Cloudera Data Visualization 7.2.1

Publishing Datasets

Date published: 2020-10-30 Date modified: 2024-02-29



Legal Notice

© Cloudera Inc. 2024. All rights reserved.

The documentation is and contains Cloudera proprietary information protected by copyright and other intellectual property rights. No license under copyright or any other intellectual property right is granted herein.

Unless otherwise noted, scripts and sample code are licensed under the Apache License, Version 2.0.

Copyright information for Cloudera software may be found within the documentation accompanying each component in a particular release.

Cloudera software includes software from various open source or other third party projects, and may be released under the Apache Software License 2.0 ("ASLv2"), the Affero General Public License version 3 (AGPLv3), or other license terms. Other software included may be released under the terms of alternative open source licenses. Please review the license and notice files accompanying the software for additional licensing information.

Please visit the Cloudera software product page for more information on Cloudera software. For more information on Cloudera support services, please visit either the Support or Sales page. Feel free to contact us directly to discuss your specific needs.

Cloudera reserves the right to change any products at any time, and without notice. Cloudera assumes no responsibility nor liability arising from the use of products, except as expressly agreed to in writing by Cloudera.

Cloudera, Cloudera Altus, HUE, Impala, Cloudera Impala, and other Cloudera marks are registered or unregistered trademarks in the United States and other countries. All other trademarks are the property of their respective owners.

Disclaimer: EXCEPT AS EXPRESSLY PROVIDED IN A WRITTEN AGREEMENT WITH CLOUDERA, CLOUDERA DOES NOT MAKE NOR GIVE ANY REPRESENTATION, WARRANTY, NOR COVENANT OF ANY KIND, WHETHER EXPRESS OR IMPLIED, IN CONNECTION WITH CLOUDERA TECHNOLOGY OR RELATED SUPPORT PROVIDED IN CONNECTION THEREWITH. CLOUDERA DOES NOT WARRANT THAT CLOUDERA PRODUCTS NOR SOFTWARE WILL OPERATE UNINTERRUPTED NOR THAT IT WILL BE FREE FROM DEFECTS NOR ERRORS, THAT IT WILL PROTECT YOUR DATA FROM LOSS, CORRUPTION NOR UNAVAILABILITY, NOR THAT IT WILL MEET ALL OF CUSTOMER'S BUSINESS REQUIREMENTS. WITHOUT LIMITING THE FOREGOING, AND TO THE MAXIMUM EXTENT PERMITTED BY APPLICABLE LAW, CLOUDERA EXPRESSLY DISCLAIMS ANY AND ALL IMPLIED WARRANTIES, INCLUDING, BUT NOT LIMITED TO IMPLIED WARRANTIES OF MERCHANTABILITY, QUALITY, NON-INFRINGEMENT, TITLE, AND FITNESS FOR A PARTICULAR PURPOSE AND ANY REPRESENTATION, WARRANTY, OR COVENANT BASED ON COURSE OF DEALING OR USAGE IN TRADE.

Contents

Configuring dataset recipient roles	4
Publishing datasets	5
Configuring the dataset publisher role	8
Defining groups for teams and access levels	16
Assigning groups to roles	17
Assigning users to groups	21

Configuring dataset recipient roles

This document outlines the steps for setting up Dataset Recipient roles, providing members with access to datasets at various levels.

About this task

Possible levels are:

- · Manage dataset
- Manage dashboards
- · View dashboards

For more information on possible permissions, see RBAC permissions.

Within this context, three distinct dataset roles—Data Admin, Analyst, and Visual Consumer—are established for each of the three organization groups: Marketing, Sales, and Operations.

Restriction:

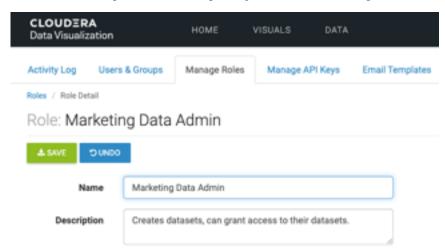
This task is for users with Manage roles and users privileges.

The steps for creating the role Marketing Data Admin:

Procedure

- 1. On the main navigation bar, click the Gear icon, and select Manage Roles.
- 2. In the Roles interface, start the new role by clicking New Role.
- 3. In the Role definition interface, enter the following information:
 - Name: Marketing Data Admin
 - Description: Creates datasets, can grant access to their datasets.

At a later time, we plan to define the privileges and the membership of the role.



- 4. Click SAVE.
- 5. Cloudera Data Visualization generates a success message.

