Monitoring Kafka Connect using Streams Messaging Manager 7.1.8

# **Monitoring Kafka Connect using Streams Messaging Manager**

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## Introduction to Kafka Connect in SMM

Get started with Kafka Connect in SMM.

Kafka Connect is a tool for streaming data between Apache Kafka and other systems in a reliable and scalable fashion. Kafka Connect makes it simple to quickly define connectors that move large collections of data into and out of Kafka. Source connectors can ingest entire databases or collect metrics from all your application servers into Kafka topics, making the data available for stream processing with low latency. Sink connectors can deliver data from Kafka topics into secondary storage and query systems or into batch systems for offline analysis.

Kafka Connect in CDP is shipped with many different Cloudera developed as well as publicly available sink and source connectors. Each of which cover a specific use case for streaming data. In addition to the connectors available by default, installing custom developed or third-party connectors is also possible. All connectors can be deployed, managed, and monitored using the Streams Messaging Manager UI (recommended), Streams Messaging Manager REST API, or Kafka Connect REST API.

For a comprehensive list of connectors shipped in CDP, see *Connectors*.

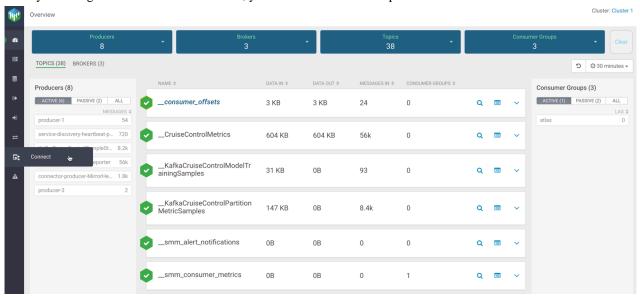
## **Related Information**

Connectors

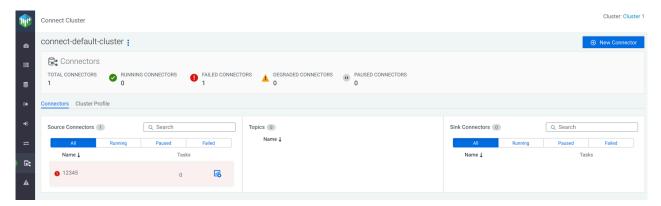
## Default view of Kafka Connect in the SMM UI

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.

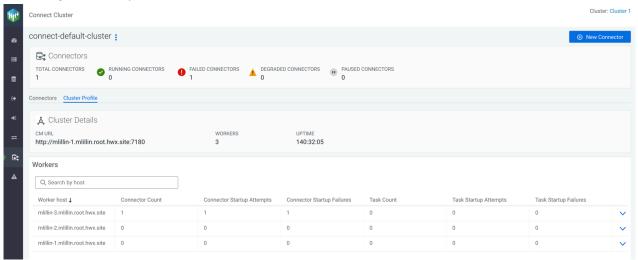
At the top-right corner of the Connect Cluster page, you can see the name of the cluster.

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 using Kafka Connect in SMM

Learn how to create a connector through Kafka Connect in your cluster.

## **About this task**

Perform the following steps to create a connector:

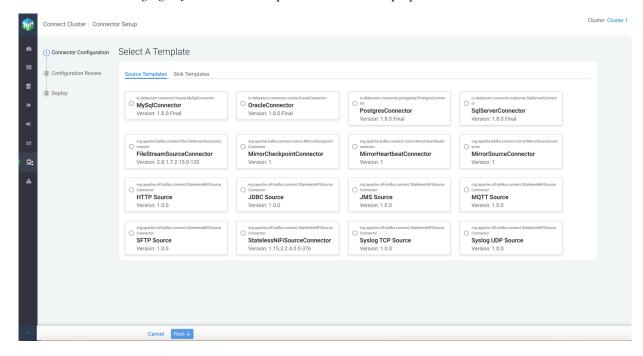
## **Procedure**

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

The Select A Template page appears. This page contains all connectors available for deployment in the form of selectable cards. Source and sink connectors are grouped in their respective tabs. By default, this page displays the connectors shipped in CDP. If you have previously installed additional connectors, they will also be visible on this page.

