Monitoring Kafka Connect using Streams Messaging Manager

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Contents

Kafka Connect Overview

Kafka Connect is a framework for connecting Kafka with external systems. You can use Kafka Connect to deploy connector implementations for common data sources and sinks to move data to and from Kafka.

You can create the following types of connectors through Kafka Connect in SMM:

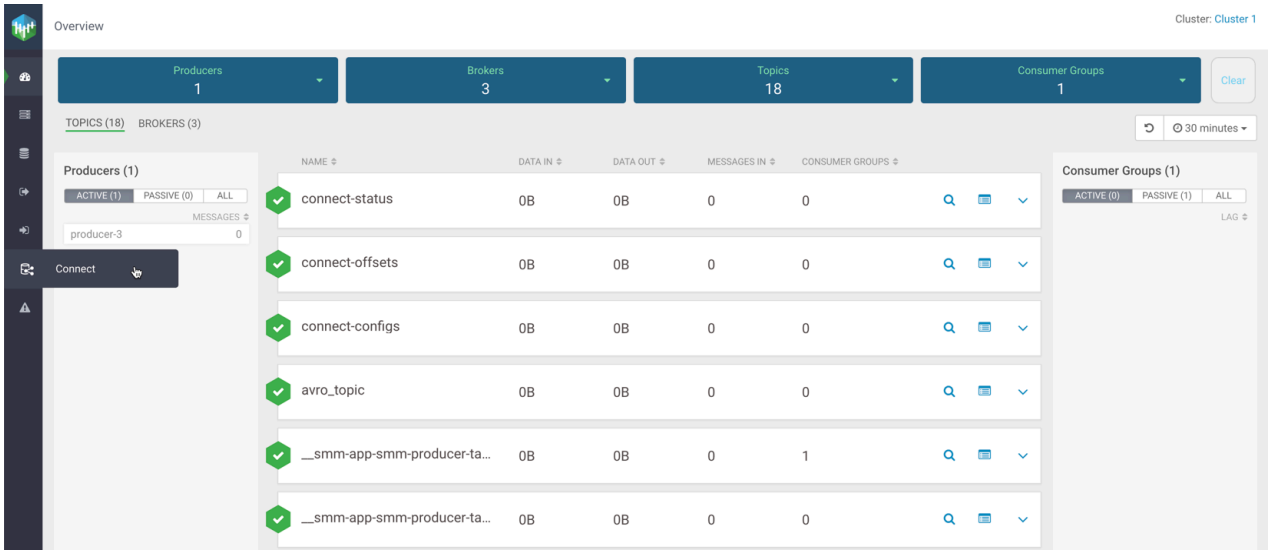
- Source Connector. A source connector delivers data from external systems like databases to Kafka topics.
- Sink Connector. A sink connector delivers data from Kafka topics to external systems, for example, S3 and Hadoop.

You can use the Kafka Connect option in SMM to create connectors in your cluster, and read data from or write data to Kafka topics.

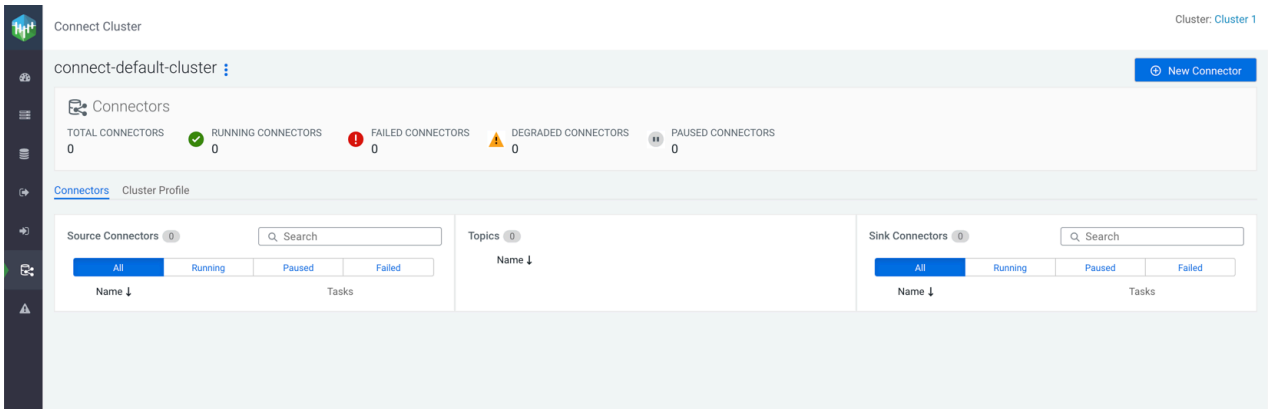
Default view of Kafka Connect in the SMM UI

Learn where the Kafka Connect option lies in the SMM UI and what are the different options that you can use while connecting Kafka with external systems.

