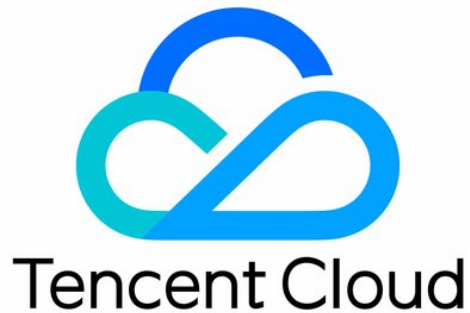


Cloud Log Service

Developer Guide

Product Documentation



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Developer Guide

Embedding CLS Console

Last updated : 2021-06-07 11:15:37

Overview

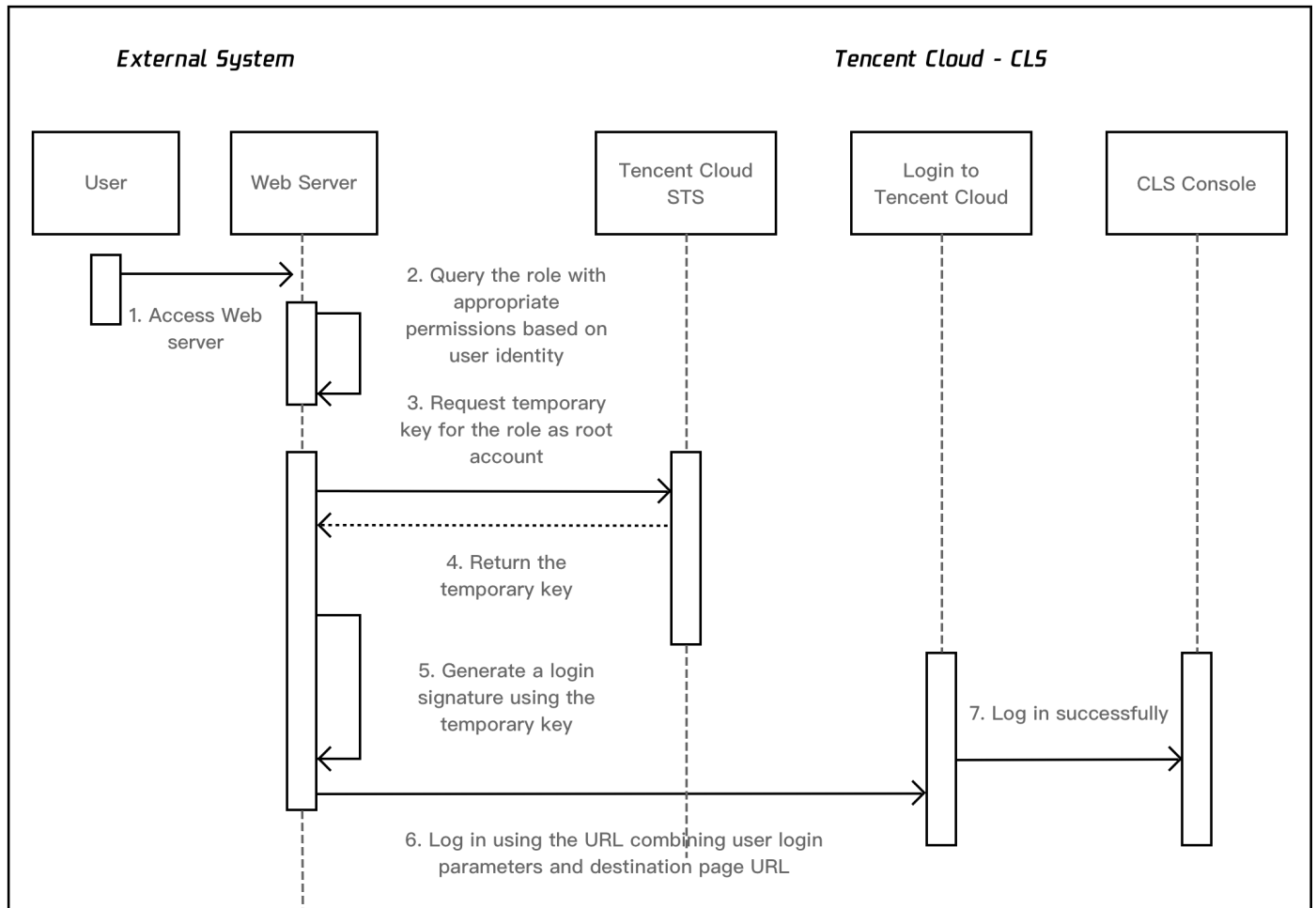
CLS allows you to embed the [CLS console](#) into an external system so you can conduct log search and analysis without logging in to Tencent Cloud console. This feature offers benefits as follows:

- Quickly integrate CLS search and analysis capabilities into an external service system (e.g., for business maintenance or operation).
- Easily share your log data with others without needing to manage additional Tencent Cloud sub-accounts.