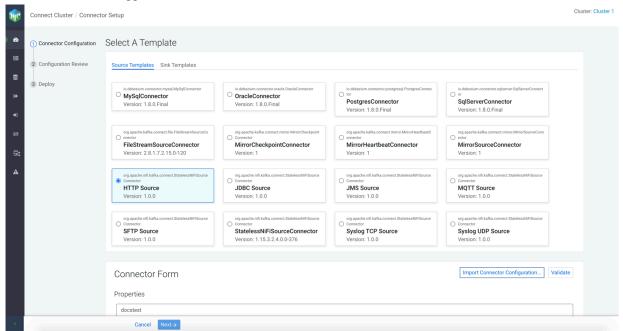


**Note:** For more information regarding each connector shipped in CDP, as well as instructions on how to install additional connectors, see *Connectors* in the Kafka Connect documentation. Additionally, see *Streams Messaging Reference* for a comprehensive list of the properties available for each connector.



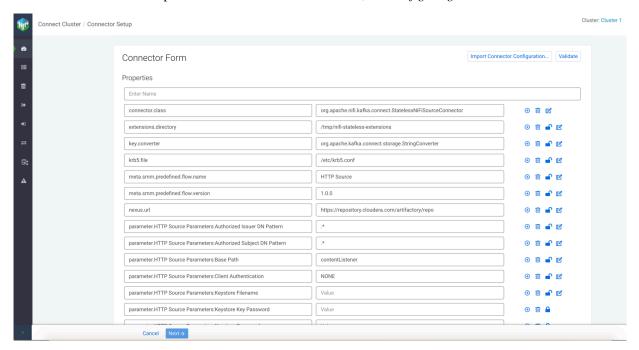
2. Select a connector from the **Source Templates** or **Sink Templates** tab.

The Connector Form appears.

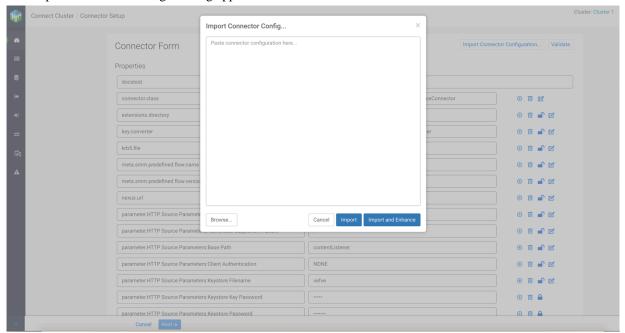


3. Configure the properties of the connector.

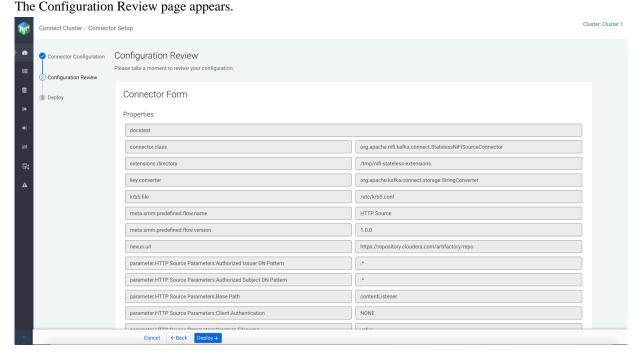
For more details about the options in the Connector Form section, see Configuring Connector Form.



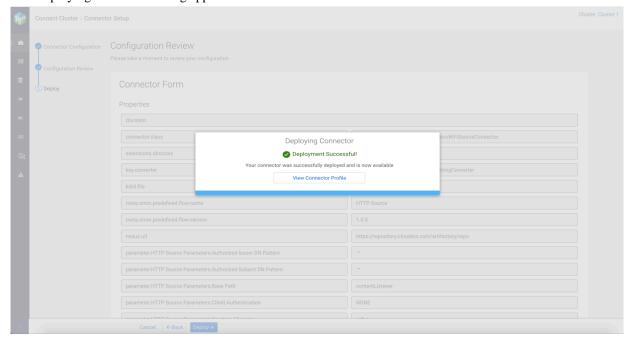
**4.** Click Import Connector Configuration to import configurations for a connector. For more information about how to import connector configuration, see *Importing connector configuration*. The Import Connector Config... dialog appears.