After you configure Kafka Connect in SMM, you can see the Connect option in the SMM UI.



When you click the Connect option, the Connect Cluster page appears.



The Connect Cluster page shows the connector and cluster details.

At the top-right corner of the Connect Cluster page, you can see the name of the cluster.

The New Connector option below the cluster name enables you to create connectors in your cluster.

In the Connectors section, you can view the number of total connectors, running connectors, failed connectors, degraded connectors, and paused connectors.

In the Connectors tab, you can view details of the source connectors, topics, and sink connectors in the cluster. The Source Connectors and Sink Connectors sections show all, running, paused, and failed connectors with connector name and associated task details. Both Source Connectors and Sink Connectors sections contain a Search option that enables you to search for particular connector details. The Topics section shows the Kafka topic names where data is read from or written to. For more details on connectors, see the *Monitoring Connectors* section.

In the Cluster Profile tab, you can view details of the cluster and workers. For more details on cluster profile, see the *Monitoring Cluster Profile* section.

Related Information

Monitoring Connectors

Monitoring Cluster Profile

Creating a Connector

This section describes how to create a connector.

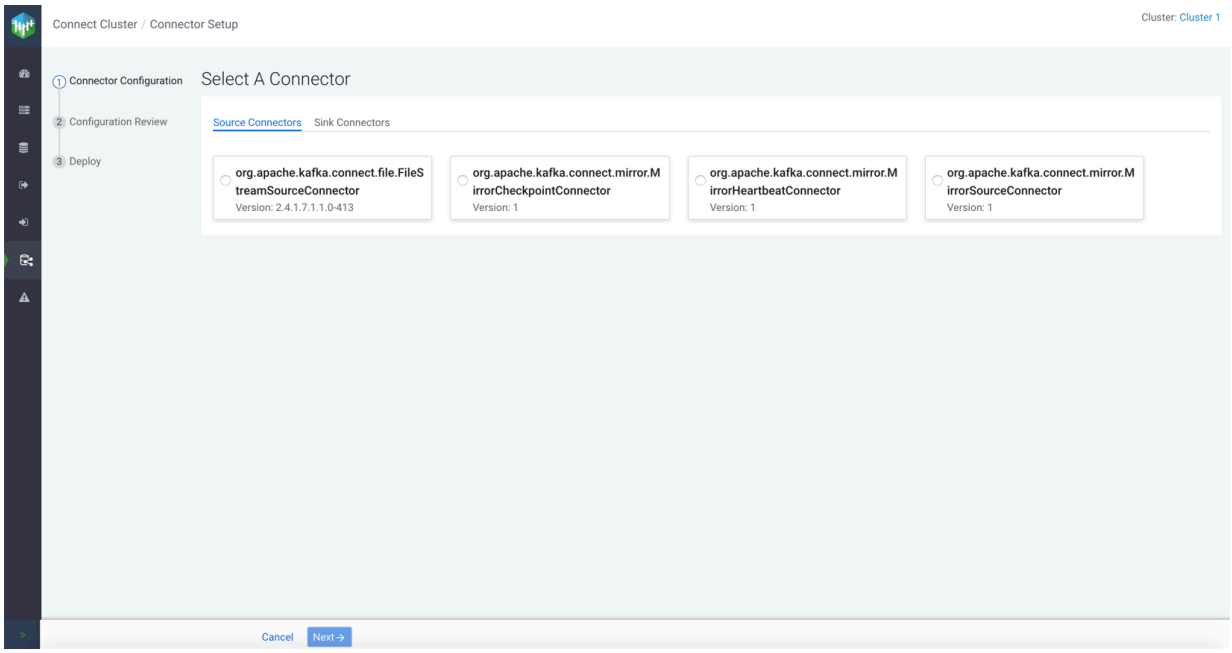
About this task

Perform the following steps to create a connector:

Procedure

1. Click the New Connector option in the upper right corner of the Connect Cluster page.

   The Select A Connector screen appears.

