

Cloudera Runtime 7.0.2

## Ranger Auditing

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# CLOUdera

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## Audit Overview

Apache Ranger provides a centralized framework for collecting access audit history and reporting data, including filtering on various parameters. Ranger enhances audit information obtained from Hadoop components and provides insights through this centralized reporting capability.

## Managing Auditing with Ranger

To explore options for auditing policies in Ranger, click Audit in the top menu.

Exclude Service Users : ☐

Entries : 1 to 25 of 149 Last Updated Time : 07/21/2019 12:24:11 PM

| Policy ID | Policy Version | Event Time             | Application | User  | Service Name / Type | Resource Name / Type | Access Type | Result  | Access Enforcer | Agent Host Name               | Client IP | C |
|-----------|----------------|------------------------|-------------|-------|---------------------|----------------------|-------------|---------|-----------------|-------------------------------|-----------|---|
| 3         | 1              | 07/21/2019 12:21:35 PM | hbaseMaster | hbase | cm_hbase<br>hbase   | --                   | balance     | Allowed | ranger-acl      | dhoyle-7-1-1.vpc.cloudera.com |           | C |
| 3         | 1              | 07/21/2019 12:16:30 PM | hbaseMaster | hbase | cm_hbase<br>hbase   | --                   | balance     | Allowed | ranger-acl      | dhoyle-7-1-1.vpc.cloudera.com |           | C |
| 3         | 1              | 07/21/2019 12:11:30 PM | hbaseMaster | hbase | cm_hbase<br>hbase   | --                   | balance     | Allowed | ranger-acl      | dhoyle-7-1-1.vpc.cloudera.com |           | C |
| 3         | 1              | 07/21/2019 12:06:30 PM | hbaseMaster | hbase | cm_hbase<br>hbase   | --                   | balance     | Allowed | ranger-acl      | dhoyle-7-1-1.vpc.cloudera.com |           | C |

There are six tabs on the Audit page:

- Access
- Admin
- Login sessions
- Plugins
- Plugin Status
- User Sync

## View audit details

How to view operation details in Ranger audits.

### Procedure

To view details for a particular operation, click any tab, then Policy ID, Operation name, or Session ID.

## Audit > Admin: Update

**Ranger** | [Access Manager](#) | [Audit](#) | [Security Zone](#) | [Settings](#)

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ACCESS    Audit    Login Sessions    Plugins    Plugin Status    User Sync

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🔍 Search for your access logs...

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Entries : [1 to 25 of 70](#) Last Updated Time : [07/21/2019 01:06:40 PM](#)

| Operation                        | Audit Type     | User  | Date (Eastern Daylight Time) | Actions                     | Session Id |
|----------------------------------|----------------|-------|------------------------------|-----------------------------|------------|
| Service updated tag_service2     | Ranger Service | admin | 07/21/2019 01:09:34 PM       | <a href="#">Update</a>      | 40         |
| Group created temp_employees     | Ranger Group   | admin | 07/20/2019 02:15:05 PM       | <a href="#">Create</a>      | 38         |
| Group created audit              | Ranger Group   | admin | 07/18/2019 04:18:42 PM       | <a href="#">Create</a>      | 35         |
| Exported policies                | Ranger Policy  | admin | 07/17/2019 03:06:22 PM       | <a href="#">Export Json</a> | 32         |
| Service updated tag_service1     | Ranger Service |       | 07/15/2019 04:11:25 PM       | <a href="#">Update</a>      |            |
| Policy created EXPIRES_ON        | Ranger Policy  |       | 07/15/2019 04:11:25 PM       | <a href="#">Create</a>      |            |
| Service created tag_tag          | Ranger Service |       | 07/15/2019 04:11:25 PM       | <a href="#">Create</a>      |            |
| Policy created                   |                |       |                              | <a href="#">Create</a>      | 29         |
| Service create                   |                |       |                              | <a href="#">Create</a>      | 29         |
| Security Zone                    |                |       |                              | <a href="#">Create</a>      | 27         |
| Policy created                   |                |       |                              | <a href="#">Create</a>      | 27         |
| Policy created                   |                |       |                              | <a href="#">Create</a>      | 27         |
| Policy created                   |                |       |                              | <a href="#">Create</a>      | 27         |
| Policy created                   |                |       |                              | <a href="#">Create</a>      | 27         |
| Security Zone                    |                |       |                              | <a href="#">Create</a>      | 27         |
| Policy created                   |                |       |                              | <a href="#">Create</a>      | 27         |
| Policy created                   |                |       |                              | <a href="#">Create</a>      | 27         |
| Policy created all - global      | Ranger Policy  | admin | 07/14/2019 05:04:32 PM       | <a href="#">Create</a>      | 27         |
| Policy created all - hiveservice | Ranger Policy  | admin | 07/14/2019 05:04:32 PM       | <a href="#">Create</a>      | 27         |
| User created auditor1            | Ranger User    | admin | 07/14/2019 05:02:58 PM       | <a href="#">Create</a>      | 27         |
| Service updated cm_nifi_registry | Ranger Service |       | 07/11/2019 11:30:39 AM       | <a href="#">Update</a>      |            |
| Policy created EXPIRES_ON        | Ranger Policy  |       | 07/11/2019 11:30:39 AM       | <a href="#">Create</a>      |            |

