

Cloudera Runtime 7.1.3

Configuring and Using Ranger KMS

Date published: 2019-11-01

Date modified:

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.

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

Legal Notice

© Cloudera Inc. 2024. All rights reserved.

The documentation is and contains Cloudera proprietary information protected by copyright and other intellectual property rights. No license under copyright or any other intellectual property right is granted herein.

Unless otherwise noted, scripts and sample code are licensed under the Apache License, Version 2.0.

Copyright information for Cloudera software may be found within the documentation accompanying each component in a particular release.

Cloudera software includes software from various open source or other third party projects, and may be released under the Apache Software License 2.0 (“ASLv2”), the Affero General Public License version 3 (AGPLv3), or other license terms. Other software included may be released under the terms of alternative open source licenses. Please review the license and notice files accompanying the software for additional licensing information.

Please visit the Cloudera software product page for more information on Cloudera software. For more information on Cloudera support services, please visit either the Support or Sales page. Feel free to contact us directly to discuss your specific needs.

Cloudera reserves the right to change any products at any time, and without notice. Cloudera assumes no responsibility nor liability arising from the use of products, except as expressly agreed to in writing by Cloudera.

Cloudera, Cloudera Altus, HUE, Impala, Cloudera Impala, and other Cloudera marks are registered or unregistered trademarks in the United States and other countries. All other trademarks are the property of their respective owners.

Disclaimer: EXCEPT AS EXPRESSLY PROVIDED IN A WRITTEN AGREEMENT WITH CLOUDERA, CLOUDERA DOES NOT MAKE NOR GIVE ANY REPRESENTATION, WARRANTY, NOR COVENANT OF ANY KIND, WHETHER EXPRESS OR IMPLIED, IN CONNECTION WITH CLOUDERA TECHNOLOGY OR RELATED SUPPORT PROVIDED IN CONNECTION THEREWITH. CLOUDERA DOES NOT WARRANT THAT CLOUDERA PRODUCTS NOR SOFTWARE WILL OPERATE UNINTERRUPTED NOR THAT IT WILL BE FREE FROM DEFECTS NOR ERRORS, THAT IT WILL PROTECT YOUR DATA FROM LOSS, CORRUPTION NOR UNAVAILABILITY, NOR THAT IT WILL MEET ALL OF CUSTOMER’S BUSINESS REQUIREMENTS. WITHOUT LIMITING THE FOREGOING, AND TO THE MAXIMUM EXTENT PERMITTED BY APPLICABLE LAW, CLOUDERA EXPRESSLY DISCLAIMS ANY AND ALL IMPLIED WARRANTIES, INCLUDING, BUT NOT LIMITED TO IMPLIED WARRANTIES OF MERCHANTABILITY, QUALITY, NON-INFRINGEMENT, TITLE, AND FITNESS FOR A PARTICULAR PURPOSE AND ANY REPRESENTATION, WARRANTY, OR COVENANT BASED ON COURSE OF DEALING OR USAGE IN TRADE.

Contents

Configuring Ranger KMS High Availability.....	4
Configure High Availability for Ranger KMS with DB.....	4
Configure High Availability for Ranger KMS with KTS.....	13
Overriding custom keystore alias on a Ranger KMS Server.....	22
Overriding custom keystore alias while configuring TLS/SSL on a single instance of Ranger KMS Server.....	22
Overriding custom keystore alias while configuring TLS/SSL on multiple instances of Ranger KMS Server.....	22

Configuring Ranger KMS High Availability

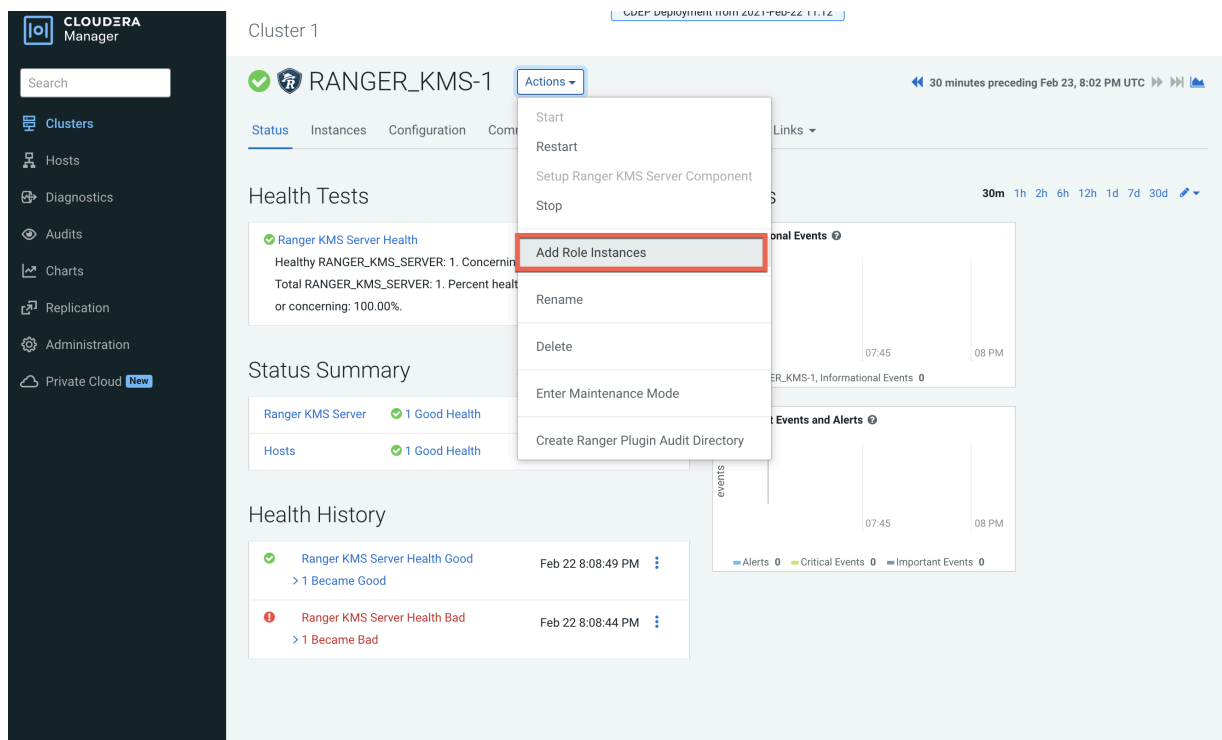
How to configure Ranger KMS high availability (HA) for Ranger KMS.

Configure High Availability for Ranger KMS with DB

Use the following steps to configure high availability for Ranger KMS with an associated keystore database.