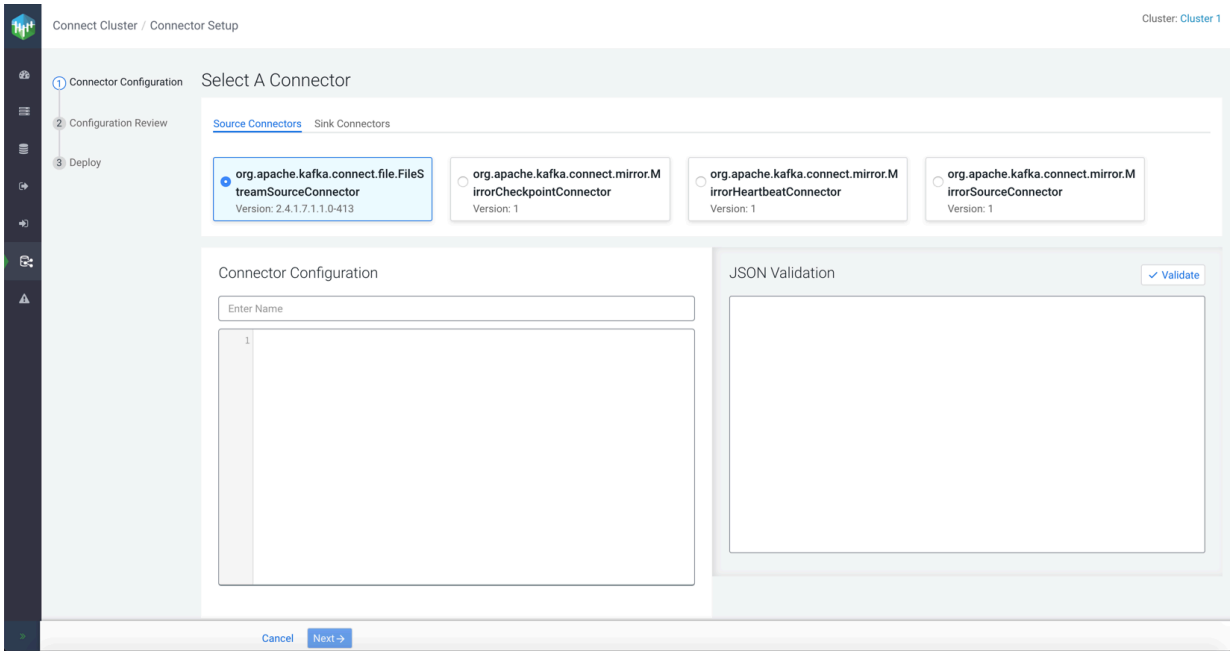


2. Go to Source Connectors or Sink Connectors tab based on your requirement.

   Both the tabs show the list of available connectors.