Cloudera Data Visualization Publishing datasets

6. Repeat the previous steps to generate a total of 9 (nine) new roles, with the following names and descriptions:

Table 1: Roles that receive access to new datasets

Role Name	Description
Marketing Data Admin	Creates datasets, can grant access to their datasets.
Marketing Analyst	Can create dashboards.
Marketing Visual Consumer	Can view dashboards.
Sales Data Admin	Creates datasets, can grant access to their datasets.
Sales Analyst	Can create dashboards.
Sales Visual Consumer	Can view dashboards.
Operations Data Admin	Creates datasets, can grant access to their datasets.
Operations Analyst	Can create dashboards.
Operations Visual Consumer	Can view dashboards.

Results

After completing these steps, the list of roles should appear similar to this:

Manage Roles				
+ NEW ROLE				
Role / Description	Components	Users	Groups	
Marketing Analyst Can create dashboards.	0	0	0	ø
Marketing Data Admin Creates datasets, can grant access to their datasets.	•	0	•	≠ ±
Marketing Visual Consumer Can view dashboards.	1	0	0	≠ 0
Operations Analyst Can create dashboards.	•	0	0	ø 🛈
Operations Data Admin Creates datasets, can grant access to their datasets.	0	0	0	₽ 🗓
Operations Visual Consumer Can view dashboards.	•	0	•	ØÜ
Sales Analyst Can create dashboards.	0	0	0	Ø
Sales Data Admin Creates datasets, can grant access to their datasets.	0	0	0	₽ 0
Sales Visual Consumer Can view dashboards.	0	0	0	≠ ±

Related Information

RBAC permissions

Publishing datasets

When a user creates a new dataset, that dataset is private by default. To share, user must explicitly grant others access to the new dataset.

About this task

In principal, anyone with Manage roles and users privileges can grant dataset access to others. However, we choose to restrict this privilege to a small number of people in the organization, typically system administrators. This is because role editing is very powerful and role editors have full access to the entire system and can update any role to grant any permission to any user.

As a result, most dataset creators do not ordinarily have the Manage roles and users permission, and must place a service request so that system administrators add new datasets to the desired roles. In large organizations with

Cloudera Data Visualization Publishing datasets

multiple teams that consist of users with different responsibilities (dataset creators, dashboard creators, and dashboard viewers), access management becomes a laborious task.

Our role-based access control (RBAC) security approach gives dataset creators an opportunity to 'publish' or share their datasets through a set of grants based on roles. They can grant access to specific roles though the Grant manage dataset, Grant manage dashboards, and Grant view dashboards permissions.

The following workflow is established to ensure that dataset creators can grant access to their datasets without having to rely on system administrators.



Note: Only users with Manage roles and users role privileges, typically system administrators, can set up the roles and permissions, and define users and user groups.

Before a dataset creator, Data Admin, can publish a dataset, they must have appropriate RBAC permissions, and the roles have to be assigned correctly to the members of each team. To understand how to configure the required permissions, roles, groups, and users, read RBAC setup for dataset publishing, which contains the following topics:

- Setting the dataset recipient roles
- Setting the dataset publisher role
- Defining groups for teams and access levels
- Assigning groups to roles
- Assign users to groups

After making all necessary adjustments to the dataset, a user with a Data Admin role can publish the dataset.

Restriction:

This workflow is intended for users with Data Admin role privileges.

This feature is only available after completing RBAC setup for dataset publishing.

For more information on possible permissions, see *RBAC permissions*.

Follow these steps to publish a dataset to the intended users:

Procedure

- 1. Log in as a user with Data Admin privileges. Here, we log in as user John Marketing.
- 2. Navigate to the dataset you plan to publish. In our case, we plan to publish the Modified Iris Data dataset.
- **3.** Click the Permissions option in the left navigation.

At this stage, the Permissions interface for the Modified Iris Data dataset appears. In this example, it contains the default matrix for roles and privileges for the three Data Admin roles for All datasets on the Arcadia Enterprise connection (Manage dataset, Manage dashboards, and View dashboards).

You can publish the dataset through one of the following actions:

O	ption
$\mathbf{\sigma}$	խատո

Publish

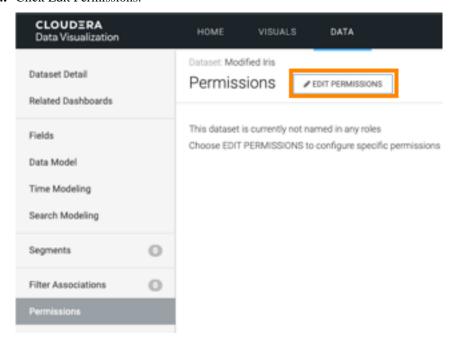
Makes the dataset publicly visible to the already enabled roles. You can stop here.

