

Cloudera Runtime 7.0.2

Ranger Auditing

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CLOUDERA

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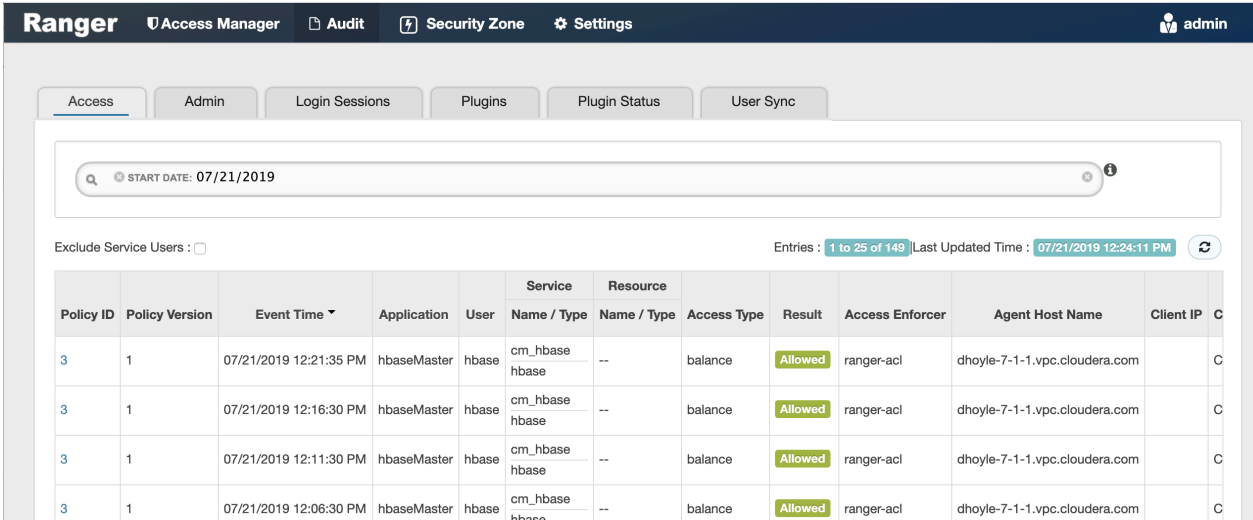
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Audit Overview

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.



The screenshot shows the Ranger web interface with the 'Audit' tab selected. The page displays a search bar with 'START DATE: 07/21/2019' and a table of audit entries. The table has columns for Policy ID, Policy Version, Event Time, Application, User, Service Name / Type, Resource Name / Type, Access Type, Result, Access Enforcer, Agent Host Name, Client IP, and a 'C' column. The 'Result' column shows 'Allowed' for all entries.

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 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 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 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 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 > Access: HBase Table

The screenshot displays the Ranger interface with the 'Access' tab selected. A search bar shows 'START DATE: 07/21/2019'. Below this is a table with columns for Policy ID, Policy Version, Event Time, Application, User, Service, Resource, Access Type, Result, and Access. The table contains several rows, all with a 'Result' of 'Allowed'. A 'Policy Details' modal is open over the fourth row, showing details for 'cm_hbase' policy, including Policy ID 3, Version 1, and various permissions. A blue arrow points from the 'Allowed' result in the table to the 'Policy Details' modal.

Audit > Admin: Update

The screenshot displays the Ranger interface with the 'Admin' tab selected. A search bar is empty. Below this is a table with columns for Operation, Audit Type, User, Date, Actions, and Session ID. The table contains various operations like 'Service updated', 'Group created', etc. An 'Update' action is highlighted in the first row. A modal titled 'Operation: update' is open, showing details for the update of 'tag_service2', including the Service Name 'tag_tag' being updated to 'tag_service2'. A blue arrow points from the 'Update' button in the table to the modal.

Audit > Admin: Create

Ranger Access Manager Audit Security Zone Settings admin

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 01:08:40 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	Update	40
Group created temp_employees	Ranger Group	admin	07/20/2019 02:15:05 PM	Create	38
Group created audit	Ranger Group	admin	07/18/2019 04:18:42 PM	Create	35
Exported policies	Ranger Policy	admin	07/17/2019 03:06:22 PM	Export Json	32
Service updated tag_service1	Ranger Service		07/15/2019 04:11:25 PM	Update	
Policy created EXPIRES_ON	Ranger Policy		07/15/2019 04:11:25 PM	Create	
Service created tag_tag	Ranger Service		07/15/2019 04:11:25 PM	Create	
Policy created EXPIRES_ON	Ranger Policy	admin	07/15/2019 04:11:24 PM	Create	29
Service created tag_service1	Ranger Service	admin	07/15/2019 04:11:24 PM	Create	29
Security Zone created security-zone2	Ranger Security Zone	admin	07/14/2019 05:24:36 PM	Create	27
Policy created all - database, udf	Ranger Policy	admin	07/14/2019 05:24:36 PM	Create	27
Policy created all - database, table, column	Ranger Policy	admin	07/14/2019 05:24:36 PM	Create	27
Policy created all - url	Ranger Policy	admin	07/14/2019 05:24:36 PM	Create	27
Policy created all - global	Ranger Policy	admin	07/14/2019 05:24:36 PM	Create	27
				Create	27
				Create	27
				Create	27
				Create	27
				Create	27
				Create	27
				Create	27
				Create	27
				Create	27
				Update	
				Create	
				Create	

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 > User Sync: Sync details

The screenshot shows the Ranger Admin console interface. At the top, there are navigation tabs: Access, Admin, Login Sessions, Plugins, Plugin Status, and User Sync. Below the tabs is a search bar with the text "START DATE: 07/21/2019". To the right of the search bar, it says "Entries: 1 to 25 of 803" and "Last Updated Time: 07/21/2019 01:23:45 PM".

