

Cloudera Runtime 7.2.13

Configuring Apache Ranger Authentication with UNIX, LDAP, or AD

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CLouDERA

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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 displays the Cloudera Management Console interface for configuring Ranger authentication. The left sidebar shows navigation options like Clusters, Hosts, Diagnostics, Audits, Charts, Backup, and Administration. The main content area is titled 'Cluster 1' and 'RANGER-1'. The 'Configuration' tab is selected, showing a search bar with 'authentication unix' and various filter options (SCOPE, CATEGORY, STATUS). The configuration details include:

- Admin Authentication Method:** Set to UNIX (selected), with options for LDAP, ACTIVE_DIRECTORY, PAM, and NONE.
- Admin UNIX Auth Remote Login:** Checked, with a help icon.
- Admin UNIX Auth Service Hostname:** Set to {{RANGER_USERSYNC_HOST}}, with a help icon.
- Unix Auth Service Hostname:** Set to 5151, with a help icon.
- Admin Unix Auth Service Port:** Set to 5151, with a help icon.

At the bottom right, there is a '25 Per Page' dropdown menu.

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.

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 authen |
| 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.

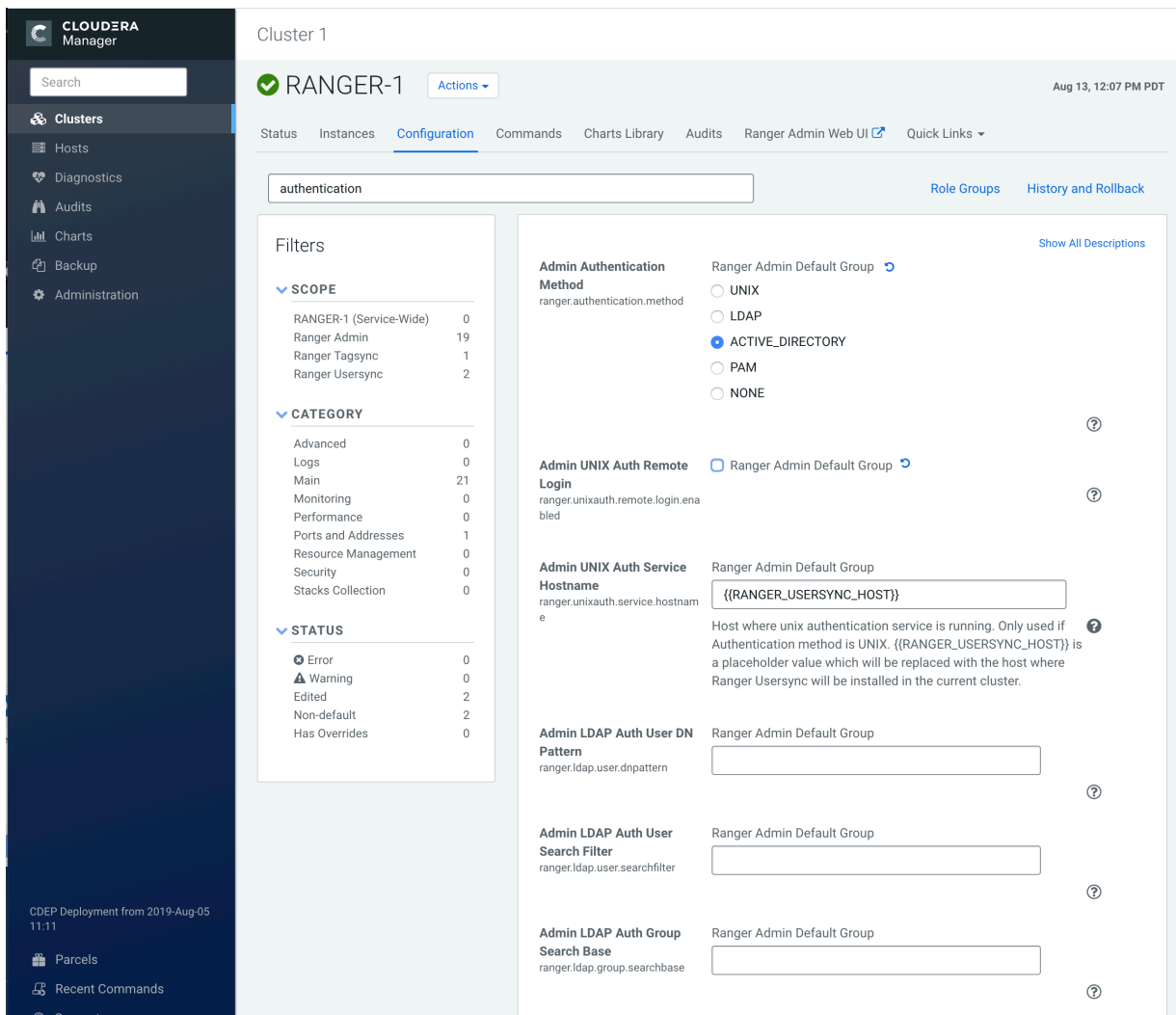
About this task



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.



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 | example.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.