Edit Permissions

Allows the user to grant additional access permissions on the dataset. This is only available to users with Role permissions. If you choose this option, continue to the next step.

Cloudera Data Visualization Publishing datasets

4. Click Edit Permissions.



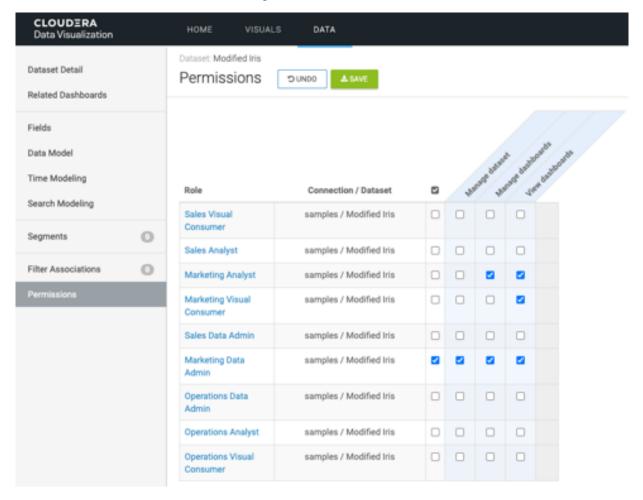
The full Permissions matrix appears.

5. To grant the available privileges to the Modified Iris Data to the Marketing group, click the check boxes for the appropriate grants for the Data Admin, Analyst, and Visual Consumer roles defined in the Marketing group.

In this example, we granted all possible privileges. However, it is feasible that you may initially select only the Data Admin role, to involve others who have that role in testing the dataset and building preliminary dashboards. You can subsequently use this interface to grant access to other roles and users, such as Analysts who build more sophisticated dashboards, and postpone Visual Consumer access to a later time.

6. Click Save.

This action makes the dataset available to all specified roles.



Related Information

RBAC permissions

RBAC setup for dataset publishing

Configuring dataset recipient roles

Configuring the dataset publisher role

Defining groups for teams and access levels

Assigning groups to roles

Assigning users to groups

Configuring the dataset publisher role

This guide walks through the setup process for the Dataset Publisher role.

About this task

In this example, the members assigned to this role possess the ability to grant dataset access to other users, which can be categorized into three levels:

- Grant manage dataset
- Grant manage dashboards

· Grant view dashboards

The granter must have the Grant manage dataset permissions on the target dataset.

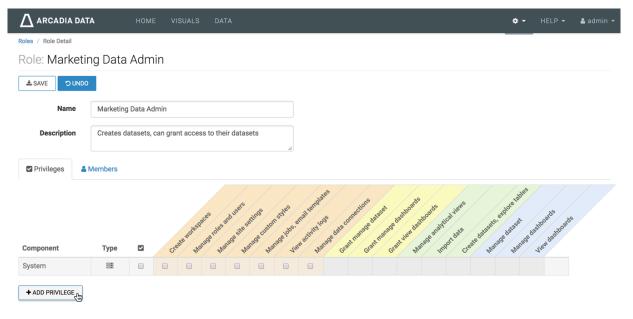
In an earlier section, three (3) dataset publishing roles (data admins) in *Setting the dataset recipient roles*, one each for the three organization groups: Marketing, Sales, and Operations were established. These are Marketing Data Admin, Sales Data Admin, and Operations Data Admin, respectively. The roles for the recipients of the grants, the analysts and the visual consumers were also created.

For more information on possible permissions, see RBAC permissions.

Follow these steps to specify the role Marketing Data Admin:

Procedure

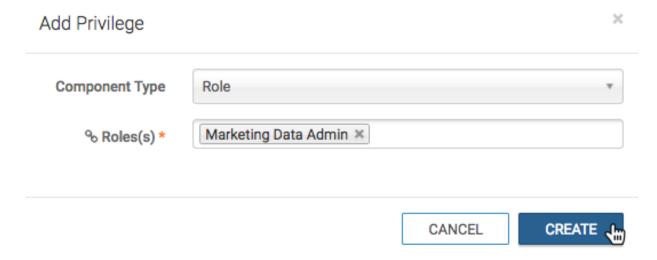
- 1. In the Roles interface, click either the name of the role, Marketing Data Admin, or the Edit icon on its role.
- 2. In the Role Detail interface, click the ADD PRIVILEGE button.