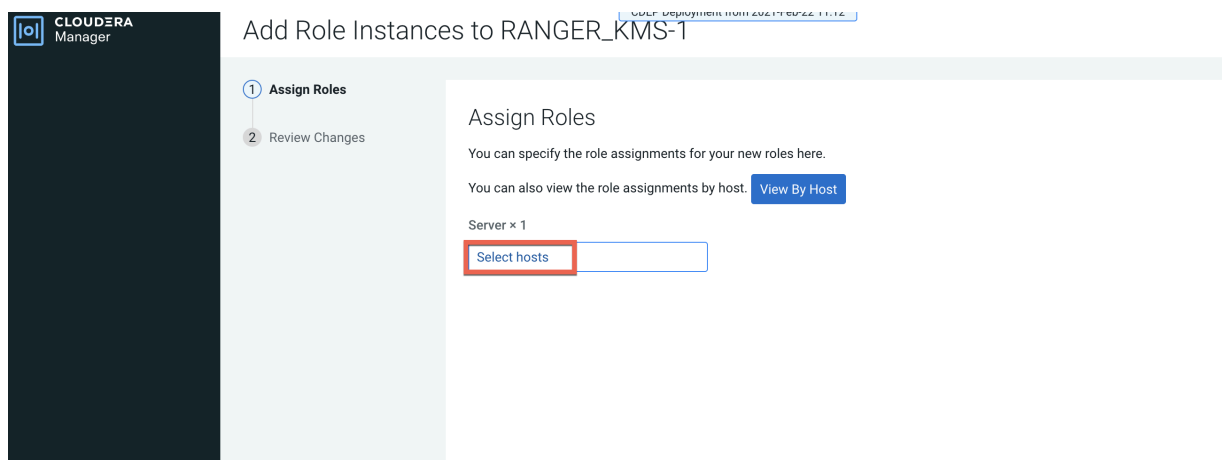
Procedure

1. In Cloudera Manager, select Ranger KMS, then select Actions > Add Role Instances.



The screenshot shows the Cloudera Manager interface for Cluster 1. The main content area displays the configuration for RANGER_KMS-1. The 'Actions' dropdown menu is open, and the 'Add Role Instances' option is highlighted with a red box. The interface includes a sidebar with navigation options like Clusters, Hosts, Diagnostics, Audits, Charts, Replication, Administration, and Private Cloud. The main content area shows the 'Health Tests' section with a 'Ranger KMS Server Health' indicator, a 'Status Summary' section with 'Ranger KMS Server' and 'Hosts' both showing 'Good Health', and a 'Health History' section with a log of health changes.

2. On the Assign Roles page, click Select hosts.



The screenshot shows the 'Assign Roles' page in Cloudera Manager for RANGER_KMS-1. The page title is 'Add Role Instances to RANGER_KMS-1'. The 'Assign Roles' section contains the text: 'You can specify the role assignments for your new roles here. You can also view the role assignments by host: View By Host'. Below this, there is a 'Server x 1' label and a 'Select hosts' button, which is highlighted with a red box.

- On the selected hosts page, select a backup Ranger KMS host. A Ranger KMS (RK) icon appears in the Added Roles column for the selected host. Click OK to continue.



Note: These steps show how to add one additional backup Ranger KMS host, but you can use the same procedure to add multiple Ranger KMS hosts.

2 Hosts Selected

Select hosts for a new or existing role. The host list is filtered to remove hosts that are not valid candidates; these include hosts that are unhealthy, members of other clusters, or have an incompatible version of the software installed on them.

Enter hostnames: host01, IP addresses or rack

Hostname	IP Address	Rack	Cores	Physical Memory	Existing Roles	Added Roles
<input type="checkbox"/> cloudera7151name 1. cloudera7151name.com.lax.site	172.27.00.69	/default	80	251.6 GiB	AS, CCS, G, HB..., RS, DN, G, G, G, ID, KB, KC, KG, M, G, LS, RA, RT, RU, RK..., SRS, G, G, SM..., SM..., SR..., SR..., G, G, NM, ZS	RK...
<input checked="" type="checkbox"/> cloudera7151name 2. cloudera7151name.com.lax.site	172.27.00.71	/default	32	251.6 GiB	RS, DN, G, G, ID, KB, KC, TS, G, G, G, SR..., SR..., G, NM	RK...
<input type="checkbox"/> cloudera7151name 3. cloudera7151name.com.lax.site	172.27.01.2	/default	32	251.6 GiB	M, B, NN, NF..., SNN, G, HMS, G, HS2, LB, HS, KTR, ICS, ISS, G, KB, KC, LHBI, TS, G, AP, ES, HM, RM, SM, OS, SS, G, HS, G, G, JHS, RM, S	

1 - 3 of 3

Cancel OK

- The Assign Roles page is redisplayed with the new backup host. Click Continue.

CDEP Deployment from 2021-Feb-22 11:12

Add Role Instances to RANGER_KMS-1

1 Assign Roles

2 Review Changes

Assign Roles

You can specify the role assignments for your new roles here.

You can also view the role assignments by host. [View By Host](#)

Server x (1 + 1 New)

- cloudera7151name.com.lax.site

Back Continue

5. Review the settings on the Review Changes page, then click Continue.

The screenshot shows the Cloudera Manager interface. On the left is a dark sidebar with the Cloudera Manager logo and navigation options: Parcels, Running Commands, Support, and a user profile for 'admin'. The main content area is titled 'Add Role Instances to RANGER_KMS-1'. Below the title is a progress indicator with two steps: 'Assign Roles' (completed) and 'Review Changes' (current step). The 'Review Changes' section contains several configuration items, each with a label, a description, a value, and a help icon:

- Ranger KMS Master Key Password:** Value is 'Ranger KMS Server Default Group'. Description: 'ranger.db.encrypt.key.password'. Link: 'ranger_kms_master_key_password'.
- Ranger KMS DB Auth Type:** Value is 'Ranger KMS Server Default Group'. Description: 'ranger.ks.db.ssl.auth.type'. Radio buttons: '1-way' (selected), '2-way'. Link: 'ranger_ks_db_ssl_auth_type'.
- Ranger KMS Database SSL Certificate File:** Value is 'Ranger KMS Server Default Group'. Description: 'ranger.ks.db.ssl.certificateFile'. Link: 'ranger_ks_db_ssl_certificateFile'.
- Ranger KMS DB SSL Enabled:** Value is 'Ranger KMS Server Default Group'. Description: 'ranger.ks.db.ssl.enabled'. Link: 'ranger_ks_db_ssl_enabled'.
- Ranger KMS DB SSL Required:** Value is 'Ranger KMS Server Default Group'. Description: 'ranger.ks.db.ssl.required'. Link: 'ranger_ks_db_ssl_required'.
- Ranger KMS DB SSL Verify Server Certificate:** Value is 'Ranger KMS Server Default Group'. Description: 'ranger.ks.db.ssl.verifyServerCertificate'. Link: 'ranger_ks_db_ssl_verifyServerCertificate'.
- Ranger KMS Keystore File:** Value is 'Ranger KMS Server Default Group'. Description: 'ranger.ks.keystore.file'. Link: 'ranger_ks_keystore_file'.
- Ranger KMS Keystore Password:** Value is 'Ranger KMS Server Default Group'. Description: 'ranger.ks.keystore.password'. Link: 'ranger_ks_keystore_password'.
- Ranger KMS Truststore File:** Value is 'Ranger KMS Server Default Group'.