**Operation : update**

Name : tag\_service2  
Date : 07/21/2019 01:09:34 PM Eastern Daylight Time  
Updated By : admin

Service Details :

| Fields              | Old Value | New Value    |
|---------------------|-----------|--------------|
| Service Description | --        | --           |
| Service Name        | tag_tag   | tag_service2 |

[OK](#)

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

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Access Admin Login Sessions Plugins Plugin Status User Sync

Search for your access logs...

Entries : 1 to 25 of 70 | Last Updated Time : 07/21/2019 01:09:40 PM

| Operation                                           | Audit Type           | User  | Date ( Eastern Daylight Time ) | Actions                            | Session Id |
|-----------------------------------------------------|----------------------|-------|--------------------------------|------------------------------------|------------|
| Service updated <b>tag_service2</b>                 | Ranger Service       | admin | 07/21/2019 01:09:34 PM         | <button>Update</button>            | 40         |
| Group created <b>temp_employees</b>                 | Ranger Group         | admin | 07/20/2019 02:15:05 PM         | <button>Create</button>            | 38         |
| Group created <b>audit</b>                          | Ranger Group         | admin | 07/18/2019 04:18:42 PM         | <button>Create</button>            | 35         |
| Exported policies                                   | Ranger Policy        | admin | 07/17/2019 03:06:22 PM         | <button>Export Json</button>       | 32         |
| Service updated <b>tag_service1</b>                 | Ranger Service       |       | 07/15/2019 04:11:25 PM         | <button>Update</button>            |            |
| Policy created <b>EXPIRES_ON</b>                    | Ranger Policy        |       | 07/15/2019 04:11:25 PM         | <button>Create</button>            |            |
| Service created <b>tag_tag</b>                      | Ranger Service       |       | 07/15/2019 04:11:25 PM         | <button>Create</button>            |            |
| Policy created <b>EXPIRES_ON</b>                    | Ranger Policy        | admin | 07/15/2019 04:11:24 PM         | <button>Create</button>            | 29         |
| Service created <b>tag_service1</b>                 | Ranger Service       | admin | 07/15/2019 04:11:24 PM         | <button>Create</button>            | 29         |
| Security Zone created <b>security-zone2</b>         | Ranger Security Zone | admin | 07/14/2019 05:24:36 PM         | <div><button>Create</button></div> | 27         |
| Policy created <b>all - database, udf</b>           | Ranger Policy        | admin | 07/14/2019 05:24:36 PM         | <button>Create</button>            | 27         |
| Policy created <b>all - database, table, column</b> | Ranger Policy        | admin | 07/14/2019 05:24:36 PM         | <button>Create</button>            | 27         |
| Policy created <b>all - url</b>                     | Ranger Policy        | admin | 07/14/2019 05:24:36 PM         | <button>Create</button>            | 27         |
| Policy created <b>all - label</b>                   | Ranger Policy        | admin | 07/14/2019 05:24:36 PM         | <button>Create</button>            | 27         |
|                                                     |                      |       |                                | <button>Create</button>            | 27         |
|                                                     |                      |       |                                | <button>Create</button>            | 27         |
|                                                     |                      |       |                                | <button>Create</button>            | 27         |
|                                                     |                      |       |                                | <button>Create</button>            | 27         |
|                                                     |                      |       |                                | <button>Create</button>            | 27         |
|                                                     |                      |       |                                | <button>Create</button>            | 27         |
|                                                     |                      |       |                                | <button>Create</button>            | 27         |
|                                                     |                      |       |                                | <button>Update</button>            | 27         |
|                                                     |                      |       |                                | <button>Create</button>            |            |
|                                                     |                      |       |                                | <button>Create</button>            |            |

### Operation : create

Name : security-zone2  
Date : 07/14/2019 05:24:36 PM Eastern Daylight Time  
Created By : admin

