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Novell Identity Manager Roles Based Provisioning Module

3.6

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USER APPLICATION: USER GUIDE

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Novell®

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Contents

About This Guide 11

Part I Welcome to Identity Manager 13

1 Getting Started 15

1.1 Identity Manager and You . . . 15
1.1.1 Introducing the Identity Manager User Application . . . 15
1.1.2 The Big Picture . . . 17
1.1.3 Typical Uses . . . 17
1.2 Accessing the Identity Manager User Application . . . 19
1.2.1 Your User Application Might Look Different . . . 20
1.3 Logging In . . . 20
1.3.1 If You Forget Your Password . . . 20
1.3.2 If You Have Trouble Logging In . . . 21
1.3.3 If You're Prompted for Additional Information . . . 22
1.4 Exploring the User Application . . . 22
1.4.1 Getting Help . . . 23
1.4.2 Preferred Locale . . . 23
1.4.3 Logging Out . . . 23
1.4.4 Common User Actions . . . 24
1.5 What's Next . . . 28

Part II Using the Identity Self-Service Tab 29

2 Introducing the Identity Self-Service Tab 31

2.1 About the Identity Self-Service Tab . . . 31
2.2 Accessing the Identity Self-Service Tab . . . 31
2.3 Exploring the Tab's Features . . . 32
2.4 Identity Self-Service Actions You Can Perform . . . 35

3 Using the Organization Chart 37

3.1 About the Organization Chart . . . 37
3.2 Navigating the Chart . . . 40
3.2.1 Navigating to the Next Higher Level . . . 40
3.2.2 Resetting the Root of the Relationship . . . 41
3.2.3 Switching the Default Relationship . . . 42
3.2.4 Expanding or Collapsing the Default Chart . . . 43
3.2.5 Choosing a Relationship to Expand or Collapse . . . 44
3.2.6 Looking Up a User in Organization Chart . . . 45
3.3 Displaying Detailed Information . . . 47
3.4 Sending E-Mail from a Relationship Chart . . . 47
3.4.1 E-Mailing Information About a User in a Chart . . . 48
3.4.2 Sending New E-Mail to a User in the Chart . . . 49
3.4.3 Sending E-Mail to a Manager's Team . . . 49

4 Using the Associations Report 51

4.1 About the Associations Report . . . 51
4.2 Displaying Associations . . . 52

5 Using My Profile 55

5.1 About My Profile . . . 55
5.2 Editing Your Information . . . 56
5.2.1 Hiding Information . . . 57
5.2.2 Using the Editing Buttons . . . 57
5.3 E-Mailing Your Information . . . 61
5.4 Displaying Your Organization Chart . . . 62
5.5 Linking to Other Users or Groups . . . 63
5.6 Choosing a Preferred Language . . . 67
5.6.1 Defining a Preferred Language in the Browser . . . 68

6 Using Directory Search 69

6.1 About Directory Search . . . 69
6.2 Performing Basic Searches . . . 72
6.3 Performing Advanced Searches . . . 73
6.3.1 Selecting an Expression . . . 76
6.3.2 Specifying a Value for Your Comparison . . . 77
6.4 Working with Search Results . . . 82
6.4.1 About Search Results . . . 82
6.4.2 Using the Search List . . . 84
6.4.3 Other Actions You Can Perform . . . 85
6.5 Using Saved Searches . . . 88
6.5.1 To List Saved Searches . . . 88
6.5.2 To Run a Saved Search . . . 88
6.5.3 To Edit a Saved Search . . . 88
6.5.4 To Delete a Saved Search . . . 89

7 Performing Password Management 91

7.1 About Password Management . . . 91
7.2 Password Challenge Response . . . 92
7.3 Password Hint Change . . . 93
7.4 Change Password . . . 94
7.5 Password Policy Status . . . 96
7.6 Password Sync Status . . . 97

8 Creating Users or Groups 99

8.1 About Creating Users or Groups . . . 99
8.2 Creating a User . . . 99
8.3 Creating a Group . . . 102
8.4 Using the Editing Buttons . . . 103
8.4.1 To Look Up a Container . . . 104
8.4.2 To Look Up a User . . . 105
8.4.3 To Use the History List . . . 107

Part III Using the Requests & Approvals Tab 109

9 Introducing the Requests & Approvals Tab 111

9.1 About the Requests & Approvals Tab . . . 111
9.2 Accessing the Requests & Approvals Tab . . . 112
9.3 Exploring the Tab's Features . . . 112
9.4 Requests & Approvals Actions You Can Perform . . . 114
9.5 Understanding the Requests & Approvals Legend . . . 117

10 Managing Your Work 121

10.1 About the My Work Actions . . . 121
10.2 Managing Your Tasks . . . 121
10.2.1 Viewing Your Tasks . . . 122
10.2.2 Selecting a Task . . . 123
10.2.3 Claiming a Task . . . 127
10.3 Requesting a Resource . . . 130
10.4 Checking the Status of Your Requests . . . 138

11 Configuring Your Provisioning Settings 143

11.1 About the My Settings Actions . . . 143
11.1.1 About Proxies and Delegates . . . 143
11.1.2 Sample Usage Scenarios . . . 143
11.2 Acting As a Proxy . . . 144
11.3 Specifying Your Availability . . . 146
11.3.1 Setting Your Availability Status . . . 146
11.3.2 Creating or Editing an Availability Setting . . . 148
11.3.3 Deleting an Availability Setting . . . 151
11.4 Viewing and Editing Your Proxy Assignments . . . 152
11.4.1 Displaying Your Proxy Settings . . . 152
11.4.2 Creating or Editing Proxy Assignments . . . 153
11.4.3 Deleting Proxy Assignments . . . 154
11.5 Viewing and Editing Your Delegate Assignments . . . 155
11.5.1 Displaying Your Delegate Settings . . . 155
11.5.2 Creating or Editing Delegate Assignments . . . 156
11.5.3 Deleting a Delegate Assignment . . . 159

12 Managing Your Team's Work 161

12.1 About My Team's Work Actions . . . 161
12.1.1 About Teams . . . 161
12.1.2 About Team Request Rights . . . 162
12.2 Managing Your Team's Tasks . . . 162
12.2.1 Viewing Tasks by Team Member . . . 163
12.2.2 Viewing Tasks by User or Group . . . 164
12.2.3 Using the Task Displays . . . 166
12.2.4 Selecting a Task . . . 170
12.2.5 Claiming a Task . . . 175
12.2.6 Reassigning a Task . . . 179
12.2.7 Releasing a Task . . . 180
12.3 Make Team Requests . . . 180
12.4 Managing Your Team's Requests . . . 186

13 Configuring Your Team's Provisioning Settings 191

13.1 About the My Team's Settings Actions . . . 191
13.2 Viewing and Editing Your Team's Proxy Assignments . . . 191
13.3 Viewing and Editing Your Team's Delegate Assignments . . . 195
13.4 Specifying Your Team's Availability . . . 201

Part IV Using the Roles Tab 207

14 Introducing the Roles Tab 209

14.1 About the Roles Tab . . . 209
14.1.1 About Roles . . . 210
14.2 Accessing the Roles Tab . . . 215
14.3 Exploring the Tab's Features . . . 215
14.4 Roles Actions You Can Perform . . . 217
14.5 Understanding the Roles Legend . . . 218

15 Viewing Your Roles 221

15.1 About the My Roles Actions . . . 221
15.2 Looking at Your Approved Role Requests . . . 221

16 Making Role Assignments 223

16.1 About the Role Assignments Actions . . . 223
16.2 Assigning Roles . . . 223
16.2.1 Assigning Users, Groups, and Containers to a Role . . . 223
16.2.2 Assigning Roles to a Single User . . . 226
16.2.3 Assigning Roles to a Single Group . . . 229
16.2.4 Assigning Roles to a Single Container . . . 231
16.3 Checking the Status of Your Requests . . . 233

17 Managing Roles 245

17.1 Browsing the Role Catalog . . . 245
17.2 Managing Roles . . . 246
17.2.1 Creating New Roles . . . 247
17.2.2 Modifying or Deleting Existing Roles . . . 249
17.2.3 Role Properties . . . 250
17.3 Managing Role Relationships . . . 251
17.3.1 Creating and Removing Role Relationships . . . 252
17.3.2 Managing Role Relationships Properties . . . 254
17.4 Managing Separation of Duties Constraints . . . 255
17.4.1 Creating New Separation of Duties Constraints . . . 255
17.4.2 Modifying Existing SoD Constraints . . . 256
17.4.3 SoD Constraint Property Reference . . . 257
17.5 Configuring the Role Subsystem . . . 259

18 Creating and Viewing Role Reports 261

18.1 About the Role Reporting Actions . . . 261
18.2 Role Reports . . . 261
18.2.1 The Role List Report . . . 261

18.2.2 The Role Assignment Report 263
18.3 SoD Reports 265
18.3.1 SoD Constraint Report 265
18.3.2 SoD Violations and Exceptions Report 266
18.4 User Reports 267
18.4.1 User Roles Report 268
18.4.2 User Entitlements Report 269

About This Guide

This book describes the user interface of the Novell® Identity Manager user application and how you can use the features it offers, including:

- Identity self-service (for user information, passwords, and directories)
- Requests and approvals (using workflow-based provisioning)
- Roles (for roles-based provisioning actions)

Audience

The information in this book is for end users of the Identity Manager user interface.

Prerequisites

This guide assumes that you are using the default configuration of the Identity Manager user interface. However, it's possible that your version of the user interface has been customized to look or operate differently.

Before you get started, you should check with your system administrator for details on any customizations you might encounter.

Organization

Here's a summary of what you'll find in this book:

Part	Description
Part I, "Welcome to Identity Manager," on page 13	Introduction to the Identity Manager user interface and how to begin using it
Part II, "Using the Identity Self-Service Tab," on page 29	How to use the *Identity Self-Service* tab of the Identity Manager user interface to display and work with identity information, including: ◆ Organization charts ◆ Profiles (your identity details) ◆ Directory searches ◆ Passwords ◆ User accounts (and more)
Part III, "Using the Requests & Approvals Tab," on page 109	How to use the *Requests & Approvals* tab of the Identity Manager user interface to: ◆ Manage provisioning work (tasks and resource requests) for yourself or your team ◆ Configure provisioning settings for yourself or your team

Part	Description
Part IV, “Using the Roles Tab,” on page 207	How to use the Roles tab of the Identity Manager user interface to: ◆ Make role requests for yourself or other users within your organization ◆ Create roles and role relationships within the roles hierarchy ◆ Create separation of duties (SoD) constraints to manage potential conflicts between role assignments ◆ Look at reports that provide details about the current state of the Role Catalog and the roles currently assigned to users, groups, and containers

Feedback

We want to hear your comments and suggestions about this manual and the other documentation included with this product. Please use the User Comments feature at the bottom of each page of the online documentation, or go to www.novell.com/documentation/feedback.html and enter your comments there.

Documentation Updates

For the most recent version of the *IDM User Application: User Guide*, visit the Identity Manager Web site (http://www.novell.com/documentation/idm35/).

Documentation Conventions

In Novell documentation, a greater-than symbol (>) is used to separate actions within a step and items in a cross-reference path.

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When a single pathname can be written with a backslash for some platforms or a forward slash for other platforms, the pathname is presented with a backslash. Users of platforms that require a forward slash, such as Linux* or UNIX*, should use forward slashes as required by your software.

Welcome to Identity Manager

Read this part first to learn about the Identity Manager User Application and how to begin using it.

- Chapter 1, “Getting Started,” on page 15

Getting Started

1

This section tells you how to begin using the Identity Manager User Application. Topics include:

- Section 1.1, “Identity Manager and You,” on page 15
- Section 1.2, “Accessing the Identity Manager User Application,” on page 19
- Section 1.3, “Logging In,” on page 20
- Section 1.4, “Exploring the User Application,” on page 22
- Section 1.5, “What’s Next,” on page 28

1.1 Identity Manager and You

Novell® Identity Manager is a system software product that your organization uses to securely manage the access needs of its user community. If you’re a member of that user community, you benefit from Identity Manager in a number of ways. For example, Identity Manager enables your organization to:

- Give users access to the information (such as group org charts, department white pages, or employee lookup) and resources (such as equipment or accounts on internal systems) that they need, right from day one
- Synchronize multiple passwords into a single login for all your systems
- Modify or revoke access rights instantly when necessary (such as when someone transfers to a different group or leaves the organization)
- Support compliance with government regulations

To bring these benefits directly to you and your team, the Identity Manager User Application provides a user interface that you can use from your Web browser.

1.1.1 Introducing the Identity Manager User Application

The Identity Manager User Application is your view into the information, resources, and capabilities of Identity Manager. Your system administrator determines the details of what you can see and do in the Identity Manager User Application. Typically, this includes:

- Identity self-service, which enables you to:
  - Display organization charts
  - Report applications associated with a user if you are an administrator. (Requires the Roles Based Provisioning Module for Identity Manager.)
  - Edit the information in your profile
  - Search a directory
  - Change your password, password challenge response, and password hint
  - Review your password policy status and password synchronization status
  - Create accounts for new users or groups (if you are authorized)

- Requests and approvals, which enable you to:
  - Request resources
  - Check the approval of your resource requests
  - Work on tasks assigned to you for approving other resource requests
  - Perform requests and approvals as a proxy or delegate for someone else
  - Assign someone else to be your proxy or delegate (if you are authorized)
  - Manage all of these request and approval features for your team (if you are authorized)
  - Optionally provide a digital signature for each request or approval

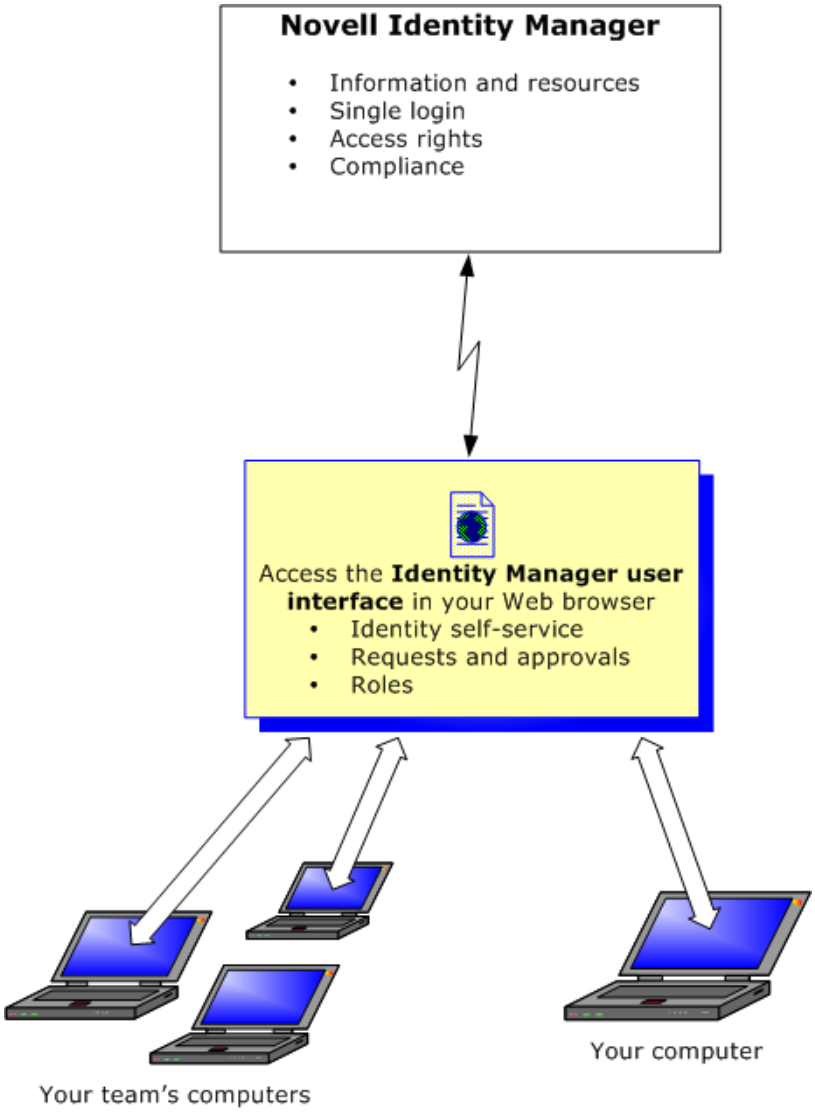
NOTE: Requests and approvals require the Roles Based Provisioning Module for Identity Manager.

- Roles, which enable you to:
  - Request role assignments and manage the approval process for role assignment requests
  - Check the status of your role requests
  - Define roles and role relationships
  - Define separation of duties (SoD) constraints and manage the approval process in situations where a user requests an override to a constraint
  - Browse the Role Catalog
  - Look at detailed reports that list the roles and separation of duties constraints defined in the catalog, as well as the current state of role assignments, separation of duties exceptions, and user entitlements

NOTE: Roles require the Roles Based Provisioning Module for Identity Manager.

1.1.2 The Big Picture

Figure 1-1 *The IDM User Application Provides the User Interface to Identity Manager*



1.1.3 Typical Uses

Here are some examples of how people typically use the Identity Manager User Application within an organization.

Working with Identity Self-Service

- Ella (an end user) recovers her forgotten password through the identity self-service features when logging in.
- Erik (an end user) performs a search for all employees who speak German at his location.
- Eduardo (an end user) browses the organization chart, finds Ella, and clicks the e-mail icon to send a message to her.

Working with Requests and Approvals

- Ernie (an end user) browses a list of resources available to him, and requests access to the Siebel* system.
- Amy (an approver) receives notification of an approval request via e-mail (which contains an URL). She clicks the link, is presented with an approval form, and approves it.
- Ernie checks on the status of his previous request for Siebel access (which has now gone to a second person for approval). He sees that it is still in progress.
- Amy is going on vacation, so she indicates that she is temporarily unavailable. No new approval tasks are assigned to her while she is unavailable.
- Amy opens her approval task list, sees that there are too many for her to respond to in a timely manner, and reassigns several to co-workers.
- Pat (an administrative assistant, acting as a proxy user for Amy) opens Amy's task list and performs an approval task for her.
- Max (a manager) views the task lists of people in his department. He knows that Amy is on vacation, so he reassigns tasks to others in his department.
- Max initiates a request for a database account for someone in his department who reports directly to him.
- Max assigns Dan to be an authorized delegate for Amy.
- Dan (now a delegated approver) receives Amy's tasks when she is unavailable.
- Max engages an unpaid intern, who should not be entered into the HR system. The system administrator creates the user record for this intern and requests that he be given access to Notes, Active Directory*, and Oracle*.

Working with Roles

- Maxine (a Role Manager) creates the Nurse and Doctor business roles and the Administer Drugs and Write Prescriptions IT roles.
- Maxine (a Role Manager) defines a relationship between the Nurse and Administer Drugs roles, specifying that the Nurse role contains the Administer Drugs role. Max also defines a relationship between the Write Prescriptions and Doctor roles, specifying that the Doctor role contains the Write Prescriptions role.
- Chester (a Security Officer) defines a separation of duties constraint that specifies that a potential conflict exists between the Doctor and Nurse roles. This means that ordinarily the same user should be used assigned to both roles at the same time. In some circumstances, an individual who requests a role assignment may want to override this constraint. To define a separation of duties exception, the individual who requests the assignment must provide a justification.
- Ernest (an end user) browses a list of roles available to him, and requests assignment to the Nurse role.
- Amelia (an approver) receives notification of an approval request via e-mail (which contains an URL). She clicks the link, is presented with an approval form, and approves it.
- Arnold (a Role Manager) requests that Ernest be assigned to the Doctor role. He is notified that a potential conflict exists between the Doctor role and Nurse role, to which Ernest has already been assigned. He provides a justification for making an exception to the separation of duties constraint.

- Edward (a separation of duties approver) receives notification of a separation of duties conflict via e-mail. He approves Arnold's request to override the separation of duties constraint.
- Amelia (an approver) receives notification of an approval request for the Doctor role via e-mail. She approves the Arnold's request to assign Ernest to the Doctor role.
- Bill (a Role Auditor) looks at the SoD Violations and Exceptions Report and sees that Ernest has been assigned to both the Doctor and Nurse roles.

1.2 Accessing the Identity Manager User Application

When you're ready to start using the Identity Manager User Application, all you need on your computer is a Web browser. Identity Manager supports the most popular browser versions; see your system administrator for a list of supported browsers or for help installing one.

Because it works in a browser, the Identity Manager User Application is as easy to access as any Web page.

NOTE: To use the Identity Manager User Application, enable cookies (at least *Medium* privacy level in Internet Explorer) and JavaScript* in your Web browser.

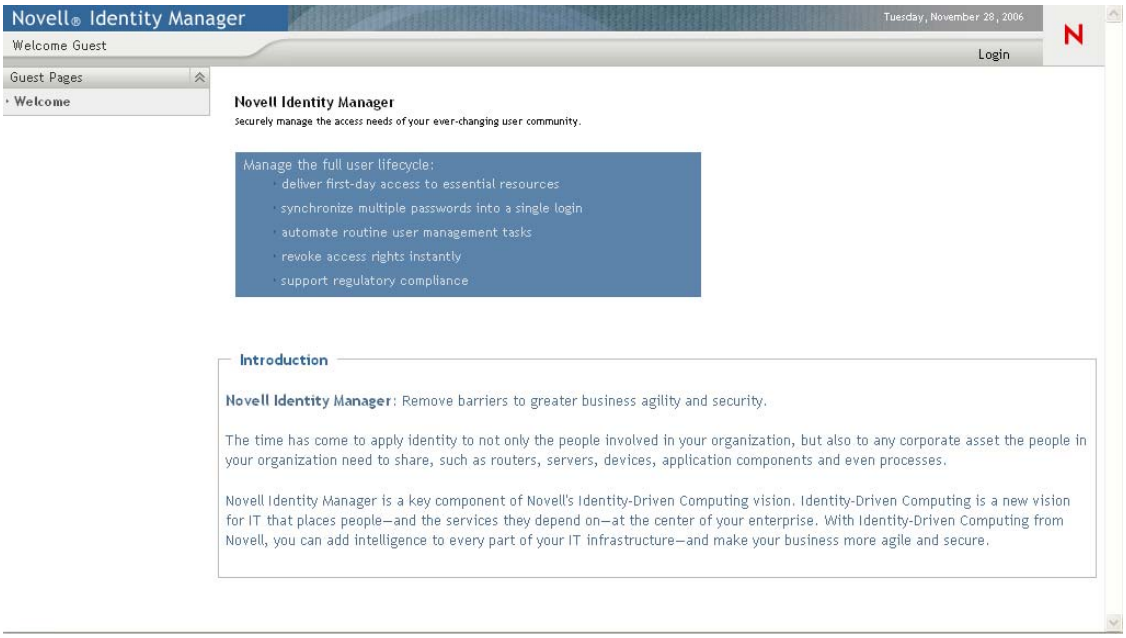
To access the Identity Manager User Application, open a Web browser and go to the address (URL) for the Identity Manager User Application (as supplied by your system administrator), for example http://myappserver:8080/IDM.

By default, this takes you to the Welcome Guest page of the User Application:

Figure 1-2 *The Welcome Guest Page of the User Application*

Description: Welcome Guest page in the User Application

Screen Capture Path: This is the first screen you see when you access the user application server by its URL, for instance in the form http://servername.company.com:8180/IDM



From here, you can log in to the User Application to get access to its features.

1.2.1 Your User Application Might Look Different

If you see a different first page when accessing the Identity Manager User Application, it's typically because the application has been customized for your organization. As you work, you might find that other features of the User Application have also been customized.

If this is the case, you should check with your system administrator to learn how your customized User Application differs from the default configuration described in this guide.

1.3 Logging In

You must be an authorized user to log in to the Identity Manager User Application from the guest welcome page. If you need help getting a username and password to supply for the login, see your system administrator.

To log in to the Identity Manager User Application:

1 From the Welcome Guest page, click the *Login* link (in the top right corner of the page).

The User Application prompts you for a username and password:

Description: Login window prompts for username and password

2 Type your username and password, then click *Login*.

1.3.1 If You Forget Your Password

If you can't remember the password to type, you might be able to use the *Forgot Password?* link for assistance. When you are prompted to log in, this link appears on the page by default. You can take advantage of it if your system administrator has set up an appropriate password policy for you.

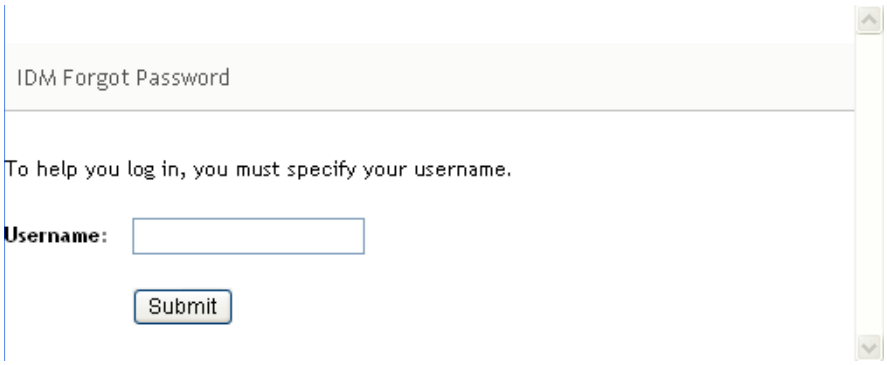
To use the Forgot Password feature:

1 When you're prompted to log in, click the *Forgot Password?* link.

You are then asked for your username:

Description: Forgot Password dialog

Screen Capture Path: IDM > Login > Forgot Password?

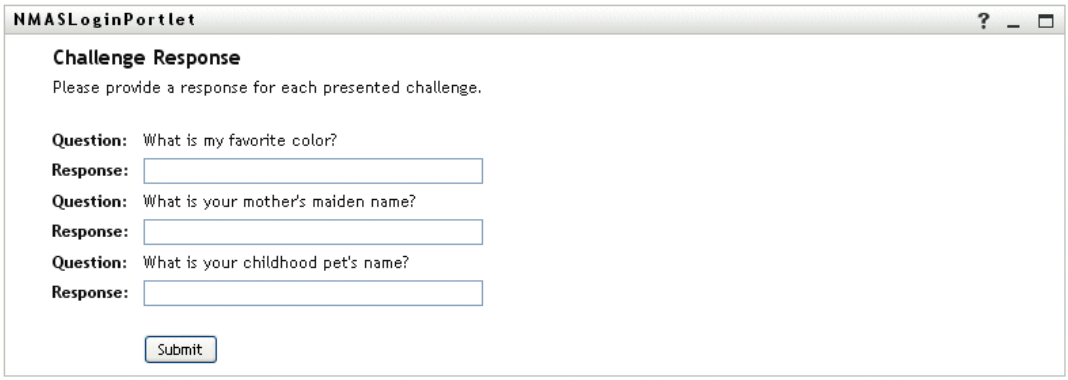


2 Type your username and click *Submit*.

If Identity Manager responds that it can't find a password policy for you, see your system administrator for assistance.

3 Answer any challenge questions that display and click *Submit*. For example:

Description: screen capture of the challenge response page



Answer the challenge questions to get assistance with your password. Depending on how the system administrator has set up your password policy, you could:

- See a hint about your password displayed on the page
- Receive an e-mail containing your password or a hint about it
- Be prompted to reset your password

1.3.2 If You Have Trouble Logging In

If you are unable to log in to the Identity Manager User Application, make sure that you're using the right username and typing the password correctly (spelling, uppercase or lowercase letters, etc.). If you still have trouble, consult your system administrator. It's helpful if you can provide details about the problem you are having (such as error messages).

1.3.3 If You're Prompted for Additional Information

You might be prompted for other kinds of information as soon as you log in to the Identity Manager User Application. It all depends on how the system administrator has set up your password policy (if any). For example:

- If this is your first login, you might be prompted to define your challenge questions and responses, or your password hint
- If your password has expired, you might be prompted to reset it

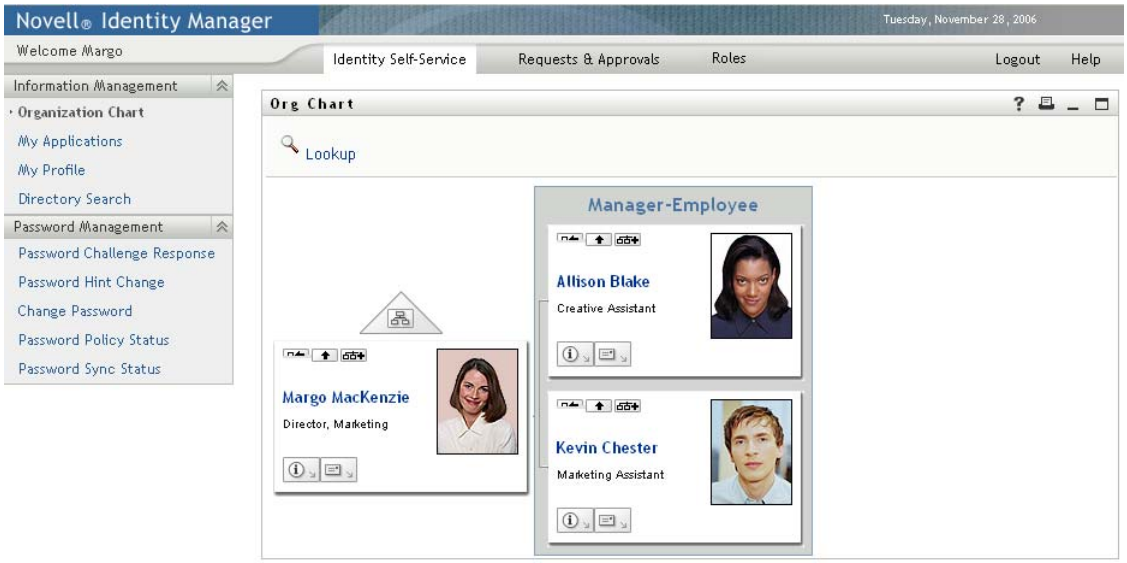
1.4 Exploring the User Application

After you log in, the Identity Manager User Application displays the tab pages where you do your work:

Figure 1-3 *On Login, You See Tabs and the Organization Chart*

Description: Successful log-in displays tab pages and the Organization Chart

Screen Capture Path: IDM > Login > username and password



If you look along the top of the User Application, you'll see the main tabs:

- *Identity Self-Service* (which is open by default)

  To learn about this tab and how to work with it, see Part II, "Using the Identity Self-Service Tab," on page 29.

- *Requests & Approvals*

  To learn about this tab and how to work with it, see Part III, "Using the Requests & Approvals Tab," on page 109.

  NOTE: To enable the *Requests & Approvals* tab, your organization must have the Roles Based Provisioning Module for Identity Manager.

To switch to a different tab, simply click the tab you want to use.

1.4.1 Getting Help

While working in the Identity Manager User Application, you can display online help to get documentation about the tab that you're currently using.

1. Go to the tab that you want to learn about (such as *Identity Self-Service* or *Requests & Approvals*).
2. Click the *Help* link (in the top right corner of the page).

   The help page for the current tab displays.

1.4.2 Preferred Locale

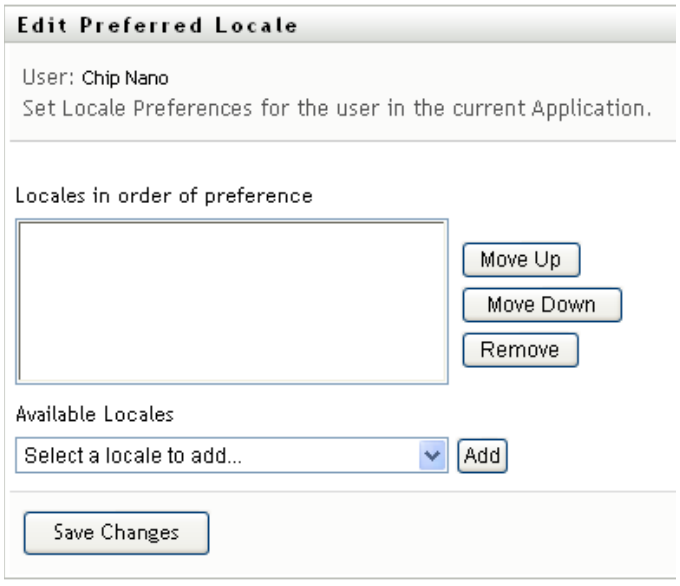
If your administrator has not defined a preferred locale (language) for the User Application, you receive a prompt to select your own preferred locale when you first log in.

1. When prompted, add a locale by opening the *Available Locales* list, selecting a locale, and clicking *Add*.

   For more information, see Section 5.6, "Choosing a Preferred Language," on page 67.

Description: Use the Edit Preferred Locale page to select the UI preferred language

Screen Capture Path: Identity Self-Service > Information Management > My Profile > Edit Preferred Locale



1.4.3 Logging Out

When you're finished working in the Identity Manager User Application and want to end your session, you can log out.

1. Click the *Logout* link (in the top right corner of the page).

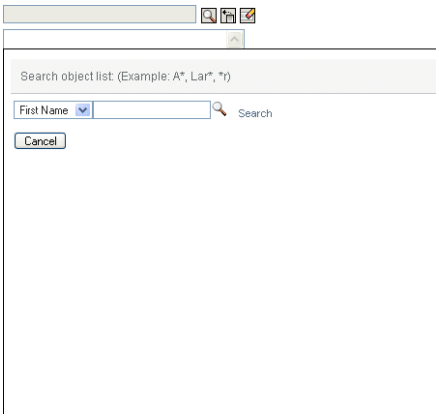
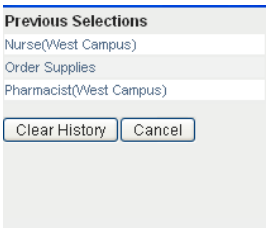
By default, the User Application thanks you for using Novell Identity Manager. Click the red link titled *Return to Novell Identity Manager Login* to return to a login prompt.

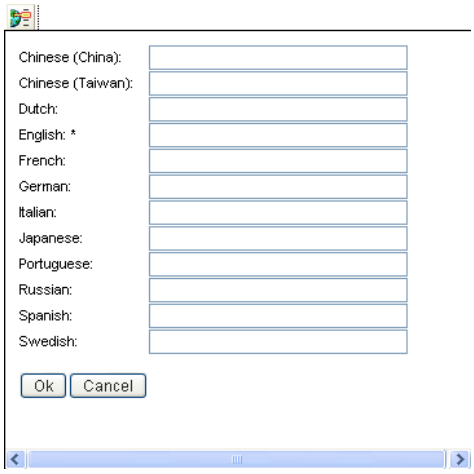
1.4.4 Common User Actions

The User Application provides a consistent user interface with common user interactions for accessing and displaying data. This section describes several of the common user interface elements and includes instructions for:

- "Using the Object Selector Button for Searching" on page 25
- "Filtering Data" on page 26

Table 1-1 *Common Buttons*

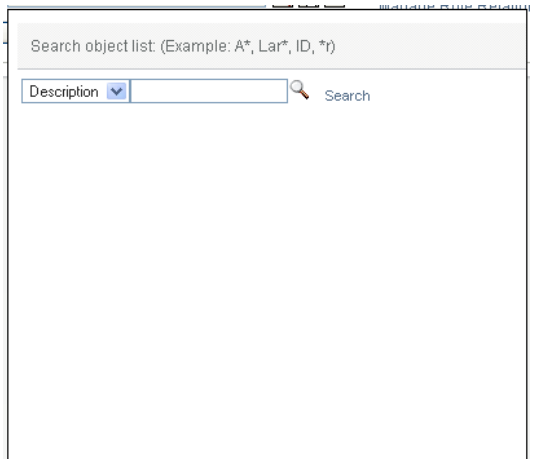
Button	Description
	Object Selector Provides access to a Search dialog box or popin. You can enter search criteria for different types of objects based on your location within the User Application. For example, in the Identity Self-Service tab, you can search for users and groups while in the Roles tab, you can search for users, groups, and roles.  See "Using the Object Selector Button for Searching" on page 25.
	Show History Provides links to previously accessed data. You can select the link to display the data for the previous selection. Clicking Show History might be faster than performing a search if you know that you have recently worked with an item. 
	Reset Clears the current selection.

Button	Description
	Localize Displays a dialog box that lets you enter the text usually for a field name or description in any of the locales currently supported by the User Application. 
	Add Adds a new item or object. You are prompted for additional information specific to the type of object you are adding.
	Delete Deletes the currently selected item.
	Up or Down Arrow Moves the currently selected object up or down on the list
	Legend Provides a description for the symbols used on the *Requests & Approvals* or *Roles* tabs.

Using the Object Selector Button for Searching

To use the Object Selector button:

1 Click . The Search dialog displays:



2 Specify your search criteria as follows:

2a Use the drop-down list to choose a field on which to search. The drop-down list fields depend on where you launched the search. In this example, you can specify *Name* or *Description*.

2b In the text box next to the drop-down list, type all or part of the search criteria (such as name or description). The search finds every occurrence of the type of object you are searching for that begins with the text you type. You can optionally use the asterisk (*) as a wildcard in your text to represent zero or more of any character. For instance, all of the following examples find the role Nurse:

nurse

n

n*

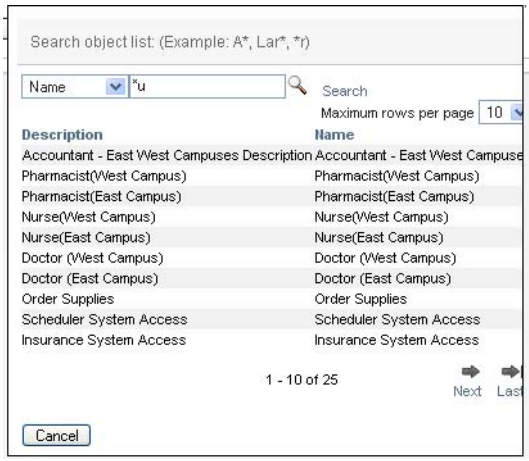
*u

*r

*e

3 Click *Search*.

The search results display. You can sort the search results in ascending or descending order by clicking the column headings. This example shows a list of roles.



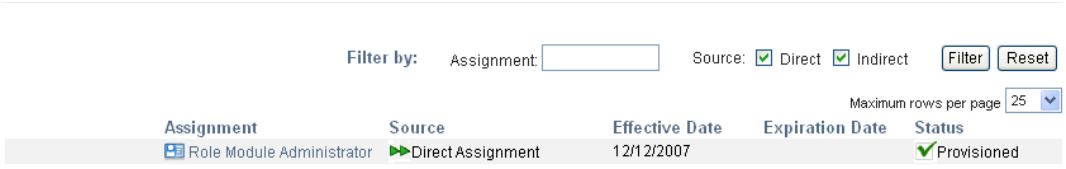
If you the result list includes the one you want, go to Step 4. Otherwise, go back to Step 2.

4 Select the item you want from the list. The lookup page closes and populates the page with the data associated with your selection.

Filtering Data

The Roles tab of the User Application provides filters so that you can display only the data that you are interested in viewing. You can additionally limit the amount of data displayed on a single page by using the Maximum rows per page setting. Some examples of filters include:

- Filtering by role assignment and source (available in the My Roles action):



- Filtering by role name, user, and status (available in the View Request Status action):

- Filtering by role level and category (available in the Browse Role Catalog action):

To use filtering:

1 Specify a value in the *Filter by* text field, as follows:

1a To limit the items to those that start with a particular string of characters, type all or part of the character string in the *Filter by* box. You can optionally use the asterisk (*) as a wildcard in your text to represent zero or more of any character. For instance, all of the following examples find the role assignment called Nurse:

nurse

n

n*

*u

*r

*e

NOTE: A filter on Role Name does not limit the number of objects returned from the Identity Vault. It simply restricts the objects displayed on the page based on the filter criteria. Other filters (such as Status) do restrict the number of objects returned from the Identity Vault.