At the bottom right of the configuration area are two buttons: 'Back' and 'Continue'.

- The new role instance appears on the Ranger KMS page. If the new Ranger KMS instance was not started by the wizard, you can start the service by clicking Actions > Start in the Ranger KMS service.

Cluster 1

RANGER_KMS-1

Status **Instances** Configuration Commands Charts Library Audits Quick Links

⚠ This entity is currently running with an outdated configuration. Restart the service (or the instance) for the changes to take effect.

Search Filters Last Updated: Feb 23, 8:24:09 PM UTC

Filters

- STATUS
 - Stopped 1
 - Good Health 1
- COMMISSION STATE
- MAINTENANCE MODE
- RACK ID
- ROLE GROUP
- ROLE TYPE
- STATE
- HEALTH TEST

Actions for Selected

Status	Role Type	State	Hostname	Commission State	Role Group
<input type="checkbox"/>	Ranger KMS Server	Stopped	...	Commissioned	Ranger KMS Server Default Group
<input type="checkbox"/>	Ranger KMS Server	Started with Outdated Configuration	...	Commissioned	Ranger KMS Server Default Group

1 - 2 of 2

7. In Cloudera Manager, select the Ranger service, click Ranger Admin Web UI, then log in as the Ranger KMS user (the default credentials are keyadmin/admin123). Click the Edit icon for the cm_kms service, then update the KMS URL property.

- Add the new KMS host using the following format:
kms://http@<kms_host1>;http@<kms_host2>:<kms_port>/kms
- The default port is 9292. For example:
kms://http@kms_host1;http@kms_host2:9292/kms
- If SSL is enabled, use https and port 9494. For example:
kms://https@kms_host1;https@kms_host2:9494/kms

Click Test Connection to confirm the settings, then click Save to save your changes.

The screenshot shows the 'Edit Service' page for the 'cm_kms' service in the Ranger Admin Web UI. The page is divided into two main sections: 'Service Details' and 'Config Properties'.

Service Details:

- Service Name: cm_kms
- Display Name: cm_kms
- Description: KMS repo
- Active Status: Enabled Disabled
- Select Tag Service: Select Tag Service

Config Properties:

- KMS URL: `it.hwx.site;http@10.10.10.15kms-2.dhgw.com:9292;https@10.10.10.15kms.root.hwx.com:9494`
- Username: keyadmin
- Password:

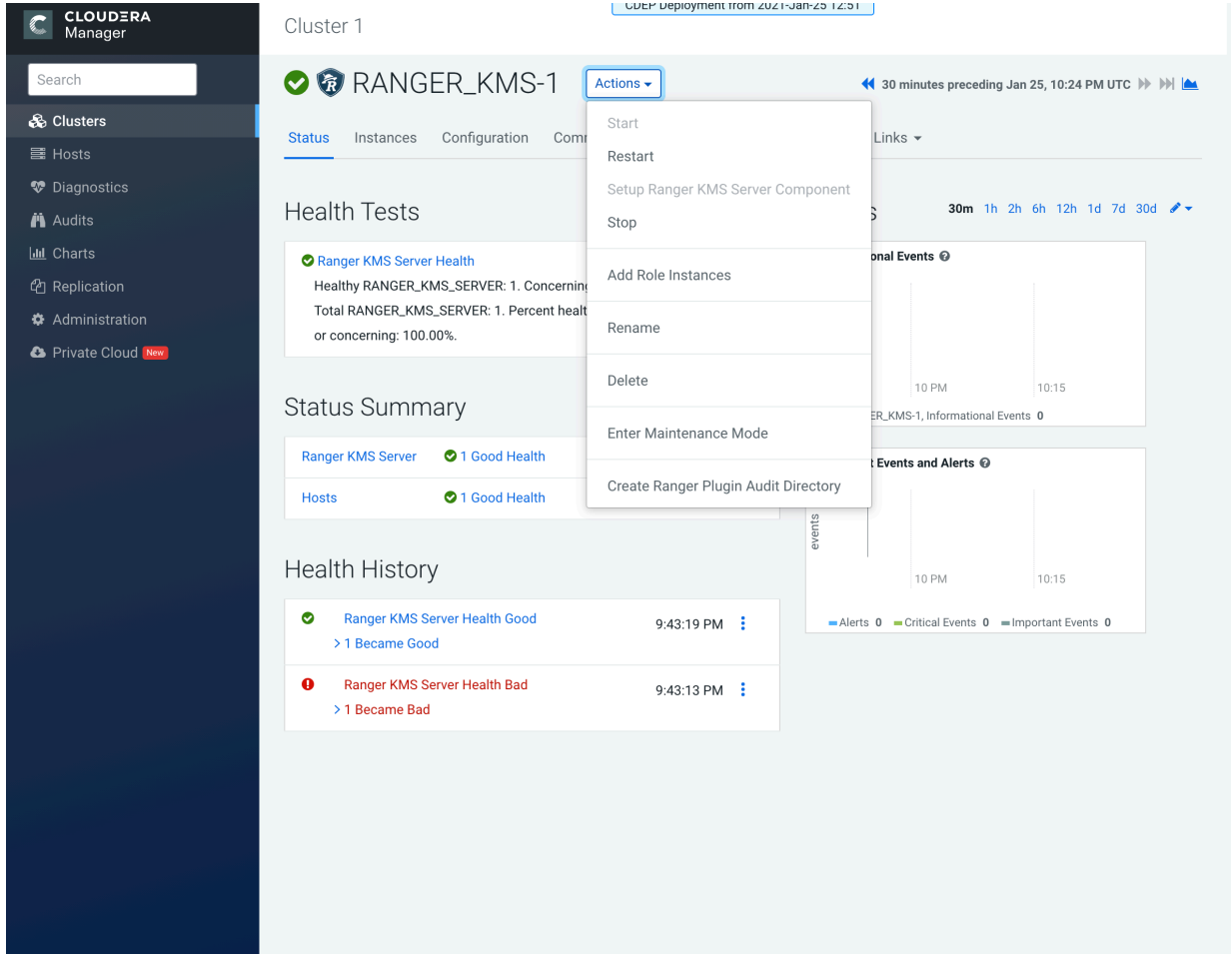
Add New Configurations:

Name	Value	
cluster.name	Cluster 1	<input type="button" value="x"/>
policy.download.auth.users	keyadmin,rangerkms	<input type="button" value="x"/>

Below the table is a '+' button to add new configurations and a 'Test Connection' button.

At the bottom of the page are three buttons: 'Save' (blue), 'Cancel' (grey), and 'Delete' (red).