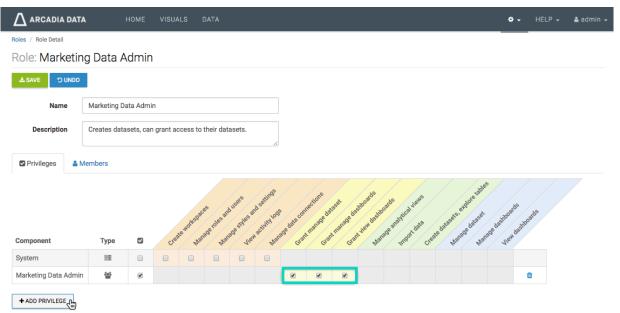
The Add Privilege modal window appears.

- 3. Create the following privilege:
- **4.** Under Component Type, select Role.
- **5.** From Roles(s), select Marketing Data Admin, a role we defined previously.

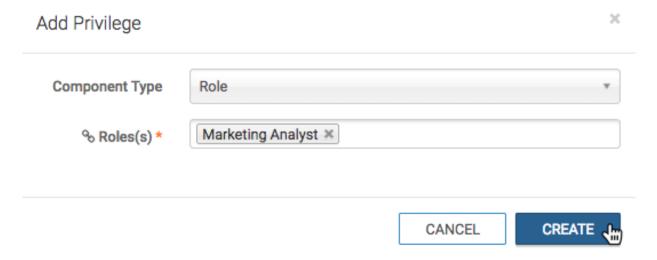
Note that this enables individuals with the Marketing Data Admin role to grant privileges to others with the same role.



7. Leave this privilege with all options on, and click the ADD PRIVILEGE button to add the next privilege.



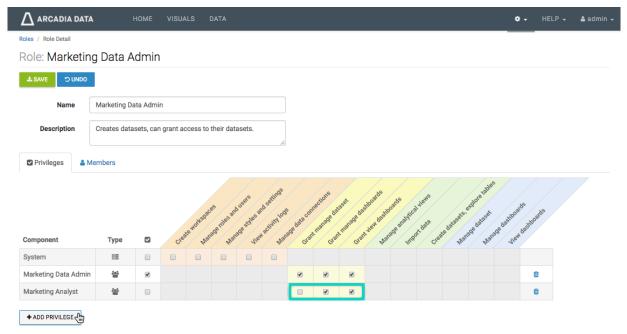
- **8.** Under Component Type, select Role.
- **9.** From Roles(s), select Marketing Analyst, a role we defined previously.



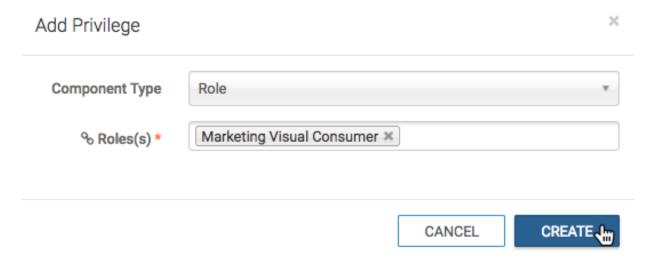
11. Deselect the Grant manage dataset option for this privilege.

This is because analysts should not be altering the dataset.

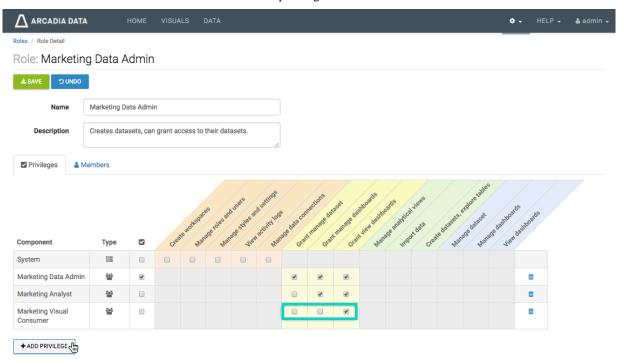
12. Click the ADD PRIVILEGE button to add the next privilege.



- 13. Under Component Type, select Role.
- **14.** From Roles(s), select Marketing Visual Consumer, a role we defined previously.

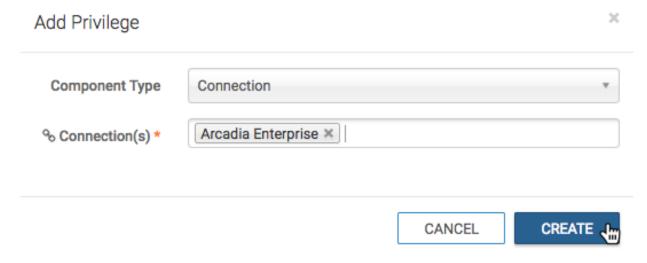


- **16.** Unselect the Grant manage dataset and Grant manage dashboards options for this privilege. This is because visual consumers can only view dashboards, and should not be altering the dataset or creating new dashboards. Therefore, this line contains only the Grant view dashboards option.
- 17. Click the ADD PRIVILEGE button to add the next privilege.