3. Select a connector.

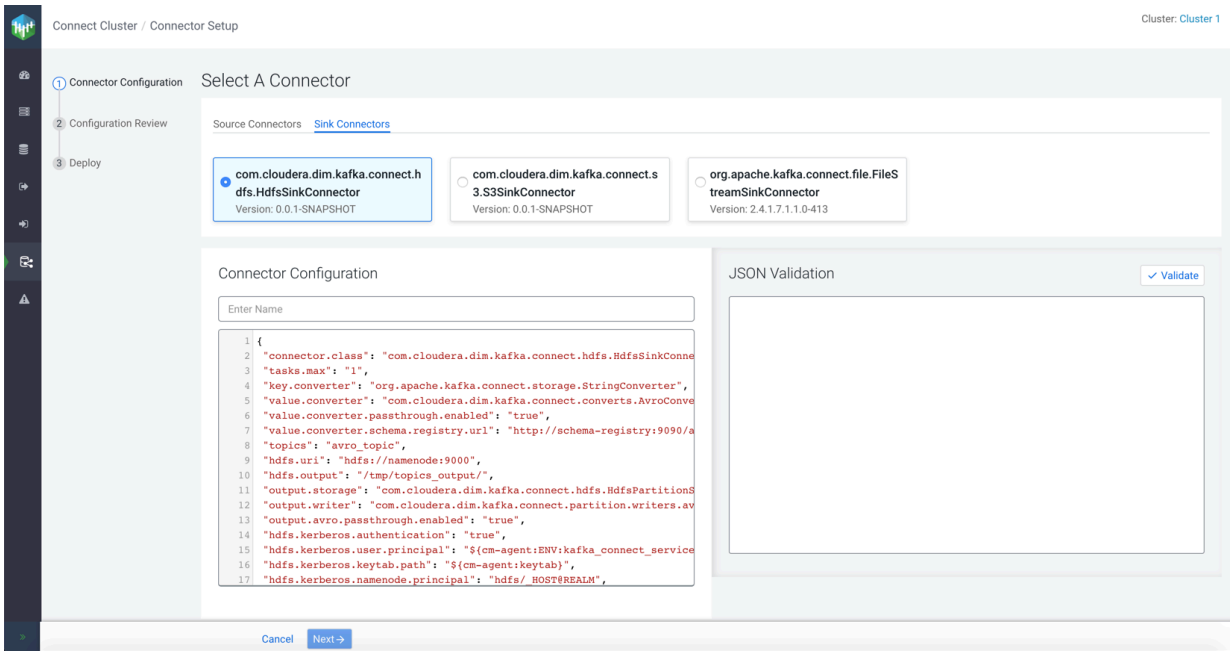
   The configuration options appear.



4. Enter a name for the connector in the Connector Configuration section.

   A sample configuration appears for some connectors.

   The following image shows the sample configuration for HDFS sink connector:

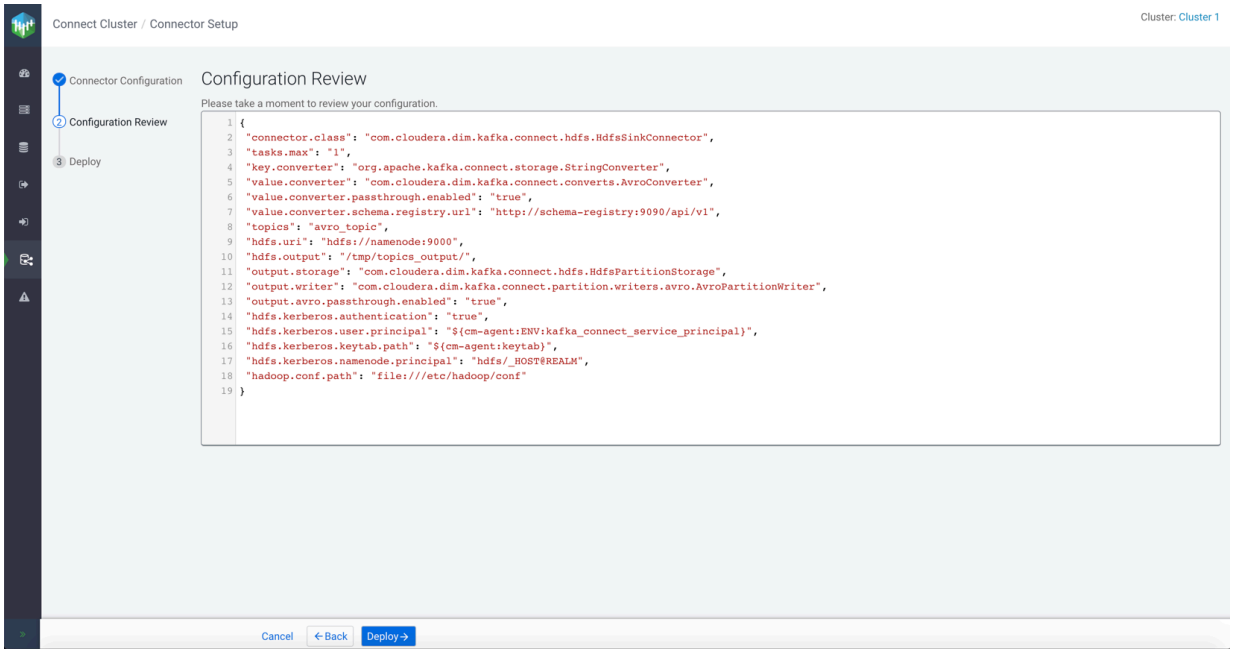


5. Optional. Modify the sample configuration as per your requirement.

   You can refer to environment variables by using a syntax similar to ${cm-agent:ENV:ENVIRONMENT_VARIABLE_NAME}. You should replace the ENVIRONMENT_VARIABLE_NAME with the exact environment variable name.