8. In Cloudera Manager click the Ranger KMS service, then select Actions > Create Ranger Plugin Audit Directory.



9. In Cloudera Manager, select Ranger KMS, then click Configuration.

a) Use the Add (+) icons for the Ranger KMS Server Advanced Configuration Snippet (Safety Valve) for conf/kms-site.xml property to add the following properties, then click Save Changes.

- `hadoop.kms.authentication.zk-dt-secret-manager.enable = true`
- `hadoop.kms.authentication.zk-dt-secret-manager.zkConnectionString = <Zookeeper hostname>:2181`



Note: In a cluster with multiple ZK hosts, include them as a comma-separated list.
For example: `hadoop.kms.authentication.zk-dt-secret-manager.zkConnectionString = <ZK_hostname1>:2181,<ZK_hostname2>:2181,.....,<ZK_hostnameN>:2181 .`

- `hadoop.kms.authentication.zk-dt-secret-manager.znodeWorkingPath = <provide a znode working path other than /zkdt-sm to avoid collision>`

For example:

`hadoop.kms.authentication.zk-dt-secret-manager.znodeWorkingPath = testzkms`



Note: Do not put a leading slash at the beginning of the znode working path.

- `hadoop.kms.authentication.zk-dt-secret-manager.zkAuthType = sasl`
- `hadoop.kms.authentication.zk-dt-secret-manager.kerberos.keytab = {{CMF_CONF_DIR}}/ranger_kms.keytab`

The screenshot shows the Cloudera Manager interface for configuring Ranger KMS. The left sidebar contains navigation options like Clusters, Hosts, Diagnostics, Audits, Charts, Replication, Administration, and Private Cloud. The main content area is titled 'Ranger KMS Server Advanced Configuration Snippet (Safety Valve) for conf/kms-site.xml'. It features a 'Filters' panel on the left with categories like SCOPE, CATEGORY, and STATUS. The main panel displays a list of configuration properties with their names, values, and descriptions. The properties are:

- Name:** `hadoop.kms.authentication.zk-dt-secret-manager.enable`, **Value:** `true`
- Name:** `hadoop.kms.authentication.zk-dt-secret-manager.zkConnectionString`, **Value:** `<ZK_hostname1>:2181,<ZK_hostname2>:2181,.....,<ZK_hostnameN>:2181`
- Name:** `hadoop.kms.authentication.zk-dt-secret-manager.znodeWorkingPath`, **Value:** `testzkms`
- Name:** `hadoop.kms.authentication.zk-dt-secret-manager.zkAuthType`, **Value:** `sasl`
- Name:** `hadoop.kms.authentication.zk-dt-secret-manager.kerberos.keytab`, **Value:** `{{CMF_CONF_DIR}}/ranger_kms.keytab`

At the bottom of the page, there is a status bar indicating '1 Edited Value' and a 'Reason for change:' field. A 'Save Changes (CTRL+S)' button is located at the bottom right.

10. Update the following Ranger KMS configuration properties, then click Save Changes.

- hadoop.kms.authentication.signer.secret.provider = zookeeper
- hadoop.kms.authentication.signer.secret.provider.zookeeper.auth.type = sasl

The screenshot shows the Cloudera Manager interface for configuring the RANGER_KMS-1 cluster. The left sidebar contains navigation options like Clusters, Hosts, Diagnostics, Audits, Charts, Replication, Administration, Private Cloud, Parcels, Running Commands, Support, and user 'admin'. The main content area is titled 'Cluster 1' and shows the configuration for 'RANGER_KMS-1'. A search bar at the top left of the configuration area contains the query 'hadoop.kms.authentication.signer.secret.provider'. On the left, there are filter sections for SCOPE (RANGER_KMS-1 (Service-Wide) 0, Ranger KMS Server 3) and CATEGORY (Advanced 0, Database 0, Logs 0, Main 3, Monitoring 0, Performance 0, Ports and Addresses 0, Resource Management 0, Security 0, Stacks Collection 0). The STATUS section shows Error 0, Warning 0, Edited 2, Non-default 2, and Has Overrides 0. The main configuration area displays three properties:

- Hadoop KMS Authentication Signer Secret Provider:** Set to 'Ranger KMS Server Default Group'. Options: random, string, zookeeper (selected).
- Hadoop KMS Authentication Signer Secret Provider Zookeeper Path:** Set to '/hadoop-kms/hadoop-auth-signature-secret'.
- Hadoop KMS Authentication Signer Secret Provider Zookeeper Auth Type:** Set to 'Ranger KMS Server Default Group'. Options: none, kerberos, sasl (selected).

 At the bottom, it indicates '2 Edited Values' and provides a 'Reason for change: Modified Hadoop KMS Authentication Signer Secret Provider, Hadoop KMS Auth...'. A 'Save Changes (CTRL+S)' button is located at the bottom right.

11. Verify that the `hadoop.kms.cache.enable` property is set to the default value of `true` (the check box is selected).

The screenshot shows the Cloudera Manager interface for configuring the `hadoop.kms.cache.enable` property on cluster `RANGER_KMS-1`. The left sidebar contains navigation options like Clusters, Hosts, Diagnostics, Audits, Charts, Replication, Administration, Private Cloud, Parcels, Running Commands, Support, and admin. The main content area shows the configuration page with a search bar containing `hadoop.kms.cache.enable`. A filters sidebar on the left lists categories such as SCOPE, CATEGORY, and STATUS. The main configuration area shows the property `hadoop.kms.cache.enable` with a checked checkbox for `Ranger KMS Server Default Group`. The page also includes a 'Per Page' dropdown set to 25 and a page indicator '1 - 25 of 142'.

12. Click the Stale Configuration Restart icon.

The screenshot shows the Cloudera Manager interface for Cluster 1. The main content area displays the configuration for RANGER_KMS-1. A search bar at the top contains the text 'hadoop.kms.cache.enable'. Below the search bar, there are tabs for 'Filters', 'Role Groups', and 'History and Rollback'. The 'Filters' section is expanded, showing a list of filters with counts:

Filter	Count
SCOPE	
RANGER_KMS-1 (Service-Wide)	0
Ranger KMS Server	1
CATEGORY	
Advanced	0
Database	0
Logs	0
Main	1
Monitoring	0
Performance	0
Ports and Addresses	0
Resource Management	0
Security	0
Stacks Collection	0
STATUS	
Error	0
Warning	0
Edited	0
Non-default	0
Has Overrides	0

At the top right of the configuration page, there is a 'Stale Configuration: Restart needed' notification with a circular arrow icon. The 'Actions' menu is open, showing this option. The page also includes a 'Save Changes (CTRL+S)' button at the bottom right.