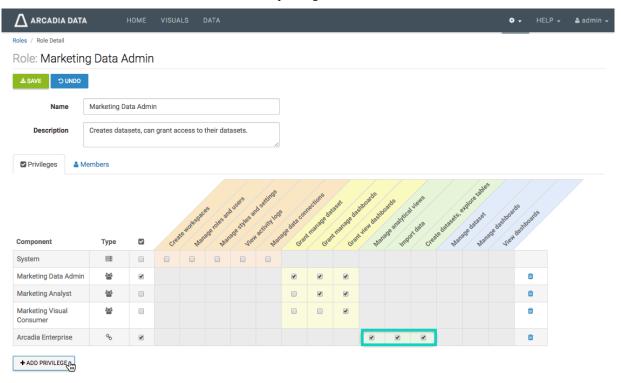


This time, let us declare connection-level privileges so that the Marketing Data Admin can access connected data, build datasets, and import supplemental data. Depending on the operational structure, we may also let the users with this role manage analytical views.

- **18.** In the Add Privilege modal window, create the connection-level privileges necessary for the Marketing Data Admin user. This particular privilege enables access to all data available through the specified connection:
- 19. Under Component Type, select Connection.
- 20. From Connection(s), select Impala.

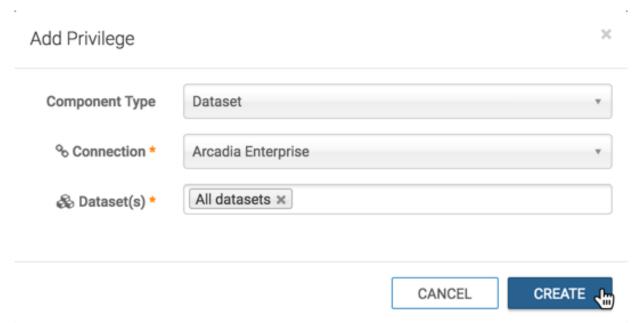


- **22.** Leave this privilege with all options on (Manage analytical views, Import data, and Create datasets, explore tables).
- 23. Click the ADD PRIVILEGE button to add the next privilege.

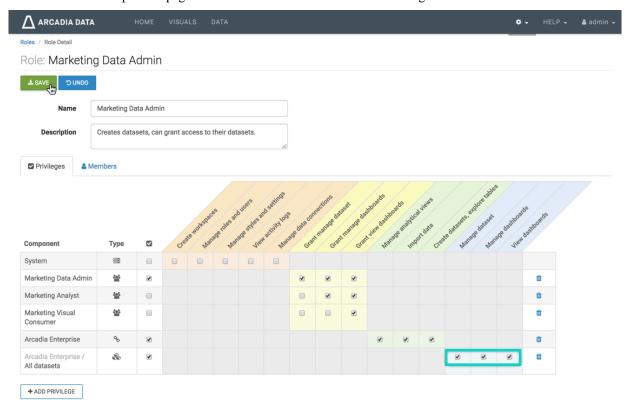


Finally, we declare dataset-level privileges. We can choose previously declared connections and limit access to a few of its datasets, or select a new connection, or choose all datasets on a connection. Here, we simply let members of the Marketing Data Admin role access all existing datasets on the Arcadia Enterprise connection.

- **24.** In the Add Privilege modal window, create the connection-level privileges necessary for the Marketing Data Admin user. This particular privilege enables access to all data available through the specified connection.
- **25.** Under Component Type, select Dataset.
- **26.** From Connection(s), select Arcadia Enterprise.
- **27.** From Dataset(s), select All datasets.



- 29. Leave this privilege with all options on (Manage dataset, Manage dashboards, and View dashboards)
- 30. Click SAVE at the top of the page to save the new definition of the Marketing Data Admin role.



