User Guide

NetIQ Identity Manager Catalog Administrator

March 2014

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Contents

About this Book and the Library

The *Catalog Administrator User Guide* provides conceptual information about the Catalog Administration feature of the NetIQ Identity Manager product. This book defines terminology and includes implementation scenarios.

Intended Audience

This book provides information for individuals responsible for understanding administration concepts for roles and resource management across the enterprise, and implementing a secure, distributed administration model.

Other Information in the Library

The library provides the following information resources:

Identity Manager Framework Installation Guide

Provides detailed planning and installation information for Identity Manager components.

Identity Manager Overview Guide

Provides conceptual information about Identity Manager. This book also provides an overview of the various components and many administration tasks.

Identity Manager Catalog Administration Release Notes

Provides overview information and known issues for this release of Identity Manager Catalog Administrator.

Identity Manager Catalog Administration Online Help

Provides information about Identity Manager Catalog Administrator in an online Help format.

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1 Overview

NetIQ Identity Manager Catalog Administrator is a Web-based tool that allows business and security analysts manage roles and resources in Identity Manager. Though catalog is not a unique database or a set of files, it encompasses all information about roles, resources, and relationship between them. Catalog Administrator allows you to view and manage permission assignments across various connected systems in organizations managed by Identity Manager. Catalog Administrator also allows you to design roles and map them with resources across connected systems.

You can use Catalog Administrator to:

- Associate resources to roles within your organization
- Create new roles and assign other roles to them
- Create separation of duties (SoD) constraints to manage potential conflicts between roles
- Find out which role or resource is associated with which container
- Create new resources, either from an entitlement or without an entitlement
- Modify existing roles and resources

Identity Manager Catalog Administrator leverages the Identity Manager resource model and provides you an up-to-date and easy-to-manage view of an organization's roles and resources. Catalog Administrator gets role and resource information from the User Application driver.

1.1 Roles

A role defines a set of permissions related to one or more target systems or applications. The Identity Manager roles system includes several different built-in roles that provide different levels of access rights to the role-based provisioning system. For example, someone assigned to administer the Roles Module has unlimited scope within the Roles system, but someone assigned to just manage roles is limited to specifically designated users, groups, and roles.

1.2 Resources

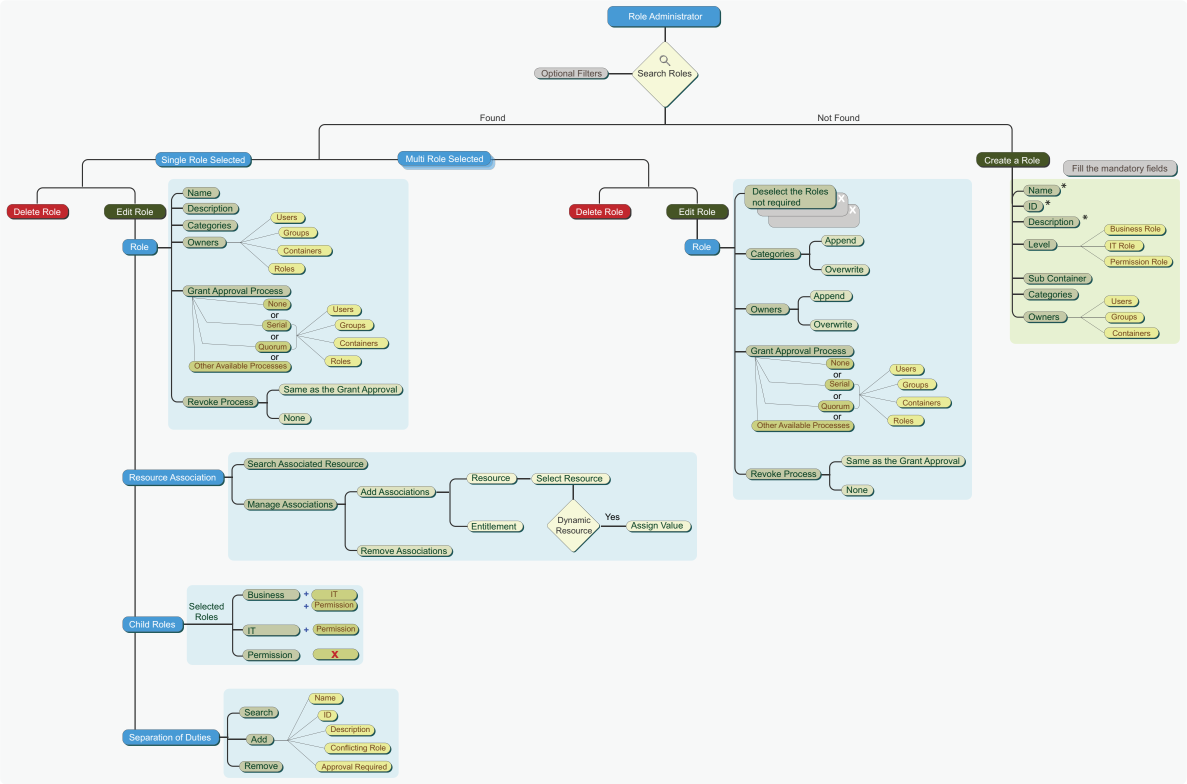
The Identity Manager drivers maintain the permission model by collecting account IDs and permissions assignments from external systems. Identity Manager calls these permissions entitlements. Identity Manager uses entitlements to provide users with access to resources in connected systems. For more information about entitlements, see *Identity Manager 4.0.2 Entitlements Guide*.

