

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.

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 > Admin: Update

Ranger
Access Manager
Audit
Security Zone
Settings
admin

Access
Admin
Login Sessions
Plugins
Plugin Status
User Sync

START DATE: 07/21/2019

Exclude Service Users: ☐

Entries: 1 to 25 of 25

Policy ID	Policy Version	Event Time	Application	User	Service Name / Type	Resource Name / Type	Access Type	Result	Access	Access	Access
3	1	07/21/2019 12:51:30 PM	hbaseMaster	hbase	cm_hbase hbase	--	balance	Allowed	ranger-		
3	1	07/21/2019 12:46:30 PM	hbaseMaster	hbase	cm_hbase hbase	--	balance	Allowed	ranger-		
3	1	07/21/2019 12:41:30 PM	hbaseMaster	hbase	cm_hbase hbase	--	balance	Allowed	ranger-acl	dhoyle-7-1-1.vpc.cloudera.com	C
3	1	07/21/2019 12:36:30 PM	hbaseMaster	hbase	cm_hbase hbase	--	balance	Allowed	ranger-acl	dhoyle-7-1-1.vpc.cloudera.com	C
3	1	07/21/2019 12:31:31 PM	hbaseMaster	hbase	cm_hbase hbase	--	balance	Allowed	ranger-acl	dhoyle-7-1-1.vpc.cloudera.com	C
3	1	07/21/2019 12:26:30 PM	hbaseMaster	hbase	cm_hbase hbase	--	balance	Allowed	ranger-acl	dhoyle-7-1-1.vpc.cloudera.com	C

Policy Details

Service Name : cm_hbase
Service Type : hbase

Policy Details :

Policy Type

Policy ID

Version

Policy Name

HBase Table

HBase Column-family

HBase Column

Description

Audit Logging

Policy Labels

Access

3

1

all - table, column-family, column

Enabled

Includes

Includes

Policy for all - table, column-family, column

Yes

--

Allow Condition :

Version 1

OK

The screenshot shows the RANGER Admin interface with the 'Access Logs' tab selected. A modal window titled 'Operation : update' is open, displaying details for a service update operation. The modal includes fields for Name, Date, Updated By, Service Details, Fields, Old Value, and New Value.

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
Export policies	Ranger Policy	admin	07/17/2019 03:06:22 PM	Export Data	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	Ranger Service		07/15/2019 04:11:25 PM	Create	

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

Access |
 Admin |
 Login Sessions |
 Plugins |
 Plugin Status |
 User Sync

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 tag_service2	Ranger Service	admin	07/21/2019 01:09:34 PM	<button>Update</button>	40
Group created temp_employees	Ranger Group	admin	07/20/2019 02:15:05 PM	<button>Create</button>	38
Group created audit	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 tag_service1	Ranger Service		07/15/2019 04:11:25 PM	<button>Update</button>	
Policy created EXPIRES_ON	Ranger Policy		07/15/2019 04:11:25 PM	<button>Create</button>	
Service created tag_tag	Ranger Service		07/15/2019 04:11:25 PM	<button>Create</button>	
Policy created EXPIRES_ON	Ranger Policy	admin	07/15/2019 04:11:24 PM	<button>Create</button>	29
Service created tag_service1	Ranger Service	admin	07/15/2019 04:11:24 PM	<button>Create</button>	29
Security Zone created security-zone2	Ranger Security Zone	admin	07/14/2019 05:24:36 PM	<button>Create</button>	27
Policy created all - database, udf	Ranger Policy	admin	07/14/2019 05:24:36 PM	<button>Create</button>	27
Policy created all - database, table, column	Ranger Policy	admin	07/14/2019 05:24:36 PM	<button>Create</button>	27
Policy created all - url	Ranger Policy	admin	07/14/2019 05:24:36 PM	<button>Create</button>	27
Policy created all - label	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
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				<button>Create</button>	27
				<button>Create</button>	27
				<button>Create</button>	27
				<button>Create</button>	27
				<button>Create</button>	27
				<button>Update</button>	
				<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 > User Sync: Sync details

The screenshot shows the Ranger Admin console interface. At the top, there's a navigation bar with 'Ranger', 'Access Manager', 'Audit', 'Security Zone', and 'Settings'. The 'Audit' tab is selected, and the 'User Sync' sub-tab is active. Below the navigation bar, there's a search bar with 'START DATE: 07/21/2019'. The main content area displays a table of sync events. The table has columns: User Name, Sync Source, Number Of New Users, Number Of New Groups, Number Of Modified Users, Number Of Modified Groups, Event Time, and Sync Details. A modal window titled 'Sync Details' is open, showing a list of configuration parameters and their values.

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

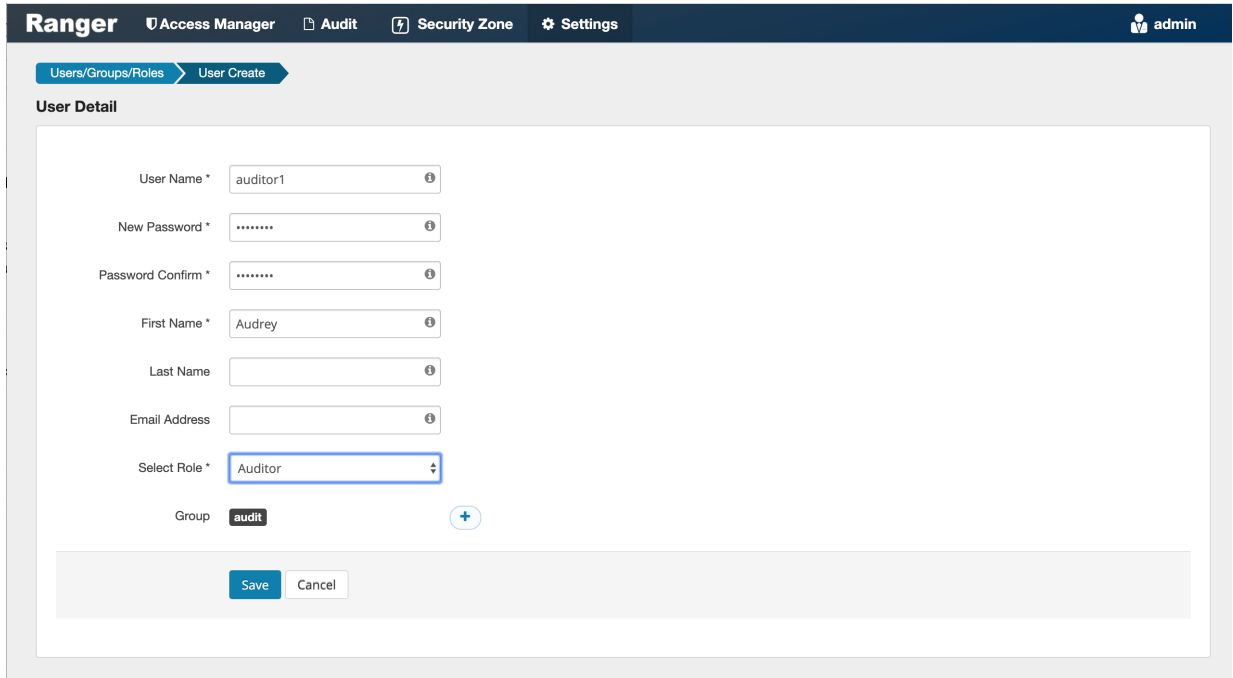
About this task

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'. The user 'admin' is logged in. 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 '+' button to add more groups)

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

4. Click Save.