

Configuring Apache Ranger Authentication with UNIX, LDAP, or AD

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Configuring Ranger Authentication with UNIX, LDAP, AD, or PAM

This section describes how to configure the authentication method that determines who is allowed to log in to the Ranger web UI. The options are local UNIX, LDAP, AD, or PAM.



Note: In CDP Public Cloud, identity management is provided by FreeIPA, and configured using the Management Console. Therefore for CDP Public Cloud you should leave the Admin Authentication Method set to the UNIX authentication settings. For more information on FreeIPA, see [Managing FreeIPA in the Identify Management documentation](#).

The screenshot shows the Cloudera Manager interface for configuring Ranger-1. The left sidebar contains navigation links: Clusters, Hosts, Diagnostics, Audits, Charts, Backup, and Administration. The main panel displays the configuration for 'RANGER-1' under the 'Configuration' tab. The search bar shows 'authentication unix'. The filters section on the left lists various categories and their counts. The configuration details on the right show the 'Admin Authentication Method' set to 'UNIX'. Other settings include 'Admin UNIX Auth Remote Login', 'Admin UNIX Auth Service Hostname', 'Unix Auth Service Hostname', and 'Admin Unix Auth Service Port'.

Filters	Count
SCOPE	
RANGER-1 (Service-Wide)	0
Ranger Admin	4
Ranger Tagsync	0
Ranger Usersync	1
CATEGORY	
Advanced	0
Logs	0
Main	4
Monitoring	0
Performance	0
Ports and Addresses	1
Resource Management	0
Security	0
Stacks Collection	0
STATUS	
Error	0
Warning	0
Edited	0
Non-default	0
Has Overrides	0

Configuration Details:

- Admin Authentication Method:** UNIX (selected), LDAP, ACTIVE_DIRECTORY, PAM, NONE.
- Admin UNIX Auth Remote Login:** Ranger Admin Default Group (checked).
- Admin UNIX Auth Service Hostname:** {{RANGER_USERSYNC_HOST}}
- Unix Auth Service Hostname:** 5151
- Admin Unix Auth Service Port:** 5151

Related Information

[Cloudera Management Console](#)

[CDP Cloud Management Console: Managing user access and authorization](#)

[Managing FreeIPA](#)

Configure Ranger authentication for UNIX

How to configure Ranger to use UNIX for user authentication.

About this task



Note: In CDP Public Cloud, identity management is provided by FreeIPA, and configured using the Management Console. Therefore for CDP Public Cloud you should leave the Admin Authentication Method set to the UNIX authentication settings. For more information on FreeIPA, see [Managing FreeIPA](#) in the [Identify Management](#) documentation.

Procedure

1. In Cloudera Manager, select Ranger, then click the Configuration tab.
2. To display the UNIX authentication settings, type "authentication unix" in the Search box.

The screenshot shows the Cloudera Manager interface for Cluster 1. The left sidebar contains navigation links: Clusters, Hosts, Diagnostics, Audits, Charts, Backup, and Administration. The main content area is titled 'RANGER-1' and shows the 'Configuration' tab. A search bar at the top of the configuration area contains the text 'authentication unix'. Below the search bar, there are filters for SCOPE, CATEGORY, and STATUS. The configuration settings are displayed in a table-like format:

Property	Value	Default Group
Admin Authentication Method	UNIX	Ranger Admin Default Group
Admin UNIX Auth Remote Login	<input checked="" type="checkbox"/>	Ranger Admin Default Group
Admin UNIX Auth Service Hostname	{{(RANGER_USERSYNC_HOST)}}	Ranger Admin Default Group
Unix Auth Service Hostname	5151	Ranger Usersync Default Group
Admin Unix Auth Service Port	5151	Ranger Admin Default Group

3. Configure the following settings for UNIX authentication, then click Save Changes.

Table 1: UNIX Authentication Settings

Configuration Property	Description	Default Value	Example Value	Required
Admin Authentication Method	The Ranger authentication method.	UNIX	UNIX	Yes, to authentication
Allow remote Login	Flag to enable/disable remote login. Only used if the Authentication method is UNIX.	TRUE	TRUE	No.

Configuration Property	Description	Default Value	Example Value	Required
ranger.unixauth.service.hostname	The FQDN of the host where the UNIX authentication service is running. Only used if the Authentication method is UNIX. {{RANGER_USERSYNC_HOST}} is a placeholder value that is replaced with the host where Ranger Usersync is installed in the cluster.	localhost	myunixhost.domain.com	Yes, if selected
ranger.unixauth.service.port	The port number where the ranger-usersync module is running the UNIX Authentication Service.	5151	5151	Yes, if selected

Related Information

[Cloudera Management Console](#)

Configure Ranger authentication for AD

How to configure Ranger to use Active Directory (AD) for user authentication.

About this task



Note: In CDP Public Cloud, identity management is provided by FreeIPA, and configured using the Management Console. Therefore for CDP Public Cloud you should leave the Admin Authentication Method set to the UNIX authentication settings. For more information on FreeIPA, see [Managing FreeIPA](#) in the [Identify Management](#) documentation.

Procedure

1. Select Cloudera Manager Ranger Configuration, type authentication in Search. Ranger authentication property settings display. You may need to scroll down to see the AD settings.

Cluster 1

RANGER-1 Actions Aug 13, 12:07 PM PDT

Status Instances **Configuration** Commands Charts Library Audits Ranger Admin Web UI Quick Links

authentication Role Groups History and Rollback Show All Descriptions

Filters

- SCOPE**
 - RANGER-1 (Service-Wide) 0
 - Ranger Admin 19
 - Ranger Tagsync 1
 - Ranger Usersync 2
- CATEGORY**
 - Advanced 0
 - Logs 0
 - Main 21
 - Monitoring 0
 - Performance 0
 - Ports and Addresses 1
 - Resource Management 0
 - Security 0
 - Stacks Collection 0
- STATUS**
 - Error 0
 - Warning 0
 - Edited 2
 - Non-default 2
 - Has Overrides 0

Admin Authentication Method
ranger.authentication.method

☐ UNIX
☐ LDAP
☒ ACTIVE_DIRECTORY
☐ PAM
☐ NONE

Admin UNIX Auth Remote Login
ranger.unixauth.remote.login.enabled

☐ Ranger Admin Default Group

Admin UNIX Auth Service Hostname
ranger.unixauth.service.hostname

Host where unix authentication service is running. Only used if Authentication method is UNIX. {{RANGER_USERSYNC_HOST}} is a placeholder value which will be replaced with the host where Ranger Usersync will be installed in the current cluster.

Admin LDAP Auth User DN Pattern
ranger.ldap.user.dn.pattern

Admin LDAP Auth User Search Filter
ranger.ldap.user.searchfilter

Admin LDAP Auth Group Search Base
ranger.ldap.group.searchbase

2. Configure the following settings for AD authentication, then click Save Changes.

Property	Description	Default value	Sample values
Admin Authentication Method	The Ranger authentication method.	UNIX	ACTIVE_DIRECTORY
Admin AD Auth Base DN ranger.ldap.ad.base.dn	The Distinguished Name (DN) of the starting point for directory server searches.	N/A	dc=example,dc=com
Admin AD Auth Bind DN ranger.ldap.ad.bind.dn	The full Distinguished Name (DN), including Common Name (CN) of an LDAP user account that has privileges to search for users.	N/A	cn=adadmin,cn=Users,dc=example,dc=com
Admin AD Auth Bind Password ranger.ldap.ad.bind.password	Password for the bind.dn.	N/A	Secret123!
Admin AD Auth Domain Name ranger.ldap.ad.domain	The domain name of the AD Authentication service.	N/A	dc=example,dc=com

Property	Description	Default value	Sample values
Admin AD Auth Referral ranger.ldap.ad.referral*	See below.	ignore	follow ignore throw
Admin AD Auth URL ranger.ldap.ad.url	The AD server URL, for example: ldap://<AD-Servername>Port	N/A	ldap://<AD-Servername>Port
Admin AD Auth User Search Filter ranger.ldap.ad.user.searchfilter	AD user search filter.	N/A	

* There are three possible values for ranger.ldap.ad.referral:

- follow
- throw
- ignore

The recommended setting is: follow.

When searching a directory, the server might return several search results, along with a few continuation references that show where to obtain further results. These results and references might be interleaved at the protocol level.

When ranger.ldap.ad.referral is set to follow:

The AD service provider processes all of the normal entries first, and then follows the continuation references.

When ranger.ldap.ad.referral is set to throw:

All of the normal entries are returned in the enumeration first, before the `ReferralException` is thrown.

By contrast, a referral error response is processed immediately when this property is set to follow or throw.

When ranger.ldap.ad.referral is set to ignore:

The server should return referral entries as ordinary entries (or plain text). This might return partial results for the search. In the case of AD, a `PartialResultException` is returned when referrals are encountered while search results are processed.

Related Information

[Cloudera Management Console](#)

Configure Ranger authentication for LDAP

How to configure Ranger to use LDAP for user authentication.

About this task



Note: In CDP Public Cloud, identity management is provided by FreeIPA, and configured using the Management Console. Therefore for CDP Public Cloud you should leave the Admin Authentication Method set to the UNIX authentication settings. For more information on FreeIPA, see [Managing FreeIPA](#) in the Identify Management documentation.

