# Log Tank Service

# API Reference

**Issue** 01

**Date** 2020-03-30

HUAWEI TECHNOLOGIES CO., LTD.

## Trademarks and Permissions


and other Huawei trademarks are trademarks of Huawei Technologies Co., Ltd.
All other trademarks and trade names mentioned in this document are the property of their respective holders.

## Notice

The purchased products, services and features are stipulated by the contract made between Huawei and the customer. All or part of the products, services and features described in this document may not be within the purchase scope or the usage scope. Unless otherwise specified in the contract, all statements, information, and recommendations in this document are provided "AS IS" without warranties, guarantees or representations of any kind, either express or implied.

The information in this document is subject to change without notice. Every effort has been made in the preparation of this document to ensure accuracy of the contents, but all statements, information, and recommendations in this document do not constitute a warranty of any kind, express or implied.

# Contents



# 1 Before You Start

This document provides the descriptions, syntax, parameters, and examples of the Log Tank Service (LTS) APIs. You can view the required information in **Table 1**.

**Table 1-1** Overview

| Section | Description |
| --- | --- |
| API Overview | LTS API components and API lists |
| Environment Preparations | Preparations before using the APIs, including obtaining request authentication information and project IDs |
| Method of Calling APIs | Representational State Transfer (REST) message bodies, calling methods, and examples |
| API Description | API usage description |
| Public Parameters | General return values and error code of LTS APIs |

# 2 API Overview

Log Tank Service (LTS) provides extension APIs. Using the APIs provided by LTS, you can use all basic LTS functions. For example, you can query the API version number, create and delete log groups or log streams.

**Table 1** describes the LTS APIs.

**Table 2-1** API description

| Subtype | Description |
| --- | --- |
| Log group APIs | APIs for creating and deleting log groups |
| Log stream APIs | APIs for creating and deleting log streams |

# 3 Environment Preparations

## 3.1 Obtaining Request Authentication Information

You can use either of the following authentication methods when calling APIs:

- Token authentication: Requests are authenticated using tokens.
- AK/SK authentication: Requests are authenticated by encrypting the request body using an Access Key ID/Secret Access Key (AK/SK) pair. AK/SK authentication is recommended because it is more secure than token authentication.

### Token Authentication

For token authentication, you must obtain a token and add the **X-Auth-Token** request header when calling APIs.

**Step 1** Send **POST https://*IAM endpoint*/v3/auth/tokens**. Obtain the Identity and Access Management (IAM) endpoint and region name in the message body.

NOTE

Content in italic in the following example must be replaced with actual content.

```
{
  "auth": {
    "identity": {
      "methods": [
        "password"
      ],
      "password": {
        "user": {
          "name": "username",
          "password": "password",
          "domain": {
            "name": "domainname"
          }
        }
      }
    },
    "scope": {
      "project": {
        "name": "aaa"
      }
```

```
  }
 }
}
```

**Step 2** Obtain the token. After the request is processed, the value of **X-Subject-Token** in the message header is the token value.

**Step 3** To call a service API, add **X-Auth-Token** to the request header. The value of **X-Auth-Token** is that of the token obtained in **Step 2**.

**----End**

## AK/SK Authentication

**NOTE**

AK/SK authentication supports API requests with a body not larger than 12 MB. For API requests with a larger body, token authentication is recommended.

In AK/SK authentication, AK/SK is used to sign requests and the signature is then added to the requests for authentication.

- AK: access key ID. It is a unique identifier associated with a secret access key and is used in conjunction with a secret access key to sign requests cryptographically.
- SK: secret access key used in conjunction with an AK to sign requests cryptographically. It identifies a request sender and prevents the request from being modified.

In AK/SK authentication, you can use an AK/SK to sign requests based on the signature algorithm or use the signing SDK to sign requests.

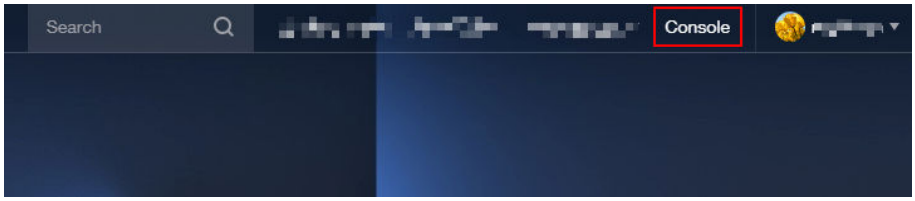
**NOTICE**

The signing SDK is only used for signing requests and is different from the SDKs provided by services.