- 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 configuration interface for Ranger. The left sidebar contains navigation options: Clusters, Hosts, Diagnostics, Audits, Charts, Replication, and Administration. The main content area displays various configuration parameters, including:

- Shards for Solr Collection of Ranger Audits: Ranger Admin Default Group
- Maximum Shards for Solr Collection of Ranger Audits: Ranger Admin Default Group
- Replicas for Solr Collection of Ranger Audits: Ranger Admin Default Group
- Admin Authentication Method: Ranger Admin Default Group (Undo)
 - UNIX
 - LDAP
 - ACTIVE_DIRECTORY
 - PAM
 - NONE
- Admin UNIX Auth Remote Login: Ranger Admin Default Group
- Admin UNIX Auth Service Hostname: Ranger Admin Default Group ({{RANGER_USERSYNC_HOST}})
- Admin LDAP Auth URL: Ranger Admin Default Group
- Admin LDAP Auth Bind User: Ranger Admin Default Group
- Admin LDAP Auth Bind User Password: Ranger Admin Default Group
- Admin LDAP Auth User DN Pattern: Ranger Admin Default Group
- Admin LDAP Auth User Search Filter: Ranger Admin Default Group

At the bottom, a status bar indicates "1 Edited Value" and "Reason for change: Modified Admin Authentication Method". A blue "Save Changes (CTRL+S)" button is visible in the bottom right corner.

3. Allow the Ranger user to read the `/etc/shadow` file:

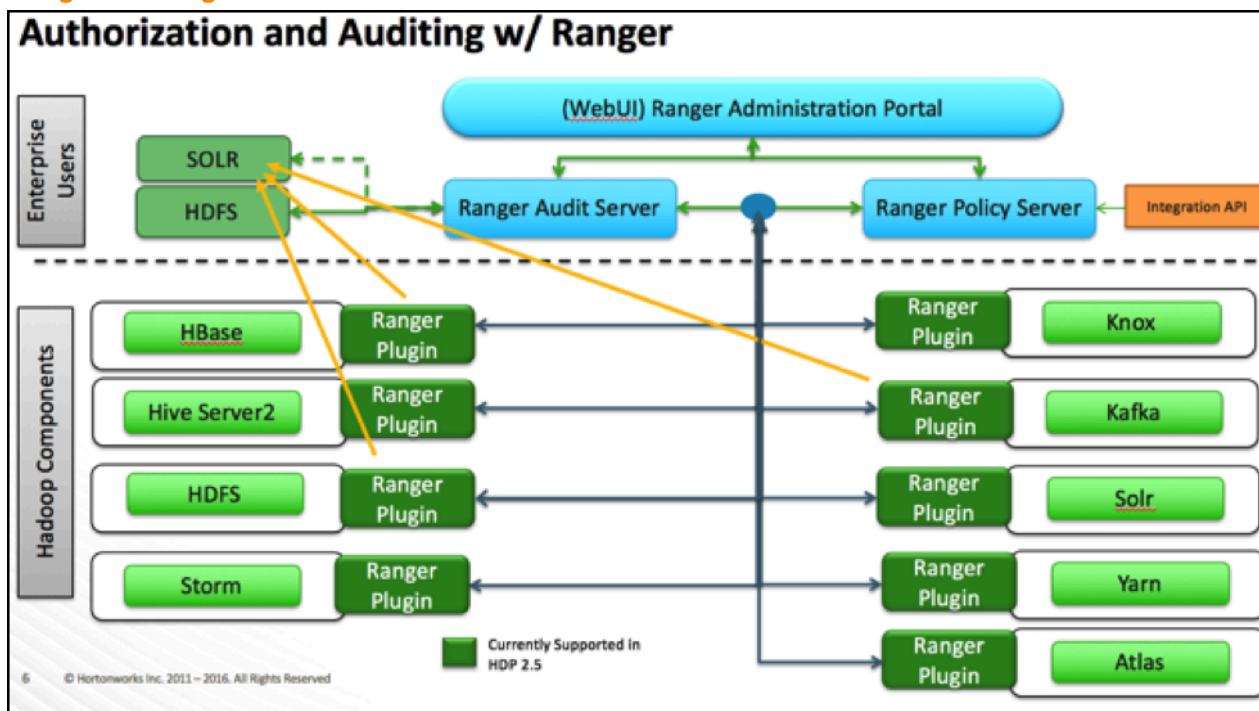
```
groupadd shadow
usermod -a -G shadow ranger
chgrp shadow /etc/shadow
chmod g+r /etc/shadow
```