Procedure

1. In Cloudera Manager, select Ranger, then click the Configuration tab.

- To display the authentication settings, type "authentication" in the Search box. You may need to scroll down to see all of the LDAP settings.

The screenshot shows the Cloudera Manager interface for configuring Ranger-1 authentication. The left sidebar contains a navigation menu with options like Clusters, Hosts, Diagnostics, Audits, Charts, Backup, and Administration. The main panel displays the 'authentication' search results for 'RANGER-1'. The configuration details for 'Admin Authentication Method' are shown, including options for UNIX, LDAP (selected), ACTIVE_DIRECTORY, PAM, and NONE. Other settings like 'Admin UNIX Auth Remote Login', 'Admin UNIX Auth Service Hostname', 'Admin LDAP Auth User DN Pattern', 'Admin LDAP Auth User Search Filter', 'Admin LDAP Auth Group Search Base', and 'Admin LDAP Auth Group Search Filter' are also visible.

- Configure the following settings for LDAP authentication, then click Save Changes.

Property	Required ?	Description	Default value	Sample values
Admin Authentication Method	Required	The Ranger authentication method.	UNIX	LDAP
Admin LDAP Auth Group Search Base ranger.ldap.group.searchbase	Optional	The LDAP group search base.	N/A	((CN=Hdp_users)(CN=Hdp_admins))
Admin LDAP Auth Group Search Filter ranger.ldap.group.searchfilter	Optional	The LDAP group search filter.	N/A	
Admin LDAP Auth URL ranger.ldap.url	Required	The LDAP server URL	N/A	ldap://localhost:389 or ldaps://localhost:636

Property	Required ?	Description	Default value	Sample values
Admin LDAP Auth Bind User ranger.ldap.bind.dn	Required	Full distinguished name (DN), including common name (CN), of an LDAP user account that has privileges to search for users. This user is used for searching the users. This could be a read-only LDAP user.	N/A	cn=admin,dc=example,dc=com
Admin LDAP Auth Bind User Password ranger.ldap.bind.password	Required	Password for the account that can search for users.	N/A	Secret123!
Admin LDAP Auth User Search Filter ranger.ldap.user.searchfilter	Required	The LDAP user search filter.	N/A	
Admin LDAP Auth Base DN ranger.ldap.base.dn	Required	The Distinguished Name (DN) of the starting point for directory server searches.	N/A	dc=example,dc=com
Admin LDAP Auth Group Role Attribute ranger.ldap.group.roleattribute	Optional	The LDAP group role attribute.	N/A	cn
Admin LDAP Auth Referral ranger.ldap.referral*	Required	See below.	ignore	follow ignore throw
Admin LDAP Auth User DN Pattern ranger.ldap.user.dnpattern	Required	The LDAP user DN.	N/A	uid={0},ou=users,dc=xasecure,dc=net

* There are three possible values for ranger.ldap.ad.referral: follow, throw, and ignore. The recommended setting is follow.

When searching a directory, the server might return several search results, along with a few continuation references that show where to obtain further results. These results and references might be interleaved at the protocol level.

- When this property is set to follow, the AD service provider processes all of the normal entries first, and then follows the continuation references.
- When this property is set to throw, all of the normal entries are returned in the enumeration first, before the ReferralException is thrown. By contrast, a "referral" error response is processed immediately when this property is set to follow or throw.
- When this property is set to ignore, it indicates that the server should return referral entries as ordinary entries (or plain text). This might return partial results for the search. In the case of AD, a PartialResultException is returned when referrals are encountered while search results are processed.

Related Information

[Cloudera Management Console](#)

Configure Ranger authentication for PAM

How to configure Ranger to use PAM for user authentication.

About this task



Note: In CDP Public Cloud, identity management is provided by FreeIPA, and configured using the Management Console. Therefore for CDP Public Cloud you should leave the Admin Authentication Method set to the UNIX authentication settings. For more information on FreeIPA, see [Managing FreeIPA](#) in the [Identify Management](#) documentation.

Procedure

1. In Cloudera Manager, select Ranger, then click the Configuration tab.
2. Under Admin Authentication Method, select PAM, then click Save Changes.

The screenshot shows the Cloudera Manager interface for configuring Ranger. The left sidebar contains the navigation menu with 'Administration' selected. The main panel displays the 'Admin Authentication Method' configuration. The 'Admin Authentication Method' section is highlighted, showing radio buttons for UNIX, LDAP, ACTIVE_DIRECTORY, PAM (selected), and NONE. Below this, there are several other configuration sections, each with a dropdown menu set to 'Ranger Admin Default Group'. At the bottom, a status bar indicates '1 Edited Value' and 'Reason for change: Modified Admin Authentication Method'. A 'Save Changes (CTRL+S)' button is located at the bottom right.

3. Create the following two PAM files:

- `/etc/pam.d/ranger-admin` with the following content:

```
#%PAM-1.0
auth sufficient pam_unix.so
auth sufficient pam_sss.so
account sufficient pam_unix.so
account sufficient pam_sss.so
```

- `/etc/pam.d/ranger-remote` with the following content:

```
#%PAM-1.0
auth sufficient pam_unix.so
auth sufficient pam_sss.so
account sufficient pam_unix.so
```

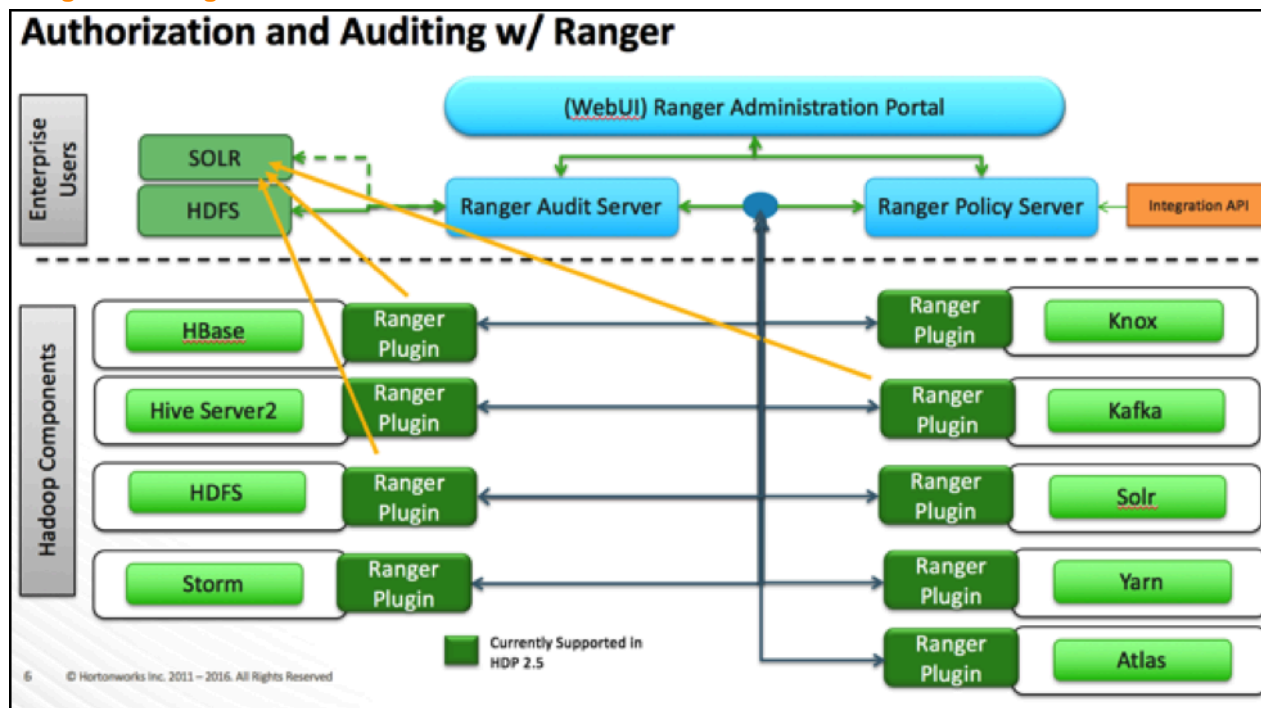
```
account sufficient pam_sss.so
```

4. Confirm that the /etc/shadow file has 444 permissions.
5. Select Actions > Restart to restart Ranger.

Ranger AD Integration

A conceptual overview of Ranger-AD integration architecture.

Ranger AD Integration: Architecture Overview



When a Ranger plugin for a component (such as HBase or HDFS) is activated, Ranger is in full control of any access. There is two-way communication between the Ranger plugin and the Ranger (Admin) Policy Server (RPS):

1. **Plugins to RPS:** Ranger plugins regularly call the RPS to see if new policies were defined in the Ranger Administration Portal (RAP). Generally it takes approximately 30 seconds for a policy to be updated.
2. **RPS to components:** The RPS queries the component for meta objects that live on the component to base policies upon (this provides the autocomplete and drop-down list when defining policies).

The first communication channel (Plugin to RPS) is essential for the plugin to function, whereas the second (RPS to components) is optional. It would still be possible to define and enforce policies without the second channel, but you would not have autocomplete during policy definition.