1b To further filter the items displayed, you can specify additional filter criteria. The user application allows you to select the criteria in different ways depending on the data. You might select a checkbox or select one or more items from a list box (using your platforms multi-select keystrokes). The criteria is ANDed so that only the items that meet all of the criteria are displayed.

1c To apply the filter criteria you've specified to the display, click *Filter*.

1d To clear the currently specified filter criteria, click *Reset*.

2 To set the maximum number of items matching the filter by criteria that are displayed on each page, select a number in the *Maximum rows per page* dropdown list.

1.5 What's Next

Now that you've learned the basics of the Identity Manager User Application, you can start using the tabs it provides to get your work done.

To learn about	See
Doing identity self-service work	Part II, "Using the Identity Self-Service Tab," on page 29
Doing request and approval work	Part III, "Using the Requests & Approvals Tab," on page 109
Doing roles work	Part IV, "Using the Roles Tab," on page 207

Using the Identity Self-Service Tab

These sections tell you how to use the *Identity Self-Service* tab of the Identity Manager User Application to display and work with identity information.

- Chapter 2, “Introducing the Identity Self-Service Tab,” on page 31
- Chapter 3, “Using the Organization Chart,” on page 37
- Chapter 4, “Using the Associations Report,” on page 51
- Chapter 5, “Using My Profile,” on page 55
- Chapter 6, “Using Directory Search,” on page 69
- Chapter 7, “Performing Password Management,” on page 91
- Chapter 8, “Creating Users or Groups,” on page 99

Introducing the Identity Self-Service Tab

2

This section tells you how to begin using the *Identity Self-Service* tab of the Identity Manager User Application. Topics include:

- Section 2.1, “About the Identity Self-Service Tab,” on page 31
- Section 2.2, “Accessing the Identity Self-Service Tab,” on page 31
- Section 2.3, “Exploring the Tab’s Features,” on page 32
- Section 2.4, “Identity Self-Service Actions You Can Perform,” on page 35

For more general information about accessing and working with the Identity Manager User Application, see Chapter 1, “Getting Started,” on page 15.

2.1 About the Identity Self-Service Tab

The *Identity Self-Service* tab gives you a convenient way to display and work with identity information yourself. It enables your organization to be more responsive by giving you access to the information you need whenever you need it. For example, you might use the *Identity Self-Service* tab to:

- Manage your own user account directly
- Look up other users and groups in the organization on demand
- Visualize how those users and groups are related
- List applications with which you are associated

Your system administrator is responsible for setting up the contents of the *Identity Self-Service* tab for you and the others in your organization. What you can see and do is typically determined by your job requirements and your level of authority.

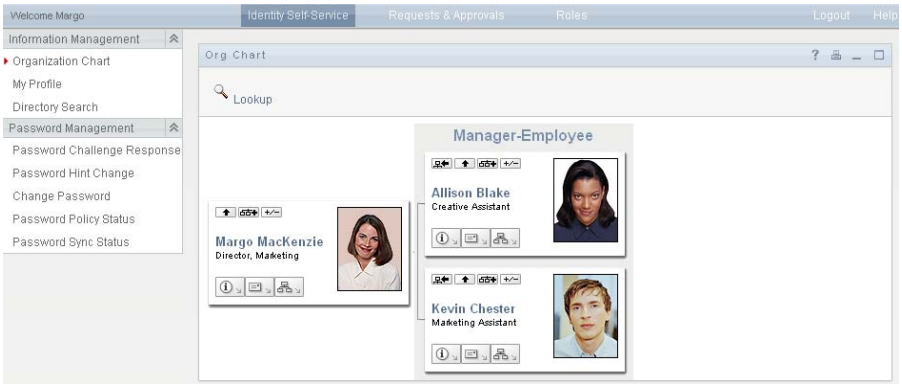
2.2 Accessing the Identity Self-Service Tab

By default, after you have logged in to the Identity Manager User Application, the *Identity Self-Service* tab opens and displays its Organization Chart page:

Figure 2-1 *The Organization Chart Page on the Identity Self-Service Tab*

Description: The Organization Chart page on the Identity Self-Service tab

Screen Capture Path: IDM > Identity Self-Service



If you go to another tab in the Identity Manager User Application but then want to return, just click the *Identity Self-Service* tab to open it again.

2.3 Exploring the Tab's Features

This section describes the default features of the *Identity Self-Service* tab. (Your tab might look different because of customizations made for your organization; consult your system administrator.)

The left side of the *Identity Self-Service* tab displays a menu of actions you can perform. The actions are listed by category — *Information Management*, *Password Management*, and *Directory Management* (if authorized):

Figure 2-2 *The Identity Self-Service Menu of Actions*

Description: The Identity Self-Service menu of actions

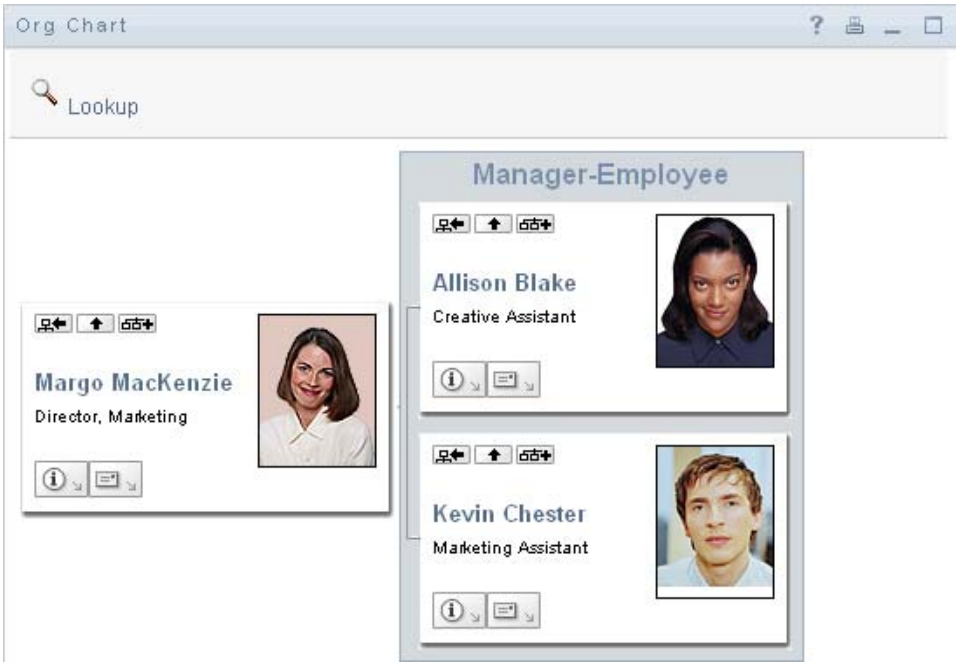
Screen Capture Path: IDM > Identity Self-Service

When you click an action, it displays a corresponding page on the right. The page typically contains a special window called a *portlet*, which shows the details for that action. For example, the portlet on the Organization Chart page looks like this:

Figure 2-3 *The Portlet on the Organization Chart Page*

Description: The portlet on the Organization Chart page

Screen Capture Path: IDM > Identity Self-Service



The portlet title bar typically displays a set of buttons you can click to perform standard operations. For example:

Description: The four buttons on a typical portlet title bar

Screen Capture Path: IDM > Identity Self-Service

Table 2-1 describes what these buttons do:

Table 2-1 *Portlet Title-Bar Buttons and Their Functions*

Button	What It Does
	Displays help for the portlet
	Prints the contents of the portlet
	Minimizes the portlet
	Maximizes the portlet

If you see other buttons and aren't sure what they do, hover your mouse pointer over them to display descriptions.

2.4 Identity Self-Service Actions You Can Perform

Table 2-2 summarizes the actions that are available to you by default on the *Identity Self-Service* tab:

Table 2-2 *Actions Available Through the Identity Self-Service Tab*

Category	Action	Description
Information Management	Organization Chart	Displays the relationships among users and groups in the form of an interactive organizational chart. For details, see Chapter 3, “Using the Organization Chart,” on page 37.
	Associations Report	Available to administrators. Displays applications with which a user is associated. For details, see Chapter 4, “Using the Associations Report,” on page 51.
	My Profile	Displays the details for your user account and lets you work with that information. For details, see Chapter 5, “Using My Profile,” on page 55.
	Directory Search	Lets you search for users or groups by entering search criteria or by using previously saved search criteria. For details, see Chapter 6, “Using Directory Search,” on page 69.

Category	Action	Description
Password Management	Password Challenge Response	Lets you set or change your valid responses to administrator-defined challenge questions, and set or change user-defined challenge questions and responses. For details, see Chapter 7, “Performing Password Management,” on page 91.
	Password Hint Definition	Lets you set or change your password hint. For details, see Chapter 7, “Performing Password Management,” on page 91.
	Change Password	Lets you change (reset) your password, according to the rules established by your system administrator. For details, see Chapter 7, “Performing Password Management,” on page 91.
	Password Policy Status	Displays information about the effectiveness of your password management. For details, see Chapter 7, “Performing Password Management,” on page 91.
	Password Sync Status	Displays the status of password synchronization for your associated applications that synchronize with the Identity Vault. For details, see Chapter 7, “Performing Password Management,” on page 91.
Directory Management	Create User or Group	Available to administrators and authorized users. Lets you create a new user or group. For details, see Chapter 8, “Creating Users or Groups,” on page 99.

Using the Organization Chart

3

This section tells you how to use the Organization Chart page on the *Identity Self-Service* tab of the Identity Manager User Application. Topics include:

- Section 3.1, “About the Organization Chart,” on page 37
- Section 3.2, “Navigating the Chart,” on page 40
- Section 3.3, “Displaying Detailed Information,” on page 47
- Section 3.4, “Sending E-Mail from a Relationship Chart,” on page 47

NOTE: This section describes the default features of the Organization Chart page. You might encounter some differences because of your job role, your level of authority, and customizations made for your organization; consult your system administrator for details.

For more general information about accessing and working with the *Identity Self-Service* tab, see Chapter 2, “Introducing the Identity Self-Service Tab,” on page 31.

3.1 About the Organization Chart

The Organization Chart page displays relationships. It can display relationships among managers, employees, and user groups in your business, and it can display other types of relationships that your administrator defines. The display is in the form of an organizational chart. In the chart, each person, group, or other entity is represented in a format that resembles a business card. The business card that is the starting point or orientation point of the organization chart is the *root* card.

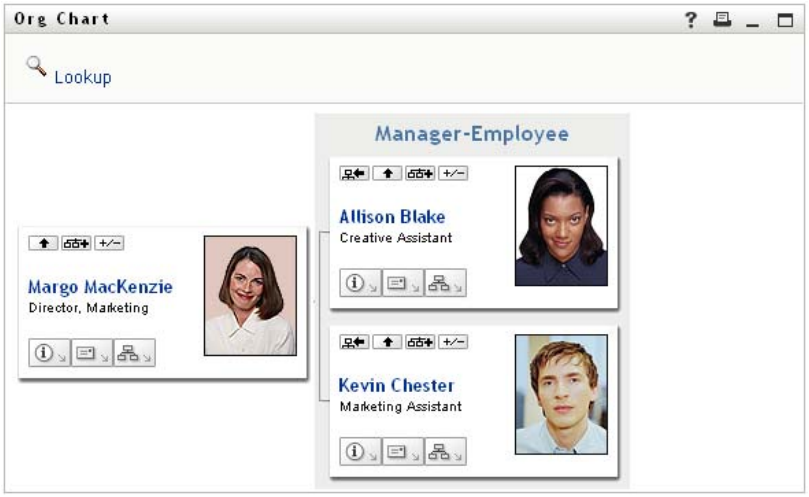
The organization chart is interactive. You can:

- Select and display a type of relationship.
- Set your preferred default type of relationship, such as manager-employee, user group, or another that your administrator supplies.
- Set the default placement of a relationship chart to the left or right of the root card.
- Add up to two levels above the root card to the chart display.
- Make another user the root of the chart.
- Close (contract) or open (expand) a chart below a card.
- Look up a user to display in the chart.
- Display details (Profile page) for a selected user.
- Send user details (in the form of a link) to someone by e-mail.
- Send new e-mail to a selected user or to a manager’s team.

The following example introduces you to using Organization Chart. When you first display the Organization Chart page, it shows your own manager-employee relationships. For example, Margo MacKenzie (Marketing Director) logs in and sees the following default display of the Organization Chart page:

Figure 3-1 *Default View at Login*

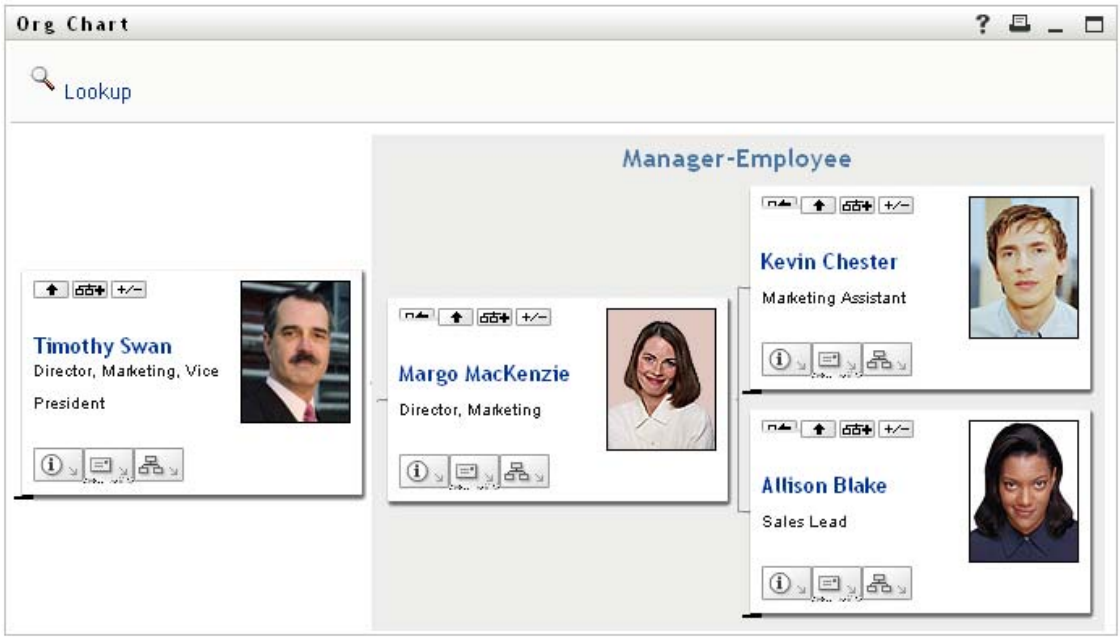
Description: A User's Default Log-In Organization Chart



In her business card, Margo MacKenzie clicks *Go Up a Level* Description: inline icon button to expand the chart to display her manager:

Figure 3-2 *Margo Clicks "Go Up a Level" to Show Her Manager*

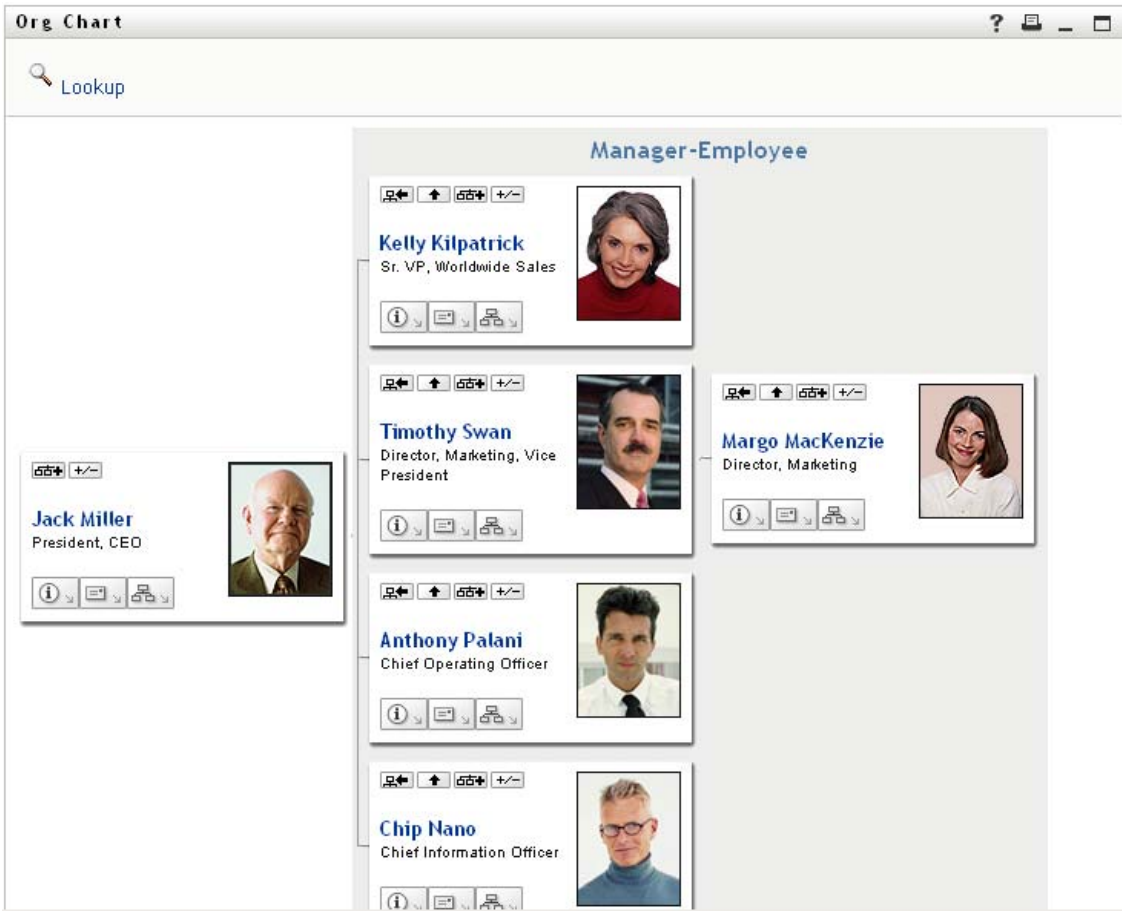
Description: The user's organization chart shows one level of management above the user



Margo then clicks *Go Up a Level* Description: inline icon button in her manager's card, to show her manager's manager:

Figure 3-3 *Margo Clicks "Go Up a Level" A Second Time to Show Her Manager's Manager*

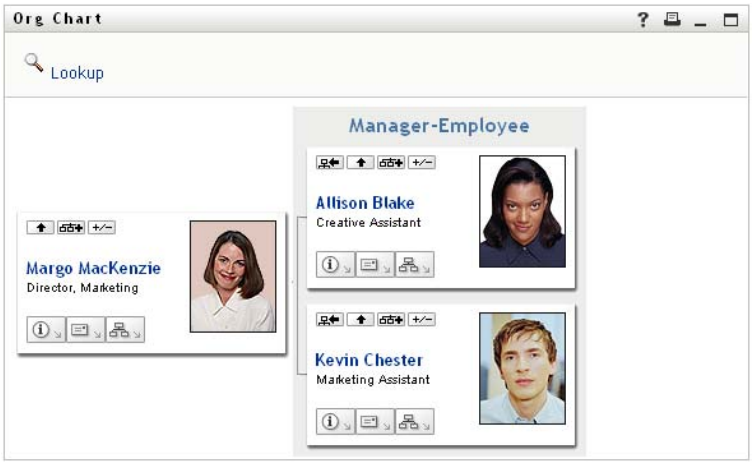
Description: The user's organization chart shows two levels of management above the user



Margo then clicks *Make This Entity the New Root* in her own card. This makes her card the root of the display again:

Figure 3-4 *Margo Clicks "Make This Entity the New Root" in Her Card*

Description: The user makes herself the root of the display again.



3.2 Navigating the Chart

This section describes how to move around a relationship chart by:

- Section 3.2.1, "Navigating to the Next Higher Level," on page 40
- Section 3.2.2, "Resetting the Root of the Relationship," on page 41
- Section 3.2.3, "Switching the Default Relationship," on page 42
- Section 3.2.4, "Expanding or Collapsing the Default Chart," on page 43
- Section 3.2.5, "Choosing a Relationship to Expand or Collapse," on page 44
- Section 3.2.6, "Looking Up a User in Organization Chart," on page 45

3.2.1 Navigating to the Next Higher Level

To navigate and expand to the next higher level in the relationship tree:

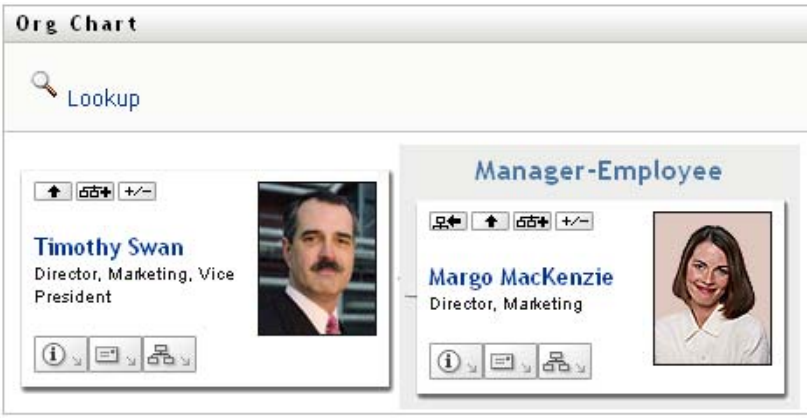
1 Click *Go Up a Level* Description: icon in the current top-level card.

For example, suppose that Margo clicks *Go Up a Level* in this view:

Description: The button with the up arrow lets a user display as many as two levels above

Her view expands to include the level above her:

Description: The user's view includes one level above her



Go Up a Level is available only if the user in the card is assigned a manager. If this function is not available to you, check with your administrator.

You can go up a level twice for a card.

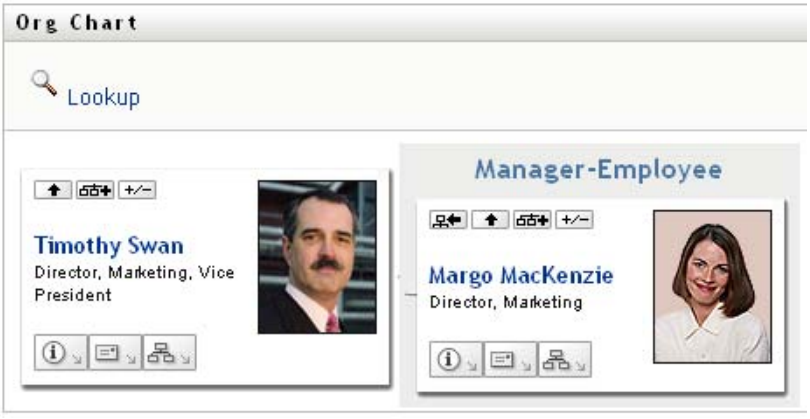
3.2.2 Resetting the Root of the Relationship

To reset the root of your view of the relationship chart:

1. Find the card of the user whom you want to the new root.
2. Click *Make This Entity the New Root* , or click the user's name (the name is a link) on that card. The chosen card becomes the root of the organization chart.

   For example, suppose Margo Mackenzie clicks Make This Entity the New Root in her own card in this view:

Description: The user is viewing her card and one level above her card



Her card becomes the new root and is now at the top of her organization chart:

Description: The user made her card the root, so her card is now the top level in her view

3.2.3 Switching the Default Relationship

1. Click *Switch to An Org Chart* to change your default relationship.
2. Select the type of relationship to display. Your administrator can use relationships supplied by Novell (see Table 3-1) and can also define customized relationships.

Table 3-1 *Types of Organization Chart Relationships Supplied by Novell*

Type of Organizational Chart	Description
Manager - employee	Shows the reporting structure of managers and subordinates.
User group	Shows users and the groups in which they participate.

Margo Mackenzie changes her default relationship display to User Groups:

Description: Switching the default relationship

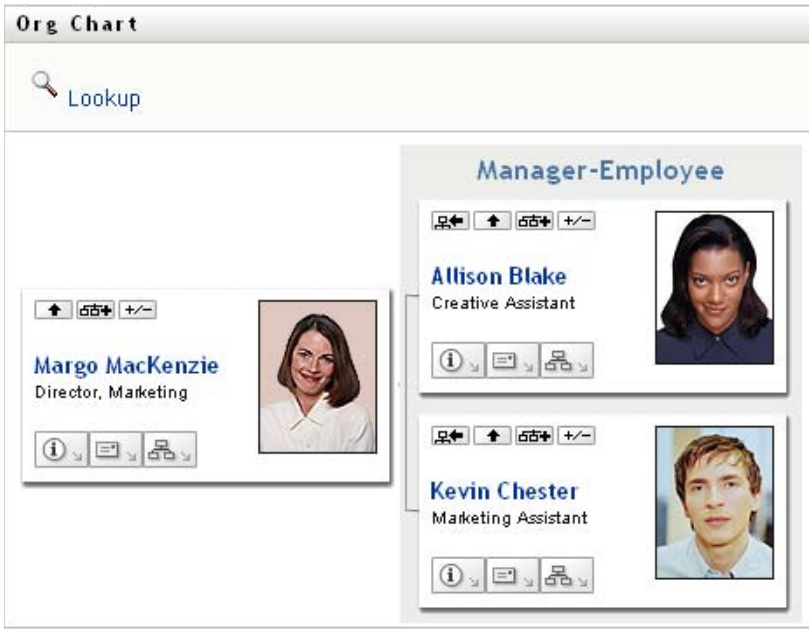
3.2.4 Expanding or Collapsing the Default Chart

The default relationship chart is Manager-Employee, unless you or your administrator sets it to another type. To expand or collapse the default chart:

1. Find a card for which you want to expand or collapse the default relationship display.
2. Click the *Expand/Collapse current relationship* +/− toggle button.

   The chart expands or collapses to display or hide the subsidiary cards that are related to your chosen card. For example, the following two views show the Expand view and then the Collapse view.

Description: The Expand/Collapse current relationship button is a toggle. This is an example of the Expand view.



Description: The Expand/Collapse current relationship button is a toggle. This is an example of the Collapse view.

3.2.5 Choosing a Relationship to Expand or Collapse

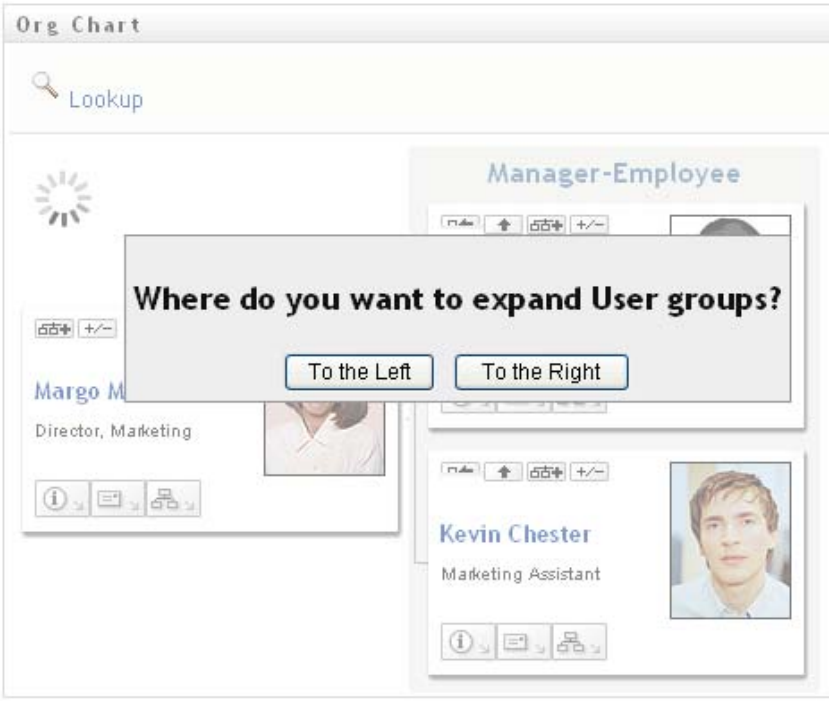
1. Identify a card whose relationships you want to view.
2. Click *Choose relationship to Expand/Collapse* in that card. A drop-down list opens.
3. Select a relationship and action from the drop-down list:

Action	Description
Expand Manager-Employee	Select this option to open a Manager-Employee chart. Available if the chart is closed.
Expand User Groups	Select this option to open User groups. Available if User groups is closed.
Collapse Manager-Employee	Select this option to collapse the Manager-Employee chart for a card. Available if the chart is open.
Collapse User Groups	Select this option to collapse User Groups for a card. Available if the chart is open.

Additional relationships are available in the list if your administrator defines them.

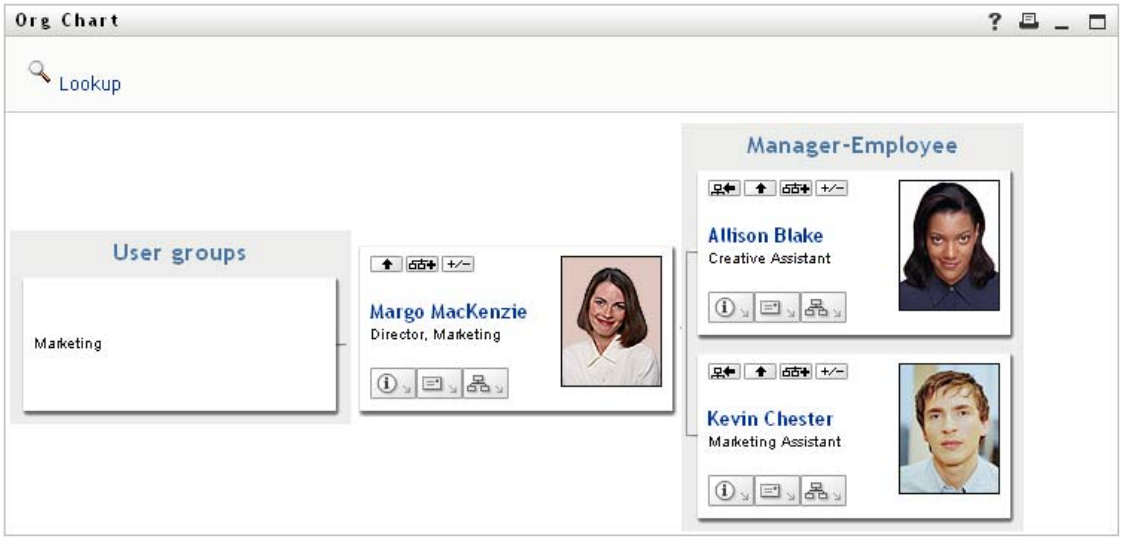
In the following example, Margo MacKenzie clicks *Choose relationship to Expand/Collapse* and selects *Expand User groups*:

Description: screen capture



She then clicks *To the Left* and sees the following:

Description: Margo expands both Manager-Employee and User Group views.



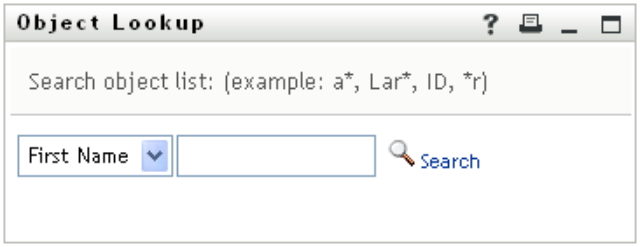
3.2.6 Looking Up a User in Organization Chart

You can look up a user in Organization Chart. This search is a quick way to find a user who is not in your current view or relationship chart. The looked-up user becomes the new root in your view.

1 Click the *Lookup* link at the top left corner of the chart.

The Lookup page displays:

Description: The object lookup page lets you specify search criteria



2 Specify search criteria for the user you want:

2a Use the drop-down list to select whether the search is by *First Name* or *Last Name*.

2b In the text box next to the drop-down, type all or part of the name to search for.

The search finds every name that begins with the text you type. It is not case sensitive. You can optionally use the asterisk (*) as a wildcard in your text to represent zero or more of any character.

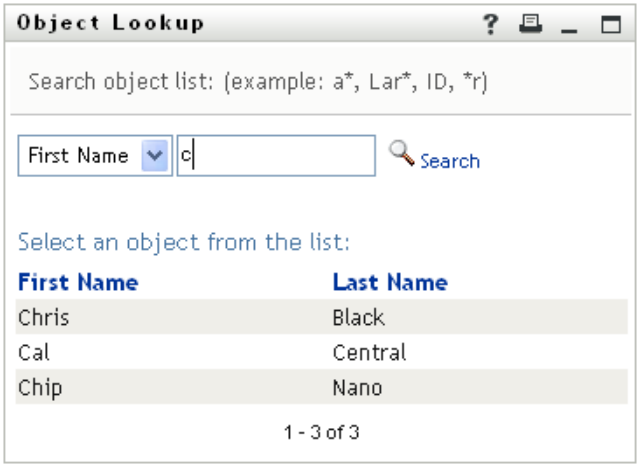
For instance, all of the following examples find the first name Chip:

```
Chip
chip
c
c*
*p
*h*
```

3 Click *Search*.

The Lookup page displays your search results:

Description: After a search, the object lookup page also displays search results



If you see a list of users that includes the one you want, go to Step 4. Otherwise, go back to Step 2.

You can sort the search results in ascending or descending order by clicking the column headings.

4 Select the user you want from the list.

The Lookup page closes and makes that user the new root in your view of the chart.

3.3 Displaying Detailed Information

You can display details (the Profile page) for a selected user in the chart:

1 Find the card of a user whose details you want to display.

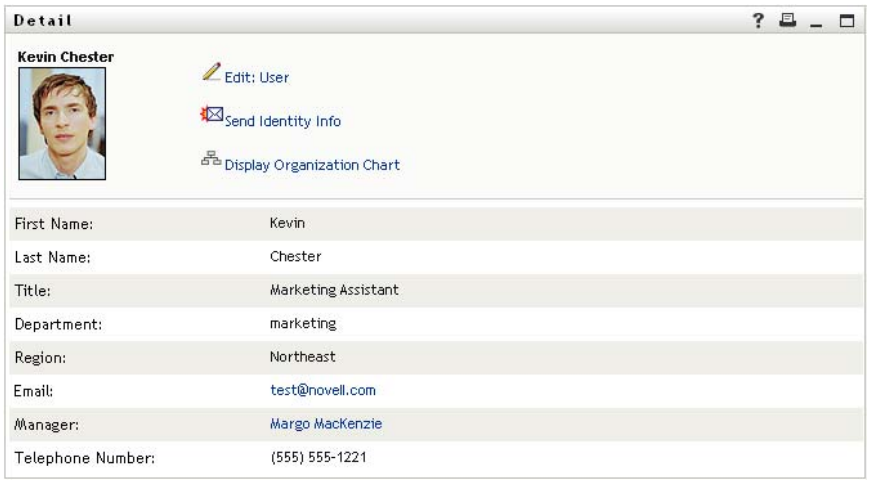
2 Click *Identity Actions* on that card:

A drop-down list displays.

3 Click *Show Info* from the drop-down list. Additional options are listed if your administrator defines them.

The Profile page displays, showing detailed information about your chosen user:

Description: Profile page



This page is similar to your own My Profile page on the *Identity Self-Service* tab. However, as you view details about another user, you might not be authorized to see some of the data or perform some of the actions on the page. Consult your system administrator for assistance.

To learn about using the features of the Profile page, see Chapter 5, “Using My Profile,” on page 55.

4 When you’re done with the Profile page, you can close its window.

3.4 Sending E-Mail from a Relationship Chart

This section describes:

- Section 3.4.1, “E-Mailing Information About a User in a Chart,” on page 48
- Section 3.4.2, “Sending New E-Mail to a User in the Chart,” on page 49
- Section 3.4.3, “Sending E-Mail to a Manager’s Team,” on page 49

3.4.1 E-Mailing Information About a User in a Chart

1 Find the card of a user whose details you want to e-mail to someone.

2 Click the e-mail icon on the card:

A pop-up menu displays.

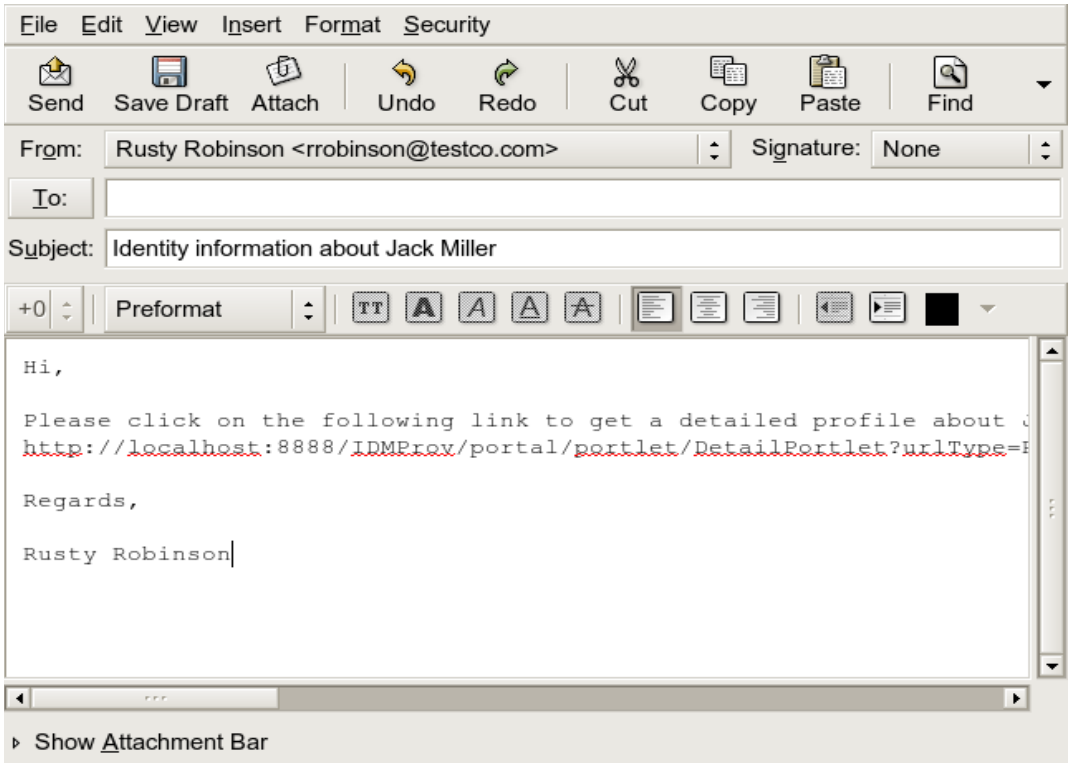
3 Select *Email Info*.

A new message is created in your default e-mail client. The following parts of the message are already filled in for you:

This part of the message	Contains
Subject	The text: `Identity Information for` *`user-name`*
Body	Greeting, message, link, and sender's name. The link (URL) is to the Profile page that displays detailed information about your chosen user. This link prompts the recipient to log in to the Identity Manager User Application before it displays any information. The recipient must have appropriate authority to view or edit the data. To learn about using the features of the Profile page, see Chapter 5, "Using My Profile," on page 55.

For example:

Description: The User Application drafts an e-mail for you from a template



4 Specify the recipients of the message (and any additional content that you want).

5 Send the message.

3.4.2 Sending New E-Mail to a User in the Chart

1 Find the card of a user to whom you want to send e-mail.

2 Click the e-mail icon on the card.

A pop-up menu displays.

