedOperation	Operation failed.
InternalError	Internal error.
InvalidParameter	Incorrect parameter.
InvalidParameterValue	Incorrect parameter value.
LimitExceeded	The quota limit is exceeded.
MissingParameter	Missing parameter.
OperationDenied	Operation denied.
OperationDenied.UserHasNoStrategy	Error with CAM authentication.
RequestLimitExceeded	The number of requests exceeds the frequency limit.
ResourceNotFound	The resource does not exist.

UnauthorizedOperation	The operation is unauthorized.
UnknownParameter	Unknown parameter.
UnsupportedOperation	Unsupported operation.

DescribeMySqlProcessList

Last updated : 2023-10-17 10:51:55

1. API Description

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

This API is used to query the real-time thread list of a relational database.

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: DescribeMySqlProcessList.
Version	Yes	String	Common Params . The value used for this API: 2021-05-27.
Region	No	String	Common Params . This parameter is not required for this API.
InstanceId	Yes	String	Instance ID.
ID	No	Integer	Thread ID, which is used to filter the thread list.
User	No	String	Thread operation account name, which is used to filter the thread list.
Host	No	String	Thread operation host address, which is used to filter the thread list.
DB	No	String	Thread operation database, which is used to filter the thread list.
State	No	String	Thread operation status, which is used to filter the thread list.

Command	No	String	Thread execution type, which is used to filter the thread list.
Time	No	Integer	Minimum operation duration of the thread in seconds, which is used to filter the list of threads whose operation duration is greater than this value.
Info	No	String	Thread operation statement, which is used to filter the thread list.
Limit	No	Integer	Number of returned results. Default value: 20.
Product	No	String	Service type. Valid values: mysql (TencentDB for MySQL), cynosdb (TDSQL-C for MySQL). Default value: mysql.

3. Output Parameters

Parameter Name	Type	Description
ProcessList	Array of MySQLProcess	List of real-time threads.
RequestId	String	The unique request ID, which is returned for each request. RequestId is required for locating a problem.

4. Example

Example1 Querying the list of real-time threads

Input Example

```
https://dbbrain.tencentcloudapi.com/?Action=DescribeMySQLProcessList
&Product=mysql
&InstanceId=cdb-test
&User=root
&<Common request parameters>
```

Output Example

```
{
  "Response": {
    "RequestId": "24665720-8c93-11eb-bee6-e98cea0e6794",
    "ProcessList": [
```

```
{
  "Host": "127.0.0.1:42036",
  "State": "",
  "Command": "Sleep",
  "Time": "1179",
  "ID": "171588317",
  "User": "root",
  "Info": "",
  "DB": "test"
}
```

5. Developer Resources

SDK

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

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

Command Line Interface

- [Tencent Cloud CLI 3.0](#)

6. Error Code

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

Error Code	Description
AuthFailure	Error with CAM signature/authentication.

FailedOperation	Operation failed.
InternalError	Internal error.
InvalidParameter	Incorrect parameter.
InvalidParameterValue	Incorrect parameter value.
LimitExceeded	The quota limit is exceeded.
MissingParameter	Missing parameter.
OperationDenied	Operation denied.
OperationDenied.UserHasNoStrategy	Error with CAM authentication.
ResourceNotFound	The resource does not exist.
UnauthorizedOperation	The operation is unauthorized.
UnknownParameter	Unknown parameter.
UnsupportedOperation	Unsupported operation.

Data Types

Last updated : 2024-07-26 11:08:00

AuditInstance

Instance details

Used by actions: DescribeAuditInstanceList.

Name	Type	Description
AuditStatus	String	Audit status. Valid values: <code>ON</code> (Enabled), <code>OFF</code> (Not enabled).
BillingAmount	Integer	Audit log size. This parameter is only used for the free trial edition of Database Audit.
BillingConfirmed	Integer	Billing confirmation status. Valid values: <code>0</code> (Unconfirmed), <code>1</code> (Confirmed).
ColdLogExpireDay	Integer	Infrequent access storage period
ColdLogSize	Integer	Storage size of infrequently accessed logs in MB
HotLogExpireDay	Integer	Storage period of frequently accessed logs in days
HotLogSize	Integer	Storage size of frequently accessed logs in MB
InstanceId	String	Instance ID
LogExpireDay	Integer	Log retention period in days, which is the sum of the frequent and infrequent access storage periods.
CreateTime	String	Instance creation time
InstanceInfo	AuditInstanceInfo	Instance details

AuditInstanceFilter

Query condition of the instance list

Used by actions: DescribeAuditInstanceList.

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

Name	String	Yes	Filter name
Values	Array of String	Yes	Filter value

AuditInstanceInfo

Instance details

Used by actions: DescribeAuditInstanceList.

Name	Type	Description
Appld	Integer	appld
AuditStatus	Integer	Audit status. Valid values: <code>0</code> (Not enabled), <code>1</code> (Enabled).
InstanceId	String	Instance ID
InstanceName	String	Instance name
ProjectId	Integer	Project ID
Region	String	The region where the instance resides
ResourceTags	Array of String	Resource tags

ContactItem

Recipient description.

Used by actions: DescribeAllUserContact.

Name	Type	Description
Id	Integer	Recipient ID.
Name	String	Recipient name.
Mail	String	Recipient email.

DiagHistoryEventItem

Instance diagnosis event

Used by actions: DescribeDBDiagEvents, DescribeDBDiagHistory.

Name	Type	Description
DiagType	String	Diagnosis type.
EndTime	Timestamp	End time.
StartTime	Timestamp	Start time.
EventId	Integer	Unique event ID.
Severity	Integer	Severity, which can be divided into 5 levels: 1: fatal, 2: severe, 3: warning, 4: notice, 5: healthy.
Outline	String	Diagnosis summary.
DiagItem	String	Diagnosis item description.
InstanceId	String	Instance ID.
Metric	String	Reserved field. Note: this field may return null, indicating that no valid values can be obtained.
Region	String	Region.

EventInfo

Exception information.

Used by actions: DescribeHealthScore.

Name	Type	Description
EventId	Integer	Event ID.
DiagType	String	Diagnosis type.
StartTime	Timestamp ISO8601	Start time.
EndTime	Timestamp ISO8601	End time.
Outline	String	Summary.

Severity	Integer	Severity, which can be divided into 5 levels: <code>1</code> (Critical), <code>2</code> (Severe), <code>3</code> (Alarm), <code>4</code> (Reminder), <code>5</code> (Healthy).
ScoreLost	Integer	Deduction.
Metric	String	Reserved field.
Count	Integer	Number of alarms.

GroupItem

Describes the group information.

Used by actions: DescribeAllUserGroup.

Name	Type	Description
Id	Integer	Group ID.
Name	String	Group name.
MemberCount	Integer	Number of group members.

HealthReportTask

Details of the health report task.

Used by actions: DescribeDBDiagReportTasks.

Name	Type	Description
AsyncRequestId	Integer	Async task request ID.
Source	String	Source that triggers the task. Valid values: <code>DAILY_INSPECTION</code> (instance inspection), <code>SCHEDULED</code> (scheduled task), and <code>MANUAL</code> (manual trigger).
Progress	Integer	Task progress in %.
CreateTime	Timestamp	Task creation time.
StartTime	Timestamp	Task start time.

EndTime	Timestamp	Task end time.
InstanceInfo	InstanceBasicInfo	Basic information of the instance to which the task belongs.
HealthStatus	HealthStatus	Health information in health report.

HealthScoreInfo

Details of the obtained health score.

Used by actions: DescribeHealthScore.

Name	Type	Description
IssueTypes	Array of IssueTypeInfo	Exception details.
EventsTotalCount	Integer	Total number of exceptions.
HealthScore	Integer	Health score.
HealthLevel	String	Health level, such as <code>HEALTH</code> , <code>SUB_HEALTH</code> , <code>RISK</code> , and <code>HIGH_RISK</code> .

HealthStatus

Instance health status.

Used by actions: DescribeDBDiagReportTasks.

Name	Type	Description
HealthScore	Integer	Health score out of 100 points.
HealthLevel	String	Health level. Valid values: <code>HEALTH</code> (healthy), <code>SUB_HEALTH</code> (sub-healthy), <code>RISK</code> (dangerous), and <code>HIGH_RISK</code> (high-risk).
ScoreLost	Integer	Total deducted scores.
ScoreDetails	Array of ScoreDetail	Deduction details. Note: This field may return null, indicating that no valid values can be obtained.

InstanceBasicInfo

Basic instance information.

Used by actions: DescribeDBDiagReportTasks.

Name	Type	Description
InstanceId	String	Instance ID.
InstanceName	String	Instance name.
Vip	String	Private IP of the instance.
Vport	Integer	Private port of the instance.
Product	String	Instance service.
EngineVersion	String	Instance engine version.

InstanceConfs

Instance configuration.

Used by actions: DescribeDiagDBInstances, ModifyDiagDBInstanceConf.

Name	Type	Required	Description
DailyInspection	String	No	Whether to enable database inspection. Valid values: Yes, No.
OverviewDisplay	String	No	Whether to enable instance overview. Valid values: Yes, No.
KeyDelimiters	Array of String	No	Custom big key analysis separator for Redis only Note: This field may return null, indicating that no valid values can be obtained.

InstanceInfo

Queries the list of instances and returns their information.

Used by actions: DescribeDiagDBInstances.

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

InstanceId	String	Instance ID.
InstanceName	String	Instance name.
Region	String	Instance region.
HealthScore	Integer	Health score.
Product	String	Service.
EventCount	Integer	Number of exceptions.
InstanceType	Integer	Instance type. Valid values: 1 (MASTER), 2 (DR), 3 (RO), 4 (SDR)
Cpu	Integer	Number of cores.
Memory	Integer	Memory in MB.
Volume	Integer	Disk storage in GB.
EngineVersion	String	Database version.
Vip	String	Private network address.
Vport	Integer	Private network port.
Source	String	Access source.
GroupId	String	Group ID.
GroupName	String	Group name.
Status	Integer	Instance status. Valid values: 0 (delivering), 1 (running), 4 (terminating), 5 (isolated)
UniqSubnetId	String	Unified subnet ID.
DeployMode	String	TencentDB instance type.
InitFlag	Integer	TencentDB instance initialization flag. Valid values: 0 (not initialized), 1 (initialized).
TaskStatus	Integer	Task status.
UniqVpcId	String	Unified VPC ID.
InstanceConf	InstanceConfs	Instance inspection/overview status.
DeadlineTime	Timestamp	Resource expiration time.

IsSupported	Boolean	Whether it is an instance supported by DBbrain.
SecAuditStatus	String	Status of instance security audit log. Valid values: ON (enabled), OFF (disabled).
AuditPolicyStatus	String	Status of instance audit log. Valid values: ALL_AUDIT (full audit is enabled), RULE_AUDIT (rule audit is enabled), UNBOUND (audit is disabled).
AuditRunningStatus	String	Running status of instance audit log. Valid values: normal (running), paused (suspension due to overdue payment).
InternalVip	String	Private VIP Note: This field may return null, indicating that no valid values can be obtained.
InternalVport	Integer	Private network port Note: This field may return null, indicating that no valid values can be obtained.
CreateTime	String	Creation time
ClusterId	String	Cluster ID. This field is only required for cluster database products like TDSQL-C. Note: This field may return null, indicating that no valid values can be obtained.
ClusterName	String	Cluster name. This field is only required for cluster database products like TDSQL-C. Note: This field may return null, indicating that no valid values can be obtained.

IssueTypeInfo

Metric information.

Used by actions: DescribeHealthScore.

Name	Type	Description
IssueType	String	Metric categories. Valid values: <code>AVAILABILITY</code> , <code>MAINTAINABILITY</code> , <code>PERFORMANCE</code> , and <code>RELIABILITY</code> .
Events	Array of EventInfo	Exception.

TotalCount	Integer	Total number of exceptions.
------------	---------	-----------------------------

MailConfiguration

Email sending configuration

Used by actions: CreateMailProfile, CreateSchedulerMailProfile.

Name	Type	Required	Description
SendMail	Integer	Yes	Whether to enable email sending. Valid values: <code>0</code> (no), <code>1</code> (yes).
Region	Array of String	Yes	Region configuration, such as "ap-guangzhou" and "ap-shanghai". For the inspection email sending template, configure the region where you need to send the inspection email. For the subscription email sending template, configure the region where the current subscribed instance resides.
HealthStatus	Array of String	Yes	Sends a report with the specified health level, such as <code>HEALTH</code> , <code>SUB_HEALTH</code> , <code>RISK</code> , and <code>HIGH_RISK</code> .
ContactPerson	Array of Integer	No	Recipient ID. Either <code>ContactPerson</code> or <code>ContactGroup</code> should be passed in.
ContactGroup	Array of Integer	No	Recipient group ID. Either <code>ContactPerson</code> or <code>ContactGroup</code> should be passed in.

MonitorFloatMetric

Monitoring data in float type

Used by actions: DescribeTopSpaceTableTimeSeries.

Name	Type	Description
Metric	String	Metric name.
Unit	String	Metric unit.
Values	Array of Float	Metric value.

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

MonitorFloatMetricSeriesData

Monitoring metric value in float type in a unit of time interval

Used by actions: DescribeTopSpaceTableTimeSeries.

Name	Type	Description
Series	Array of MonitorFloatMetric	Monitoring metric.
Timestamp	Array of Integer	Timestamp corresponding to monitoring metric.

MonitorMetric

Monitoring data

Used by actions: DescribeSlowLogTimeSeriesStats, DescribeTopSpaceSchemaTimeSeries.

Name	Type	Description
Metric	String	Metric name.
Unit	String	Metric unit.
Values	Array of Float	Metric value. Note: This field may return null, indicating that no valid values can be obtained.

MonitorMetricSeriesData

Monitoring metric value in a unit of time interval

Used by actions: DescribeSlowLogTimeSeriesStats, DescribeTopSpaceSchemaTimeSeries.

Name	Type	Description
Series	Array of MonitorMetric	Monitoring metric.
Timestamp	Array of Integer	Timestamp corresponding to monitoring metric.

MySqlProcess

Relational database thread

Used by actions: DescribeMySqlProcessList.

Name	Type	Description
ID	String	Thread ID.
User	String	Thread operation account name.
Host	String	Thread operation host address.
DB	String	Thread operation database.
State	String	Thread operation status.
Command	String	Thread execution type.
Time	String	Thread operation duration in seconds.
Info	String	Thread operation statement.

ProcessStatistic

Real-time session statistics.

Used by actions: DescribeProxyProcessStatistics.

Name	Type	Description
Items	Array of SessionItem	Array of session details
AllConnSum	Integer	The total number of connections
ActiveConnSum	Integer	The total number of active connections

ProfileInfo

Information configured by the user.

Used by actions: CreateMailProfile, CreateSchedulerMailProfile, DescribeMailProfile.

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Name	Type	Required	Description
Language	String	Yes	Email language, such as <code>en</code> .
MailConfiguration	MailConfiguration	Yes	Email template content.

RedisPreKeySpaceData

Space information of Redis key prefixes

Used by actions: DescribeRedisTopKeyPrefixList.

Name	Type	Description
AveElementSize	Integer	Average element length
Length	Integer	Total memory usage in bytes
KeyPreIndex	String	Key prefix
ItemCount	Integer	The number of elements
Count	Integer	The number of keys
MaxElementSize	Integer	The max element length

Schemaltem

`SchemaItem` array

Used by actions: DescribeSlowLogTopSqls.

Name	Type	Required	Description
Schema	String	Yes	Database name

SchemaSpaceData

Database space statistics.

Used by actions: DescribeTopSpaceSchemas.

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Name	Type	Description
TableSchema	String	Database name.
DataLength	Float	Data space in MB.
IndexLength	Float	Index space in MB.
DataFree	Float	Fragmented space in MB.
TotalLength	Float	Total space usage in MB.
FragRatio	Float	Fragmentation rate in %.
TableRows	Integer	Number of rows.
PhysicalFileSize	Float	Total size in MB of physical files exclusive to all tables in the database. Note: this field may return null, indicating that no valid values can be obtained.

SchemaSpaceTimeSeries

Time series of database space data

Used by actions: DescribeTopSpaceSchemaTimeSeries.