Configuration details on both communication channels are configured in both Cloudera Manager and in the Ranger Administration Portal.

Example for HDFS plugin on a kerberized cluster:

Search

Clusters

Hosts

Diagnostics

Audits

Charts

Backup

Administration

CDEP Deployment from 2019-Aug-05 11:11

Parcels

Recent Commands

Support

admin

Cluster 1

HDFS-1

Actions

Aug 14, 11:38 AM PDT

StatusInstancesConfigurationCommandsFile BrowserCharts LibraryCache StatisticsAuditsNameNode Web UIQuick Links

Search

Role GroupsHistory and Rollback

Filters

Clear All

SCOPE

HDFS-1 (Service-Wide)51

Balancer0

DataNode1

Gateway0

HttpFS7

JournalNode0

NFS Gateway0

NameNode2

SecondaryNameNode0

Failover Controller0

CATEGORY

Clear

Advanced95

Checkpointing2

Cloudera Navigator4

Erasure Coding4

High Availability5

Logs37

Main44

Monitoring100

Performance20

Ports and Addresses26

Superuser Group

dfs.permissions.superusergroup

HDFS-1 (Service-Wide)

supergroup

?

Kerberos Principal

HDFS-1 (Service-Wide)

hdfs

Kerberos principal short name used by all roles of this service.

?

HDFS User to Impersonate

HDFS-1 (Service-Wide)

?

Hue's Kerberos Principal Short Name

HDFS-1 (Service-Wide)

hue.kerberos.principal.shortname

?

DataNode Data Transfer Protection

dfs.data.transfer.protection

HDFS-1 (Service-Wide)

Authentication

Integrity

The Kerberos principal short name for the HDFS service,"hdfs", is the one that is involved the second communication channel (RPS to components) for getting metadata from HDFS (such as HDFS folders) across. The settings on the HDFS configuration must match those set in Ranger (by selecting Access > Manager > Resource Based Policies, then selecting the Edit icon for the HDFS service:

Ranger Access Manager Audit Security Zone Settings admin

Service Manager Edit Service

Select Tag Service: cm_tag

Config Properties :

Username * hdfs

Password *

Namenode URL * hdfs://dhoyle-8-5-1.vpc.cloudera

Authorization Enabled Yes

Authentication Type * Kerberos

hadoop.security.auth_to_local

dfs.datanode.kerberos.principal

dfs.namenode.kerberos.principal

dfs.secondary.namenode.kerberos.principal

RPC Protection Type Authentication

Common Name for Certificate

Add New Configurations

Name	Value
tag.download.auth.users	hdfs
policy.download.auth.users	hdfs

+

Test Connection

Save Cancel Delete

To verify the second communication channel (RPS to components) click Test Connection for the applicable service (as shown above for the HDFS service). A confirmation message appears if the connection works successfully.

To verify if the paramount first communication channel (Plugins to RPS) works, select Audit > Plugins in Ranger:

Ranger Access Manager Audit Security Zone Settings admin						
Access Admin Login Sessions Plugins Plugin Status User Sync						
Search for your plugins...						
Entries : 1 to 23 of 23 Last Updated Time : 08/14/2019 03:01:02 PM						
Export Date (Eastern Daylight Time)	Service Name	Plugin Id	Plugin IP	Cluster Name	Http Response Code	Status
08/13/2019 11:49:39 AM	cm_hive	hiveServer2@...	10.65.30.5	Cluster 1	200	Policies synced to plugin
08/13/2019 11:49:27 AM	cm_hive	impala@...	10.65.30.5	Cluster 1	200	Policies synced to plugin
08/13/2019 11:49:22 AM	cm_hive	impala@...	10.65.30.5	Cluster 1	200	Policies synced to plugin
08/13/2019 11:49:17 AM	cm_hive	impala@...	10.65.49.144	Cluster 1	200	Policies synced to plugin
08/13/2019 11:49:17 AM	cm_hive	impala@...	10.65.50.67	Cluster 1	200	Policies synced to plugin
08/13/2019 11:46:39 AM	cm_hive	hiveServer2@...	10.65.30.5	Cluster 1	200	Policies synced to plugin
08/13/2019 11:46:27 AM	cm_hive	impala@...	10.65.30.5	Cluster 1	200	Policies synced to plugin
08/13/2019 11:46:22 AM	cm_hive	impala@...	10.65.30.5	Cluster 1	200	Policies synced to plugin
08/13/2019 11:46:17 AM	cm_hive	impala@...	10.65.49.144	Cluster 1	200	Policies synced to plugin
08/13/2019 11:46:17 AM	cm_hive	impala@...	10.65.50.67	Cluster 1	200	Policies synced to plugin
08/05/2019 02:51:20 PM	cm_atlas	atlas@...	10.65.30.5	Cluster 1	200	Policies synced to plugin

Ranger AD Integration: Ranger Audit

Ranger plugins furthermore send their audit event (whether access was granted or not and based on which policy) directly to the configured sink for audits, which can be HDFS, Solr or both. This is indicated by the yellow arrows in the architectural graph.

The audit access tab on the RAP (Audit > Access) is only populated if Solr is used as the sink.

Ranger Access Manager Audit Security Zone Settings admin										
Access Admin Login Sessions Plugins Plugin Status User Sync										
START DATE: 08/14/2019										
Exclude Service Users : <input type="checkbox"/> Entries : 1 to 25 of 101696 Last Updated Time : 08/14/2019 03:15:10 PM										
Policy ID	Policy Version	Event Time	Application	User	Service Name / Type	Resource Name / Type	Access Type	Result	Access Enforcer	Agent Host Name
5	1	08/14/2019 03:15:02 PM	hbaseRegional	atlas	cm_hbase hbase	atlas_janus/m column-family	get	Allowed	ranger-acl	10.65.30.5
15	1	08/14/2019 03:15:02 PM	kafka	kafka	cm_kafka kafka	kafka-cluster cluster	kafka_admin	Allowed	ranger-acl	10.65.30.5
15	1	08/14/2019 03:15:02 PM	kafka	kafka	cm_kafka kafka	kafka-cluster cluster	kafka_admin	Allowed	ranger-acl	10.65.30.5
15	1	08/14/2019 03:15:00 PM	kafka	kafka	cm_kafka kafka	kafka-cluster cluster	kafka_admin	Allowed	ranger-acl	10.65.30.5
20	1	08/14/2019 03:15:00 PM	kafka	atlas	cm_kafka kafka	ATLAS_SPARK_... topic	consume	Allowed	ranger-acl	10.65.30.5
15	1	08/14/2019 03:15:00 PM	kafka	kafka	cm_kafka kafka	kafka-cluster cluster	kafka_admin	Allowed	ranger-acl	10.65.30.5
18	1	08/14/2019 03:15:00 PM	kafka	atlas	cm_kafka kafka	ATLAS_HOOK topic	consume	Allowed	ranger-acl	10.65.30.5
15	1	08/14/2019 03:14:58 PM	kafka	kafka	cm_kafka kafka	kafka-cluster cluster	kafka_admin	Allowed	ranger-acl	10.65.30.5
15	1	08/14/2019 03:14:58 PM	kafka	kafka	cm_kafka kafka	kafka-cluster cluster	kafka_admin	Allowed	ranger-acl	10.65.30.5
5	1	08/14/2019 03:14:57 PM	hbaseRegional	atlas	cm_hbase hbase	atlas_janus/m column-family	get	Allowed	ranger-acl	10.65.30.5

This screen points out an important Ranger feature. When the plugin is enabled AND no specific policy is in place for access to some object, the plugin will fall back to enforcing the standard component-level Access Control Lists (ACLs). For HDFS that would be the user : rwx / group : rwx / other : rwx ACLs on folders and files.

Once this defaulting to component ACLs happens, the audit events list a " - " in the Policy ID column instead of a policy number. If a Ranger policy was in control of allowing/denying access, the policy number is shown.