Entitlement model can become technical and difficult for business users to manage. The Identity Manager Resource model simplifies the entitlement model by providing you a convenient way to do resource-based provisioning. A resource is any digital entity such as a user account, computer, or database that a business user needs to be able to access. A resource definition can have no more than one entitlement bound to it. A resource definition can be bound to the same entitlement more than once, with different entitlement parameters for each resource.

The resource model makes it easy for business managers to make decisions about who should get access to what. The resource model also allows IT personnel to quickly see what users have access to what, what resources are available, and which rights and resources are assigned to what roles. For more information, see “Introducing Roles and Resources” in the *User Application: User Guide*.

Figure 1-1 illustrates the role administration scenario. For more information about roles, see Chapter 3, “Role Administration,” on page 17.

Figure 1-1 *Role Administration*



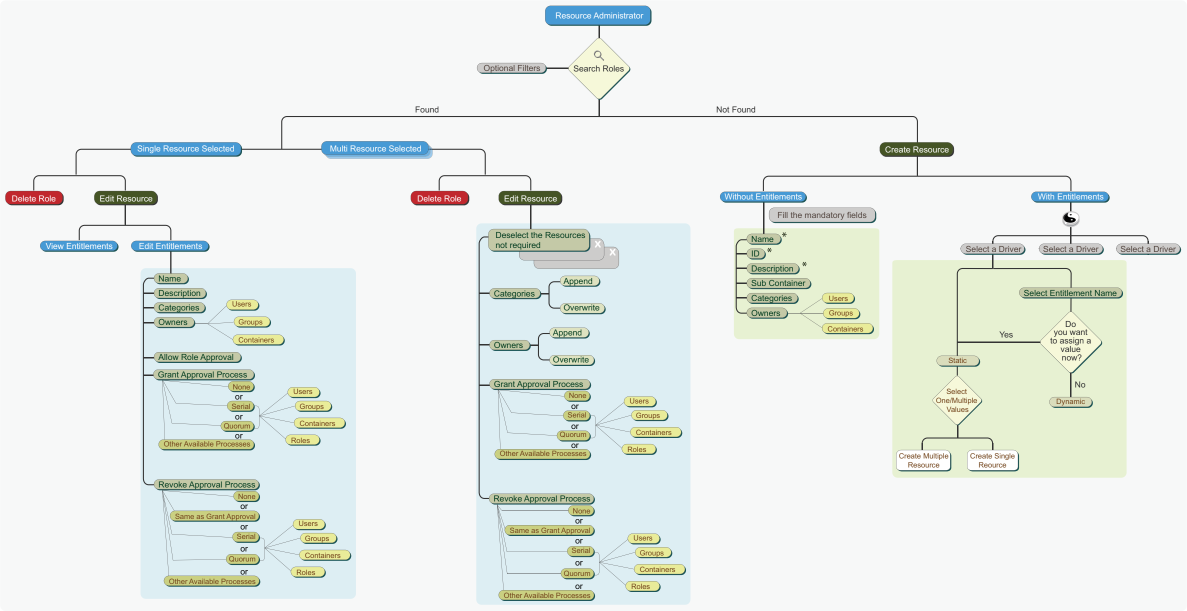
You can leverage Catalog Administrator to create and manage roles by defining several aspects of roles such as role levels, categories, and owners. You can also define child roles and separation of duties constraints for roles. When the Role Administrator sets up a role, the Resource Administrator can associate a resource to this role.