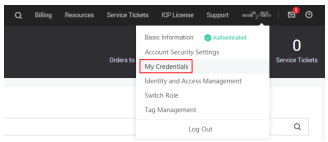
# 3.2 Obtaining Account and Project IDs

Account and project IDs are required for some URLs when an API is called. To obtain the IDs, perform the following operations:

1. Register an account and log in to the management console.

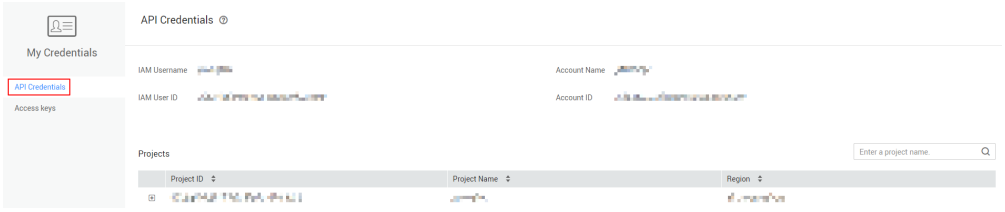



2. Click the username and choose **My Credentials** from the drop-down list.



3. On the **My Credentials** page, view the account ID and project ID.




If there are multiple projects in one region, expand **Region** and obtain sub-project IDs from the **Project ID** column.

# 4 Examples

This section describes how to call APIs to create a log group.

NOTE

The token obtained from Identity and Access Management (IAM) is valid for only 24 hours. If you want to use one token for authentication, you can cache it to avoid frequently obtaining the token.

## Involved APIs

For token authentication, you must obtain a token and add the **X-Auth-Token** request header when calling APIs.

- IAM API used to obtain the token
- API used to create a log group

## Procedure

1. Obtain the token by following instructions in **3.1 Obtaining Request Authentication Information**.
2. Send **POST /v2.0/{project_id}/log-groups**.
3. Add **Content-Type** and **X-Auth-Token** to the request header.
4. Specify the following parameters in the request body:

```
POST /v2.0/{project_id}/log-groups
{
"log_group_name":"test001", //Log group name (mandatory, String)
"ttl_in_days":"7",  // log expiration time (default, int)
}
```

After the request is successfully processed, information about the created tracker is returned.

```
{
"log_group_id":"2a0089e4-3001-11e9-9e9d-286ed488ce71", //log group ID (String)
}
```

If the request fails, an error code and error description are returned. For details, see **6.2 Error Code**.

# 5 API Description

## 5.1 Log Stream Management

### 5.1.1 Creating a Log Stream

#### Function

This function describes how to create a log stream under a created log group. You can view and query raw logs under a log stream. (Currently, only CN North-Beijing4 is supported.)

#### URI

- URI format

  POST /v2/{project_id}/groups/{group_id}/topics

- Path parameter description

  **Table 5-1** Parameter description

| Parameter | Mandatory | Type | Description |
| --- | --- | --- | --- |
| project_id | Yes | String | Project ID obtained from Identity and Access Management (IAM). Generally, a project ID is a string containing 32 characters. |
| group_id | Yes | String | Group ID of the log group in which the tenant wants to create log streams. Generally, a group ID is a string containing 36 characters. |

## Request

- Request header parameter description

  **Table 5-2** Parameter description

| Parameter | Mandatory | Type | Description |
| --- | --- | --- | --- |
| X-Auth-Token | Yes | String | User token obtained from IAM. |
| Content-Type | Yes | String | Content type, which is **application/json**. |

- Request body parameter description

  **Table 5-3** Parameter description

| Parameter | Mandatory | Type | Description |
| --- | --- | --- | --- |
| log_topic_name | Yes | String | Log topic name.<br>The configuration rules are as follows:<br>• Must be a string of 1 to 64 characters.<br>• Only letters, digits, special characters, such as underscores (_), hyphens (-), and periods (.) are allowed. The name cannot start or end with a period. |

- Example request

```
POST  /v2/{project_id}/groups/{group_id}/topics
{
"log_topic_name":"lts-topic-13ci"
}
```

## Response

- Response parameter description

  **Table 5-4** Parameter description

| Parameter | Type | Description |
| --- | --- | --- |
| log_topic_id | String | Log stream ID. |

- Example response

```
{
   "log_topic_id":"a25d64c8-3028-11e9-9660-286ed488ce71"
}
```

### Returned Value

- Normal

  201
- Abnormal

  For details, see **Status Code**.

## 5.1.2 Deleting a Log Stream

### Function

This function describes how to delete a log stream that will not be used. (Currently, only CN North-Beijing4 is supported.)

NOTE

Before deleting a log stream, ensure that the log stream has no log transfer task. Deleted log streams cannot be recovered. Therefore, exercise caution when performing this deletion operation.