Sample code for an embedded page: [cls-iframe-demo](#).

See the figure below for an overview of this feature:

Embedding CLS Console



Prerequisites

- Log in to the [CAM console](#) to create a **CAM role with console login permissions**. Set the role entity to root account, e.g. `CompanyOpsRole`. Grant the CAM role appropriate access permissions using policies, e.g. `QcloudCLSReadOnlyAccess` for read-only access. You can create a CAM role in 2 ways: [using the console](#) or [using APIs](#).

- **Creating a CAM role using the console:**

- Log in to the [CAM console](#).
- Click **Roles** in the left sidebar to enter the roles list page.
- Select **Create Role > Tencent Cloud Account** to create a custom role.
- Select **Current root account ***, **check *Allow the current role to access console**, and click **Next**.

Note :

If the option **Allow the current role to access console* is not available, [submit a ticket](#) to be whitelisted for this feature.

e. Set access policies for the role, e.g., the read-only policy `QcloudCLSReadOnlyAccess` , and click **Next**.

f. Enter the role name and click **Done**.

• Creating a CAM role using APIs:

For detailed directions, see [CreateRole](#). Note that you need to enter `1` as the value of `ConsoleLogin` to allow the role to log in to the console.

Sample request:

```
plaintext
https://cam.tencentcloudapi.com/?Action=CreateRole&RoleName=CompanyOpsRole&ConsoleLogin=1&PolicyDocument={"version":"2.0","statement":[{"action":["cls:get*","cls:list*","cls:GetHistogram","cls:GetFastAnalysis","cls:GetChart","cls:ListChart","cls:ListDashboard","cls:GetDashboard","cls:searchLog","cls:downloadLog","cls:pullLogs"],"effect":"allow","principal":{"qcs":["qcs::cam::uin/100001234567:root"]}}]}
```

ii. Obtain the access key of current user. For more information, see [Root Account Access Key](#).

Directions

1. Log in to the web server outside Tencent Cloud.
2. The external web server assigns you the pre-created role created in Prerequisite 1 based on your identity, e.g. `CompanyOpsRole` .
3. The web server accesses the Tencent Cloud STS service based on the role name and uses the access key obtained in Prerequisite 2 to call the [AssumeRole](#) API to apply for a temporary key of `CompanyOpsRole` .
4. Call the [AssumeRole](#) API to get the temporary key of `CompanyOpsRole` .
5. Generate a login signature using the temporary key with the steps as shown below:

i. Sorting parameters

Sort parameters to be signed listed below in ascending alphabetical or numerical order. That is, sort the parameters by their first letters, then by their second letters if their first letters are the same, and so on. You can do this with the aid of sorting functions in programming languages, such as the `ksort` function in PHP.

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

Parameter Name	Required	Type	Description
action	Yes	String	Action; fixed as `roleLogin`
timestamp	Yes	Int	Current timestamp
nonce	Yes	Int	Random integer. Value range: 10000-100000000
secretId	Yes	String	Temporary AK returned by STS

ii. Formatting parameters

Combine the above sorted parameters into the form of "parameter name=parameter value".

Example:

```
plaintext
action=roleLogin&nonce=67439&secretId=AKI***PLE&timestamp=1484793352
```

iii. Constructing a signature string

Construct a signature string in the format of "request method + request CVM + request path + ? + request string".