Ranger AD Integration: Overview

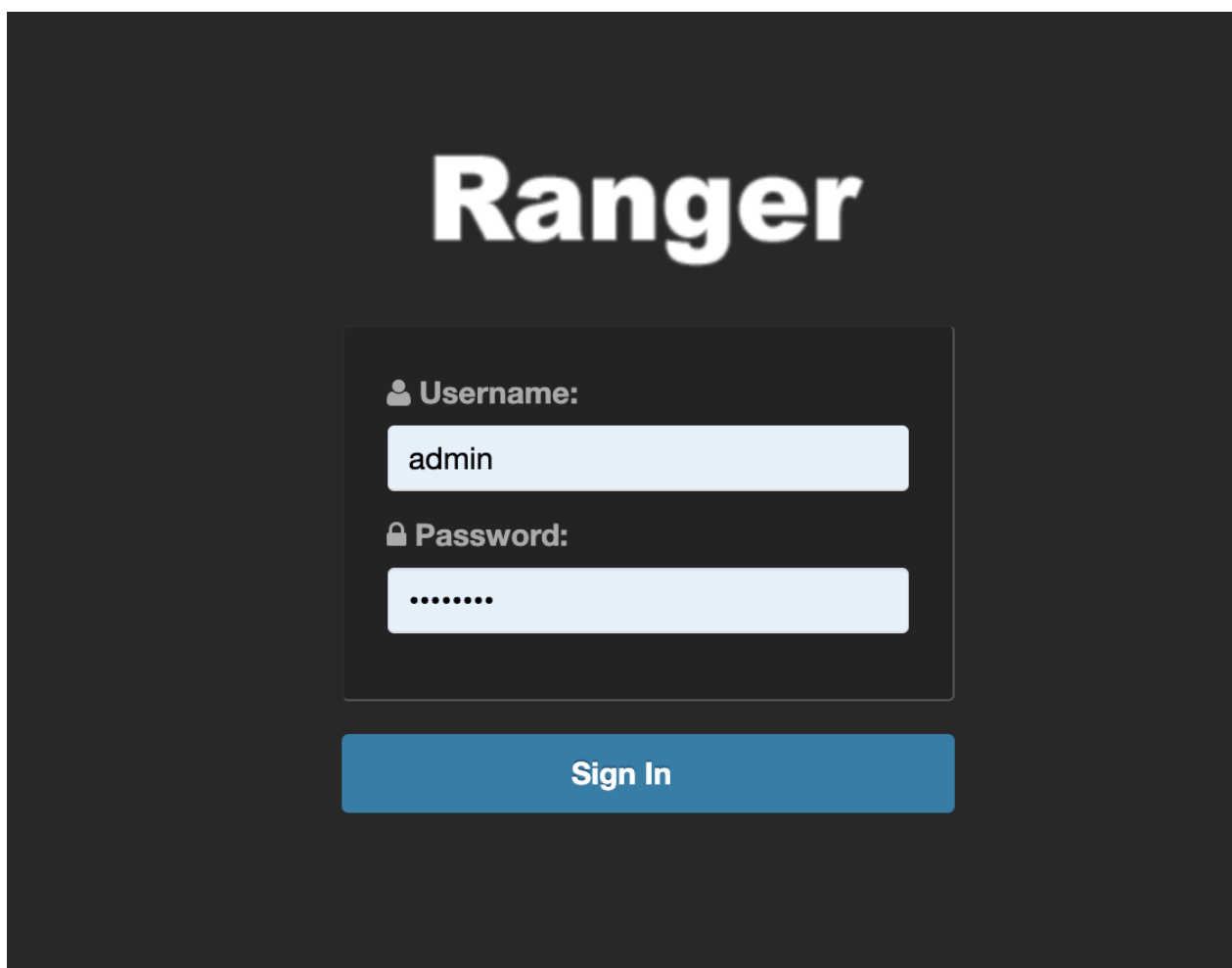
Rangers AD Integration has 2 levels:

1. Ranger UI authentication (which users can log in to Ranger itself).
2. Ranger user/group sync (which users/groups to define policies for)

Ranger UI authentication

Reference information on Ranger UI authentication, when configuring Ranger AD integration.

This is an extra AD level filter option on top of Kerberos authentication that maps to:



For AD there are two options for defining who can access the Ranger UI: LDAP or ACTIVE_DIRECTORY. There is not a huge amount of difference between them, but they are separate sets of properties.

ACTIVE_DIRECTORY

In Cloudera Manager, select Ranger, then click the Configuration tab. To display the authentication settings, type "authentication" in the Search box. You may need to scroll down to see the AD settings.

Search

Clusters

Hosts

Diagnostics

Audits

Charts

Backup

Administration

Cluster 1

RANGER-1

Actions

Aug 13, 12:07 PM PDT

Status

Instances

Configuration

Commands

Charts Library

Audits

Ranger Admin Web UI

Quick Links

authentication

Role Groups

History and Rollback

Filters

SCOPE

RANGER-1 (Service-Wide)

0

Ranger Admin

19

Ranger Tagsync

1

Ranger Usersync

2

CATEGORY

Advanced

0

Logs

0

Main

21

Monitoring

0

Performance

0

Ports and Addresses

1

Resource Management

0

Security

0

Stacks Collection

0

STATUS

Error

0

Warning

0

Edited

2

Non-default

2

Has Overrides

0

Admin Authentication Method

ranger.authentication.method

Ranger Admin Default Group

UNIX

LDAP

ACTIVE_DIRECTORY

PAM

NONE

Admin UNIX Auth Remote Login

ranger.unixauth.remote.login.enabled

Ranger Admin Default Group

Admin UNIX Auth Service Hostname

ranger.unixauth.service.hostname

Ranger Admin Default Group

{{RANGER_USERSYNC_HOST}}

Host where unix authentication service is running. Only used if Authentication method is UNIX. {{RANGER_USERSYNC_HOST}} is a placeholder value which will be replaced with the host where Ranger Usersync will be installed in the current cluster.

Admin LDAP Auth User DN Pattern

ranger.ldap.user.dnpattern

Ranger Admin Default Group

Admin LDAP Auth User Search Filter

ranger.ldap.user.searchfilter

Ranger Admin Default Group

Admin LDAP Auth Group Search Base

ranger.ldap.group.searchbase

Ranger Admin Default Group

CDEP Deployment from 2019-Aug-05 11:11

Parcels

Recent Commands

The `ranger ldap.ad.base.dn` property determines the base of any search, so users not on this OU tree path can not be authenticated.

The `ranger.ldap.ad.user.searchfilter` property is a dynamic filter that maps the user name in the Ranger web UI login screen to `sAMAccountName`. For example, the AD `sAMAccountName` property has example values like `k.res` and `d.alora` so make sure to enter a matching value for 'Username' in the logon dialogue.

LDAP

The LDAP properties allow for more fine tuning.

In Cloudera Manager, select Ranger, then click the Configuration tab. To display the authentication settings, type "authentication" in the Search box. You may need to scroll down to see all of the LDAP settings.

There is one catch: the `ranger.ldap.user.dnpattern` is evaluated first. Consider the following example value:

`CN={0},OU=London,OU=Company,OU=User Accounts,OU=CorpUsers,DC=field,DC=hortonworks,DC=com`

This would work, but has two side effects:

- Users would have to log on with their 'long username' (like 'Kvotthe Reshi / Denna Alora'), which would also mean that policies would have to be updated using that long name instead of the `k.reshi` short name variant.
- Traversing AD by DN patterns does not allow for applying group filters at all. In the syntax above, only users directly in `OU=London` would be able to log on.

This adverse behavior can be avoided by intentionally putting a DN pattern (`DC=intentionally,DC=wrong`) in the `ranger.ldap.user.dnpattern` property, AND a valid filter in User Search Filter:

`(&(objectclass=user)(memberOf=CN=Hdp_admins,OU=Company,OU=User Accounts,OU=CorpUsers,DC=field,DC=hortonworks,DC=com)(sAMAccountName={0}))`

This works because the filter is only applied after the DN pattern query on AD does not return anything. If it does, the User Search Filter is not applied.

Ranger has a very simple approach to the internal user list that is kept in a relational schema. This list contains all users that were synced with AD ever, and all those users can potentially log in to the Ranger UI. But only Admin users can really do any policy-related things in the Ranger UI (see next section).

Be aware that all of this is only about authentication to Ranger. Someone from the 'Hdp_admins' group would still not have a Ranger admin role.

Related Information

[Configure Ranger authentication for LDAP](#)

Ranger UI authorization

Reference information on Ranger UI authorization, when configuring Ranger AD integration.

To configure the users, groups, and roles that can access the Ranger portal or its services, select Settings > Users/Groups/Roles in the top menu.

Ranger Access Manager Audit Security Zone Settings **admin**

Users/Groups/Roles

Users Groups Roles

User List

Search for your users...

Add New User Set Visibility

<input type="checkbox"/>	User Name	Email Address	Role	User Source	Groups	Visibility
<input type="checkbox"/>	admin		Admin	Internal	--	Visible
<input type="checkbox"/>	rangerusersync		Admin	Internal	--	Visible
<input type="checkbox"/>	rangertagsync		Admin	Internal	--	Visible
<input type="checkbox"/>	hive		User	External	hive	Visible
<input type="checkbox"/>	cloudera-scm		User	External	wheel cloudera-scm	Visible
<input type="checkbox"/>	https		User	External	https	Visible
<input type="checkbox"/>	superset		User	External	superset	Visible
<input type="checkbox"/>	atlas		User	External	hadoop atlas	Visible
<input type="checkbox"/>	ranger		User	External	hadoop ranger	Visible
<input type="checkbox"/>	kudu		User	External	kudu	Visible
<input type="checkbox"/>	kms		User	External	kms	Visible
<input type="checkbox"/>	accumulo		User	External	accumulo	Visible
<input type="checkbox"/>	polkitd		User	External	polkitd	Visible
<input type="checkbox"/>	nfsnobody		User	External	nfsnobody	Visible
<input type="checkbox"/>	spark		User	External	spark	Visible
<input type="checkbox"/>	flume		User	External	flume	Visible
<input type="checkbox"/>	solr		User	External	solr	Visible
<input type="checkbox"/>	jenkins		User	External	jenkins	Visible

A user can be a User, Admin, or Auditor:

Only users with the Admin role can edit Ranger policies.

