Cloudera Streaming Analytics 1.6.0

SSB REST API

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Contents

Using SQL Stream Builder REST API..... 4

Using SQL Stream Builder REST API

You can use the REST API to monitor, manage and configure the SQL Stream jobs with GET, POST and DELETE HTTP methods. You can use the SQL Stream Builder (SSB) REST API in command line, import them to REST API Tools or by accessing the Swagger UI.

The following HTTP methods are available for SSB:

- GET to query information about the specified endpoint
- POST to create resources for the specified endpoint
- DELETE to remove objects from the specified endpoint

The REST API Reference document contains the available endpoints for SQL Stream Builder.

You can also reach the SSB REST API reference document from the following places:

- From Cloudera Manager:
  1. Go to your cluster in Cloudera Manager.
  2. Select SQL Stream Builder from the list of services.
  3. Click Web UI.
  4. Select SQLStreamBuilder API Explorer.
- From Streaming SQL Console:
  1. Access Streaming SQL Console.
  2. Click API Explorer from the main menu.



Warning: The **API Explorer** page of SSB cannot be accessed when using Apache Knox as authentication method.

You can use the SSB REST API with Command Line Interface (CLI), you can also import the REST API swagger.json file to a REST API Tool, for example Postman, and you also have the option to use the REST API with the Swagger User Interface (UI).

The Streaming SQL Engine API details the following operations for SQL Stream Builder and Flink:

- SQL Operations: You can execute and analyze the SQL queries
- Session Operations: You can manage and reset the SSB session
- Sampling Operations: You can configure the sampling behavior and retrieve sampling results.
- Job Operations: You can create and stop jobs, and also retrieve job information
- Flink Session Cluster Operations: You can manage and reset the Flink session
- Flink Job Management: You can run flink applications
- Artifact Management: You can add and delete jar files and configuration files, and also retrieve information about them

Using REST API with CLI

When using the SSB REST API with CLI Tool, you need to create the POST or GET commands with curl, and also include the Streaming SQL Engine hostname, port and the required operation for the endpoint. The submitted commands return the information, or complete the process you have requested and display the status in the CLI.

The following examples show a secured and unsecured GET method to list the SQL jobs:

For Unsecured

```
$ curl -H 'Username: <YOUR_USERNAME>' \
       'https://<CLUSTER_DOMAIN>:<STREAMING_SQL_ENGINE_SERVER_PORT>/api/
v1/ssb/jobs'
```

For Secured with SPNEGO

```
$ kinit <YOUR_USER>
$ curl -ik --negotiate -u: \
       'https://<CLUSTER_DOMAIN>:<STREAMING_SQL_ENGINE_SERVER_PORT>/api/
v1/ssb/jobs'
```

For Secured with Knox

```
$ curl -ik --negotiate -u <KNOX_USERNAME>:<KNOX_PASSWORD> \
       'https://<CLUSTER_DOMAIN>:<STREAMING_SQL_ENGINE-SERVER_PORT>/gat
eway/cdp-proxy-api/ssb-sse-api/api/v1/ssb/jobs'
```



Note: When using the unsecured endpoints, you must provide the Username HTTP header for the command as an authentication method to indicate which user sends the request.

Using REST API Tool

When using REST API Tools, you need to connect to the cluster that hosts the SQL Stream Builder REST API. You can also use the following URL in a browser to download the swagger.json file when you need to manually upload the REST API endpoints for a Tool.

```
http(s)://<CLUSTER-DOMAIN>:<STREAMING-SQL-ENGINE-SERVER-PORT>/swagger/api-
docs/public
```

Using Swagger UI

You can access the Swagger UI to use the SSB REST API by adding your hostname and the Streaming SQL Engine port to the Swagger UI URL.

```
http(s)://<CLUSTER-DOMAIN>:<STREAMING-SQL-ENGINE-SERVER-PORT>/swagger-ui/
index.html?configUrl=/swagger/api-docs/swagger-config
```

You can also download the swagger.json for the SSB REST API using the Swagger UI.