3 Select *New Email*.

A new message is created in your default e-mail client. The message is blank except for the *To* list, which specifies your chosen user as a recipient.

4 Fill in the message contents.

5 Send the message.

3.4.3 Sending E-Mail to a Manager's Team

1 Find the card of a user who manages a team to whom you want to send e-mail.

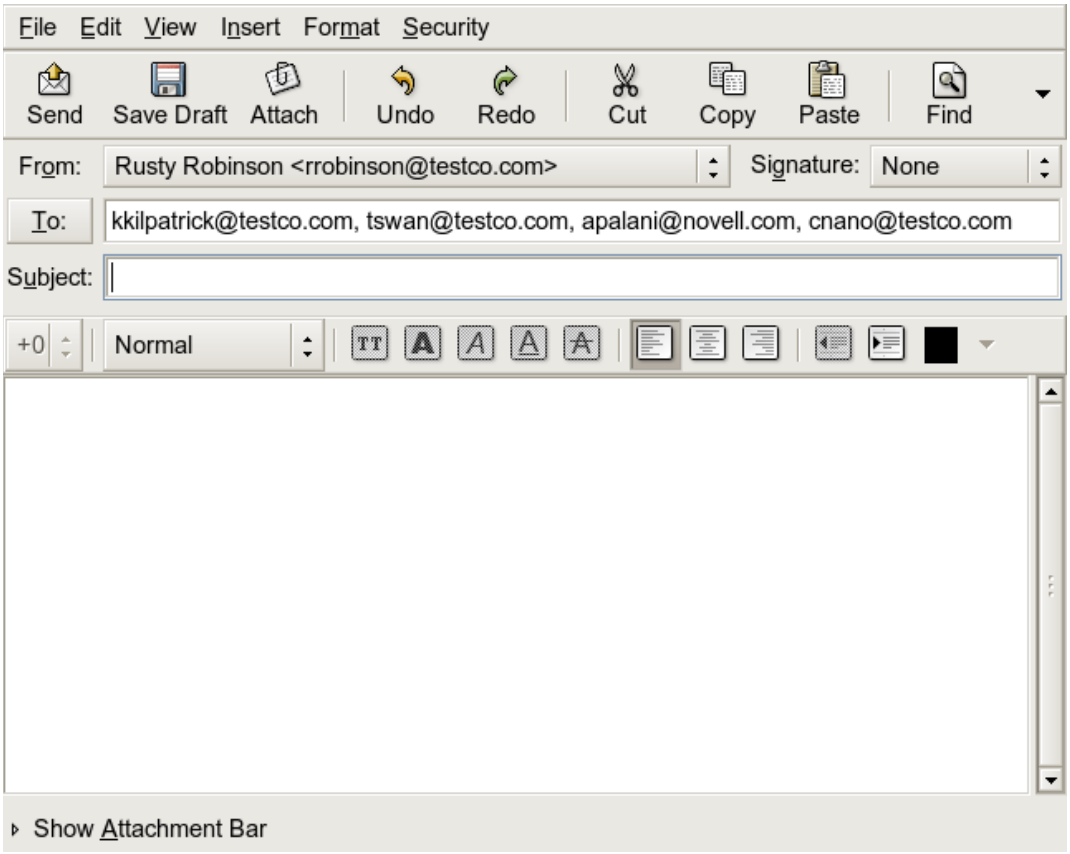
2 Click the e-mail icon on the card:

A pop-up menu displays.

3 Select *Email to team*.

A new message is created in your default e-mail client. The message is blank except for the *To* list, which specifies each immediate subordinate of your chosen user (manager) as a recipient.

Description: Screen capture



4 Fill in the message contents.

5 Send the message.

Using the Associations Report

4

This section tells you how to use the Associations Report page on the *Identity Self-Service* tab of the Identity Manager User Application. Topics include

- Section 4.1, “About the Associations Report,” on page 51
- Section 4.2, “Displaying Associations,” on page 52

NOTE: This section describes the default features of the Associations Report page. You might encounter some differences because of your job role, your level of authority, and customizations made for your organization; consult your system administrator for details.

For more general information about accessing and working with the *Identity Self-Service* tab, see Chapter 2, “Introducing the Identity Self-Service Tab,” on page 31.

4.1 About the Associations Report

As an administrator, you can use the Associations Report page to list or troubleshoot some of the associations with which users have been provisioned. The application table shows:

- Application or system names for which the user has an association in the DirXML-Associations table in the Identity Vault. (The associations table is populated when the Identity Vault synchronizes a user account with a connected system through a policy or an entitlement.)
- The instance of the association.
- The status of the association. See Table 4-1 for status descriptions.

Table 4-1 *Association Status Table*

Status	Indicates
Processed	A driver recognizes the user for the driver’s target application. Users might want to check whether they need to issue a provisioning request for an application or system that does not appear in their associations lists. Or, if an application is in their lists but they cannot access it, users might want to check with their application administrators to determine the problem.
Disabled	The application is probably unavailable to the user.
Pending	The association is waiting for something.
Manual	A manual process is required to implement the association.
Migrate	Migration is required.
ANY	Miscellaneous kinds of status.

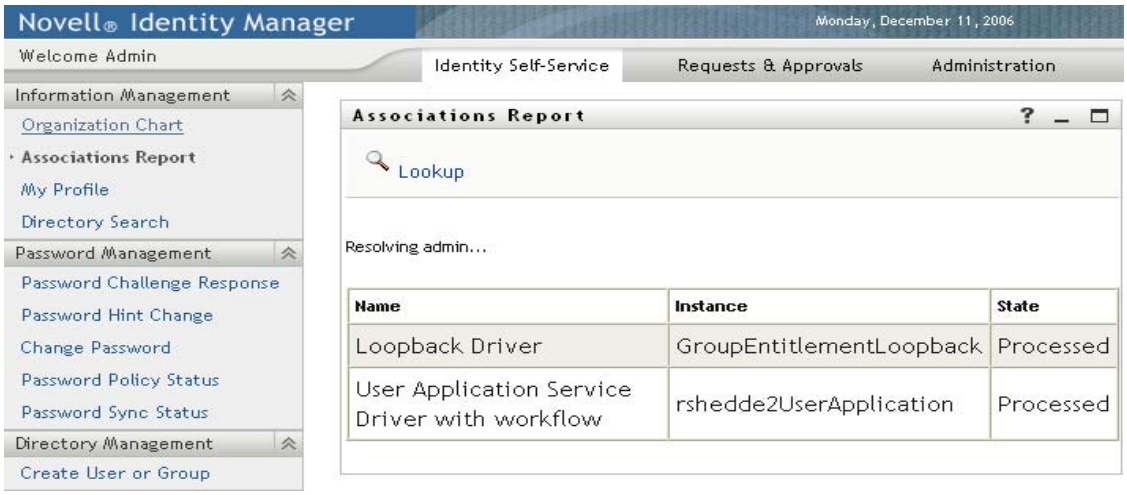
Not all provisioned resources are represented in the Identity Vault.

Figure 4-1 on page 52 shows an example of the Associations Report page.

Figure 4-1 *The Associations Report Page*

Description: The Associations Report page

Screen Capture Path: IDM > Identity Self-Service > Associations Report [must be logged in as administrator]



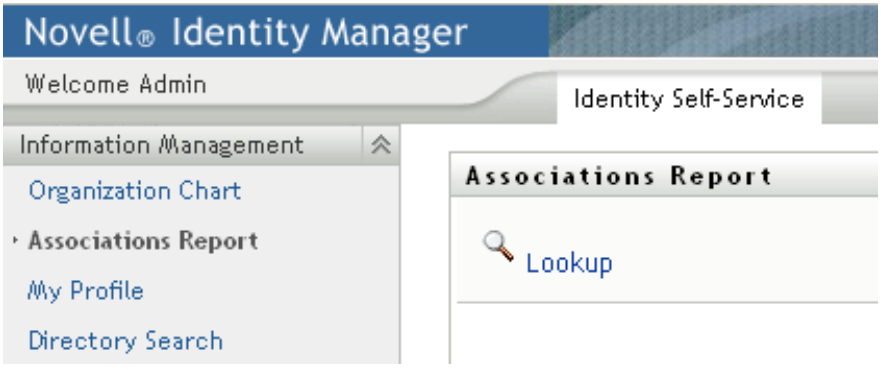
4.2 Displaying Associations

When you click *Associations Report*, the first associations shown are your own. To display another user's associations:

1. On the *Identity Self-Service* tab, under *Information Management*, click *Associations Report*.
2. Above the associations table, click *Lookup*.

Description: Click Lookup on the Associations Report page to look up another user's associations

Screen Capture Path: Identity Self-Service > Associations Report



3 In the Object Lookup window, select *First Name* or *Last Name* from the drop-down menu and specify a search string. The Object Lookup window displays both *First Name* and *Last Name*.

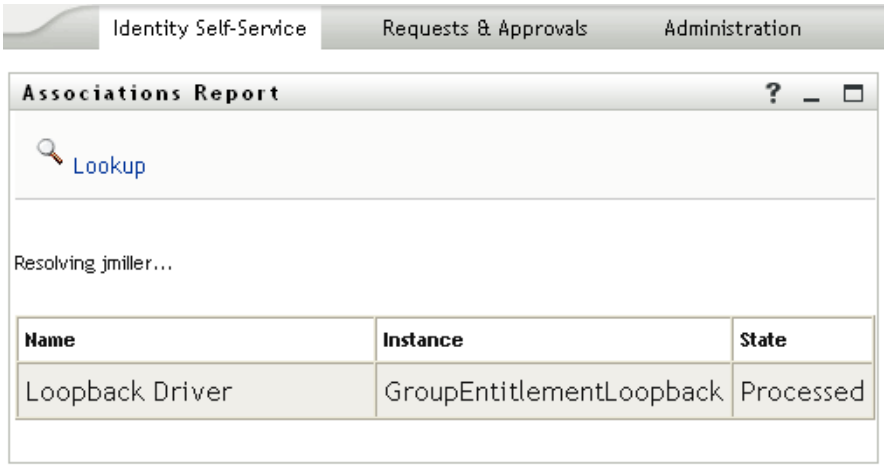
Description: Lookup prompts you for search criteria

Screen Capture Path: Identity Self-Service > Associations Report > Lookup

4 Select a name. The associations table displays associations for that name.

Description: Lookup displays associations for the specified user

Screen Capture Path: Identity Self-Service > Information Management > Associations Report [must be logged in as administrator]



Using My Profile

5

This section tells you how to use the My Profile page on the *Identity Self-Service* tab of the Identity Manager User Application. Topics include:

- Section 5.1, “About My Profile,” on page 55
- Section 5.2, “Editing Your Information,” on page 56
- Section 5.3, “E-Mailing Your Information,” on page 61
- Section 5.4, “Displaying Your Organization Chart,” on page 62
- Section 5.5, “Linking to Other Users or Groups,” on page 63

NOTE: This section describes the default features of the My Profile page. You might encounter some differences because of your job role, your level of authority, and customizations made for your organization; consult your system administrator for details.

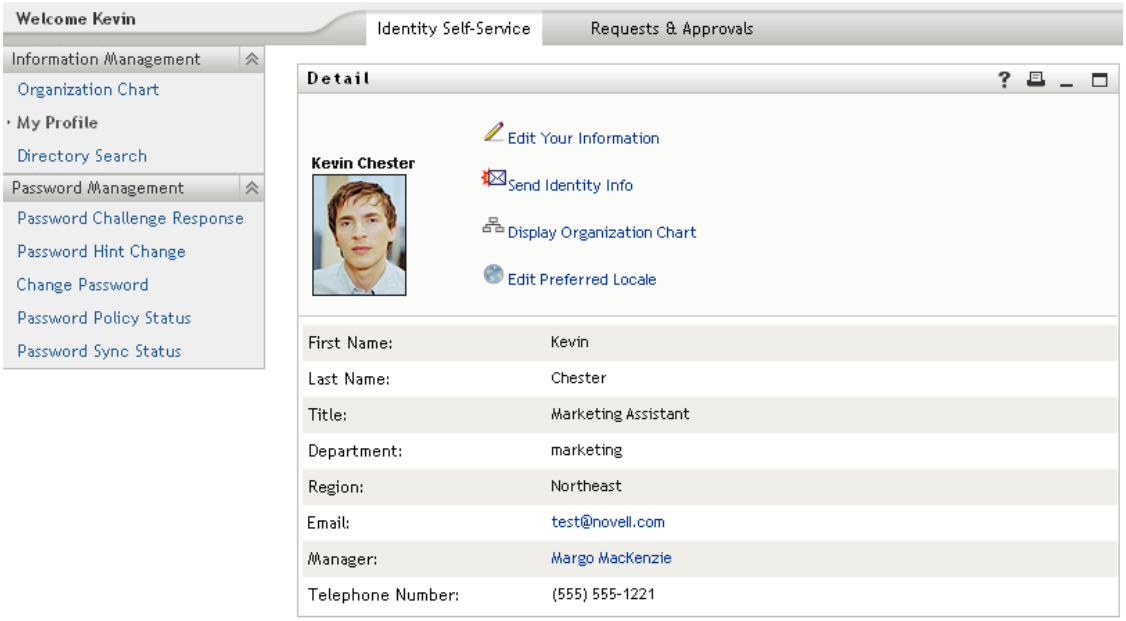
For more general information about accessing and working with the *Identity Self-Service* tab, see Chapter 2, “Introducing the Identity Self-Service Tab,” on page 31.

5.1 About My Profile

You can use the My Profile page to display the details for your user account and to work with that information, as needed. For example, here’s what Kevin Chester (Marketing Assistant) sees when he goes to the My Profile page:

Figure 5-1 *My Profile Detail Page*

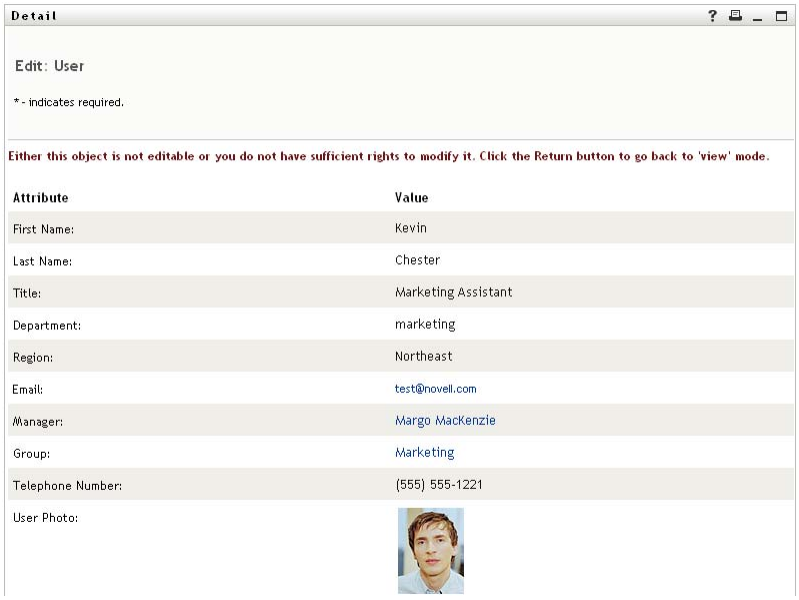
Description: Choose Identity Self-Service > My Profile to display your Detail page



If you want to change some of these details, you can edit your information (although it's up to the system administrator to determine exactly what you are authorized to edit). For instance, suppose Kevin Chester clicks *Edit Your Information*. He sees a page in which he can edit Profile information, after his administrator gives him privileges to do so:

Figure 5-2 *Edit Profile Page*

Description: The Edit Detail page



Back on the main (viewing) page, My Profile provides links for performing other useful actions on your information. You can:

- Send your details (in the form of a link) to someone by e-mail
- Switch to displaying your organization chart instead of your details
- If authorized, select another user or group in the organization chart whose details you want to display
- Click an e-mail address to send a message to that account
- Specify a locale (language) for the instance of the User Application that you use.

5.2 Editing Your Information

My Profile provides an editing page that you can switch to when you want to make changes.

Some values might not be editable. Uneditable values appear on the editing page as read-only text or as links. If you have questions about what you're authorized to edit, consult your system administrator.

To edit your information:

1. Click the *Edit Your Information* link at the top of the My Profile page.
2. When the editing page displays, make your changes as needed. Use the editing buttons in Table 5-1.

3 When you're done editing, click *Save Changes*, then click *Return*.

5.2.1 Hiding Information

Hiding a piece of your information hides it from everyone using the Identity Manager User Application, except you and the system administrator.

1 Click the *Edit Your Information* link at the top of the My Profile page.

2 On the editing page, find an item that you want to hide.

3 Click *Hide* next to that item.

Hide might be disabled for some items. The system administrator can enable this feature for specific items.

5.2.2 Using the Editing Buttons

Table 5-1 lists the editing buttons you can use to edit your profile details.

Table 5-1 *Editing Buttons*

Button	What it does
	Looks up a value to use in an entry
	Displays a *History* list of values used in an entry
	Adds another entry
	Displays all entries for the attribute
	Deletes an existing entry and its value
	Lets you edit (specify and display) an image

NOTE: Add and delete groups in separate editing operations. If you remove and add groups in the same editing operation, the deleted group name reappears when the + (add) button is clicked.

The following sections tell you more about using some of these editing buttons:

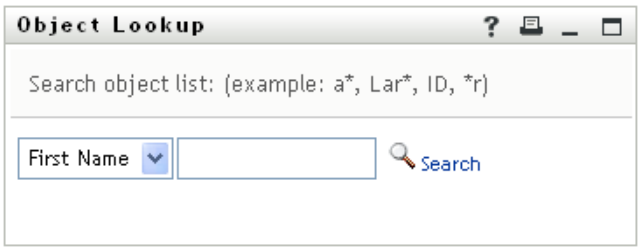
- "Looking Up a User" on page 57
- "Looking Up a Group" on page 59
- "Using the History List" on page 60
- "Editing an Image" on page 61

Looking Up a User

1 Click *Lookup* Description: Lookup button to the right of an entry (for which you want to look up a user).

The Lookup page displays:

Description: The Lookup page prompts you for search criteria



2 Specify search criteria for the user you want:

2a Use the drop-down list to specify a search by *First Name* or *Last Name*.

2b In the text box next to the drop-down list, type all or part of the name to search for.

The search finds every name that begins with the text you type. It is not case sensitive. You can optionally use the asterisk (*) as a wildcard in your text to represent zero or more of any character.

For instance, all of the following examples find the first name Chip:

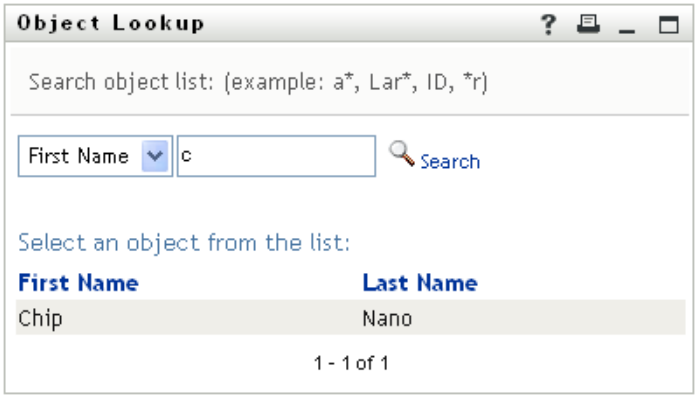
```
Chip
chip
c
c*
*p
*h*
```

A manager lookup searches only for users who are managers.

3 Click *Search*.

The Lookup page displays your search results:

Description: The Lookup page displays search results



If you see a list of users that includes the one you want, go to Step 4. Otherwise, go back to Step 2.

You can sort the search results in ascending or descending order by clicking the column headings.

4 Select the user you want from the list.

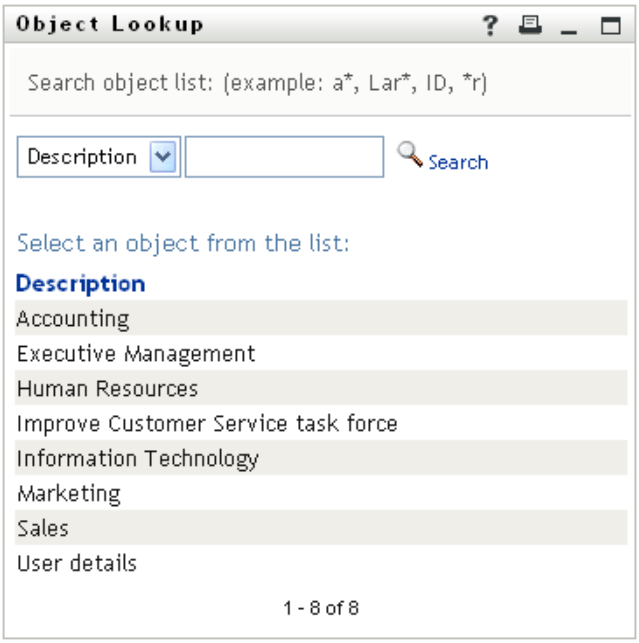
The Lookup page closes and inserts the name of that user into the appropriate entry on the editing page.

Looking Up a Group

1 Click *Lookup* Description: Lookup button to the right of an entry (for which you want to look up a group).

The Lookup page displays:

Description: The Lookup page prompts you for search criteria



2 Specify search criteria for the group you want:

2a In the drop-down list, your only choice is to search by *Description*.

2b In the text box next to the drop-down list, type all or part of the description to search for.

The search finds every description that begins with the text you type. It is not case sensitive. You can optionally use the asterisk (*) as a wildcard in your text to represent zero or more of any character.

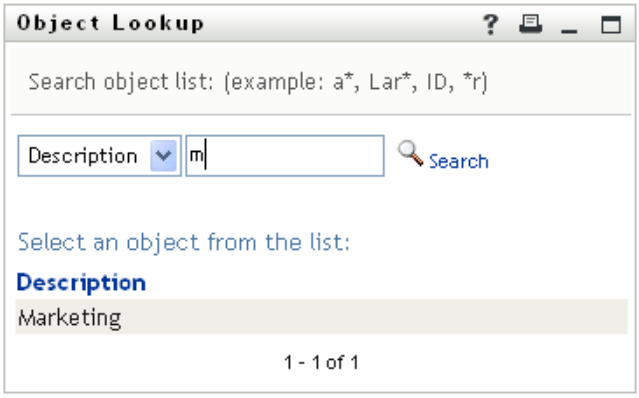
For instance, all of the following examples find the description Marketing:

```
Marketing
marketing
m
m*
*g
*k*
```

3 Click *Search*.

The Lookup page displays your search results:

Description: The Lookup page displays search results



If you see a list of groups that includes the one you want, go to Step 4. Otherwise, go back to Step 2.

You can sort the search results in ascending or descending order by clicking the column heading.

4 Select the group you want from the list.

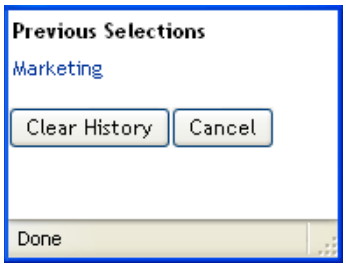
The Lookup page closes and inserts the group into the appropriate entry on the editing page.

Using the History List

1 Click *History* Description: icon to the right of an entry (whose previous values you want to see).

The *History* list displays. Values appear in alphabetical order.

Description: A short History list



2 Do one of the following:

If you want to	Do this
Pick from the *History* list	*Select a value* that you want from the list. The *History* list closes and inserts that value into the appropriate entry on the editing page.

If you want to	Do this
Clear the *History* list	Click *Clear History*. The *History* list closes and deletes its values for this entry. Clearing the *History* list does not change the current value of the entry on the editing page.

Editing an Image

Editing your information might involve adding, replacing, or displaying an image:

1 On the editing page, click *Display* to display an image.

2 Click the plus sign icon

to add an image.

If an image already exists, you can click the pencil icon to replace or remove it.

3 Click that button to display the File Upload page:

Description: The Image Upload page lets you browse to the image to include in your profile

If this item already has an image, that image displays here.

4 To add an image or to replace the current one:

4a Click *Browse* and select an appropriate image file (such as a GIF or JPG).

4b Click *Save Changes* to upload the selected image file to the server.

5 Click *Close Window* to return to the editing page.

5.3 E-Mailing Your Information

The My Profile page enables e-mailing details as links:

1 Click the *Send Identity Info* link toward the top of the My Profile page.

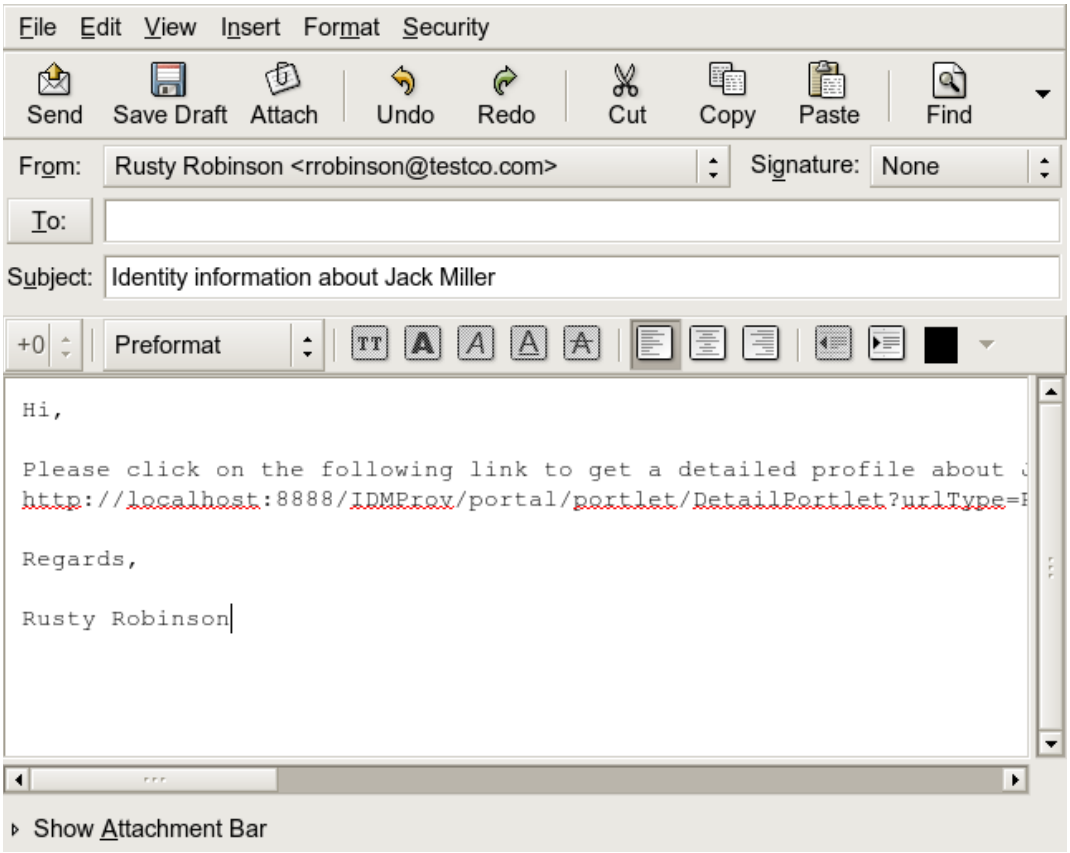
A new message is created in your default e-mail client. The following parts of the message are already filled in for you:

This part of the message	Contains
Subject	The text: `Identity Information for your-user-id`

This part of the message	Contains
Body	A greeting, message, link, and your name. The link (URL) is to the Profile page that displays detailed information about you. This link prompts the recipient to log in to the Identity Manager User Application before it displays any information. The recipient must have appropriate authority to view or edit the data.

For example:

Description: E-Mailing a link to profile information



2 Specify the recipients of the message (and any additional content that you want).

3 Send the message.

5.4 Displaying Your Organization Chart

To switch from My Profile to Organization Chart, click the *Display Organization Chart* link toward the middle of the My Profile page.

Your organization chart displays. For example:

Description: A view of an Organization Chart

To learn about using the features of this page, see Chapter 3, “Using the Organization Chart,” on page 37.

5.5 Linking to Other Users or Groups

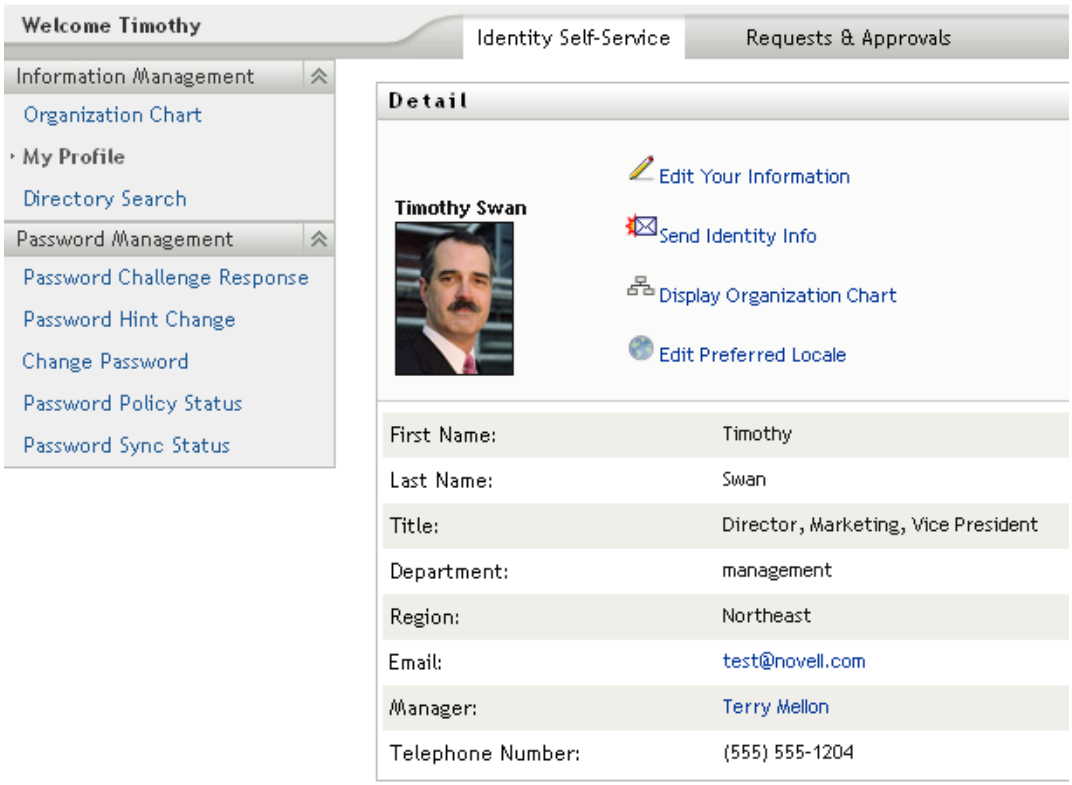
The Detail page of your profile can include links to other users or groups. You can display the details (Profile page) for any other user or group that is listed as a link in your details.

To display detailed information about another user or group:

1. While viewing or editing information on the My Profile page, look for links that refer to the names of users or groups. Move your mouse cursor over text to reveal the underline that indicates a link.
2. Click a link to display the details for that user or group (in a separate window).
3. When you’re done with that detail window, you can close it.

Here’s a scenario that shows how someone might link to other user and group details. Timothy Swan (Vice President of Marketing) logs in to the Identity Manager User Application and goes to the My Profile page:

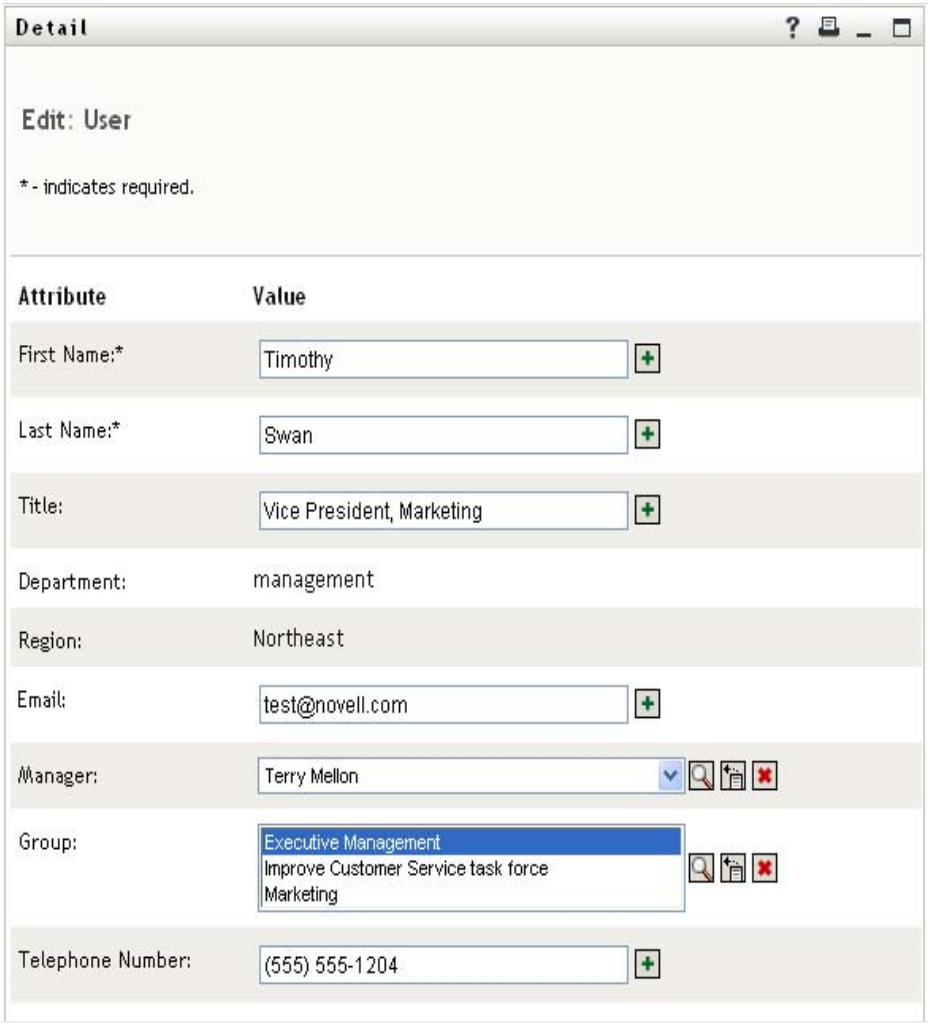
Figure 5-3 *The My Profile Page Shows Profile Details and Lists Profile Actions*



He clicks *Edit Your Information*.

Figure 5-4 *The Edit Detail Page*

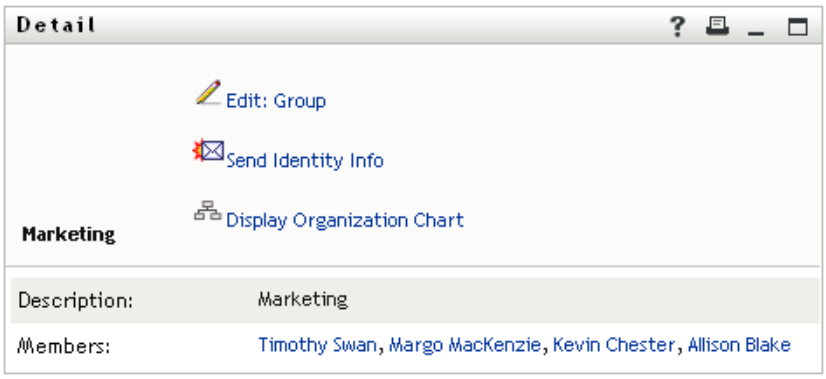
Description: The Edit Detail page



He notices user names (Terry Mellon) and group names (Executive Management, Marketing, Improve Customer Service task force) that appear as links. He clicks *Marketing* and sees a new window:

Figure 5-5 *The Group Detail Page*

Description: The Group Detail Page



This is the detailed information about the Marketing group. If he has permission, he can click *Edit Group* and use the *Edit Group* page to add or remove members from the group, change the group description, or even delete the group.

The names of the Marketing group's members are also links. He clicks *Allison Blake* and sees:

Figure 5-6 *The Group Detail Page Links to Group Members' Profiles*

Description: The Group Detail page links group members to their profiles

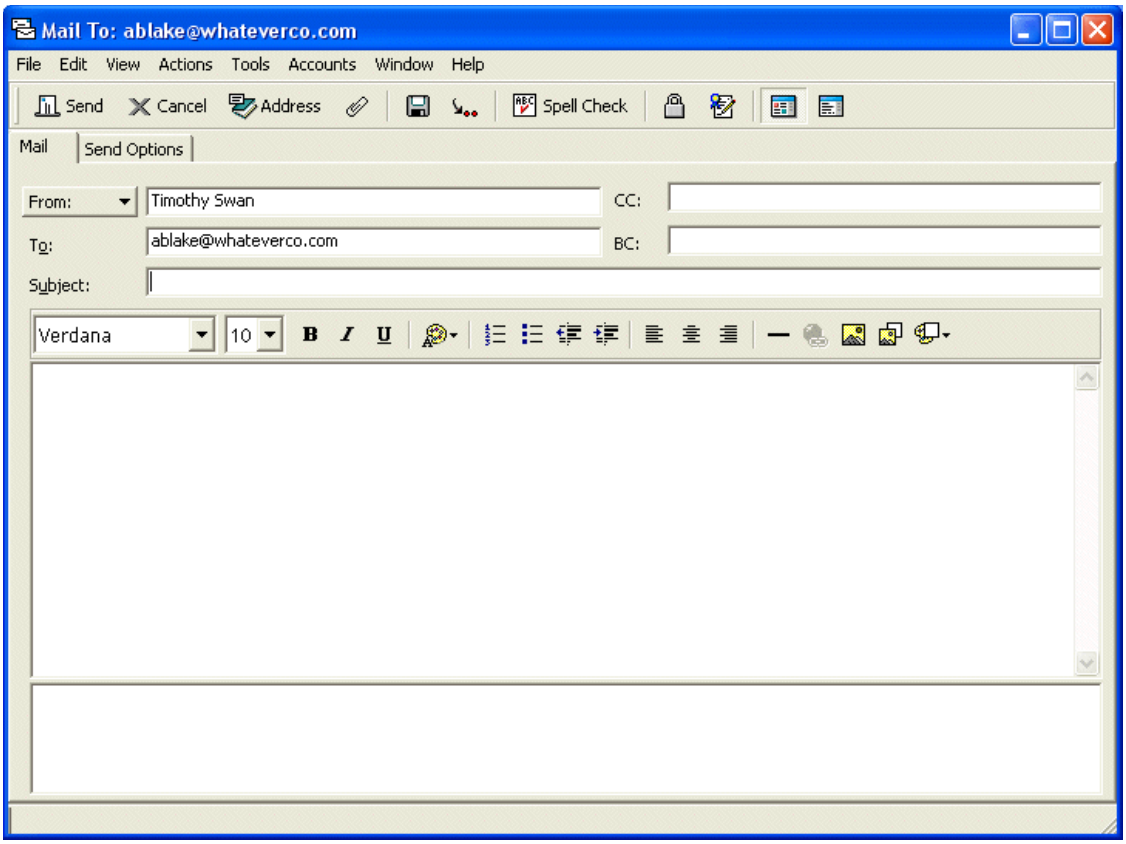
This is the detailed information about user Allison Blake (one of his employees).

He can click *Edit: User*, and, if the system administrator has given him the ability to do so, edit this user's details (except the Department and Region attributes) or delete this user.