13. On the Stale Configurations page, click Restart Stale Services.

14. On the Restart Stale Services page, select the Re-deploy client configuration checkbox, then click Restart Now.

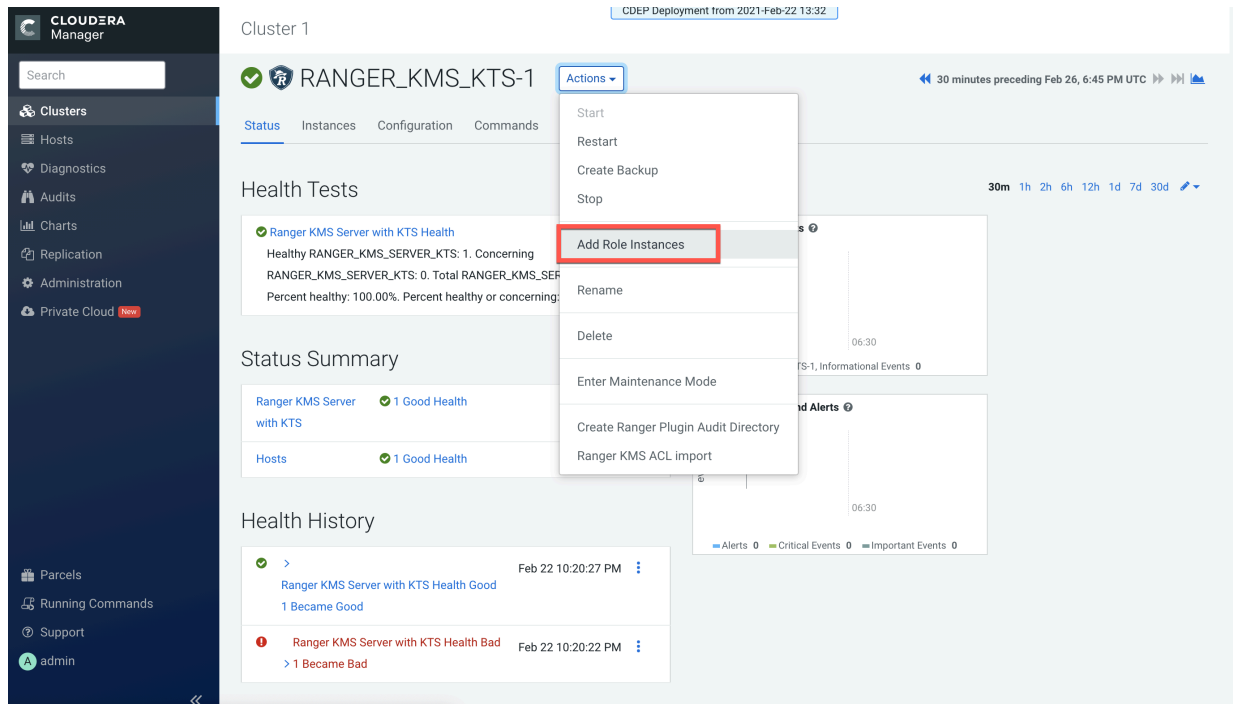
15. A progress indicator page appears while the services are being restarted. When the services have restarted, click Finish.

Configure High Availability for Ranger KMS with KTS

Use the following steps to configure high availability for Ranger KMS with Key Trustee Server as the backing key store.

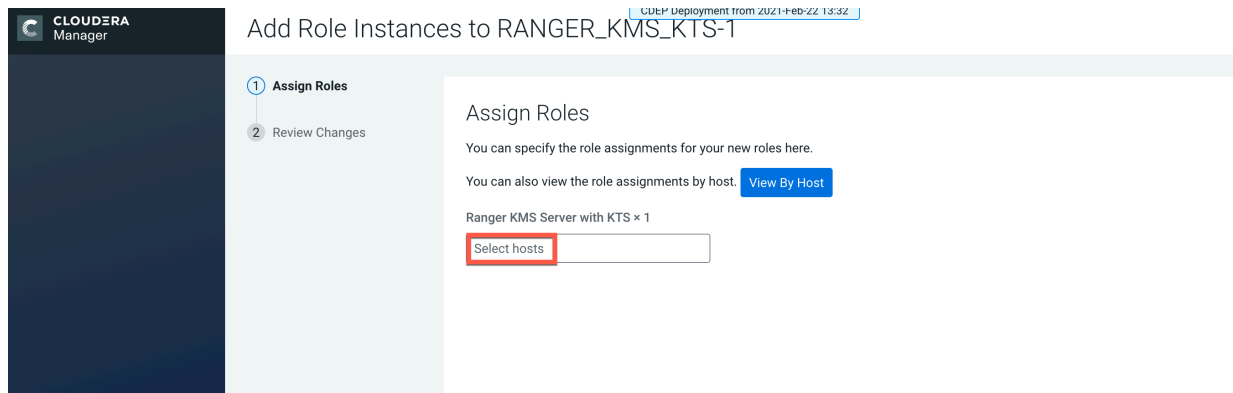
Procedure

1. In Cloudera Manager, select Ranger KMS KTS, then select Actions > Add Role Instances.



The screenshot shows the Cloudera Manager interface for a cluster named 'Cluster 1'. The main content area displays the 'RANGER_KMS_KTS-1' service. A dropdown menu is open over the 'Actions' button, with 'Add Role Instances' highlighted in red. The menu options include Start, Restart, Create Backup, Stop, Add Role Instances, Rename, Delete, Enter Maintenance Mode, Create Ranger Plugin Audit Directory, and Ranger KMS ACL import. The 'Health Tests' section shows 'Ranger KMS Server with KTS Health' as 'Healthy'. The 'Status Summary' shows 'Ranger KMS Server with KTS' and 'Hosts' both with '1 Good Health'. The 'Health History' shows a recent event where 'Ranger KMS Server with KTS Health' became good and another where it became bad.

2. On the Assign Roles page, click Select hosts.



The screenshot shows the 'Assign Roles' page in Cloudera Manager for the 'RANGER_KMS_KTS-1' service. The page title is 'Add Role Instances to RANGER_KMS_KTS-1'. The 'Assign Roles' section contains the text: 'You can specify the role assignments for your new roles here. You can also view the role assignments by host. View By Host'. Below this, it says 'Ranger KMS Server with KTS x 1' and there is a 'Select hosts' button highlighted in red.

- On the selected hosts page, select a backup Ranger KMS KTS host. A Ranger KMS KTS (RK) icon appears in the Added Roles column for the selected host. Click OK to continue.



Note: These steps show how to add one additional backup Ranger KMS KTS host, but you can use the same procedure to add multiple Ranger KMS KTS hosts.

2 Hosts Selected ✕

Select hosts for a new or existing role. The host list is filtered to remove hosts that are not valid candidates; these include hosts that are unhealthy, members of other clusters, or have an incompatible version of the software installed on them.