As a Role Administrator, you can perform the following tasks in Catalog Administrator:

- Create, remove, and modify roles
- Modify role relationships for roles
- Create, remove, and modify separation of duty constraints
- Browse the list of roles

Figure 1-2 illustrates the resource administration scenario. For more information about resources, see Chapter 4, “Resource Administration,” on page 21.

Figure 1-2 Resource Administration



As a Resource Administrator, you have the ability to create, modify, delete, browse resources or associate resources to an individual role or a role that is part of other role, group, or a container in an organization. You can associate only resources to a role.

1.3 What is Different in Catalog Administrator?

Catalog Administrator and Role Mapping Administrator are different in many ways. Catalog Administrator provides improved functionality over Role Mapping Administrator. Feature distinction between them is illustrated in a graphical representation.

Figure 1-3 lists how role management is handled in Catalog Administrator and Role Mapping Administrator.

Figure 1-3 *Differences in Role Functionality*

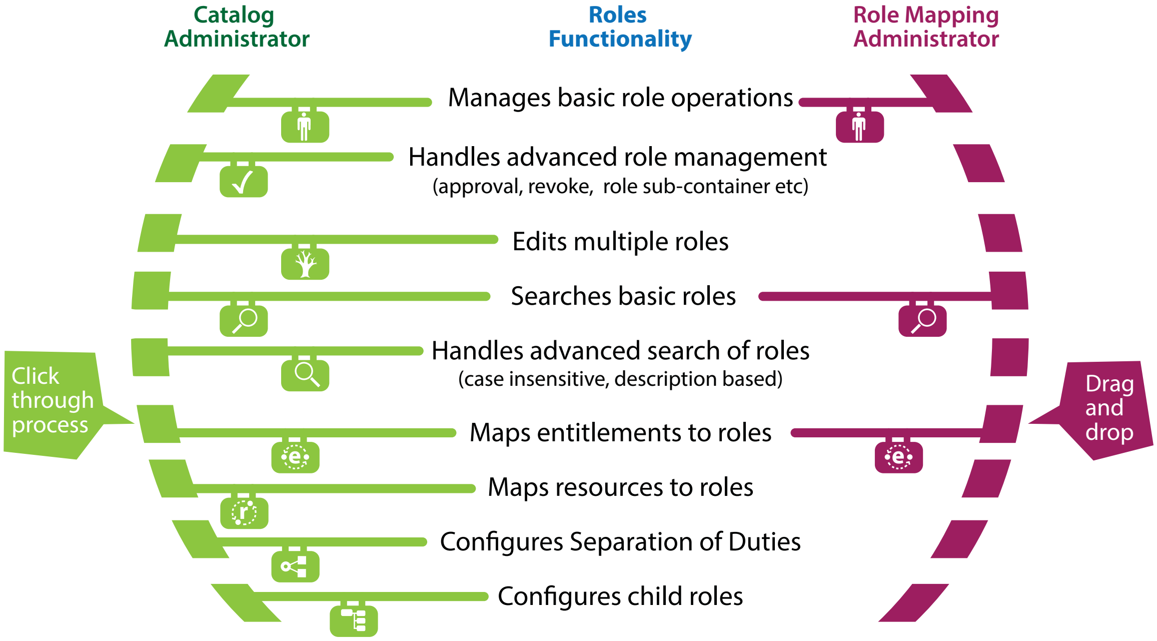

Catalog Administrator
Roles Functionality
Role Mapping Administrator
Manages basic role operations
Handles advanced role management
(approval, revoke, role sub-container etc)
Edits multiple roles
Searches basic roles
Handles advanced search of roles
(case insensitive, description based)
Click through process
Drag and drop
Maps entitlements to roles
Maps resources to roles
Configures Separation of Duties
Configures child roles

Figure 1-4 lists how resource management is handled in Catalog Administrator and Role Mapping Administrator.