Name	Type	Description
TableSchema	String	Database name
SeriesData	MonitorMetricSeriesData	Space metric value in a unit of time interval

ScoreDetail

Deduction details.

Used by actions: DescribeDBDiagReportTasks.

Name	Type	Description
IssueType	String	Deduction item type. Valid values: <code>Availability</code> , <code>Maintainability</code> , <code>Performance</code> , <code>Reliability</code> .
ScoreLost	Integer	Total deducted scores.

ScoreLostMax	Integer	Upper limit of the deducted scores.
Items	Array of ScoreItem	List of deduction items. Note: This field may return null, indicating that no valid values can be obtained.

ScoreItem

Diagnosis deduction item.

Used by actions: DescribeDBDiagReportTasks.

Name	Type	Description
DiagItem	String	Exception diagnosis item name.
IssueType	String	Diagnosis item type. Valid values: <code>Availability</code> , <code>Maintainability</code> , <code>Performance</code> , <code>Reliability</code> .
TopSeverity	String	Health level. Valid values: <code>Healthy</code> , <code>Reminder</code> , <code>Alarm</code> , <code>Severe</code> , <code>Critical</code> .
Count	Integer	Number of occurrences of this exception diagnosis item.
ScoreLost	Integer	Deducted scores.

SecLogExportTaskInfo

Security audit log export task information.

Used by actions: DescribeSecurityAuditLogExportTasks.

Name	Type	Description
AsyncRequestId	Integer	Async task Id.
StartTime	Timestamp	Task start time. Note: This field may return null, indicating that no valid values can be obtained.
EndTime	Timestamp	Task end time. Note: This field may return null, indicating that no valid values can be obtained.
CreateTime	Timestamp	Task creation time.

Status	String	Task status.
Progress	Integer	Task progress.
LogStartTime	Timestamp	Exported log start time. Note: This field may return null, indicating that no valid values can be obtained.
LogEndTime	Timestamp	Exported log end time. Note: This field may return null, indicating that no valid values can be obtained.
TotalSize	Integer	Total size of log files in KB. Note: This field may return null, indicating that no valid values can be obtained.
DangerLevels	Array of Integer	List of risk levels. Valid values: <code>0</code> (no risk), <code>1</code> (low risk), <code>2</code> (medium risk), <code>3</code> (high risk). Note: This field may return null, indicating that no valid values can be obtained.

SessionItem

Access source details of the real-time session

Used by actions: DescribeProxyProcessStatistics.

Name	Type	Description
Ip	String	Access source
ActiveConn	String	The number of active connections from the current access source
AllConn	Integer	The total number of connections from the current access source

SlowLogHost

Details of slow log source addresses.

Used by actions: DescribeSlowLogUserHostStats.

Name	Type	Description

UserHost	String	Source addresses.
Ratio	Float	Proportion (in %) of slow logs from this source address to the total number of slow logs.
Count	Integer	Number of slow logs from this source address.

SlowLogInfoItem

Slow log details

Used by actions: DescribeSlowLogs.

Name	Type	Description
Timestamp	String	Slow log start time
SqlText	String	SQL statement
Database	String	Database
UserName	String	User source Note: This field may return null, indicating that no valid values can be obtained.
UserHost	String	IP source Note: This field may return null, indicating that no valid values can be obtained.
QueryTime	Integer	Execution time in seconds
LockTime	Integer	Lock time in seconds Note: This field may return null, indicating that no valid values can be obtained.
RowsExamined	Integer	Number of scanned rows Note: This field may return null, indicating that no valid values can be obtained.
RowsSent	Integer	Number of returned rows Note: This field may return null, indicating that no valid values can be obtained.

SlowLogTopSqlItem

Top slow SQL statements

Used by actions: DescribeSlowLogTopSqls.

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

LockTime	Float	Total SQL lock wait time in seconds.
LockTimeMax	Float	Maximum lock wait time in seconds
LockTimeMin	Float	Minimum lock wait time in seconds
RowsExamined	Integer	Total number of scanned rows
RowsExaminedMax	Integer	Maximum number of scanned rows
RowsExaminedMin	Integer	Minimum number of scanned rows
QueryTime	Float	Total duration in seconds
QueryTimeMax	Float	Maximum execution time in seconds
QueryTimeMin	Float	Minimum execution time in seconds
RowsSent	Integer	Total number of returned rows
RowsSentMax	Integer	Maximum number of returned rows
RowsSentMin	Integer	Minimum number of returned rows
ExecTimes	Integer	Number of executions
SqlTemplate	String	SQL template
SqlText	String	SQL statements with parameter (random)
Schema	String	Database name
QueryTimeRatio	Float	Ratio of the total duration in %
LockTimeRatio	Float	Ratio of the total SQL lock wait time in %
RowsExaminedRatio	Float	Ratio of total number of scanned rows in %
RowsSentRatio	Float	Ratio of total number of returned rows in %
QueryTimeAvg	Float	Average execution time in seconds
RowsSentAvg	Float	Average number of returned rows
LockTimeAvg	Float	Average lock wait time in seconds
RowsExaminedAvg	Float	Average number of scanned rows
Md5	String	MD5 value of the SQL template

SlowLogUser

Details of the source users of slow logs

Used by actions: DescribeSlowLogUserHostStats.

Name	Type	Description
UserName	String	Source username
Ratio	Float	Percentage of the number of slow logs from this source username to the total number of slow logs
Count	Integer	Number of slow logs from this source username

TableSpaceData

Database tablespace statistics.

Used by actions: DescribeTopSpaceTables.

Name	Type	Description
TableName	String	Table name.
TableSchema	String	Database name.
Engine	String	Database table storage engine.
DataLength	Float	Data space in MB.
IndexLength	Float	Index space in MB.
DataFree	Float	Fragmented space in MB.
TotalLength	Float	Total space usage in MB.
FragRatio	Float	Fragmentation rate in %.
TableRows	Integer	Number of rows.
PhysicalFileSize	Float	Size in MB of the physical file exclusive to a table.

TableSpaceTimeSeries

Time series of database tablespace data

Used by actions: DescribeTopSpaceTableTimeSeries.

Name	Type	Description
TableName	String	Table name.
TableSchema	String	Database name.
Engine	String	Database table storage engine.
SeriesData	MonitorFloatMetricSeriesData	Space metric value in a unit of time interval

TaskInfo

Information about Redis session killing task status

Used by actions: DescribeProxySessionKillTasks.

Name	Type	Description
AsyncRequestId	Integer	Async task ID.
InstProxyList	Array of String	List of all proxies of the current instance.
InstProxyCount	Integer	Total number of proxies of the current instance.
CreateTime	Timestamp ISO8601	Task creation time.
StartTime	Timestamp ISO8601	Task start time.
TaskStatus	String	Task status. Valid values: <code>created</code> (create), <code>chosen</code> (to be executed), <code>running</code> (being executed), <code>failed</code> (failed), and <code>finished</code> (completed).
FinishedProxyList	Array of String	IDs of the proxies that have completed the session killing tasks.
FailedProxyList	Array of String	IDs of the proxies that failed to execute the session killing tasks.
EndTime	Timestamp	Task end time.

	ISO8601	
Progress	Integer	Task progress.
InstanceId	String	Instance ID.

TimeSlice

Slow log statistics in the specified time range

Used by actions: DescribeSlowLogTimeSeriesStats.

Name	Type	Description
Count	Integer	Total number
Timestamp	Integer	Statistics start time

UserProfile

Information configured by user, including email configuration.

Used by actions: DescribeMailProfile.

Name	Type	Description
ProfileId	String	Configured ID Note: This field may return null, indicating that no valid values can be obtained.
ProfileType	String	Configuration type. Valid values: <code>dbScan_mail_configuration</code> (email configuration of the database inspection report), <code>scheduler_mail_configuration</code> (email configuration of the scheduled task report). Note: This field may return null, indicating that no valid values can be obtained.
ProfileLevel	String	Configuration level. Valid values: <code>User</code> (user-level), <code>Instance</code> (instance-level). For database inspection emails, it should be <code>User</code> . For scheduled task emails, it should be <code>Instance</code> . Note: This field may return null, indicating that no valid values can be obtained.
ProfileName	String	Configuration name. Note: This field may return null, indicating that no valid values can be obtained.

ProfileInfo	ProfileInfo	Configuration details.
-------------	-------------	------------------------

Error Codes

Last updated : 2024-07-26 11:08:00

Feature Description

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

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

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

Error Code List

Common Error Codes

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

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

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

Service Error Codes

Error Code	Description
AuthFailure	Error with CAM signature/authentication.
FailedOperation.SegmentLoading	
OperationDenied	Operation denied.
OperationDenied.UserHasNoStrategy	Error with CAM authentication.
ResourcesSoldOut	The resources have been sold out.

DBbrain APIs 2019-10-16

History

Last updated : 2021-07-13 17:27:39

Release 6

Release time: 2021-05-12 19:24:28

Release updates:

Improvement to existing documentation.

New APIs:

- [CreateDBDiagReportUrl](#)
- [DescribeDBDiagReportTasks](#)
- [DescribeSlowLogUserHostStats](#)
- [DescribeTopSpaceSchemaTimeSeries](#)
- [DescribeTopSpaceSchemas](#)
- [DescribeUserSqlAdvice](#)

New data structures:

- [HealthReportTask](#)
- [HealthStatus](#)
- [InstanceBasicInfo](#)
- [SchemaSpaceData](#)
- [SchemaSpaceTimeSeries](#)
- [ScoreDetail](#)
- [ScoreItem](#)
- [SlowLogHost](#)

Modified data structures:

- [SlowLogTopSqlItem](#)
 - New members: QueryTimeAvg, RowsSentAvg, LockTimeAvg, RowsExaminedAvg

Release 5

Release time: 2021-03-08 18:50:14

Release updates:

Improvement to existing documentation.

New APIs:

- [AddUserContact](#)
- [CreateSchedulerMailProfile](#)
- [DescribeDiagDBInstances](#)
- [DescribeHealthScore](#)
- [DescribeMailProfile](#)

New data structures:

- [EventInfo](#)
- [HealthScoreInfo](#)
- [InstanceInfo](#)
- [IssueTypeInfo](#)
- [UserProfile](#)

Modified data structures:

- [InstanceConfs](#)
 - New members:OverviewDisplay

Release 4

Release time: 2020-12-22 17:44:22

Release updates:

Improvement to existing documentation.

New APIs:

- [CreateDBDiagReportTask](#)
- [CreateMailProfile](#)
- [DescribeAllUserContact](#)
- [DescribeAllUserGroup](#)
- [ModifyDiagDBInstanceConf](#)

New data structures:

- [ContactItem](#)
- [GroupItem](#)
- [InstanceConfs](#)
- [MailConfiguration](#)
- [ProfileInfo](#)

Release 3

Release time: 2020-12-02 09:44:52

Release updates:

Improvement to existing documentation.

Modified APIs:

- [DescribeDBDiagEvent](#)
 - New input parameters:Product
- [DescribeDBSpaceStatus](#)
 - New input parameters:Product
- [DescribeTopSpaceTables](#)
 - New input parameters:Product

Release 2

Release time: 2020-11-24 16:54:54

Release updates:

Improvement to existing documentation.

Modified APIs:

- [DescribeDBDiagHistory](#)
 - New input parameters:Product
- [DescribeSlowLogTimeSeriesStats](#)
 - New input parameters:Product
- [DescribeSlowLogTopSqls](#)
 - New input parameters:SchemaList, Product
- [DescribeTopSpaceTableTimeSeries](#)

- New input parameters:Product
- [DescribeTopSpaceTables](#)
 - New output parameters:Timestamp

New data structures:

- [SchemaItem](#)

Existing Release

Release time: 2020-07-30 19:50:52

Existing APIs/data structures are as follows:

Improvement to existing documentation.

Existing APIs:

- [DescribeDBDiagEvent](#)
- [DescribeDBDiagHistory](#)
- [DescribeDBSpaceStatus](#)
- [DescribeSlowLogTimeSeriesStats](#)
- [DescribeSlowLogTopSqls](#)
- [DescribeTopSpaceTableTimeSeries](#)
- [DescribeTopSpaceTables](#)

Existing data structures:

- [DiagHistoryEventItem](#)
- [MonitorFloatMetric](#)
- [MonitorFloatMetricSeriesData](#)
- [MonitorMetric](#)
- [MonitorMetricSeriesData](#)
- [SlowLogTopSqlItem](#)
- [TableSpaceData](#)
- [TableSpaceTimeSeries](#)
- [TimeSlice](#)

API Category

Last updated : 2021-07-13 17:27:38

Health Report Email Sending APIs

API Name	Feature
AddUserContact	Adds the contact information
CreateDBDiagReportUrl	Creates a URL for a health report
CreateMailProfile	Creates email configuration
CreateSchedulerMailProfile	Creates the regularly generated email sending configuration
DescribeAllUserContact	Obtains information of the contact in the email
DescribeAllUserGroup	Obtains information of the contact group in the email
DescribeDBDiagReportTasks	Queries the list of health report generation tasks
DescribeMailProfile	Obtains email configuration

Other APIs

API Name	Feature
CreateDBDiagReportTask	Creates a health report generation task
DescribeDBSpaceStatus	Queries overview of instance space usage during a specified time period
DescribeDiagDBInstances	Obtains instance information list
DescribeHealthScore	Obtains health score
DescribeTopSpaceSchemaTimeSeries	Obtains daily space statistics of top databases during a specified time period
DescribeTopSpaceSchemas	Obtains the space statistics of top databases
DescribeTopSpaceTableTimeSeries	Queries daily space statistics of top tables during a specified time

	period
DescribeTopSpaceTables	Queries space statistics of top tables
ModifyDiagDBInstanceConf	Enables/disables instance inspection

Slow Log Analysis APIs

API Name	Feature
DescribeSlowLogTimeSeriesStats	Gets slow log statistics histogram
DescribeSlowLogTopSqs	Queries slow log statistics in specified time period by SQL template
DescribeSlowLogUserHostStats	Obtains the statistical distribution chart of slow log source addresses.
DescribeUserSqlAdvice	Obtains SQL statement optimization suggestions

Exception Detection APIs

API Name	Feature
DescribeDBDiagEvent	Gets diagnosis event details
DescribeDBDiagHistory	Gets instance diagnosis history

Making API Requests

Request Structure

Last updated : 2021-07-13 18:15:54

1. Service Address

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

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

Tencent Cloud currently supports the following regions:

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

Hosted region	Domain name
Southeast Asia (Bangkok)	dbbrain.ap-bangkok.tencentcloudapi.com
South Asia (Mumbai)	dbbrain.ap-mumbai.tencentcloudapi.com
Northeast Asia (Seoul)	dbbrain.ap-seoul.tencentcloudapi.com
Northeast Asia (Tokyo)	dbbrain.ap-tokyo.tencentcloudapi.com
U.S. East Coast (Virginia)	dbbrain.na-ashburn.tencentcloudapi.com
U.S. West Coast (Silicon Valley)	dbbrain.na-siliconvalley.tencentcloudapi.com
North America (Toronto)	dbbrain.na-toronto.tencentcloudapi.com
Europe (Frankfurt)	dbbrain.eu-frankfurt.tencentcloudapi.com
Europe (Moscow)	dbbrain.eu-moscow.tencentcloudapi.com

2. Communications Protocol

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

3. Request Methods

Supported HTTP request methods:

- POST (recommended)
- GET

The Content-Type types supported by POST requests:

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

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

4. Character Encoding

Only UTF-8 encoding is used.