Ranger Usersync

How to configure Ranger Usersync to sync users and groups from AD/LDAP

Overview

The Ranger usersync service syncs users, groups, and group memberships from various sources, such as Unix, File, or AD/LDAP into Ranger. Ranger usersync provides a set of rich and flexible configuration properties to sync users, groups, and group memberships from AD/LDAP supporting a wide variety of use cases.

As a Ranger administrator, you will work with users and groups to configure policies in Ranger and administer access to the Ranger UI. You will use group memberships only to administer access to the Ranger UI. You must first understand the specific use-case before syncing users, groups, and group memberships from AD/LDAP. For example, if you want to configure only group-level policies, then you must sync groups to Ranger, but syncing users and group memberships to Ranger is not required.

Determining the users and groups to sync to Ranger:

Typically, you must complete a three-step process to define the complete set of users and groups that you will sync to Ranger:

1. Define the customer use-case.

3 common use cases:

- A customer Admin or Data Admin wants to configure only group-level policies and restrict access to the Ranger UI to only a few users.
- A customer's Admin or Data Admin wants to configure only group-level policies and restrict access to the Ranger UI to only members of a group.
- A customer's Admin or Data Admin wants to configure mostly group-level policies and a few user-level policies.

2. Define all relevant sync source details. For every use-case, at least four key questions must be answered:

- What groups will sync to Ranger?
- Which organizational units (OUs) in AD/LDAP contain these groups?
- What users will sync to Ranger?
- Which organizational units (OUs) in AD/LDAP contain these users?

3. Configure Usersync properties.

This topic describes an example set of Usersync configuration properties and values, based on a simple use-case and example AD source repository.

Example Use Case:

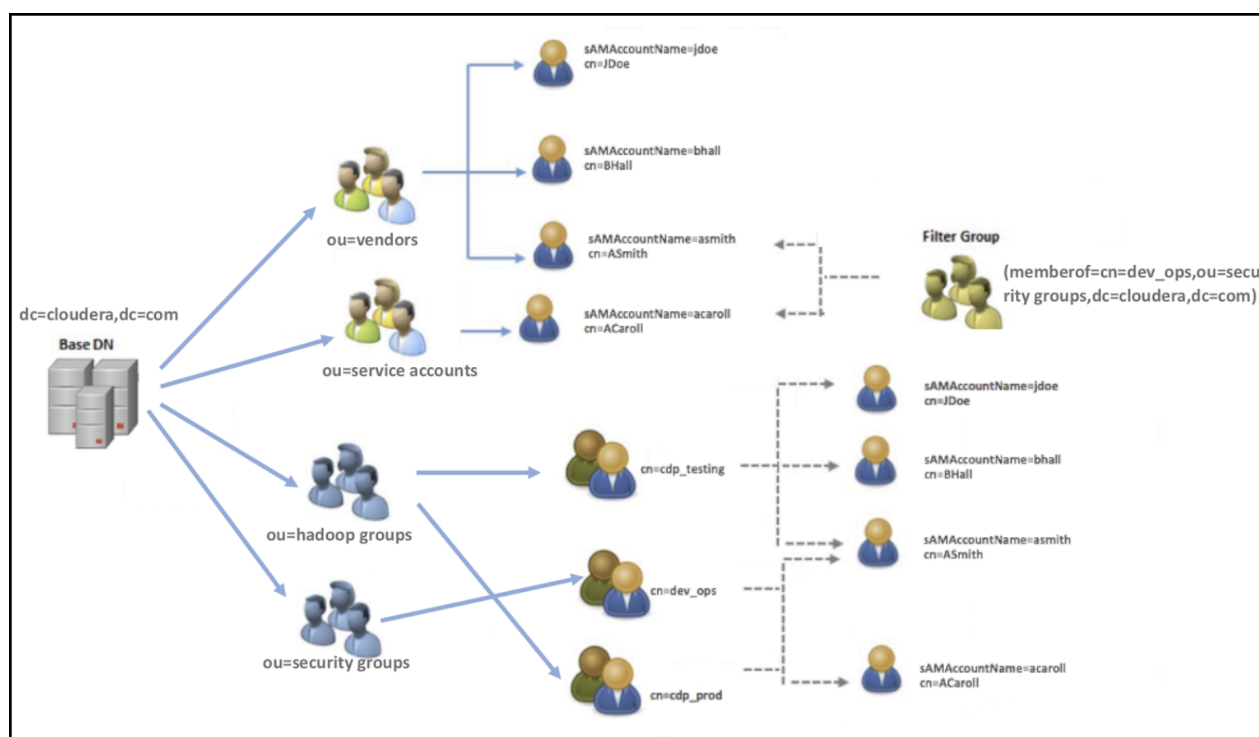
First, consider the following use-case, in order to better understand how to configure Usersync properties:

A customer's Admin or Data Admin wants to configure only group-level policies and restrict access to the Ranger UI to only members of a group.

Example AD environment:

Configuring Ranger Usersync with AD/LDAP depends highly on the customer environment. You must understand the organization of users and groups in the customer environment. This illustration shows users and groups organized in an Active Directory environment.

Figure 1: Example Active Directory Structure



Answering the key user and group questions, based on the example AD structure:

In this example, the customer wants to configure group-level policies for groups `cdp_testing` and `cdp_prod` and wants to provide admin access to the Ranger UI only for users in the `dev_ops` group.

Based on the example Active Directory structure, answers to the four key user/group questions are:

Q1: What groups will be synced to Ranger?

A1: `cdp_testing`, `cdp_prod`, and `dev_ops`

Q2: What OUs contain these groups in AD?

A2: `hadoop groups` and `security groups`

Q3: What users will be synced to Ranger?

A3: asmith and acaroll (these users are dev_ops group members)

Q4: What OUs contain these users in AD?

A4: vendors and service accounts

To find the specific answers to these questions in a particular environment, use a tool such as Ldapsearch, as shown in the following examples.

- Example: Ldapsearch command to search a particular group cdp_testing and determine what attributes are available for the group.

Figure 2: Using Ldapsearch to find a specific group

```
ldapsearch -x -LLL -h 10.10.10.10:389 -D 'cn=administrator,CN=Users,dc=cloudera,dc=com' -W  
-b 'ou=Hadoop Groups,dc=cloudera,dc=com' 'cn=cdp_testing'  
Enter LDAP Password:  
dn: CN=cdp_testing,ou=Hadoop Groups,dc=cloudera,dc=com  
objectClass: top  
objectClass: group  
cn: cdp_testing  
member: CN=ASmith,ou=Hadoop Users,dc=cloudera,dc=com  
member: CN=BHall,ou=Hadoop Users,dc=cloudera,dc=com  
member: CN=JDoe,ou=Hadoop Users,dc=cloudera,dc=com  
distinguishedName: CN=cdp_testing,ou=Hadoop Groups,dc=cloudera,dc=com  
instanceType: 4  
name: cdp_testing  
sAMAccountName: cdp_testing
```

Above output shows all the available attributes for cn=cdp_testing. The highlighted attributes are those of interest for usersync configuration. In this case, cdp_testing has three “member” attributes: ASmith, BHall, and JDoe.

- Example: Ldapsearch command to search a particular user ASmith and determine what attributes are available for the user.

