

Cloudera Runtime 7.3.1

Securing Streams Messaging Manager

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The Cloudera logo is displayed in a bold, orange, sans-serif font. The word "CLOUDERA" is written in all caps, with a stylized 'E' that has a horizontal bar extending to the right.

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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 (SMM) web user interface (UI). After you secure the SMM web UI, the login page appears, which does not appear by default.

About this task

If you deploy SMM without security, the login page is not enabled on the SMM UI by default. When you enable Kerberos authentication, SMM 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 SMM, anyone within the organization can login to SMM. 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 SMM.

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 SMM

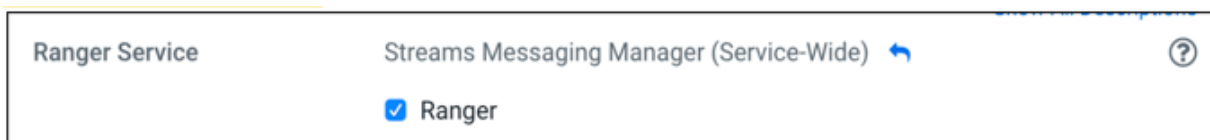
For more information, see *Creating your first Streams Messaging cluster*.



Note: For the Kafka Client security protocol, it is possible to use INFERRED, SASL_PLAINTEXT, and SASL_SSL for securing SMM. However, Cloudera recommends using SASL_SSL.

Procedure

1. Go to Cloudera Manager > SMM , and click Configuration.
2. Enable Ranger for SMM.



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.

| Policy ID | Policy Name | Policy Labels | Status | Audit Logging | Roles | Groups | Users | Action |
|-----------|--|---------------|---------|---------------|-------|--------|--|-----------------------|
| 22 | all - consumergroup | -- | Enabled | Enabled | -- | -- | crusecontrol, streamsmgmr, kafka, streamsmgmr, + More... | [Eye] [Edit] [Delete] |
| 23 | all - topic | -- | Enabled | Enabled | -- | -- | crusecontrol, streamsmgmr, kafka, streamsmgmr, + More... | [Eye] [Edit] [Delete] |
| 24 | all - transactionalid | -- | Enabled | Enabled | -- | -- | crusecontrol, streamsmgmr, kafka, streamsmgmr, + More... | [Eye] [Edit] [Delete] |
| 25 | all - cluster | -- | Enabled | Enabled | -- | -- | crusecontrol, streamsmgmr, kafka, streamsmgmr, + More... | [Eye] [Edit] [Delete] |
| 26 | all - delegationtoken | -- | Enabled | Enabled | -- | -- | crusecontrol, streamsmgmr, kafka, streamsmgmr, + More... | [Eye] [Edit] [Delete] |
| 27 | ATLAS_HOOK | -- | Enabled | Enabled | -- | -- | hbase, hive, impala, mgov, + More... | [Eye] [Edit] [Delete] |
| 28 | ATLAS_ENTITIES | -- | Enabled | Enabled | -- | -- | atlas, rangertagsync, cloudera-scm | [Eye] [Edit] [Delete] |
| 29 | ATLAS_SPARK_HOOK | -- | Enabled | Enabled | -- | public | atlas, cloudera-scm | [Eye] [Edit] [Delete] |
| 30 | atlas consumergroup | -- | Enabled | Enabled | -- | -- | atlas | [Eye] [Edit] [Delete] |
| 31 | ranger_entities_consumer consumergroup | -- | Enabled | Enabled | -- | -- | rangertagsync | [Eye] [Edit] [Delete] |
| 42 | enable-create | -- | Enabled | Enabled | -- | -- | cloudera-scm | [Eye] [Edit] [Delete] |

The Policy Details page appears.

Policy Details :

Policy Type: **Access**

Policy Name *: ? **enabled** **normal**

Policy Label:

cluster **include**

Description:

Audit Logging: **YES**

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

Policy Details :

Policy Type **Access**

Policy Name * enabled normal

Policy Label include

- topic
- transactionalid
- cluster
- delegationtoken
- consumergroup

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 |
|---|--|--|----------------------------------|--|--|
| <input type="text" value="Select Roles"/> | <input type="text" value="Select Groups"/> | <input type="text" value="x streamsmgmr"/> | Add Conditions + | Add Permissions + | <input type="checkbox"/> hide |
| <div style="border: 1px solid #ccc; padding: 5px;"> <p>⚠ Exclude from Allow Conditions :</p> </div> | | | | | |
| <input type="text" value="Select Roles"/> | <input type="text" value="Select Groups"/> | <input type="text" value="Select Users"/> | Add Conditions + | <div style="border: 1px solid #ccc; padding: 5px;"> <p>add/edit permissions</p> <ul style="list-style-type: none"> <input type="checkbox"/> Configure <input checked="" type="checkbox"/> Describe <input type="checkbox"/> Kafka Admin <input checked="" type="checkbox"/> Create <input type="checkbox"/> Idempotent Write <input type="checkbox"/> Describe Configs <input type="checkbox"/> Alter Configs <input type="checkbox"/> Cluster Action <input type="checkbox"/> Alter <input type="checkbox"/> Select/Deselect All </div> | <input type="checkbox"/> hide |