Common Params

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

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

Common parameters for Signature Algorithm v3

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

Parameter Name	Type	Required	Description
X-TC-Action	String	Yes	The name of the API for the desired operation. For the specific value, see description of common parameter <code>Action</code> in the input parameters in related API documentation. For example, the API for querying the CVM instance list is <code>DescribeInstances</code> .
X-TC-Region	String	Yes	Region parameter, which is used to identify the region to which the data you work with belongs. For values supported for an API, see the description of common parameter <code>Region</code> in the input parameters in related API documentation. This parameter is not required for some APIs (which will be indicated in related API documentation), and will not take effect even it is passed.
X-TC-Timestamp	Integer	Yes	The current UNIX timestamp that records the time when the API request is sent. For example, 1529223702. Note: If the difference between the UNIX timestamp and server time is greater than 5 minutes, a signature expiration error may occur.
X-TC-Version	String	Yes	API version of the action. For the valid values, see the description of the common parameter <code>Version</code> in the API documentation. For example, the version is 2017-03-12.
Authorization	String	Yes	The HTTP authentication request header, for example: TC3-HMAC-SHA256 Credential=AKIDEXAMPLE/Date/service/tc3_request/Region, SignedHeaders=content-type;host, Signature=fe5f80f77d5fa3beca038a248ff027d0445342fe2855ddc96317 Here: - TC3-HMAC-SHA256: Signature method, currently fixed as this value; - Credential: Signature credential; AKIDEXAMPLE is the SecretId; Date is the UNIX timestamp in UTC time, and this value must match the value of X-TC-Timestamp (a co

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

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

Example of an HTTP GET request structure:

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

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

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

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

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

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

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

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

```
Authorization: TC3-HMAC-SHA256 Credential=AKIDEXAMPLE/2018-05-30/cvm/tc3_request, SignedHeaders=content-type;host, Signature=582c400e06b5924a6f2b5d7d672d79c15b13162d9279b0855cfba6789a8edb4c
```

```
Content-Type: multipart/form-data; boundary=58731222010402
```

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

```
X-TC-Action: DescribeInstances
```

```
X-TC-Version: 2017-03-12
```

```
X-TC-Timestamp: 1527672334
```

```
X-TC-Region: ap-guangzhou
```

```
--58731222010402
```

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

```
0
```

```
--58731222010402
```

```
Content-Disposition: form-data; name="Limit"
```

```
10
```

```
--58731222010402--
```

Common parameters for Signature Algorithm v1

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

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

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

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

Example of an HTTP GET request structure:

```
https://cvm.tencentcloudapi.com/?Action=DescribeInstances&Version=2017-03-12&SignatureMethod=HmacSHA256&Timestamp=1527672334&Signature=37ac2f4fde00b0ac9bd9eadeb459b1bb224158d66e7ae5fcadb70b2d181d02&Region=ap-guangzhou&Nonce=23823223&SecretId=AKIDEXAMPLE
```

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

Example of an HTTP POST request structure:

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

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

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

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

Region List

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

Region	Value
Southeast Asia Pacific (Bangkok)	ap-bangkok
North China (Beijing)	ap-beijing
Southwest China (Chengdu)	ap-chengdu
Southwest China (Chongqing)	ap-chongqing
South China (Guangzhou)	ap-guangzhou
Hong Kong/Macao/Taiwan (Hong Kong, China)	ap-hongkong
South Asia Pacific (Mumbai)	ap-mumbai
East China (Nanjing)	ap-nanjing
East China (Shanghai)	ap-shanghai
East China (Shanghai Finance)	ap-shanghai-fsi
South China (Shenzhen Finance)	ap-shenzhen-fsi
Southeast Asia Pacific (Singapore)	ap-singapore
Europe (Frankfurt)	eu-frankfurt
Eastern U.S. (Virginia)	na-ashburn
Western U.S. (Silicon Valley)	na-siliconvalley

Signature v3

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

Applying for Security Credentials

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

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

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

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

Using the Resources for Developers

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

TC3-HMAC-SHA256 Signature Algorithm

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

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

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

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

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

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

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

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

The signature calculation process is explained in detail below.

1. Concatenating the CanonicalRequest String

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

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

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

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

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

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

POST

/

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

host:cvm.tencentcloudapi.com

content-type;host

`99d58dfbc6745f6747f36bfca17dee5e6881dc0428a0a36f96199342bc5b4907`

2. Concatenating the String to Be Signed

The string to sign is concatenated as follows:

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

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

HashedCanonicalRequest

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

```
2815843035062ffffda5fd6f2a44ea8a34818b0dc46f024b8b3786976a3ad
```

Note:

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

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

```
TC3-HMAC-SHA256
1551113065
2019-02-25/cvm/tc3_request
2815843035062ffffda5fd6f2a44ea8a34818b0dc46f024b8b3786976a3adda7a
```

3. Calculating the Signature

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

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

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

2) Calculate the signature with the following pseudocode:

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

4. Concatenating the Authorization

The Authorization is concatenated as follows:

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

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

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

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

The following example shows a finished authorization header:

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

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

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

5. Signature Demo

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

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

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

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

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

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

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

Java

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

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

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

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

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

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

```

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

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

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

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

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

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

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

```

```

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

```

Python

```

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

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

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

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

```

```

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

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

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

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

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

```

Golang

```
package main

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

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

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

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

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



```

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

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

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

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

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

```

PHP

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

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

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

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

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

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

Ruby

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

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

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

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

```

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

puts canonical_request

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

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

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

puts 'curl -X POST ' + endpoint \

```

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

DotNet

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

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

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

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

```

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

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

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

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

```

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

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

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

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

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

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

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

NodeJS

```

const crypto = require('crypto');

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

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

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

function main(){

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

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

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

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

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

const canonicalRequest = httpRequestMethod + "\n"

```



```

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

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

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

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

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

```

C++

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

using namespace std;

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

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

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

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

```

return output;
}

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

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

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

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

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

```

```

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

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

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

```

Signature Failure

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

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

Signature

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

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

1. Applying for Security Credentials

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

Security credentials consist of SecretId and SecretKey:

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

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

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

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

2. Generating a Signature

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

Assume that the SecretId and SecretKey are:

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

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

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

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

2.1. Sorting Parameters

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

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

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

2.2. Concatenating a Request String

This step generates a request string.

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

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

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

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

2.3. Concatenating the Signature Original String

This step generates a signature original string.

The signature original string consists of the following parameters:

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

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

The concatenation result of the example is:

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

2.4. Generating a Signature String

This step generates a signature string.

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

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

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

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

The final signature is:

```
zmmjn35mikh6pM3V7sUEuX4wyYM=
```

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

3. Encoding a Signature String

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

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

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

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

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

4. Signature Failure

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

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

5. Signature Demo

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

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

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

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

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

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

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

Java

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

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

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

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

    public static String getUrl(TreeMap<String, Object> params) throws UnsupportedEncodingException {
        StringBuilder url = new StringBuilder("https://cvm.tencentcloudapi.com/?");
        // There is no requirement for the order of the parameters in the actual request
        // URL.
        for (String k : params.keySet()) {
            // The request string needs to be URL encoded. As the Key is all in English letters,
            // only the value is URL encoded here.
            url.append(k).append("=").append(URLEncoder.encode(params.get(k).toString(), CHARSET))
                .append("&");
        }
    }
}
```

```

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

```

Python

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

```

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

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

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

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

```

```

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

```

Golang

```

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

```

```

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

```

PHP

```

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

```

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

Ruby

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

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

DotNet

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



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

NodeJS

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

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

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

Responses

Last updated : 2020-06-12 10:32:18

Response for Successful Requests

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

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

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

Response for Failed Requests

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

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

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

Common Error Codes

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

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

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

Slow Log Analysis APIs

DescribeSlowLogTopSqls

Last updated : 2021-07-13 17:27:40

1. API Description

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

This API is used to get and sort the top slow SQL statements in a specified time period by the aggregation mode of SQL template plus schema.

A maximum of 5 requests can be initiated per second for this API.

Note: This API supports Finance regions. If the common parameter Region is a Finance region, a domain name with the Finance region needs to be specified, for example: dbbrain.ap-shanghai-fsi.tencentcloudapi.com

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 parameter. The value used for this API: DescribeSlowLogTopSqls.
Version	Yes	String	Common parameter. The value used for this API: 2019-10-16.
Region	Yes	String	Common parameter. For more information, please see the list of regions supported by the product.
InstanceId	Yes	String	Instance ID.
StartTime	Yes	Timestamp	Start time, such as "2019-09-10 12:13:14".

EndTime	Yes	Timestamp	End time, such as "2019-09-10 12:13:14". The interval between the end time and the start time can be up to 7 days.
SortBy	No	String	Sorting key. Valid values: QueryTime, ExecTimes, RowsSent, LockTime, RowsExamined.
OrderBy	No	String	Sorting order. Valid values: ASC (ascending), DESC (descending).
Limit	No	Integer	Number of results to be returned. Default value: 20. Maximum value: 100.
Offset	No	Integer	Offset. Default value: 0.
SchemaList.N	No	Array of Schemaltem	Database name array.
Product	No	String	Service type. Valid values: <code>mysql</code> (TencentDB for MySQL), <code>cynosdb</code> (TencentDB for CynosDB (compatible with MySQL)). Default value: <code>mysql</code> .

3. Output Parameters

Parameter Name	Type	Description
TotalCount	Integer	Number of eligible entries.
Rows	Array of SlowLogTopSqlItem	List of top slow SQL statements
RequestId	String	The unique request ID, which is returned for each request. RequestId is required for locating a problem.

4. Example

Example1 Querying slow log statistics during a specified time period by SQL template

Input Example

```
https://dbbrain.tencentcloudapi.com/?Action=DescribeSlowLogTopSqls
&InstanceId=test
&SortBy=QueryTime
```



```
&OrderBy=ASC
&Limit=10
&Offset=0
&StartTime=2019-01-01 00:00:00
&EndTime=2019-01-01 01:00:00
&SchemaList.0.Schema=dbName
&<common request parameters>
```

Output Example

```
{
  "Response": {
    "RequestId": "",
    "TotalCount": 1,
    "Rows": [
      {
        "RowsExaminedMax": 0,
        "ExecTimes": 2,
        "RowsSentMax": 0,
        "QueryTimeRatio": 100,
        "LockTimeRatio": 0,
        "LockTimeMin": 0,
        "RowsExaminedRatio": 0,
        "Schema": "dbName",
        "SqlText": "select test from test",
        "QueryTime": 28.17341,
        "SqlTemplate": "select ? from ?",
        "QueryTimeMax": 14.086705,
        "LockTime": 0,
        "RowsSent": 0,
        "RowsSentMin": 0,
        "LockTimeMax": 0,
        "RowsSentRatio": 0,
        "RowsExamined": 0,
        "RowsExaminedMin": 0,
        "QueryTimeMin": 0
      }
    ]
  }
}
```

5. Developer Resources

SDK

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

Command Line Interface

- [Tencent Cloud CLI 3.0](#)

6. Error Code

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

Error Code	Description
FailedOperation	Operation failed.
InvalidParameter	Incorrect parameter.
InvalidParameterValue	Incorrect parameter value.
OperationDenied.UserHasNoStrategy	Error with CAM authentication.

DescribeSlowLogTimeSeriesStats

Last updated : 2021-07-13 17:27:41

1. API Description

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

This API is used to get the slow log statistics histogram.

A maximum of 5 requests can be initiated per second for this API.

Note: This API supports Finance regions. If the common parameter Region is a Finance region, a domain name with the Finance region needs to be specified, for example: dbbrain.ap-shanghai-fsi.tencentcloudapi.com

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 parameter. The value used for this API: DescribeSlowLogTimeSeriesStats.
Version	Yes	String	Common parameter. The value used for this API: 2019-10-16.
Region	Yes	String	Common parameter. For more information, please see the list of regions supported by the product.
InstanceId	Yes	String	Instance ID.
StartTime	Yes	Timestamp	Start time, such as "2019-09-10 12:13:14".
EndTime	Yes	Timestamp	End time, such as "2019-09-10 12:13:14". The interval between the end time and the start time can be up to 7 days.

Product	No	String	Service type. Valid values: <code>mysql</code> (TencentDB for MySQL), <code>cynosdb</code> (TencentDB for CynosDB (compatible with MySQL)). Default value: <code>mysql</code> .
---------	----	--------	---

3. Output Parameters

Parameter Name	Type	Description
Period	Integer	Time range in seconds in histogram.
TimeSeries	Array of TimeSlice	Number of slow logs in specified time range.
SeriesData	MonitorMetricSeriesData	Instance CPU utilization monitoring data in specified time range.
RequestId	String	The unique request ID, which is returned for each request. RequestId is required for locating a problem.

4. Example

Example1 Getting the slow log statistics histogram

Input Example

```
https://dbbrain.tencentcloudapi.com/?Action=DescribeSlowLogTimeSeriesStats
&InstanceId=test
&StartTime=2019-01-01 00:00:00
&EndTime=2019-01-01 01:00:00
&<common request parameters>
```

Output Example

```
{
  "Response": {
    "TimeSeries": [
      {
        "Count": 0,
        "Timestamp": 1568113800
      },
      {
        "Count": 0,
```

```
"Timestamp": 1568191680
},
{
  "Count": 0,
  "Timestamp": 1568269560
},
{
  "Count": 0,
  "Timestamp": 1568347440
},
{
  "Count": 2,
  "Timestamp": 1568425320
},
{
  "Count": 0,
  "Timestamp": 1568503200
},
{
  "Count": 0,
  "Timestamp": 1568581080
},
{
  "Count": 0,
  "Timestamp": 1568658960
},
{
  "Count": 0,
  "Timestamp": 1568736840
},
{
  "Count": 0,
  "Timestamp": 1568814720
},
{
  "Count": 0,
  "Timestamp": 1568892600
},
{
  "Count": 0,
  "Timestamp": 1568970480
},
{
  "Count": 0,
  "Timestamp": 1569048360
},
{
```

```
"Count": 0,  
"Timestamp": 1569126240  
,  
{  
"Count": 0,  
"Timestamp": 1569204120  
,  
{  
"Count": 0,  
"Timestamp": 1569282000  
,  
{  
"Count": 0,  
"Timestamp": 1569359880  
,  
{  
"Count": 0,  
"Timestamp": 1569437760  
,  
{  
"Count": 0,  
"Timestamp": 1569515640  
,  
{  
"Count": 0,  
"Timestamp": 1569593520  
,  
{  
"Count": 0,  
"Timestamp": 1569671400  
,  
{  
"Count": 0,  
"Timestamp": 1569749280  
,  
{  
"Count": 0,  
"Timestamp": 1569827160  
,  
{  
"Count": 0,  
"Timestamp": 1569905040  
,  
{  
"Count": 0,  
"Timestamp": 1569982920  
,
```

[illegible]

```
-1,  
-1,  
-1,  
-1,  
-1,  
-1,  
-1,  
-1,  
-1,  
-1,  
-1,  
-1,  
-1,  
-1,  
-1,  
-1,  
],  
"Metric": "cpu_use_rate",  
"Unit": "%"  
}  
],  
"Timestamp": [  
1568113800,  
1568191680,  
1568269560,  
1568347440,  
1568425320,  
1568503200,  
1568581080,  
1568658960,  
1568736840,  
1568814720,  
1568892600,  
1568970480,  
1569048360,  
1569126240,  
1569204120,  
1569282000,  
1569359880,  
1569437760,  
1569515640,  
1569593520,  
1569671400,  
1569749280,  
1569827160,  
1569905040,  
1569982920,  
1570060800,  
1570138680,  
1570216560,
```



```
1570294440,  
1570372320,  
1570450200  
],  
,  
"RequestId": "b445f8ee-9357-4d93-83c2-3596f9d1f27e",  
"Period": 77880  
}  
}
```

5. Developer Resources

SDK

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

Command Line Interface

- [Tencent Cloud CLI 3.0](#)

6. Error Code

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

Error Code	Description
OperationDenied.UserHasNoStrategy	Error with CAM authentication.

DescribeSlowLogUserHostStats

Last updated : 2021-07-13 17:27:40

1. API Description

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

This API is used to obtain the statistical distribution chart of slow log source addresses.

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

Note: This API supports Finance regions. If the common parameter Region is a Finance region, a domain name with the Finance region needs to be specified, for example: dbbrain.ap-shanghai-fsi.tencentcloudapi.com

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 parameter. The value used for this API: DescribeSlowLogUserHostStats.
Version	Yes	String	Common parameter. The value used for this API: 2019-10-16.
Region	Yes	String	Common parameter. For more information, please see the list of regions supported by the product.
InstanceId	Yes	String	Instance ID.
StartTime	Yes	Timestamp ISO8601	Start time of the time range in the format of yyyy-MM-dd HH:mm:ss, such as 2019-09-10 12:13:14.
EndTime	Yes	Timestamp ISO8601	End time of the time range in the format of yyyy-MM-dd HH:mm:ss, such as 2019-09-10 12:13:14.

