

Managing Alert Policies 1.2.1

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Alert Policies Overview

An alert policy sends notifications through a notifier based on the conditions that you configure in the alert policy.

You can configure an alert policy in Streams Messaging Manager (SMM). When an alert policy triggers, SMM creates an alert. An alert consists of details of the policy including the alert message and the conditions that fire the alert. You can use these alerts to monitor the health of different Kafka entity types and to identify and troubleshoot problems.

You can modify alert policy names, descriptions, and can enable or disable alert policies. You can also delete alert policies.

You can check the list of alerts that occurred in the system till date on the Alerts > HISTORY page. You can check the component type, state, timestamp, and target of an alert. You can click show more to check payload details for an alert. Click ACTIONS Mark All As Read to mark all the alerts as read. You can also click the Dismiss icon for each alert to mark the alert as read.

Component Types and Metrics for Alert Policies

You create an alert policy for a component type. The component type drives the list of metrics to select for creating a threshold.

The following table lists the component types and metrics for an alert policy:

Table 1: Component Types and Metrics

Component Type	Metric	Description
Topic	UNDER REPLICATED PARTITIONS COUNT	Total number of partitions that are under replicated for a topic.
	BYTES IN PER SEC	Bytes per second coming in to a topic.
	BYTES OUT PER SEC	Bytes per second going out from a topic. It does not count the internal replication traffic.
	OUT OF SYNC REPLICA COUNT	Total number of replicas that are not in sync with the leader for a topic.
Producer	IS PRODUCER ACTIVE	Checks whether a producer is active.
Cluster	ACTIVE CONTROLLER COUNT	Number of brokers in the cluster reporting as the active controller in the last interval.
	ONLINE BROKER COUNT	Number of brokers that are currently online.
	UNCLEAN LEADER ELECTION COUNT	Number of unclean partition leader elections in the cluster reported in the last interval.
	UNDER REPLICATED PARTITIONS COUNT	Total number of topic partitions in the cluster that are under replicated.
	LEADER ELECTION PER SEC	Rate of partition leader elections.
	OFFLINE PARTITIONS COUNT	Total number of topic partitions, in the cluster, that are offline.
Consumer	CONSUMER GROUP LAG	How far consumer groups are behind the producers.
	IS CONSUMER ACTIVE	Checks whether a consumer is active.
Broker	BYTES IN PER SEC	Number of bytes per second produced to a broker.

Component Type	Metric	Description
	ZOOKEEPER SESSION EXPIRATION PER SEC	Rate at which brokers are experiencing Zookeeper session expirations per second.
	TOTAL PRODUCE REQUESTS PER SEC	Total number of produce requests to a broker per second.
	PARTITION IMBALANCE PERCENTAGE	The partition imbalance for a broker. It is calculated as: $(\text{abs}(\text{average_no_of_partitions_per_broker} - \text{actual_no_of_partitions_per_broker}) / \text{average_no_of_partitions_per_broker}) * 100$
	BYTES OUT PER SEC	Number of bytes per second fetched from a broker. It does not count the internal replication traffic.
	IS BROKER DOWN	Checks whether a broker is down.
	TOTAL PRODUCE REQUEST LATENCY	Latency of produce requests to this broker at the 99th percentile (in ms).
	ISR SHRINKS PER SEC	Rate at which brokers are experiencing InSync Replica Shrinks (number of shrinks per second).
	TOTAL FETCH CONSUMER REQUEST LATENCY	Latency of fetch consumer requests to this broker at 99th percentile (in ms).

Notifiers

You can use notifiers to communicate important Kafka alerts to appropriate recipients.

You can configure a notifier in Streams Messaging Manager (SMM). You can modify notifier names, descriptions, and can enable or disable notifiers.

SMM uses the following predefined set of notifiers:

- Email
- HTTP

Managing Alert Policies and Notifiers

You can use SMM to manage and monitor all the alert policies and notifiers in your environment.

Creating a Notifier

You can use SMM to create a notifier in your environment.

About this task

Perform the following steps to create a notifier:

Procedure

1. From the left navigation pane, select Alerts.
The Alerts Overview page appears.
2. Click NOTIFIERS.

- Click ADD NEW to create a new notifier.

The Notifier window appears.

- Configure the following properties:

