

Securing Streams Messaging Manager 7.2.14

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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

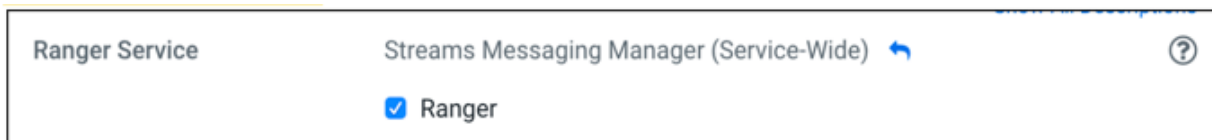
For more information, see *Creating your first Streams Messaging cluster*.



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 web interface. At the top, there are navigation tabs: Ranger, Access Manager, Audit, Security Zone, and Settings. Below that, a breadcrumb trail shows 'Service Manager > cm_kafka Policies'. The main heading is 'List of Policies : cm_kafka'. There is a search bar 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 - consumergroup	--	Enabled	Enabled	--	--	crusecontrol, streamsmgmr, kafka, streamrepngr	[Eye] [Edit] [Delete]
23	all - topic	--	Enabled	Enabled	--	--	crusecontrol, streamsmgmr, kafka, streamrepngr	[Eye] [Edit] [Delete]
24	all - transactionalid	--	Enabled	Enabled	--	--	crusecontrol, streamsmgmr, kafka, streamrepngr	[Eye] [Edit] [Delete]
25	all - cluster	--	Enabled	Enabled	--	--	crusecontrol, streamsmgmr, kafka, streamrepngr	[Eye] [Edit] [Delete]
26	all - delegationtoken	--	Enabled	Enabled	--	--	crusecontrol, streamsmgmr, kafka, streamrepngr	[Eye] [Edit] [Delete]
27	ATLAS_HOOK	--	Enabled	Enabled	--	--	hbase, hive, impala, mgov	[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.

The screenshot shows the 'Policy Details' page for the 'enable-create' policy. The 'Policy Type' is 'Access'. The 'Policy Name' is 'enable-create' and it is currently set to 'enabled'. The 'Policy Label' is 'Policy Label'. The 'cluster' dropdown is set to 'cluster' and the policy is set to 'include'. The 'Description' field is empty. The 'Audit Logging' is set to '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"/>
<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"/>