🔍 Enter hostnames: host01, IP addresses or rack

<input type="checkbox"/>	Hostname	IP Address	Rack	Cores	Physical Memory	Existing Roles	Added Roles
<input type="checkbox"/>	dh... 1. dh...x.site	172.27.130.1	/default	32	251.6 GiB	AS, CCS, G, HB..., RS, DN, G, G, G, ID, KB, KC, KG, M, G, LS, RA, RT, RU, SRS, G, G, SM..., SM..., SR..., SR..., G, G, NM, ZS	
<input checked="" type="checkbox"/>	dh... 2. dh...site	172.27.130.71	/default	32	251.6 GiB	RS, DN, G, G, ID, KB, KC, TS, G, RK..., G, G, G, NM	RK...
<input checked="" type="checkbox"/>	dh... 3. dh...site	172.27.130.09	/default	32	503.6 GiB	M, B, NN, NF..., SNN, G, HMS, G, HS2, LB, HS, KTR, ICS, ISS, G, KB, KC, LHB, TS, G, AP, ES, HM, RM	RK...

Cancel OK

- The Assign Roles page is redisplayed with the new backup host. Click Continue.

CDEP Deployment from 2021-Feb-22 13:32

Add Role Instances to RANGER_KMS_KTS-1

1 Assign Roles

2 Review Changes

Parcels

Running Commands

Support

admin

Assign Roles

You can specify the role assignments for your new roles here.

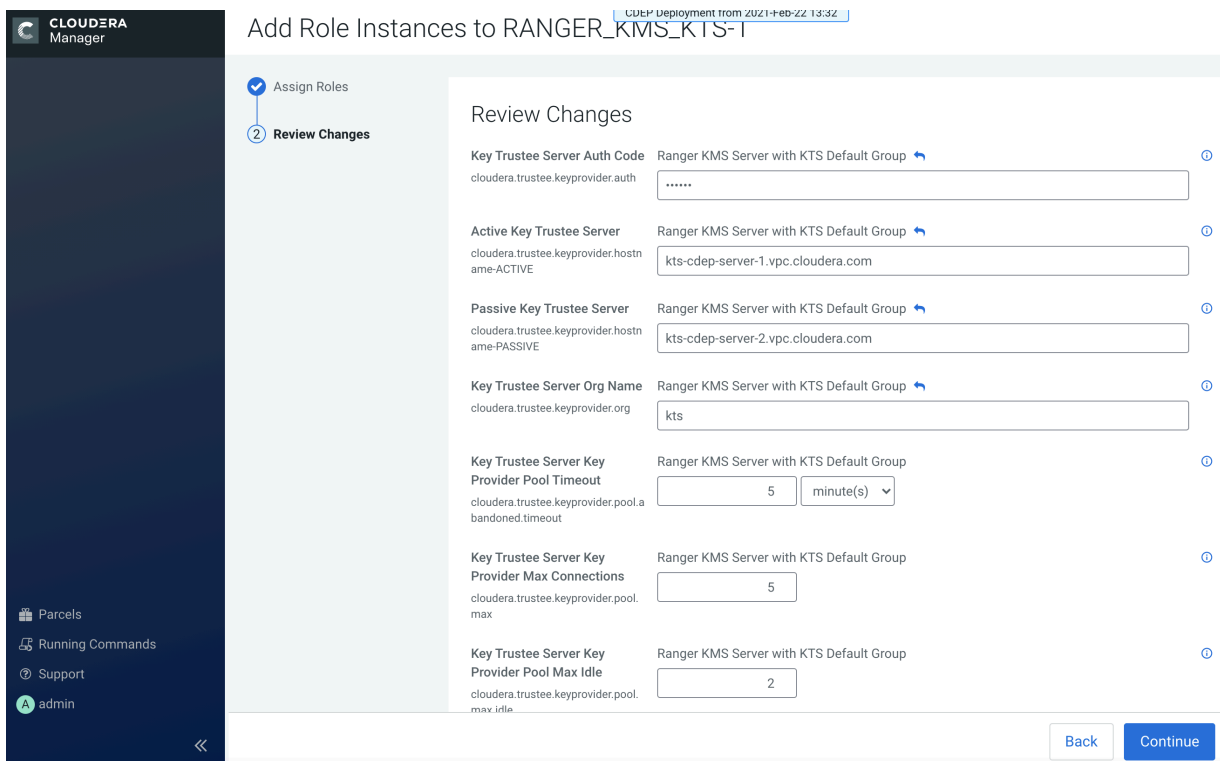
You can also view the role assignments by host. [View By Host](#)

Ranger KMS Server with KTS × (1 + 1 New)

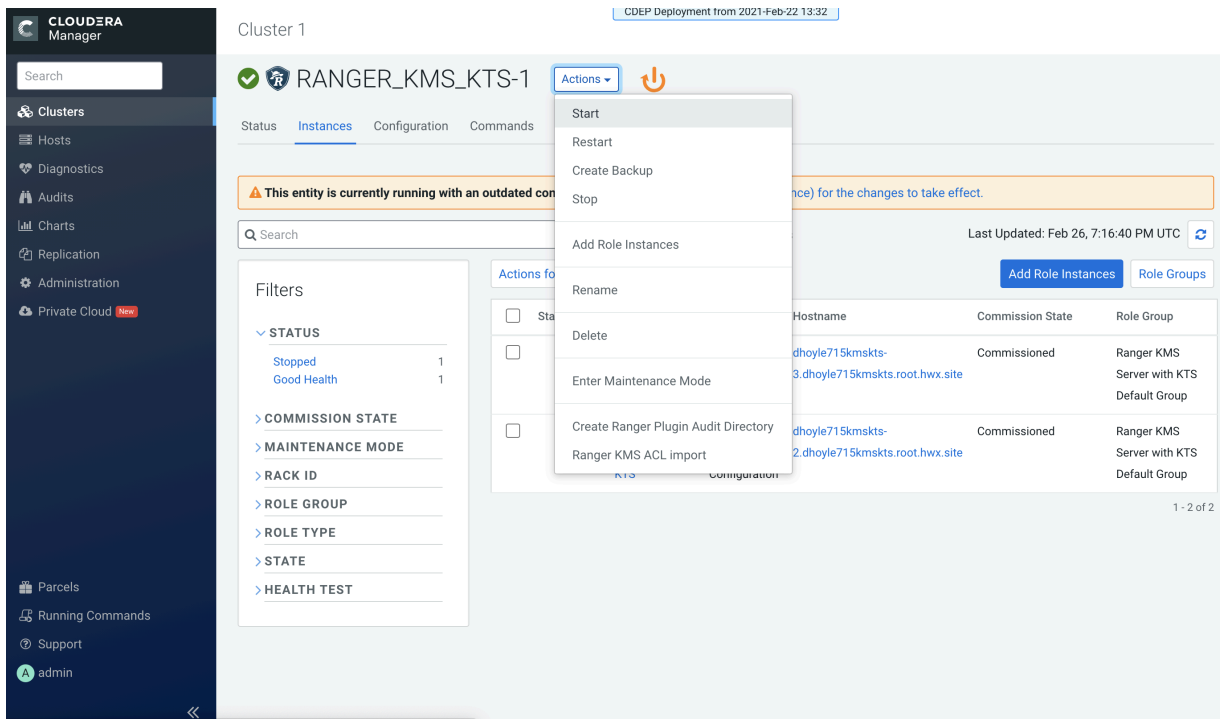
dl...-3.d...mksks...