Figure 1-4 *Differences in Resource Functionality*

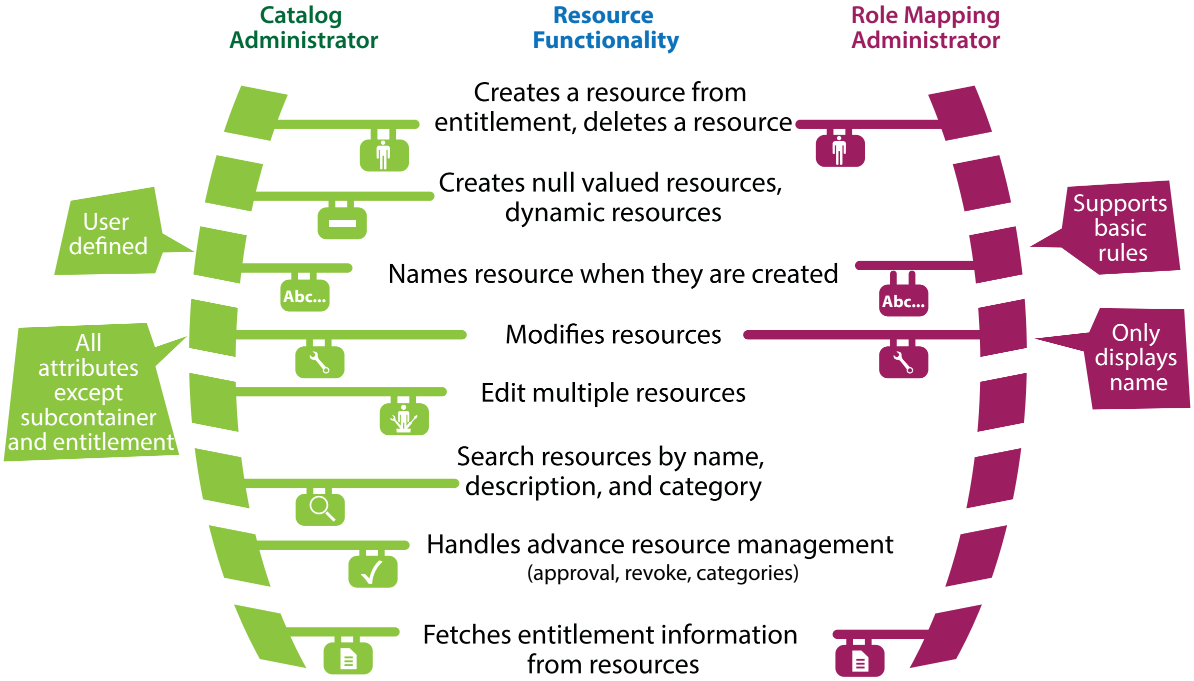
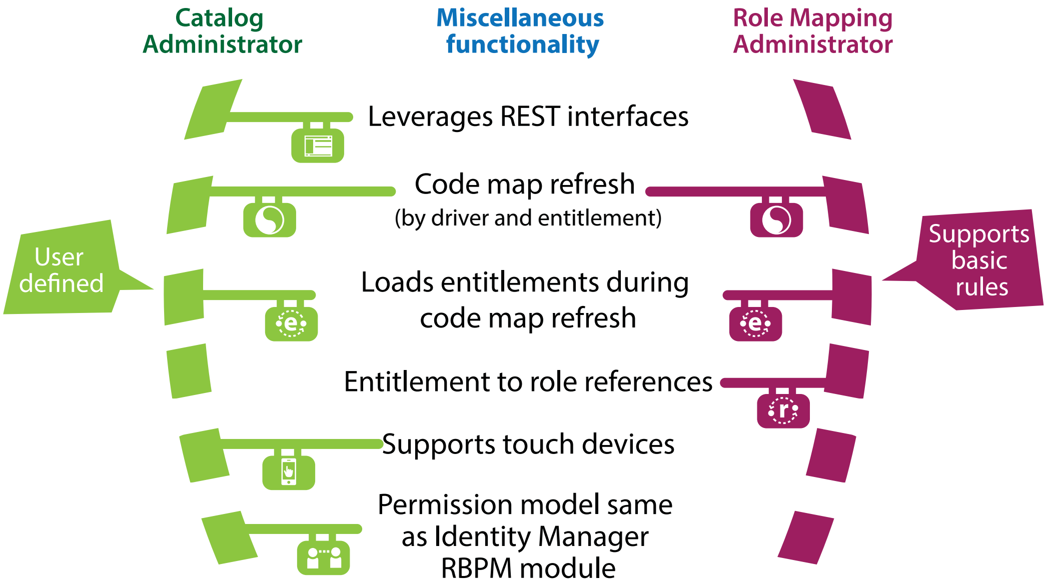