Property	Description
Common Notifier Configuration	
NAME	Enter a unique name for the notifier.
DESCRIPTION	Enter an optional description for the notifier.
PROVIDER	Choose one of the following providers: <ul style="list-style-type: none"> Email HTTP
NOTIFIER RATE LIMIT COUNT	Select the number of allowed notifications.
NOTIFIER RATE LIMIT DURATION	Select the number of allowed notifications with respect to given duration in SECONDS, MINUTES, or HOURS.
Email Notifier Configuration	
FROM ADDRESS	Enter the email address to use for SMTP mail command. Default is admin@localhost.
TO ADDRESS	Enter one or multiple email addresses that you want to send the notification to.
USERNAME	Enter the username for SMTP.
PASSWORD	Enter the password for SMTP.
SMTP HOSTNAME	Enter the SMTP server that you want to connect to. Default is localhost.
SMTP PORT	Enter the SMTP server port that you want to connect to. Default is 25.
ENABLE AUTH	Select to enable authentication.
ENABLE SSL/STARTTLS	Select to enable SSL. This is applicable when you enable authentication. You can either select SSL or STARTTLS.
ENABLE DEBUG	Select to enable debug mode to trace any issue in the email notifier. Disabled by default.
PROTOCOL	Enter the protocol to use to send emails. Default is SMTP.
HTTP Notifier Configuration	
URL	Enter the target service URL.
CONNECTION TIMEOUT (MSECS)	Select the connection timeout in milliseconds for creating the initial connection. Default is 30 seconds.
READ TIMEOUT (MSECS)	Select the read timeout in milliseconds for waiting to read data. Default is 30 seconds.

- Click Save.

Updating a Notifier

You can use SMM to update a notifier that you create in your environment.

About this task

Perform the following steps to update a notifier:

Procedure

1. From the left navigation pane, select Alerts.
The Alerts Overview page appears.
2. Click NOTIFIERS.
3. Find the notifier you want to update from the list of available notifiers, and click the pencil icon beside the notifier.
The Notifier window appears.
4. Edit the properties.
5. Click Save.

Deleting a Notifier

You can use SMM to delete a notifier that you create in your environment. You can delete a notifier only if the notifier is not mapped to an alert policy.

About this task

Perform the following steps to delete a notifier:

Procedure

1. From the left navigation pane, select Alerts.
The Alerts Overview page appears.
2. Click NOTIFIERS.
3. Find the notifier you want to delete from the list of available notifiers, and click the delete icon beside the notifier.
4. Click Yes.

Creating an Alert Policy

You can use SMM to create an alert policy in your environment.

About this task

Perform the following steps to create an alert policy:

Procedure

1. From the left navigation pane, select Alerts.
The Alerts Overview page appears.
2. Click ALERT POLICIES.
3. Click ADD NEW to create a new alert policy.
The Alert Policy window appears.

4. Configure the following properties:

Property

Description

NAME

Enter a unique name for the alert policy.

DESCRIPTION

Enter a description for the alert policy.

EXECUTION INTERVAL IN SECONDS

Enter the execution interval in seconds to execute the alert policy periodically after the given time interval.

EXECUTION DELAY IN SECONDS

Enter the execution delay in seconds to delay the execution of the alert policy. This is applicable only when the last execution of the alert policy triggered an alert. Ideally, this value should not be less than the value you enter for the EXECUTION INTERVAL IN SECONDS option.

ENABLE

Choose to enable or disable the alert policy.

COMPONENT TYPE

Select one of the following component types for the IF policy:

- Topic
- Producer
- Cluster
- Consumer
- Broker

TARGET NAME

Select the target name for the IF policy.

You can add multiple WITH conditions by clicking the plus icon beside TARGET NAME.

ATTRIBUTE

Select the attribute for the policy.

CONDITION

Select the condition for the policy.

VALUE

Select the value for the policy.

You can add multiple attributes, conditions, and values by clicking the plus icon beside VALUE.

NOTIFICATION

Select a notifier.

PREVIEW

Displays the alert that you configure. For example, IF [COMPONENT_TYPE]: [TARGET_NAME] has [METRIC] [CONDITION] [VALUE] THEN not if by [NOTIFICATION]

5. Click Save.

Updating an Alert Policy

You can use SMM to update an alert policy in your environment.

About this task

Perform the following steps to update an alert policy:

Procedure

1. From the left navigation pane, select Alerts.
The Alerts Overview page appears.
2. Click ALERT POLICIES.
3. Find the alert policy that you want to update, and click the pencil icon beside the alert policy.
The Alert Policy window appears.
4. Edit the properties.
5. Click Save.

Enabling an Alert Policy

You can use SMM to enable an alert policy in your environment.

About this task

Perform the following steps to enable an alert policy:

Procedure

1. From the left navigation pane, select Alerts.
The Alerts Overview page appears.
2. Click ALERT POLICIES.
3. Find the alert policy that you want to enable, and click the enable icon beside the alert policy.
The alert policy is enabled.

Disabling an Alert Policy

You can use SMM to disable an alert policy in your environment.

About this task

Perform the following steps to disable an alert policy:

Procedure

1. From the left navigation pane, select Alerts.
The Alerts Overview page appears.
2. Click ALERT POLICIES.
3. Find the alert policy that you want to disable, and click the enable icon beside the alert policy.
The alert policy is disabled.

Deleting an Alert Policy

You can use SMM to delete an alert policy in your environment.

About this task

Perform the following steps to delete an alert policy:

Procedure

1. From the left navigation pane, select Alerts.
The Alerts Overview page appears.
2. Click ALERT POLICIES.
3. Find the alert policy that you want to delete, and click the delete icon beside the alert policy.
4. Click Yes.