Allison's e-mail address is a link. When he clicks it, his e-mail client creates a new message to her:

Figure 5-7 *E-Mail Message to User from User's Profile Page*

Description: E-Mail message to user, from user's Profile page



He can now type the message contents and send it.

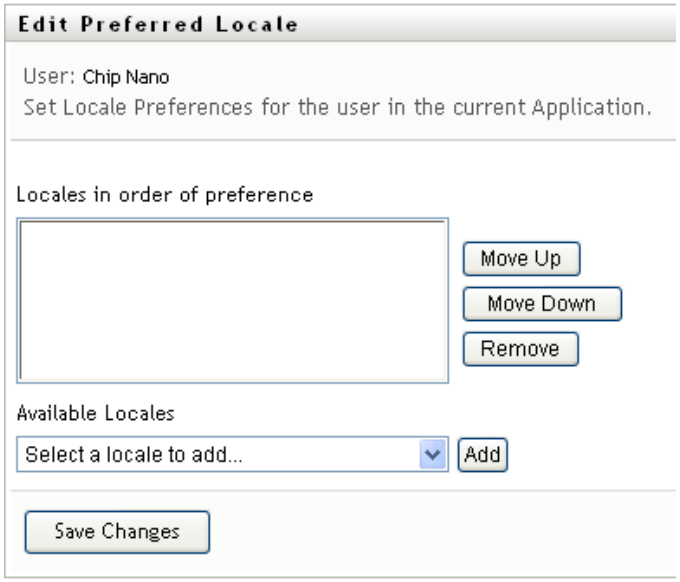
5.6 Choosing a Preferred Language

You can select the locale (language) that you prefer to use in the Identity Manager User Application. You can set the preferred locale at any time in *My Profile*.

1. Click *Identity Self-Service* > *Information Management* > *My Profile* > *Edit Preferred Locale*. The *Edit Preferred Locale* page opens.
2. Add a locale by opening the *Available Locales* drop-down list, selecting a locale, and clicking *Add*.
3. Change the order of preference by selecting a locale from the *Locales in order of preference list* and choosing *Move Up, Move Down,* or *Remove*.
4. Click *Save Changes*.

Description: Use the Edit Preferred Locale page to select the UI preferred language

Screen Capture Path: Identity Self-Service > Information Management > My Profile > Edit Preferred Locale



The Identity Manager User Application pages are displayed in one or more preferred languages (locales) according to these rules:

1. The User Application uses locales defined in the User Application, according to the order in the preferred-locale list.
2. If no preferred locale is defined for the User Application, the User Application uses the preferred browser languages in the order listed.
3. If no preferred locale is defined for the User Application or the browser, the User Application default is used.

5.6.1 Defining a Preferred Language in the Browser

In Firefox*, add languages through *Tools* > *General* > *Languages* > *Languages*. Place your preferred language at the top of the list. In Internet Explorer, set language through *View* > *Encoding*.

Using Directory Search

6

This section tells you how to use the Directory Search page on the *Identity Self-Service* tab of the Identity Manager User Application. Topics include:

- Section 6.1, “About Directory Search,” on page 69
- Section 6.2, “Performing Basic Searches,” on page 72
- Section 6.3, “Performing Advanced Searches,” on page 73
- Section 6.4, “Working with Search Results,” on page 82
- Section 6.5, “Using Saved Searches,” on page 88

NOTE: This section describes the default features of the Directory Search page. You might encounter some differences because of your job role, your level of authority, and customizations made for your organization; consult your system administrator for details.

For more general information about accessing and working with the *Identity Self-Service* tab, see Chapter 2, “Introducing the Identity Self-Service Tab,” on page 31.

6.1 About Directory Search

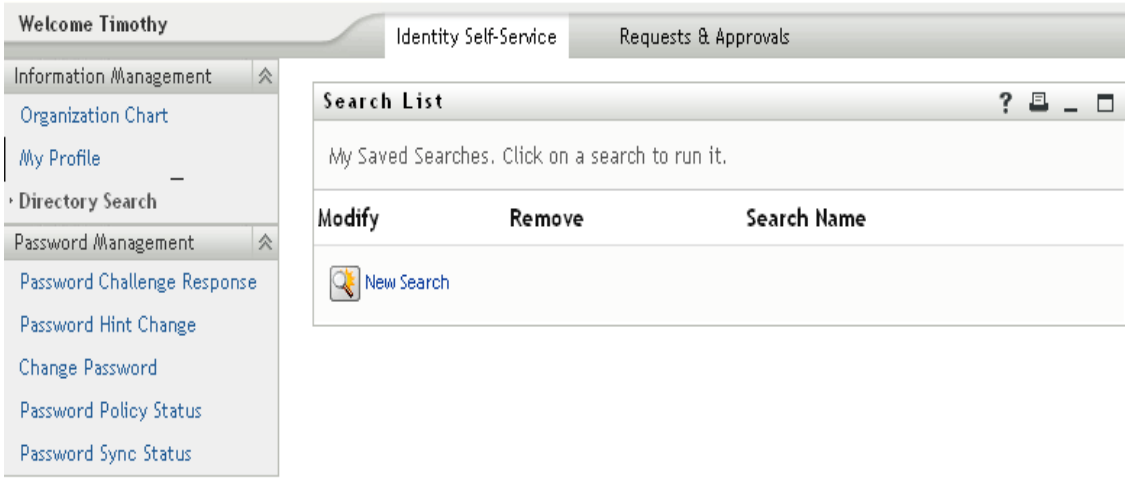
You can use the Directory Search page to search for users, groups, or teams by entering search criteria or by using previously saved search criteria.

For example, suppose Timothy Swan (Marketing Director) needs to search for information about someone in his organization. He goes to the Directory Search page and sees this by default:

Figure 6-1 *Directory Search Page*

Description: Directory Search page

Screen Capture Path: Identity Self-Service > Directory Search



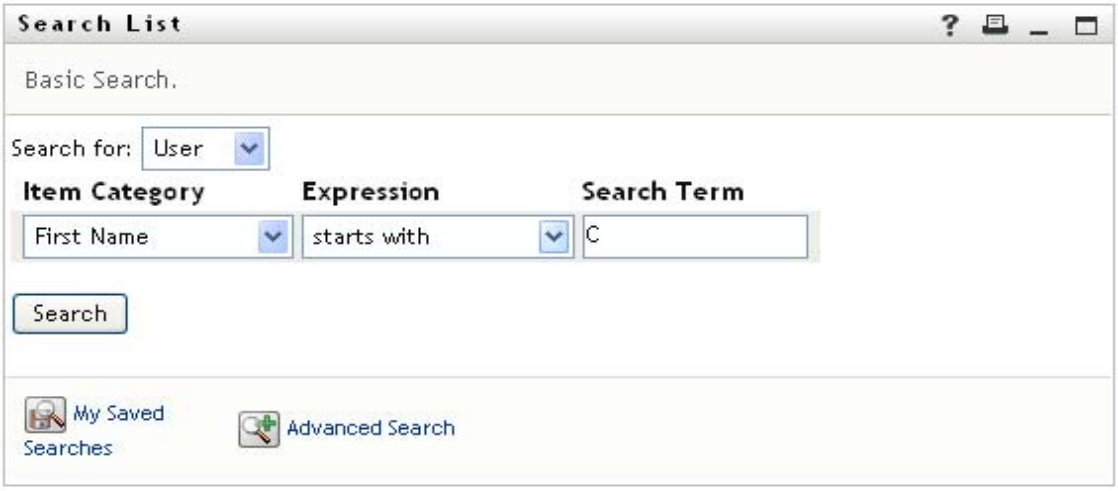
He doesn’t yet have any saved searches to select from, so he selects *New Search*.

There's a user he wants to contact whose first name begins with the letter C, but he can't remember the full name. He just needs to specify a basic search with this criterion:

Figure 6-2 *Specify a Search Criterion on the Search List Page*

Description: Specify a Search Criterion on the Search List page

Screen Capture Path: Identity Self-Service > Directory Search > New Search

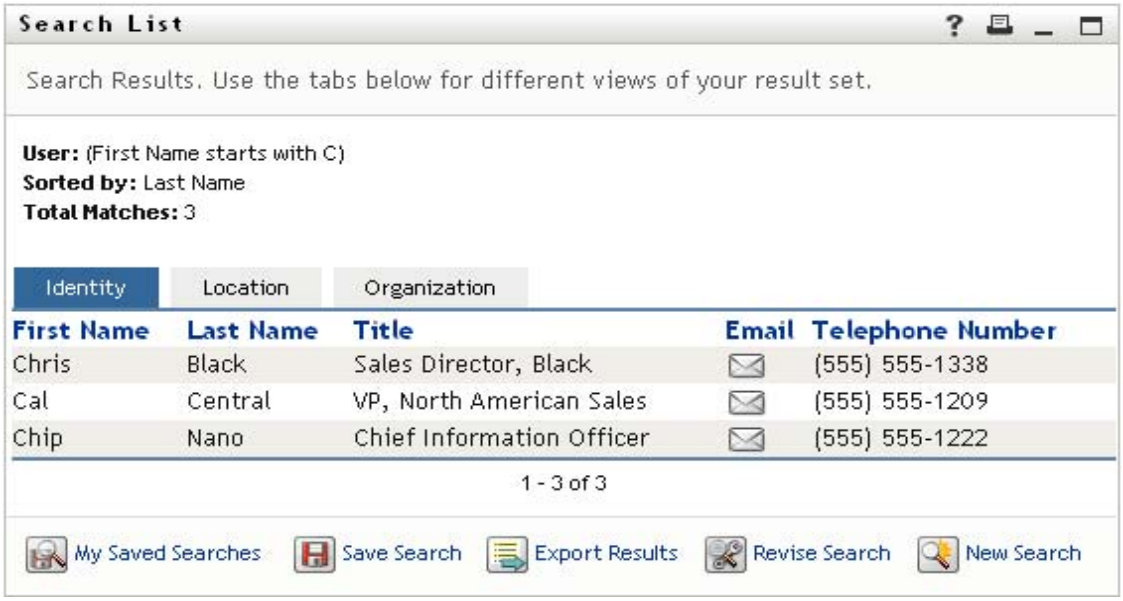


The search results display, enabling Timothy to examine and work with his requested information. By default, *Identity* tab information is displayed:

Figure 6-3 *Search Results*

Description: The Search List page displays search results

Screen Capture Path: Identity Self-Service > Directory Search > New Search > enter criteria and click Search

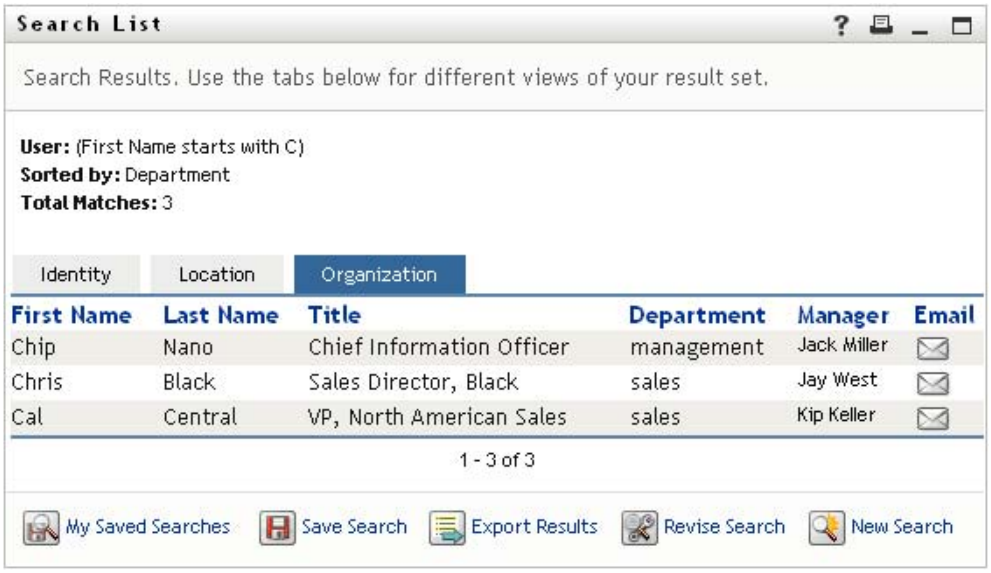


Timothy clicks the *Organization* tab in the search results to get another view of the information. He recalls that the person he seeks works for Kip Keller, so that narrows it down to Cal Central:

Figure 6-4 *Use Tabs to Change Views of Search Results*

Description: Select a tab to change view of search results

Screen Capture Path: Identity Self-Service > Directory Search > New Search > enter criteria and click Search > Organization tab



In addition to the tabs for different views, the search results page provides links and buttons for performing actions on its information. You can:

- Sort the rows of information by clicking the column headings
- Display details (Profile page) for a user or group by clicking its row
- Send new e-mail to a user by clicking the e-mail icon in that user's row
- Save the search for future reuse
- Export the results to a text file
- Revise the search by changing its criteria

When generating search results, you might sometimes need more than a basic search to describe the information you want. You can use an advanced search to specify complex criteria.

If there's an advanced search that you might need to perform again, you can retain it as a saved search. Saved searches are even handy for basic searches that you run frequently. For instance, Timothy Swan has added a couple of saved searches that he often uses:

Figure 6-5 *Saved Searches, on the Search List Page*

Description: List of saved searches on the Search List Page

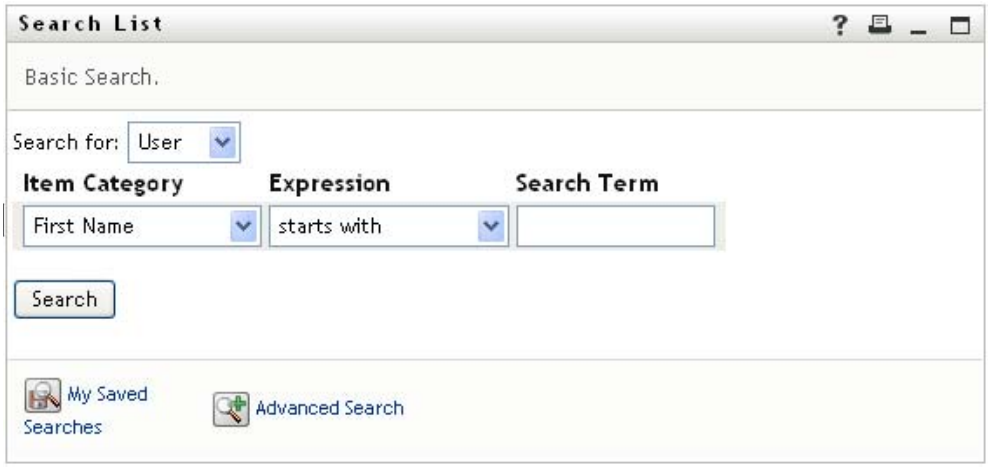
Screen Capture Path: Identity Self-Service > Directory Search > New Search > enter criteria, and search > Save Search

6.2 Performing Basic Searches

1 Go to the Directory Search page and click *New Search*. The Basic Search page displays by default:

Description: A basic search on the Search List Page

Screen Capture Path: Identity Self-Service > Directory Search > New Search



2 In the *Search for* drop-down list, specify the type of information to find by selecting *Group* or *User*.

3 In the *Item Category* drop-down list, select an attribute to search on. For example:

`Last Name`

The list of available attributes is determined by what you're searching for (users or groups).

4 In the *Expression* drop-down list, select a comparison operation to perform against your chosen attribute. For example:

`equals`

For more information, see Section 6.3.1, "Selecting an Expression," on page 76.

5 In the *Search Term* entry box, specify a value to compare against your chosen attribute. For example:

```
Smith
```

For more information, see Section 6.3.2, "Specifying a Value for Your Comparison," on page 77.

6 Click *Search*.

Your search results display.

To learn about what to do next, see Section 6.4, "Working with Search Results," on page 82.

6.3 Performing Advanced Searches

If you need to specify multiple criteria when searching for users or groups, you can use an advanced search. For example:

```
Last Name equals Smith AND Title contains Rep
```

If you specify multiple criteria groupings (to control the order in which criteria are evaluated), you'll use the same logical operations to connect them. For example, to perform an advanced search with the following criteria (two criteria groupings connected by an or):

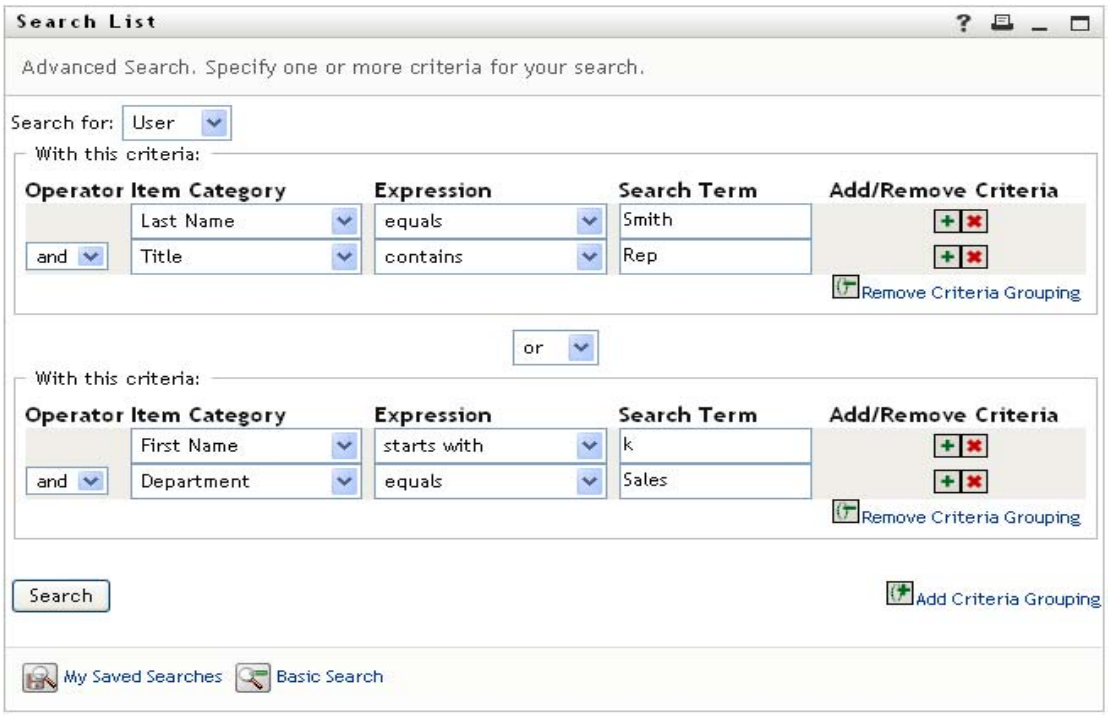
```
(Last Name equals Smith AND Title contains Rep) OR (First Name starts
with k AND Department equals Sales)
```

specify the following shown in Figure 6-6 on page 73:

Figure 6-6 *Specifying an Advanced Search on the Search List Page*

Description: An Advanced Search on the Search List Page

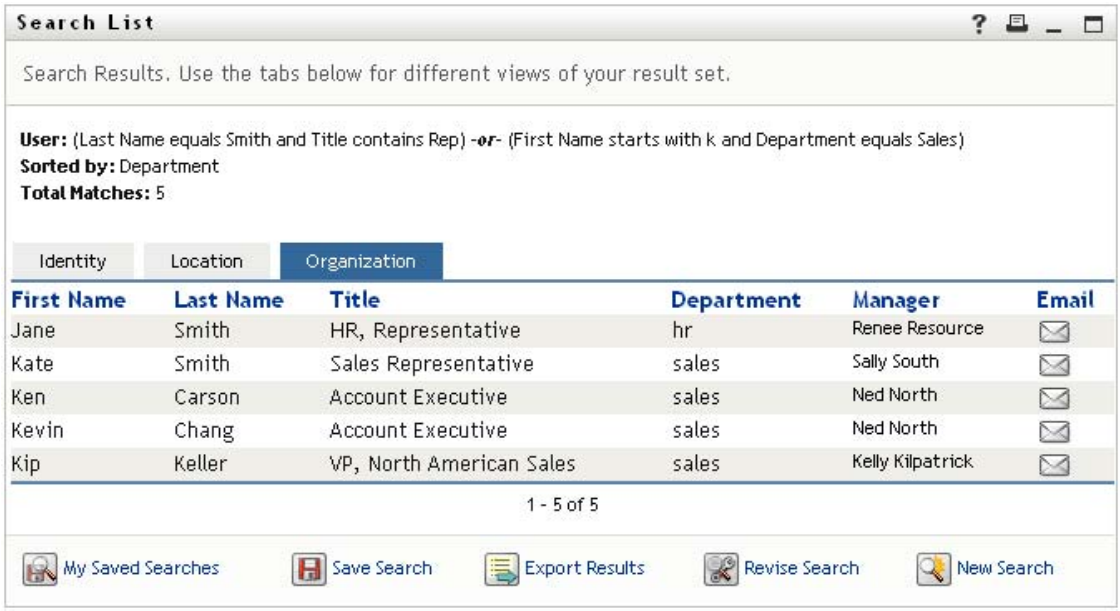
Screen Capture Path: Identity Self-Service > Directory Search > Basic Search > Advanced Search (Basic Search/Advanced Search is a toggle)



The result of this search is shown in Figure 6-7 on page 74.

Figure 6-7 *Result of Advanced Search*

Description: Result of Advanced Search

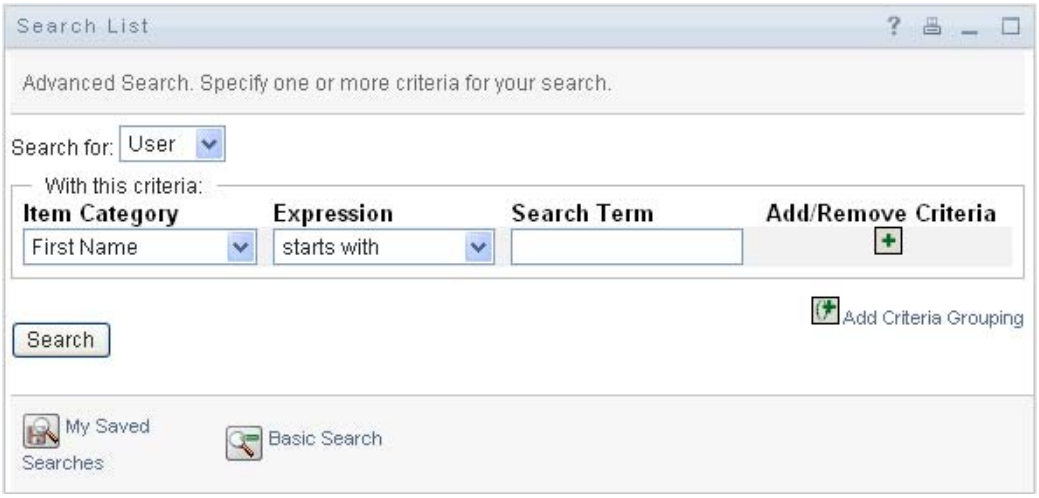


To perform an advanced search:

1. Go to the Directory Search page and click *New Search*. The Basic Search page displays by default.
2. Click *Advanced Search*. The Advanced Search page displays:

Description: Advanced Search

Screen Capture Path: Identity Self-Service > Directory Search > New Search > Advanced Search



3 In the *Search for* drop-down list, specify the type of information to find by selecting one of the following:

- Group
- User

You can now fill in the *With this criteria* section.

4 Specify a criterion of a criteria grouping:

4a Use the *Item Category* drop-down list to select an attribute to search on. For example:

```
Last Name
```

The list of available attributes is determined by what you're searching for (users or groups).

4b Use the *Expression* drop-down list to select a comparison operation to perform against your chosen attribute. For example:

```
equals
```

For more information, see Section 6.3.1, "Selecting an Expression," on page 76.

4c Use the *Search Term* entry to specify a value to compare against your chosen attribute. For example:

```
Smith
```

For more information, see Section 6.3.2, "Specifying a Value for Your Comparison," on page 77.

5 If you want to specify another criterion of a criteria grouping:

5a Click *Add Criteria* on the right side of the criteria grouping:

Description: Add Criteria button

5b On the left side of the new criterion, use the *Criteria Logical Operator* drop-down list to connect this criterion with the preceding one; select either *and* or *or*. You can use only one of the two types of logical operator within any one criteria grouping.

5c Repeat this procedure, starting with Step 4.

To delete a criterion, click *Remove Criteria* to its right: Description: The Remove button

6 If you want to specify another criteria grouping:

6a Click *Add Criteria Grouping*:

Description: The Add Criteria Grouping button

6b Above the new criteria grouping, use the *Criteria Grouping Logical Operator* drop-down list to connect this grouping with the preceding one; select either *and* or *or*.

6c Repeat this procedure, starting with Step 4.

To delete a criteria grouping, click *Remove Criteria Grouping* directly above it: Description: The Remove Criteria Grouping button

7 Click *Search*.

Your search results display.

To learn about what to do next, see Section 6.4, "Working with Search Results," on page 82.

6.3.1 Selecting an Expression

Click *Expression* to select a comparison criterion for your search. The list of comparison (relational) operations available to you in a criterion is determined by the type of attribute specified in that criterion:

Table 6-1 *Comparison Operations for Searching*

If the attribute is a	You can select one of these comparison operations
String (text)	◆ starts with ◆ contains ◆ equals ◆ ends with ◆ is present ◆ does not start with ◆ does not contain ◆ does not equal ◆ does not end with ◆ is not present
String (text) with a predetermined list of choices User or group (or other object identified by DN) Boolean (true or false)	◆ equals ◆ is present ◆ does not equal ◆ is not present
User (item category: Manager, Group, or Direct Reports)	◆ equals ◆ is present ◆ does not equal ◆ is not present
Group (item category: Members)	◆ equals ◆ is present ◆ does not equal ◆ is not present

If the attribute is a	You can select one of these comparison operations
Time (in date-time or date-only format) Number (integer)	◆ equals ◆ greater than ◆ greater than or equal to ◆ less than ◆ less than or equal to ◆ is present ◆ does not equal ◆ not greater than ◆ not greater than or equal to ◆ not less than ◆ not less than or equal to ◆ is not present

6.3.2 Specifying a Value for Your Comparison

The type of attribute specified in a criterion also determines how you specify the value for a comparison in that criterion:

Table 6-2 *Method of Entering Comparison Value*

If the attribute is a	You do this to specify the value
String (text)	Type your text in the text box that displays on the right.
String (text) with a predetermined list of choices	Select a choice from the drop-down list that displays on the right.
User or group (or other object identified by DN)	Use the *Lookup, History,* and *Reset* buttons that display on the right.
Time (in date-time or date-only format)	Use the *Calendar* and *Reset* buttons that display on the right.
Number (integer)	Type your number in the text box that displays on the right.
Boolean (true or false)	Type `true` or `false` in the text box that displays on the right.

Don’t specify a value when the comparison operation is one of the following:

- is present
- is not present

Case in Text

Text searches are not case sensitive. You’ll get the same results no matter which case you use in your value. For example, these are all equivalent:

```
McDonald
mcdonald
MCDONALD
```

Wildcards in Text

You can optionally use the asterisk (*) as a wildcard in your text to represent zero or more of any character. For example:

```
Mc*
*Donald
*Don*
McD*d
```

Using the Lookup, History, and Reset Buttons

Some search criteria display Lookup, History, and Reset buttons. This section describes how to use these buttons:

Table 6-3 *Lookup, History, and Reset Buttons in Search Criteria*

Button	What It Does
	Looks up a value to use for a comparison
	Displays a *History* list of values used for a comparison
	Resets the value for a comparison

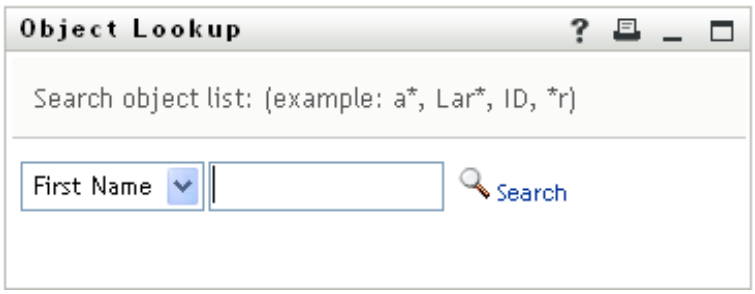
To look up a user:

1 Click *Lookup* to the right of an entry (for which you want to look up the user):

Description: The Lookup button

The Lookup page displays:

Description: The Lookup page



2 Specify search criteria for the user you want:

2a Use the drop-down list to select a search by *First Name* or *Last Name*.

2b In the text box next to the drop-down list, type all or part of the name to search for.

The search finds every name that begins with the text you type. It is not case sensitive. You can optionally use the asterisk (*) as a wildcard in your text to represent zero or more of any character.

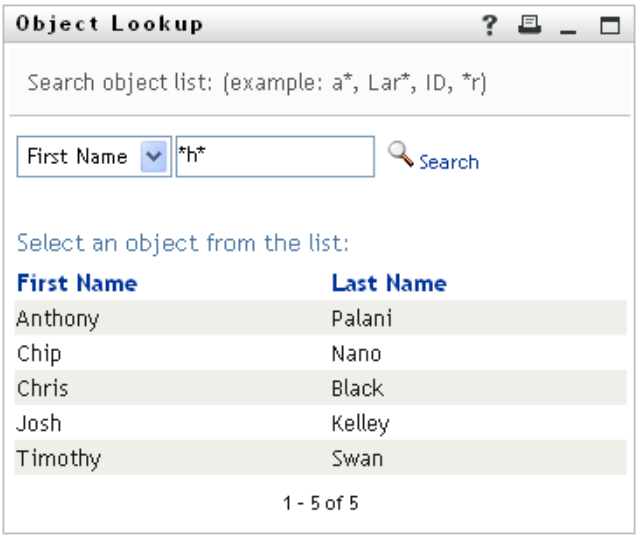
For instance, all of the following examples finds the first name Chip:

```
Chip
chip
c
c*
*p
*h*
```

3 Click *Search*.

The Lookup page displays your search results:

Description: The Lookup page displays search results



If you see a list of users that includes the one you want, go to Step 4. Otherwise, go back to Step 2.

You can sort the search results in ascending or descending order by clicking the column headings.

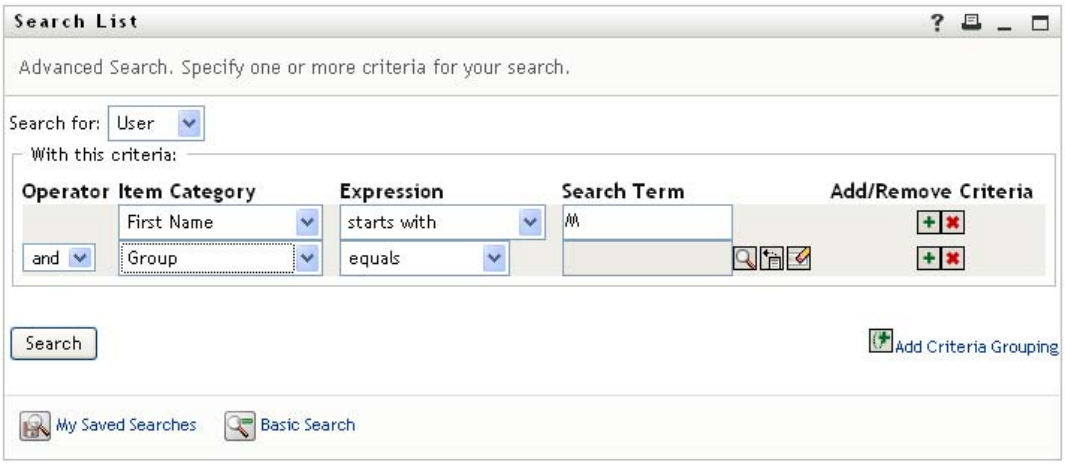
4 Select the user you want from the list.

The Lookup page closes and inserts the name of that user into the appropriate entry as the value to use for your comparison.

To look up a group as a search criterion for a user:

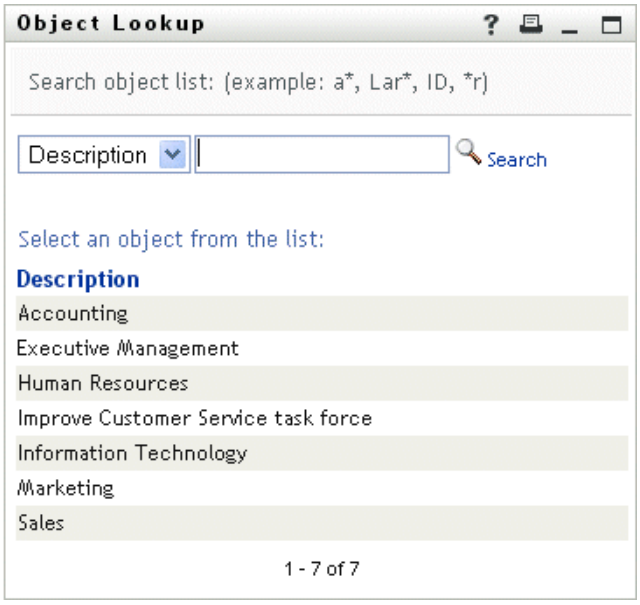
1 Add *Group* as a search criterion, then click *Lookup* Description: The Lookup button to the right of the *Search Term* field:

Description: Specifying advanced search criteria on the Search List page



The Lookup page displays search results:

Description: The Lookup page displays search results



2 Specify search criteria for the group you want:

2a In the drop-down list, your only choice is to search by *Description*.

2b In the text box next to the drop-down list, type all or part of the description to search for.

The search finds every description that begins with the text you type. It is not case sensitive. You can optionally use the asterisk (*) as a wildcard in your text to represent zero or more of any character.

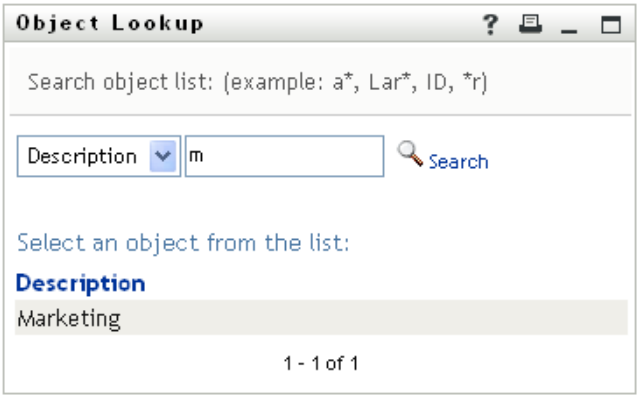
For instance, all of the following examples find the description Marketing:

```
Marketing
marketing
m
m*
*g
*k*
```

3 Click *Search*.

The Lookup page displays your search results:

Description: Search results



If you see a list of groups that includes the one you want, go to Step 4. Otherwise, go back to Step 2.

You can sort the search results in ascending or descending order by clicking the column heading.

4 Select the group you want from the list.

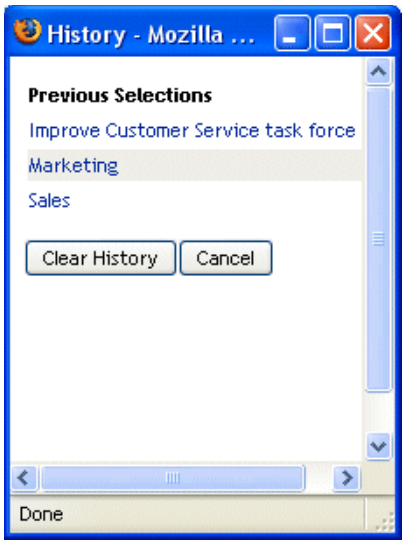
The Lookup page closes and inserts the description of that group into the appropriate entry as the value to use for your comparison.

To use the *History* list:

1 Click *History* Description: The History button to the right of an entry (whose previous values you want to see):

The *History* list displays previous values for this criterion in alphabetical order:

Description: screen capture



2 Do one of the following:

If you want to	Do this
Pick from the *History* list	Select a value that you want from the list. The *History* list closes and inserts that value into the appropriate entry as the value to use for your comparison.
Clear the *History* list	Click *Clear History*. The *History* list closes and deletes its values for this entry. Clearing the *History* list does not change the current value of the entry in your comparison.

6.4 Working with Search Results

This section tells you how to work with the results that display after a successful search:

- Section 6.4.1, “About Search Results,” on page 82
- Section 6.4.2, “Using the Search List,” on page 84
- Section 6.4.3, “Other Actions You Can Perform,” on page 85

6.4.1 About Search Results

The content of your search results depends on the type of search you perform:

- “For a User Search” on page 83
- “For a Group Search” on page 83

On any search results page, you can select

- View My Saved Searches
- Save Search
- Revise Search
- Export Results
- Start a New Search

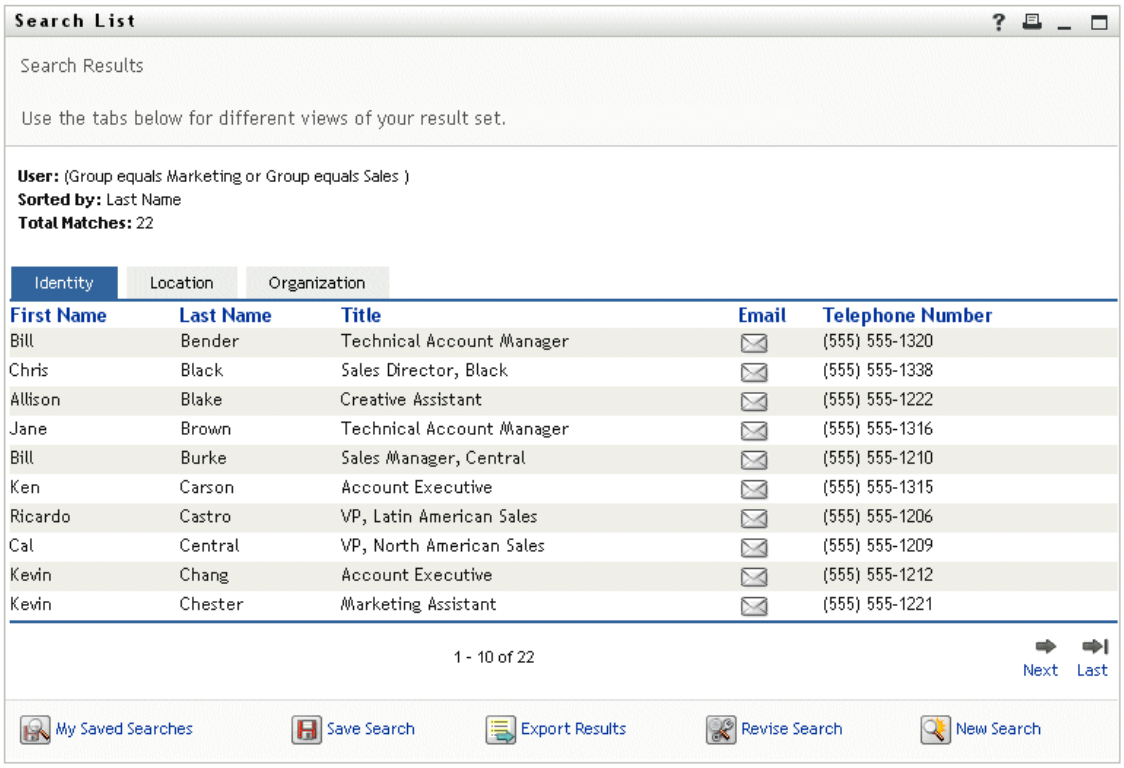
For a User Search

In the results of a user search, the list of users provides tabs for three views of the information:

- *Identity* (contact information)
- *Location* (geographical information)
- *Organization* (organizational information)

Figure 6-8 *User Search Results*

Description: The Search List page displays user search results on three tabs

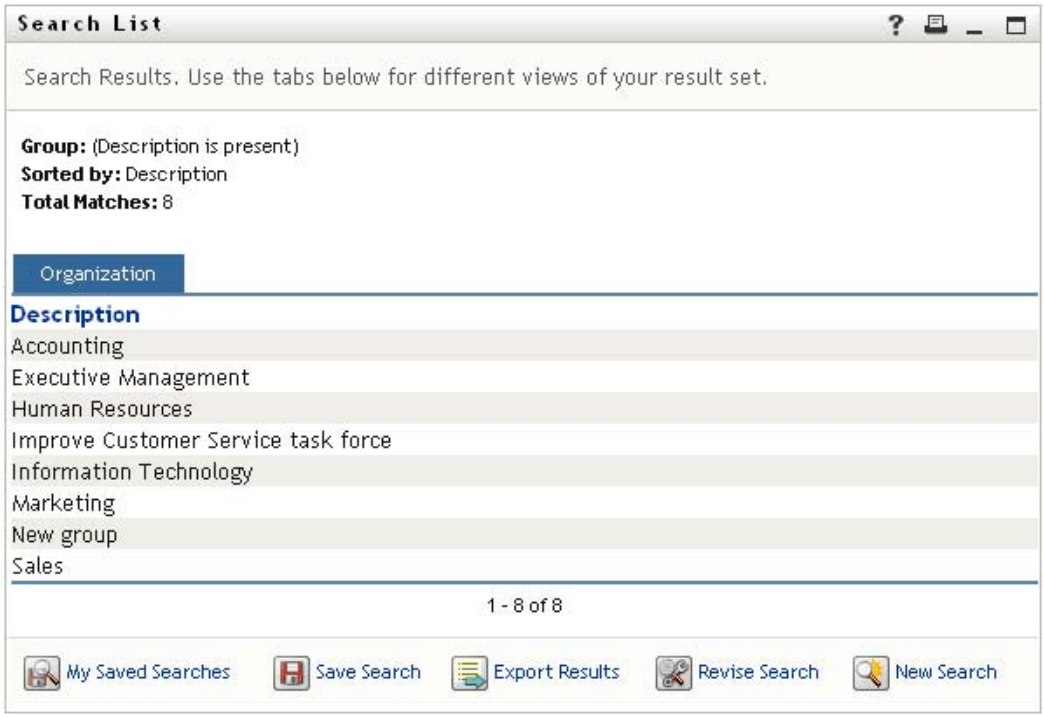


For a Group Search

The results of a group search provide only the Organization view of the information:

Figure 6-9 *Group Search Results*

Description: The Search List page displays group search results on only one tab



6.4.2 Using the Search List

You can do the following with the list of rows that displays to represent your results:

- "To Switch to a Another View" on page 84
- "To Sort the Rows of Information" on page 84
- "To Display Details for a User or Group" on page 84
- "To Send E-Mail to a User in the Search List" on page 85

To Switch to a Another View

1 Click the tab for the view you want to display.

To Sort the Rows of Information

1 Click the heading of the column that you want to sort.

The initial sort is in ascending order.