- 5. Import your connector configurations and then click Validate.
  For more information on validation of connector configurations, see *Validating connector configurations*.
  Error messages might appear next to the properties where the validator found errors.
- **6.** Resolve the errors until validation passes, and then click Next.



**7.** Review your connector configuration and click Deploy. The Deploying Connector dialog appears.



8. Click View Connector Profile.

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

#### **Related Information**

Connectors

Streams Messaging Reference

## **Configuring connector form**

Learn how to configure connector properties in the Connector Form.

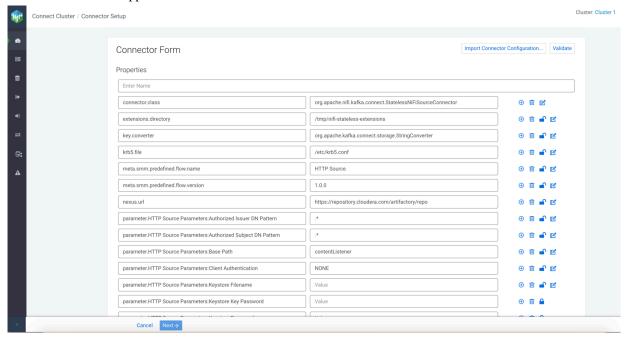
## About this task

Perform the following steps to configure properties in the Connector Form:

- **1.** Click the New Connector option in the upper right corner of the Connect Cluster page. The Select A Template screen appears.
- 2. Go to Source Templates or Sink Templates tab based on your requirement.

## 3. Select a connector.

The Connector Form appears.



**4.** Enter a name for the connector and configure other properties.

The connector name property is common in all connectors and mandatory. Other properties vary from connector to connector.

**5.** Add a new property field by clicking the + icon beside any property.

A row appears for the new property with Key (in the left) and Value (in the right) fields.

- a) Enter a name for the new property in the Key field and value in the Value field.
- **6.** Delete any property by clicking the delete icon beside that property.

You can delete all the fields except the connector name field.

7. Lock any property by clicking the open-lock icon beside that property.

Clicking the open-lock icon marks the property as a secret. Properties that are marked as secrets have their values hidden on the UI. Additionally, the value of the property gets encrypted and is securely stored in an internal Kafka topic. You can unlock it again by clicking the locked icon. You can also unclock properties that are by default locked by clicking the same icon. For example, passwords.

8. Edit any property by typing in the input field, or clicking the edit icon beside that property.

For convenience, the secure properties can be unlocked before deployment and edited on the UI. After deployment, the placeholders for these properties are removed in case anyone wants to update or unlock it, to avoid leaking secure information.

After you click the edit icon, the Edit Config Value... dialog appears.

a) Edit the value and click Save.

The Edit Config Value... dialog is useful when the property value is more complex. Bigger values can be edited in this modal text-editing dialog easily.

9. Validate your connector configurations and click Next.

#### **Related Information**

Connectors

Streams Messaging Reference

## Importing connector configuration

Learn how to import your connector configuration.

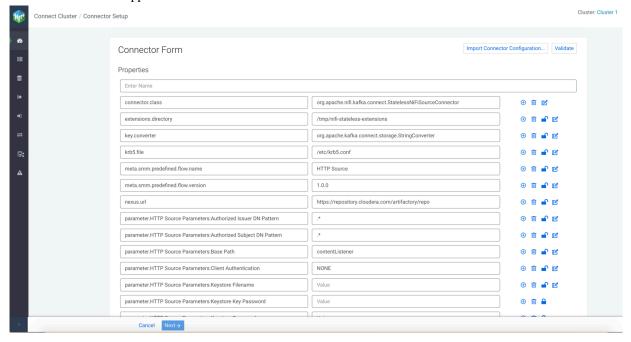
## **About this task**

Configuration can not only be edited or typed, but imported as well. You can initiate import by clicking the Import Connector Configuration button. You can then select a file containing a JSON text. The file is parsed, and its content is displayed in the grid.