### URI

- URI format

  DELETE /v2/{project_id}/groups/{group_id}/topics/{topic_id}
- Path parameter description

**Table 5-5** Parameter description

| Parameter | Mandatory | Type | Description |
| --- | --- | --- | --- |
| project_id | Yes | String | Project ID obtained from Identity and Access Management (IAM). Generally, a project ID is a string containing 32 characters. |
| group_id | Yes | String | ID of a created log group. |
| topic_id | Yes | String | ID of a created log stream. |

### Request

- Request header parameter description

**Table 5-6** Parameter description

| Parameter | Mandatory | Type | Description |
| --- | --- | --- | --- |
| X-Auth-Token | Yes | String | User token obtained from IAM. |
| Content-Type | Yes | String | Content type, which is **application/json**. |

- Example request
  ```
  DELETE /v2/{project_id}/groups/{group_id}/topics/{topic_id}
  ```

## Response

- Parameter description

  None
- Example response

  None

## Returned Value

- Normal

  204
- Abnormal

  For details, see **Status Code**.

# 6 Public Parameters

## 6.1 Status Code

Table 1 lists the status code.

**Table 6-1** Status code description

| Status Code | Returned Value | Description |
| --- | --- | --- |
| 200 | OK | The results of GET and PUT operations are returned normally. |
| 201 | OK | The POST request is successful and the query result is returned. |
| 204 | No Content | The result of the DELETE operation is returned normally. |
| 400 | Bad Request | Request error. |
| 401 | Unauthorized | The authentication information is unavailable or incorrect. |
| 403 | Forbidden | You are forbidden to access the page requested. |
| 404 | Not Found | The server failed to find the requested resource. |
| 408 | Request Timeout | The request timed out. |
| 429 | Too Many Requests | The number of requests exceeded the upper limit. |
| 500 | Internal Server Error | Failed to complete the request because of an internal service error. |
| 503 | Service Unavailable | Failed to complete the request because the system is unavailable. |

# 6.2 Error Code

## Description

This section explains the meanings of error code responses returned by Log Tank Service (LTS) APIs.

## Response Format

{"error_msg":"Current user is not authenticated correctly, check your token.","error_code":"LTS.0002"}

## Error Code Description

**Table 6-2** Error code description

| Response Code | Error Code | Description | Error Message | Solution |
|---|---|---|---|---|
| 400 | LTS.0101 | Failed to create the log group because a log group with the same name already exists. | Failed to create log group, the group name has been existed | Check the log group name. |
| 400 | LTS.0104 | Failed to create the log group because the maximum number of log groups has been reached. | Failed to create log group, the number of log groups exceeds the quota | Check whether the number of log groups reaches the quota (100 by default). |
| 400 | LTS.0105 | Failed to delete the log group because the log group has associated log transfer tasks. | Log group is associated by transfer | Check whether the associated log transfer tasks have been deleted. |
| 404 | LTS.0201 | Failed to create the log stream because the associated log group does not exist. | The group is not existed | Check the ID of the log group. |

| Response Code | Error Code | Description | Error Message | Solution |
| --- | --- | --- | --- | --- |
| 400 | LTS.0205 | Failed to create the log stream because a log stream with the same name already exists. | The topic name has been existed | Check whether the log stream with the same name already exists. |
| 400 | LTS.0206 | Failed to create the log stream because the maximum number of log streams has been reached. | Failed to create log topic, the number of log topics exceeds the quota | Check whether the number of log streams reaches the quota (100 by default). |
| 400 | LTS.0207 | Failed to delete the log stream because the log stream has associated log transfer tasks. | Log topic is associated by transfer | Check whether the associated log transfer tasks have been deleted. |
| 500 | LTS.0010 | System internal error. | The system encountered an internal error | Contact the administrator. |
| 500 | LTS.0102 | Failed to create the log group. | Failed to create log group. | Check whether the project ID is correct and whether the log group name meets the requirements. |
| 500 | LTS.0103 | Failed to delete the log group. | Failed to delete log group | Check whether the database is normal or whether the network connection is normal. |
| 500 | LTS.0202 | Failed to create the log stream. | Failed to create log topic | Check whether the project and group IDs are correct and whether the log stream name meets the requirements. |

| Response Code | Error Code | Description | Error Message | Solution |
| --- | --- | --- | --- | --- |
| 500 | LTS.0203 | Failed to delete the log stream. | Failed to delete log topic | Check whether the database is normal or whether the network connection is normal. |
| 400 | LTS.0001 | The API version or project Id is invalid or does not exist. | API version/project id invalid or missing | Check whether the API version and project ID information are correct. |
| 401 | LTS.0002 | Invalid user token. | Current user is not authenticated correctly, check your token | Check whether the token information of the current user is correct. |
| 400 | LTS.0011 | Invalid resource ID. | The resource id is invalid or missing | Check whether the resource ID in the request is correct. |

# A Change History

| Released On | Description |
| --- | --- |
| 2020-03-20 | This issue is the first official release. |