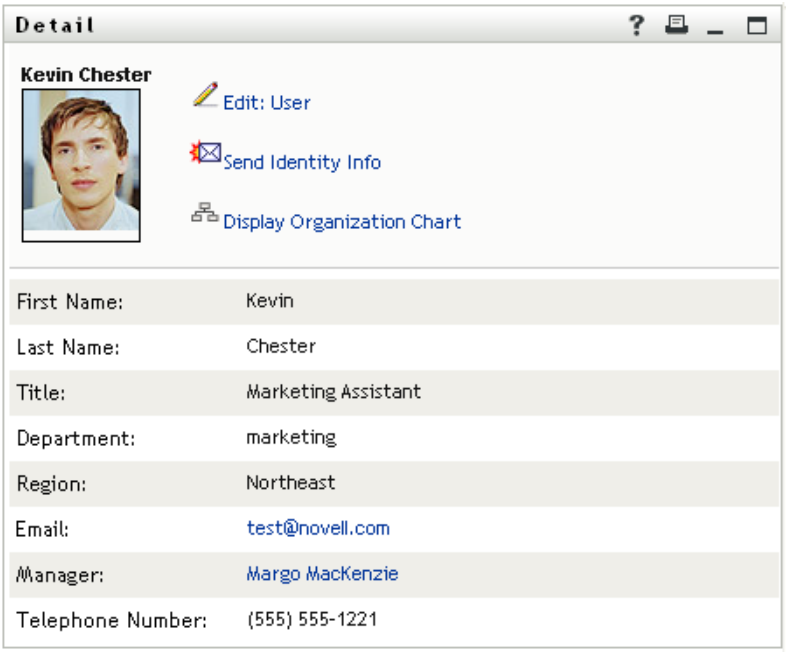
2 You can toggle between ascending and descending order by clicking the column heading again (as often as you like).

To Display Details for a User or Group

1 Click the row for the user or group whose details you want to see (but don't click directly on an e-mail icon unless you want to send a message instead).

The Profile page displays, showing detailed information about your chosen user or group:

Description: User Profile detail page



This page is just like the My Profile page on the *Identity Self-Service* tab. The only difference is that, when you are viewing details about another user or group (instead of yourself), you might not be authorized to see some of the data or perform some of the actions on the page. Consult your system administrator for assistance.

To learn about using the features of the Profile page, see Chapter 5, "Using My Profile," on page 55.

2 When you're done with the Profile page, you can close its window.

To Send E-Mail to a User in the Search List

1 Find the row of a user to whom you want to send e-mail.

2 Click *Send E-Mail* Description: The Send E-Mail button in that user's row:

A new message is created in your default e-mail client. The message is blank except for the *To* list, which specifies your chosen user as a recipient.

3 Fill in the message contents.

4 Send the message.

6.4.3 Other Actions You Can Perform

While displaying search results, you can also:

- "Save a Search" on page 86
- "Export Search Results" on page 86
- "Revise Search Criteria" on page 87

Save a Search

To save the current set of search criteria for future reuse:

1. Click *Save Search* (at the bottom of the page).
2. When prompted, specify a name for this search.

   If you're viewing the results of an existing saved search, that search name displays as the default. This enables you to update a saved search with any criteria changes you've made.

   Otherwise, if you type a search name that conflicts with the name of an existing saved search, a version number is automatically added to the end of the name when your new search is saved.
3. Click *OK* to save the search.

   The Search List page displays a list of My Saved Searches.

   To learn more about working with saved searches, see Section 6.5, "Using Saved Searches," on page 88.

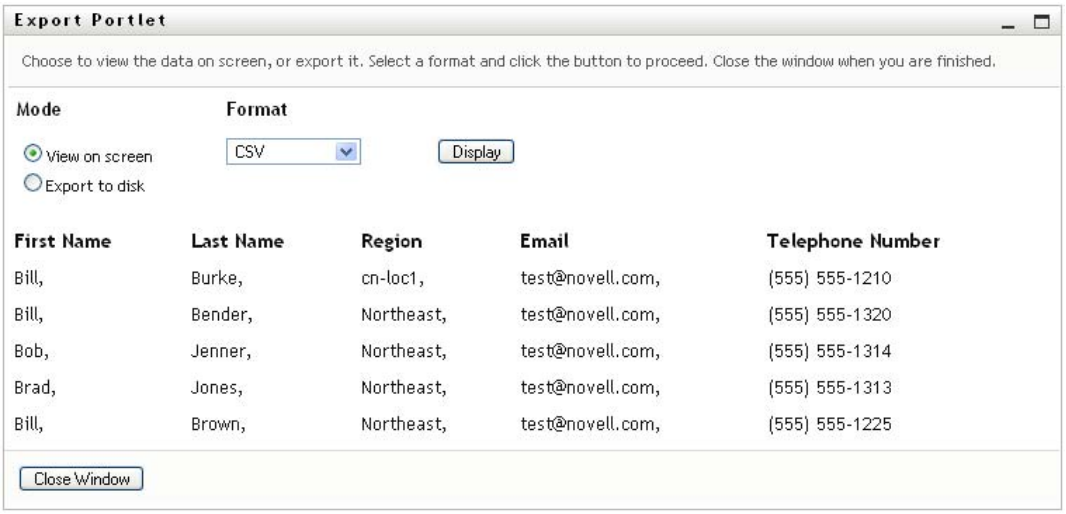
Export Search Results

To export search results to a text file:

1. Click *Export Results* (at the bottom of the page).

   The Export page displays:

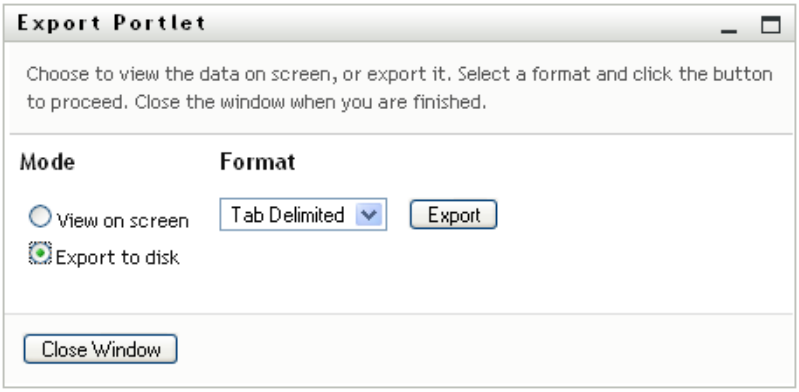
Description: The Export page



   By default, *View on screen* is selected, and *CSV* is chosen in the format drop-down list. Consequently, the Export page shows your current search results in CSV (Comma Separated Value) format.
2. If you want to see what those search results look like in Tab Delimited format instead, select *Tab Delimited* in the drop-down list, then click *Continue*.
3. When you're ready to export your current search results to a text file, check *Export to disk*.

The Export page displays:

Description: The Export portlet prompts for an export format



4 Use the *Format* drop-down list to select an export format for the search results:

Export Format	Default Name of Generated File
CSV	SearchListResult.*date*.*time*.csv For example: `SearchListResult.27-Sep-05.11.21.47.csv`
Tab Delimited	SearchListResult.*date*.*time*.txt For example: `SearchListResult.27-Sep-05.11.20.51.txt`
XML (available if you are exporting to disk)	SearchListResult.*date*.*time*.xml For example: `SearchListResult.27-Sep-05.11.22.51.xml`

5 Click *Export*.

6 When prompted, specify where to save the file of exported search results.

7 When you're finished exporting, click *Close Window*.

Revise Search Criteria

1 Click *Revise Search* (at the bottom of the page).

This returns you to your previous search page to edit your search criteria.

2 Make your revisions to the search criteria according to the instructions in these sections:

- Section 6.2, "Performing Basic Searches," on page 72
- Section 6.3, "Performing Advanced Searches," on page 73

6.5 Using Saved Searches

When you go to Directory Search, the My Saved Searches page displays by default. This section describes what you can do with saved searches:

- Section 6.5.1, "To List Saved Searches," on page 88
- Section 6.5.2, "To Run a Saved Search," on page 88
- Section 6.5.3, "To Edit a Saved Search," on page 88
- Section 6.5.4, "To Delete a Saved Search," on page 89

6.5.1 To List Saved Searches

1 Click the *My Saved Searches* button at the bottom of a Directory Search page. The My Saved Searches page displays. Figure 6-10 on page 88 shows an example.

Figure 6-10 *The My Saved Searches Page*

Description: Saved searches display by default

6.5.2 To Run a Saved Search

1 In the *My Saved Searches* list, find a saved search that you want to perform.

2 Click the name of the saved search (or click the beginning of that row).

Your search results display.

To learn about what to do next, see Section 6.4, "Working with Search Results," on page 82.

6.5.3 To Edit a Saved Search

1 In the *My Saved Searches* list, find a saved search that you want to revise.

2 Click *Edit* in the row for that saved search.

This takes you to the search page to edit the search criteria.

3 Make your revisions to the search criteria according to the instructions in these sections:

- Section 6.2, "Performing Basic Searches," on page 72
- Section 6.3, "Performing Advanced Searches," on page 73

4 To save your changes to the search, see Section 6.4, “Working with Search Results,” on page 82.

6.5.4 To Delete a Saved Search

1 In the *My Saved Searches* list, find a saved search that you want to delete.

2 Click *Delete* in the row for that saved search.

3 When prompted, click *OK* to confirm the deletion.

Performing Password Management

7

This section tells you how to use the Password Management pages on the *Identity Self-Service* tab of the Identity Manager User Application. Topics include:

- Section 7.1, “About Password Management,” on page 91
- Section 7.2, “Password Challenge Response,” on page 92
- Section 7.3, “Password Hint Change,” on page 93
- Section 7.4, “Change Password,” on page 94
- Section 7.5, “Password Policy Status,” on page 96
- Section 7.6, “Password Sync Status,” on page 97

NOTE: This section describes the default features of the Password Management pages. You might encounter some differences because of your job role, your level of authority, and customizations made for your organization; consult your system administrator for details.

For more general information about accessing and working with the *Identity Self-Service* tab, see Chapter 2, “Introducing the Identity Self-Service Tab,” on page 31.

7.1 About Password Management

You can use the Password Management pages to do any of the functions listed in Table 7-1:

Table 7-1 *Password Management Functions*

This Password Management page	Enables you to
Password Challenge Response	Set or change either of the following: ◆ Your valid responses to administrator-defined challenge questions ◆ User-defined challenge questions and responses
Password Hint Change	Set or change your password hint
Change Password	Change (reset) your password, according to the rules established by your system administrator
Password Policy Status	Review your password policy requirements. You can change requirements marked **Valid**
Password Sync Status	Display the status of synchronization of application passwords with the Identity Vault **NOTE:** Accessing applications prior to completion of synchronization causes application access issues.

7.2 Password Challenge Response

Challenge questions are used to verify your identity during login when you have forgotten your password. If the system administrator has set up a password policy that enables this feature for you, you can use the Password Challenge Response page to:

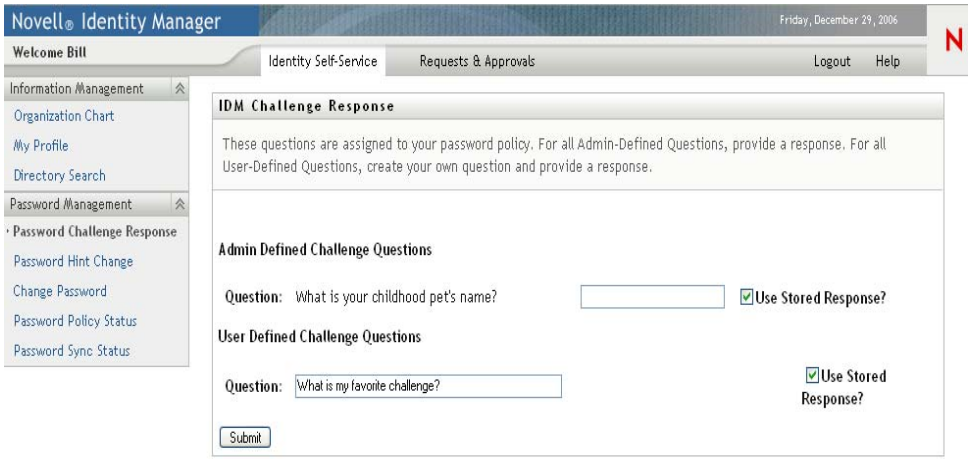
- Specify responses that are valid for you when answering administrator-defined questions
- Specify your own questions and the valid responses for them (if your password policy enables this)

To use the Password Challenge Response page:

1. On the *Identity Self-Service* tab, click *Password Challenge Response* in the menu (under *Password Management*).

   The Password Challenge Response page displays. For example:

Description: The Password Challenge Response page



   The *Response* text boxes display as blank (even if you have previously defined responses).

2. Type an appropriate response in each *Response* text box (they are all required), or use your previously stored response.

   Make sure you specify responses that you can remember later.

3. Specify or change any user-defined questions that are required. You may not use the same question more than once.

4. Click *Submit*.

   The status of your request displays. For example:

Description: Successful password challenge response

7.3 Password Hint Change

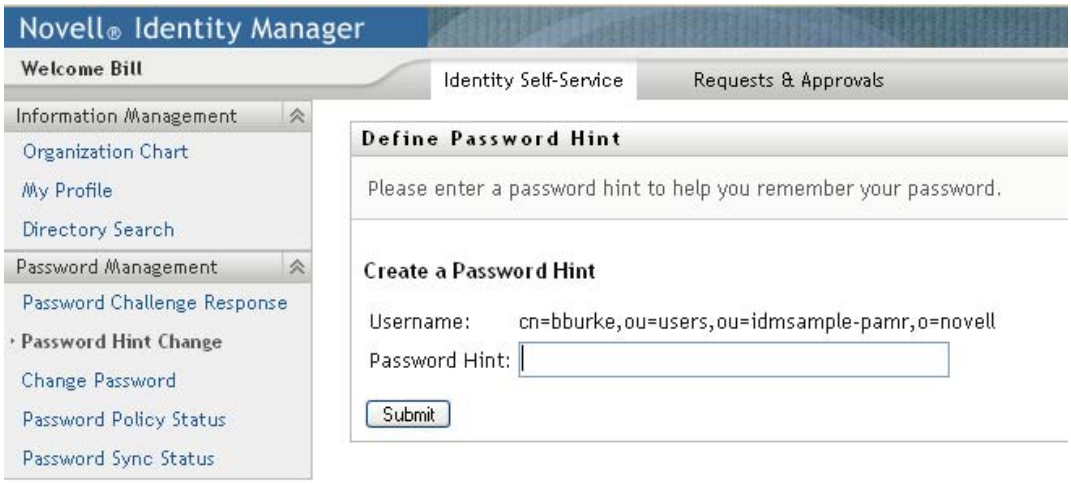
A password hint is used during login to help you remember your password when you have forgotten it. Use the Password Hint Change page to set or change your password hint.

1 On the *Identity Self-Service* tab, click *Password Hint Change* in the menu (under *Password Management*).

The Password Hint Definition page displays:

Description: Define Password Hint page

Screen Capture Path: Identity Self-Service > Password Hint Change



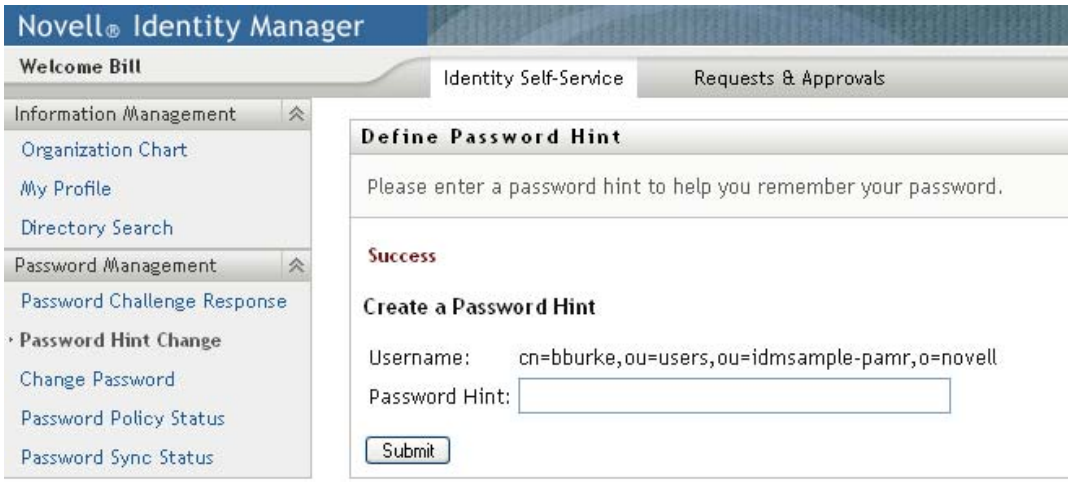
2 Type the new text for your hint.

Your password cannot appear within the hint text.

3 Click *Submit*.

The status of your request displays. For example:

Description: Success status on Define password hint page



7.4 Change Password

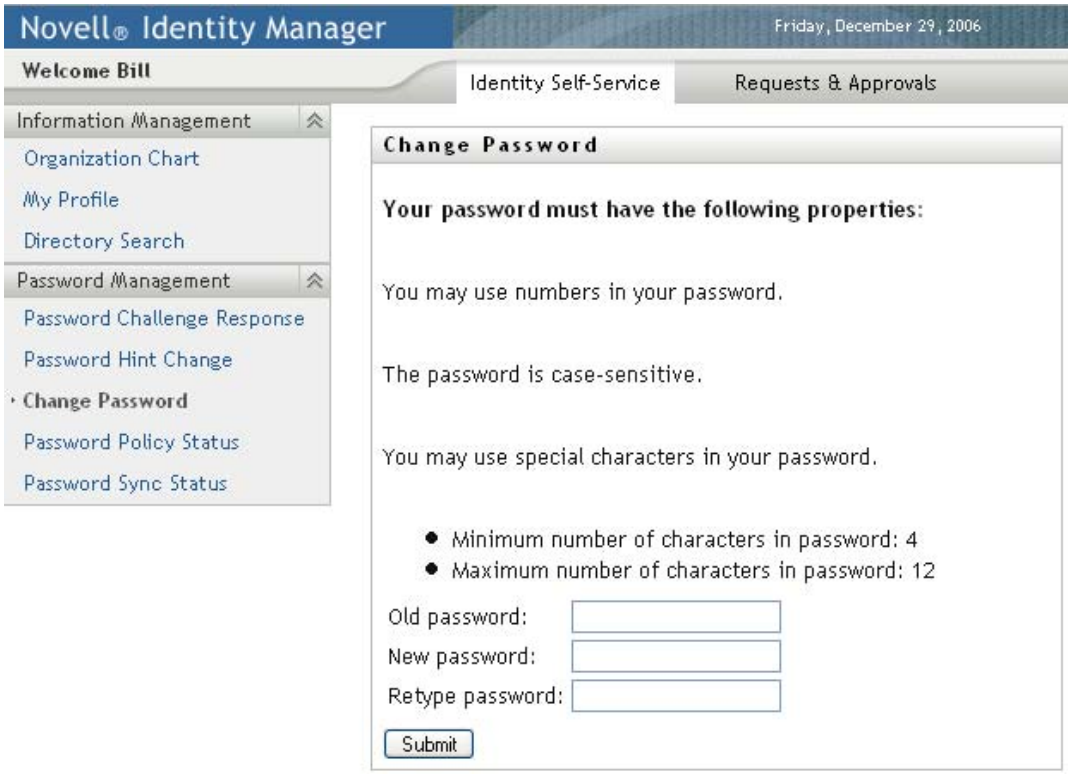
You can use this page whenever you need to change your password (providing that the system administrator has enabled you to do so).

1 On the *Identity Self-Service* tab, click *Change Password* in the menu (under *Password Management*).

The Change Password page displays. If the system administrator has set up a password policy for you, the Change Password page typically provides information about how to specify a password that meets the policy's requirements. For example:

Description: Change Password page

Screen Capture Path: Identity Self-Service > Change Password



If no password policy applies, you'll see the basic Change Password page:

Description: screen capture

2 Type your current password in the *Old password* text box.

3 Type your new password in the *New password* text box.

4 Type your new password again in the *Retype password* text box.

5 Click *Submit*.

6 You might be prompted to supply a password hint, if your administrator configured your security policy to do so. If so, see Section 7.3, "Password Hint Change," on page 93.

7 The status of your request is displayed. For example:

Description: Status of Password Change on Password Change page

7.5 Password Policy Status

You are assigned a password policy by your administrator. The policy determines the security measures associated with your password. You can check your password policy requirements as follows:

1 On the *Identity Self-Service* tab, click *Password Policy Status* in the menu (under *Password Management*).

The *Password Policy Status* page displays. For example:

Description: Password Policy Status page

Items labeled invalid are items that you cannot change.

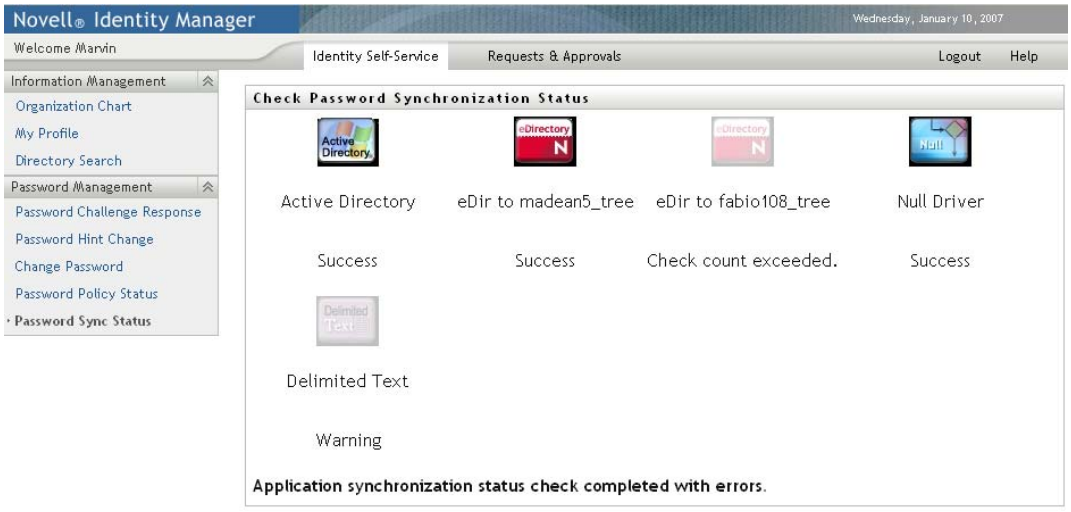
7.6 Password Sync Status

Use the Password Sync Status page to determine if your password has been synchronized across applications. Access another application only after your password has synchronized. Accessing applications prior to completion of synchronization causes application access issues.

1 On the *Identity Self-Service* tab, click *Password Sync Status* in the menu (under *Password Management*).

The *Password Sync Status* page displays. Full-color icons indicate applications for which the password is synchronized. Dimmed icons indicate applications that are not yet synchronized. For example:

Description: Password Sync Status page



Creating Users or Groups

8

This section tells you how to use the Create User or Group page on the *Identity Self-Service* tab of the Identity Manager User Application. Topics include:

- Section 8.1, “About Creating Users or Groups,” on page 99
- Section 8.2, “Creating a User,” on page 99
- Section 8.3, “Creating a Group,” on page 102
- Section 8.4, “Using the Editing Buttons,” on page 103

For general information about accessing and working with the *Identity Self-Service* tab, see Chapter 2, “Introducing the Identity Self-Service Tab,” on page 31.

8.1 About Creating Users or Groups

System administrators can use the Create User or Group page to create users and groups. The system administrator can give others (typically, selected people in administration or management positions) access to this page.

You might encounter some differences from functions documented in this section because of your job role, your level of authority, and customizations made for your organization. Consult your system administrator for details.

Details on enabling access to the Create User or Group page are in the “Page Administration” section of the *Identity Manager User Application: Administration Guide* (http://www.novell.com/documentation/idm35/index.html). To enable access, open iManager, add the user as a Trustee, and add the Assigned Right called Create to the Trustee.

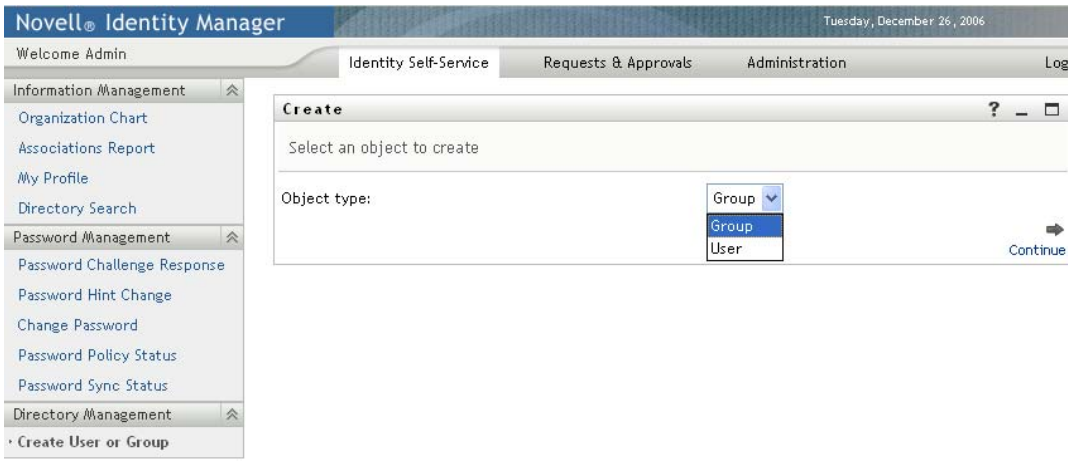
To check which users or groups already exist, use the Directory Search page. See Chapter 6, “Using Directory Search,” on page 69.

8.2 Creating a User

1 On the *Identity Self-Service tab*, click *Create User or Group* in the menu (under *Directory Management*, if displayed).

The *Select an object to create* panel displays.

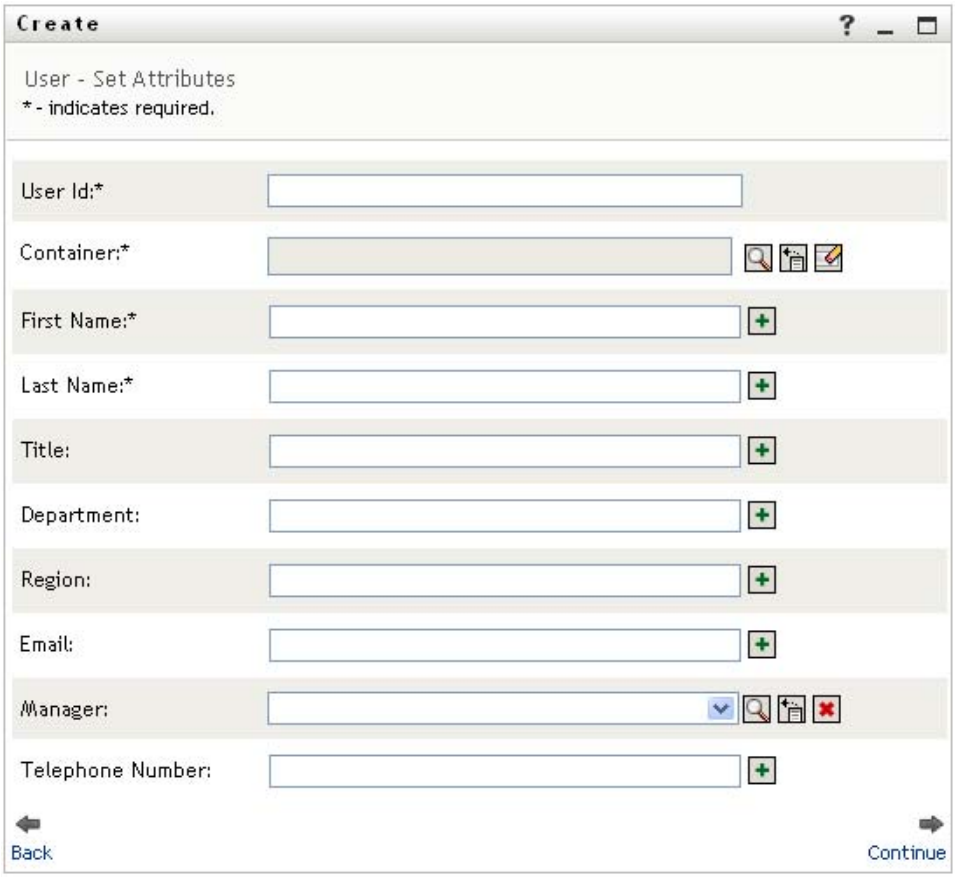
Description: The Create page



2 Use the *Object type* drop-down list to select *User*, then click *Continue*.

The *User - Set Attributes* panel displays:

Description: The User - Set Attributes panel



3 Specify values for the following required attributes:

Attribute	What to Specify
User ID	The username for this new user.
Container	An organizational unit in the Identity Vault under which you want the new user stored (such as an OU named users). For example: `ou=users,ou=MyUnit,o=MyOrg` To learn about using the buttons provided to specify a container, see Section 8.4, "Using the Editing Buttons," on page 103. You won't be prompted for Container if the system administrator has established a default create container for this type of object.
First Name	First name of the user.
Last Name	Last name of the user.

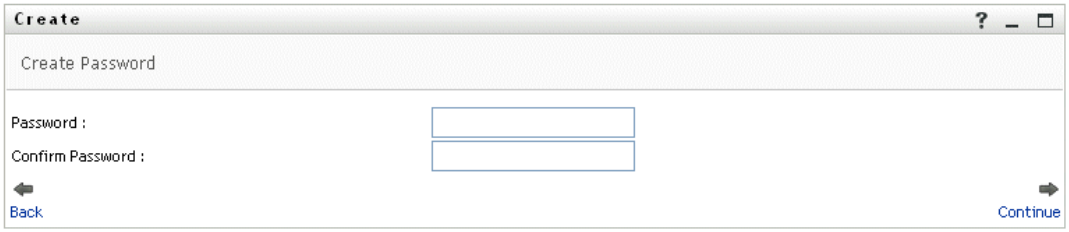
4 Specify optional details about this new user, such as Title, Department, Region, E-mail, Manager, or Telephone Number.

To learn about using the buttons provided to specify values for certain attributes, see Section 8.2, "Creating a User," on page 99.

5 Click *Continue*.

The *Create Password* panel displays:

Description: The Create Password panel



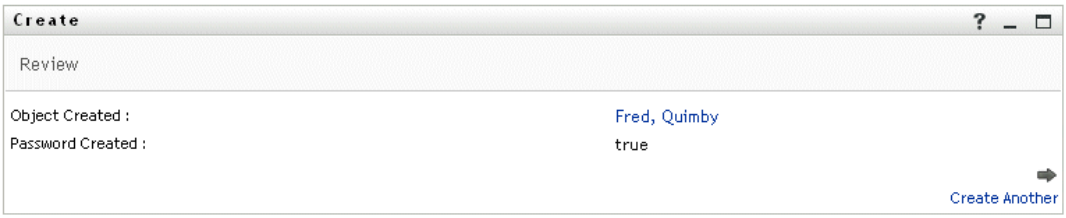
If a password policy is in effect for the target container, this panel provides information about how to specify a password that meets the policy's requirements. The password is also validated against that policy.

6 Type a password for the new user in the *Password* and *Confirm Password* text boxes, then click *Continue*.

This sets the new user's initial password. When that user first logs in, the Identity Manager User Application prompts the user to change this password.

The user and password are created, then the *Review* panel displays to summarize the result:

Description: The Create review panel



The *Review* panel provides optional links that you might find handy:

- Click the new user's name to display the Profile page of detailed information for this user. From the Profile page, you can edit the user's details to make changes or delete the user.
- Click *Create Another* to return to the initial panel of the Create User or Group page

8.3 Creating a Group

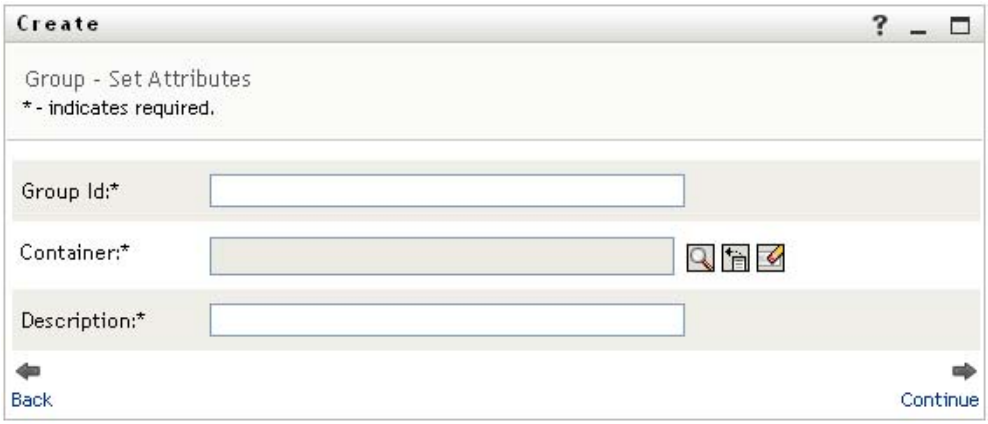
1 On the *Identity Self-Service* tab, click *Create User or Group* in the menu (under *Directory Management*, if displayed).

The *Select an object to create* panel displays.

2 Use the *Object type* drop-down list to select *Group*, then click *Continue*.

The *Set attributes for this Group* panel displays:

Description: The Group - Set Attributes panel



3 Specify values for the following required attributes:

Attribute	What to Specify
Group ID	The group name for this new group.

Attribute	What to Specify
Container	An organizational unit in the identity vault under which you want the new group stored (such as an OU named groups). For example: `ou=groups,ou=MyUnit,o=MyOrg` To learn about using the buttons provided to specify a container, see Section 8.2, "Creating a User," on page 99. **NOTE:** You won't be prompted for *Container* if the system administrator has established a default create container for this type of object.
Description	A description of this new group.

4 Click *Continue*.

The group is created, then the *Review* panel displays to summarize the result:

Description: The Create review panel

The *Review* panel provides optional links that you might find handy:

- Click the new group's name to display the Profile page of detailed information for this group

  From the Profile page, you can edit the group's details to make changes or delete the group.
- Click *Create Another* to return to the initial panel of the Create User or Group page

8.4 Using the Editing Buttons

Table 8-1 lists the editing buttons you can use to specify values for attributes.

Table 8-1 *Editing Buttons for Specifying Users and Groups*

Button	What It Does
	Looks up a value to use in an entry
	Displays a *History* list of values used in an entry
	Resets the value of a selected entry
	Adds a new entry. You can add more than one entry.
	Indicates that more than one entry exists.
	Deletes a selected entry and its value

IMPORTANT: It is possible to use the Edit User page of the *Identity Self-Service* tab to break the hierarchical reporting structure. For example, you can add a direct report to a manager even if the direct report has another manager assigned, or you can have a manager report to a person in his or her own organization.

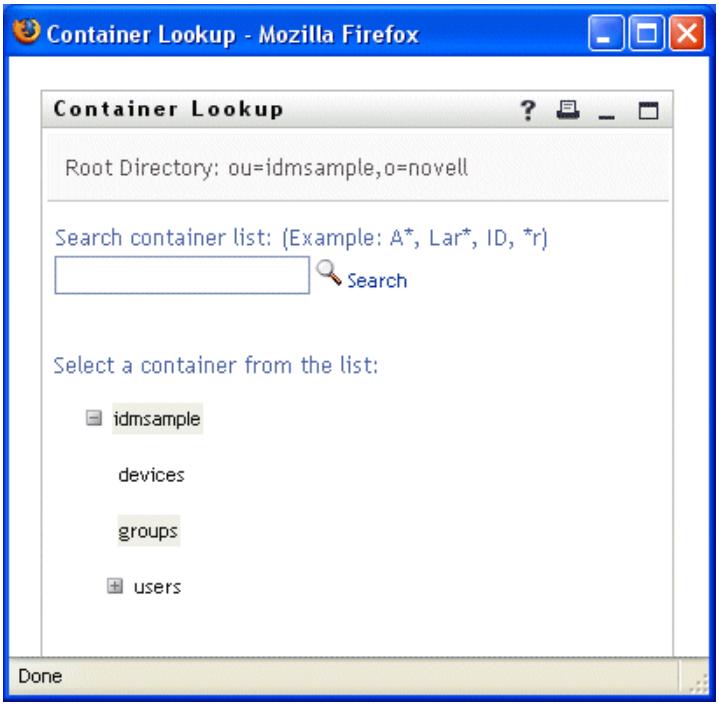
From Readme bug 132256.