Product	No	String	Service type. Valid values: <code>mysql</code> (TencentDB for MySQL), <code>cynosdb</code> (TDSQL-C for MySQL). Default value: <code>mysql</code> .
---------	----	--------	---

3. Output Parameters

Parameter Name	Type	Description
TotalCount	Integer	Total number of source addresses.
Items	Array of SlowLogHost	Detailed list of the proportion of slow logs from each source address.
RequestId	String	The unique request ID, which is returned for each request. RequestId is required for locating a problem.

4. Example

Example1 Obtaining the statistical distribution chart of slow log source addresses.

Input Example

```
https://dbbrain.tencentcloudapi.com/?Action=DescribeSlowLogUserHostStats
&Product=mysql
&InstanceId=cdb-c1nl9rpv
&StartTime=2020-09-21T00:00:00+00:00
&EndTime=2020-09-22T00:00:00+00:00
&<common request parameters>
```

Output Example

```
{
  "Response": {
    "TotalCount": 2,
    "RequestId": "e2a51350-8c9f-11eb-bc0f-c9f5ab88d057",
    "Items": [
      {
        "UserHost": "10.3.1.1",
        "Ratio": 50,
        "Count": 29
      },
    ]
  }
}
```

```
{
  "UserHost": "10.3.1.2",
  "Ratio": 50,
  "Count": 29
}
]
```

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
AuthFailure	Error with CAM signature/authentication.
InvalidParameter	Incorrect parameter.
InvalidParameterValue	Incorrect parameter value.
OperationDenied	Operation denied.

OperationDenied.UserHasNoStrategy	Error with CAM authentication.
-----------------------------------	--------------------------------

DescribeUserSqlAdvice

Last updated : 2021-07-13 17:27:40

1. API Description

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

This API is used to obtain SQL statement optimization suggestions.

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

Note: This API supports Finance regions. If the common parameter Region is a Finance region, a domain name with the Finance region needs to be specified, for example: dbbrain.ap-shanghai-fsi.tencentcloudapi.com

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 parameter. The value used for this API: DescribeUserSqlAdvice.
Version	Yes	String	Common parameter. The value used for this API: 2019-10-16.
Region	Yes	String	Common parameter. For more information, please see the list of regions supported by the product.
InstanceId	Yes	String	Instance ID.
SqlText	Yes	String	SQL statement.
Schema	No	String	Database name.

3. Output Parameters

Parameter Name	Type	Description
Advices	String	SQL statement optimization suggestions, which can be parsed into JSON arrays.
Comments	String	Notes of SQL statement optimization suggestions, which can be parsed into String arrays.
SqlText	String	SQL statement.
Schema	String	Database name.
Tables	String	DDL information of related tables, which can be parsed into JSON arrays.
SqlPlan	String	SQL execution plan, which can be parsed into JSON.
Cost	String	Cost saving details after SQL statement optimization, which can be parsed into JSON.
RequestId	String	The unique request ID, which is returned for each request. RequestId is required for locating a problem.

4. Example

Example1 Obtaining SQL statement optimization suggestions

Input Example

```
https://dbbrain.tencentcloudapi.com/?Action=DescribeUserSqlAdvice
&InstanceId=cdb-c1n19rpv
&SqlText=select * from t1 where id in ( ? )
&<common request parameters>
```

Output Example

```
{
  "Response": {
    "RequestId": "e2a51350-8c9f-11eb-bc0f-c9f5ab88d057",
    "Advices": "[{\"TableName\": \"t1\", \"TableSchema\": \"test\", \"Keys\": [{\"SqlText\": \"alter table `test`.`t1` add index index_0(`id`);\"}]}]",
    "Comments": "[]"
  }
```

```

"Schema": "test",
"Tables": "[{\"TableName\": \"t1\", \"TableSchema\": \"test\", \"TableDDL\": \"CREATE TABLE `test` (\n `id` varchar(36) NOT NULL) ENGINE=InnoDB DEFAULT CHARSET=utf8 ROW_FORMAT=DYNAMIC\"}]",
"SqlText": "select * from t1 where id in ( ? )",
"SqlPlan": "{ \"Before\": [{ \"Format\": \"Table\", \"Data\": { \"Names\": [\"id\", \"select_type\", \"table\", \"partitions\", \"type\", \"possible_keys\", \"key\", \"key_len\", \"ref\", \"rows\", \"filtered\", \"Extra\"], \"Data\": [ [1, \"SIMPLE\", \"t1\", null, \"ALL\", null, null, null, null, 1530, 10, \"Using where\" ] ] } } ], \"After\": [{ \"Format\": \"Table\", \"Data\": { \"Names\": [\"id\", \"select_type\", \"table\", \"partitions\", \"type\", \"possible_keys\", \"key\", \"key_len\", \"ref\", \"rows\", \"filtered\", \"Extra\"], \"Data\": [ [1, \"SIMPLE\", \"t1\", null, \"ref\", \"index_0\", \"index_0\", 1056, \"const\", 51, 100.00, null ] ] } } ] }",
"Cost": "{ \"Before\": 0.1, \"After\": 0.03, \"Ratio\": 90.61 }"
}
}

```

Example2 Obtaining a suggestion that there is no need to optimize SQL statements

Input Example

```

https://dbbrain.tencentcloudapi.com/?Action=DescribeUserSqlAdvice
&InstanceId=cdb-c1nl9rpv
&SqlText=select * from t1 where id = ?
&<common request parameters>

```

Output Example

```

{
  "Response": {
    "RequestId": "e2a51350-8c9f-11eb-bc0f-c9f5ab88d057",
    "Advices": "",
    "Comments": "",
    "Schema": "test",
    "Tables": "[{\"TableName\": \"t1\", \"TableSchema\": \"test\", \"TableDDL\": \"CREATE TABLE `test` (\n `id` varchar(36) NOT NULL) ENGINE=InnoDB DEFAULT CHARSET=utf8 ROW_FORMAT=DYNAMIC\"}]",
    "SqlText": "select * from t1 where id in ( ? )",
    "SqlPlan": "",
    "Cost": ""
  }
}

```


5. Developer Resources

SDK

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

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

Command Line Interface

- [Tencent Cloud CLI 3.0](#)

6. Error Code

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

Error Code	Description
AuthFailure	Error with CAM signature/authentication.
InternalError	Internal error.
InvalidParameter	Incorrect parameter.
InvalidParameterValue	Incorrect parameter value.
MissingParameter	Missing parameter.
OperationDenied	Operation denied.
OperationDenied.UserHasNoStrategy	Error with CAM authentication.

Exception Detection APIs

DescribeDBDiagHistory

Last updated : 2021-07-13 17:27:48

1. API Description

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

This API is used to get the list of instance diagnosis events.

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

Note: This API supports Finance regions. If the common parameter Region is a Finance region, a domain name with the Finance region needs to be specified, for example: dbbrain.ap-shanghai-fsi.tencentcloudapi.com

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 parameter. The value used for this API: DescribeDBDiagHistory.
Version	Yes	String	Common parameter. The value used for this API: 2019-10-16.
Region	Yes	String	Common parameter. For more information, please see the list of regions supported by the product.
InstanceId	Yes	String	Instance ID.
StartTime	Yes	Timestamp	Start time, such as "2019-09-10 12:13:14".
EndTime	Yes	Timestamp	End time, such as "2019-09-11 12:13:14". The interval between the

			end time and the start time can be up to 2 days.
Product	No	String	Service type. Valid values: <code>mysql</code> (TencentDB for MySQL), <code>cynosdb</code> (TencentDB for CynosDB (compatible with MySQL)). Default value: <code>mysql</code> .

3. Output Parameters

Parameter Name	Type	Description
Events	Array of DiagHistoryEventItem	Event description.
RequestId	String	The unique request ID, which is returned for each request. RequestId is required for locating a problem.

4. Example

Example1 Obtaining the instance diagnosis event list

Input Example

```
https://dbbrain.tencentcloudapi.com/?Action=DescribeDBDiagHistory
&StartTime=2019-01-01 00:00:00
&EndTime=2019-01-01 01:00:00
&InstanceId=cdb-test
&<common request parameters>
```

Output Example

```
{
  "Response": {
    "RequestId": "",
    "Events": [
      {
        "DiagType": "Row lock",
        "StartTime": "2019-01-01 00:00:20",
        "EndTime": "2019-01-01 00:00:30",
        "InstanceId": "cdb-test",
        "Region": "ap-beijing",
```

```
"Metric": "",
"EventId": 5,
"Severity": 4,
"Outline": "Monitoring metric \"innodb_row_lock_waits\" triggered an alarm. Current value: 131",
"DiagItem": "UPDATE statement row lock wait"
}
]
}
}
```

5. Developer Resources

SDK

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

Command Line Interface

- [Tencent Cloud CLI 3.0](#)

6. Error Code

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

Error Code	Description
FailedOperation	Operation failed.
InvalidParameter	Incorrect parameter.
InvalidParameterValue	Incorrect parameter value.

OperationDenied.UserHasNoStrategy	Error with CAM authentication.
UnauthorizedOperation	The operation is unauthorized.

DescribeDBDiagEvent

Last updated : 2021-07-13 17:27:49

1. API Description

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

This API is used to get the details of an instance exception diagnosis event.

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

Note: This API supports Finance regions. If the common parameter Region is a Finance region, a domain name with the Finance region needs to be specified, for example: dbbrain.ap-shanghai-fsi.tencentcloudapi.com

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 parameter. The value used for this API: DescribeDBDiagEvent.
Version	Yes	String	Common parameter. The value used for this API: 2019-10-16.
Region	Yes	String	Common parameter. For more information, please see the list of regions supported by the product.
InstanceId	Yes	String	Instance ID.
EventId	No	Integer	Event ID, which can be obtained through the <code>DescribeDBDiagHistory</code> API.
Product	No	String	Service type. Valid values: <code>mysql</code> (TencentDB for MySQL), <code>cynosdb</code> (TencentDB for CynosDB (compatible with MySQL)). Default value: <code>mysql</code> .

3. Output Parameters

Parameter Name	Type	Description
DiagItem	String	Diagnosis item.
DiagType	String	Diagnosis type.
EventId	Integer	Event ID.
Explanation	String	Event details.
Outline	String	Summary.
Problem	String	Problem found.
Severity	Integer	Severity, which can be divided into 5 levels: 1: fatal, 2: severe, 3: warning, 4: notice, 5: healthy.
StartTime	Timestamp	Start time
Suggestions	String	Suggestion.
Metric	String	Reserved field. Note: this field may return null, indicating that no valid values can be obtained.
EndTime	Timestamp	End time.
RequestId	String	The unique request ID, which is returned for each request. RequestId is required for locating a problem.

4. Example

Example1 Obtaining diagnosis event details

Input Example

```
https://dbbrain.tencentcloudapi.com/?Action=DescribeDBDiagEvent
&InstanceId=test
&EventId=5
&<common request parameters>
```

Output Example

```
{
  "Response": {
    "Suggestions": "[]",
    "DiagType": "Database snapshot",
    "EndTime": "2019-11-06 12:05:50",
    "RequestId": "78cf7bb1-0608-11ea-a9ef-2736f0f7f829",
    "Explanation": "[]",
    "StartTime": "2019-11-06 12:05:40",
    "Severity": 4,
    "EventId": 5,
    "Outline": "1 problem found during database health check",
    "Problem": "[{\"DataType\":\"title\",\"Data\":{\"Name\":\"Session snapshot\"}},
    {\"DataType\":\"title\",\"Data\":{\"Name\":\"Transaction snapshot\"}}, {\"DataType\":\"title\",\"Data\":{\"Name\":\"InnoDB status snapshot\"}}]",
    "Metric": "",
    "DiagItem": "Health inspection"
  }
}
```

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
FailedOperation	Operation failed.
InvalidParameter	Incorrect parameter.
InvalidParameterValue	Incorrect parameter value.
OperationDenied.UserHasNoStrategy	Error with CAM authentication.
UnauthorizedOperation	The operation is unauthorized.

Health Report Email Sending APIs

DescribeAllUserGroup

Last updated : 2021-07-13 17:27:46

1. API Description

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

This API is used to obtain the information of the contact group in the email.

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

Note: This API supports Finance regions. If the common parameter Region is a Finance region, a domain name with the Finance region needs to be specified, for example: dbbrain.ap-shanghai-fsi.tencentcloudapi.com

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 parameter. The value used for this API: DescribeAllUserGroup.
Version	Yes	String	Common parameter. The value used for this API: 2019-10-16.
Region	Yes	String	Common parameter. For more information, please see the list of regions supported by the product.
Product	Yes	String	Service type, which is fixed to "mysql".
Names.N	No	Array of String	An array of contact group name. Fuzzy search is supported.

3. Output Parameters

Parameter Name	Type	Description
TotalCount	Integer	Total number of contact groups.
Groups	Array of GroupItem	Contact group information. Note: this field may return <code>null</code> , indicating that no valid value is obtained.
RequestId	String	The unique request ID, which is returned for each request. RequestId is required for locating a problem.

4. Example

Example1 Obtaining the contact group information

Input Example

```
https://dbbrain.tencentcloudapi.com/?Action=DescribeAllUserGroup
&Product=mysql
&Names.0=group1
&<common request parameters>
```

Output Example

```
{
  "Response": {
    "TotalCount": 2,
    "RequestId": "31dd9325-792f-4d76-89ad-ca8902cbe4d9",
    "Groups": [
      {
        "MemberCount": 0,
        "Id": 1,
        "Name": "group1"
      },
      {
        "MemberCount": 2,
        "Id": 2,
        "Name": "group11"
      }
    ]
  }
}
```

```
}  
}
```

5. Developer Resources

SDK

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

Command Line Interface

- [Tencent Cloud CLI 3.0](#)

6. Error Code

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

Error Code	Description
InvalidParameter	Incorrect parameter.
InvalidParameterValue	Incorrect parameter value.
MissingParameter	Missing parameter.
UnknownParameter	Unknown parameter.

DescribeAllUserContact

Last updated : 2021-07-13 17:27:46

1. API Description

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

This API is used to obtain the information of the contact in the email.

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

Note: This API supports Finance regions. If the common parameter Region is a Finance region, a domain name with the Finance region needs to be specified, for example: dbbrain.ap-shanghai-fsi.tencentcloudapi.com

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 parameter. The value used for this API: DescribeAllUserContact.
Version	Yes	String	Common parameter. The value used for this API: 2019-10-16.
Region	Yes	String	Common parameter. For more information, please see the list of regions supported by the product.
Product	Yes	String	Service type, which is fixed to "mysql".
Names.N	No	Array of String	An array of contact name. Fuzzy search is supported.

3. Output Parameters

Parameter Name	Type	Description
TotalCount	Integer	Total number of contacts.
Contacts	Array of ContactItem	Contact information. Note: this field may return <code>null</code> , indicating that no valid value is obtained.
RequestId	String	The unique request ID, which is returned for each request. RequestId is required for locating a problem.

4. Example

Example1 Obtaining the information of recipients

Input Example

```
https://dbbrain.tencentcloudapi.com/?Action=DescribeAllUserContact
&Product=mysql
&Names.0=zhangsan
&<common request parameters>
```

Output Example

```
{
  "Response": {
    "TotalCount": 2,
    "Contacts": [
      {
        "Mail": "zhangsan@qq.com",
        "Id": 1,
        "Name": "zhangsan"
      },
      {
        "Mail": "zhangsan2@qq.com",
        "Id": 2,
        "Name": "zhangsan2"
      }
    ],
    "RequestId": "b2d08895-1cfe-48bc-b7f7-87fd7cb5d6f1"
  }
}
```

```
}  
}
```

5. Developer Resources

SDK

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

Command Line Interface

- [Tencent Cloud CLI 3.0](#)

6. Error Code

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

Error Code	Description
InternalError	Internal error.
InvalidParameter	Incorrect parameter.
InvalidParameterValue	Incorrect parameter value.
MissingParameter	Missing parameter.
UnauthorizedOperation	The operation is unauthorized.
UnknownParameter	Unknown parameter.

