

Cloudera Runtime 7.1.9

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 (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

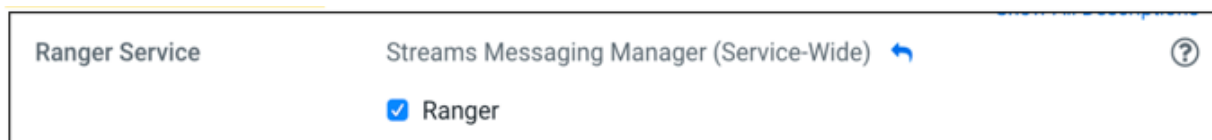
For more information, see *Creating your first Streams Messaging cluster*.



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.

The screenshot shows the Ranger Access Manager interface. The top navigation bar includes 'Ranger', 'Access Manager', 'Audit', 'Security Zone', and 'Settings'. The user is logged in as 'admin'. The breadcrumb trail shows 'Service Manager' > 'cm_kafka Policies'. The main heading is 'List of Policies : cm_kafka'. Below this is a search bar with the placeholder 'Search for your policy...' and an 'Add New Policy' button. The table below lists various policies with columns for Policy ID, Policy Name, Policy Labels, Status, Audit Logging, Roles, Groups, Users, and Action.

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

The Policy Details page appears.

The 'Policy Details' page for the 'enable-create' policy is shown. It includes the following fields and controls:

- Policy Type:** Access (selected)
- Policy Name *:** enable-create (with an information icon)
- Policy Label:** Policy Label (input field)
- Policy Type:** cluster (dropdown menu)
- Description:** (text area)
- Audit Logging:** YES (toggle switch)
- Buttons:** enabled, normal, include, and a delete button (X).

- 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

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	Add Permissions	
+ add/edit permissions					
<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					

Exclude from Allow Conditions :

Select Role	Select Group	Select User	Policy Conditions	Permissions	Delegate Admin
Select Roles	Select Groups	Select Users	Add Conditions		
+ add/edit permissions					