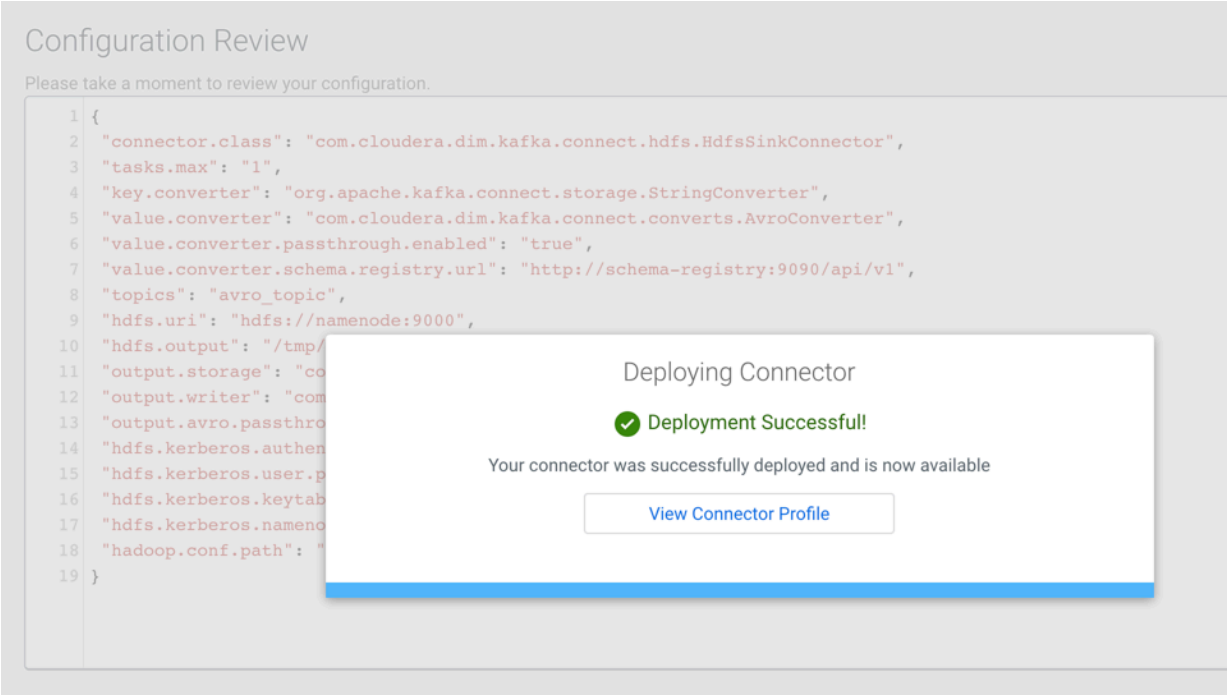
   Also, as shown in the sample configuration, you can refer to the keytab path by specifying ${cm-agent:keytab}.
6. Click Validate.
7. Click Next.

   The Configuration Review page appears.



8. Review your connector configuration and click Deploy.

   The Deploying Connector dialog appears.



9. Click View Connector Profile.

   The Connector Profile page appears where you can view your connector details.

Modifying a Connector

This section describes how to modify a connector.

