

Cloudera Runtime 7.3.1

## Securing Streams Messaging Manager

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# CLOUdera

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# Securing Streams Messaging Manager

As a cluster administrator, you can combine Kerberos authentication and Ranger authorization to secure the Streams Messaging Manager web user interface (UI). After you secure the Streams Messaging Manager web UI, the login page appears, which does not appear by default.

## About this task

If you deploy Streams Messaging Manager without security, the login page is not enabled on the Streams Messaging Manager UI by default. When you enable Kerberos authentication, Streams Messaging Manager uses SPNEGO to authenticate users and allows them to view or create topics within Kafka by administering Ranger Kafka Policies. For information on enabling browsers to use SPNEGO, see [How to Configure Browsers for Kerberos Authentication](#).

After you secure Streams Messaging Manager, anyone within the organization can login to Streams Messaging Manager. However, if they do not have the correct policy configuration in Ranger, then they may not have the necessary privileges to perform their required tasks through Streams Messaging Manager.

## Before you begin

- Configure Kafka in Ranger

For more information, see *Configure a resource-based service: Kafka*.

- Enable Kerberos authentication for Kafka

For more information, see *Enable Kerberos authentication*.

- Add and configure Streams Messaging Manager

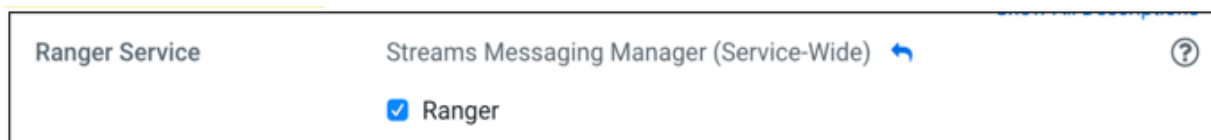
For more information, see *Creating your first Streams Messaging cluster*.



**Note:** For the Kafka Client security protocol, it is possible to use INFERRED, SASL\_PLAINTEXT, and SASL\_SSL for securing Streams Messaging Manager. However, Cloudera recommends using SASL\_SSL.

## Procedure

1. Go to Cloudera Manager Streams Messaging Manager , and click Configuration.
2. Enable Ranger for Streams Messaging Manager.



3. Go to the Ranger service UI and configure the Kafka policies.



**Note:** Review your Ranger Kafka Policies. Remember to log in to Ranger with a user that has the Ranger Admin role.

4. Click cm\_kafka in the Ranger service UI.



The List of Policies page appears.

## 5. Click Add New Policy.

Service Manager > cm\_kafka Policies

List of Policies : cm\_kafka

Search for your policy...

Add New Policy

| Policy ID | Policy Name                             | Policy Labels | Status  | Audit Logging | Roles | Groups | Users                                                    | Action |
|-----------|-----------------------------------------|---------------|---------|---------------|-------|--------|----------------------------------------------------------|--------|
| 22        | all - consumer group                    | --            | Enabled | Enabled       | --    | --     | cruisecontrol streamsmgmr kafka<br>streamsmgmr + More... |        |
| 23        | all - topic                             | --            | Enabled | Enabled       | --    | --     | cruisecontrol streamsmgmr kafka<br>streamsmgmr + More... |        |
| 24        | all - transactional id                  | --            | Enabled | Enabled       | --    | --     | cruisecontrol streamsmgmr kafka<br>streamsmgmr + More... |        |
| 25        | all - cluster                           | --            | Enabled | Enabled       | --    | --     | cruisecontrol streamsmgmr kafka<br>streamsmgmr + More... |        |
| 26        | all - delegation token                  | --            | Enabled | Enabled       | --    | --     | cruisecontrol streamsmgmr kafka<br>streamsmgmr + More... |        |
| 27        | ATLAS_HOOK                              | --            | Enabled | Enabled       | --    | --     | hbase hive impala mgov + More...                         |        |
| 28        | ATLAS_ENTITIES                          | --            | Enabled | Enabled       | --    | --     | atlas rangertagsync cloudera-scm                         |        |
| 29        | ATLAS_SPARK_HOOK                        | --            | Enabled | Enabled       | --    | public | atlas cloudera-scm                                       |        |
| 30        | atlas consumer group                    | --            | Enabled | Enabled       | --    | --     | atlas                                                    |        |
| 31        | ranger_entities_consumer consumer group | --            | Enabled | Enabled       | --    | --     | rangertagsync                                            |        |
| 42        | enable-create                           | --            | Enabled | Enabled       | --    | --     | cloudera-scm                                             |        |

The Policy Details page appears.