CreateMailProfile

Last updated : 2021-07-13 17:27:47

1. API Description

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

This API is used to create the email configuration. The input parameter `ProfileType` represents the type of the email configuration. Valid values: `dbScan_mail_configuration` (email configuration of database inspection report) and `scheduler_mail_configuration` (email sending configuration of regularly generated health report). Select Guangzhou for Region, regardless of the region where the instance belongs.

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

Note: This API supports Finance regions. If the common parameter Region is a Finance region, a domain name with the Finance region needs to be specified, for example: dbbrain.ap-shanghai-fsi.tencentcloudapi.com

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 parameter. The value used for this API: CreateMailProfile.
Version	Yes	String	Common parameter. The value used for this API: 2019-10-16.
Region	Yes	String	Common parameter. For more information, please see the list of regions supported by the product.
ProfileInfo	Yes	ProfileInfo	Email configurations
ProfileLevel	Yes	String	Configuration level. Valid values: "User" (user-level), "Instance" (instance-level). For database inspection report, it

			should be <code>User</code> ; and for scheduled task reports, it should be <code>Instance</code> .
ProfileName	Yes	String	Configuration name, which needs to be unique. For database inspection reports, this name can be customize as needed. For scheduled task reports, the name should be in the format of "scheduler_" + {instanceId}, such as "scheduler_cdb-test".
ProfileType	Yes	String	Configuration type. Valid values: "dbScan_mail_configuration" (email configuration of database inspection report), "scheduler_mail_configuration" (email configuration of scheduled task report).
Product	Yes	String	Service type. Valid values: <code>mysql</code> (TencentDB for MySQL), <code>cynosdb</code> (TencentDB for CynosDB (compatible with MySQL)).
BindInstanceIds.N	No	Array of String	Instance ID bound with the configuration, which is set when the configuration level is "Instance". Only one instance can be bound at a time. When the configuration level is "User", leave this parameter empty.

3. Output Parameters

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

4. Example

Example1 Creating an email template to send the report generated by the scheduled task/database inspection

Input Example

```
https://dbbrain.tencentcloudapi.com/?Action=CreateMailProfile
&Product=mysql
&ProfileLevel=Instance
&ProfileName=scheduler_cdb-test
&ProfileType= scheduler_mail_configuration
```

```
&BindInstanceIds.0=cdb-test
&ProfileInfo.Language=zh
&ProfileInfo.MailConfiguration.SendMail=1
&ProfileInfo.MailConfiguration.Region.0=ap-guangzhou
&ProfileInfo.MailConfiguration.HealthStatus.0=HEALTH
&ProfileInfo.MailConfiguration.ContactPerson.0=1
&ProfileInfo.MailConfiguration.ContactGroup.0=1
&<common request parameters>
```

Output Example

```
{
  "Response": {
    "RequestId": "77db16d7-bbe8-48a7-868b-ed776a96f1ab"
  }
}
```

5. Developer Resources

SDK

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- [Tencent Cloud SDK 3.0 for Go](#)
- [Tencent Cloud SDK 3.0 for NodeJS](#)
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Command Line Interface

- [Tencent Cloud CLI 3.0](#)

6. Error Code

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

Error Code	Description
AuthFailure	Error with CAM signature/authentication.
FailedOperation	Operation failed.
InternalError	Internal error.
InvalidParameter	Incorrect parameter.
InvalidParameterValue	Incorrect parameter value.
MissingParameter	Missing parameter.
OperationDenied	Operation denied.
OperationDenied.UserHasNoStrategy	Error with CAM authentication.
UnauthorizedOperation	The operation is unauthorized.
UnknownParameter	Unknown parameter.

DescribeMailProfile

Last updated : 2021-07-13 17:27:45

1. API Description

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

This API is used to obtain the email sending configurations, including the email configuration for database inspection and the email sending configuration for regularly generated health reports. Select Guangzhou for Region.

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

Note: This API supports Finance regions. If the common parameter Region is a Finance region, a domain name with the Finance region needs to be specified, for example: dbbrain.ap-shanghai-fsi.tencentcloudapi.com

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 parameter. The value used for this API: DescribeMailProfile.
Version	Yes	String	Common parameter. The value used for this API: 2019-10-16.
Region	Yes	String	Common parameter. For more information, please see the list of regions supported by the product.
ProfileType	Yes	String	Configuration type. Valid values: "dbScan_mail_configuration" (email configuration of database inspection report), "scheduler_mail_configuration" (email configuration of scheduled task report).
Product	Yes	String	Service type. Valid values: <code>mysql</code> (TencentDB for MySQL),

			<code>cynosdb</code> (TDSQL-C for MySQL). Default value: <code>mysql</code> .
Offset	Yes	Integer	Pagination offset
Limit	Yes	Integer	The number of results per page in paginated queries. Maximum value: 50
ProfileName	No	String	Query by the name of email configuration. The name of the regularly sent email configuration should be in the format of "scheduler_"+{instanceId}.

3. Output Parameters

Parameter Name	Type	Description
ProfileList	Array of UserProfile	Email configuration details Note: this field may return <code>null</code> , indicating that no valid values can be obtained.
TotalCount	Integer	Total number of email templates Note: this field may return <code>null</code> , indicating that no valid values can be obtained.
RequestId	String	The unique request ID, which is returned for each request. RequestId is required for locating a problem.

4. Example

Example1 Obtaining email configuration

Input Example

```
https://dbbrain.tencentcloudapi.com/?Action=DescribeMailProfile
&Product=mysql
&ProfileType=scheduler_mail_configuration
&Offset=0
&Limit=20
&<common request parameters>
```

Output Example

```
{
  "Response": {
    "TotalCount": 1,
    "RequestId": "c7324330-5fc8-11eb-a3f4-96666666",
    "ProfileList": [
      {
        "ProfileId": "12345",
        "ProfileType": "dbScan_mail_configuration",
        "ProfileLevel": "User",
        "ProfileName": "Test UIN",
        "ProfileInfo": {
          "MailConfiguration": {
            "HealthStatus": [
              "HEALTH",
              "SUB_HEALTH",
              "RISK",
              "HIGH_RISK"
            ],
            "Region": [
              "eu-moscow"
            ],
            "ContactGroup": [],
            "SendMail": 0,
            "ContactPerson": [
              123
            ]
          },
          "Language": "zh"
        }
      }
    ]
  }
}
```

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
InternalServerError	Internal error.
InvalidParameter	Incorrect parameter.
MissingParameter	Missing parameter.

CreateSchedulerMailProfile

Last updated : 2021-07-13 17:27:46

1. API Description

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

This API is used to create the regular generation time of the health reports and the regular email sending configuration. Pass in the regular generation time of the health reports as a parameter (Monday to Sunday) to set the regular generation time of the health reports, and save the corresponding regular email sending configuration.

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

Note: This API supports Finance regions. If the common parameter Region is a Finance region, a domain name with the Finance region needs to be specified, for example: dbbrain.ap-shanghai-fsi.tencentcloudapi.com

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 parameter. The value used for this API: CreateSchedulerMailProfile.
Version	Yes	String	Common parameter. The value used for this API: 2019-10-16.
Region	Yes	String	Common parameter. For more information, please see the list of regions supported by the product.
WeekConfiguration.N	Yes	Array of Integer	Value range: 1-7, representing Monday to Sunday respectively.
ProfileInfo	Yes	ProfileInfo	Email configurations

ProfileName	Yes	String	Configuration name, which needs to be unique. For scheduled task reports, the name should be in the format of "scheduler_" + {instanceId}, such as "scheduler_cdb-test".
BindInstanceId	Yes	String	Configure the instance ID that you need to generate the health report.
Product	Yes	String	Service type. Valid values: <code>mysql</code> (TencentDB for MySQL), <code>cynosdb</code> (TDSQL-C for MySQL). Default value: <code>mysql</code> .

3. Output Parameters

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

4. Example

Example1 Creating the regularly generated email sending configuration

This example shows you how to create the configurations for regularly generating health reports and sending them via email. Pass in the regular generation time of the health reports as a parameter (Monday to Sunday) to set the regular generation time of the health reports, and save the corresponding regular email sending configuration.

Input Example

```
https://dbbrain.tencentcloudapi.com/?Action=CreateSchedulerMailProfile
&WeekConfiguration.0=1
&Product=mysql
&ProfileName=scheduler_cdb-test
&BindInstanceId=cdb-test
&ProfileInfo.Language=zh
&ProfileInfo.MailConfiguration.SendMail=1
&ProfileInfo.MailConfiguration.Region.0=ap-guangzhou
&ProfileInfo.MailConfiguration.HealthStatus.0=HEALTH
&ProfileInfo.MailConfiguration.ContactPerson.0=1
&ProfileInfo.MailConfiguration.ContactGroup.0=1
&<common request parameters>
```

Output Example

```
{
  "Response": {
    "RequestId": "77db16d7-bbe8-48a7-868b-ed776a96f1ab"
  }
}
```

5. Developer Resources

SDK

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- [Tencent Cloud SDK 3.0 for .NET](#)
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Command Line Interface

- [Tencent Cloud CLI 3.0](#)

6. Error Code

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

Error Code	Description
AuthFailure	Error with CAM signature/authentication.
InternalError	Internal error.
InvalidParameter	Incorrect parameter.

InvalidParameterValue	Incorrect parameter value.
MissingParameter	Missing parameter.
OperationDenied	Operation denied.
OperationDenied.UserHasNoStrategy	Error with CAM authentication.
RequestLimitExceeded	The number of requests exceeds the frequency limit.
UnknownParameter	Unknown parameter.
UnsupportedOperation	Unsupported operation.

AddUserContact

Last updated : 2021-07-13 17:27:48

1. API Description

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

This API is used to add the contact name and email.. The return value is the successfully added contact ID. Select Guangzhou for Region.

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

Note: This API supports Finance regions. If the common parameter Region is a Finance region, a domain name with the Finance region needs to be specified, for example: dbbrain.ap-shanghai-fsi.tencentcloudapi.com

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 parameter. The value used for this API: AddUserContact.
Version	Yes	String	Common parameter. The value used for this API: 2019-10-16.
Region	Yes	String	Common parameter. For more information, please see the list of regions supported by the product.
Name	Yes	String	Contact name, which needs to be unique and can contain 2-60 characters, supporting uppercase and lowercase letters, numbers, and underline “_”. It cannot start with “_”.
ContactInfo	Yes	String	Email address, which can contain uppercase and lowercase letters, numbers, and underline “_”, and cannot start with “_”.

Product	Yes	String	Service type, which is fixed to "mysql".
---------	-----	--------	--

3. Output Parameters

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

4. Example

Example1 Adding email recipients

Input Example

```
https://dbbrain.tencentcloudapi.com/?Action=AddUserContact
&Name=John Smith
&ContactInfo=test@qq.com
&Product=mysql
&<common request parameters>
```

Output Example

```
{
  "Response": {
    "Id": 1,
    "RequestId": "77db16d7-bbe8-48a7-868b-ed776a96f1ab"
  }
}
```

5. Developer Resources

SDK

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

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

Command Line Interface

- [Tencent Cloud CLI 3.0](#)

6. Error Code

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

Error Code	Description
AuthFailure	Error with CAM signature/authentication.
FailedOperation	Operation failed.
InternalError	Internal error.
InvalidParameter	Incorrect parameter.
InvalidParameterValue	Incorrect parameter value.
MissingParameter	Missing parameter.
RequestLimitExceeded	The number of requests exceeds the frequency limit.
UnauthorizedOperation	The operation is unauthorized.
UnknownParameter	Unknown parameter.
UnsupportedOperation	Unsupported operation.

DescribeDBDiagReportTasks

Last updated : 2021-07-13 17:27:45

1. API Description

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

This API is used to query the list of health report generation tasks.

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

Note: This API supports Finance regions. If the common parameter Region is a Finance region, a domain name with the Finance region needs to be specified, for example: dbbrain.ap-shanghai-fsi.tencentcloudapi.com

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 parameter. The value used for this API: DescribeDBDiagReportTasks.
Version	Yes	String	Common parameter. The value used for this API: 2019-10-16.
Region	Yes	String	Common parameter. For more information, please see the list of regions supported by the product.
StartTime	No	Timestamp ISO8601	Start time of the first task in the format of yyyy-MM-dd HH:mm:ss, such as 2019-09-10 12:13:14. It is used for queries by time range.
EndTime	No	Timestamp ISO8601	End time of the last task in the format of yyyy-MM-dd HH:mm:ss, such as 2019-09-10 12:13:14. It is used for queries by time range.

InstanceIds.N	No	Array of String	Instance ID array, which is used to filter the task list of a specified instance.
Sources.N	No	Array of String	Source that triggers the task. Valid values: <code>DAILY_INSPECTION</code> (instance inspection), <code>SCHEDULED</code> (timed generation), and <code>MANUAL</code> (manual trigger).
HealthLevels	No	String	Health level. Valid values: <code>HEALTH</code> (healthy), <code>SUB_HEALTH</code> (suboptimal), <code>RISK</code> (risky), and <code>HIGH_RISK</code> (critical).
TaskStatuses	No	String	The task status. Valid values: <code>created</code> (create), <code>chosen</code> (to be executed), <code>running</code> (being executed), <code>failed</code> (failed), and <code>finished</code> (completed).
Offset	No	Integer	Offset. Default value: 0.
Limit	No	Integer	Number of returned results. Default value: 20.
Product	No	String	Service type. Valid values: <code>mysql</code> (TencentDB for MySQL), <code>cynosdb</code> (TDSQL-C for MySQL). Default value: <code>mysql</code> .

3. Output Parameters

Parameter Name	Type	Description
TotalCount	Integer	Total number of tasks.
Tasks	Array of HealthReportTask	Task list.
RequestId	String	The unique request ID, which is returned for each request. RequestId is required for locating a problem.

4. Example

Example1 Querying the list of the health report generation tasks

Input Example

```
https://dbbrain.tencentcloudapi.com/?Action=DescribeDBDiagReportTasks
&Product=mysql
```



```
&StartTime=2020-09-21T00:00:00+00:00
&EndTime=2020-09-22T00:00:00+00:00
&Sources.0=DAILY_INSPECTION
&<common request parameters>
```

Output Example

```
{
  "Response": {
    "TotalCount": 1,
    "Tasks": [
      {
        "AsyncRequestId": 63452,
        "Source": "DAILY_INSPECTION",
        "Progress": 100,
        "CreateTime": "2020-09-21 00:00:00",
        "StartTime": "2020-09-21 00:00:00",
        "EndTime": "2020-09-21 00:00:00",
        "InstanceInfo": {
          "InstanceId": "cdb-c9orjpes",
          "InstanceName": "dbbbrain-test",
          "EngineVersion": "5.7",
          "Vip": "10.207.0.10",
          "Vport": 3306,
          "Product": "MySQL"
        },
        "HealthStatus": {
          "HealthScore": 100,
          "HealthLevel": "HEALTH",
          "ScoreLost": 0,
          "ScoreDetails": []
        }
      }
    ],
    "RequestId": "24665720-8c93-11eb-bee6-e98cea0e6794"
  }
}
```

5. Developer Resources

SDK

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

Command Line Interface

- [Tencent Cloud CLI 3.0](#)

6. Error Code

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

Error Code	Description
AuthFailure	Error with CAM signature/authentication.
InvalidParameter	Incorrect parameter.
InvalidParameterValue	Incorrect parameter value.
MissingParameter	Missing parameter.
OperationDenied	Operation denied.
OperationDenied.UserHasNoStrategy	Error with CAM authentication.

CreateDBDiagReportUrl

Last updated : 2021-07-13 17:27:47

1. API Description

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

This API is used to create a URL for a health report.

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

Note: This API supports Finance regions. If the common parameter Region is a Finance region, a domain name with the Finance region needs to be specified, for example: dbbrain.ap-shanghai-fsi.tencentcloudapi.com

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 parameter. The value used for this API: CreateDBDiagReportUrl.
Version	Yes	String	Common parameter. The value used for this API: 2019-10-16.
Region	Yes	String	Common parameter. For more information, please see the list of regions supported by the product.
InstanceId	Yes	String	Instance ID.
AsyncRequestId	Yes	Integer	The health report task ID, which can be queried through <code>DescribeDBDiagReportTasks</code> .
Product	No	String	Service type. Valid values: <code>mysql</code> (TencentDB for MySQL), <code>cynosdb</code> (TDSQL-C for MySQL). Default value: <code>mysql</code> .