Figure 3: Using Ldapsearch to find a specific user

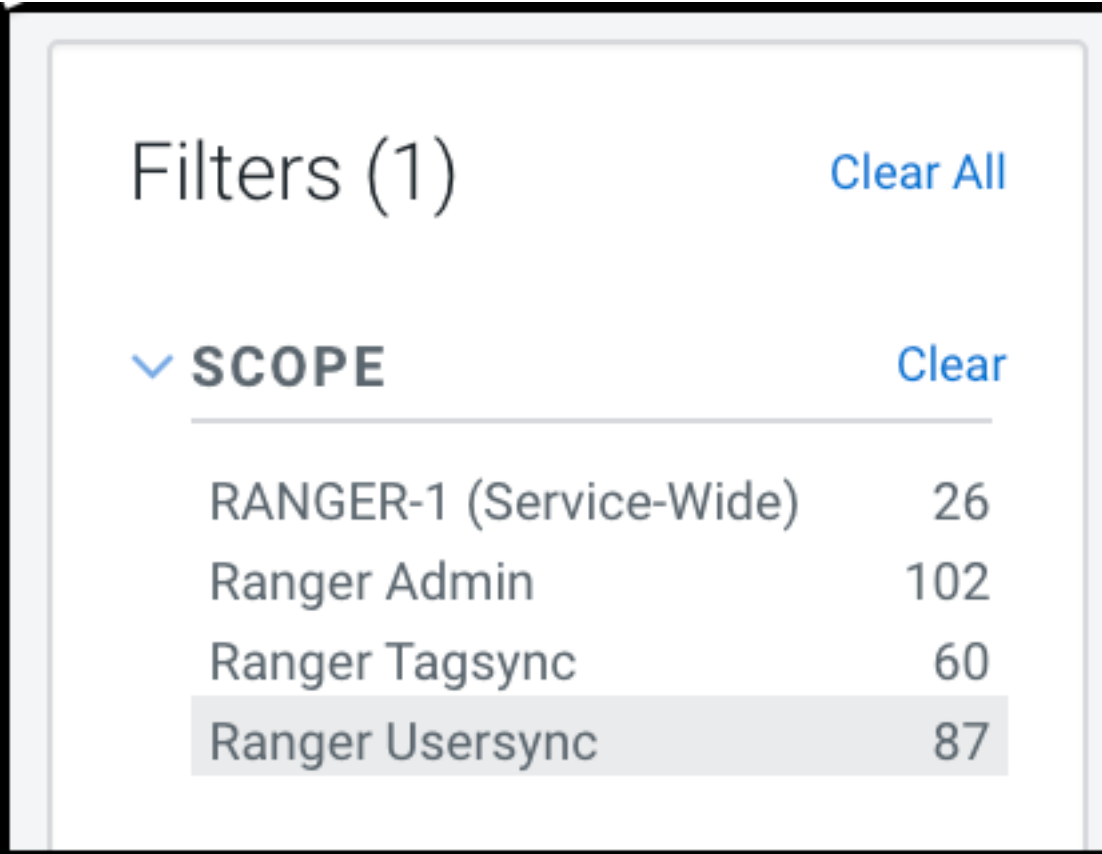
```
ldapsearch -x -LLL -h 10.10.10.10:389 -D 'cn=administrator,CN=Users,dc=cloudera,dc=com'
-W -b 'ou=Hadoop Users,dc=cloudera,dc=com' 'samaccountname=ASmith'
Enter LDAP Password:
dn: CN=ASmith,ou=Hadoop Users,dc=cloudera,dc=com
objectClass: top
objectClass: person
objectClass: organizationalPerson
objectClass: user
cn: ASmith
sn: Smith
givenName: Andy
distinguishedName: CN=ASmith,ou=Hadoop Users,dc=cloudera,dc=com
instanceType: 4
memberOf: CN=cdp_testing,ou=Hadoop Groups,dc=cloudera,dc=com
memberOf: CN=dev_ops,ou=Hadoop Groups,dc=cloudera,dc=com
memberOf: CN=cdp_prod,ou=Hadoop Groups,dc=cloudera,dc=com
primaryGroupID: 513
logonCount: 0
sAMAccountName: ASmith
```

Above output shows all the available attributes for a user. The highlighted attributes are those of interest for usersync configuration. In this case, ASmith is a “memberof” 3 groups - cdp_testing, dev_ops, and cdp_prod.

How to configure Usersync, based on the illustrated AD environment example:

In Cloudera Manager Ranger Configuration select the Ranger Usersync filter scope.

Figure 4: Filtering the Ranger Configuration Properties for Usersync



Filters (1) [Clear All](#)

▼ **SCOPE** [Clear](#)

RANGER-1 (Service-Wide)	26
Ranger Admin	102
Ranger Tagsync	60
Ranger Usersync	87

Filtering narrows the list to 87 configuration properties specific to Usersync.

1. To define the common configuration properties that control LDAP URL and bind credentials, scroll to Source for Syncing Users and Groups, then define the configurations properties appropriate for the environment. Configurations shown here match the Example AD environment.

Figure 5: Ranger Usersync common configuration settings

Source for Syncing User and Groups ranger.usersync.source.impl.class ranger.usersync.source.impl.class	Ranger Usersync Default Group Undo ⓘ <input type="radio"/> org.apache.ranger.unixusersync.process.UnixUserGroupBuilder <input type="radio"/> org.apache.ranger.unixusersync.process.FileSourceUserGroupBuilder <input checked="" type="radio"/> org.apache.ranger.ldapusersync.process.LdapUserGroupBuilder
Usersync LDAP/AD URL ranger.usersync.ldap.url ranger.usersync.ldap.url	Ranger Usersync Default Group Undo ⓘ <input type="text" value="ldap://ad01.cloudera.com:389"/>
Usersync Bind User ranger.usersync.ldap.binddn ranger.usersync.ldap.binddn	Ranger Usersync Default Group Undo ⓘ <input type="text" value="cn=administrator,ou=service accounts,dc=cloudera,dc=com"/>
Usersync Bind User Password ranger.usersync.ldap.ldapbindpassword ranger_usersync_ldap_ldapbindpassword	Ranger Usersync Default Group Undo ⓘ <input type="password" value="....."/>
Usersync Incremental Sync ranger.usersync.ldap.deltasync ranger.usersync.ldap.deltasync	<input checked="" type="checkbox"/> Ranger Usersync Default Group ⓘ

Bind credentials are for the user to query Ldap service for users and groups. Bind credentials contain two configuration properties:

- Usersync Bind User (or bind dn) - specify the username as complete DN (Distinguished Name)
- Usersync Bind User Password

- To define the required configuration properties that control group synchronization from AD, scroll to Usersync Enable User Search, then define the configurations properties appropriate for the environment. Configurations shown here match the Example AD environment.

Figure 6: Ranger Usersync group configuration settings

Usersync Groupname Case Conversion ranger.usersync.ldap.groupname.caseconversion ranger.usersync.ldap.groupname.caseconversion	Ranger Usersync Default Group Undo <input type="radio"/> none <input checked="" type="radio"/> lower <input type="radio"/> upper
Usersync Enable User Search ranger.usersync.user.searchenabled ranger.usersync.user.searchenabled	<input checked="" type="checkbox"/> Ranger Usersync Default Group
Usersync Group Search Base ranger.usersync.group.searchbase ranger.usersync.group.searchbase	Ranger Usersync Default Group Undo ou=hadoop groups,dc=cloudera,dc=com,ou=security groups,dc=cloudera,dc=com
Usersync Group Search Scope ranger.usersync.group.searchscope ranger.usersync.group.searchscope	Ranger Usersync Default Group <input checked="" type="radio"/> sub <input type="radio"/> base <input type="radio"/> one
Usersync Group Object Class ranger.usersync.group.objectclass ranger.usersync.group.objectclass	Ranger Usersync Default Group Undo group
Usersync Group Search Filter ranger.usersync.group.searchfilter ranger.usersync.group.searchfilter	Ranger Usersync Default Group Undo ((cn=cdp*)(cn=dev_ops))
Usersync Group Name Attribute ranger.usersync.group.nameattribute ranger.usersync.group.nameattribute	Ranger Usersync Default Group Undo cn
Usersync Group Member Attribute ranger.usersync.group.memberattributename ranger.usersync.group.memberattributename	Ranger Usersync Default Group Undo member

A few specific points to consider about group config settings:

- ranger.usersync.ldap.groupname.caseconversion - Used for converting the case of the groupname. Three possible options are:
 - None - Group names are synced to ranger as is from AD/LDAP. This is the default setting.
 - Lower - All the group names are converted to lowercase while syncing to ranger. This is the recommended setting.
 - Upper - All the group names are converted to uppercase while syncing to ranger



Note: Policy authorization is case sensitive. Therefore, usernames and groups names synced to ranger must match the exact case of the users and groups resolved by the services such as hdfs, hive, hbase, etc. For example, consider dev_ops (all in lower case). Ranger does not treat this as the same value as Dev_Ops which may have been synced from AD and applied to some policies.

ranger.usersync.group.searchbase - Used to search a particular OU in AD for groups. Multiple OUs can be specified with ; separated. For example, the example AD shows two OUs that must be searched for groups:

- ou=hadoop groups,dc=cloudera,dc=com (complete DN for ou=hadoop groups)
- ou=security groups,dc=cloudera,dc=com (complete DN for ou=security groups)

- `ranger.usersync.group.searchfilter` - In this example, since only 3 groups exist in hadoop groups OU and security groups OU and since all 3 require sync to Ranger, you can specify the filter as `cn=*` . The value for this property follows standard ldap search query filter format.



Note: Later, if a new group is added in AD under these OUs and if the customer wants those groups to be sync'd to ranger, no configuration change to usersync is required.

- `ranger.usersync.user.searchenabled` - In this example, since the customer wants to sync users from dev_ops groups to provide admin access to Ranger UI, this property is set to true .

- To define the required configuration properties that control user synchronization from AD, scroll to Usersync User Search Base, then define the configurations properties appropriate for the environment. Configurations shown here match the Example AD environment.

Figure 7: Ranger Usersync user configuration settings

Usersync User Search Base ranger.usersync ldap.user.searchbase ranger.usersync ldap.user.searchbase	Ranger Usersync Default Group Undo <input type="text" value="ou=vendors,dc=cloudera,dc=com,ou=service accounts,dc=cloudera,dc=com"/>
Usersync User Search Scope ranger.usersync ldap.user.searchscope ranger.usersync ldap.user.searchscope	Ranger Usersync Default Group <input checked="" type="radio"/> sub <input type="radio"/> base <input type="radio"/> one
Usersync User Object Class ranger.usersync ldap.user.objectclass ranger.usersync ldap.user.objectclass	Ranger Usersync Default Group Undo <input type="text" value="user"/>
Usersync User Search Filter ranger.usersync ldap.user.searchfilter ranger.usersync ldap.user.searchfilter	Ranger Usersync Default Group Undo <input type="text" value="(memberof=cn=dev_ops,ou=security groups,dc=cloudera,dc=com)"/>
Usersync User Name Attribute ranger.usersync ldap.user.nameattribute ranger.usersync ldap.user.nameattribute	Ranger Usersync Default Group Undo <input type="text" value="sameaccountname"/>
Usersync Referral ranger.usersync ldap.referral ranger.usersync ldap.referral	Ranger Usersync Default Group <input checked="" type="radio"/> ignore <input type="radio"/> follow <input type="radio"/> throw
Usersync Username Case Conversion ranger.usersync ldap.username.caseconversion ranger.usersync ldap.username.caseconversion	Ranger Usersync Default Group Undo <input type="radio"/> none <input checked="" type="radio"/> lower <input type="radio"/> upper

A few specific points to consider about user config settings:

- ranger.usersync.ldap.user.searchbase - This configuration is used to search a particular location in AD for users. Specify multiple OUs with ; separated.