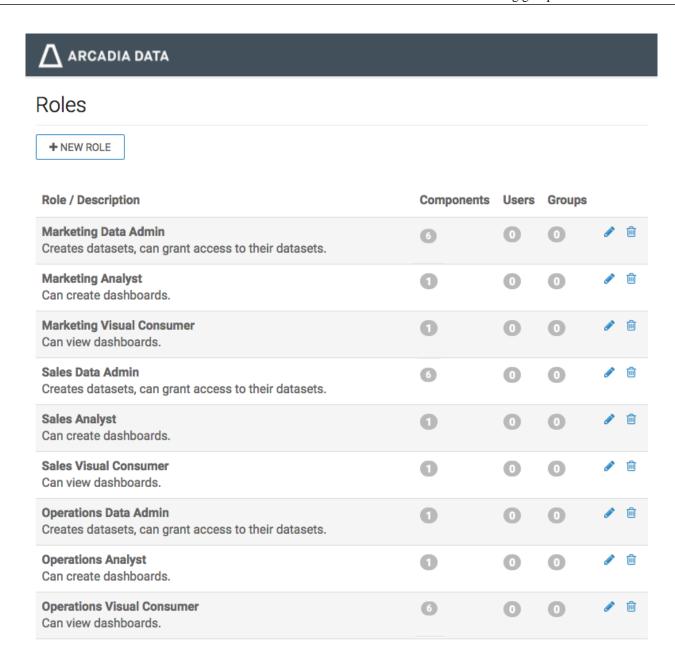
31. Repeat the previous steps to add privileges to the roles of the Sales Data Admin and Operations Data Admin. Each of these roles should have a privilege matrix that is similar to privileges assigned to the Marketing Data Admin role.

Table 2: Privileges assigned to the Data Admin roles

Role Name	Component	Permission
Marketing Data Admin	Role: Marketing Data Admin	 Grant manage dataset Grant manage dashboards Grant view dashboards
	Role: Marketing Analyst	Grant manage dashboards Grant view dashboards
	Role: Marketing Visual Consumer	Grant view dashboards
	Connection: Arcadia Enterprise	Manage analytical viewsImport dataCreate datasets, explore tables
	Dataset: Arcadia Enterprise, All Datasets	Manage dataset Manage dashboards View dashboards
Sales Data Admin	Role: Sales Data Admin	Grant manage dataset Grant manage dashboards Grant view dashboards
	Role: Sales Analyst	Grant manage dashboards Grant view dashboards
	Role: Sales Visual Consumer	Grant view dashboards
	Connection: Arcadia Enterprise	Manage analytical viewsImport dataCreate datasets, explore tables
	Dataset: Arcadia Enterprise, All Datasets	Manage dataset Manage dashboards View dashboards
Operations Data Admin	Role: Operations Data Admin	 Grant manage dataset Grant manage dashboards Grant view dashboards
	Role: Operations Analyst	Grant manage dashboards Grant view dashboards
	Role: Operations Visual Consumer	Grant view dashboards
	Connection: Arcadia Enterprise	Manage analytical viewsImport dataCreate datasets, explore tables
	Dataset: Arcadia Enterprise, All Datasets	Manage dataset Manage dashboards View dashboards

Results

After completing these steps, the list of roles shows that the number of components on the Data Admin roles increased to 6 (six):



Related Information

Configuring dataset recipient roles RBAC permissions

Defining groups for teams and access levels

Procedure

- 1. Create the groups of users by organizational team, and by level of required access.
 - There are three distinct access levels across the organization: Data Admins, Analysts, and Visual Consumers.
 - There are three teams: Marketing, Sales, and Operations.

The following steps demonstrate how to create the necessary user groups in Cloudera Data Visualization.



Note: Depending on your architecture, this definition may happen at the LDAP layer, with the groups visible to Data Visualization.

- 2. On the main navigation bar, click the Gear icon and select Users & Groups.
- 3. In the Manage Users & Groups interface, click New Group.
- **4.** In the New Group window modal, create a new group Data_Admins.
- 5. You may choose to add users to the group at this point, but we plan to do this at a later stage.
- 6. Click SAVE.
- 7. Repeat these steps to create additional new user groups: Analysts, Visual_Consumers, Marketing, Sales, and Operations.

Assigning groups to roles

About this task

Now we must correctly assign the membership groups to roles.

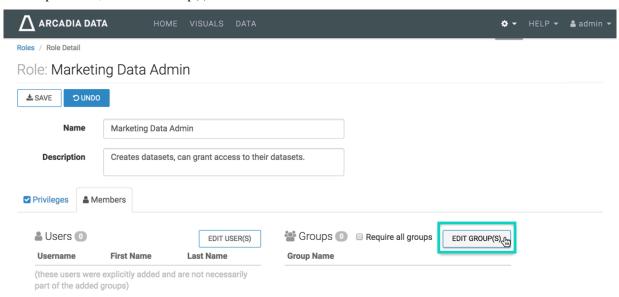
- There are three distinct access levels across the organization: Data Admins, Analysts, and Visual Consumers.
- There are three teams: Marketing, Sales, and Operations.

The following steps demonstrate how to create the necessary user groups in ArcViz. Note that depending on your architecture, this definition may happen at the LDAP layer, with groups visible to Data Visualization.