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](#)

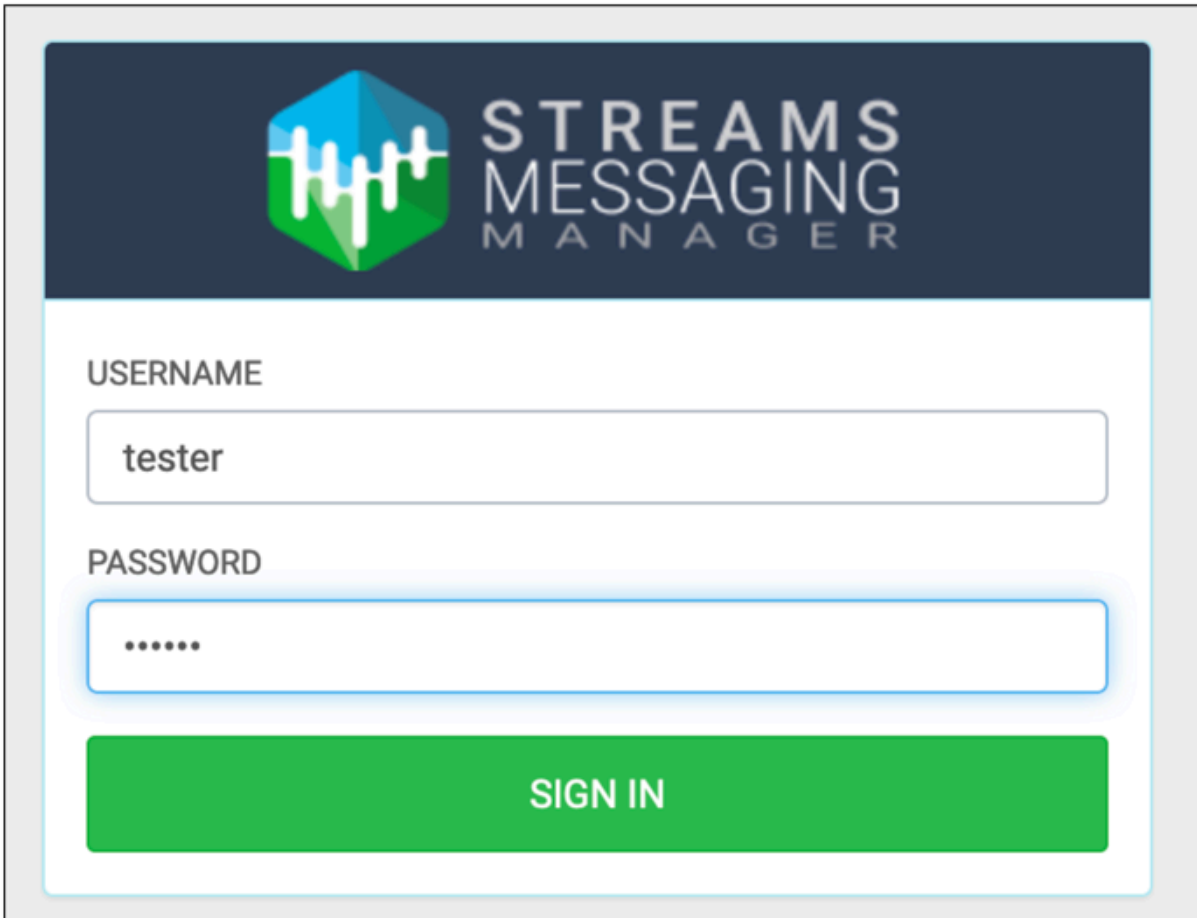
Verifying the setup

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

Procedure

1. Go to Cloudera Manager > SMM .

The login page for SMM appears.