Note: If users are distributed across several OUs, specifying a base directory, for example, dc=cloudera,dc=com might be convenient and is highly recommended to restrict the search with proper filters.

- ranger.usersync.ldap.user.searchfilter - In this example, since the customer wants to sync only the users that belong to dev_ops, the value for this property is (memberof=cn=dev_ops,ou=security groups,dc=cloudera,dc=com) .



Note: Wildcards are not supported only when the memberof attribute is used for searching. If you use attributes such as cn or samaccountname for filtering, you can specify wildcards. For example, (& (cn=asm*)(samaccountname=acar*))

- ranger.usersync.ldap.username.caseconversion - Used for converting the case of the username. Three possible options are:
 - None - Usernames are synced to ranger as is from AD/LDAP. This is the default setting.
 - Lower - All the usernames are converted to lowercase while syncing to ranger. This is the recommended setting.
 - Upper - All the usernames are converted to uppercase while syncing to ranger



Note: Policy authorization is case sensitive. Therefore, usernames and groups names synced to ranger must match the exact case of the users and groups resolved by the services such as hdfs, hive, hbase, etc. For example, consider asmith (all in lower case). Ranger does not treat this as the same value as ASmith which may have been synced from AD and applied to some policies.

Ranger user management

Reference information on Ranger user management, when configuring Ranger AD integration.

To delete a user, select the check box for the user in the User Name list, then click the red Delete button. Ranger removes the user from all policies.

The screenshot shows the Ranger web interface for managing users. The 'Users' tab is active, displaying a table of users. The user 'asmith' is selected. A red box highlights the 'Delete' button (trash icon) in the top right corner.

	User Name	Email Address	Role	User Source	Groups	Visibility
<input type="checkbox"/>	hdfs		User	External	hadoop hdfs	Visible
<input type="checkbox"/>	rangerlookup		User	External	--	Visible
<input type="checkbox"/>	livy		User	External	livy	Visible
<input type="checkbox"/>	chrony		User	External	chrony	Visible
<input type="checkbox"/>	druid		User	External	hadoop druid	Visible
<input type="checkbox"/>	kafka		User	External	kafka	Visible
<input type="checkbox"/>	knoxui		User	External	knoxui	Visible
<input type="checkbox"/>	yarn		User	External	hadoop yarn	Visible
<input type="checkbox"/>	hue		User	External	hue	Visible
<input type="checkbox"/>	sqoop		User	External	sqoop	Visible
<input type="checkbox"/>	centos		User	External	systemd-journal wheel adm centos	Visible
<input type="checkbox"/>	storm		User	External	--	Visible
<input type="checkbox"/>	knox		User	External	hadoop knox	Visible
<input type="checkbox"/>	mapred		User	External	hadoop mapred	Visible
<input type="checkbox"/>	nifi		User	External	--	Visible
<input type="checkbox"/>	tez		User	External	tez	Visible
<input type="checkbox"/>	auditor1		Auditor	Internal	--	Visible
<input type="checkbox"/>	new-user1		Admin	Internal	--	Visible
<input checked="" type="checkbox"/>	asmith		Admin	Internal	public	Visible

Configure Ranger Usersync for Deleted Users and Groups

How to configure Ranger Usersync for users and groups that have been deleted from the sync source.

About this task

You can configure Ranger Usersync to update Ranger when users and groups have been deleted from the sync source (UNIX, LDAP, AD or PAM). This ensures that users and groups – and their associated access permissions – do not remain in Ranger when they are deleted from sync source.

Procedure

1. In Cloudera Manager, select Ranger > Configuration, then use the Search box to search for Ranger Usersync Advanced Configuration Snippet (Safety Valve) for conf/ranger-ugsync-site.xml. Use the Add (+) icons to add the following properties, then click Save Changes.

Name	Value	Description
ranger.usersync.deletes.enabled	true	Enables deleted users and groups synchronization. The default setting is false (disabled).
ranger.usersync.deletes.frequency	10	Sets the frequency of delete synchronization. The default setting is 10, or once every 10 Usersync cycles. Delete synchronization consumes cluster resources, so a lower (more frequent) setting may affect performance.

Cluster 1

RANGER-1

Search: ranger-ugsync-site.xml

Filters (1) Role Groups History & Rollback

Filters (1) Clear All

SCOPE

- RANGER-1 (Service-Wide) 0
- Ranger Admin 0
- Ranger Tagsync 0
- Ranger Usersync 1

CATEGORY

- Advanced 1
- Database 0
- Logs 0
- Main 0
- Monitoring 0
- Performance 0
- Ports and Addresses 0
- Resource Management 0
- Security 0
- Stacks Collection 0

STATUS

- Error 0
- Warning 0
- Edited 1
- Non-Default 1
- Include Overrides 0

Ranger Usersync Advanced Configuration Snippet (Safety Valve) for conf/ranger-ugsync-site.xml

Name: ranger.usersync.deletes.enabled

Value: true

Description:

Final

Name: ranger.usersync.deletes.frequency

Value: 10

Description:

Final

1 - 1 of 1

1 Edited Value Reason for change: Modified Ranger Usersync Advanced Configuration Snippet (Safety Valve) for c Save Changes(CTRL+S)

2. Click the Ranger Restart icon.

CLUSTER

MANAGER

Search

Clusters

Hosts

Diagnostics

Audits

Charts

Replication

Administration

Private Cloud New

Parcels

Running Commands

Cluster 1

GOEP Deployment from 2021-May-10 12:37

RANGER-1

Actions

State Configuration: Restart

Commit needed

Share Library

Status

Instances

Configuration

Audits

Ranger Admin Web UI

Quick Links

ranger-ugsync-site.xml

Filters (1)

Role Groups

History & Rollback

Filters (1)

Clear All

SCOPE

Clear

RANGER-1 (Service-Wide)

0

Ranger Admin

0

Ranger Tagsync

0

Ranger Usersync

1

CATEGORY

Advanced

1

Database

0

Logs

0

Main

0

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

1

Ranger Usersync Advanced Configuration Snippet (Safety Valve) for conf/ranger-ugsync-site.xml

conf/ranger-ugsync-site.xml_role_safety_valve

Ranger Usersync Default Group

View as XML

Name

ranger.usersync.deletes.enabled

Value

true

Description

Final

Name

ranger.usersync.deletes.freq

Value

10

Description

Final

1 of 1

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

Cluster 1

Stale Configurations

File: conf/ranger-ugsync-site.xml RANGER-1(1) [Show](#)

```

... .. @@ -197,6 +197,14 @@
197 197 <property>
198 198 <name>ranger.usersync.kerberos.principal</name>
199 199 <value>rangerusersync/_HOST@ROOT.HWX.SITE</value>
200 200 </property>
201 201 + <property>
202 202 + <name>ranger.usersync.deletes.enabled</name>
203 203 + <value>true</value>
204 204 + </property>
205 205 + <property>
206 206 + <name>ranger.usersync.deletes.frequency</name>
207 207 + <value>10</value>
208 208 + </property>
209 209 </configuration>
210 210

```

File: conf/rangeradmin.properties RANGER-1(1) [Show](#)

```

... .. @@ -1,5 +1,9 @@
1 1 dhoyle717-1.dhoyle717.root.hwx.site:ranger.externalurl=
2 2 dhoyle717-1.dhoyle717.root.hwx.site:ranger.service.http.port=6080
3 3 dhoyle717-1.dhoyle717.root.hwx.site:ranger.service.https.attrib.ssl.enabled=fa
4 4 dhoyle717-1.dhoyle717.root.hwx.site:ranger.service.https.port=6182
5 5 +dhoyle717-2.dhoyle717.root.hwx.site:ranger.externalurl=
6 6 +dhoyle717-2.dhoyle717.root.hwx.site:ranger.service.http.port=6080
7 7 +dhoyle717-2.dhoyle717.root.hwx.site:ranger.service.https.attrib.ssl.enabled=fa
8 8 +dhoyle717-2.dhoyle717.root.hwx.site:ranger.service.https.port=6182
9 9