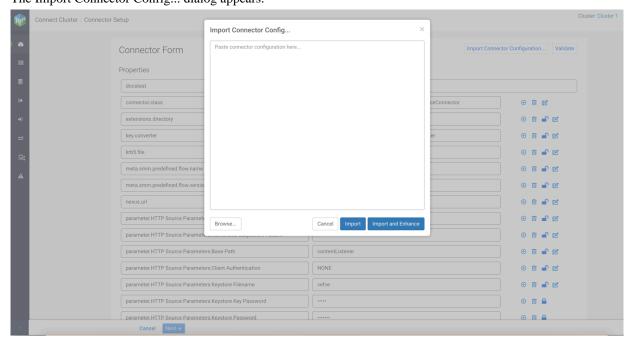
## **Procedure**

- 1. Click the New Connector option in the upper right corner of the Connect Cluster page. The Select A Template screen appears.
- 2. Go to Source Templates or Sink Templates tab based on your requirement.
- 3. Select a connector.

The Connector Form appears.



**4.** Click Import Connector Configuration to import configurations for a connector. The Import Connector Config... dialog appears.



- You can type or paste your configuration in JSON format.
- You can use the Browse button to open a configuration file in the blank pane.
- 5. Click Import or Import and Enhance to import the connector configurations.

The two buttons function in different ways. Here are the details:

Import

Import populates the connector creation form with the values from the Import Connector Config... dialog.

Import and Enhance

Import and Enhance populates the connector creation form with the values from the Import Connector Config... dialog and also adds values that are most likely needed for the respective connector.

6. Validate your connector configurations and click Next.

## **Related Information**

Connectors

Streams Messaging Reference

## Validating connector configuration

Learn how to validate your connector configuration.

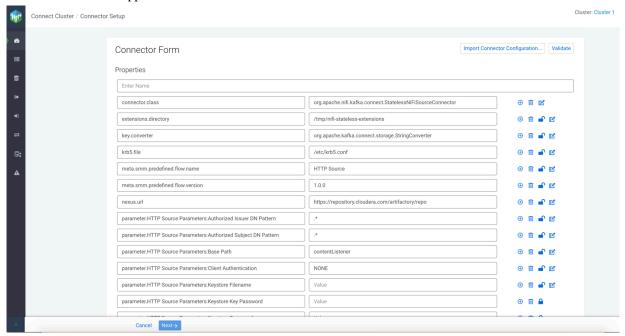
## About this task

Perform the following steps to validate the configurations of a connector:

- Click the New Connector option in the upper right corner of the Connect Cluster page.
   The Select A Template screen appears.
- 2. Go to Source Templates or Sink Templates tab based on your requirement.

3. Select a connector.

The Connector Form appears.



- 4. Configure your connector properties or import them in JSON format.
- 5. Click Validate.

Error messages might appear below the properties where the validator found errors. If the error message is bigger than usual, then only part of the message appears in the UI, and you need to click the see more button to get the full view

If you delete a mandatory property for a connector and validate the configuration, the error message with the missing property name (Key) appears on top of all properties.

6. Resolve the errors until validation passes, and then click Next.

#### **Related Information**

Connectors

Streams Messaging Reference

# Modifying a connector using Kafka Connect in SMM

Learn how to modify a connector through Kafka Connect in your cluster.

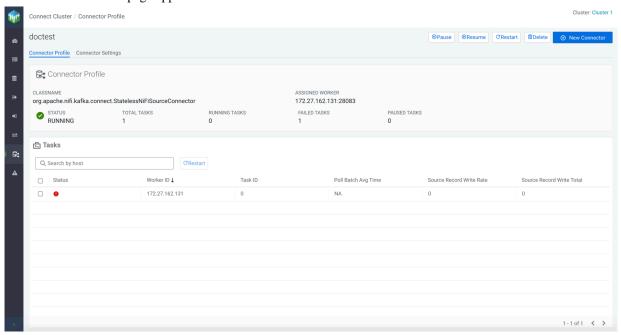
## **About this task**

Perform the following steps to modify settings of a connector:

