

Cloudera Runtime 7.3.1

## Securing Streams Messaging Manager

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# CLOUdera

<https://docs.cloudera.com/>

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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

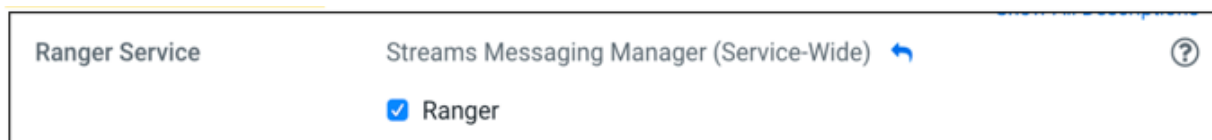
For more information, see *Creating your first Streams Messaging cluster*.



**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.

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	[Eye] [Edit] [Delete]
23	all - topic	--	Enabled	Enabled	--	--	crusecontrol, streamsmgmr, kafka	[Eye] [Edit] [Delete]
24	all - transactional id	--	Enabled	Enabled	--	--	crusecontrol, streamsmgmr, kafka	[Eye] [Edit] [Delete]
25	all - cluster	--	Enabled	Enabled	--	--	crusecontrol, streamsmgmr, kafka	[Eye] [Edit] [Delete]
26	all - delegation token	--	Enabled	Enabled	--	--	crusecontrol, streamsmgmr, kafka	[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 consumer group	--	Enabled	Enabled	--	--	atlas	[Eye] [Edit] [Delete]
31	ranger_entities_consumer consumer group	--	Enabled	Enabled	--	--	rangertagsync	[Eye] [Edit] [Delete]
42	enable-create	--	Enabled	Enabled	--	--	cloudera-scm	[Eye] [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 \*  **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 streamsmgmgr"/>	<b>Add Conditions</b> +	<b>Add Permissions</b> +	<input type="checkbox"/>
<div> <div>+</div> <div>Exclude from Allow Conditions :</div> </div>					
<input type="text" value="Select Roles"/>	<input type="text" value="Select Groups"/>	<input type="text" value="Select Users"/>	<b>Add Conditions</b> +	<b>Add Permissions</b> +	<input type="checkbox"/>

add/edit permissions  
☐ Configure  
☒ Describe  
☐ Kafka Admin  
☒ Create  
☐ Idempotent Write  
☐ Describe Configs  
☐ Alter Configs  
☐ Cluster Action  
☐ Alter  
☐ Select/Deselect All

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](#)

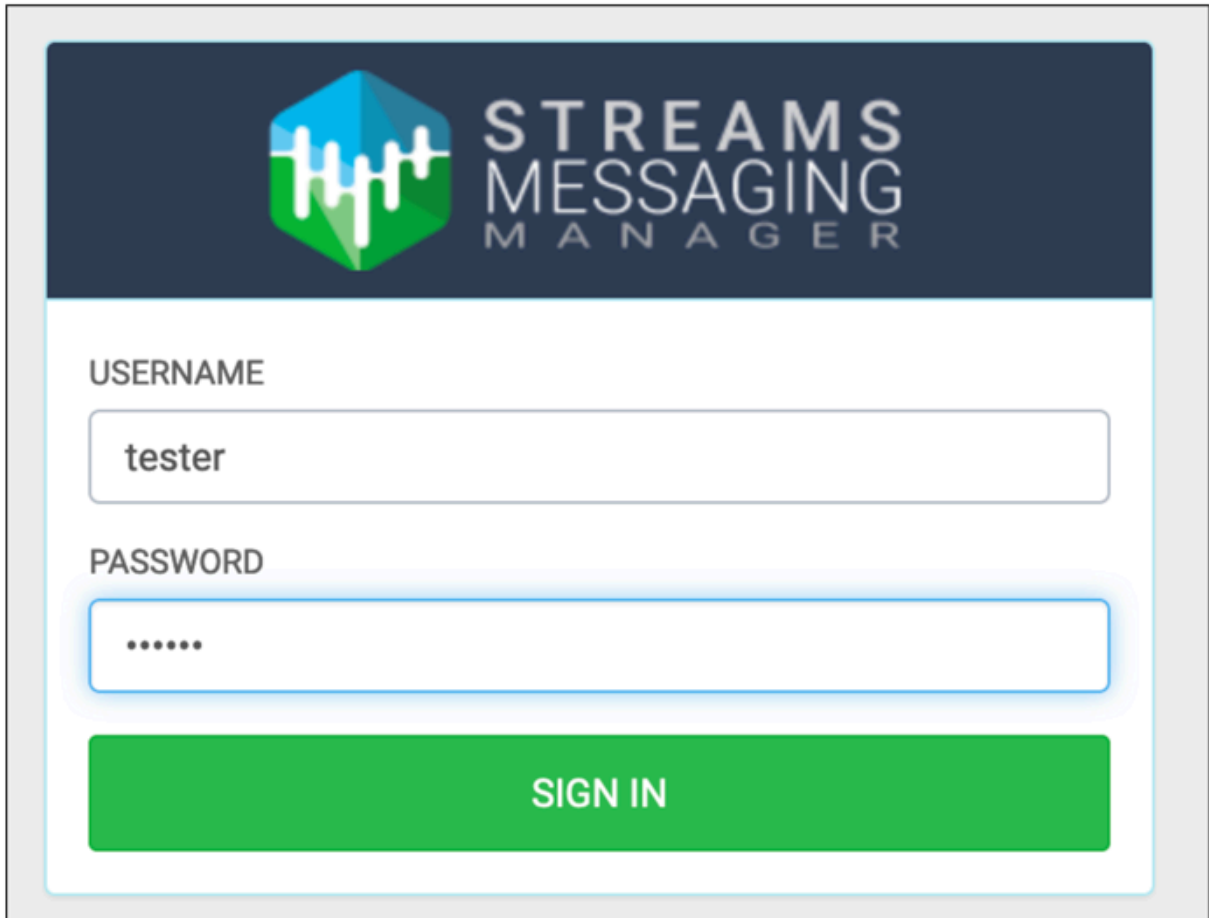
## Verifying the setup

After you secure 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 the Streams Messaging Manager. At the top, there is a dark blue header with a 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 labeled "SIGN IN".