Parameter	Required	Description
Request CVM and path	Yes	Fixed as <code>cloud.tencent.com/login/roleAccessCallback</code>
Request method	Yes	GET or POST

Sample signature string

```
plaintext
GETcloud.tencent.com/login/roleAccessCallback?action=roleLogin&nonce=67439&secretId=AKI***PLE&timestamp=1484793352
```

iv. Generating a signature string

Currently, you can sign a string using HMAC-SHA1 or HMAC-SHA256. The sample code in PHP is as follows:

```
plaintext
$secretKey = 'Gu5**1qA';
$srcStr = 'GETcloud.tencent.com/login/roleAccessCallback?action=roleLogin&nonce=67439&secretId=&timestamp=1484793352';
$signStr = base64_encode(hash_hmac('sha1', $srcStr, $secretKey, true));
echo $signStr;
```

Sample code for PHP

```

<?php
$secretId = "AKI***"; //Temporary AK returned by STS
$secretKey = "Gu5***PLE"; //Temporary SecretKey returned by STS
$token = "ADE***fds"; //Security Token returned by STS
$params["nonce"] = 11886; //rand();
$params["timestamp"] = 1465185768; //time();
$params["secretId"] = $secretId;
$params["action"] = "roleLogin";
ksort($params);
$signStr = "GETcloud.tencent.com/login/roleAccessCallback?";
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;

```

6. Combine your login information and destination page URL into a login URL.

i. **Get the CLS console search analysis page URL.**

```

plaintext
https://console.cloud.tencent.com/cls/search?region=<region>&logset_id=<logset_id>&topic_id=<topic_id>

```

Parameters in the CLS console search analysis page URL:

Parameter Name	Required	Type	Description
region	Yes	String	Region abbreviation, e.g. ap-shanghai for Shanghai region. For other available region abbreviations, see Available Regions
logset_id	Yes	String	Logset ID
topic_id	Yes	String	Log topic ID
start_time	No	String	Start time of logs to search, e.g. 2019-11-13 10:00:00
end_time	No	String	End time of logs to search, e.g. 2019-11-13 20:00:00
query	No	String	Keyword search syntax. Reserved URL characters (if any) in keywords must be URL encoded.
hideWidget	No	Boolean	Indicates whether to hide the Smart Customer Service icon. `true`: Yes; `false`: No (default)
hideTopNav	No	Boolean	Indicates whether to hide the top navigation bar in Tencent Cloud console. `true`: Yes; `false`: No (default)

Parameter Name	Required	Type	Description
hideLeftNav	No	Boolean	Indicates whether to hide the left sidebar in Tencent Cloud console. `true`: Yes; `false`: No (default)
hideHeader	No	Boolean	Indicates whether to hide the top navigation bar in CLS page (title and region options). `true`: Yes; `false`: No (default)
hideTopTips	No	Boolean	Indicates whether to hide the tips in CLS page. `true`: Yes; `false`: No (default)
hideRegion	No	Boolean	Indicates whether to hide region options at the top of CLS page. `true`: Yes; `false`: No (default)
hideLogsetSelect	No	Boolean	Indicates whether to hide logset options in CLS page. `true`: Yes; `false`: No (default)
hideTopicSelect	No	Boolean	Indicates whether to hide log topic options in CLS page. `true`: Yes; `false`: No (default)

2. Splice your login information and destination page URL into a login URL. **The parameter values should be URL-encoded.**

```
plaintext
https://cloud.tencent.com/login/roleAccessCallback
?algorithm=<encryption algorithm for signing; currently only supports sha1 (used by default) and sha
256
&secretId=<secretId for signing>
&token=<Temporary key token>
&nonce=<nonce for signing>
&timestamp=<timestamp for signing>
&signature=<signature string>
&s_url=<destination URL after login>
```

7. Use the final URL to access the embedded CLS page of the Tencent Cloud console. The sample below is a URL to the CLS search analysis page:

```
plaintext
https://cloud.tencent.com/login/roleAccessCallback?nonce=52055817&s_url=https%3A%2F%2Fconsole.cloud.tencent.com%2Fcls%2Fsearch%3Fregion%3Dap-guangzhou%26start_time%3D2020-05-26%25252014%25253A01%25253A18%26end_time%3D2020-05-26%25252014%25253A16%25253A18&secretId=AKID-vHJ7WPHcy_RVI0m-QTIktX0f9S9z_k_JackOp3dyQPJwmDrNLQJuiNuw9*****&signature=eXeWadn6iJLcPp1sqqGd6m9%2FQk****&timestamp=1592455018&token=5e4vuBHL7fBQPi1V9fvSINw4Vu7PSr9Ic3de78b86109c171eb4e3ea27c137c1fIWKU8JC-L001L87sIYlftSaHHXeHcqim7Jg9hBuN2nbdpgeBUPXhmpyAk4G6e9bHFZ-7yNRig7Y33CQHxh6jOesP4VfhRzQprWGRtC5No1ty*****-aoj_WJhA55oyvqaqxw2jtTdh8nx90jJr3tlbIa9oJe7aZYoPbdpFqrF6ZjLCPp2yQB_SkUsWwDL_9BrK2Km3U2IocdvQ7QxrW0ts1aiBi7xtTSJRcfkBYPYEV_YoJrtkhyW3E4L47imA1bfVAjM9F5uKWzVzsDGDt0aCUU9mqdb4vjJrY8tm-wJKKEe8eiyY9EbkH3VWnFV2YocYNDJqFyjKOWR*****
```