Procedure

- 1. On the main navigation bar, click the Gear icon, and select Manage Roles.
- 2. In the Roles interface, click either the name of the role, Marketing Data Admin, or the Edit icon on its role.
- 3. In the Role Detail interface, select the Members tab.

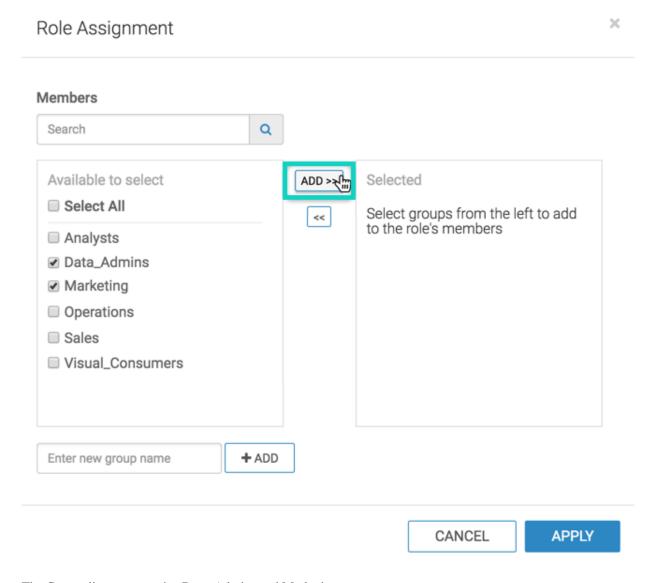
4. In Groups section, click Edit Group(s).



The Role Assignment modal window appears.

- 5. Select the groups Data_Admins and Marketing.
- 6. Click Add.

7. Click Apply.

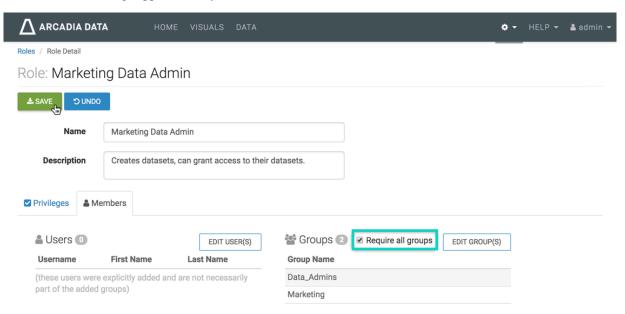


The Groups list now contains Data_Admins and Marketing.

8. Select the Require all groups option.

9. Click SAVE.

A confirmation message appears briefly.



10. Repeat the previous steps to assign groups to the rest of the roles, according to the following information. Remember that you must use the Require all groups option.

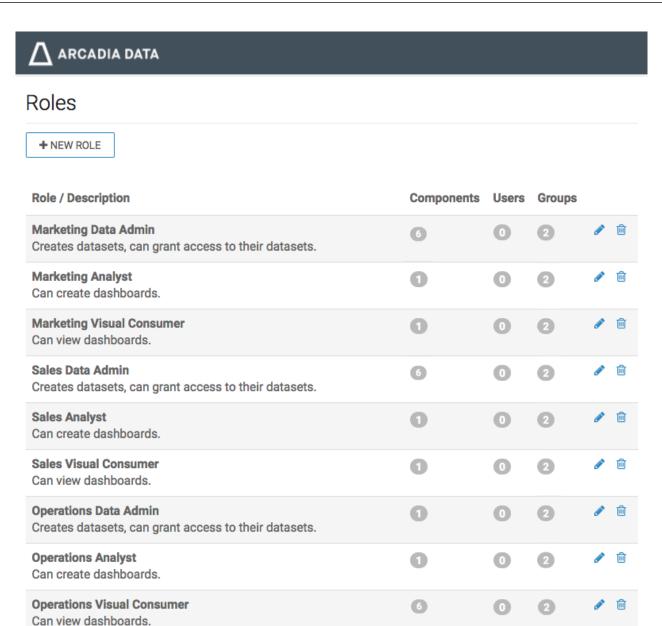
Table 3: Roles and their group assignments

Role Name	Assigned groups
Marketing Data Admin	Data_Admins Marketing
Marketing Analyst	Analysts Marketing
Marketing Visual Consumer	Visual_Consumers Marketing
Sales Data Admin	Data_Admins Sales
Sales Analyst	Analysts Sales
Sales Visual Consumer	Visual_Consumers Sales
Operations Data Admin	Data_Admins Operations
Operations Analyst	AnalystsOperations
Operations Visual Consumer	Visual_ConsumersOperations

What to do next

After completing these steps, the list of roles shows that the number of groups for each role is now 2 (two):

Cloudera Data Visualization Assigning users to groups



Assigning users to groups

About this task

Depending on your installation/migration scenario and security configuration, you may already have the required users, and they may already be assigned to the correct groups.