### Policy Details :

Policy Type **Access**

Policy Name \*

Policy Label

\*

Description

Audit Logging **YES**

**enabled** ☒ **normal** ☐

**include** ☒

- 6. Add a policy name and select cluster from the dropdown.

Policy Details :

Policy Type

Access

Policy Name \*

name

enabled

normal

Policy Label

topic

transactionalid

✓ cluster

delegationtoken

consumergroup

Policy Label

include

Description

Audit Logging

YES

- 7. Type \* in the field beside cluster, and select the \* from the values that appear.
- 8. Go to the Allow Condition section and select the user.
- 9. Add permissions by clicking the + under Add Permissions.

Allow Conditions :

| Select Role                                                                                                                                                                                                                                                                                                                                                                                                                                                            | Select Group  | Select User   | Policy Conditions   | Permissions          | Delegate Admin           |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------|---------------|---------------------|----------------------|--------------------------|
| Select Roles                                                                                                                                                                                                                                                                                                                                                                                                                                                           | Select Groups | x streamsmgmr | Add Conditions<br>+ | Add Permissions<br>+ | <input type="checkbox"/> |
| +<br>Exclude from Allow Conditions :                                                                                                                                                                                                                                                                                                                                                                                                                                   |               |               |                     |                      |                          |
| Select Roles                                                                                                                                                                                                                                                                                                                                                                                                                                                           | Select Groups | Select Users  | Add Conditions<br>+ |                      | <input type="checkbox"/> |
| +<br>add/edit permissions<br><input type="checkbox"/> Configure<br><input checked="" type="checkbox"/> Describe<br><input type="checkbox"/> Kafka Admin<br><input checked="" type="checkbox"/> Create<br><input type="checkbox"/> Idempotent Write<br><input type="checkbox"/> Describe Configs<br><input type="checkbox"/> Alter Configs<br><input type="checkbox"/> Cluster Action<br><input type="checkbox"/> Alter<br><input type="checkbox"/> Select/Deselect All |               |               |                     |                      |                          |

- 10. Select Create and Describe permissions.
- 11. Click Add.

Related Information

- [Configure a resource-based service: Kafka](#)
- [Configure a resource-based service: Kafka](#)
- [Enable Kerberos Authentication](#)
- [Enable Kerberos Authentication](#)
- [Setting up your Streams Messaging cluster](#)