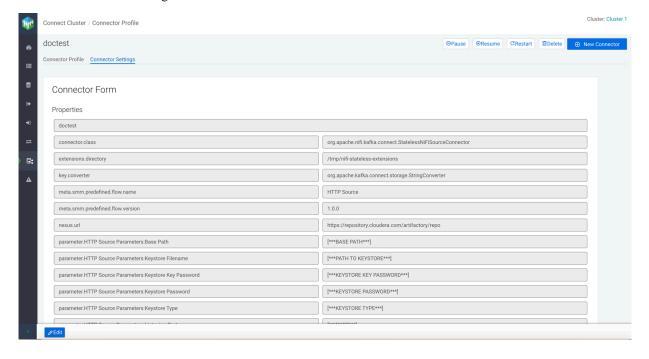
- 1. Go to the Connect Cluster page.
- 2. Identify the connector you want to modify.

**3.** Click Profile beside the connector.

The Connector Profile page appears.

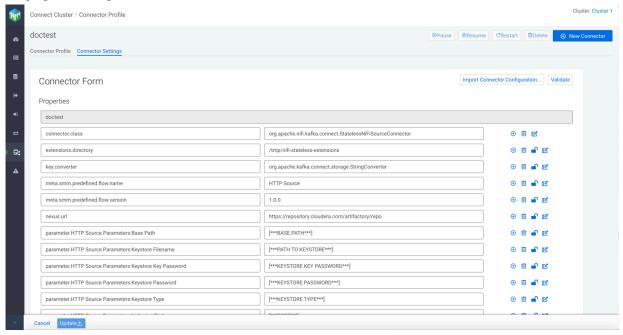


**4.** Go to the Connector Settings tab.



**5.** Click Edit at the bottom-left corner of the page.

All properties except connector name become editable.



- **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.

## **Related Information**

Connectors

Streams Messaging Reference

# Deleting a connector using Kafka Connect in SMM

Learn how to delete a connector through Kafka Connect in your cluster.

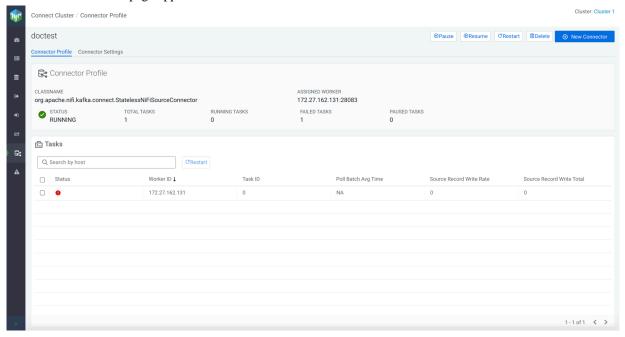
## About this task

Perform the following steps to delete a connector:

- 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.

#### **Related Information**

Connectors

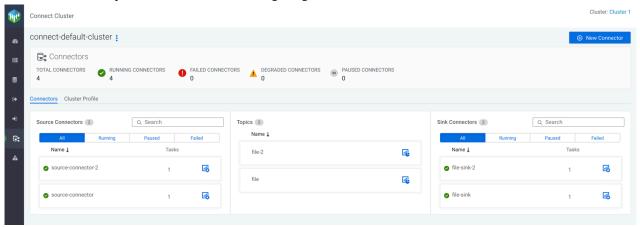
**Streams Messaging Reference** 

# Monitoring connectors using Kafka Connect in SMM

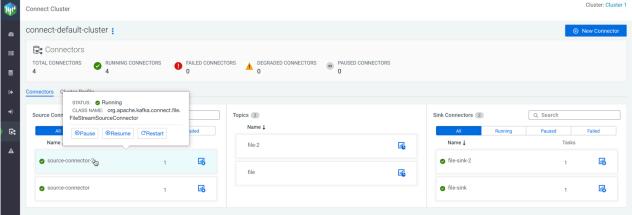
Learn how to monitor connectors with Kafka Connect in Streams Messaging Manager (SMM).

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

In the SMM UI, when you click Connect from the menu, the first page that appears is the Connect Cluster page with the Connectors tab open, as shown in the following image:



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, as shown in the following image:



For more information on the Connect Cluster page, see Default view of Kafka Connect in the SMM UI.