4. 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:

The screenshot displays the Cloudera Manager interface for configuring HDFS-1. The left sidebar shows the navigation menu with 'Clusters' selected. The main content area shows the configuration for HDFS-1, including a search bar, filters, and a list of configuration parameters. The 'Kerberos Principal' parameter is highlighted, showing the value 'hdfs'.

Filters

| SCOPE | Count |
|-----------------------|-------|
| HDFS-1 (Service-Wide) | 51 |
| Balancer | 0 |
| DataNode | 1 |
| Gateway | 0 |
| HttpFS | 7 |
| JournalNode | 0 |
| NFS Gateway | 0 |
| NameNode | 2 |
| SecondaryNameNode | 0 |
| Failover Controller | 0 |

| CATEGORY | Count |
|---------------------|-------|
| Advanced | 95 |
| Checkpointing | 2 |
| Cloudera Navigator | 4 |
| Erasure Coding | 4 |
| High Availability | 5 |
| Logs | 37 |
| Main | 44 |
| Monitoring | 100 |
| Performance | 20 |
| Ports and Addresses | 26 |

Configuration Parameters:

- Superuser Group:** HDFS-1 (Service-Wide) ?
- Kerberos Principal:** HDFS-1 (Service-Wide) ?
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) ?
- DataNode 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):

Select Tag Service:

Config Properties :

Username *

Password *

Namenode URL *

Authorization Enabled:

Authentication Type *

hadoop.security.auth_to_local:

dfs.datanode.kerberos.principal:

dfs.namenode.kerberos.principal:

dfs.secondary.namenode.kerberos.principal:

RPC Protection Type:

Common Name for Certificate:

Add New Configurations

| Name | Value |
|----------------------------|-----------------------------------|
| tag.download.auth.users | <input type="text" value="hdfs"/> |
| policy.download.auth.users | <input type="text" value="hdfs"/> |

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:

The screenshot shows the Ranger interface with the 'Plugins' tab selected. A search bar is at the top. Below it, a table lists plugin sync events. The table has columns for Export Date, Service Name, Plugin Id, Plugin IP, Cluster Name, Http Response Code, and Status. All entries show a '200' response code and a status of 'Policies synced to plugin'.

| 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.