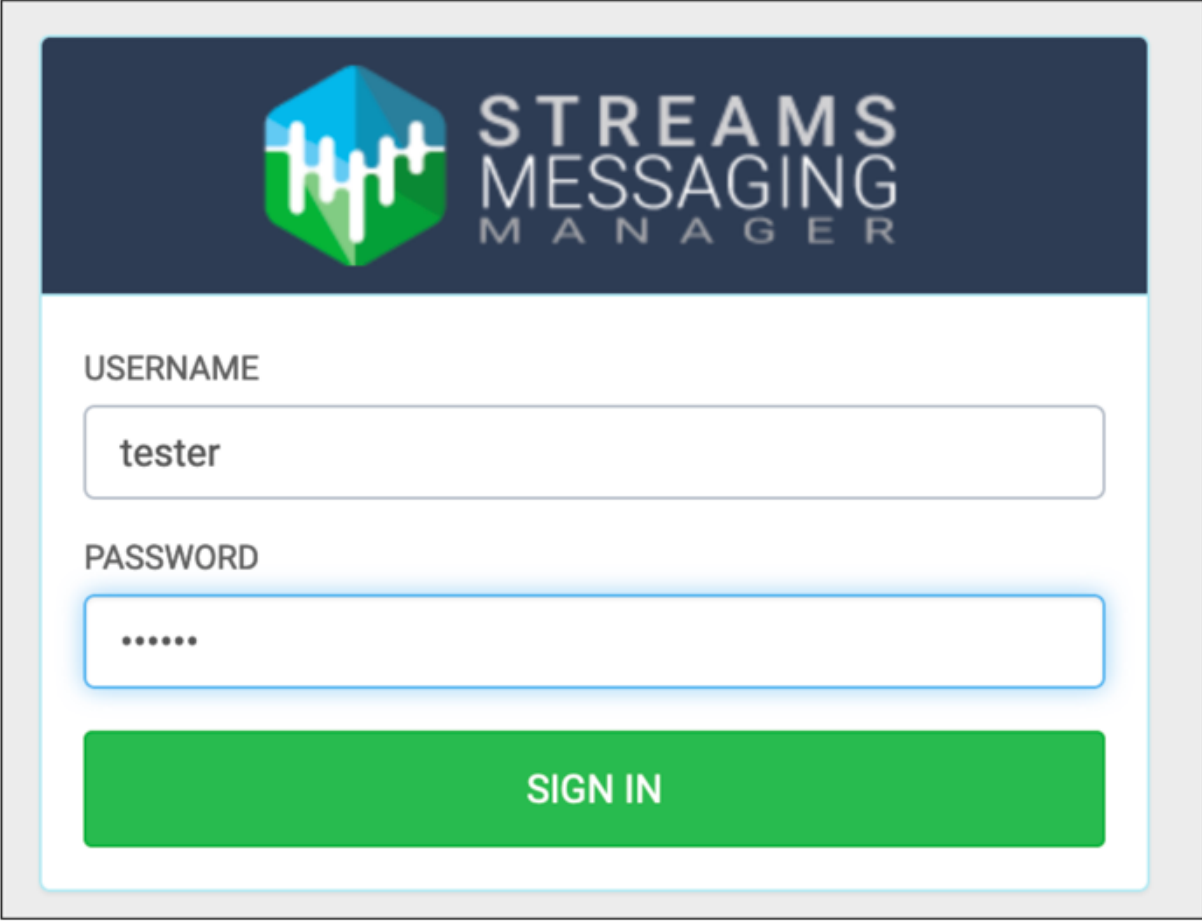
## Verifying the setup

After you secure Streams Messaging Manager, you can verify the security setup. You can login to the Streams Messaging Manager web UI and create Kafka topics.

### Procedure

1. Go to Cloudera Manager Streams Messaging Manager .

The login page for Streams Messaging Manager appears.

The image shows the login page for Streams Messaging Manager. At the top, there is a dark blue header with the Streams Messaging Manager logo on the left and the text "STREAMS MESSAGING MANAGER" on the right. Below the header, the page has a white background. There are two input fields: "USERNAME" with the text "tester" and "PASSWORD" with masked characters ".....". Below these fields is a large green button with the text "SIGN IN" in white capital letters.

STREAMS MESSAGING MANAGER

USERNAME

tester

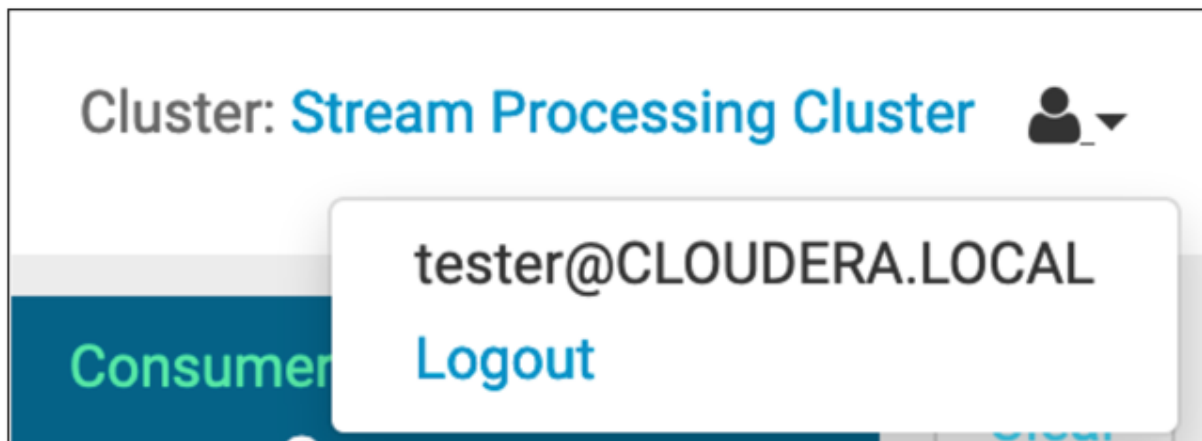
PASSWORD

.....