Back
Continue

5. Review the settings on the Review Changes page, then click Continue.



6. The new role instance appears on the Ranger KMS KTS page. If the new Ranger KMS with KTS instance was not started by the wizard, you can start the service by clicking Actions > Start in the Ranger KMS with Key Trustee Server service.



7. If necessary, synchronize the KMS KTS private key.

Check the catalina.out file in the Ranger KMS KTS log directory for the following error:

```
java.io.IOException: Unable to verify private key match between KMS hosts.  
Verify private key files have been synced  
between all KMS hosts. Aborting to prevent data inconsistency.
```

To determine whether the KMS KTS private keys are different, compare the MD5 hash of the private keys. On each Ranger KMS KTS host, run the following command:

```
md5sum /var/lib/kms-keytrustee/keytrustee/.keytrustee/secring.gpg
```

If the output is different on both instances, Cloudera recommends following security best practices and transferring the private key using offline media, such as a removable USB drive. For convenience (for example, in a development or testing environment where maximum security is not required), you can copy the private key over the network by running the following rsync command on the original Ranger KMS KTS host:

```
rsync -zav /var/lib/kms-keytrustee/keytrustee/.keytrustee root@ktkms02.e  
xample.com:/var/lib/kms-keytrustee/keytrustee/.
```

8. Restart the Ranger KMS KTS service.

9. In Cloudera Manager, select the Ranger service, click Ranger Admin Web UI, then log in as the Ranger KMS user (the default credentials are keyadmin/admin123). Click the Edit icon for the cm_kms service, then update the KMS URL property.

- Add the new KMS host using the following format:

kms://http@<kms_kts_host1>;http@<kms_kts_host2>:<kms_port>/kms

- The default port is 9292. For example:

kms://http@kms_kts_host1;http@kms_kts_host2:9292/kms

- If SSL is enabled, use https and port 9494. For example:

kms://http@kms_kts_host1;http@kms_kts_host2:9494/kms

Click Test Connection to confirm the settings, then click Save to save your changes.

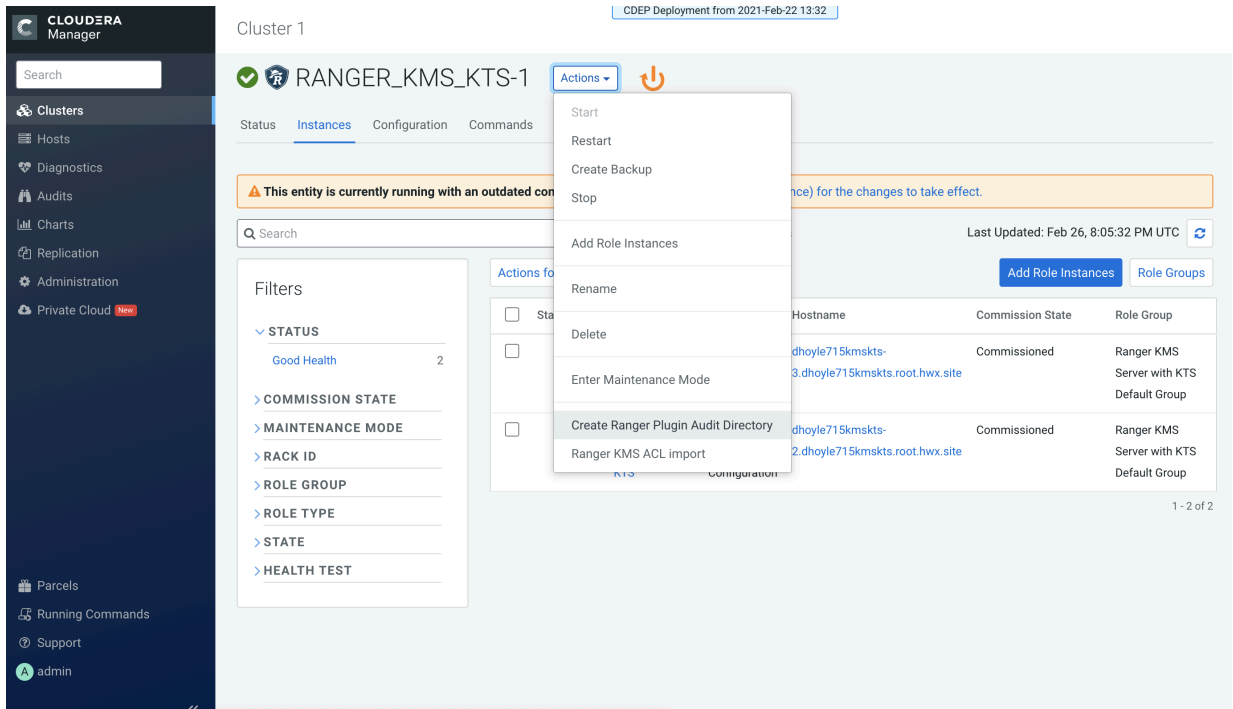
The screenshot shows the Ranger Admin Web UI configuration page for the cm_kms service. The page is titled "Edit Service" and includes a navigation bar with "Ranger", "Access Manager", "Audit", "Encryption", and "Settings". The main content area shows the "Config Properties" section with the following fields:

- Active Status:** Enabled (selected), Disabled
- Select Tag Service:** Select Tag Service (dropdown)
- Config Properties:**
 - KMS URL *:** fhoyler:tokmskts-3.dhoyler:tokmskts:root.nw.site:9292/kms
 - Username *:** keyadmin
 - Password *:**
- Add New Configurations:**

Name	Value	
policy.download.auth.users	keyadmin,rangerkms	X

At the bottom of the page, there are buttons for "Test Connection", "Save", "Cancel", and "Delete".

10. In Cloudera Manager click the Ranger KMS KTS service, then select Actions > Create Ranger Plugin Audit Directory.



11. In Cloudera Manager, select Ranger KMS KTS, then click Configuration.

a) Use the Add (+) icons for the Ranger KMS Server with KTS Advanced Configuration Snippet (Safety Valve) for conf/kms-site.xml property to add the following properties, then click Save Changes.

- `hadoop.kms.authentication.zk-dt-secret-manager.enable = true`
- `hadoop.kms.authentication.zk-dt-secret-manager.zkConnectionString = <Zookeeper hostname>:2181`
- `hadoop.kms.authentication.zk-dt-secret-manager.znodeWorkingPath = <provide a znode working path other than /zkdtsm to avoid collision>`

For example:

`hadoop.kms.authentication.zk-dt-secret-manager.znodeWorkingPath = testzkms`



Note: Do not put a leading slash at the beginning of the znode working path.