Zone Details :

| Fields :               | New Value      |
|------------------------|----------------|
| Zone Description       | --             |
| Zone Audit User Groups | --             |
| Zone Audit Users       | auditor1       |
| Zone Admin User Groups | --             |
| Zone Admin Users       | admin          |
| Zone Tag Services      | cm_tag         |
| Zone Name              | security-zone2 |

Zone Service Details :

| Service Name | Zone Service Resources |
|--------------|------------------------|
|--------------|------------------------|

OK

## Audit &gt; User Sync: Sync details

The screenshot shows the Ranger web interface with the 'User Sync' tab selected. A search bar at the top indicates 'START DATE: 07/21/2019'. Below the search bar, a status bar shows 'Entries: 1 to 25 of 803' and 'Last Updated Time: 07/21/2019 01:23:45 PM'. The main table displays sync events for 'rangerusersync' from a 'Unix' source. The table columns are: User Name, Sync Source, Number Of New (Users, Groups), Number Of Modified (Users, Groups), Event Time, and Sync Details. A blue box highlights the 'Sync Details' icon in the second row, which is linked by a blue arrow to a modal window titled 'Sync Details'.

| User Name      | Sync Source | Number Of New |        | Number Of Modified |        | Event Time             | Sync Details |
|----------------|-------------|---------------|--------|--------------------|--------|------------------------|--------------|
|                |             | Users         | Groups | Users              | Groups |                        |              |
| rangerusersync | Unix        | 0             | 0      | 0                  | 0      | 07/21/2019 01:22:48 PM | [Icon]       |
| rangerusersync | Unix        | 0             | 0      | 0                  | 0      | 07/21/2019 01:21:48 PM | [Icon]       |
| rangerusersync | Unix        | 0             | 0      | 0                  | 0      | 07/21/2019 01:20:48 PM | [Icon]       |
| rangerusersync | Unix        | 0             | 0      | 0                  | 0      | 07/21/2019 01:19:48 PM | [Icon]       |
| rangerusersync | Unix        | 0             | 0      | 0                  | 0      | 07/21/2019 01:18:48 PM | [Icon]       |
| rangerusersync | Unix        | 0             | 0      | 0                  | 0      | 07/21/2019 01:17:48 PM | [Icon]       |
| rangerusersync | Unix        | 0             | 0      | 0                  | 0      | 07/21/2019 01:16:48 PM | [Icon]       |
| rangerusersync | Unix        | 0             | 0      | 0                  | 0      | 07/21/2019 01:15:48 PM | [Icon]       |
| rangerusersync | Unix        | 0             | 0      | 0                  | 0      | 07/21/2019 01:14:48 PM | [Icon]       |
| rangerusersync | Unix        | 0             | 0      | 0                  | 0      | 07/21/2019 01:13:48 PM | [Icon]       |
| rangerusersync | Unix        | 0             | 0      | 0                  | 0      | 07/21/2019 01:12:48 PM | [Icon]       |
| rangerusersync | Unix        | 0             | 0      | 0                  | 0      | 07/21/2019 01:11:48 PM | [Icon]       |
| rangerusersync | Unix        | 0             | 0      | 0                  | 0      | 07/21/2019 01:10:48 PM | [Icon]       |
| rangerusersync | Unix        | 0             | 0      | 0                  | 0      | 07/21/2019 01:09:48 PM | [Icon]       |
| rangerusersync | Unix        | 0             | 0      | 0                  | 0      | 07/21/2019 01:08:48 PM | [Icon]       |
| rangerusersync | Unix        | 0             | 0      | 0                  | 0      | 07/21/2019 01:07:48 PM | [Icon]       |
| rangerusersync | Unix        | 0             | 0      | 0                  | 0      | 07/21/2019 01:06:48 PM | [Icon]       |
| rangerusersync | Unix        | 0             | 0      | 0                  | 0      | 07/21/2019 01:05:48 PM | [Icon]       |
| rangerusersync | Unix        | 0             | 0      | 0                  | 0      | 07/21/2019 01:04:48 PM | [Icon]       |
| rangerusersync | Unix        | 0             | 0      | 0                  | 0      | 07/21/2019 01:03:48 PM | [Icon]       |
| rangerusersync | Unix        | 0             | 0      | 0                  | 0      | 07/21/2019 01:02:48 PM | [Icon]       |
| rangerusersync | Unix        | 0             | 0      | 0                  | 0      | 07/21/2019 01:01:48 PM | [Icon]       |
| rangerusersync | Unix        | 0             | 0      | 0                  | 0      | 07/21/2019 01:00:47 PM | [Icon]       |

**Sync Details**

| Name                          | Value                  |
|-------------------------------|------------------------|
| Unix                          | nss                    |
| File Name                     | /etc/passwd            |
| Sync time                     | 07/21/2019 10:21:48 AM |
| Last modified time            | 12/31/1969 04:00:00 PM |
| Minimum user id               | 500                    |
| Minimum group id              | 0                      |
| Total number of users synced  | 35                     |
| Total number of groups synced | 39                     |

OK

## Create a read-only Admin user (Auditor)

Creating a read-only Admin user (Auditor) enables compliance activities because this user can monitor policies and audit events, but cannot make changes.