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

Related Information

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

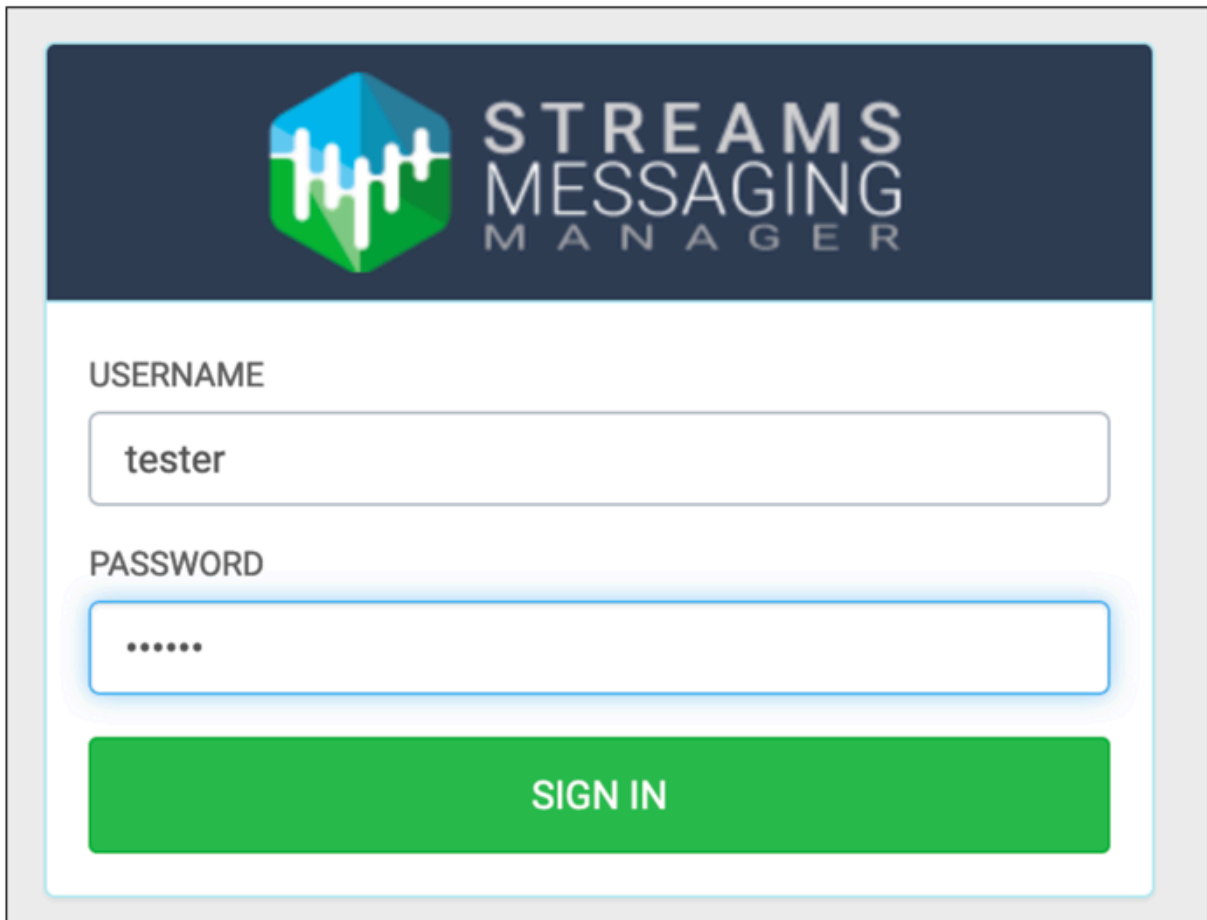
Verifying the setup

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 .

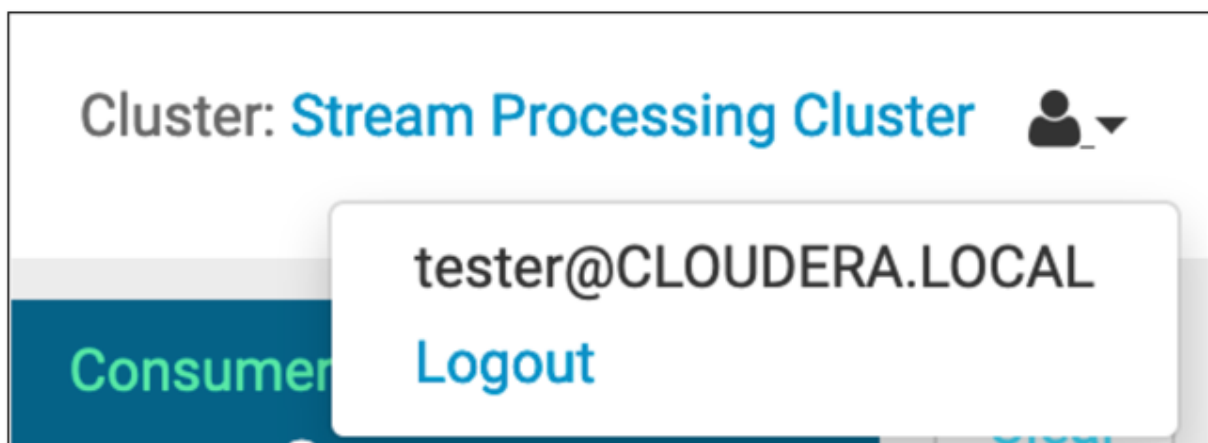
The login page for SMM appears.



The screenshot shows the login interface for Streams Messaging Manager. At the top, there is a dark blue header with the logo on the left and the text "STREAMS MESSAGING MANAGER" on the right. Below the header, there are two input fields: "USERNAME" with the value "tester" and "PASSWORD" with masked characters "*****". A green "SIGN IN" button is positioned below the password field.

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.

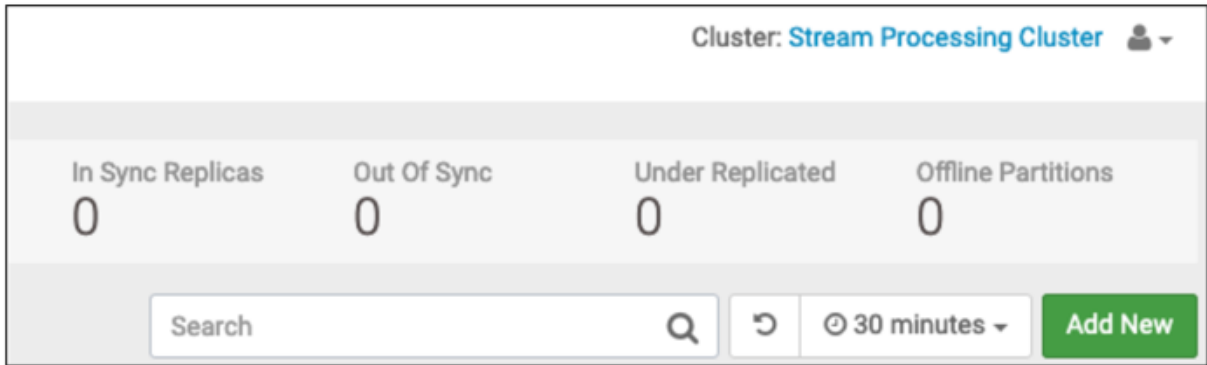


3. Click Streams Messaging Manager Web UI.

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	REPLICATION FACTOR 3	REPLICATION FACTOR 2	REPLICATION FACTOR 1	
MIN INSYNC REPLICA 2	MIN INSYNC REPLICA 1	MIN INSYNC REPLICA 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.