3. Output Parameters

Parameter Name	Type	Description
ReportUrl	String	The URL of the health report.
ExpireTime	Integer	The expiration timestamp of the health report URL (in seconds).
RequestId	String	The unique request ID, which is returned for each request. RequestId is required for locating a problem.

4. Example

Example1 Creating a URL for a health report

Input Example

```
https://dbbrain.tencentcloudapi.com/?Action=CreateDBDiagReportUrl
&Product=mysql
&InstanceId=cdb-c1nl9rpv
&AsyncRequestId=63452
&<common request parameters>
```

Output Example

```
{
  "Response": {
    "ReportUrl": "https://dbbrain-sh-1256569818.cos.ap-guangzhou.myqcloud.com/report_
cdb-c1nl9rpv_10947711_1618851196690.pdf?sign=q-sign-algorithm",
    "ExpireTime": 1618890295,
    "RequestId": "24665720-8c93-11eb-bee6-e98cea0e6794"
  }
}
```

5. Developer Resources

SDK

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

Command Line Interface

- [Tencent Cloud CLI 3.0](#)

6. Error Code

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

Error Code	Description
AuthFailure	Error with CAM signature/authentication.
InternalError	Internal error.
InvalidParameter	Incorrect parameter.
InvalidParameterValue	Incorrect parameter value.
MissingParameter	Missing parameter.
OperationDenied	Operation denied.
OperationDenied.UserHasNoStrategy	Error with CAM authentication.
ResourceNotFound	The resource does not exist.

Other APIs

DescribeTopSpaceTables

Last updated : 2021-07-13 17:27:42

1. API Description

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

This API is used to query real-time space statistics of top tables of an instance. The return results are sorted by size by default.

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

Note: This API supports Finance regions. If the common parameter Region is a Finance region, a domain name with the Finance region needs to be specified, for example: dbbrain.ap-shanghai-fsi.tencentcloudapi.com

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 parameter. The value used for this API: DescribeTopSpaceTables.
Version	Yes	String	Common parameter. The value used for this API: 2019-10-16.
Region	Yes	String	Common parameter. For more information, please see the list of regions supported by the product.
InstanceId	Yes	String	Instance ID.
Limit	No	Integer	Number of returned top tables. Maximum value: 100. Default value: 20.

SortBy	No	String	Field used to sort top tables. Valid values: <code>DataLength</code> , <code>IndexLength</code> , <code>TotalLength</code> , <code>DataFree</code> , <code>FragRatio</code> , <code>TableRows</code> , and <code>PhysicalFileSize</code> (only supported by TencentDB for MySQL instances). For TencentDB for MySQL instances, the default value is <code>PhysicalFileSize</code> ; for other database instances, the default value is <code>TotalLength</code> .
Product	No	String	Service type. Valid values: <code>mysql</code> (TencentDB for MySQL), <code>cynosdb</code> (TencentDB for CynosDB (compatible with MySQL)). Default value: <code>mysql</code> .

3. Output Parameters

Parameter Name	Type	Description
TopSpaceTables	Array of TableSpaceData	List of the returned space statistics of top tables.
Timestamp	Integer	Timestamp (in seconds) of tablespace data collect points
RequestId	String	The unique request ID, which is returned for each request. RequestId is required for locating a problem.

4. Example

Example1 Getting the space statistics of top tables

Input Example

```
https://dbbrain.tencentcloudapi.com/?Action=DescribeTopSpaceTables
&InstanceId=cdb-test
&Limit=2
&SortBy=TableRows
&<common request parameters>
```

Output Example

```
{
  "Response": {
    "RequestId": "ed279d8b-a9d9-48d6-9429-e0fde000994a",
    "Timestamp": 1603819881,
```

```
"TopSpaceTables": [  
  {  
    "DataFree": 0,  
    "TableName": "test",  
    "TotalLength": 0.1,  
    "TableSchema": "test_bak",  
    "FragRatio": 0,  
    "DataLength": 0.1,  
    "PhysicalFileSize": 0.1,  
    "TableRows": 9,  
    "Engine": "InnoDB",  
    "IndexLength": 0  
  },  
  {  
    "DataFree": 0,  
    "TableName": "test",  
    "TotalLength": 0.1,  
    "TableSchema": "test_bak",  
    "FragRatio": 0,  
    "DataLength": 0.1,  
    "PhysicalFileSize": 0.1,  
    "TableRows": 9,  
    "Engine": "InnoDB",  
    "IndexLength": 0  
  }  
]  
}  
}
```

5. Developer Resources

SDK

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

Command Line Interface

- [Tencent Cloud CLI 3.0](#)

6. Error Code

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

Error Code	Description
InvalidParameter	Incorrect parameter.
InvalidParameterValue	Incorrect parameter value.
OperationDenied.UserHasNoStrategy	Error with CAM authentication.
UnauthorizedOperation	The operation is unauthorized.

DescribeDBSpaceStatus

Last updated : 2021-07-13 17:27:44

1. API Description

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

This API is used to query the overview of instance space usage during a specified time period, including disk usage growth (MB), available disk space (MB), total disk space (MB), and estimated number of available days.

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

Note: This API supports Finance regions. If the common parameter Region is a Finance region, a domain name with the Finance region needs to be specified, for example: dbbrain.ap-shanghai-fsi.tencentcloudapi.com

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 parameter. The value used for this API: DescribeDBSpaceStatus.
Version	Yes	String	Common parameter. The value used for this API: 2019-10-16.
Region	Yes	String	Common parameter. For more information, please see the list of regions supported by the product.
InstanceId	Yes	String	Instance ID.
RangeDays	No	Integer	Query period in days. The end date is the current date and the query period is 7 days by default.
Product	No	String	Service type. Valid values: <code>mysql</code> (TencentDB for MySQL),

`cynosdb` (TencentDB for CynosDB (compatible with MySQL)).
Default value: `mysql` .

3. Output Parameters

Parameter Name	Type	Description
Growth	Integer	Disk usage growth in MB.
Remain	Integer	Available disk space in MB.
Total	Integer	Total disk space in MB.
AvailableDays	Integer	Estimated number of available days.
RequestId	String	The unique request ID, which is returned for each request. RequestId is required for locating a problem.

4. Example

Example1 Getting the overview of instance space usage during a specified time period

Input Example

```
https://dbbrain.tencentcloudapi.com/?Action=DescribeDBSpaceStatus
&InstanceId=cdb-test
&RangeDays=5
&<common request parameters>
```

Output Example

```
{
  "Response": {
    "Remain": 23224,
    "RequestId": "78cf7bb1-0608-11ea-a9ef-2736f0f7f829",
    "Growth": 231,
    "Total": 50000,
    "AvailableDays": 35
  }
}
```

5. Developer Resources

SDK

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

Command Line Interface

- [Tencent Cloud CLI 3.0](#)

6. Error Code

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

Error Code	Description
FailedOperation	Operation failed.
InvalidParameter	Incorrect parameter.
InvalidParameterValue	Incorrect parameter value.
OperationDenied.UserHasNoStrategy	Error with CAM authentication.
UnauthorizedOperation	The operation is unauthorized.

DescribeTopSpaceTableTimeSeries

Last updated : 2021-07-13 17:27:42

1. API Description

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

This API is used to query the daily space data of top tables consuming the most instance space. The data is daily collected by DBbrain during a specified time period. The return results are sorted by size by default.

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

Note: This API supports Finance regions. If the common parameter Region is a Finance region, a domain name with the Finance region needs to be specified, for example: dbbrain.ap-shanghai-fsi.tencentcloudapi.com

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 parameter. The value used for this API: DescribeTopSpaceTableTimeSeries.
Version	Yes	String	Common parameter. The value used for this API: 2019-10-16.
Region	Yes	String	Common parameter. For more information, please see the list of regions supported by the product.
InstanceId	Yes	String	Instance ID.
Limit	No	Integer	Number of returned top tables. Maximum value: 100. Default value: 20.
SortBy	No	String	Field used to sort top tables. Valid values: DataLength, IndexLength, TotalLength, DataFree, FragRatio, TableRows, PhysicalFileSize. Default

			value: PhysicalFileSize.
StartDate	No	Date	Start date. It can be as early as 29 days before the current date, and defaults to 6 days before the end date.
EndDate	No	Date	End date. It can be as early as 29 days before the current date, and defaults to the current date.
Product	No	String	Service type. Valid values: <code>mysql</code> (TencentDB for MySQL), <code>cynosdb</code> (TencentDB for CynosDB (compatible with MySQL)). Default value: <code>mysql</code> .

3. Output Parameters

Parameter Name	Type	Description
TopSpaceTableTimeSeries	Array of TableSpaceTimeSeries	Time series list of the returned space statistics of top tables.
RequestId	String	The unique request ID, which is returned for each request. RequestId is required for locating a problem.

4. Example

Example1 Getting daily space statistics of top tables during a specified time period

Input Example

```
https://dbbrain.tencentcloudapi.com/?Action=DescribeTopSpaceTableTimeSeries
&InstanceId=cdb-test
&Limit=2
&StartDate=2020-01-01
&EndDate=2020-01-01
&<common request parameters>
```

Output Example

```
{
  "Response": {
    "RequestId": "d97eacb0-cebd-40b6-963b-579092454f05",
```

```
"TopSpaceTableTimeSeries": [  
  {  
    "TableName": "test",  
    "TableSchema": "test_bak",  
    "SeriesData": {  
      "Series": [  
        {  
          "Values": [  
            0  
          ],  
          "Metric": "DataFree",  
          "Unit": "MB"  
        },  
        {  
          "Values": [  
            0.1  
          ],  
          "Metric": "DataLength",  
          "Unit": "MB"  
        },  
        {  
          "Values": [  
            0  
          ],  
          "Metric": "IndexLength",  
          "Unit": "MB"  
        },  
        {  
          "Values": [  
            0.1  
          ],  
          "Metric": "TotalLength",  
          "Unit": "MB"  
        },  
        {  
          "Values": [  
            0  
          ],  
          "Metric": "FragRatio",  
          "Unit": "%"  
        },  
        {  
          "Values": [  
            9  
          ],  
          "Metric": "TableRows",  
          "Unit": ""  
        }  
      ]  
    }  
  ]  
]
```

```
},
{
  "Values": [
    0.1
  ],
  "Metric": "PhysicalFileSize",
  "Unit": "MB"
},
{
  "Timestamp": [
    1588089600
  ]
},
{
  "Engine": "InnoDB"
},
{
  "TableName": "test22",
  "TableSchema": "test_bak",
  "SeriesData": {
    "Series": [
      {
        "Values": [
          0
        ],
        "Metric": "DataFree",
        "Unit": "MB"
      },
      {
        "Values": [
          0.1
        ],
        "Metric": "DataLength",
        "Unit": "MB"
      },
      {
        "Values": [
          0
        ],
        "Metric": "IndexLength",
        "Unit": "MB"
      },
      {
        "Values": [
          0.1
        ],
        "Metric": "TotalLength",
        "Unit": "MB"
      }
    ]
  }
}
```



```
},
{
  "Values": [
    0
  ],
  "Metric": "FragRatio",
  "Unit": "%"
},
{
  "Values": [
    6
  ],
  "Metric": "TableRows",
  "Unit": ""
},
{
  "Values": [
    0.1
  ],
  "Metric": "PhysicalFileSize",
  "Unit": "MB"
}
],
"Timestamp": [
  1588089600
]
},
"Engine": "InnoDB"
}
}
}
```

5. Developer Resources

SDK

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

Command Line Interface

- [Tencent Cloud CLI 3.0](#)

6. Error Code

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

Error Code	Description
InvalidParameter	Incorrect parameter.
InvalidParameterValue	Incorrect parameter value.
OperationDenied.UserHasNoStrategy	Error with CAM authentication.
UnauthorizedOperation	The operation is unauthorized.

ModifyDiagDBInstanceConf

Last updated : 2021-07-13 17:27:41

1. API Description

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

This API is used to enable/disable instance inspection.

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

Note: This API supports Finance regions. If the common parameter Region is a Finance region, a domain name with the Finance region needs to be specified, for example: dbbrain.ap-shanghai-fsi.tencentcloudapi.com

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 parameter. The value used for this API: ModifyDiagDBInstanceConf.
Version	Yes	String	Common parameter. The value used for this API: 2019-10-16.
Region	Yes	String	Common parameter. For more information, please see the list of regions supported by the product.
InstanceConfs	Yes	InstanceConfs	Whether to enable inspection
Regions	Yes	String	Target regions of the request. If the value is <code>All</code> , it is applied to all regions.

Parameter Name	Required	Type	Description
Product	Yes	String	Service type. Valid values: <code>mysql</code> (TencentDB for MySQL), <code>cynosdb</code> (TencentDB for CynosDB (compatible with MySQL)).
InstanceIds.N	No	Array of String	ID of the instance to modify.

3. Output Parameters

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

4. Example

Example1 Modifying the inspection configuration of instance

Input Example

```
https://dbbrain.tencentcloudapi.com/?Action=ModifyDiagDBInstanceConf
&InstanceIds.0=cdb-fyclrp7r
&InstanceConfs.DailyInspection=Yes
&Regions=All
&Product=mysql
&<common request parameters>
```

Output Example

```
{
  "Response": {
    "RequestId": "77db16d7-bbe8-48a7-868b-ed776a96f1ab"
  }
}
```

5. Developer Resources

SDK

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

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

Command Line Interface

- [Tencent Cloud CLI 3.0](#)

6. Error Code

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

Error Code	Description
InternalError	Internal error.
InvalidParameter	Incorrect parameter.
InvalidParameterValue	Incorrect parameter value.
MissingParameter	Missing parameter.
UnknownParameter	Unknown parameter.

CreateDBDiagReportTask

Last updated : 2021-07-13 17:27:44

1. API Description

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

This API is used to create a health report and send it via email as configured.

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

Note: This API supports Finance regions. If the common parameter Region is a Finance region, a domain name with the Finance region needs to be specified, for example: dbbrain.ap-shanghai-fsi.tencentcloudapi.com

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 parameter. The value used for this API: CreateDBDiagReportTask.
Version	Yes	String	Common parameter. The value used for this API: 2019-10-16.
Region	Yes	String	Common parameter. For more information, please see the list of regions supported by the product.
InstanceId	Yes	String	Instance ID.
StartTime	Yes	Timestamp ISO8601	Start time, such as <code>2020-11-08T14:00:00+08:00</code> .
EndTime	Yes	Timestamp ISO8601	End time, such as <code>2020-11-09T14:00:00+08:00</code> .

SendMailFlag	Yes	Integer	Whether to send an email. Valid values: 0 - Yes, 1 - No.
ContactPerson.N	No	Array of Integer	An array of contact IDs to receive the email.
ContactGroup.N	No	Array of Integer	An array of contact group IDs to receive the email.
Product	No	String	Service type. Valid values: <code>mysql</code> (TencentDB for MySQL), <code>cynosdb</code> (TencentDB for CynosDB (compatible with MySQL)). Default value: <code>mysql</code> .

3. Output Parameters

Parameter Name	Type	Description
AsyncRequestId	Integer	ID of an async task request, which can be used to query the execution result of an async task. Note: this field may return <code>null</code> , indicating that no valid value is obtained.
RequestId	String	The unique request ID, which is returned for each request. RequestId is required for locating a problem.

4. Example

Example1 Creating a health report and sending it via email (optional)

Input Example

```
https://dbbrain.tencentcloudapi.com/?Action=CreateDBDiagReportTask
&InstanceId=test
&StartTime=2019-01-01T00:00:00+08:00
&EndTime=2019-01-02T00:00:00+08:00
&SendMailFlag=1
&ContactPerson.0=1
&ContactGroup.0=1
&<common request parameters>
```

Output Example

```
{
  "Response": {
    "AsyncRequestId": 129632,
    "RequestId": "77db16d7-bbe8-48a7-868b-ed776a96f1ab"
  }
}
```

5. Developer Resources

SDK

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

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

Command Line Interface

- [Tencent Cloud CLI 3.0](#)

6. Error Code

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

Error Code	Description
InvalidParameter	Incorrect parameter.
MissingParameter	Missing parameter.
OperationDenied.UserHasNoStrategy	Error with CAM authentication.