To monitor a specific connector, click the Profile option ( beside that connector. The Connector Profile page appears.

#### **Related Information**

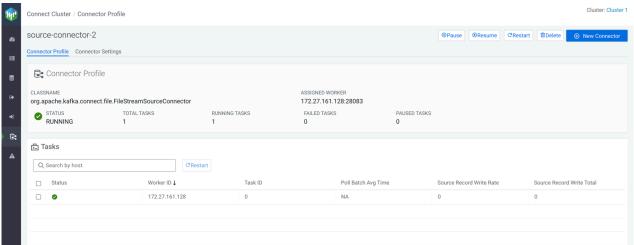
Default view of Kafka Connect in the SMM UI

## Monitoring connector profile using Kafka Connect in SMM

Learn how to monitor connector profile with Kafka Connect in Streams Messaging Manager (SMM).

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

( beside a connector in the Connect Cluster page, the Connector Profile tab appears, as shown in the following image:



In the Connector Profile tab, 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, and some other details specific to your connector.

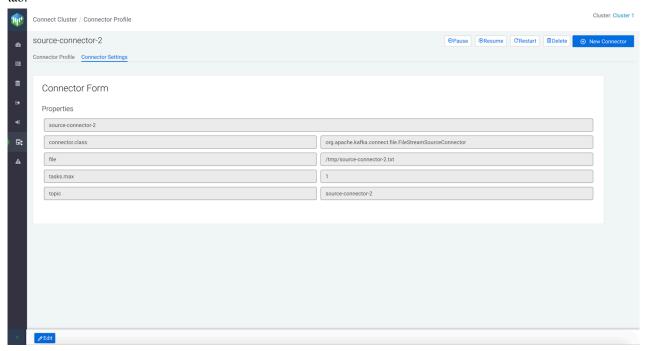
The Restart option enables you to restart the task. To restart a particular task, select the task and click Restart.

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

## Monitoring connector settings using Kafka Connect in SMM

Learn how to monitor connector settings with Kafka Connect in Streams Messaging Manager (SMM).

The Connector Settings tab enables you to monitor connector settings. After you click the Profile option (beside a connector in the Connect Cluster page, the Connector Profile tab appears. Then go to the Connector Settings tab.



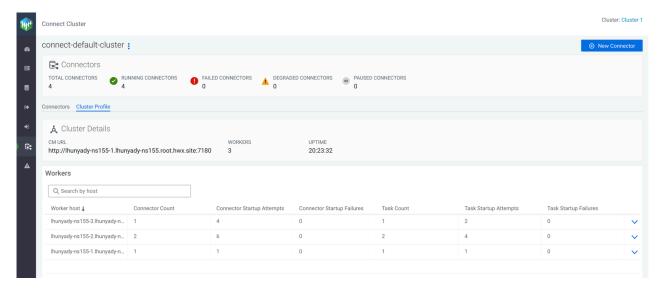
In the Connector Settings tab, you can view and monitor the Connector Form. You can also edit the connector configuration details here by clicking the Edit button.

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

# Monitoring cluster profile using Kafka Connect in SMM

Learn how to monitor cluster profile with Kafka Connect in Streams Messaging Manager (SMM).

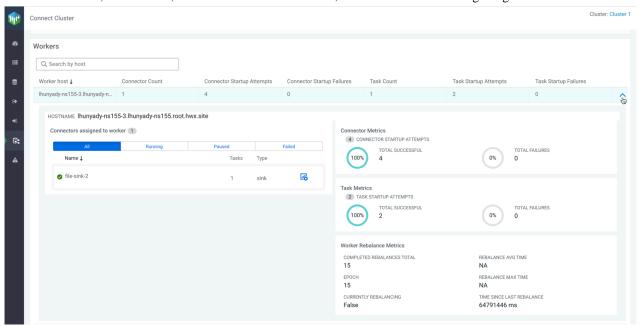
The Cluster Profile tab enables you to monitor details of the cluster and workers. You can go to the Cluster Profile tab from the Connect Cluster page, as shown in the following image:



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 connector metrics, task metrics, and worker rebalance metrics, as shown in the following image:



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