Catalog Administrator
Resource Functionality
Role Mapping Administrator
Creates a resource from entitlement, deletes a resource
Creates null valued resources, dynamic resources
User defined
Supports basic rules
Names resource when they are created
Abc...
Abc...
Modifies resources
All attributes except subcontainer and entitlement
Only displays name
Edit multiple resources
Search resources by name, description, and category
Handles advance resource management
(approval, revoke, categories)
Fetches entitlement information from resources

Figure 1-5 lists comparison of other functionality in Catalog Administrator and Role Mapping Administrator.

***Figure 1-5** Differences in Other General Functionality*


Catalog Administrator
Miscellaneous functionality
Role Mapping Administrator
Leverages REST interfaces
Code map refresh
(by driver and entitlement)
User defined
Supports basic rules
Loads entitlements during code map refresh
Entitlement to role references
Supports touch devices
Permission model same as Identity Manager RBPM module

2 Installing

You use Catalog Administrator as part of Identity Manager Home and Provisioning Dashboard. This chapter assumes that you already have Identity Manager Home with the Provisioning Dashboard installed.

The Catalog Administrator download package contains the following two files:

- `rra.war`: provides the user interface for Catalog Administrator
- `IDMProv.war`: Home and Provisioning Dashboard functionality with Catalog Administrator functionality included
- `CatalogAdminTiles.zip`: Script that adds two Catalog Administrator tiles to Identity Manager Home and Provisioning Dashboard.

2.1 Product Requirements

You must install to an existing Identity Manager Home and Provisioning Dashboard environment, so the operating system and other system requirements are described in the Home and Provisioning Dashboard documentation at https://www.netiq.com/documentation/idm402/idmhome-releasenotes/data/idmhome-releasenotes.html#b149h4pv.

2.2 Installing Catalog Administrator

Complete the following steps to install Catalog Administrator:

1. Stop JBoss.
2. At a command prompt, navigate to the `IDMProv/tmp` directory and enter the following command:

   ```
   rm -rf *
   ```
3. At a command prompt, navigate to the `IDMProv/work/jboss.web` directory and enter the following command:

   ```
   rm -rf *
   ```
4. Copy `rra.war` and `IDMProv.war` to the `deploy` folder. For example, `/opt/novell/idm/rbpm/jboss/server/IDMProv/deploy`.
5. At a command prompt, navigate to the `permindex` directory, for example, `/tmp/permindex`, and enter the following command:

   ```
   rm -rf *
   ```
6. Run `configupdate.sh`.
7. Ensure the information in the Catalog Administration section at the end of the SSO Clients tab is correct.