To continue our example, we show how to create new users and assign them to the groups. Appropriate group membership automatically endows the user with the required role.

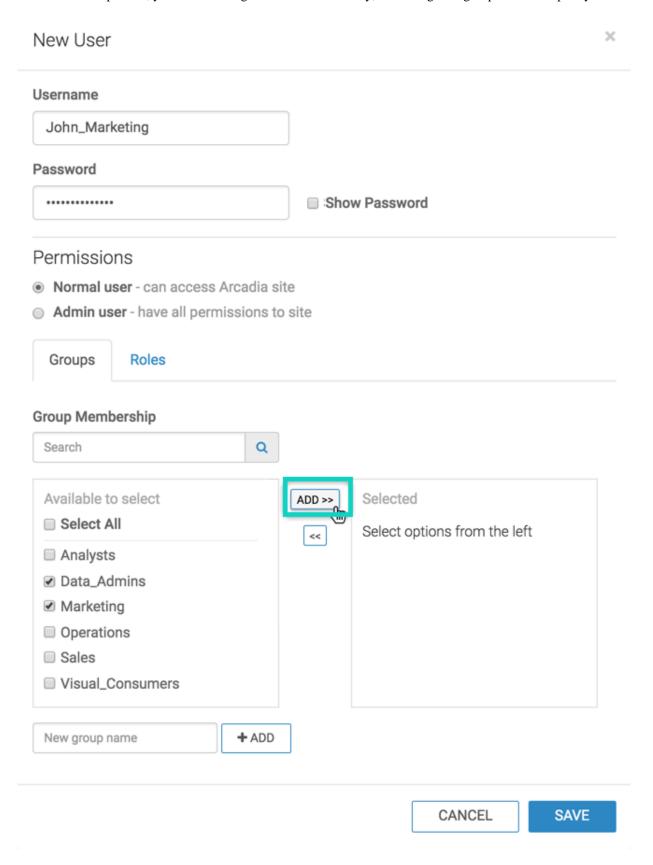
The following steps demonstrate how to create the necessary users and assign them to user groups in Data Visualization.

Procedure

- 1. On the main navigation bar, click Gear the icon.
- 2. Select Users & Groups
- 3. In the Manage Users & Groups interface, click New User.
- **4.** In the New User modal window, enter the following information:
 - Name: John_Marketing
 - Password: password of your choice.
 - Permissions: Select Normal user.
 - Under Groups tab, select Data Admin and Marketing.

5. Click Add to move these groups to the right column, and then click SAVE.

Note that in this process, you will not assign users to roles directly, but through the group membership only.



Cloudera Data Visualization Assigning users to groups

6. Repeat the previous steps to create new users and assign groups to them, according to the following information. This is a minimal set of users that 'populates' each role. We can have multiple users assigned to the same groups.

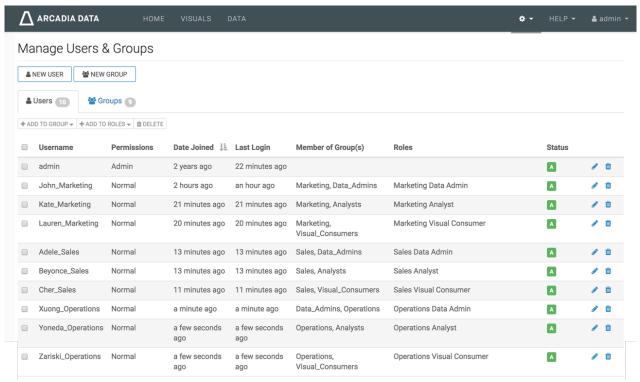
Table 4: Users and their group assignments

Role Name	Assigned groups
John_Marketing	Data_Admins Marketing
Kate_Marketing	Analysts Marketing
Lauren_Marketing	Visual_Consumers Marketing
Adele_Sales	Data_Admins Sales
Beyonce_Sales	Analysts Sales
Cher_Sales	Visual_Consumers Sales
Xuong_Operations	Data_Admins Operations
Yoneda_Operations	Analysts Operations
Zariski_Operations	Visual_ConsumersOperations

What to do next

After completing these steps, check the list of users, and notice that it shows the assigned roles. This is because we completed the group-role mapping already, as described in *Assigning groups to roles*.

Cloudera Data Visualization Assigning users to groups



Related Information

Assigning groups to roles