DescribeHealthScore

Last updated : 2021-07-13 17:27:43

1. API Description

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

This API is used to obtain the health score and deduction for exceptions in the specified time period (30 minutes) based on the instance ID.

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

Note: This API supports Finance regions. If the common parameter Region is a Finance region, a domain name with the Finance region needs to be specified, for example: dbbrain.ap-shanghai-fsi.tencentcloudapi.com

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 parameter. The value used for this API: DescribeHealthScore.
Version	Yes	String	Common parameter. The value used for this API: 2019-10-16.
Region	Yes	String	Common parameter. For more information, please see the list of regions supported by the product.
InstanceId	Yes	String	The instance ID that needs to obtain the health score
Time	Yes	Timestamp ISO8601	Time to obtain the health score
Product	Yes	String	Service type. Valid values: <code>mysql</code> (TencentDB for MySQL),

`cynosdb` (TDSQL-C for MySQL (compatible with MySQL)).
Default value: `mysql` .

3. Output Parameters

Parameter Name	Type	Description
Data	HealthScoreInfo	Health score and deduction for exceptions
RequestId	String	The unique request ID, which is returned for each request. RequestId is required for locating a problem.

4. Example

Example1 Obtaining health score

This example shows you how to obtain health score and deduction for exceptions based on instance ID.

Input Example

```
https://dbbrain.tencentcloudapi.com/?Action=DescribeHealthScore
&InstanceId=test
&Time=2019-01-01T00:00:00+08:00
&Product=mysql
&<common request parameters>
```

Output Example

```
{
  "Response": {
    "RequestId": "8b307450-6118-11eb-88ad-93c053da68c6",
    "Data": {
      "IssueTypes": [
        {
          "TotalCount": 0,
          "Events": [],
          "IssueType": "AVAILABILITY"
        },
        {
          "TotalCount": 0,
          "Events": []
        }
      ]
    }
  }
}
```

```
"IssueType": "MAINTAINABILITY"
},
{
  "TotalCount": 1,
  "Events": [
    {
      "DiagType": "high-concurrency/pressure request",
      "ScoreLost": 6,
      "EndTime": "2021-01-28 11:20:42",
      "StartTime": "2021-01-28 11:00:00",
      "EventId": 780019530,
      "Outline": "Monitoring metric \"cpu_use_rate\" triggered an alarm. Current value: 100",
      "Severity": 1,
      "Metric": "cpu_use_rate",
      "Count": 1
    }
  ],
  "IssueType": "PERFORMANCE"
},
{
  "TotalCount": 3,
  "Events": [
    {
      "DiagType": "Replicate",
      "ScoreLost": 10,
      "EndTime": "2021-01-28 11:21:17",
      "StartTime": "2021-01-28 11:20:25",
      "EventId": 780018741,
      "Outline": "I/O replication thread interrupted",
      "Severity": 1,
      "Metric": "slave_io_running",
      "Count": 1
    },
    {
      "DiagType": "Replicate",
      "ScoreLost": 10,
      "EndTime": "2021-01-28 11:09:37",
      "StartTime": "2021-01-28 11:09:32",
      "EventId": 779984938,
      "Outline": "I/O replication thread interrupted",
      "Severity": 1,
      "Metric": "slave_io_running",
      "Count": 1
    },
    {
      "DiagType": "Replicate",
```

```
"ScoreLost": 8,
"EndTime": "2021-01-28 11:20:00",
"StartTime": "2021-01-28 11:20:00",
"EventId": 780021648,
"Outline": "Replication delayed",
"Severity": 2,
"Metric": "slave_io_running",
"Count": 1
},
"IssueType": "RELIABILITY"
},
"EventsTotalCount": 4,
"HealthLevel": "RISK"
}
}
```

Example2 Requesting health score

Input Example

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

{
  "InstanceId": "cdb-8jawylhf",
  "Product": "mysql",
  "Time": "2021-02-01 14:30:00"
}
```

Output Example

```
{
  "Response": {
    "RequestId": "0736b315-a9be-4991-92e6-28eccf3d31e3",
    "Data": {
      "IssueTypes": [
        {
          "TotalCount": 0,
          "Events": [],

```

```
"IssueType": "AVAILABILITY"
},
{
  "TotalCount": 0,
  "Events": [],
  "IssueType": "MAINTAINABILITY"
},
{
  "TotalCount": 0,
  "Events": [],
  "IssueType": "PERFORMANCE"
},
{
  "TotalCount": 0,
  "Events": [],
  "IssueType": "RELIABILITY"
}
],
"HealthScore": 100,
"EventsTotalCount": 0,
"HealthLevel": "HEALTH"
}
}
}
```

5. Developer Resources

SDK

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

Command Line Interface

- [Tencent Cloud CLI 3.0](#)

6. Error Code

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

Error Code	Description
AuthFailure	Error with CAM signature/authentication.
InternalError	Internal error.
InvalidParameter	Incorrect parameter.
InvalidParameterValue	Incorrect parameter value.
MissingParameter	Missing parameter.
OperationDenied.UserHasNoStrategy	Error with CAM authentication.
RequestLimitExceeded	The number of requests exceeds the frequency limit.
UnauthorizedOperation	The operation is unauthorized.
UnknownParameter	Unknown parameter.
UnsupportedOperation	Unsupported operation.

DescribeDiagDBInstances

Last updated : 2021-07-13 17:27:44

1. API Description

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

This API is used to obtain the instance information list. Select Guangzhou for Region.

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

Note: This API supports Finance regions. If the common parameter Region is a Finance region, a domain name with the Finance region needs to be specified, for example: dbbrain.ap-shanghai-fsi.tencentcloudapi.com

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 parameter. The value used for this API: DescribeDiagDBInstances.
Version	Yes	String	Common parameter. The value used for this API: 2019-10-16.
Region	Yes	String	Common parameter. For more information, please see the list of regions supported by the product.
IsSupported	Yes	Boolean	Whether it is an instance supported by DBbrain. It is fixed to "true".
Product	Yes	String	Service type. Valid values: <code>mysql</code> (TencentDB for MySQL), <code>cynosdb</code> (TDSQL-C for MySQL). Default value: <code>mysql</code> .
Offset	Yes	Integer	Pagination parameter indicating the offset.

Limit	Yes	Integer	Pagination parameter indicating the number of entries for each page.
InstanceNames.N	No	Array of String	Query by instance name.
InstanceIds.N	No	Array of String	Query by instance ID.
Regions.N	No	Array of String	Query by region.

3. Output Parameters

Parameter Name	Type	Description
TotalCount	Integer	Total Number of Instances
DbScanStatus	Integer	Status of all instance inspection. 0: all instance inspection enabled, 1: all instance inspection disabled
Items	Array of InstanceInfo	Instance related information
RequestId	String	The unique request ID, which is returned for each request. RequestId is required for locating a problem.

4. Example

Example1 Obtaining instance information list

This example shows you how to obtain the instance information list. You can query instance related information by instance ID, instance name, and region.

Input Example

```
https://dbbrain.tencentcloudapi.com/?Action=DescribeDiagDBInstances
&IsSupported=true
&Offset=0
&Limit=50
&Product=mysql
&<common request parameters>
```


Output Example

```
{
  "Response": {
    "TotalCount": 2,
    "DbScanStatus": 1,
    "Items": [
      {
        "GroupName": "4 regions as a group",
        "EventCount": 0,
        "Memory": 4000,
        "Product": "MySQL",
        "Cpu": 2,
        "Source": "TENCENT_CLOUD",
        "UniqSubnetId": "subnet-test",
        "DeployMode": "CUSTOM",
        "InstanceType": 1,
        "AuditRunningStatus": "normal",
        "Status": 1,
        "EngineVersion": "5.6",
        "InstanceId": "cdb-test",
        "Vport": 63492,
        "InitFlag": 1,
        "TaskStatus": 0,
        "UniqVpcId": "vpc-fstest",
        "GroupId": "dg-0ttest",
        "InstanceName": "long-term monitoring",
        "HealthScore": 100,
        "InstanceConf": {
          "OverviewDisplay": "Yes",
          "DailyInspection": "Yes"
        },
        "AuditPolicyStatus": "UNBOUND",
        "Volume": 100,
        "DeadlineTime": "2021-02-25 16:33:26",
        "SecAuditStatus": "ON",
        "Region": "ap-guangzhou",
        "Vip": "10.5.0.9",
        "IsSupported": true
      }
    ],
    "RequestId": "b2d08895-1cfe-48bc-b7f7-87fd7cb5d6f1"
  }
}
```

5. Developer Resources

SDK

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

Command Line Interface

- [Tencent Cloud CLI 3.0](#)

6. Error Code

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

Error Code	Description
AuthFailure	Error with CAM signature/authentication.
FailedOperation	Operation failed.
InternalError	Internal error.
InvalidParameter	Incorrect parameter.
InvalidParameterValue	Incorrect parameter value.
MissingParameter	Missing parameter.
OperationDenied.UserHasNoStrategy	Error with CAM authentication.
RequestLimitExceeded	The number of requests exceeds the frequency limit.
UnknownParameter	Unknown parameter.

DescribeTopSpaceSchemas

Last updated : 2021-07-13 17:27:42

1. API Description

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

This API is used to query real-time space statistics of top databases. The return results are sorted by size by default.

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

Note: This API supports Finance regions. If the common parameter Region is a Finance region, a domain name with the Finance region needs to be specified, for example: dbbrain.ap-shanghai-fsi.tencentcloudapi.com

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 parameter. The value used for this API: DescribeTopSpaceSchemas.
Version	Yes	String	Common parameter. The value used for this API: 2019-10-16.
Region	Yes	String	Common parameter. For more information, please see the list of regions supported by the product.
InstanceId	Yes	String	Instance ID.
Limit	No	Integer	Number of returned top databases. Maximum value: 100. Default value: 20.
SortBy	No	String	Field used to sort top tables. Valid values: <code>DataLength</code> , <code>IndexLength</code> , <code>TotalLength</code> , <code>DataFree</code> , <code>FragRatio</code> ,

			<code>TableRows</code> , and <code>PhysicalFileSize</code> (supported only by TencentDB for MySQL instances). For TencentDB for MySQL instances, the default value is <code>PhysicalFileSize</code> ; for other database instances, the default value is <code>TotalLength</code> .
Product	No	String	Service type. Valid values: <code>mysql</code> (TencentDB for MySQL), <code>cynosdb</code> (TencentDB for CynosDB (compatible with MySQL)). Default value: <code>mysql</code> .

3. Output Parameters

Parameter Name	Type	Description
TopSpaceSchemas	Array of SchemaSpaceData	List of the returned space statistics of top databases.
Timestamp	Integer	Timestamp (in seconds) of database space data collect points
RequestId	String	The unique request ID, which is returned for each request. RequestId is required for locating a problem.

4. Example

Example1 Obtaining the space statistics of top databases

Input Example

```
https://dbbrain.tencentcloudapi.com/?Action=DescribeTopSpaceSchemas
&InstanceId=cdb-test
&Limit=2
&SortBy=TableRows
&<common request parameters>
```

Output Example

```
{
  "Response": {
    "RequestId": "ed279d8b-a9d9-48d6-9429-e0fde000994a",
    "Timestamp": 1603819881,
    "TopSpaceSchemas": [
      {
```

```
"DataFree": 0,
"TotalLength": 0.1,
"TableSchema": "test_bak",
"FragRatio": 0,
"DataLength": 0.1,
"PhysicalFileSize": 0.1,
"TableRows": 9,
"IndexLength": 0
},
{
  "DataFree": 0,
  "TotalLength": 0.1,
  "TableSchema": "test_bak",
  "FragRatio": 0,
  "DataLength": 0.1,
  "PhysicalFileSize": 0.1,
  "TableRows": 9,
  "IndexLength": 0
}
]
```

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
AuthFailure	Error with CAM signature/authentication.
InternalError	Internal error.
InvalidParameter	Incorrect parameter.
InvalidParameterValue	Incorrect parameter value.
MissingParameter	Missing parameter.
OperationDenied	Operation denied.
OperationDenied.UserHasNoStrategy	Error with CAM authentication.

DescribeTopSpaceSchemaTimeSeries

Last updated : 2021-07-13 17:27:43

1. API Description

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

This API is used to query the daily space data of top databases consuming the most instance space. The data is daily collected by DBbrain during a specified time period. The return results are sorted by size by default.

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

Note: This API supports Finance regions. If the common parameter Region is a Finance region, a domain name with the Finance region needs to be specified, for example: dbbrain.ap-shanghai-fsi.tencentcloudapi.com

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 parameter. The value used for this API: DescribeTopSpaceSchemaTimeSeries.
Version	Yes	String	Common parameter. The value used for this API: 2019-10-16.
Region	Yes	String	Common parameter. For more information, please see the list of regions supported by the product.
InstanceId	Yes	String	Instance ID.
Limit	No	Integer	Number of returned top databases. Maximum value: 100. Default value: 20.
SortBy	No	String	Field used to sort top tables. Valid values: <code>DataLength</code> ,

			<code>IndexLength</code> , <code>TotalLength</code> , <code>DataFree</code> , <code>FragRatio</code> , <code>TableRows</code> , and <code>PhysicalFileSize</code> (supported only by TencentDB for MySQL instances). For TencentDB for MySQL instances, the default value is <code>PhysicalFileSize</code> ; for other database instances, the default value is <code>TotalLength</code> .
StartDate	No	Date	Start date. It can be as early as 29 days before the current date, and defaults to 6 days before the end date.
EndDate	No	Date	End date. It can be as early as 29 days before the current date, and defaults to the current date.
Product	No	String	Service type. Valid values: <code>mysql</code> (TencentDB for MySQL), <code>cynosdb</code> (TencentDB for CynosDB (compatible with MySQL)). Default value: <code>mysql</code> .

3. Output Parameters

Parameter Name	Type	Description
TopSpaceSchemaTimeSeries	Array of SchemaSpaceTimeSeries	Time series list of the returned space statistics of top databases.
RequestId	String	The unique request ID, which is returned for each request. RequestId is required for locating a problem.

4. Example

Example1 Obtaining the daily space statistics of top databases during a specified time period

Input Example

```
https://dbbrain.tencentcloudapi.com/?Action=DescribeTopSpaceSchemaTimeSeries
&InstanceId=cdb-test
&Limit=2
&StartDate=2021-01-01
&EndDate=2021-01-01
&<common request parameters>
```


Output Example

```
{
  "Response": {
    "RequestId": "d97eacb0-cebd-40b6-963b-579092454f05",
    "TopSpaceSchemaTimeSeries": [
      {
        "TableSchema": "test_bak",
        "SeriesData": {
          "Series": [
            {
              "Values": [
                0
              ],
              "Metric": "DataFree",
              "Unit": "MB"
            },
            {
              "Values": [
                0.1
              ],
              "Metric": "DataLength",
              "Unit": "MB"
            },
            {
              "Values": [
                0
              ],
              "Metric": "IndexLength",
              "Unit": "MB"
            },
            {
              "Values": [
                0.1
              ],
              "Metric": "TotalLength",
              "Unit": "MB"
            },
            {
              "Values": [
                0
              ],
              "Metric": "FragRatio",
              "Unit": "%"
            },
            {
              "Values": [
```

```
9
],
"Metric": "TableRows",
"Unit": ""
},
{
  "Values": [
    0.1
  ],
  "Metric": "PhysicalFileSize",
  "Unit": "MB"
}
],
"Timestamp": [
  1588089600
]
}
},
{
  "TableSchema": "test_bak",
  "SeriesData": {
    "Series": [
      {
        "Values": [
          0
        ],
        "Metric": "DataFree",
        "Unit": "MB"
      },
      {
        "Values": [
          0.1
        ],
        "Metric": "DataLength",
        "Unit": "MB"
      },
      {
        "Values": [
          0
        ],
        "Metric": "IndexLength",
        "Unit": "MB"
      },
      {
        "Values": [
          0.1
        ],

```