8. (Conditional) Change all instances of `localhost` to specify the actual server DNS name or IP address. You should only use `localhost` if all access to Identity Manager Home and Provisioning Dashboard will be local, including access through a browser. The address must be resolvable from all clients.
9. (Conditional) If you configured specific ports in your environment for use with Catalog Administrator, modify the port numbers as necessary.
10. (Conditional) If you use a database other than PostgreSQL, follow the instructions in the Configuring Non-PostgreSQL User Application Databases section of the Identity Manager Home and Provisioning Dashboard User Guide.
11. (Conditional) If you specified a context other than the default IDMProv context when you installed the Roles Based Provisioning Module, repeat the steps in the Installing Identity Manager Home and Provisioning Dashboard Using a Non-Default Context section of the Identity Manager Home and Provisioning Dashboard User Guide (https://www.netiq.com/documentation/idm402/idmhomepage/data/b17qloe7.html).
12. Start JBoss.
13. Click *OK*.
14. Create Catalog Admin Roles and Catalog Admin Resources links on the Identity Manager Home and Provisioning Dashboard by running the `CatalogAdminTile/createCatalogAdminTiles.sh` script in the `CatalogAdminTiles.zip` package.

2.3 Uninstalling Catalog Administrator

Only uninstall Catalog Administrator if you also want to uninstall all components of Identity Manager Home and Provisioning Dashboard. Since Catalog Administrator is used along with the Home and Provisioning Dashboard, you do not normally uninstall the tool by itself. However, if you want to stop using the Catalog Administration tool, you can remove `rra.war`. If you remove `IDMProv.war`, the Home and Provisioning Dashboard will no longer work.

3 Role Administration

A role defines a set of permissions related to one or more target systems or applications. For example, a user administrator role might be authorized to reset a user's password, while a system administrator role might have the ability to assign a user to a specific server.

You must define roles in Catalog Administrator. This tool allows you to create roles, establish roles hierarchy, define role relationships, and perform administrative actions on the roles. Except **Role Level** and **Subcontainers**, you can modify all other parameters of a role. Once you have defined a role, you cannot change the level of the role. To change the level of the role, you must delete the role and create it again. With Catalog Administrator, you can select multiple roles for modify and delete operations.

You can access the Role Administrator page from the Identity Manager Home and Provisioning Dashboard page. The Role Administrator page displays a list of currently defined roles in your organization. It also allows you to define new roles and manage existing ones. When you select a role from the list of roles, the page displays information about that role.

To change information associated with a role, you can either select it from the list of roles or search for it using **Filter**. The Roles page displays the details associated with the role.

The following sections contain information about operations that you can perform in the Role Administration page.

3.1 Searching for Roles

Click **Filter** icon in the Role Administration page. The **Filter** dialog displays **Role Categories** and **Role Level** fields that you can use to filter the roles.

When you are doing a simple search for a role, you can type in part of a role name or a description to display a list of roles that meet the criteria. When you enter some characters strings, called “stop words”, the search does not display the associated item. Also, the browser’s built-in search mechanism cannot search through the generated list of items. The filter is a more robust search feature that you should use to find all items that meet your search criteria.

3.2 Role Ownership

When you define a role, you have the option to designate one or more owners for that role. A role owner is the person who is designated as the owner of the role definition. The role owner can be a user, a group, or a container. The role owner does not automatically have the authorization to administer changes to a role definition. In some cases, the owner must ask a Role Administrator to perform any administration actions on the role.

3.3 Role Approval and Revocation

After you create a role, you can modify it to define the approval process for that role. An approver can be a user, a group, a container, or a specific role.

To change the approval process for a role, select it from the list of roles or search for it using **Filter**. The page displays information for the role. You can define the approval process for a role using one of the following options:

- **Serial Approval:** Specify multiple approvers, and define the order by selecting an approver and moving that approver earlier or later in the order by clicking the arrows at the right of the approval list.
- **Quorum Approval:** Specify the approvers, then use the slide bar to specify the percent of those approvers that are required to grant access.
- **Other Available Processes:** Specify the other approval process that you want to use. This approval process must be available for use in Catalog Administrator.

  NOTE: You must set up this approval process in Identity Manager Designer. For more information, see *User Application: Design Guide*.

If you choose **None**, no approvers are required for the role.

You can choose to have a revoke process or not. The revocation process can match the approval process. Also, you can define a different revocation process. Select the **Revoke Process** check box if you want the revocation process to match the approval process. If you define a different process, you are presented with same options that you have for defining the approval process.