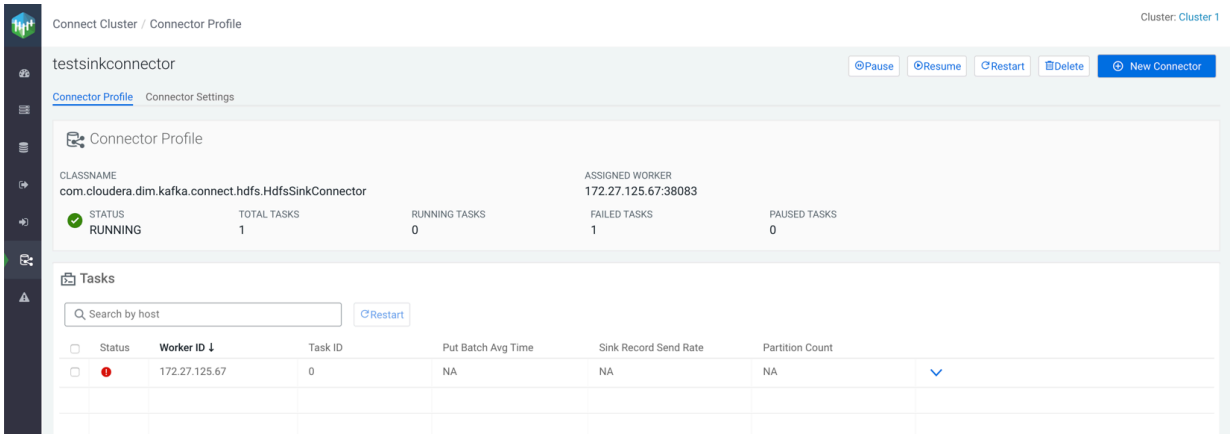
About this task

Perform the following steps to modify a connector settings:

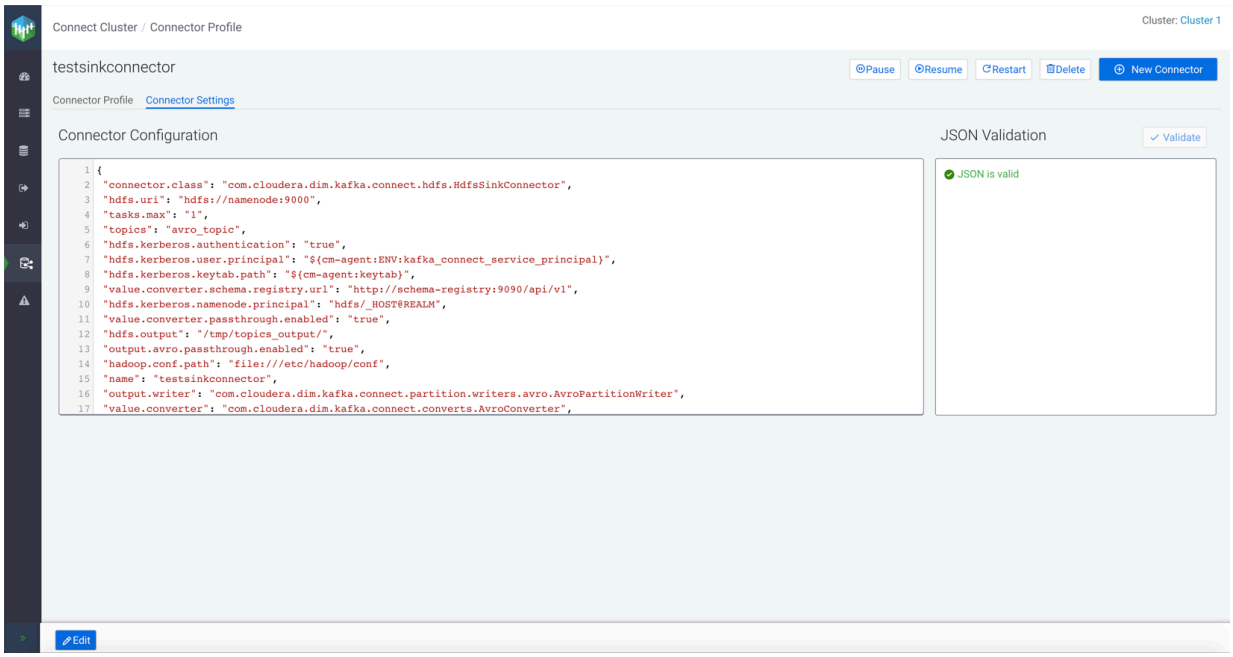
Procedure

1. Go to the Connect Cluster page.
2. Identify the connector you want to modify.
3. Click Profile beside the connector.

   The Connector Profile page appears.



4. Go to the Connector Settings tab.



5. Click Edit at the bottom-left corner of the page.
6. Modify your connector configuration, and click Validate.
7. Click Update.