The screenshot shows the Ranger interface with the 'Audit' > 'Access' tab selected. A search bar with 'START DATE: 08/14/2019' is at the top. Below it, a table lists audit events. The table has columns for Policy ID, Policy Version, Event Time, Application, User, Service Name / Type, Resource Name / Type, Access Type, Result, Access Enforcer, and Agent Host Name. All 'Result' cells are green and labeled 'Allowed'.

| 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 | ... |
| 15 | 1 | 08/14/2019 03:15:02 PM | kafka | kafka | cm_kafka kafka | kafka-cluster cluster | kafka_admin | Allowed | ranger-acl | ... |
| 15 | 1 | 08/14/2019 03:15:02 PM | kafka | kafka | cm_kafka kafka | kafka-cluster cluster | kafka_admin | Allowed | ranger-acl | ... |
| 15 | 1 | 08/14/2019 03:15:00 PM | kafka | kafka | cm_kafka kafka | kafka-cluster cluster | kafka_admin | Allowed | ranger-acl | ... |
| 20 | 1 | 08/14/2019 03:15:00 PM | kafka | atlas | cm_kafka kafka | ATLAS_SPARK_... topic | consume | Allowed | ranger-acl | ... |
| 15 | 1 | 08/14/2019 03:15:00 PM | kafka | kafka | cm_kafka kafka | kafka-cluster cluster | kafka_admin | Allowed | ranger-acl | ... |
| 18 | 1 | 08/14/2019 03:15:00 PM | kafka | atlas | cm_kafka kafka | ATLAS_HOOK topic | consume | Allowed | ranger-acl | ... |
| 15 | 1 | 08/14/2019 03:14:58 PM | kafka | kafka | cm_kafka kafka | kafka-cluster cluster | kafka_admin | Allowed | ranger-acl | ... |
| 15 | 1 | 08/14/2019 03:14:58 PM | kafka | kafka | cm_kafka kafka | kafka-cluster cluster | kafka_admin | Allowed | ranger-acl | ... |
| 5 | 1 | 08/14/2019 03:14:57 PM | hbaseRegional | atlas | cm_hbase hbase | atlas_janus/m column-family | get | Allowed | ranger-acl | ... |

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

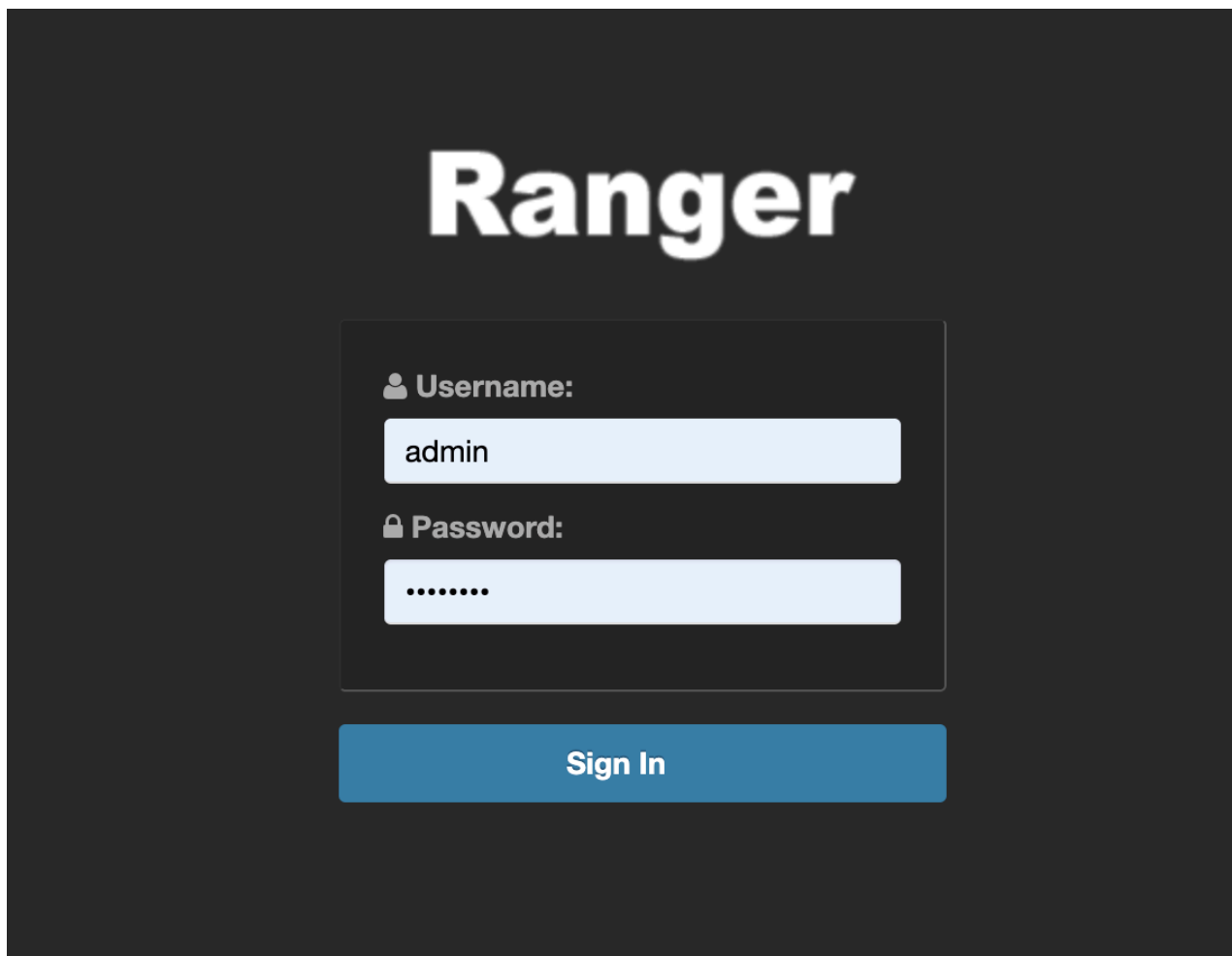
Rangers AD Integration has 2 levels:

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.

The screenshot displays the Cloudera Manager interface for configuring Ranger authentication. The left sidebar shows the navigation menu with 'Clusters' selected. The main content area is titled 'Cluster 1' and shows the configuration for 'RANGER-1'. The 'Configuration' tab is active, and a search box contains the word 'authentication'. Below the search box, there are filters for SCOPE, CATEGORY, and STATUS. The main configuration area lists several settings:

- Admin Authentication Method:** Set to 'ACTIVE_DIRECTORY' (selected). Other options include UNIX, LDAP, PAM, and NONE.
- Admin UNIX Auth Remote Login:** Set to 'Ranger Admin Default Group'.
- Admin UNIX Auth Service Hostname:** Set to '{{RANGER_USERSYNC_HOST}}'. A tooltip explains that this is a placeholder for the host where the authentication service is running.
- Admin LDAP Auth User DN Pattern:** Set to 'Ranger Admin Default Group'.
- Admin LDAP Auth User Search Filter:** Set to 'Ranger Admin Default Group'.
- Admin LDAP Auth Group Search Base:** Set to 'Ranger Admin Default Group'.

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.reshi` 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 'Kvothe 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.

The screenshot shows the Ranger UI interface for managing users. The top navigation bar includes 'Ranger', 'Access Manager', 'Audit', 'Security Zone', and 'Settings'. The 'Settings' menu is open, showing 'Users/Groups/Roles' and 'Permissions'. The 'Users/Groups/Roles' page is active, with tabs for 'Users', 'Groups', and 'Roles'. The 'User List' section contains a search bar and buttons for 'Add New User', 'Set Visibility', and a trash icon. Below is a table of users:

| <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:

The screenshot displays the Ranger web interface for editing a user. The top navigation bar includes 'Ranger', 'Access Manager', 'Audit', 'Security Zone', and 'Settings', with a user profile icon for 'admin'. The breadcrumb trail shows 'Users/Groups/Roles' > 'User Edit'. The 'User Detail' section contains two tabs: 'Basic Info' (active) and 'Change Password'. The form fields are as follows:

- User Name: rangerusersync
- First Name: rangerusersync
- Last Name: (empty)
- Email Address: (empty)
- Select Role: Admin (selected), User, Auditor
- Group: Please select (with a red error message)

At the bottom of the form are 'Save' and 'Cancel' buttons.

Only users with the Admin role can edit Ranger policies.