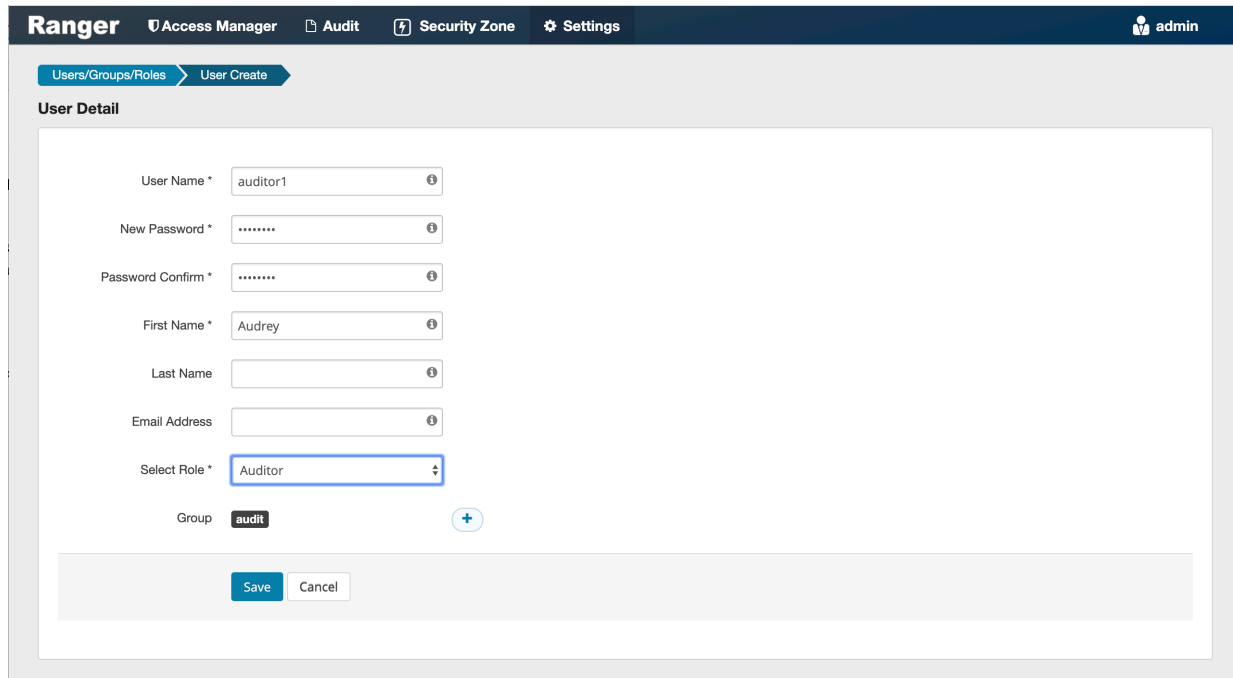
## About this task

When a user with the Auditor role logs in, they see a read-only view of Ranger policies and audit events. An Auditor can search and filter on access audit events, and access and view all tabs under Audit to understand access events. They cannot edit users or groups, export/import policies, or make changes of any kind.

## Procedure

1. Select Settings > Users/Groups/Roles.
2. Click Add New User.

3. Complete the **User Detail** section, selecting Auditor as the role:



The screenshot shows the Ranger web interface for creating a new user. The top navigation bar includes 'Ranger', 'Access Manager', 'Audit', 'Security Zone', and 'Settings', with a user profile 'admin' on the right. Below the navigation bar, a breadcrumb trail shows 'Users/Groups/Roles' and 'User Create'. The main section is titled 'User Detail' and contains the following fields:

- User Name \*: auditor1
- New Password \*: [masked]
- Password Confirm \*: [masked]
- First Name \*: Audrey
- Last Name: [empty]
- Email Address: [empty]
- Select Role \*: Auditor (selected)
- Group: audit (with a plus icon to add more)

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

4. Click Save.