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	👁
rangerusersync	Unix	0	0	0	0	07/21/2019 01:21:48 PM	👁
rangerusersync	Unix	0	0	0	0	07/21/2019 01:20:48 PM	👁
rangerusersync	Unix	0	0	0	0	07/21/2019 01:19:48 PM	👁
rangerusersync	Unix	0	0	0	0	07/21/2019 01:18:48 PM	👁
rangerusersync	Unix	0	0	0	0	07/21/2019 01:17:48 PM	👁
rangerusersync	Unix	0	0	0	0	07/21/2019 01:16:48 PM	👁
rangerusersync	Unix	0	0	0	0	07/21/2019 01:15:48 PM	👁
rangerusersync	Unix	0	0	0	0	07/21/2019 01:14:48 PM	👁
rangerusersync	Unix	0	0	0	0	07/21/2019 01:13:48 PM	👁
rangerusersync	Unix	0	0	0	0	07/21/2019 01:12:48 PM	👁
rangerusersync	Unix	0	0	0	0	07/21/2019 01:11:48 PM	👁
rangerusersync	Unix	0	0	0	0	07/21/2019 01:10:48 PM	👁
rangerusersync	Unix	0	0	0	0	07/21/2019 01:09:48 PM	👁
rangerusersync	Unix	0	0	0	0	07/21/2019 01:08:48 PM	👁
rangerusersync	Unix	0	0	0	0	07/21/2019 01:07:48 PM	👁
rangerusersync	Unix	0	0	0	0	07/21/2019 01:06:48 PM	👁
rangerusersync	Unix	0	0	0	0	07/21/2019 01:05:48 PM	👁
rangerusersync	Unix	0	0	0	0	07/21/2019 01:04:48 PM	👁
rangerusersync	Unix	0	0	0	0	07/21/2019 01:03:48 PM	👁
rangerusersync	Unix	0	0	0	0	07/21/2019 01:02:48 PM	👁
rangerusersync	Unix	0	0	0	0	07/21/2019 01:01:48 PM	👁
rangerusersync	Unix	0	0	0	0	07/21/2019 01:00:47 PM	👁

The 'Sync Details' modal window shows the following information:

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

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.

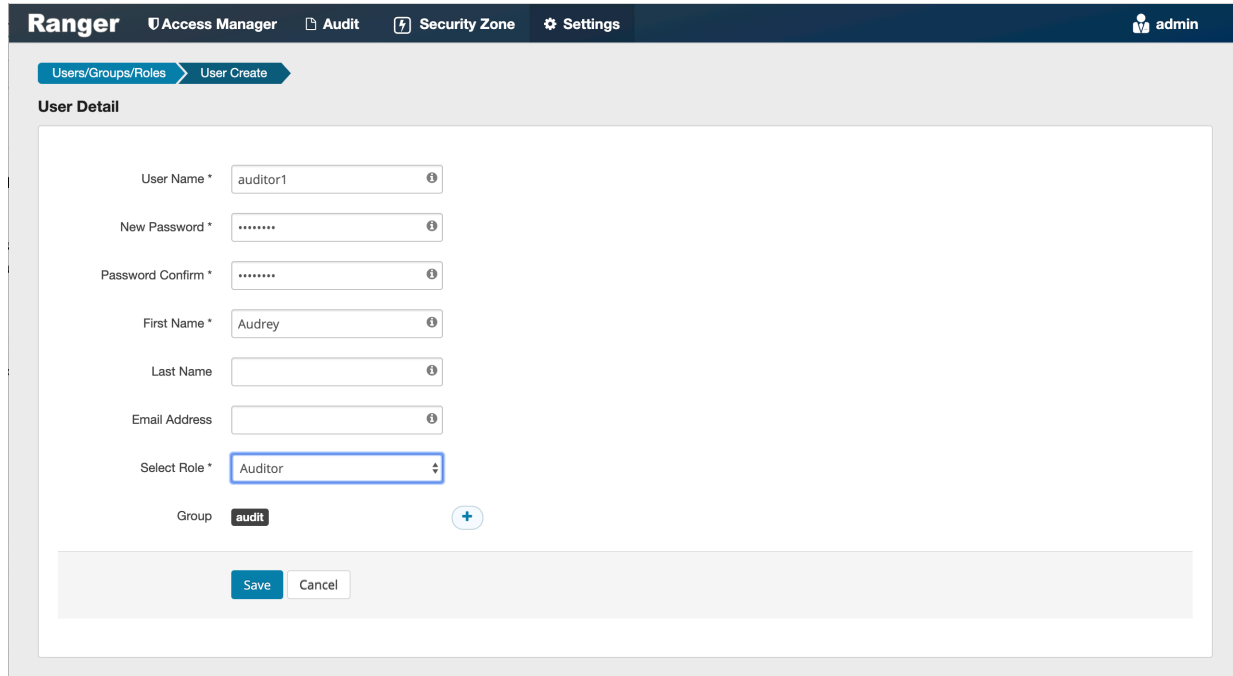
About this task

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 user. The top navigation bar includes 'Ranger', 'Access Manager', 'Audit', 'Security Zone', and 'Settings', with a user profile 'admin' on the right. The breadcrumb trail is 'Users/Groups/Roles > User Create'. The 'User Detail' section 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 (highlighted with a blue border)
- Group: audit (with a plus icon to add more groups)

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

4. Click Save.