STREAMS  
MESSAGING  
MANAGER

USERNAME

tester

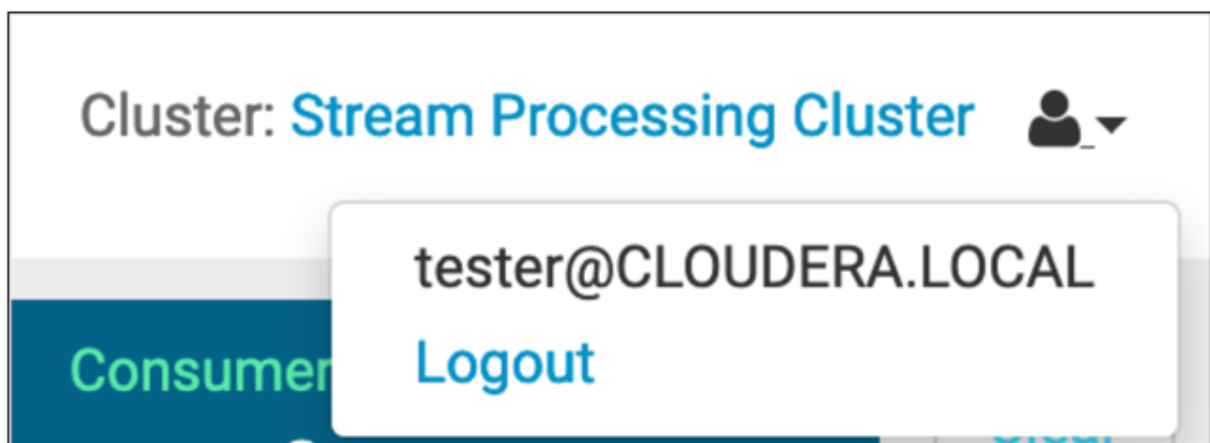
PASSWORD

.....

SIGN IN

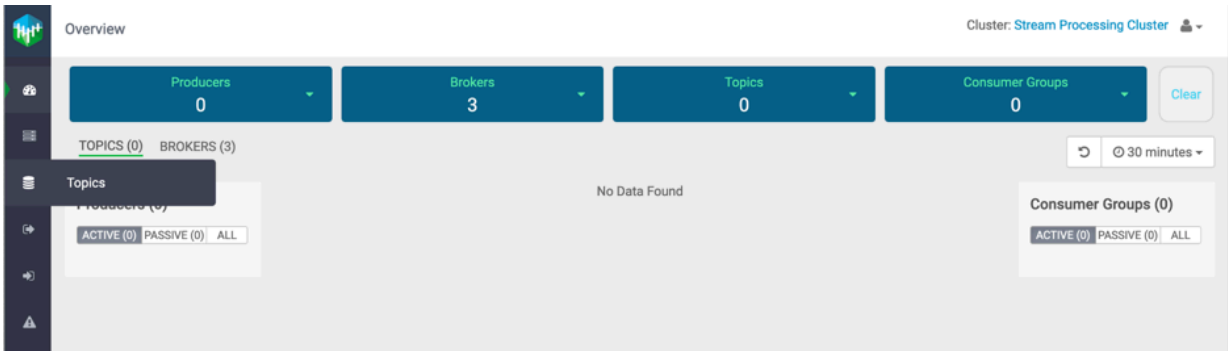
2. Login to the Streams Messaging Manager UI using your regular credentials.

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.

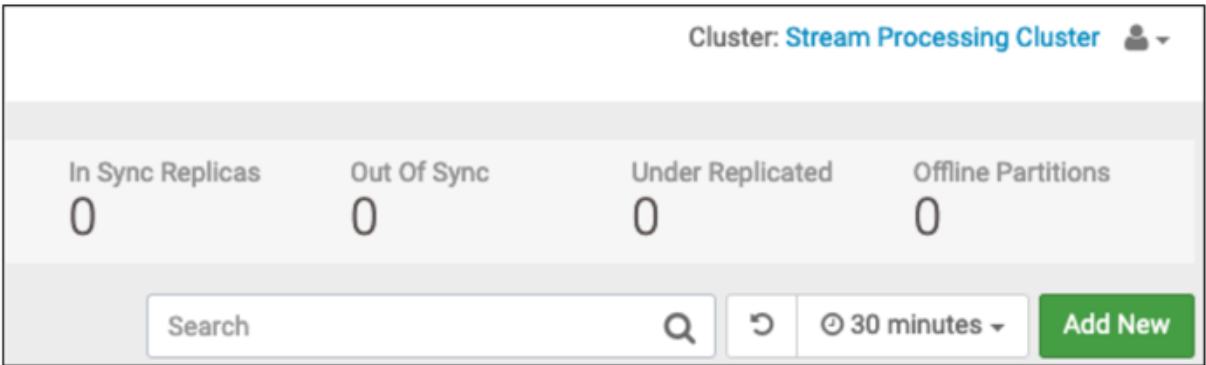


3. Click Streams Messaging Manager Web UI.

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 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.