8.4.1 To Look Up a Container

1 Click *Lookup* to the right of an entry for which you want to look up a container:

The Lookup page displays a tree of containers:

Description: Looking up a container



You can expand or collapse the nodes in this tree (by clicking the + or - buttons) to look for the container you want.

2 If necessary, specify search criteria for the container you want.

In the text box, type all or part of the container name to search for. The search finds every container name that begins with the text you type. It is not case sensitive. You can optionally use the asterisk (*) as a wildcard in your text to represent zero or more of any character.

For instance, all of the following examples find the container named users:

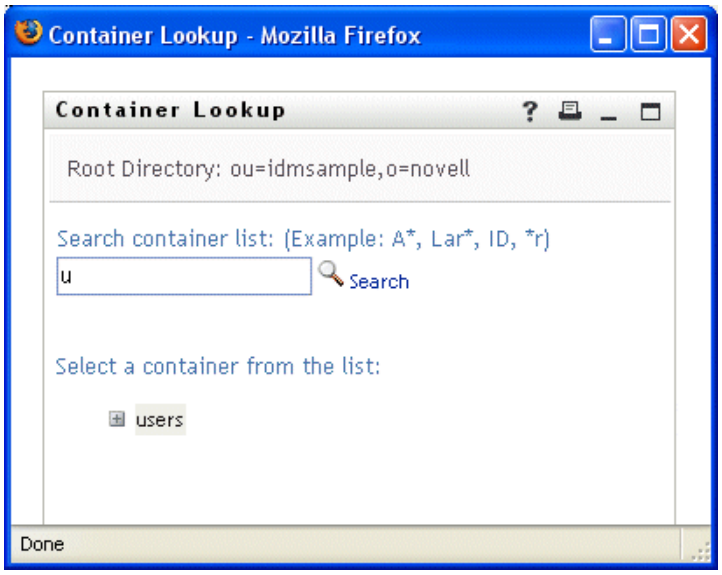
```
Users
users
u
u*
```

```
*s
*r*
```

3 Click *Search*.

The Lookup page displays your search results:

Description: Container Lookup results



4 Select the container you want from the tree.

The Lookup page closes and inserts the name of that container into the appropriate entry.

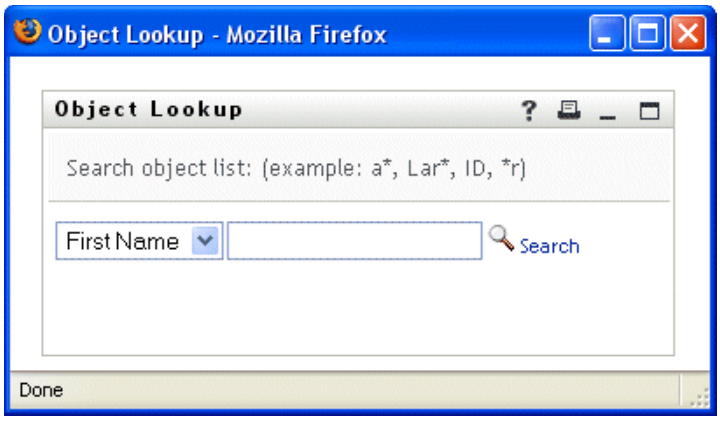
8.4.2 To Look Up a User

1 Click *Lookup* to the right of an entry (for which you want to look up a user):

Description: Lookup button

The Lookup page displays:

Description: Looking up a user



2 Specify search criteria for the user you want:

2a Use the drop-down list to select a search by *First Name* or *Last Name*.

2b In the text box next to the drop-down list, type all or part of the name to search for.

The search finds every name that begins with the text you type. It is not case sensitive. You can optionally use the asterisk (*) as a wildcard in your text to represent zero or more of any character.

For instance, all of the following examples find the first name Chip:

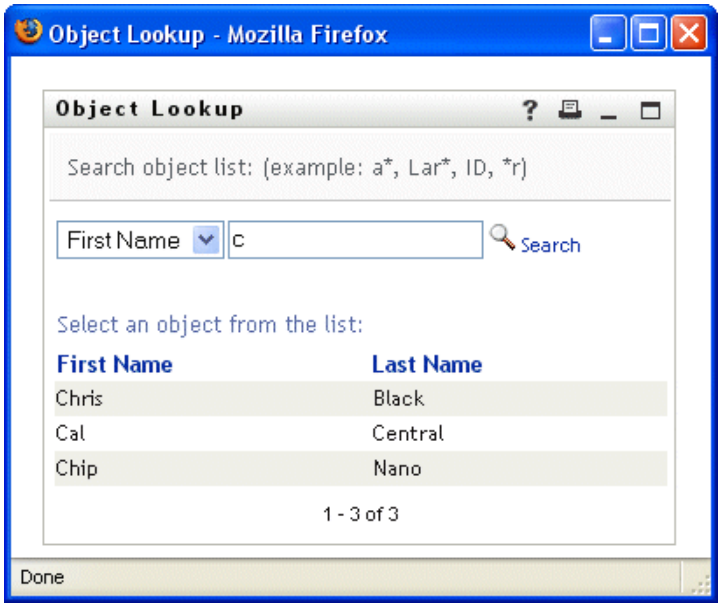
```
Chip
chip
c
c*
*p
*h*
```

A manager lookup searches only for users who are managers.

3 Click *Search*.

The Lookup page displays your search results:

Description: Lookup results for a search for a user



If you see a list of users that includes the one you want, go to Step 4. Otherwise, go back to Step 2.

You can sort the search results in ascending or descending order by clicking the column headings.

4 Select the user you want from the list.

The Lookup page closes and inserts the name of that user into the appropriate entry.

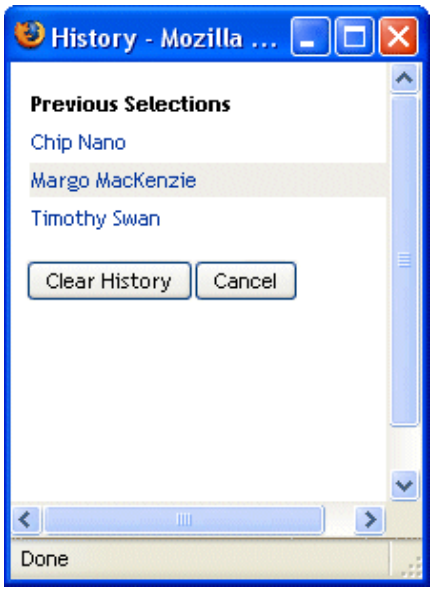
8.4.3 To Use the History List

1 Click *History* to the right of an entry (whose previous values you want to see):

Description: History button

The *History* list displays, with values in alphabetical order:

Description: History list



2 Do one of the following:

If you want to	Do this
Pick from the *History* list	Select a value that you want from the list. The *History* list closes and inserts that value into the appropriate entry.
Clear the *History* list	Click *Clear History*. The *History* list closes and deletes its values for this entry. Clearing the *History* list does not change the current value of the entry.

Using the Requests & Approvals Tab

III

These sections tell you how to use the *Requests & Approvals* tab of the Identity Manager User Application.

- Chapter 9, “Introducing the Requests & Approvals Tab,” on page 111
- Chapter 10, “Managing Your Work,” on page 121
- Chapter 11, “Configuring Your Provisioning Settings,” on page 143
- Chapter 12, “Managing Your Team’s Work,” on page 161
- Chapter 13, “Configuring Your Team’s Provisioning Settings,” on page 191

Introducing the Requests & Approvals Tab

9

This section provides an overview of the *Requests & Approvals* tab. Topics include:

- Section 9.1, "About the Requests & Approvals Tab," on page 111
- Section 9.2, "Accessing the Requests & Approvals Tab," on page 112
- Section 9.3, "Exploring the Tab's Features," on page 112
- Section 9.4, "Requests & Approvals Actions You Can Perform," on page 114
- Section 9.5, "Understanding the Requests & Approvals Legend," on page 117

For more general information about accessing and working with the Identity Manager user interface, see Chapter 1, "Getting Started," on page 15.

9.1 About the Requests & Approvals Tab

The purpose of the *Requests & Approvals* tab is to give you a convenient way to perform workflow-based provisioning actions. These actions allow you to manage user access to secure resources in your organization. These resources can include digital entities such as user accounts, computers, and databases. For example, you might use the *Requests & Approvals* tab to:

- Make provisioning requests for yourself or your team
- Manage provisioning work (tasks and resource requests) for yourself or your team
- Configure provisioning settings for yourself or your team

When a provisioning request requires permission from one or more individuals in an organization, the request starts a workflow. The workflow coordinates the approvals needed to fulfill the request. Some resource requests require approval from a single individual; others require approval from several individuals. In some instances, a request can be fulfilled without any approvals.

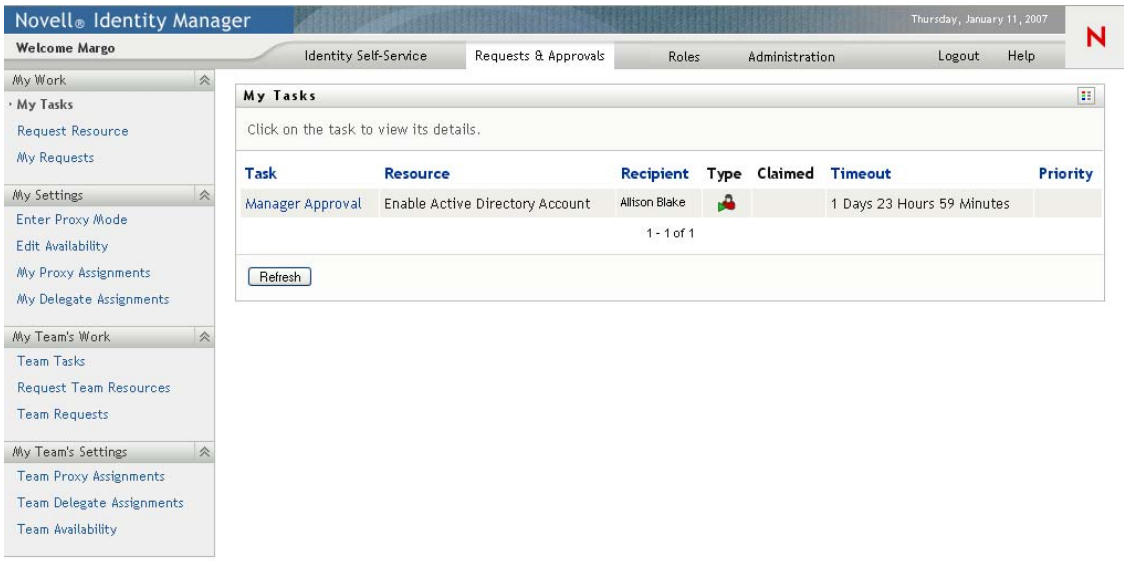
When a provisioning request is initiated, the Provisioning System tracks the initiator and the recipient. The initiator is the person who made the request. The recipient is the person for whom the request was made.

Your workflow designer and system administrator are responsible for setting up the contents of the *Requests & Approvals* tab for you and the others in your organization. The flow of control for a provisioning workflow, as well as the appearance of forms, can vary depending on how the provisioning request was defined in the Designer for Identity Manager. In addition, what you can see and do is typically determined by your job requirements and your level of authority.

For details on customizing the design of a provisioning workflow, see the *Identity Manager User Application: Design Guide* (http://www.novell.com/documentation/idm35/index.html). For details on workflow administration, see the *Identity Manager User Application: Administration Guide* (http://www.novell.com/documentation/idm35/index.html).

9.2 Accessing the Requests & Approvals Tab

By default, after you have logged in to the Identity Manager user interface, the *Requests & Approvals* tab opens and displays the My Tasks page:



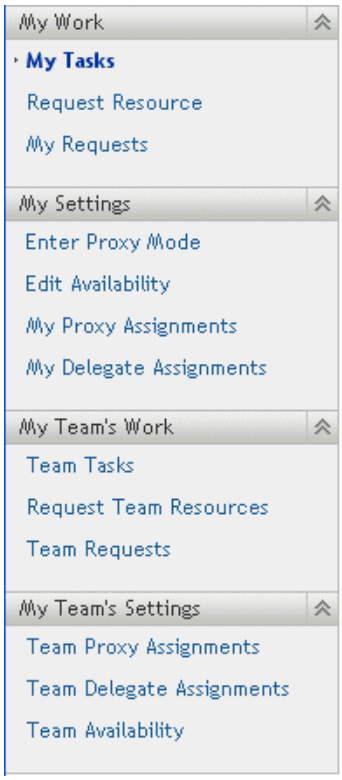
If you go to another tab in the Identity Manager user interface but then want to return, you just need to click the *Requests & Approvals* tab to open it again.

9.3 Exploring the Tab's Features

This section describes the default features of the *Requests & Approvals* tab. (Your tab might look different because of customizations made for your organization; consult your system administrator or workflow designer.)

The left side of the *Requests & Approvals* tab displays a menu of actions you can perform. The actions are listed by category (*My Work, My Settings, My Team's Work,* and *My Team's Settings*):

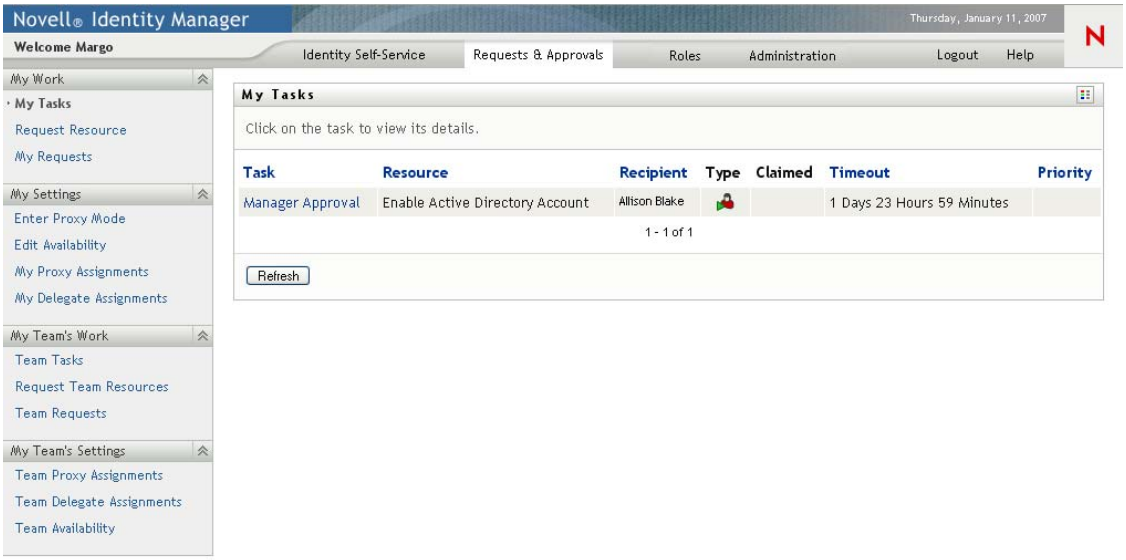
Description: Requests & Approvals menu



The *My Team's Work* and *My Team's Settings* actions are only displayed if you are a team manager.

When you click an action, it displays a corresponding page on the right. The page typically contains a window that shows the details for that action. For example, it might display a list or a form where you can enter data or make a selection, as shown below:

Figure 9-1 *Page Displayed for an Action*



Most pages you work with on the *Requests & Approvals* tab include a button in the upper right corner that lets you display the *Requests & Approvals* legend:

Description: Requests & Approvals legend button

For details on the *Requests & Approvals* legend, see Section 9.5, "Understanding the Requests & Approvals Legend," on page 117.

9.4 Requests & Approvals Actions You Can Perform

Here's a summary of the actions that are available to you by default on the *Requests & Approvals* tab:

Table 9-1 *Requests & Approvals Actions*

Category	Action	Description
My Work	My Tasks	Displays the approval tasks currently assigned to you in your workflow queue. If a task requires a digital signature, the My Tasks action provides a way to approve or disapprove the task with a digital signature. **WARNING:** You must use Novell Audit (or Sentinel) to preserve documents that you digitally sign. Digital signature documents are not stored with workflow data in the User Application database, but are stored in the logging database. You must enable logging to preserve these documents. If a task is assigned to multiple addressees, the My Tasks action provides a way to see the approval requirements for the task, as well as the list of addressees and the approval status. For details, see Chapter 10, “Managing Your Work,” on page 121.
	Request Resource	Lets you make a request for a resource. If a resource requires a digital signature, the Request Resource action provides a way to associate a digital signature with the request. For details, see Chapter 10, “Managing Your Work,” on page 121.
	My Requests	Displays the status of the resource requests made by or for you. The list of requests therefore includes those for which you are the initiator or the recipient for a request that authorizes view privileges for recipients. For details, see Chapter 10, “Managing Your Work,” on page 121.

Category	Action	Description
My Settings	Enter Proxy Mode	Lets you act as a proxy for another user. For details, see Chapter 11, “Configuring Your Provisioning Settings,” on page 143.
	Edit Availability	Lets you specify which resource requests you are available to act on, and which resource requests your assigned delegates can act on. For details, see Chapter 11, “Configuring Your Provisioning Settings,” on page 143.
	My Proxy Assignments	Lets you view or edit your proxy assignments. To edit proxy assignments, you must have the necessary authority. For details, see Chapter 11, “Configuring Your Provisioning Settings,” on page 143.
	My Delegate Assignments	Lets you view or edit your delegate assignments. To edit delegate assignments, you must have the necessary authority. For details, see Chapter 11, “Configuring Your Provisioning Settings,” on page 143.
My Team’s Work	Team Tasks	Displays the approval tasks assigned to members of your team. Depending on the rights defined for the team, this action can also allow you to claim and/or reassign tasks. If a task requires a digital signature, the Team Tasks action provides a way to approve or disapprove the task with a digital signature. If a task is assigned to multiple addressees, the Team Tasks action provides a way to see the approval requirements for the task, as well as the list of addressees. For details, see Chapter 12, “Managing Your Team’s Work,” on page 161.
	Request Team Resource	Lets you make a request for a resource for a member of your team. If a resource requires a digital signature, the Request Team Resource action provides a way to associate a digital signature with the request. For details, see Chapter 12, “Managing Your Team’s Work,” on page 161.
	Team Requests	Displays the status of resource requests made by or for members of your team. For details, see Chapter 12, “Managing Your Team’s Work,” on page 161.

Category	Action	Description
My Team's Settings	Team Proxy Assignments	Lets you specify proxy assignments for members of your team. This capability must be enabled in the team definition. When this capability is disabled, this action is not allowed. For details, see Chapter 13, "Configuring Your Team's Provisioning Settings," on page 191.
	Team Delegate Assignments	Lets you specify delegate assignments for members of your team. This capability must be enabled in the team rights definition. If the team rights allow managers to make a team member a delegate for other team member's provisioning requests, this action is allowed for these requests. When this capability is disabled in the team rights definition, this action is not allowed. For details, see Chapter 13, "Configuring Your Team's Provisioning Settings," on page 191.
	Team Availability	Lets you specify which resource requests your team members are available to act on, and which resource requests the team member's delegates can act on. This capability must be enabled in the team definition. When this capability is disabled, this action is not allowed. For details, see Chapter 13, "Configuring Your Team's Provisioning Settings," on page 191.

9.5 Understanding the Requests & Approvals Legend

Most pages you work with on the *Requests & Approvals* tab include a button in the upper right corner that lets you display the *Requests & Approvals* legend. To display the legend, click the Legend button, shown in Figure 9-2:

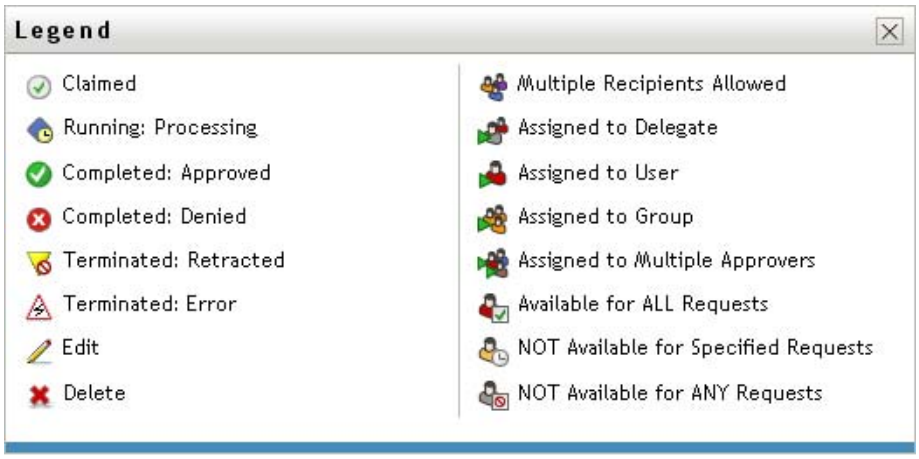
Figure 9-2 *The Legend Button*

Description: Legend button

The legend provides a brief description of the icons used throughout the *Requests & Approvals* tab. Figure 9-3 on page 118 shows the legend.

Figure 9-3 *The Requests & Approvals Legend*

Description: Requests & Approvals Legend



The table below provides detailed descriptions of the icons in the legend:

Table 9-2 *Legend Icons*

Icon	Description
Claimed	Indicates whether a particular workflow task has been claimed by a user. Appears on the My Tasks page.
Running: Processing	Indicates that a particular resource request is still in process. Appears on the My Requests and Team Requests pages.
Completed: Approved	Indicates that a particular resource request has completed its processing and has been approved. Appears on the My Requests and Team Requests pages.
Completed: Denied	Indicates that a particular resource request has completed its processing and has been denied. Appears on the My Requests and Team Requests pages.
Terminated: Retracted	Indicates that a particular resource request was retracted by a user (either the user who submitted the request, a team manager, or the Provisioning Application Administrator). Appears on the My Requests and Team Requests pages.
Terminated: Error	Indicates that a particular resource request was terminated because of an error. Appears on the My Requests and Team Requests pages.

Icon	Description
Edit	Lets you edit a proxy or delegate assignment. To edit the assignment, select it and click the *Edit* icon. Appears on the My Proxy Assignments, My Delegate Assignments, Team Proxy Assignments, Team Delegate Assignments, Edit Availability, and Team Availability pages.
Delete	Lets you delete a proxy or delegate assignment. To delete the assignment, select it and click the *Delete* icon. Appears on the My Proxy Assignments, My Delegate Assignments, Team Proxy Assignments, Team Delegate Assignments, Edit Availability, and Team Availability pages.
Multiple Recipients Allowed	Indicates that this resource provides support for multiple recipients. When a resource supports multiple recipients, the *Request Team Resources* action lets you select multiple users as recipients. Appears on the Request Team Resources page.
Assigned to Delegate	Indicates that a particular workflow task has been delegated by another user. This task appears in the current user's queue because the original assignee has declared himself or herself unavailable. Because the current user is the original assignee's delegate, this user sees the task. Appears on the My Tasks and Team Tasks pages.
Assigned to User	Indicates that a particular workflow task was assigned to a user. Appears on the My Tasks and Team Tasks pages.
Assigned to Group	Indicates that a particular workflow task was assigned to a group. Appears on the My Tasks and Team Tasks pages.
Assigned to Multiple Approvers	Indicates that a particular workflow task was assigned to more than one user. This icon applies in the following situations: ◆ The task has been assigned to a group of addressees, but only one addressee can claim and approve the task. When this approval is given, task execution is considered finished. ◆ The task has been assigned to multiple addressees, and all of them must claim and approve the task before the activity can be considered complete. ◆ The task has been assigned to multiple addressees, and a quorum of users must claim and approve the task before the activity can be considered complete. The definition of a quorum is configured by the administrator. To define the quorum, the administrator specifies an approval condition that specifies the precise number of approvals or the percentage of approvals needed. Appears on the My Tasks and Team Tasks pages.

Icon	Description
Available for ALL Requests	Indicates that a particular user is available for all kinds of resource requests. This setting applies to delegation. Appears on the Edit Availability and Team Availability pages.
NOT Available for Specified Requests	Indicates that a particular user is not available for certain kinds of resource requests during a particular period. This setting applies to delegation. During the time period when a particular user is unavailable for these requests, the user delegated to act on these requests can work on them. Appears on the Edit Availability and Team Availability pages.
NOT Available for ANY Requests	Indicates that a particular user is not available for any resource requests currently in the system. This setting applies to delegation. During the time period when a particular user is unavailable for a request, the user delegated to act on that request can work on it. Appears on the Edit Availability and Team Availability pages.

Managing Your Work

10

This section provides instructions for managing your provisioning work. Topics include:

- Section 10.1, “About the My Work Actions,” on page 121
- Section 10.2, “Managing Your Tasks,” on page 121
- Section 10.3, “Requesting a Resource,” on page 130
- Section 10.4, “Checking the Status of Your Requests,” on page 138

10.1 About the My Work Actions

The *Requests & Approvals* tab in the Identity Manager user application includes a group of actions called *My Work*. The *My Work* actions give you the ability to make resource requests, check the status of requests you've made, and perform tasks that have been assigned to you or to a group to which you belong.

The *My Work* actions also let you perform tasks as a delegate for another user. A delegated task appears in your queue when the original assignee for the task has declared himself or herself to be unavailable and has designated you as a delegate.

NOTE: The flow of control for a provisioning workflow, as well as the appearance of forms, can vary depending on how the provisioning request was defined in the Designer for Identity Manager. For details on customizing the design of a provisioning workflow, see the *Identity Manager User Application: Design Guide* (http://www.novell.com/documentation/idm35/index.html).

10.2 Managing Your Tasks

The *My Tasks* action lets you check your workflow queue for tasks that have been assigned to you. When a task is in your queue, you need to perform one of the following actions:

- Claim the task so you begin working on it
- Reassign the task to another user

NOTE: You must have the appropriate authority to reassign tasks. To reassign a task, you must be a Provisioning Application Administrator or a Team Manager who has been given this permission in the team rights definition.

When you've claimed a task to work on, you have the ability to take an action that forwards the workitem to the next activity within the workflow. The actions you can perform on a claimed task are described below:

Table 10-1 *Forward Actions*

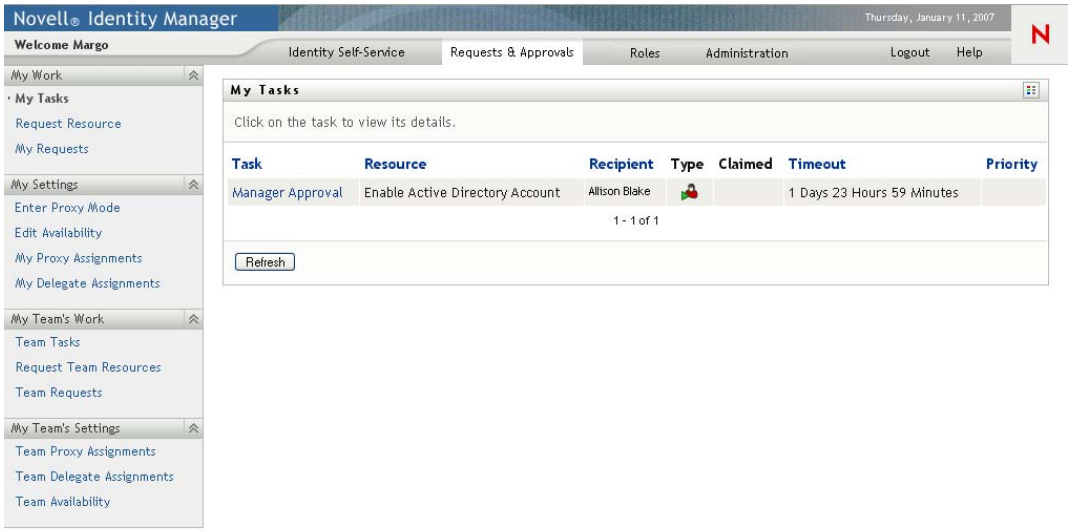
Forward Action	Description
Approve	Allows you to give your approval to the task. When you approve the task, the workitem is forwarded to the next activity in the workflow.
Deny	Allows you to explicitly deny your approval to the task. When you deny the task, the workitem is forwarded to the next activity in the workflow and the request is denied. Typically, the workflow process terminates when a request is denied.
Refuse	Allows you to explicitly refuse the task. When you refuse the task, the workitem is forwarded to the next activity for the refused action in the workflow.

10.2.1 Viewing Your Tasks

To see the tasks that have been assigned to you:

1 Click *My Tasks* in the *My Work* group of actions.

The list of tasks in your queue is displayed.



The *Type* column in the task list includes an icon that indicates whether the task is currently assigned to a user, group, delegate, or to multiple approvers. The type *Assigned to Multiple Approvers* applies in the following situations:

- The task has been assigned to a group of addressees, but only one addressee can claim and approve the task. After this approval is given, task execution is considered complete.
- The task has been assigned to multiple addressees, and all of them must claim and approve the task before the activity can be considered complete.
- The task has been assigned to multiple addressees, and a quorum of users must claim and approve the task before the activity can be considered complete. The definition of a quorum is configured by the administrator. To define the quorum, the administrator specifies an approval condition that specifies the precise number of approvals or the percentage of approvals needed.

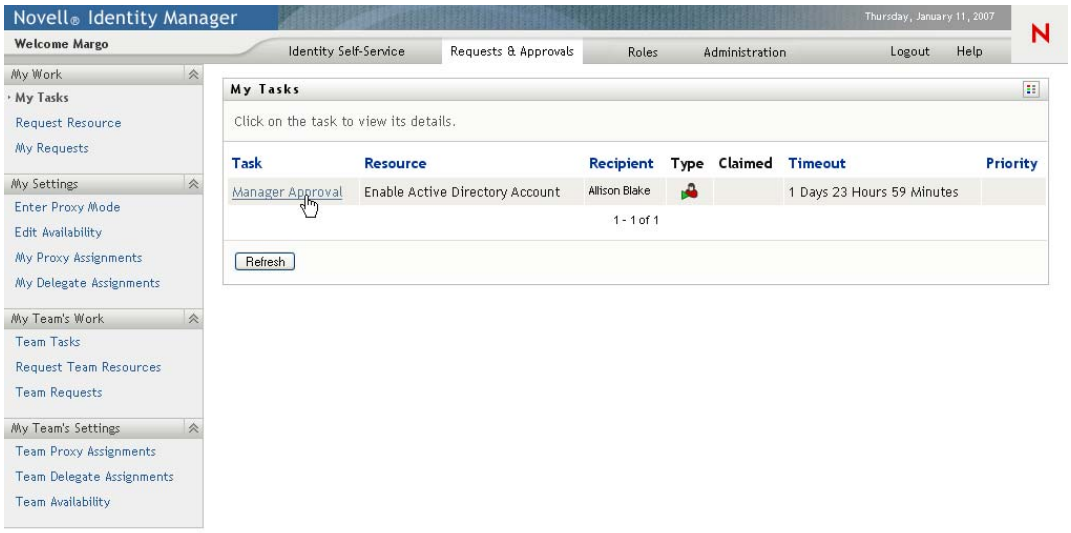
The workflow system performs *short circuit evaluation* to optimize quorums. Whenever a quorum approval condition reaches the point where a quorum is not possible, the activity is denied and the task is removed from the queues of all addressees.

The *Priority* column shows a flag for the high priority tasks. You can sort the list of tasks by priority by clicking the *Priority* column.

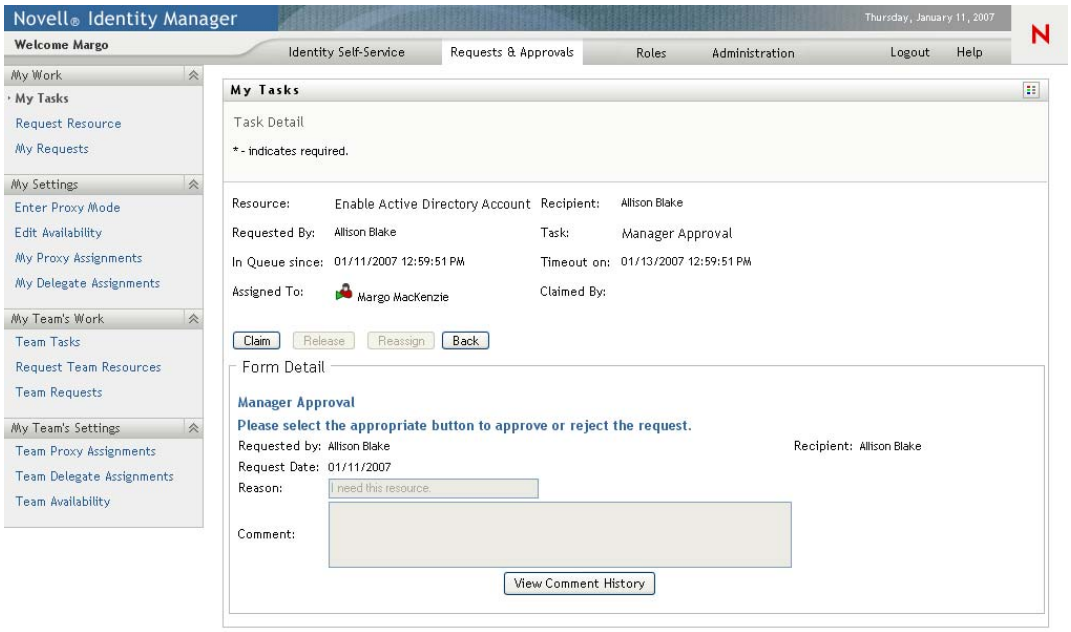
10.2.2 Selecting a Task

To select a task in the queue list:

1 Click the name of the task in the queue.

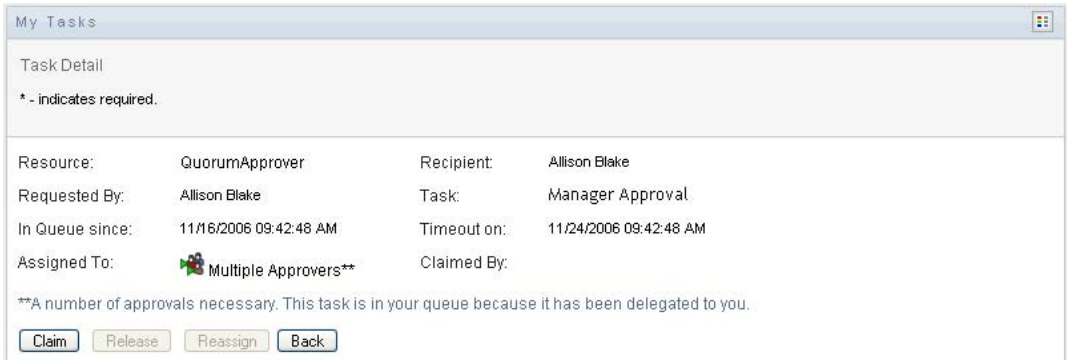


The Task Detail form is displayed.



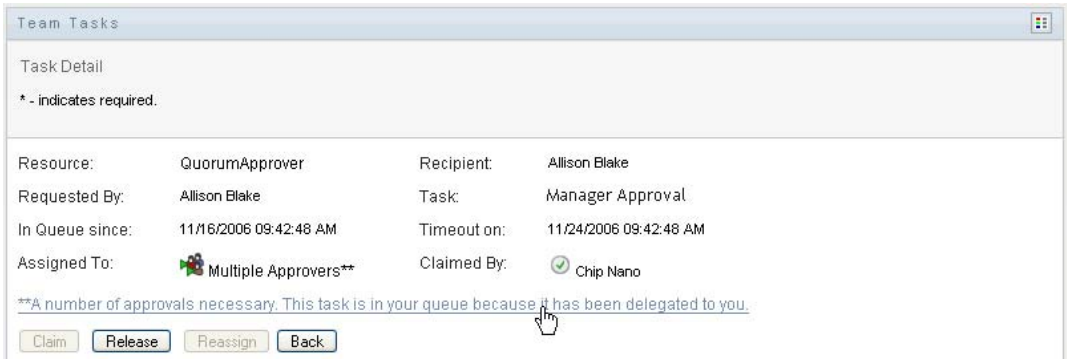
When a task is assigned to multiple approvers, the Task Detail form displays the *Multiple Approvers* icon next to the *Assigned To* field, and displays text below the icon to indicate that multiple approvals are necessary.

Description: Task Detail form



2 To display more information about a task assigned to multiple approvers, click the text under the *Multiple Approvers* icon:

Description: Task Detail form continued



A pop-up window displays to indicate how many approvals are required, who the current addressees are, and what the approval status currently is.

Description: Multiple Approvers screen

The requirements for the task depend on how the task was configured by your administrator:

- If the approval type is *group*, the task has been assigned to several users within a group, but only one is expected to claim and approve the task.

- If the approval type is *multiple approvers*, the task has been assigned to several addressees, and all of the addressees must claim and approve the task.
- If the approval type is *quorum*, the task has been assigned to several addressees, and a quorum of addressees is sufficient to approve the task. The definition of a quorum is configured by the administrator. To define the quorum, the administrator specifies an approval condition that specifies the precise number of approvals or the percentage of approvals needed.

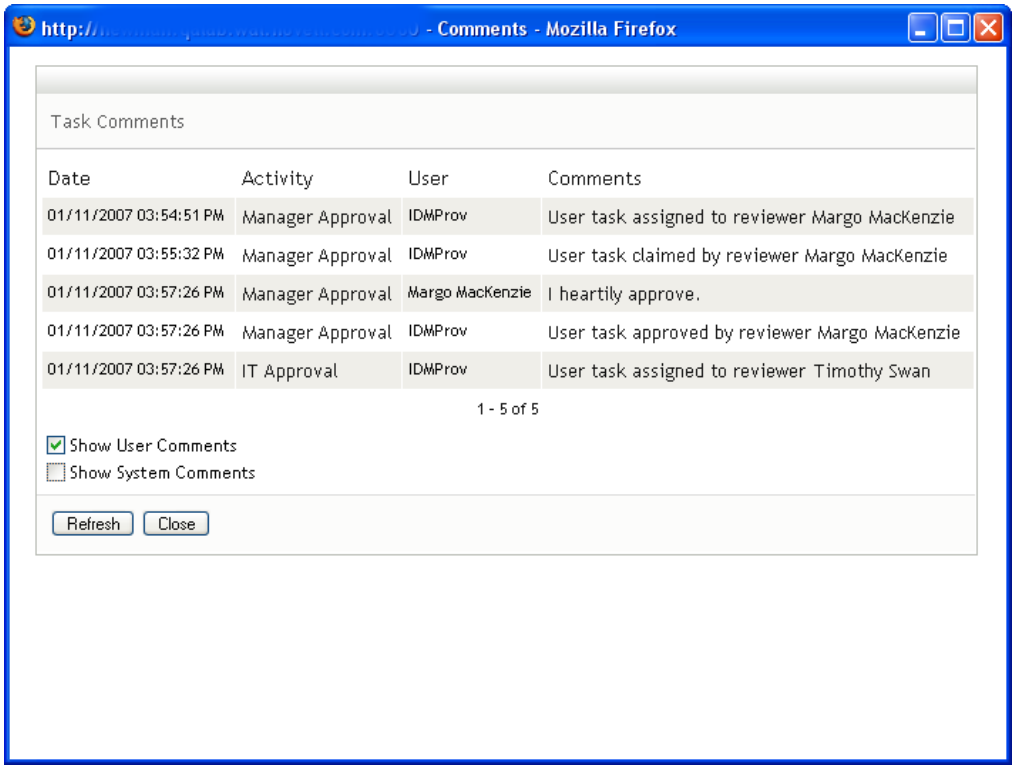
The workflow system performs *short circuit evaluation* to optimize quorums. Whenever a quorum approval condition reaches the point where a quorum is not possible, the activity is denied and the task is removed from the queues of all addressees.