```
"Metric": "TotalLength",
"Unit": "MB"
},
{
"Values": [
0
],
"Metric": "FragRatio",
"Unit": "%"
},
{
"Values": [
6
],
"Metric": "TableRows",
"Unit": ""
},
{
"Values": [
0.1
],
"Metric": "PhysicalFileSize",
"Unit": "MB"
}
],
"Timestamp": [
1588089600
]
}
}
]
}
}
```

5. Developer Resources

SDK

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

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

Command Line Interface

- [Tencent Cloud CLI 3.0](#)

6. Error Code

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

Error Code	Description
AuthFailure	Error with CAM signature/authentication.
InternalError	Internal error.
InvalidParameter	Incorrect parameter.
InvalidParameterValue	Incorrect parameter value.
MissingParameter	Missing parameter.
OperationDenied	Operation denied.
OperationDenied.UserHasNoStrategy	Error with CAM authentication.

Data Types

Last updated : 2021-05-12 19:27:03

ContactItem

Contact description.

Used by actions: DescribeAllUserContact.

Name	Type	Description
Id	Integer	Contact ID.
Name	String	Contact name.
Mail	String	The email address of the contact.

DiagHistoryEventItem

Instance diagnosis event

Used by actions: DescribeDBDiagHistory.

Name	Type	Description
DiagType	String	Diagnosis type.
EndTime	Timestamp	End time.
StartTime	Timestamp	Start time.
EventId	Integer	Event ID.
Severity	Integer	Severity, which can be divided into 5 levels: 1: fatal, 2: severe, 3: warning, 4: notice, 5: healthy.
Outline	String	Summary.
DiagItem	String	Diagnosis item.
InstanceId	String	Instance ID. Note: this field may return null, indicating that no valid values can be obtained.

Metric	String	Reserved field Note: this field may return null, indicating that no valid values can be obtained.
Region	String	Region Note: this field may return null, indicating that no valid values can be obtained.

EventInfo

Exception information

Used by actions: DescribeHealthScore.

Name	Type	Description
EventId	Integer	Event ID
DiagType	String	Diagnosis type
StartTime	Timestamp ISO8601	Start time
EndTime	Timestamp ISO8601	End time
Outline	String	Summary
Severity	Integer	Severity, which can be divided into 5 levels: 1: fatal, 2: severe, 3: warning, 4: notice, 5: healthy.
ScoreLost	Integer	Deduction
Metric	String	Reserved field
Count	Integer	The number of alarms

GroupItem

Describe the group information.

Used by actions: DescribeAllUserGroup.

Name	Type	Description
Id	Integer	Group ID.

Name	String	Group name.
MemberCount	Integer	Number of group members.

HealthReportTask

Details of health report tasks.

Used by actions: DescribeDBDiagReportTasks.

Name	Type	Description
AsyncRequestId	Integer	Async task request ID.
Source	String	Source that triggers the task. Valid values: <code>DAILY_INSPECTION</code> (instance inspection), <code>SCHEDULED</code> (timed generation), and <code>MANUAL</code> (manual trigger).
Progress	Integer	Task progress in %.
CreateTime	Timestamp	Task creation time.
StartTime	Timestamp	Task start time.
EndTime	Timestamp	Task end time.
InstanceInfo	InstanceBasicInfo	Basic information about the instance to which the task belongs.
HealthStatus	HealthStatus	Health information in a health report.

HealthScoreInfo

Obtain the details of the health score and deduction.

Used by actions: DescribeHealthScore.

Name	Type	Description
IssueTypes	Array of IssueTypeInfo	Exception details
EventsTotalCount	Integer	Total number of the exceptions
HealthScore	Integer	Health score

HealthLevel	String	Health level, such as "HEALTH", "SUB_HEALTH", "RISK", "HIGH_RISK".
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HealthStatus

Instance health status.

Used by actions: DescribeDBDiagReportTasks.

Name	Type	Description
HealthScore	Integer	Health score out of 100 points.
HealthLevel	String	Health level. Valid values: <code>HEALTH</code> (healthy), <code>SUB_HEALTH</code> (suboptimal), <code>RISK</code> (risky), and <code>HIGH_RISK</code> (critical).
ScoreLost	Integer	Total scores deducted.
ScoreDetails	Array of ScoreDetail	Deduction details. Note: <code>null</code> may be returned for this field, indicating that no valid values can be obtained.

InstanceBasicInfo

Basic information of instance.

Used by actions: DescribeDBDiagReportTasks.

Name	Type	Description
InstanceId	String	Instance ID.
InstanceName	String	Instance name.
Vip	String	Private IP of the instance.
Vport	Integer	Private network port of the instance.
Product	String	Instance product.
EngineVersion	String	Instance engine version.

InstanceConfs

Instance configuration.

Used by actions: DescribeDiagDBInstances, ModifyDiagDBInstanceConf.

Name	Type	Required	Description
DailyInspection	String	No	Whether to enable database inspection. Valid values: Yes/No.
OverviewDisplay	String	No	Whether to enable instance overview. Valid values: Yes/No.

InstanceInfo

Query the list of instances and return information about the instances.

Used by actions: DescribeDiagDBInstances.

Name	Type	Description
InstanceId	String	Instance ID
InstanceName	String	Instance name
Region	String	The region where the instance belongs
HealthScore	Integer	Health score
Product	String	Service
EventCount	Integer	Number of exceptions
InstanceType	Integer	Instance type. Valid values: 1: MASTER, 2: DR, 3: RO, 4: SDR
Cpu	Integer	Number of cores
Memory	Integer	Memory in MB
Volume	Integer	Disk storage in GB
EngineVersion	String	Database version
Vip	String	Private network address
Vport	Integer	Private network port

Source	String	Access source
GroupId	String	Group ID
GroupName	String	Group name
Status	Integer	Instance status. Valid values: 0: Delivering, 1: Running, 4: Terminating, 5: Isolated
UniqSubnetId	String	Subnet unified ID
DeployMode	String	cdb (TencentDB instance) type
InitFlag	Integer	cdb (TencentDB instance) initialization flag. Valid values: 0: not initialized, 1: initialized
TaskStatus	Integer	Task status
UniqVpcId	String	Unified VPC ID
InstanceConf	InstanceConfs	Instance inspection/overview status
DeadlineTime	Timestamp	Resource expiration time
IsSupported	Boolean	Whether it is an instance supported by DBbrain.
SecAuditStatus	String	The status of instance security audit log. ON: enabled, OFF: disabled.
AuditPolicyStatus	String	The status of instance audit log. ALL_AUDIT: full audit is enabled, RULE_AUDIT: rule audit is enabled, UNBOUND: audit is disabled.
AuditRunningStatus	String	The running status of instance audit log. normal: running, paused: suspension due to arrears

IssueTypeInfo

Metric information

Used by actions: DescribeHealthScore.

Name	Type	Description
IssueType	String	Metric categories: AVAILABILITY, MAINTAINABILITY, PERFORMANCE, and RELIABILITY
Events	Array of EventInfo	Exception

TotalCount	Integer	Total number of the exceptions
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MailConfiguration

Email sending configuration.

Used by actions: CreateMailProfile, CreateSchedulerMailProfile, DescribeMailProfile.

Name	Type	Required	Description
SendMail	Integer	Yes	Whether to enable email sending. Valid values: 0 (No), 1 (Yes).
Region	Array of String	Yes	Region configuration, such as "ap-guangzhou", "ap-shanghai". For the inspection email sending template, configure the region where you need to send the inspection email. For the subscription email sending template, configure the region to which the current subscribed instance belongs.
HealthStatus	Array of String	Yes	Sending a report with the specified health level, such as "HEALTH", "SUB_HEALTH", "RISK", "HIGH_RISK".
ContactPerson	Array of Integer	No	Contact ID. Either <code>ContactGroup</code> or <code>ContactID</code> should be passed in.
ContactGroup	Array of Integer	No	Contact group ID. Either <code>ContactGroup</code> or <code>ContactID</code> should be passed in.

MonitorFloatMetric

Monitoring data in float type

Used by actions: DescribeTopSpaceTableTimeSeries.

Name	Type	Description
Metric	String	Metric name.
Unit	String	Metric unit.
Values	Array of Float	Metric value.

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

MonitorFloatMetricSeriesData

Monitoring metric value in float type in a unit of time interval

Used by actions: DescribeTopSpaceTableTimeSeries.

Name	Type	Description
Series	Array of MonitorFloatMetric	Monitoring metric.
Timestamp	Array of Integer	Timestamp corresponding to monitoring metric.

MonitorMetric

Monitoring data

Used by actions: DescribeSlowLogTimeSeriesStats, DescribeTopSpaceSchemaTimeSeries.

Name	Type	Description
Metric	String	Metric name.
Unit	String	Metric unit.
Values	Array of Integer	Metric value. Note: this field may return null, indicating that no valid values can be obtained.

MonitorMetricSeriesData

Monitoring metric data in specified time range

Used by actions: DescribeSlowLogTimeSeriesStats, DescribeTopSpaceSchemaTimeSeries.

Name	Type	Description
Series	Array of MonitorMetric	Monitoring metric.
Timestamp	Array of Integer	Timestamp corresponding to monitoring metric.

ProfileInfo

Information configured by user.

Used by actions: CreateMailProfile, CreateSchedulerMailProfile, DescribeMailProfile.

Name	Type	Required	Description
Language	String	Yes	Language of the email, such as <code>en</code> .
MailConfiguration	MailConfiguration	Yes	The content of email template.

SchemaItem

`SchemaItem` array

Used by actions: DescribeSlowLogTopSqls.

Name	Type	Required	Description
Schema	String	Yes	Database name

SchemaSpaceData

Database space statistics.

Used by actions: DescribeTopSpaceSchemas.

Name	Type	Description
TableSchema	String	Database name.
DataLength	Float	Data space in MB.
IndexLength	Float	Index space in MB.
DataFree	Float	Fragmented space in MB.
TotalLength	Float	Total space usage in MB.
FragRatio	Float	Fragmented rate (%).
TableRows	Integer	Number of rows.

PhysicalFileSize	Float	The total size of the independent physical files corresponding to all the database tables (MB). Note: <code>null</code> may be returned for this field, indicating that no valid values can be obtained.
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SchemaSpaceTimeSeries

Time series of database space data

Used by actions: DescribeTopSpaceSchemaTimeSeries.

Name	Type	Description
TableSchema	String	Database name
SeriesData	MonitorMetricSeriesData	Monitoring metric data in a unit of time interval.

ScoreDetail

Deduction details.

Used by actions: DescribeDBDiagReportTasks.

Name	Type	Description
IssueType	String	Deduction item types. Valid values: availability, maintainability, performance, and reliability.
ScoreLost	Integer	Total scores deducted.
ScoreLostMax	Integer	Upper limit of the deducted scores.
Items	Array of ScoreItem	Deduction item list. Note: <code>null</code> may be returned for this field, indicating that no valid values can be obtained.

ScoreItem

Diagnosis deduction item.

Used by actions: DescribeDBDiagReportTasks.

Name	Type	Description
DiagItem	String	Exception diagnosis item name.
IssueType	String	Diagnosis item types. Valid values: availability, maintainability, performance, and reliability.
TopSeverity	String	Health level. Valid values: information, reminder, alarm, serious, fatal.
Count	Integer	Number of occurrences of this exception diagnosis item.
ScoreLost	Integer	Scores deducted.

SlowLogHost

Details of slow log source addresses.

Used by actions: DescribeSlowLogUserHostStats.

Name	Type	Description
UserHost	String	Source addresses.
Ratio	Float	The proportion (in %) of slow logs from this source address to the total number of slow logs
Count	Integer	Number of slow logs from this source address.

SlowLogTopSqlItem

Top slow SQL statements

Used by actions: DescribeSlowLogTopSqls.

Name	Type	Description
LockTime	Float	Total SQL lock wait time
LockTimeMax	Float	Maximum lock wait time
LockTimeMin	Float	Minimum lock wait time
RowsExamined	Integer	Total number of scanned rows

RowsExaminedMax	Integer	Maximum number of scanned rows
RowsExaminedMin	Integer	Minimum number of scanned rows
QueryTime	Float	Total duration
QueryTimeMax	Float	Maximum execution time
QueryTimeMin	Float	Minimum execution time
RowsSent	Integer	Total number of returned rows
RowsSentMax	Integer	Maximum number of returned rows
RowsSentMin	Integer	Minimum number of returned rows
ExecTimes	Integer	Number of executions
SqlTemplate	String	SQL template
SqlText	String	SQL with parameter (random)
Schema	String	Database name
QueryTimeRatio	Float	Ratio of total duration
LockTimeRatio	Float	Ratio of total SQL lock wait time
RowsExaminedRatio	Float	Ratio of total number of scanned rows
RowsSentRatio	Float	Ratio of total number of returned rows
QueryTimeAvg	Float	Average execution time
RowsSentAvg	Float	Average number of rows returned
LockTimeAvg	Float	Average lock wait time
RowsExaminedAvg	Float	Average number of rows scanned

TableSpaceData

Database table space statistics.

Used by actions: DescribeTopSpaceTables.

Name	Type	Description
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TableName	String	Table name.
TableSchema	String	Database name.
Engine	String	Database table storage engine.
DataLength	Float	Data space in MB.
IndexLength	Float	Index space in MB.
DataFree	Float	Fragmented space in MB.
TotalLength	Float	Total space usage in MB.
FragRatio	Float	Fragmented rate (%).
TableRows	Integer	Number of rows.
PhysicalFileSize	Float	Size in MB of the physical file exclusive to a table.

TableSpaceTimeSeries

Time series of database table space data

Used by actions: DescribeTopSpaceTableTimeSeries.

Name	Type	Description
TableName	String	Table name.
TableSchema	String	Database name.
Engine	String	Database table storage engine.
SeriesData	MonitorFloatMetricSeriesData	Monitoring metric data in a unit of time interval.

TimeSlice

Slow log statistics in specified time range

Used by actions: DescribeSlowLogTimeSeriesStats.

Name	Type	Description
Count	Integer	Total number

Timestamp	Integer	Statistics start time
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UserProfile

Information configured by user, including email configuration.

Used by actions: DescribeMailProfile.

Name	Type	Description
ProfileId	String	Configured ID Note: this field may return <code>null</code> , indicating that no valid values can be obtained.
ProfileType	String	Configuration type Note: this field may return <code>null</code> , indicating that no valid values can be obtained.
ProfileLevel	String	Configuration level. Valid values: "User" or "Instance" Note: this field may return <code>null</code> , indicating that no valid values can be obtained.
ProfileName	String	Configuration name Note: this field may return <code>null</code> , indicating that no valid values can be obtained.
ProfileInfo	ProfileInfo	Configuration details

Error Codes

Last updated : 2021-07-13 17:27:49

Feature Description

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

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

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

Error Code List

Common Error Codes

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

AuthFailure.SignatureFailure	Invalid signature. Signature calculation error. Please ensure you've followed the signature calculation process described in the Signature API documentation.
AuthFailure.TokenFailure	Token error.
AuthFailure.UnauthorizedOperation	The request is not authorized. For more information, see the CAM documentation.
DryRunOperation	DryRun Operation. It means that the request would have succeeded, but the DryRun parameter was used.
FailedOperation	Operation failed.
InternalError	Internal error.
InvalidAction	The API does not exist.
InvalidParameter	Incorrect parameter.
InvalidParameterValue	Invalid parameter value.
InvalidRequest	The multipart format of the request body is incorrect.
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.
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.
ServiceUnavailable	Service is unavailable now.
UnauthorizedOperation	Unauthorized operation.
UnknownParameter	Unknown parameter.

UnsupportedOperation	Unsupported operation.
UnsupportedProtocol	HTTP(S) request protocol error; only GET and POST requests are supported.
UnsupportedRegion	API does not support the requested region.

Service Error Codes

Error Code	Description
AuthFailure	Error with CAM signature/authentication.
OperationDenied	Operation denied.
OperationDenied.UserHasNoStrategy	Error with CAM authentication.