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

Related Information

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

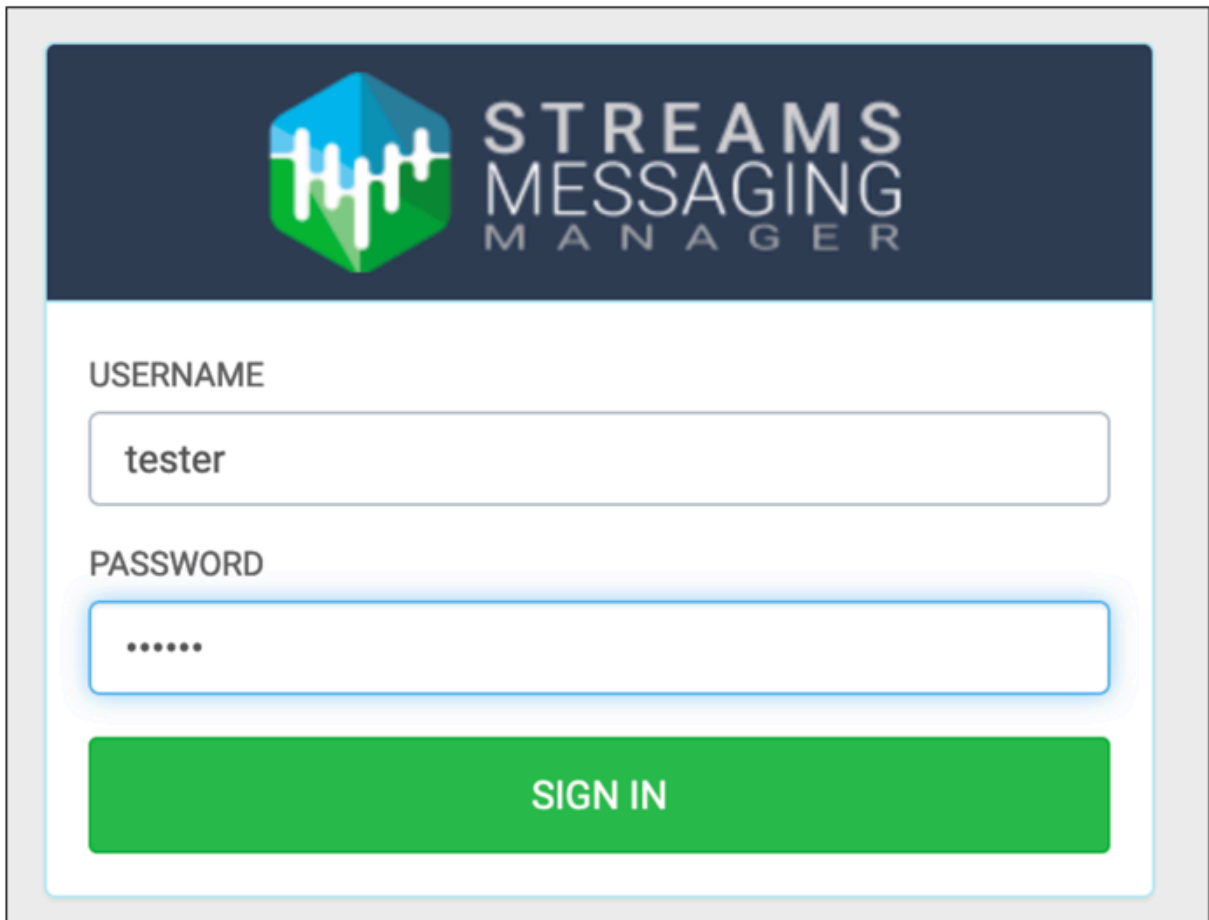
Verifying the setup

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

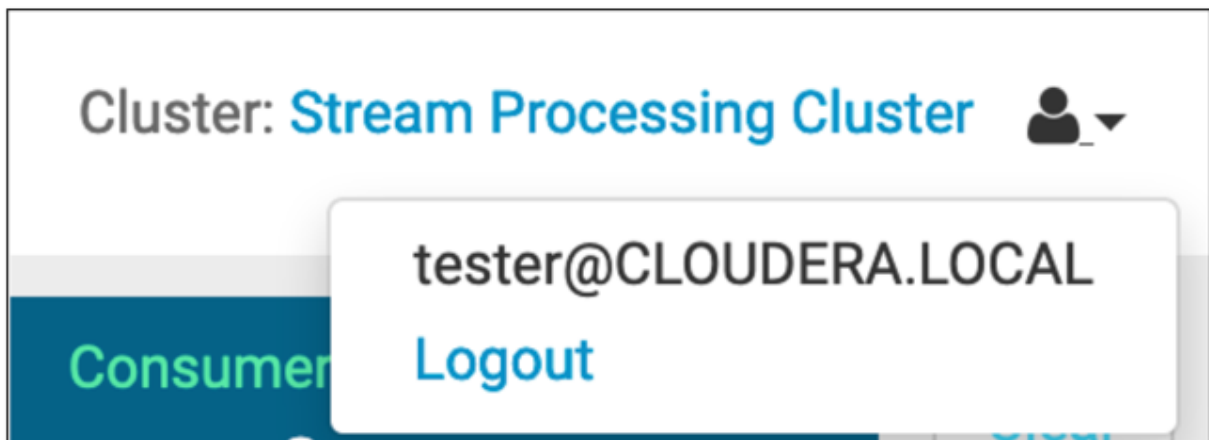
PASSWORD

.....

SIGN IN

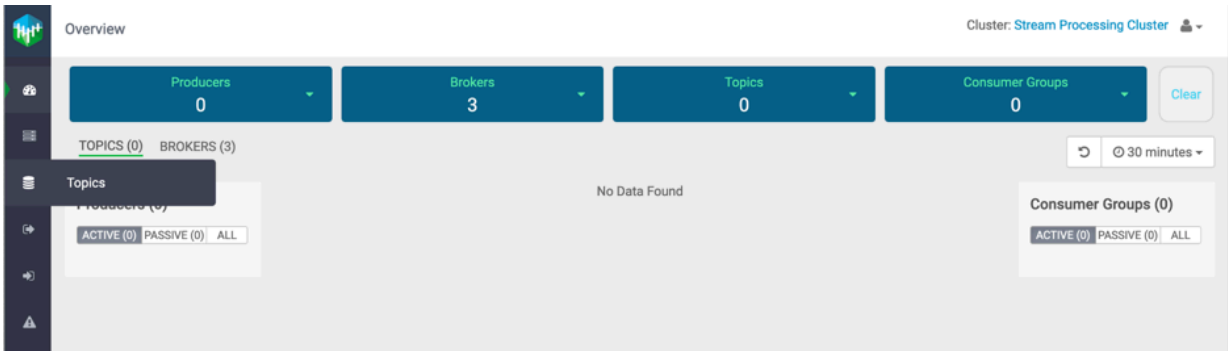
2. Login to the SMM UI using your regular credentials.

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.

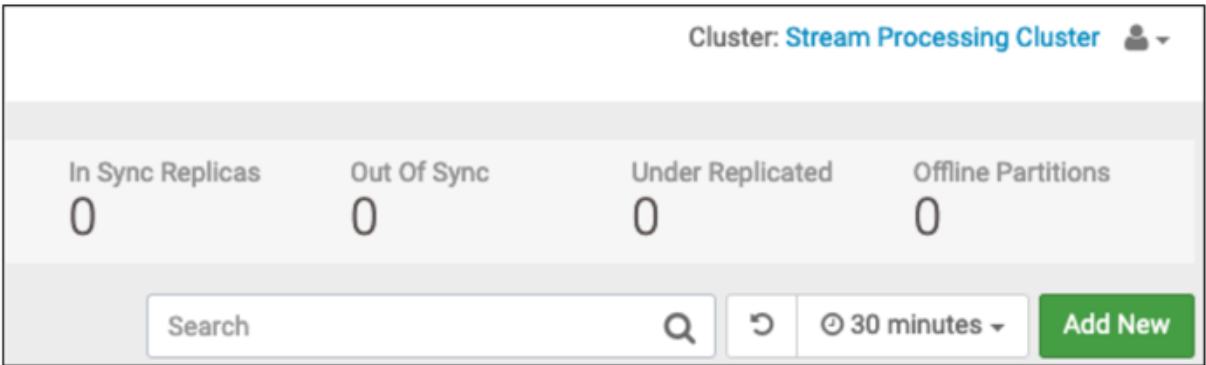


3. Click Streams Messaging Manager Web UI.

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

test1

PARTITIONS

1

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

delete

Advanced

Cancel

Save

7. Click Save.

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