CLS Connection to Grafana

Last updated : 2021-05-26 11:34:48

Overview

CLS can be connected to Grafana to export the raw log data and SQL aggregate analysis results for display in Grafana. To display the results in Grafana, you only need to install the Grafana plugins for CLS and enter search and analysis statements in Grafana.

You can log in to [Grafana](#) by using the following username and password for trial.

- Username: Viewer
- Password: clsdemo

This document describes how to install and configure Grafana on CentOS.

Directions

Installing Grafana

For more information on how to install Grafana, please see [Install Grafana](#).

The following uses installing Grafana 7.3.6 on CentOS as an example:

```
sudo yum install initscripts urw-fonts wget
wget https://dl.grafana.com/oss/release/grafana-7.3.6-1.x86_64.rpm
sudo yum install grafana-7.3.6-1.x86_64.rpm
sudo systemctl daemon-reload
sudo systemctl start grafana-server
sudo systemctl status grafana-server
sudo systemctl enable grafana-server
```

To install more visual panels (such as pie and graph panels), please install Grafana panel plugins by running the corresponding commands.

For example, if you want to install the pie panel, you can run the following command:

```
grafana-cli plugins install grafana-piechart-panel
service grafana-server restart
```

For information on more plugins, please see [Grafana Plugins](#).

Installing and configuring Grafana plugins for CLS

1. Install Grafana plugins for CLS in the `/var/lib/grafana/plugins/` plugin directory.

```
cd /var/lib/grafana/plugins/  
wget https://github.com/TencentCloud/cls-grafana-datasource/releases/latest/download/tencent-cls-grafana-datasource.zip  
unzip tencent-cls-grafana-datasource
```

Note :

- If your CVM instance is not on CentOS, please confirm the location of the Grafana plugin directory first and go to the directory for installation.
- You need to install Grafana 7.0 or above. If your Grafana version is lower than 7.0, configuration backup and upgrade are required. For details, see [Upgrade Grafana](#).

2. Open the `grafana.ini` configuration file on the server where Grafana has been deployed.
 - The file path on macOS is `/usr/local/etc/grafana/grafana.ini`.
 - The file path on Linux is `/etc/grafana/grafana.ini`.
3. Set the `allow_loading_unsigned_plugins` parameter in **plugins**.

```
allow_loading_unsigned_plugins = tencent-cls-grafana-datasource
```

4. Run the following command to restart the Grafana service:

```
service grafana-server restart
```

Configuring log data source

5. Log in to Grafana by accessing the following URL from your browser.

Note :

The default port of Grafana is `3000`.

```
http://Grafana IP address: 3000
```

6. On the left sidebar, select the **Settings** icon to go to the **Data Sources** page.
7. On the **Data Sources** page, click **Add data source**.

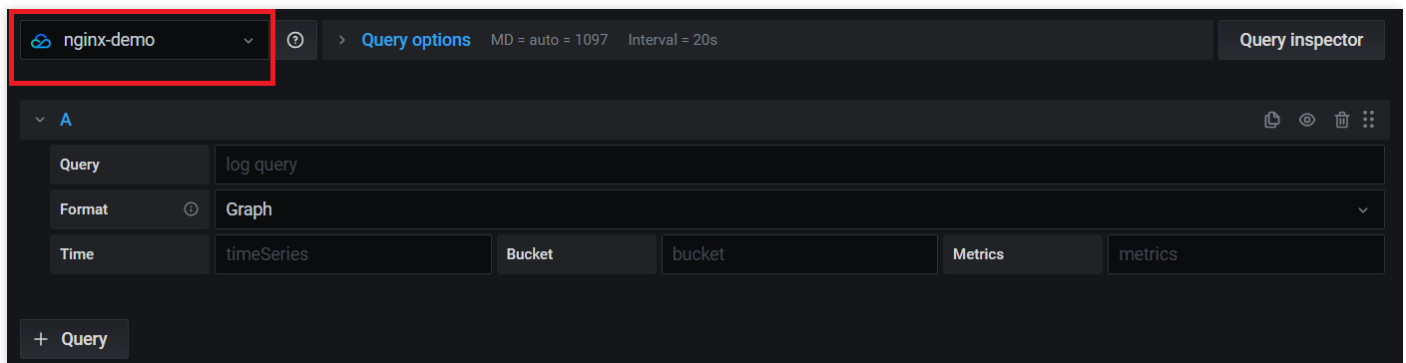
8. Select **Tencent Cloud Log Service Datasource** and configure the data source as instructed below.