```

File: conf/rangeradmin.properties RANGER-1(2) [Show](#)

```

... .. @@ -2,5 +2,10 @@
2 2 dhoyle717-1.dhoyle717.root.hwx.site:ranger.externalurl=
3 3 dhoyle717-1.dhoyle717.root.hwx.site:ranger.service.http.port=6080
4 4 dhoyle717-1.dhoyle717.root.hwx.site:ranger.service.https.attrib.ssl.enabled=fa
5 5 dhoyle717-1.dhoyle717.root.hwx.site:ranger.service.https.port=6182
6 6 +dhoyle717-2.dhoyle717.root.hwx.site:ranger.authentication.method=PAM
7 7 +dhoyle717-2.dhoyle717.root.hwx.site:ranger.externalurl=
8 8 +dhoyle717-2.dhoyle717.root.hwx.site:ranger.service.http.port=6080
9 9 +dhoyle717-2.dhoyle717.root.hwx.site:ranger.service.https.attrib.ssl.enabled=fa
10 10 +dhoyle717-2.dhoyle717.root.hwx.site:ranger.service.https.port=6182
11 11

```

Filters [Clear All](#)

FILE

- Environment 0
- File: conf/ranger-atlas-security... 0
- File: conf/ranger-knox-security... 0
- File: conf/ranger-ugsync-site.x... 1
- File: conf/rangeradmin.propert... 2
- File: hadoop-conf/ranger-hive... 0
- File: ranger-hbase-security.xml 0
- File: ranger-hdfs-security.xml 0
- File: ranger-hive-security.xml 0
- File: ranger-kafka-security.xml 0
- File: ranger-kudu-security.xml 0
- File: ranger-schema-registry-se... 0
- File: ranger-yarn-security.xml 0

SERVICE [Clear](#)

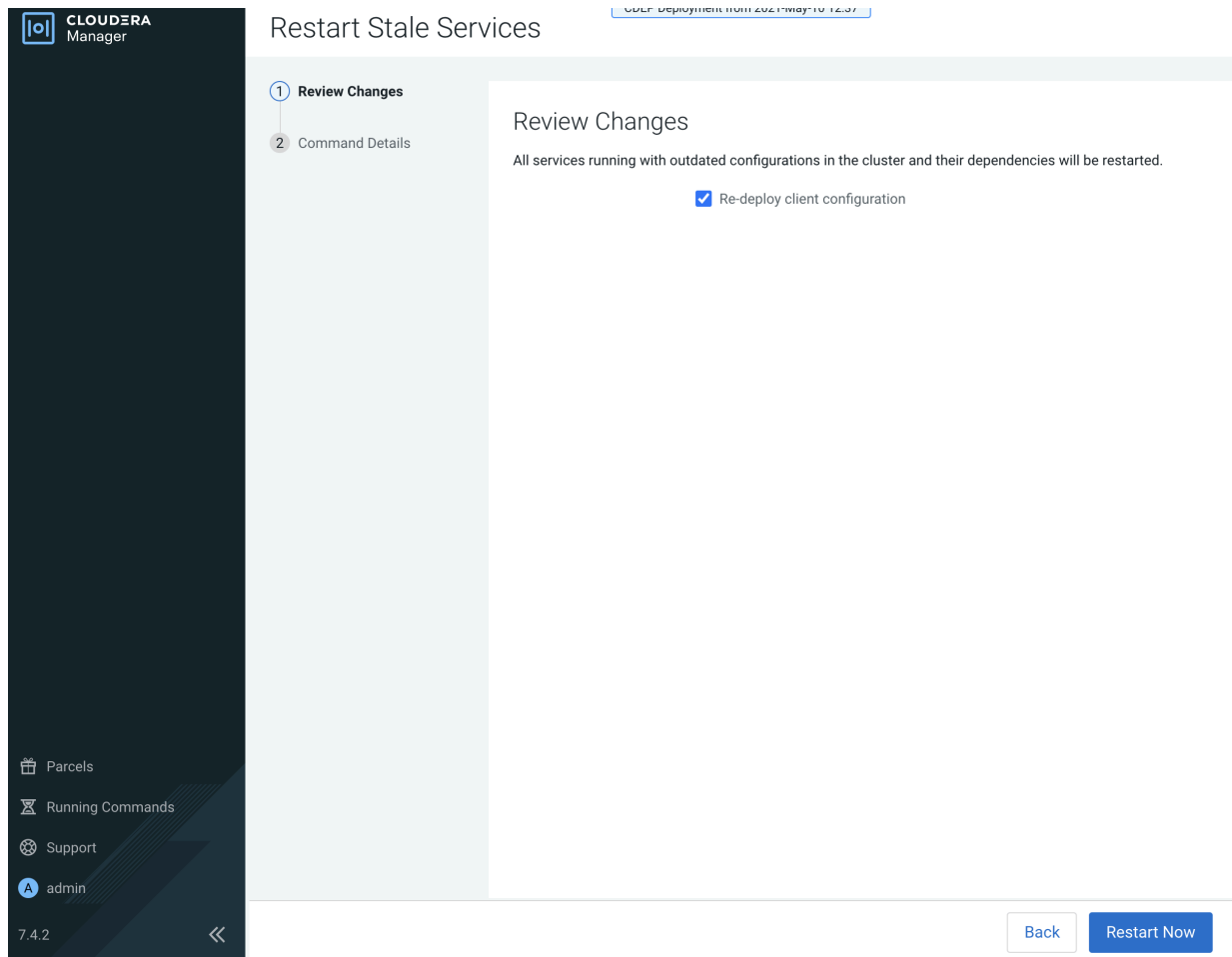
- ATLAS-1 1
- HBASE-1 1
- HDFS-1 1
- HIVE-1 1
- HIVE_ON_TEZ-1 1
- IMPALA-1 1
- KAFKA-1 2
- KNOX-1 1
- KUDU-1 2
- RANGER-1 3**
- SCHEMAREGISTRY-1 2
- STREAMS_MESSAGING_M... 2
- YARN-1 1

ROLE TYPE

- Atlas Server 0

[Restart Stale Services](#)

4. On the Restart Stale Services page, select the Re-deploy client configuration check box, then click Restart Now.



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

6. Users that have been deleted in sync source are not automatically deleted in Ranger – they are marked as Hidden and must be manually deleted by the Ranger Admin user, and then Ranger Usersync must be restarted.

In the Ranger Admin Web UI, select Settings > Users/Groups/Roles. Click in the User List text box, then select Visibility > Hidden.

The screenshot shows the Ranger Admin Web UI with the 'Users/Groups/Roles' section selected. The 'User List' tab is active, and a dropdown menu is open for the 'VISIBILITY' filter, showing 'Hidden' and 'Visible' options. The table below lists several users, including 'admin', 'rangerusersync', 'rangertagsync', 'hdfs', 'hive', 'cloudera-scm', and 'https'.

	User Name	Email Address	Role	User Source	Groups	Visibility
<input type="checkbox"/>	admin		Admin	Internal	hueDefaultUsers	Visible
<input type="checkbox"/>	rangerusersync		Admin	Internal	rangerusersync	Visible
<input type="checkbox"/>	rangertagsync		Admin	Internal	rangertagsync	Visible
<input type="checkbox"/>	hdfs		User	External	hadoop hdfs	Visible
<input type="checkbox"/>	hive		User	External	hive	Visible
<input type="checkbox"/>	cloudera-scm		User	External	cloudera-scm wheel	Visible
<input type="checkbox"/>	https		User	External	https	Visible

7. To delete hidden users and groups, select the applicable check boxes, then click the red Delete icon.

The screenshot shows the Ranger Admin Web UI with the 'Users/Groups/Roles' section selected. The 'User List' tab is active, and the 'VISIBILITY' filter is set to 'Hidden'. The table below lists one user, 'acapone', which is selected with a checkmark. The 'Delete' icon (a red trash can) is highlighted with a red box.

	User Name	Email Address	Role	User Source	Groups	Visibility
<input checked="" type="checkbox"/>	acapone		Admin	Internal	admin	Hidden

8. In Cloudera Manager, select Ranger > Ranger Usersync, then select Actions > Restart this Ranger Usersync.

The screenshot shows the Cloudera Manager interface for the 'Ranger Usersync' service. The left sidebar contains navigation links for Clusters, Hosts, Diagnostics, Audits, Charts, Replication, Administration, and Private Cloud. The main content area displays the 'Ranger Usersync' status, including 'Health Tests' (4 Good, 2 Disabled) and 'Health History' (2 Became Good, 2 Became Disabled, 1 Became Good, 1 Became Unknown). The 'Actions' dropdown menu is open, showing options to start, stop, restart, or enter maintenance mode. The 'Charts' section shows 'JVM Heap Memory Usage' and 'JVM Heap committed' metrics.



Note:

- Sync source is tracked when processing Ranger users and groups for deletion. If the same user name for a separate sync source already exists in Ranger DB, that user will not be updated or marked as hidden.
- For AD/LDAP sync:
 - Once a user is marked as deleted in Ranger, the user status will not be changed automatically until the user is manually deleted and Usersync is restarted to reflect any changes to the same user name in the source.
 - For example, a user (Bob) from one OU (say Engineering) is deleted from the source and is marked as deleted in Ranger admin. If the same user name (Bob) is subsequently added back to the same OU, the user status will not be automatically enabled. The user must be manually deleted and Usersync must be restarted to implement the changes.
 - If an identical user name (say Bob) is deleted from one OU (say Engineering) and added to a different OU (say Finance) between the sync cycles, user Bob is marked as hidden/deleted only when the delete cycle is triggered. Until then there is a security risk that user Bob from Finance will be granted the permissions for Bob from Engineering.