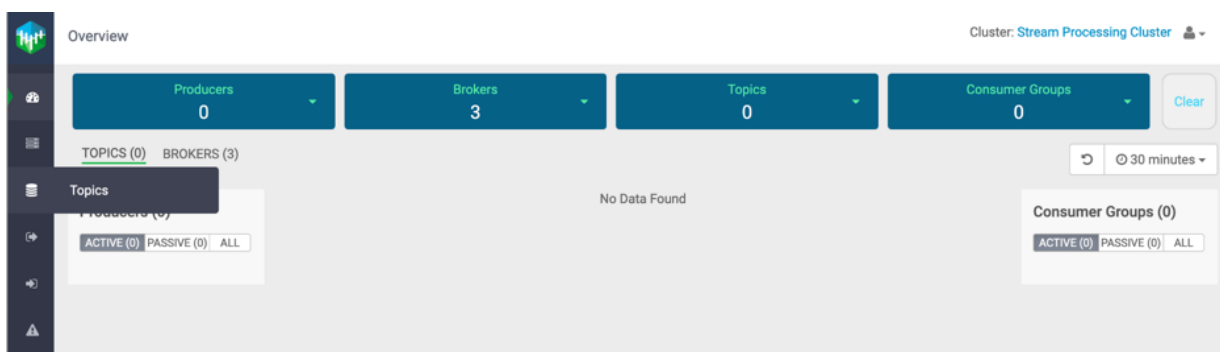
SIGN IN

2. Login to the Streams Messaging Manager UI using your regular credentials.

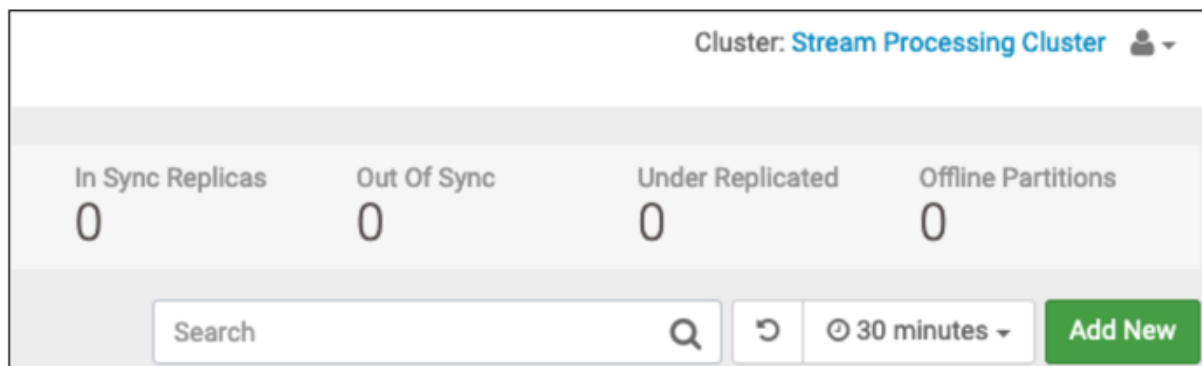
After you log in, you see the user logout dropdown at the top right corner of your screen. It shows the domain associated with the user.



3. Click Streams Messaging Manager Web UI.
4. To add a topic, go to Topics.



5. Click Add New.



6. Add a topic name, select partitions, and cleanup policy.

### Add Topic

TOPIC NAME

test1

PARTITIONS

1

#### Availability

|                                                                                   |                                                                                   |                                                                                   |                                                                                     |                                                                                     |
|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|
|  |  |  |  |  |
| MAXIMUM                                                                           | HIGH                                                                              | MODERATE                                                                          | LOW                                                                                 | CUSTOM                                                                              |
| REPLICATION<br>FACTOR 3<br>MIN INSYNC<br>REPLICA 2                                | REPLICATION<br>FACTOR 3<br>MIN INSYNC<br>REPLICA 1                                | REPLICATION<br>FACTOR 2<br>MIN INSYNC<br>REPLICA 1                                | REPLICATION<br>FACTOR 1<br>MIN INSYNC<br>REPLICA 1                                  |                                                                                     |

#### Limits

CLEANUP.POLICY

delete

Advanced

Cancel

Save

7. Click Save.

You see the following message in the top right corner of the webpage.