3.4 Role Hierarchy

Role levels define role hierarchy. The roles hierarchy supports three levels. Roles defined at the highest level (called Business Roles) define operations that have business meaning within the organization. Mid-level roles (called IT Roles) supports technology functions. Roles defined at the lowest level of the hierarchy (called Permission Roles) define lower-level privileges.

A higher-level role automatically includes privileges from the lower-level roles that it contains. For example, a Business Role automatically includes privileges from the IT Roles that it contains. Similarly, an IT Role automatically includes privileges from the Permission Roles that it contains.

Role relationships are not permitted between peer roles within the hierarchy. In addition, lower-level roles cannot contain higher-level roles.

You can modify the label used for each role level in the User Application by defining localized strings for the level’s **Name** and **Description** in the role configuration editor.

To associate a role with another role, select it from the list of roles or search for it using **Filter**. The page displays information about the role. A child role must have a lower role level than the parent role, and the parent role is automatically assigned the privileges assigned to the lower-level roles.

3.5 Resource Associations

A role is only useful when it is defined to have access to a resource, and a resource is only useful as an entity that a user has access to. Therefore, you must associate roles and resources to make them useful. A user assigned to a role has access to all resources that are associated with that role.

To associate a resource with a role,

1. Go to the Roles Administration page.
2. Select the role you want to map from the list of roles.
3. Click **Resource Associations**, then click **Manage Associations**.
4. Select **Resources** or **Entitlements** to associate to a role.

   You are presents with two options: **Resources** and **Entitlements**. You can bind entitlements with a role. If a role has an entitlement bound to it, it allows you to see the entitlement mapping.

   or

   Search for a resource by drivers installed in your Identity Manager environment. You can type in part of a driver name to display a list of resources that meet the criteria.
5. (Conditional) If you select **Resources**, you can either search for a resource or select it from the list of available resources.
6. (Conditional) If you select **Entitlements**, select the driver for granting entitlements to this role from the list of available drivers. Based on the type of the role, the list of entitlements is displayed in the page. Select an entitlement to grant for this role. Also, you can search for values associated with an entitlement. To do this, you can either enter text in the **Entitlements Values** search field for the entitlement you are searching for.
7. Click **Add Association.**
8. Enter a mapping description for the resource or entitlement you selected.
9. Click **Apply** and **Close** to return to the Roles Administration page.

3.6 Separation of Duties Constraints

Separation of duties is an important aspect of an organization’s security controls because it helps prevent fraud and user error related to user access. In a separation of duties constraint, the conflicting roles must be at the same level in the roles hierarchy.

An SoD constraint represents a rule that makes two roles mutually exclusive, unless there is an exception allowed for that constraint. You can define whether exceptions to the constraint are always allowed or are only allowed through an approval flow. When a role assignment results in a potential separation of duties conflict, the initiator has the option to override the separation of duties constraint, and provide a justification for making an exception to the constraint.

You can add or delete separation of duties constraints.

To add separation of duties constraints, do the following:

1. Go to the Role Administration page.
2. Click **Manage Constraints**.

3 In the Add Separation of Duties page, fill in the mandatory fields.

4 Click **Apply** and **Close** to return to the Roles Administration page.

3.7 Editing Multiple Roles at Once

Catalog Administrator provides you the ability to perform actions on multiple roles as a group instead of requiring you to repeat those actions on each role individually. Select the roles you want to manage from the list of roles. You can change **Categories, Owners, and Approval Details** for the roles you selected. Also, you can append or overwrite values for **Categories** and **Owners** for the selected role.

4 Resource Administration

A resource is any digital entity such as a user account, computer, or database that a business user needs to be able to access. Each resource is mapped to an entitlement. For more information, see Section 1.2, “Resources,” on page 9.

Catalog Administrator allows you to create entitlement-based dynamic resources and non-valued resources (without entitlements). It also allows you to create static resources. You can modify **Categories, Owners**, and **Approval Process** for a resource. With Catalog Administrator, you can select multiple resources for modify and delete operations.

You can access the Resource Administrator page from the Identity Manager Home and Provisioning Dashboard page. The Resource Administrator page displays a list of currently defined resources in your organization.