- `hadoop.kms.authentication.zk-dt-secret-manager.zkAuthType = sasl`
- `hadoop.kms.authentication.zk-dt-secret-manager.kerberos.keytab = {{CMF_CONF_DIR}}/ranger_kms_kts.keytab`

The screenshot shows the Cloudera Manager interface for configuring Ranger KMS KTS-1. The configuration page is titled "Ranger KMS Server with KTS Advanced Configuration Snippet (Safety Valve) for conf/kms-site.xml". The configuration is organized into sections: SCOPE, CATEGORY, and STATUS. The SCOPE section shows "RANGER_KMS_KTS-1 (Service)" and "Ranger KMS Server with KTS". The CATEGORY section lists various categories like Advanced, Logs, Main, Monitoring, Performance, Ports and Addresses, Resource Management, Security, and Stacks Collection. The STATUS section shows "Error", "Warning", "Edited", "Non-default", and "Has Overrides". The configuration properties are listed in a table with columns for Name, Value, and Description. The properties being edited are:

Name	Value	Description
hadoop.kms.authentication.zk-dt-secret-manager.enable	true	
hadoop.kms.authentication.zk-dt-secret-manager.zkConnectionString	d...:2181	
hadoop.kms.authentication.zk-dt-secret-manager.znodeWorkingPath	testzkms	
hadoop.kms.authentication.zk-dt-secret-manager.zkAuthType	sasl	
hadoop.kms.authentication.zk-dt-secret-manager.kerberos.keytab	{{CMF_CONF_DIR}}/ranger_kms_kts.keytab	

At the bottom of the page, there is a "Save Changes (CTRL+S)" button and a "Reason for change:" field with the text "Modified Ranger KMS Server with KTS Advanced Configuration Snippet (Safety Valve)".

12. Update the following Ranger KMS configuration properties, then click Save Changes.

- `hadoop.kms.authentication.signer.secret.provider.zookeeper.auth.type = sasl`

The screenshot shows the Cloudera Manager interface for Cluster 1, specifically the Configuration page for RANGER_KMS_KTS-1. The configuration property `hadoop.kms.authentication.signer.secret.provider.zookeeper.auth.type` is highlighted, and its value is set to `sasl`. The interface includes a search bar, filters, and a 'Save Changes' button.

Filters

SCOPE	Count
RANGER_KMS_KTS-1 (Service...	0
Ranger KMS Server with KTS	1

CATEGORY	Count
Advanced	0
Logs	0
Main	1
Monitoring	0
Performance	0
Ports and Addresses	0
Resource Management	0
Security	0
Stacks Collection	0

STATUS	Count
Error	0
Warning	0
Edited	1
Non-default	1
Has Overrides	0

Configuration Properties:

- Hadoop KMS Authentication Signer Secret Provider Zookeeper Auth Type: `sasl`
- Ranger KMS Server with KTS Default Group: [Undo](#)

Per Page: 25 | 1 - 25 of 115

1 Edited Value Reason for change: Modified Hadoop KMS Authentication Signer Secret Provider Zookeeper Auth Type Save Changes (CTRL+S)

13. Click the Stale Configuration Restart icon.

The screenshot shows the Cloudera Manager interface for Cluster 1, specifically the Configuration page for RANGER_KMS_KTS-1. A tooltip labeled 'Stale Configuration: Restart needed' is visible over the configuration property `hadoop.kms.authentication.signer.secret.provider.zookeeper.auth.type`. The configuration property is set to `sasl`. The interface includes a search bar, filters, and a 'Save Changes' button.

Filters

SCOPE	Count
RANGER_KMS_KTS-1 (Service...	0
Ranger KMS Server with KTS	1

CATEGORY	Count
Advanced	0
Logs	0
Main	1
Monitoring	0
Performance	0
Ports and Addresses	0
Resource Management	0
Security	0
Stacks Collection	0

STATUS	Count
Error	0
Warning	0
Edited	0
Non-default	1
Has Overrides	0

Configuration Properties:

- Hadoop KMS Authentication Signer Secret Provider Zookeeper Auth Type: `sasl`
- Ranger KMS Server with KTS Default Group: [Undo](#)

Per Page: 25 | 1 - 25 of 115

Stale Configuration: Restart needed Save Changes (CTRL+S)

14. On the Stale Configurations page, click Restart Stale Services.

15. On the Restart Stale Services page, select the Re-deploy client configuration checkbox, then click Restart Now.

16. A progress indicator page appears while the services are being restarted. When the services have restarted, click Finish.

Overriding custom keystore alias on a Ranger KMS Server

Use this procedure to override the custom keystore alias on a Ranger KMS server.

About this task

The custom keystore alias may need to be overridden in the following scenarios:

- User has manually enabled TLS/SSL during fresh installations of Ranger KMS and Ranger KMS with Key Trustee Server (KTS), and the keystore alias was not added to the hostname.
- User has upgraded from CDP-DC 7.0.3 with Key Trustee KMS and Ranger to CDP-DC 7.1.1 (where Ranger KMS with KTS is added during the upgrade) in a TLS/SSL environment in which TLS/SSL was manually enabled, and the keystore alias was not added to the hostname.

Overriding custom keystore alias while configuring TLS/SSL on a single instance of Ranger KMS Server

Procedure

1. In Cloudera Manager, select Ranger KMS > Configuration and use the Add (+) icon for the Ranger KMS Service Advanced Configuration Snippet (Safety valve) for conf/ranger-kms-site.xml property to add the following property:

```
ranger.service.https.attrib.keystore.keyalias = <expected alias>
```

2. Click Save Changes.
3. Restart the Ranger KMS service.

Overriding custom keystore alias while configuring TLS/SSL on multiple instances of Ranger KMS Server

Procedure

1. In Cloudera Manager, select Ranger KMS > Instances and select Ranger KMS Server role > Configuration. Use the Add (+) icons for the Ranger KMS Server Advanced Configuration Snippet (Safety valve) for conf/ranger-kms-site.xml property to add the following property:

```
ranger.service.https.attrib.keystore.keyalias = <expected alias>
```

This overrides the configuration on the host on which the current Ranger KMS Server role is available.

2. Repeat Step 1 for all the other Ranger KMS Servers to override the configuration by using the Ranger KMS Server Advanced Configuration Snippet (Safety valve) for conf/ranger-kms-site.xml property.
3. Restart the Ranger KMS service.



Note: When high-availability has been enabled for Ranger KMS, the keystore may not have the same alias for different KMS instances. In such cases, use FQDN as the alias or add the custom key alias configuration in the Ranger KMS Server Advanced Configuration Snippet (Safety valve) for conf/ranger-kms-site.xml property of each host.