STREAMS
MESSAGING
MANAGER

USERNAME

tester

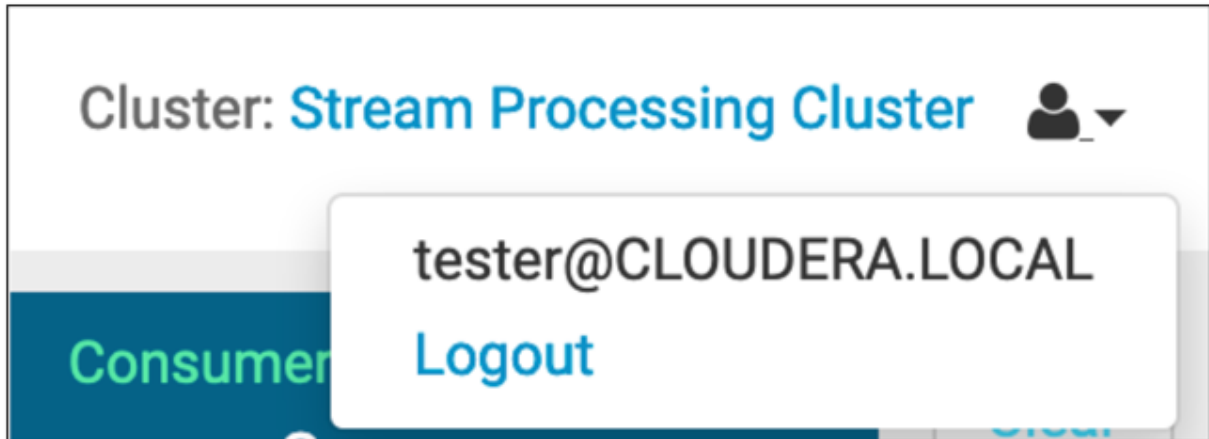
PASSWORD

.....

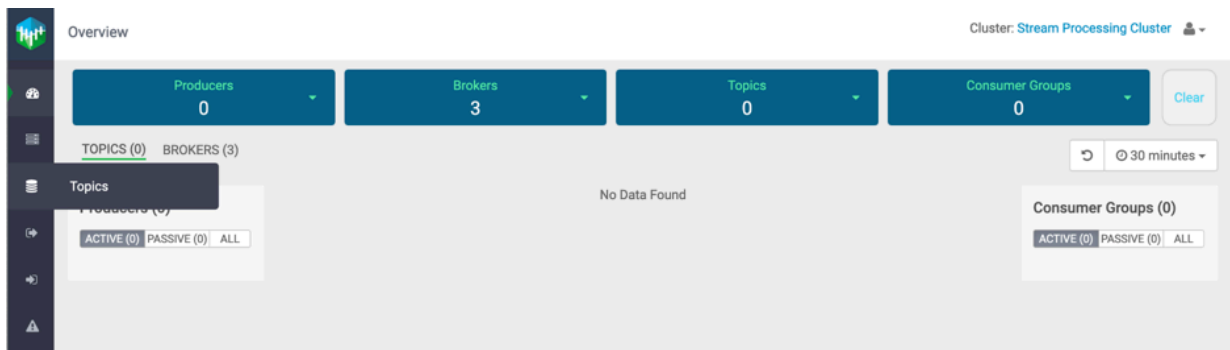
SIGN IN

2. Login to the SMM UI using your regular credentials.

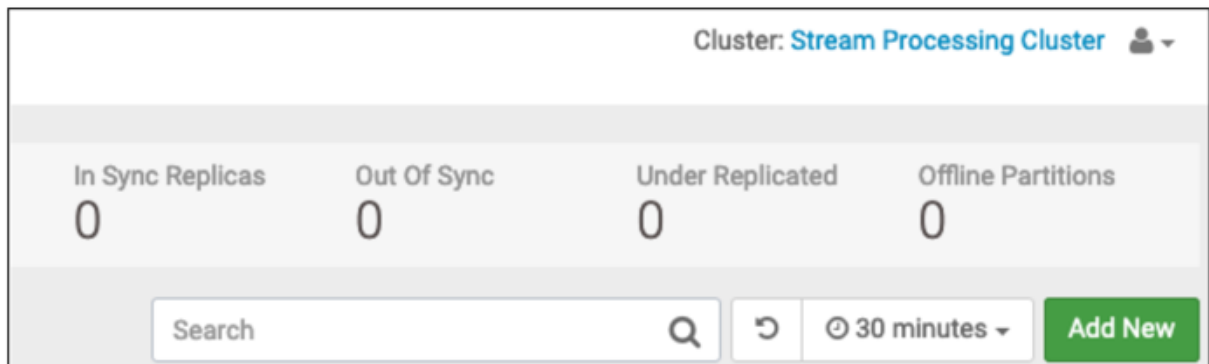
After you log in, you see the user logout dropdown at the top right corner of your screen. It shows the domain associated with the user.



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

PARTITIONS

Availability

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

Limits

CLEANUP.POLICY

[Advanced](#)

7. Click Save.

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