To change information associated with a resource, you can either select it from the list of resources or search for it using **Filter**. The Resources page displays information about that resource.

The following sections contain information about operations that you can perform in the Resource Administration page.

- Section 4.1, “Searching for Resources,” on page 21
- Section 4.2, “Creating Resources,” on page 22
- Section 4.3, “Modifying Resources,” on page 22
- Section 4.4, “Resource Approval and Revocation,” on page 22
- Section 4.5, “Editing Multiple Resources at Once,” on page 23

4.1 Searching for Resources

Click **Filter** icon in the Resource Administration page. The **Filter** dialog displays **Resource Categories** field that you can use to filter the resources.

When you are doing a simple search for a resource, you can type in part of a resource name or a description to display a list of resources that meet the criteria. When you enter some characters strings, called “stop words”, the search does not display the associated item. Also, the browser’s built-in search mechanism cannot search through the generated list of items. The filter is a more robust search feature that you should use to find all items that meet your search criteria.

4.2 Creating Resources

You can create a non-valued resource (without entitlements) and entitlement based static or dynamic resource. If you choose to create a resource with entitlements, you have the following choices:

- Select the driver from the list of available drivers installed in your Identity Manager environment. When you click the tree view of the driver you selected, the entitlements associated with the driver are displayed. Select an entitlement and specify a value for it. If you select **Entitlement Association**, Catalog Administrator creates a dynamic resource. You must enter a description for the entitlement for the resource to be created. After creating a dynamic resource, you can specify the entitlement value when the resource is requested using Identity Manager Home and Provisioning Dashboard or when you are associating the resource with a role using Catalog Administrator.

  NOTE: Select **Allow this resource and entitlement to be assigned multiple times with different values** only if this resource will be requested by business users multiple times with different values.

  This option is displayed for User Account entitlement though it should not be because User Account entitlement is a single-valued entitlement.

- Select the driver from the list of available drivers installed in your Identity Manager environment and select an entitlement value from the list. The new static resource is associated with this entitlement value. If you select multiple entitlement values for creating a resource, Catalog Administrator automatically creates only one resource for each entitlement value.

To create a resource without entitlements, you must specify the mandatory fields to create it. The newly added resources are added to the organizational resources and available for business managers.

4.3 Modifying Resources

You can modify several parameters of a resource. You can select a resource whose parameters you want to change from the list of available resources or search for it in the filter dialog. The tool allows you to modify all parameters that are displayed in the page.

You can modify more than one resources at one time. For more information, see Section 4.5, "Editing Multiple Resources at Once," on page 23.

4.4 Resource Approval and Revocation

After you create a resource, you can modify the resource information and define the approval process for it. You can choose the role approval process to override the resource approval process.

To change the approval process for a resource, select it from the list of resources or search for it using **Filter**. The page displays information for the resource. A resource approver can be a user, a group, a container, or a specific role. You can define the approval process for a resource using one of the following options:

- **Serial Approval:** Specify multiple approvers, and define the order by selecting an approver and moving that approver earlier or later in the order by clicking the arrows at the right of the approval list.
- **Quorum Approval:** Specify the approvers, then use the slide bar to specify the percent of those approvers that are required to grant access.

- **Other Available Processes:** Specify the other approval process that you want to use. This approval process must be available for use in Catalog Administrator.

  NOTE: You must set up this approval process in Identity Manager Designer. For more information, see *User Application: Design Guide*.

If you choose **None**, no approvers are required for assigning the resource.

You can revoke the resource assignment by choosing one of the available options. The resource revocation process can match the resource approval process, or you can define a different process. Select the **Same as Grant Approval** option if you want the revocation process to match the approval process. If you define a different process, you are presented with same options that you have for defining the approval process.

4.5 Editing Multiple Resources at Once

Catalog Administrator provides you the ability to perform actions on multiple resources as a group instead of requiring you to repeat those actions on each resource individually. You need to select the resources you want to manage. You have the option to change **Owners, Categories, Grant Approval Process**, and **Revoke Process** for the resources you selected. Also, you can append or overwrite values for **Categories** and **Owners** for the selected resource.