   The Deploying Connector dialog appears.
8. Click View Connector Profile.

   The Connector Profile page appears where you can view your connector details.

Deleting a Connector

This section describes how to delete a connector.

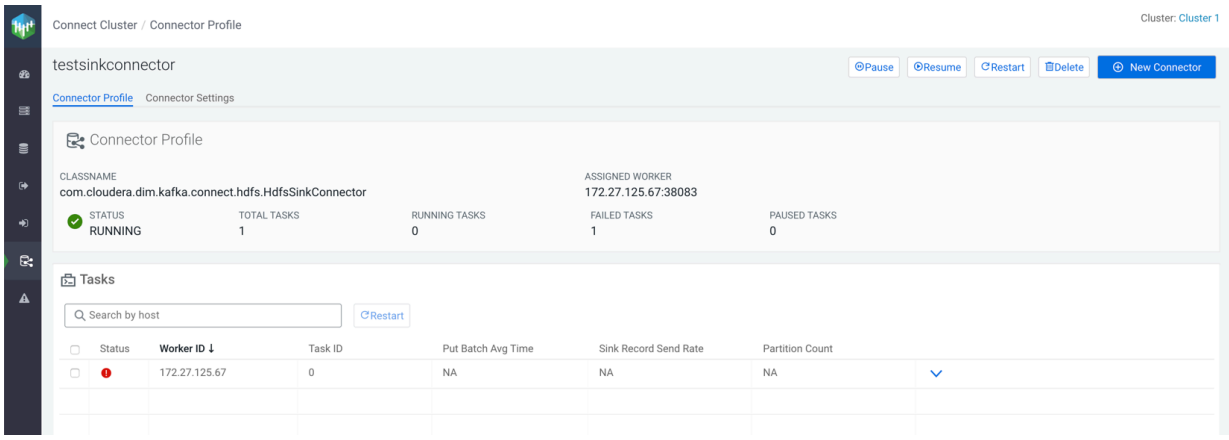
About this task

Perform the following steps to delete a connector:

Procedure

1. Go to the Connect Cluster page.
2. Identify the connector you want to delete.
3. Click the Profile icon beside the connector.

   The Connector Profile page appears.



4. Click Delete at the top-right of the page.
5. Click Yes.

Monitoring Connectors

After you create a connector, you can monitor the details of the connector in the Connector Profile and Connector Se ttings pages.

If you hover the mouse over a connector in the Connect Cluster page, you can see the class name and status of the connector. You can also see the options to pause, resume, and restart the connector.

If you click the connector name in the Connect Cluster page, you can see the complete workflow for that connector.

To monitor a connector, click the Profile option. The Connector Profile page appears.

Monitoring Connector Profile

The Connector Profile tab enables you to monitor details of the connector and task.

In the Connector Profile section, you can view and monitor Classname, Assigned Worker, Status, Total Tasks, Running Tasks, Failed Tasks, and Paused Tasks.

In the Tasks section, you can view and monitor Status, Worker ID, Task ID, Put Batch Avg Time, Sink Record Send Date, and Partition Count.

Click the metrics arrow to monitor Running Ratio, Offset Commits, Additional Sink Record Metrics, and Additional Sink Start Metrics for the selected task.

The Restart option enables you to restart the task. To restart a particular task, select the task and click Restart.

The Tasks section contains a Search option that enables you to search for particular task details.

Monitoring Connector Settings

The Connector Settings tab enables you to monitor connector settings.

In the Connector Settings section, you can view and monitor the Connector Configuration and JSON Validation. You can edit the connector configuration details here and click Validate.

Use the Pause, Resume, and Restart options to pause, resume, and restart a connector respectively.

Monitoring Cluster Profile

The Cluster Profile tab enables you to monitor details of the cluster and workers.

In the Cluster Details section, you can monitor the Cloudera Manager URL, number of workers, and uptime details.

In the Workers section, you can monitor details of worker host, connector count, connector startup attempts, connector startup failures, task count, task startup attempts, and task startup failures.

If you click the metrics arrow, you can monitor the details and metrics of workers. The worker metrics showcases the hostname, details of the connector assigned to the worker, connector metrics, task metrics, and worker rebalance metrics.

The Workers section contains a Search option that enables you to search for particular worker details.