The screenshot shows the configuration interface for a 'Tencent Cloud Log Service Datasource' named 'nginx-demo'. The page has a dark theme. At the top left is the Tencent Cloud logo. The main title is 'Data Sources / nginx-demo' with a subtitle 'Type: Tencent Cloud Log Service Datasource'. Below this is a 'Settings' tab. The configuration includes a 'Name' field with the value 'nginx-demo' and a 'Default' toggle switch that is turned on. There are two sections for credentials: 'Security Credentials' with fields for 'SecretId' and 'SecretKey', and 'Log Service Info' with fields for 'Region' (set to 'ap-chongqing') and 'TopicId'. At the bottom, there are three buttons: 'Save & Test' (blue), 'Delete' (red), and 'Back' (grey).

Configuration Item	Description
Security Credentials	SecretId and SecretKey : API request key, which is used for authentication. You can go to the API Key Management page to get a key.
Log Service Info	<ul style="list-style-type: none"> ◦ Region: abbreviation of the CLS region. For example, enter `ap-beijing` for the Beijing region. For the complete list of regions, please see Available Regions. ◦ TopicId: log topic ID.

Configuring dashboard

1. On the left sidebar, click **Creat Dashboards**.
2. On the dashboard page, click **Add new panel**.
3. Select the log data source you just created as the data source as shown below:



4. Enter the query statement, select the format according to the panel type to be displayed, and the system will automatically convert the data for display in Grafana.

Format	Description	Configuration Item
Log panel	Log panel is used to shown log search results. Query syntax supports searching by keyword and fuzzy match. For more information, see [Syntax and Rules] (https://intl.cloud.tencent.com/document/product/614/30439). Eg. status:400	limit: specifies the number of log search results to be returned.
Table panel	Table panel automatically shows the results of whatever columns and rows your query returns.	None
Graph,Pie,Gauge panel	In this pattern, there is a format transformation where data will be adapted to graph,pie,gauge panel.	<ul style="list-style-type: none"> ◦ Metrics: metrics to be collected. ◦ Bucket: (optional) name of the aggregate column. ◦ Time: (optional) if the result returned by a query is continuous

time data, you need to specify the **Time** field; otherwise, leave it empty.

Samples

Graph

A graph shows the PV and UV curves as shown below:

You can configure it according to the following information:

- The query statement is entered as shown below:

```
* | select histogram( cast(__TIMESTAMP__ as timestamp), interval 1 minute) as time, count(*) as pv, count( distinct remote_addr) as uv group by time order by time limit 1000
```

- **Format:** select **Graph,Pie,Gauge panel**.
- **Metrics:** **pv, uv**.
- **Bucket:** **leave it empty** if there are no aggregate columns.
- **Time:** **time**.

Pie

A pie shows the distribution of request status codes as shown below:

You can configure it according to the following information:

- The query statement is entered as shown below:

```
* | select count(*) as count, status group by status
```

- **Format:** select **Graph,Pie,Gauge panel**.
- **Metrics:** **count**.
- **Bucket:** **status**.
- **Time:** **leave it empty** if it is not continuous time data.

Bar gauge

A bar gauge shows the top 10 pages in terms of access latency as shown below:

You can configure it according to the following information:

- The query statement is entered as shown below:

```
* | select http_referer, avg(request_time) as latency group by http_referer order by latency desc limit 10
```

- **Format:** select **Graph, Pie, Gauge panel**.
- **Metrics:** **latency**.
- **Bucket:** **http_referer**.
- **Time:** **leave it empty** if it is not continuous time data.

Table

A table shows the top 10 users in terms of access requests as shown below:

You can configure it according to the following information:

- The query statement is entered as shown below:

```
* | select remote_addr, count(*) as count group by remote_addr order by count desc limit 10
```

- **Format:** **Table**.