3 To claim a task, follow the instructions under Section 10.2.3, "Claiming a Task," on page 127.

4 To view the comment history for the task, click *View Comment History*.

A pop-up window lets you see user and system comments. The order in which comments appear is determined by the time stamp associated with each comment. Comments entered first are displayed first. For parallel approval flows, the order of activities being processed concurrently can be unpredictable.

4a To display user comments, click *Show User Comments*.



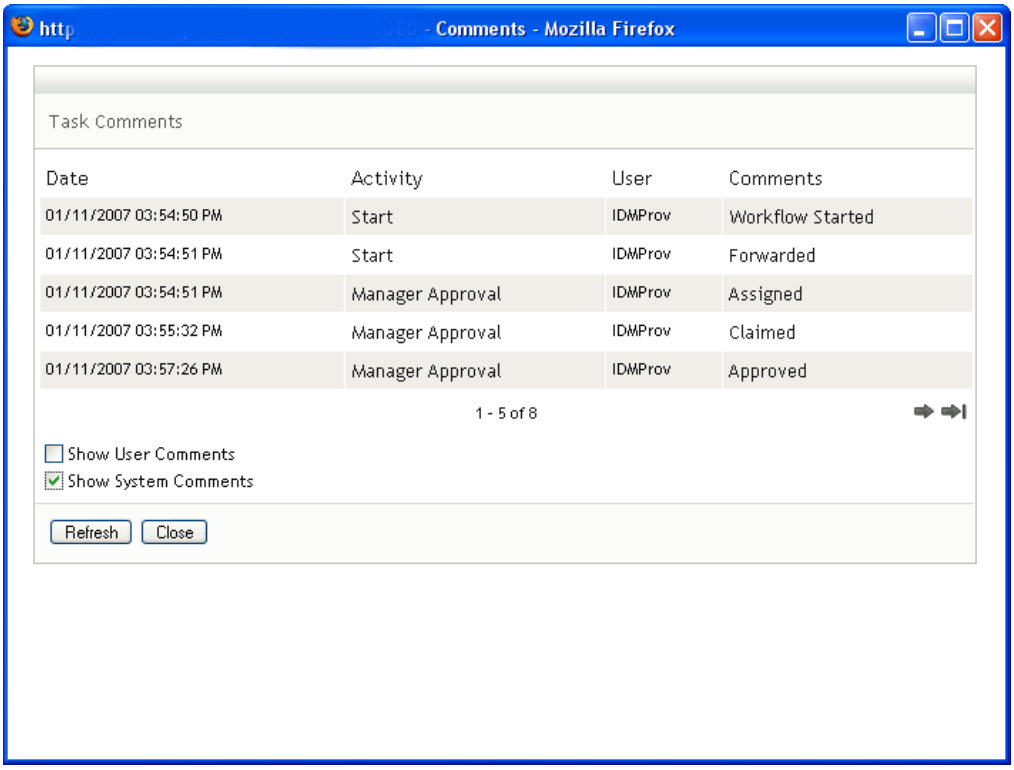
User comments include the following kinds of information:

- The date and time when each comment was added.
- The name of the activity to which each comment applies. The list of activities displayed includes user and provisioning activities that have been processed or are currently being processed.

- The name of the user who made the comment. If the comment is generated by the workflow system, the name of the application (for example, `IDMProv`) is the user name. Comments generated by the workflow system are localized automatically.
- The comment text, which includes the name of the user who is the current assignee for each activity.

The workflow designer can disable the generation of user comments for a workflow. For more information, see the *Identity Manager User Application: Design Guide.* (http://www.novell.com/documentation/idm35/index.html)

4b To display system comments, click *Show System Comments*.



System comments include the following kinds of information:

- The date and time when each comment was added.
- The name of the activity to which each comment applies. When you display system comments, all activities in the workflow are listed. The list of activities includes those that have been processed or are currently being processed.
- The name of the user who made the comment. If the comment is generated by the workflow system, the name of the application (for example, `IDMProv`) is the user name. Comments generated by the workflow system are localized automatically.
- The comment text, which indicates what action was taken for the activity.

System comments are intended primarily for debugging purposes. Most business users do not need to look at the system comments for a workflow.

4c To scroll through a long list of comments, click the arrows at the bottom of the screen. For example, to scroll to the next page, click the *Next* arrow.

Description: Next arrow

4d Click *Close* to close the window.

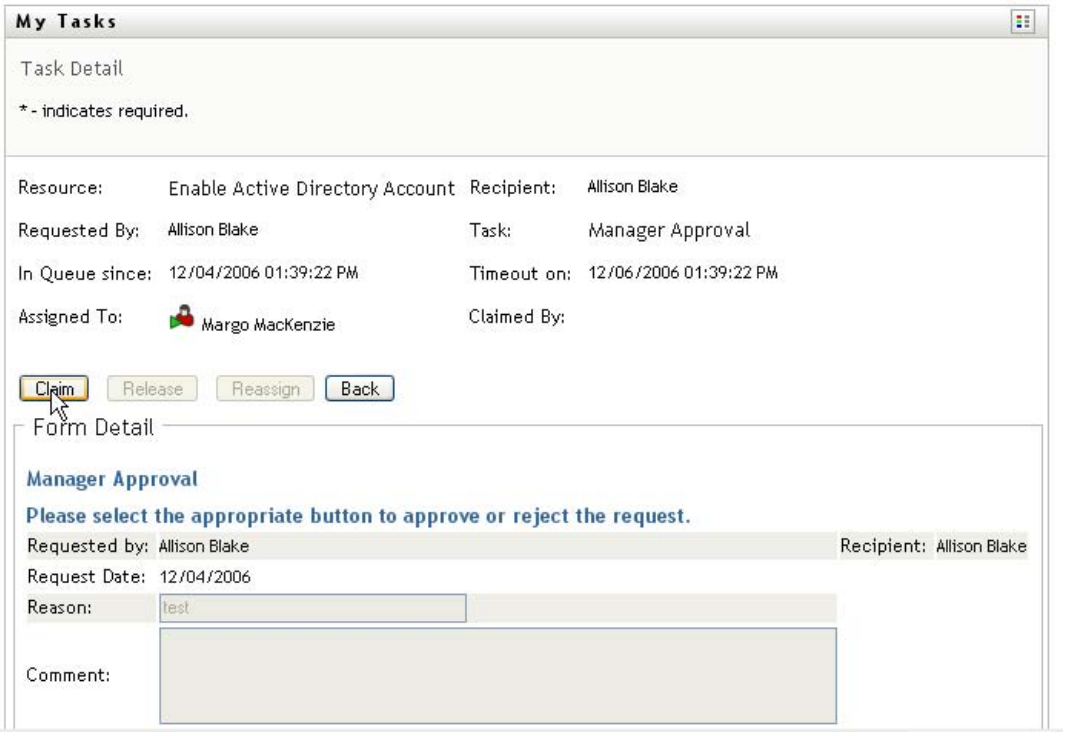
5 To return to the task list, click *Back*.

10.2.3 Claiming a Task

To claim a task to work on:

1 Click *Claim*.

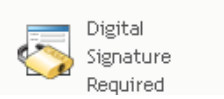
Description: Claim button



The *Form Detail* section of the page is updated to include the *Deny* and *Approve* buttons, as well as any other action buttons included by the flow definition, and the appropriate fields become editable.

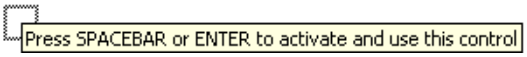
If the resource you've requested requires a digital signature, the *Digital Signature Required* icon appears in the upper right corner of the page.

Description: Digital Signature Required icon



In addition, on Internet Explorer, a message appears indicating that you need to press the Spacebar or the Enter key to activate the digital signature applet.

Description: Internet Explorer message



2 If you're working on a task that requires a digital signature, perform these steps:

2a If you're using a smart card, insert the smart card into the smart card reader.

2b On Internet Explorer, press the Spacebar or the Enter key to activate the applet.

At this point, your browser might display a security warning message.

Description: Security warning

2c Click *Run* to proceed.

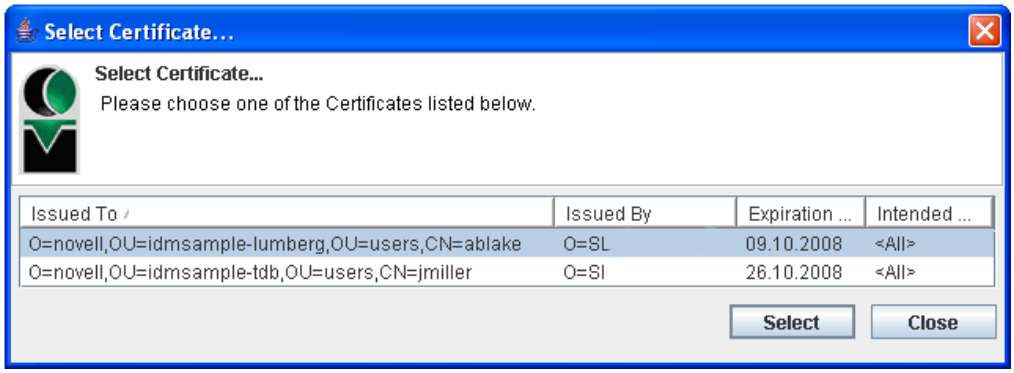
2d Fill in the fields in the approval form. The fields on the form vary depending on which resource you requested.

2e Click the check box next to the digital signature confirmation message to indicate that you are ready to sign.

The digital signature confirmation message varies depending on how the provisioning resource was configured by the administrator.

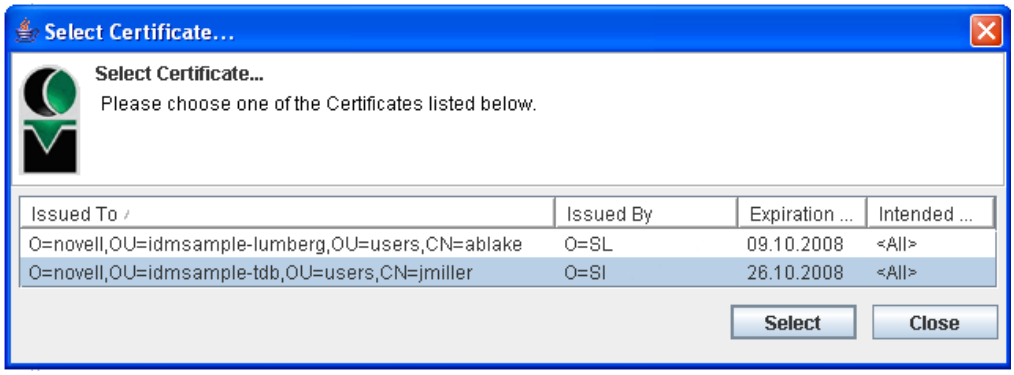
The applet then displays a pop-up window that allows you to select a certificate. The pop-up window lists certificates imported to the browser as well as certificates imported to the smart card (if one is currently connected).

Description: Select Certificate window



2f Select the certificate you want to use and click *Select*.

Description: Select Certificate window

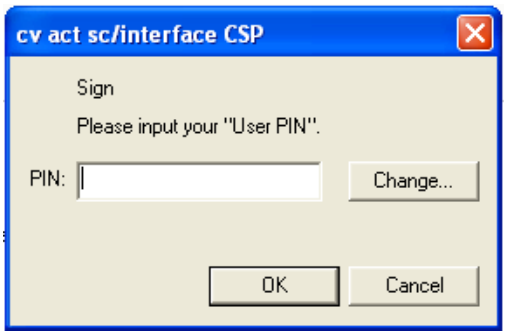


2g If you select a certificate that has been imported into your browser, type the password for the certificate in the *Password* field on the request form.

2h If you select a certificate that has been imported to your smart card, type the PIN for your smart card and click *OK*.

You do not need to type the password for the certificate if you're using a smart card, because the certificate password has already been transmitted to the card.

Description: PIN screen



If your administrator has enabled the ability to preview the user agreement, the *Preview* button is enabled.

2i Click *Preview* to see the user agreement.

If the digital signature type is set to Form, a PDF document is displayed.

If the digital signature type is set to data, an XML document is displayed.

3 To deny the request, click *Deny*.

Description: Form Detail page

4 To approve the request, click *Approve*.

Description: Form Detail page

The user application displays a message indicating whether the action was successful.

10.3 Requesting a Resource

The *Request Resource* action allows you to make a resource request. When you initiate the request, the user application displays the initial request form. This form lets you specify all of the information needed for the request.

When a resource request is submitted, the request starts a workflow. The workflow coordinates the approvals needed to fulfill the request. Some resource requests require approval from a single

individual; others require approval from several individuals. In some instances, a request can be fulfilled without any approvals.

To request a resource:

1 Click *Request Resource* in the *My Work* group of actions.

The Request Resource page is displayed.

Description: Request Resource page

2 Select the category of the resource in the *Resource Search Criteria* drop-down list. Select *All* to include resources from all available categories.

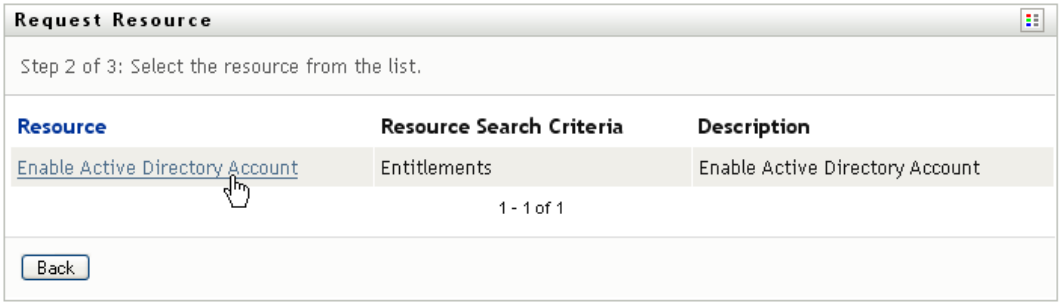
3 Click *Continue*.

The Request Resource page displays a list of resources available to the current user.

The user application enforces security constraints to ensure that you see only those request types to which you have access rights.

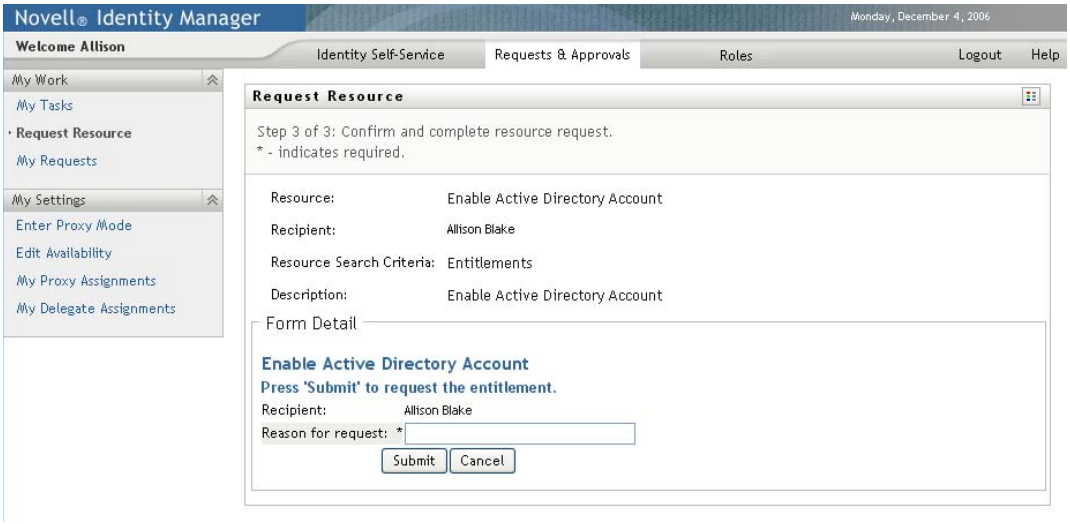
4 Select the desired resource by clicking the resource name.

Description: Request Resource page



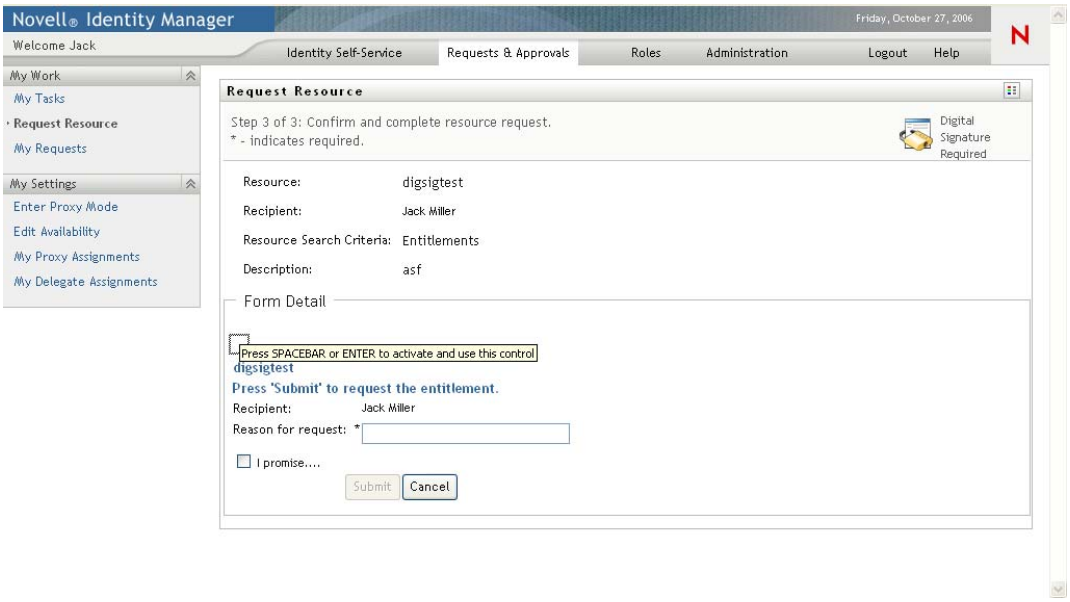
The Request Resource page displays the initial request form.

Description: Request Resource page



If the resource you've requested requires a digital signature, the *Digital Signature Required* icon appears in the upper right corner of the page. In addition, on Internet Explorer, a message appears indicating that you need to press the Spacebar or the Enter key to activate the digital signature applet:

Description: Request Resource page



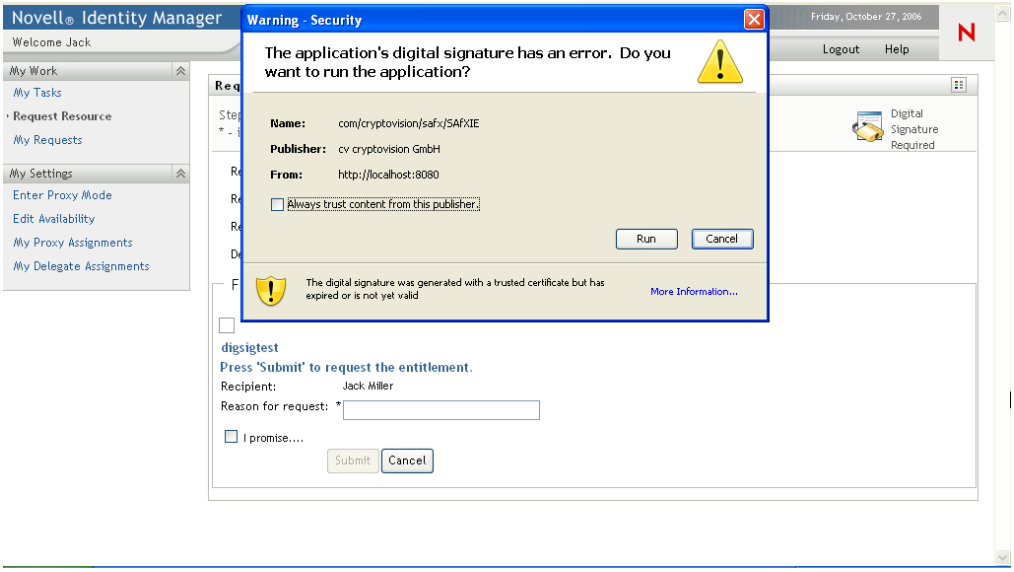
5 If you're making a request that requires a digital signature, perform these steps:

5a If you're using a smart card, insert the smart card into the smart card reader.

5b On Internet Explorer, press the Spacebar or the Enter key to activate the applet.

At this point, your browser might display a security warning message.

Description: Security warning



5c Click *Run* to proceed.

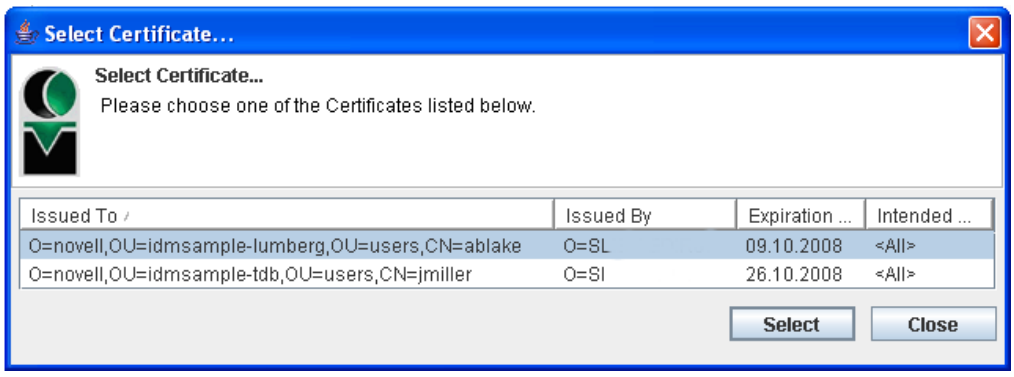
5d Fill in the fields in the initial request form. The fields on the form vary depending on which resource you requested.

5e Click the check box next to the digital signature confirmation message to indicate that you are ready to sign.

The digital signature confirmation message varies depending on how the provisioning resource was configured by the administrator.

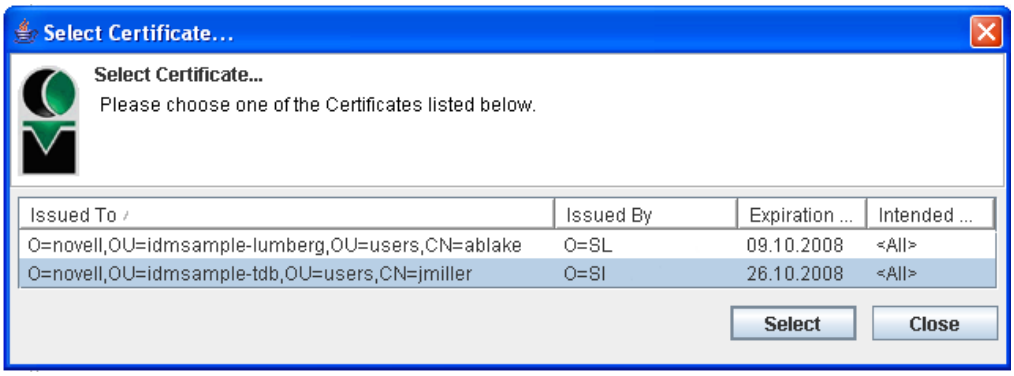
The applet then displays a pop-up window that allows you to select a certificate. The pop-up window lists certificates imported to the browser as well as certificates imported to the smart card (if one is currently connected).

Description: Select Certificate screen



5f Select the certificate you want to use and click *Select*.

Description: Select Certificate screen

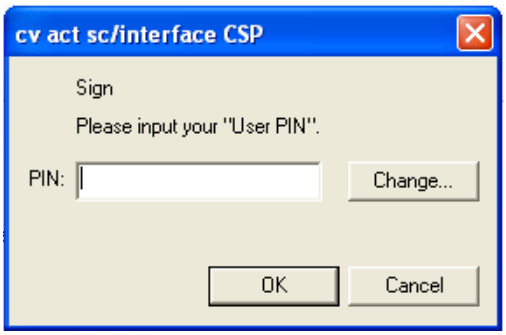


5g If you select a certificate that has been imported into your browser, you need to type the password for the certificate in the *Password* field on the request form.

5h If you select a certificate that has been imported to your smart card, type the PIN for your smart card and click *OK*.

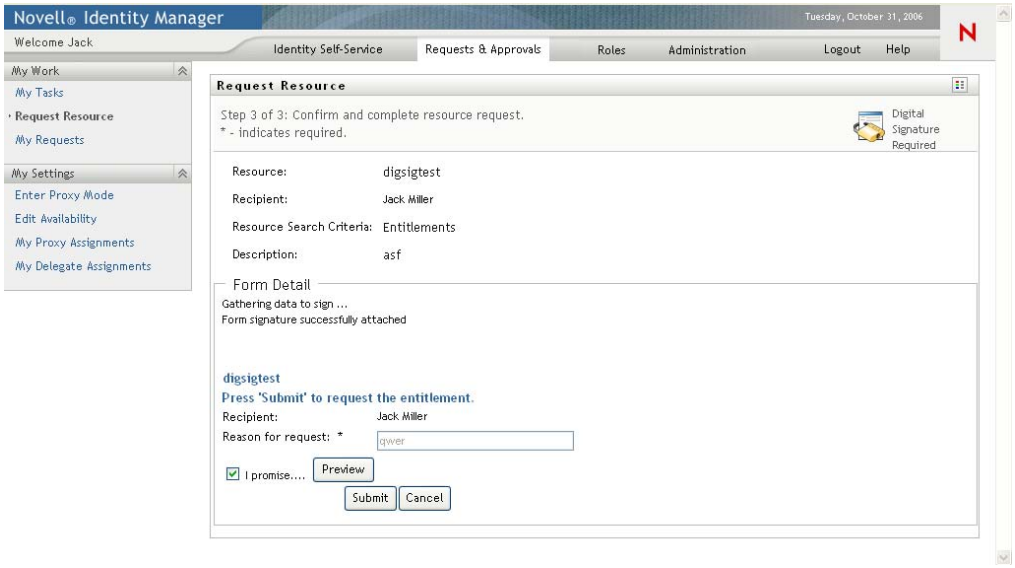
You do not need to type the password for the certificate if you're using a smart card, because the certificate password has already been transmitted to the card.

Description: PIN screen



If your administrator has enabled the ability to preview the user agreement, the *Preview* button is enabled.

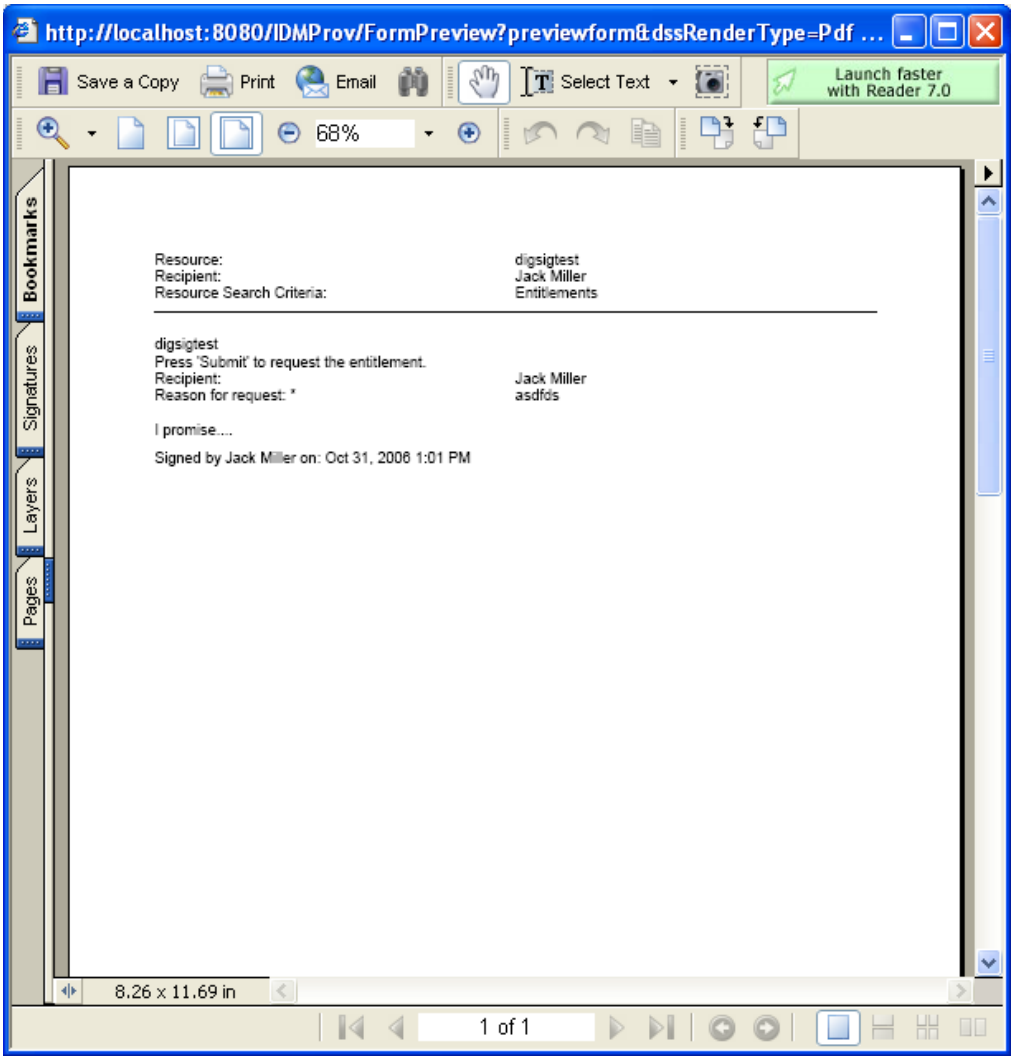
Description: Preview button



5i Click *Preview* to see the user agreement.

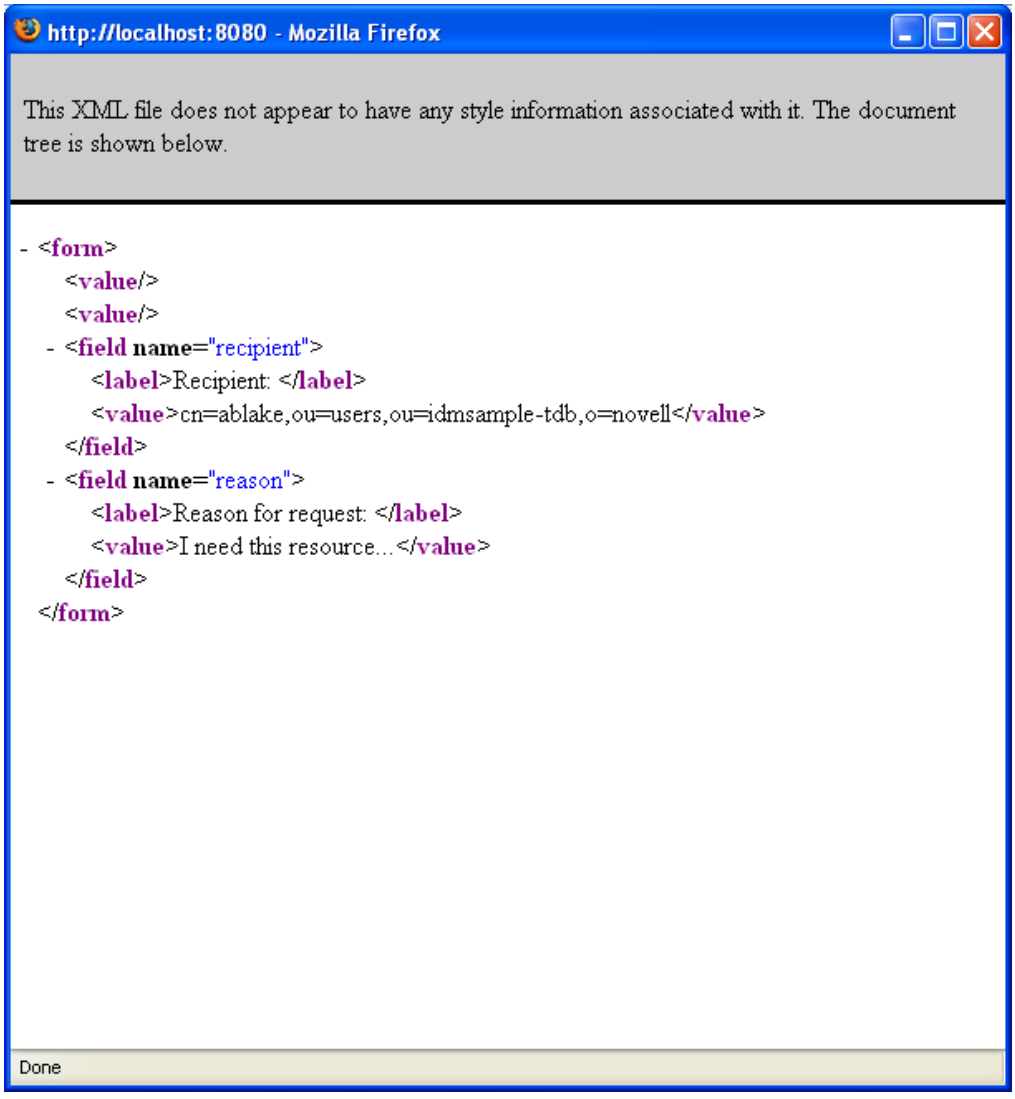
If the digital signature type is set to Form, a PDF document is displayed.

Description: PDF for digital signature



If the digital signature type is set to data, an XML document is displayed.

Description: XML document for digital signature

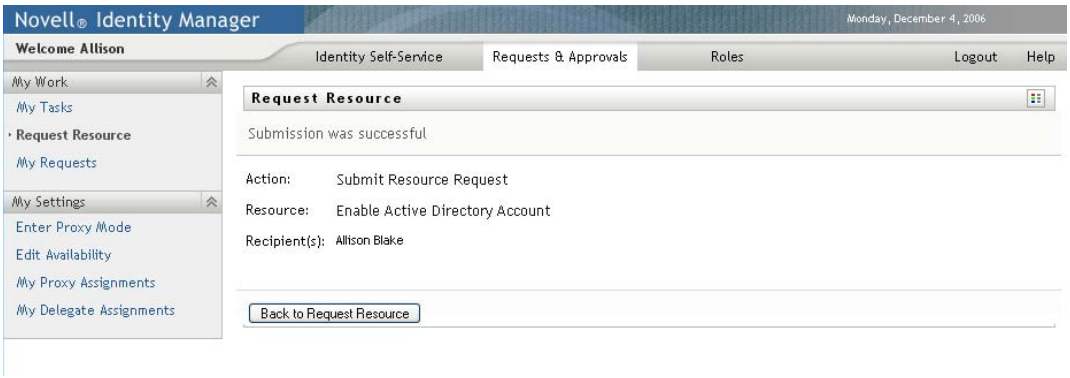


6 If the request you're making does not require a digital signature, simply fill in the fields on the initial request form. The fields on the form vary depending on which resource you requested.

7 Click *Submit*.

The Request Resource page displays a status message indicating whether the request was submitted successfully.

Description: Request Resource status message



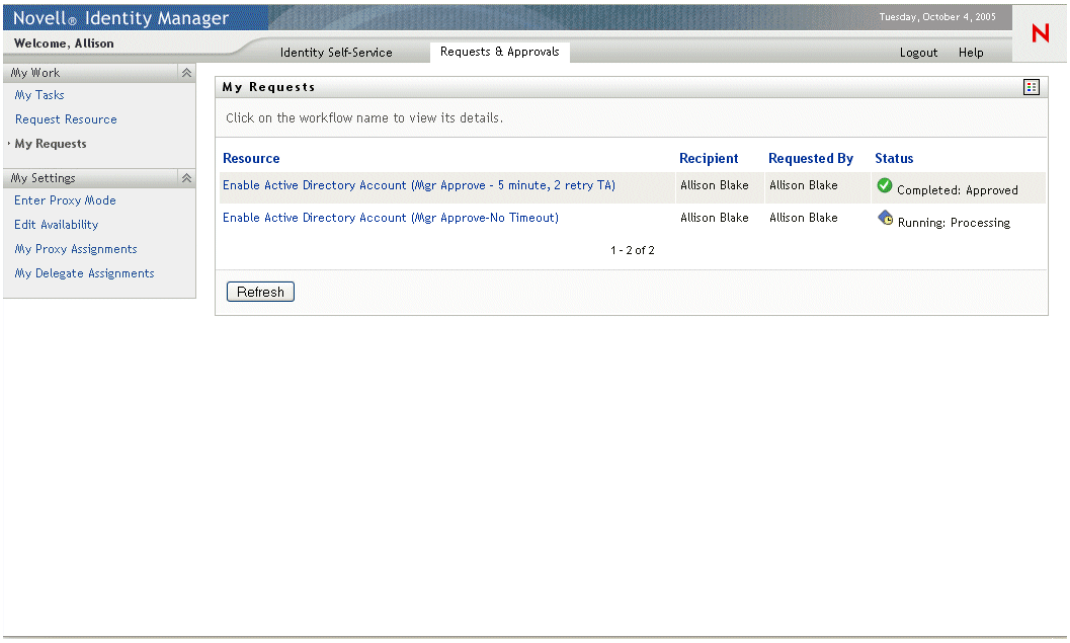
10.4 Checking the Status of Your Requests

The *My Requests* action allows you to see the status of the resource requests you've made. It lets you see the history and current state of each request. In addition, it gives you the option to retract a request that is still in process if you have changed your mind and do not need to have the request fulfilled.

To view a list of your requests:

1 Click *My Requests* in the *My Work* group of actions.

Description: My Requests page



2 Select the category of the resource in the *Resource Search Criteria* drop-down list. Select *All* to include resources from all available categories.

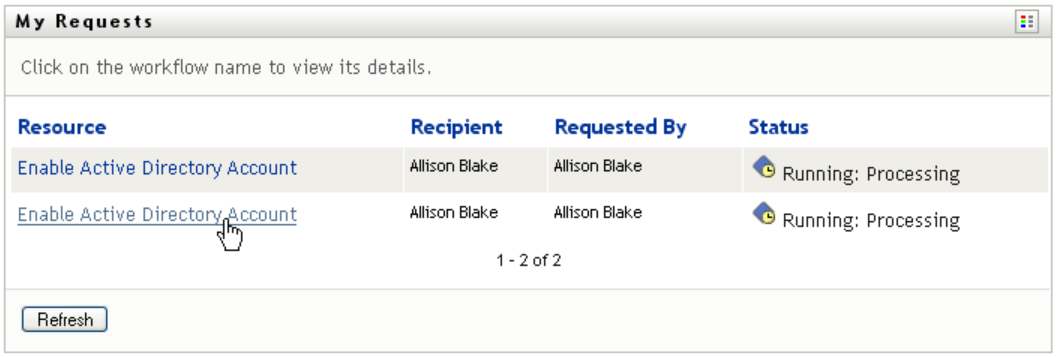
3 Optionally filter the list of requests by date by selecting *on*, *before*, or *after*, and filling in the *Request Date* field. To include all requests for the selected resource search criteria, leave the *Request Date* field blank.

4 Click *Continue*.

The Request Resource page displays your requests. The list includes active requests, as well as requests that have already been approved or denied. The administrator can control how long workflow results are retained for. By default, the Workflow system retains workflow results for 120 days.

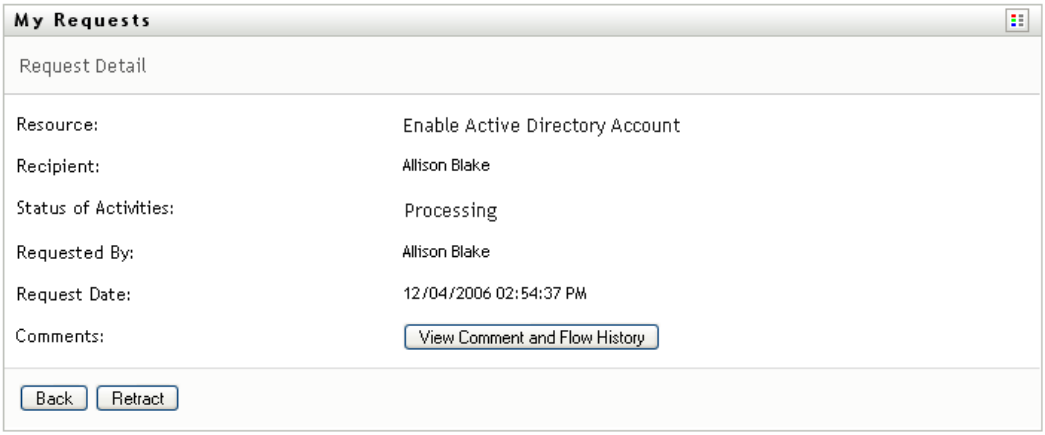
5 To view details about a particular resource request, select the request by clicking the name:

Description: My Requests resource list



The Request Resource page displays details such as when the request was initiated and what the current state of the workflow is.

Description: My Requests page with request details

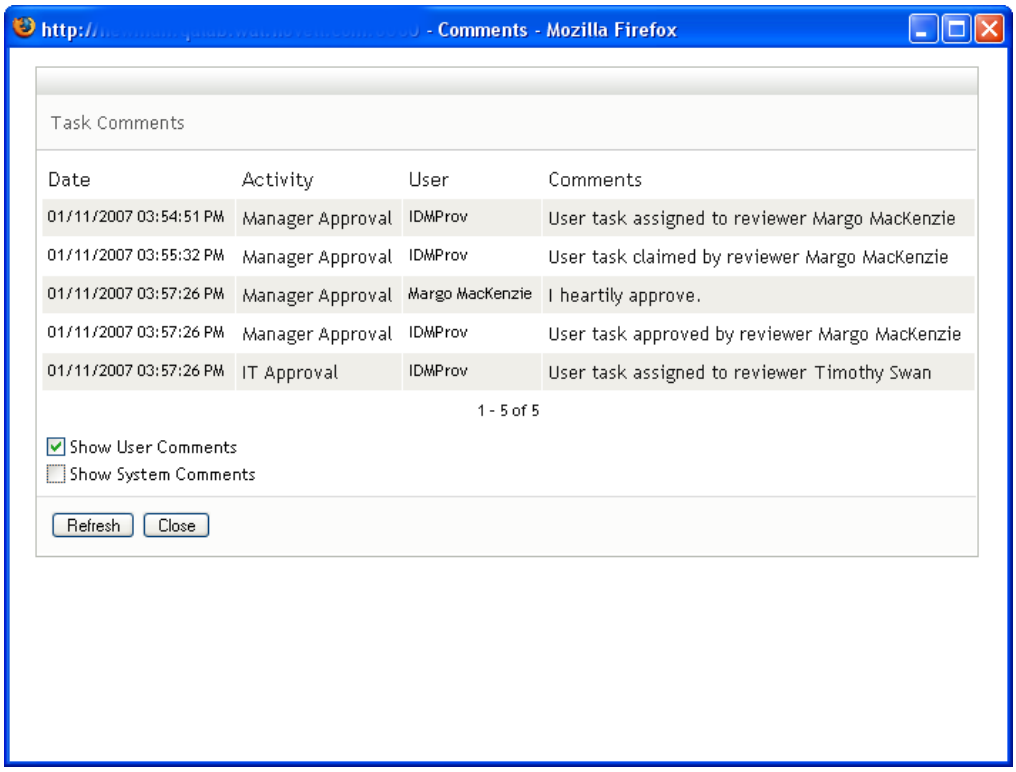


6 To retract the request, click *Retract*.

7 To view comment history for the request, click *View Comment and Flow History*.

A pop-up window lets you see user and system comments. The order in which comments appear is determined by the time stamp associated with each comment. Comments entered first are displayed first. For parallel approval flows, the order of activities being processed concurrently can be unpredictable.

7a To display user comments, click *Show User Comments*.

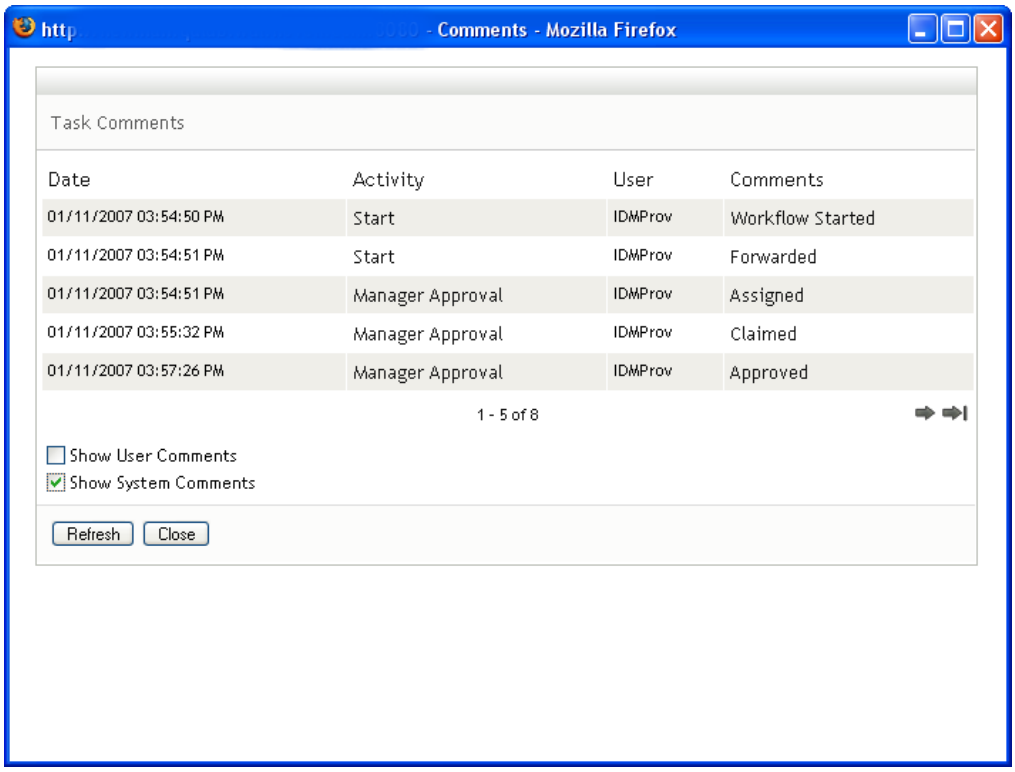


User comments include the following kinds of information:

- The date and time when each comment was added.
- The name of the activity to which each comment applies. The list of activities displayed includes user and provisioning activities that have been processed or are currently being processed.
- The name of the user who made the comment. If the comment is generated by the workflow system, the name of the application (for example, `IDMProv`) is the user name. Comments generated by the workflow system are localized automatically.
- The comment text, which includes the name of the user who is the current assignee for each activity.

The workflow designer can disable the generation of user comments for a workflow. For more information, see the *Identity Manager User Application: Design Guide (http://www.novell.com/documentation/idm35/index.html)*.

7b To display system comments, click *Show System Comments*.



System comments include the following kinds of information:

- The date and time when each comment was added.
- The name of the activity to which each comment applies. When you display system comments, all activities in the workflow are listed. The list of activities includes those that have been processed or are currently being processed.
- The name of the user who made the comment. If the comment is generated by the workflow system, the name of the application (for example, `IDMProv`) is the user name. Comments generated by the workflow system are localized automatically.
- The comment text, which indicates what action was taken for the activity.

System comments are intended primarily for debugging purposes. Most business users do not need to look at the system comments for a workflow.

7c To scroll through a long list of comments, click the arrows at the bottom of the screen. For example, to scroll to the next page, click the *Next* arrow.

Description: Next arrow

7d Click *Close* to close the window.

Configuring Your Provisioning Settings

11

This section provides instructions for configuring your provisioning settings. Topics include:

- Section 11.1, “About the My Settings Actions,” on page 143
- Section 11.2, “Acting As a Proxy,” on page 144
- Section 11.3, “Specifying Your Availability,” on page 146
- Section 11.4, “Viewing and Editing Your Proxy Assignments,” on page 152
- Section 11.5, “Viewing and Editing Your Delegate Assignments,” on page 155

11.1 About the My Settings Actions

The *Requests & Approvals* tab in the Identity Manager user application includes a group of actions called *My Settings*. The *My Settings* actions give you the ability to act as a proxy for another user. In addition, they allow you to view your proxy and delegate assignments. If you are a team manager or Provisioning Application Administrator, you might also be permitted to define proxy and delegate assignments, as well as team availability settings.

11.1.1 About Proxies and Delegates

A *delegate* is a user authorized to perform work for another user. A delegate assignment applies to a particular type of resource request.

A *proxy* is a user authorized to perform any and all work (and also define provisioning settings) for one or more users, groups, or containers. Unlike delegate assignments, proxy assignments are independent of resource requests, and therefore apply to all work and settings actions.

Proxy and Delegate Assignments Have Time Periods: Both proxy and delegate assignments are associated with time periods. The time period for a proxy or delegate assignment can be as short or as long as you need it to be. The time period can also have no expiration date.

Proxy and Delegate Actions Are Logged: If logging is enabled, any actions taken by a proxy or delegate are logged along with actions taken by other users. When an action is taken by a proxy or delegate, the log message clearly indicates that the action was performed by a proxy or delegate for another user. In addition, each time a new proxy or delegate assignment is defined, this event is logged as well.

11.1.2 Sample Usage Scenarios

This section describes two business scenarios where proxies and delegates might be used:

- “Proxy Usage Scenario” on page 144
- “Delegate Usage Scenario” on page 144

Proxy Usage Scenario

Suppose you are a manager who is responsible for approving (or denying) a large number of workflow tasks on a daily basis. In addition, you are also responsible for editing provisioning settings for a large number of users in your organization. In this situation, you might want to assign a proxy so that some of your work can be off-loaded to a trusted member of your team.

Delegate Usage Scenario

Suppose you are a manager who is responsible for approving or denying requests for ten different types of provisioned resources. All ten request types need regular attention, but you would rather have another individual in your organization attend to six of them. In this case, you could define a delegate for these six resource request types. If necessary, you could restrict this delegate relationship to a period of hours, days, or weeks. Alternatively, you could specify no expiration for the delegate relationship, thereby establishing this relationship as a more permanent arrangement.

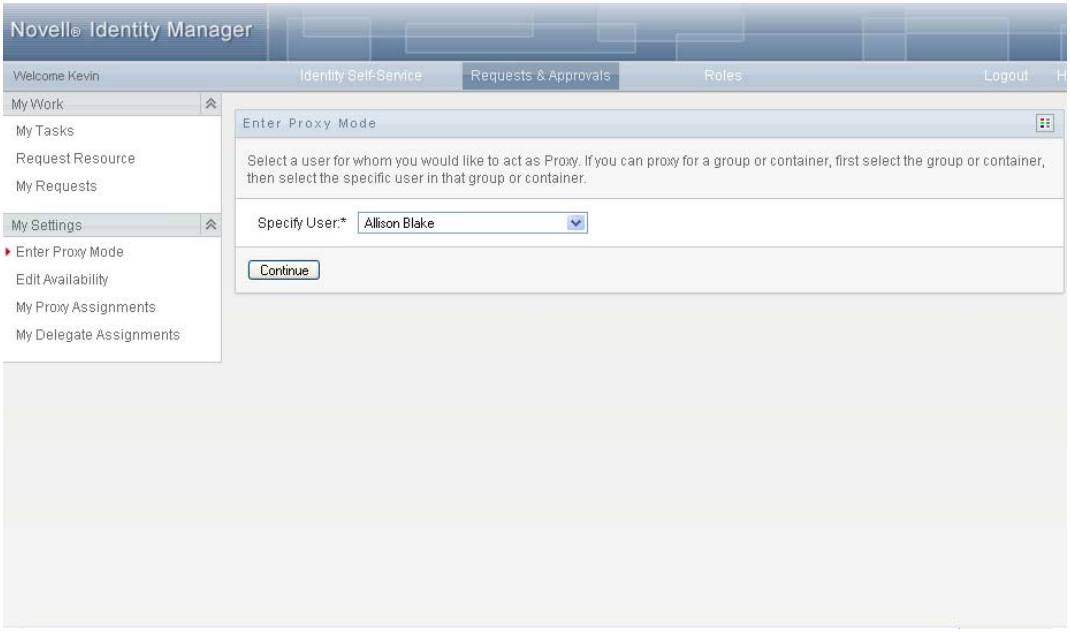
11.2 Acting As a Proxy

The *Enter Proxy Mode* action allows you to act as a proxy for another user.

1 Click *Enter Proxy Mode* in the *My Settings* group of actions.

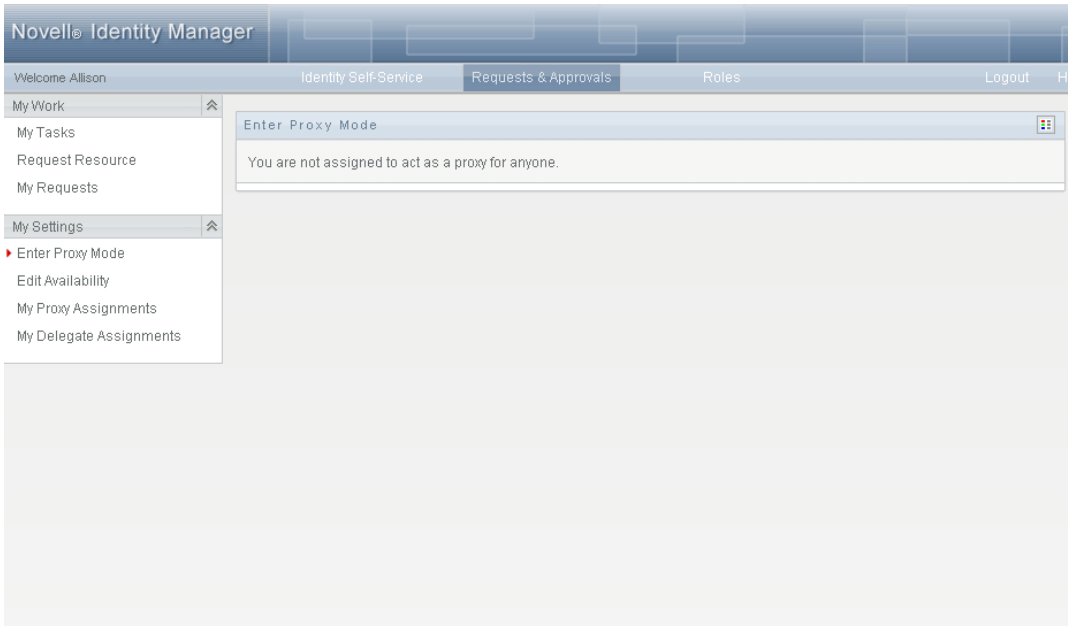
If you are authorized to act as a proxy for at least one other user, the user application displays a list of users.

Description: Enter Proxy Mode page



If you are not authorized to act as a proxy for any other user, the user application displays this message:

Description: Enter Proxy Mode error message



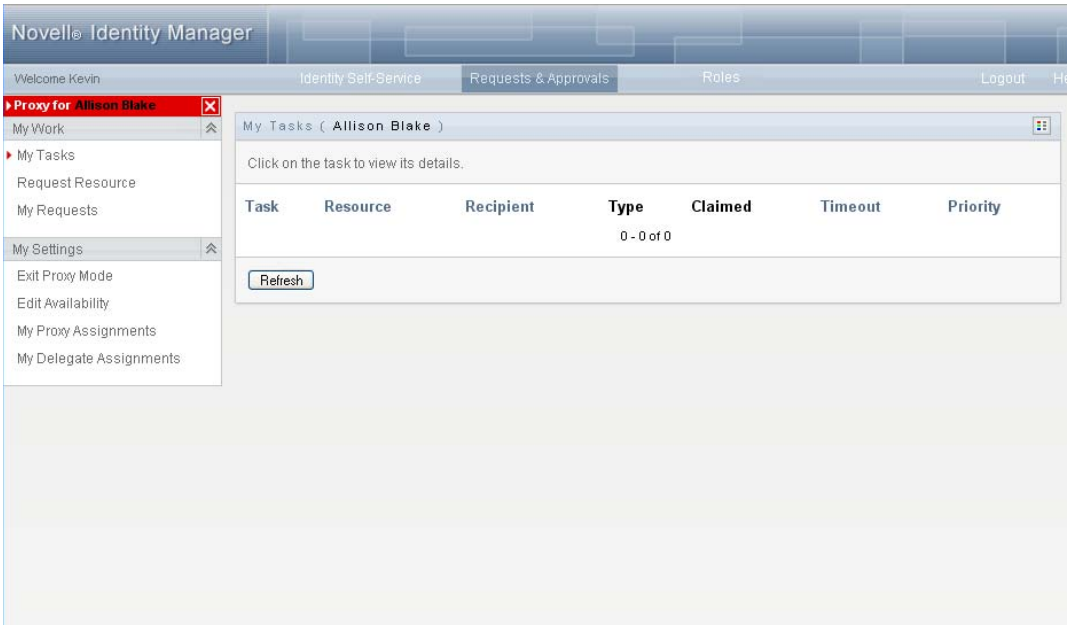
2 Select the user for whom you want to act as proxy and click *Continue*.

If you are designated as a proxy for a group or container, you must select the group or container before you can select the user.

The user application refreshes the display and returns you to the *My Tasks* action, the default action when you log on. The task lists shows tasks assigned to the user for whom you are acting

as proxy. A message appears above the *My Work* group (as well as in the title bar) indicating that you are now acting as a proxy for another user.

Description: Proxy mode message



At this point, you can perform any action that the user for whom you are acting as proxy could perform. The list of actions available changes depending on your authority and the authority of the user for whom you are acting as proxy.

11.3 Specifying Your Availability

The *Edit Availability* action allows you to specify which resource requests with a delegate assignment you are unavailable to work on during a particular time period. During the time period when you are unavailable for a particular request, the user delegated to act on that request can work on it.

If you prefer not to specify your availability for each request definition individually, you can use the *Edit Availability* action to establish global settings pertaining to delegation.

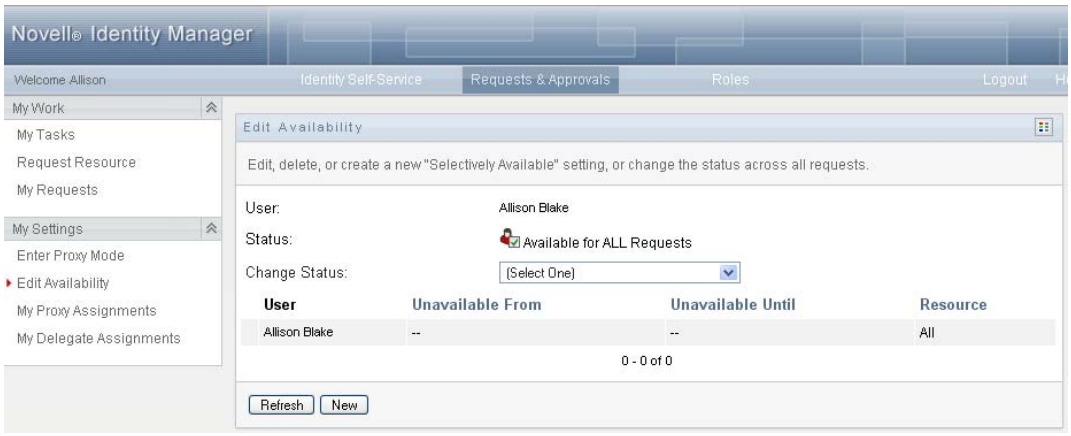
TIP: Before using the *Edit Availability* action, you need to have at least one delegate assignment to work on. You need to have your team manager (or the Provisioning Application Administrator) create delegate assignments for you.

- Section 11.3.1, “Setting Your Availability Status,” on page 146
- Section 11.3.2, “Creating or Editing an Availability Setting,” on page 148
- Section 11.3.3, “Deleting an Availability Setting,” on page 151

11.3.1 Setting Your Availability Status

1 Click *Edit Availability* in the *My Settings* group of actions.

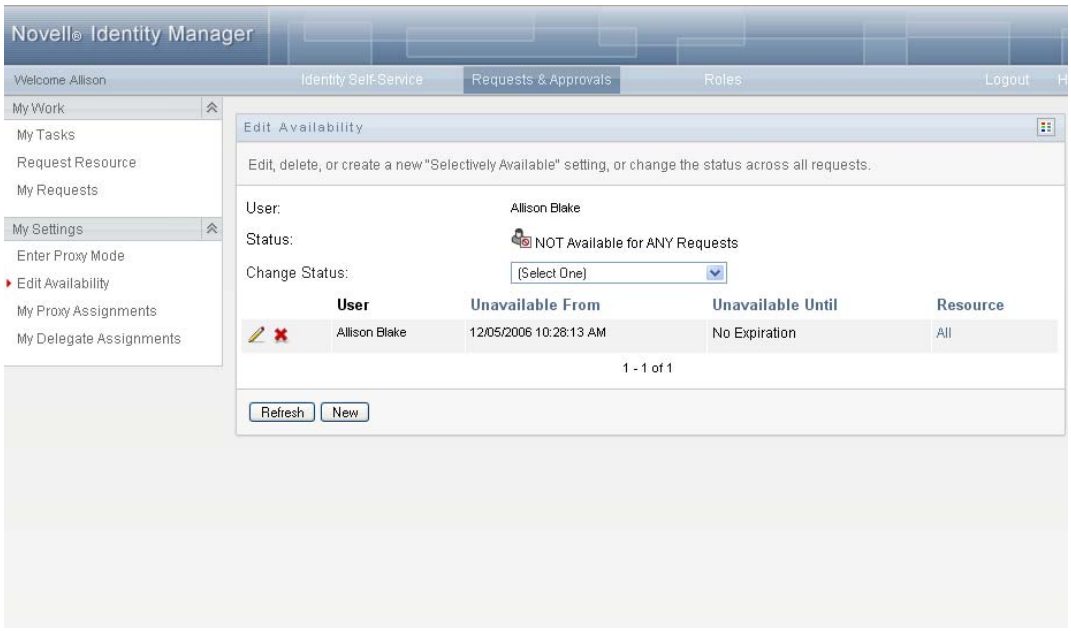
The user application displays the Edit Availability page. If you do not have any existing availability settings, the display list is empty:



If no delegates have been assigned for you, the user application displays a message indicating that you cannot change your status on the Edit Availability page.

If you have one or more availability settings, the display list shows these settings:

Description: Edit Availability display list



2 To see details about a particular resource associated with an availability assignment, click the name of the resource:

Description: Resource name link

The page then displays a pop-up window that provides information about the delegate assignment:

Description: Delegate Assignment details

This information is particularly helpful in situations where the same resource name appears more than once in the availability settings list.

3 Specify your status by selecting one of the following options in the *Change Status* drop-down list:

Status	Description
Available for ALL Requests	This is the default status. It indicates that you are globally available. When this status is in effect, requests assigned to you are not delegated, even if you have assigned delegates. The *Available for ALL Requests* status overrides other settings. If you change the status to one of the other settings, and then change it back to *Available for ALL Requests*, any *Selectively Available* settings previously defined are removed.
NOT Available for ANY Requests	Specifies that you are globally unavailable for any request definitions currently in the system. Choosing the *Not Available for ANY Requests* status indicates that you are unavailable for each existing delegate assignment and changes the current status to *Not Available for Specified Requests*. Assignments are effective immediately until the delegate assignment expires. This setting does not affect availability for new assignments created after this point.
NOT Available for Specified Requests	Specifies that you are not available for certain resource request definitions. During the time period when you are unavailable for a particular request, the user delegated to act on that request can work on it. The *NOT Available for Specified Requests* option takes you to the Edit Availability page. It is the same action as clicking the *New* button.

11.3.2 Creating or Editing an Availability Setting

1 To create a new availability setting, click *New* (or select *NOT Available for Specified Requests* in the *Change Status* drop-down list).

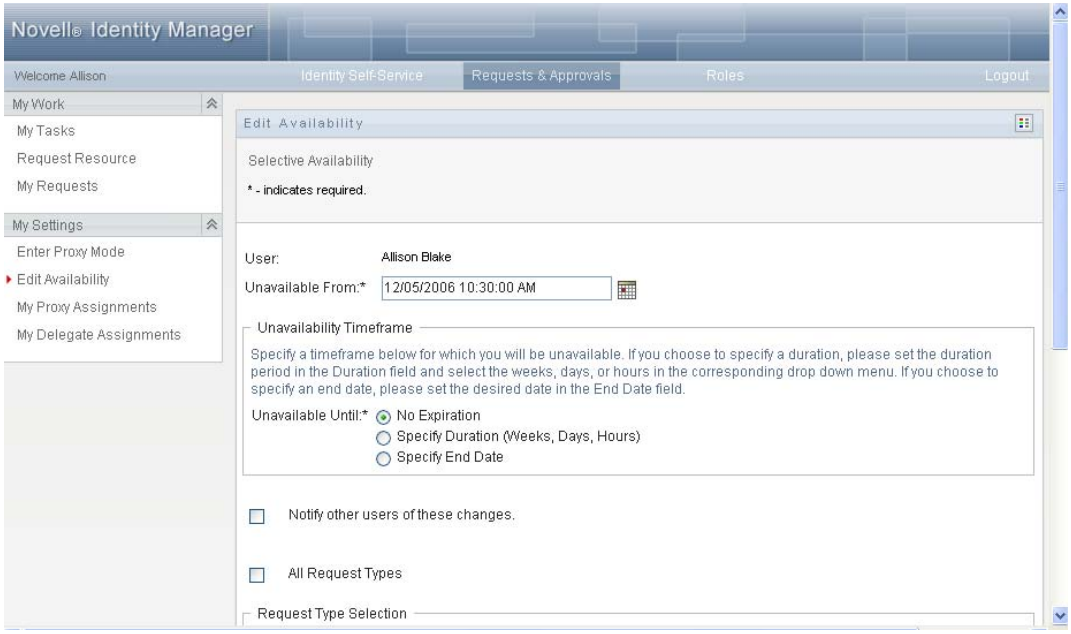
2 To edit an existing setting, click *Edit* next to the setting you want to modify:

Description: Edit button

The user application displays a set of controls that allow you to specify the time period for which you are unavailable and select the requests to which this setting applies.

The list of requests displayed includes only those that have a delegate assignment.

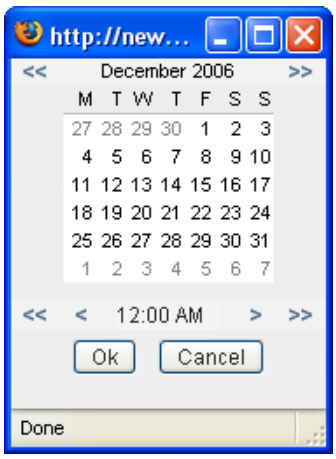
Description: Edit Availability page



3 Specify the time period during which you will be unavailable:

3a Specify when the time period begins by typing the start date and time in the *Unavailable From* box, or by clicking the calendar button and selecting the date and time.

Description: Calendar control



3b Specify when the time period ends by clicking one of the following:

Button	Description
Duration	Lets you specify the time period in weeks, days, or hours.

Button	Description
End date	Lets you specify the end date and time. You can type the date and time, or click the calendar button and select the date and time from the calendar.
No Expiration	Indicates that this unavailability setting does not expire.

The end date you specify must be within the time period allowed by the delegate assignment. For example, if the delegate assignment expires on October 31, 2007, you cannot specify an expiration date of November 15, 2007 for the availability setting. If you specify an expiration date of November 15, 2007, it is automatically adjusted when it is submitted to expire on October 31, 2007.

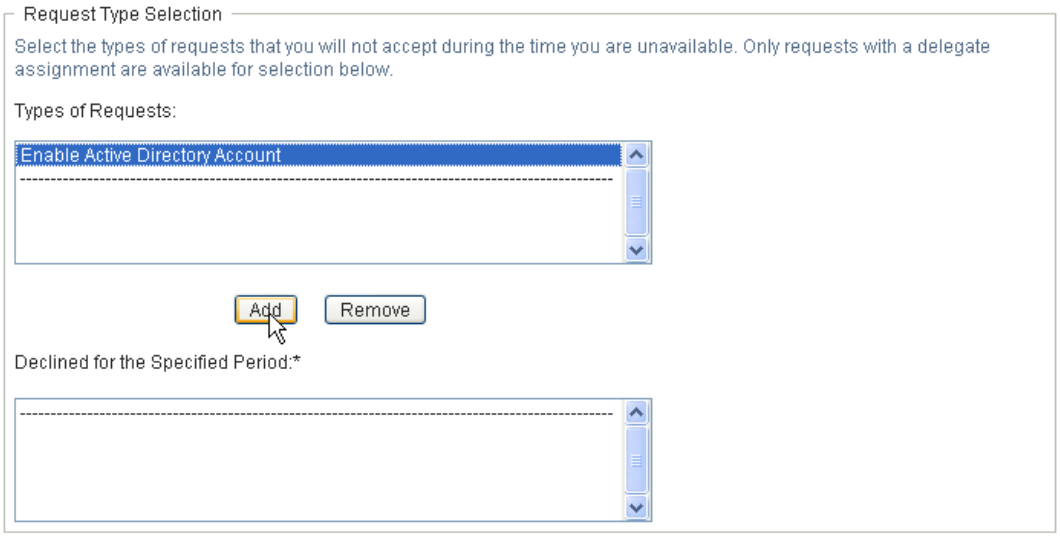
4 Specify whether you want to send e-mail notifications to other users by filling in these fields:

Field	Description
Notify other users of these changes	Indicates whether you want to send an e-mail message to notify one or more users of this availability assignment.
Addressee	Specifies which users should receive e-mail notifications: **Selective:** Allows you to send e-mail notifications to any users you select.

5 Select one or more requests in the *Types of Requests* list, and click *Add*.

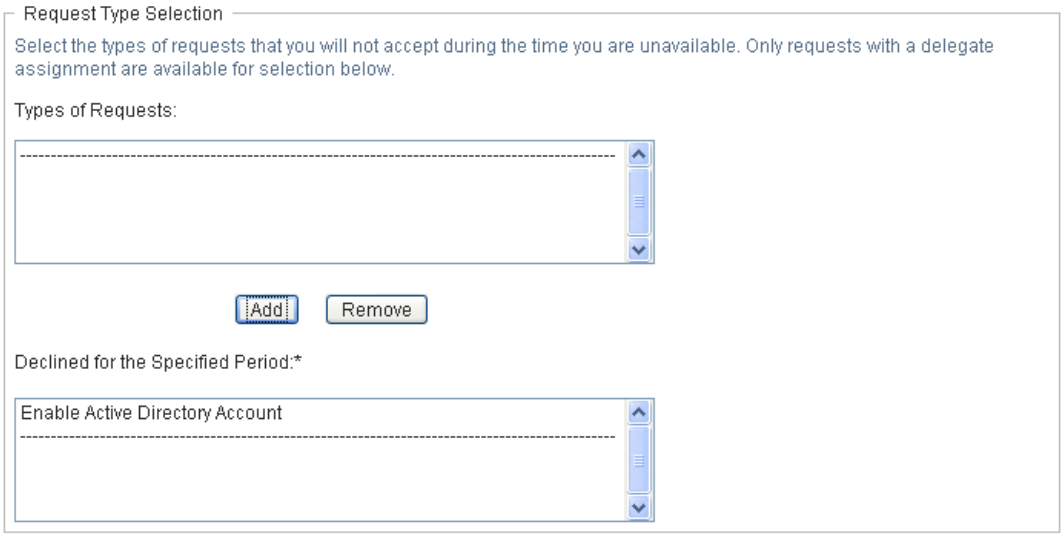
On this page, you select the types of requests not to accept during the time you are unavailable. This has the effect of delegating these requests to other users.

Description: Request Type Selection box



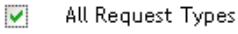
Each request you add is included in the *Declined for the Specified Period* list.

Description: Declined for the Specified Period list



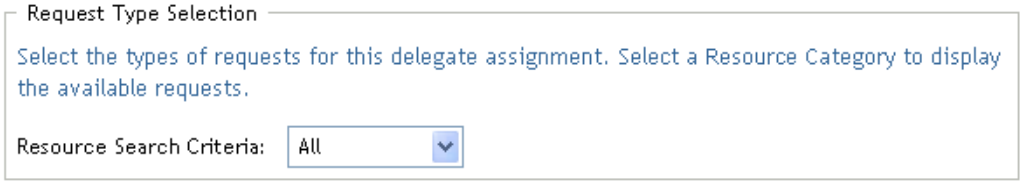
6 To indicate that this availability setting applies to all request types, click *All Request Types* instead of selecting the request types individually.

Description: All Request Types check box



The *All Request Types* check box is only available when the resource search criteria for the delegate assignment is set to *All*.

Description: Resource Search Criteria set to All



7 To remove a request from the list, click *Remove*.

8 Click *Submit* to commit your changes.

11.3.3 Deleting an Availability Setting

To delete an existing availability setting:

1 Click *Remove* next to the setting:

Description: Remove button

11.4 Viewing and Editing Your Proxy Assignments

The *My Proxy Assignments* action allows you to view your proxy assignments. If you are a Provisioning Application Administrator, you can also use this action to edit proxy assignments.

Only Provisioning Application Administrators and team managers can assign proxies, as described below:

- The Provisioning Application Administrator has the ability to define proxy assignments for any user in the organization.
- A team manager might have the ability to define proxy settings for users on his team, depending on how the team was defined. The proxies must also be within the team. To define a proxy, a team manager must use the *Team Proxy Assignments* action.

If a team manager needs to select a proxy who is not within the team, the manager must request that the Provisioning Application Administrator define the proxy relationship.

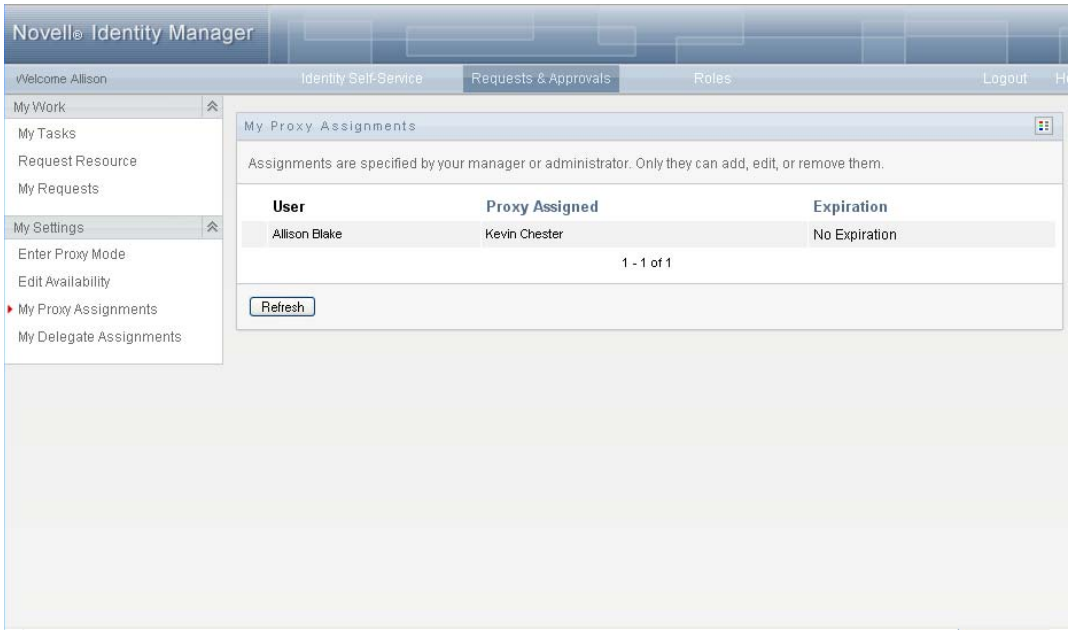
11.4.1 Displaying Your Proxy Settings

1 Click *My Proxy Assignments* in the *My Settings* group of actions.

The user application displays your current settings. The proxy assignments displayed are those that specify you as proxy for someone else, as well as those that specify someone else as proxy for you.

If you are not a Provisioning Application Administrator, you see a read-only view of your proxy assignments:

Description: My Proxy Assignments page



If you have administrative privileges, you are provided with buttons that let you create and edit proxy assignments.

2 To refresh the list, click *Refresh*.

11.4.2 Creating or Editing Proxy Assignments

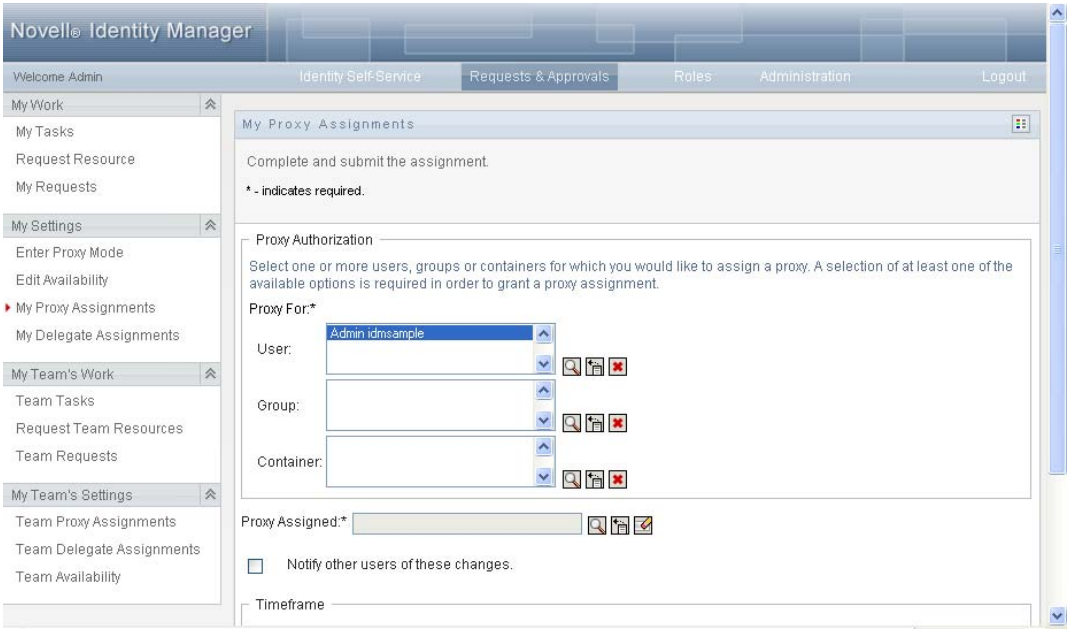
1 To create a new proxy assignment, click *New*.

2 To edit an existing proxy assignment, click *Edit* next to the assignment:

Description: Edit button

If you are the Provisioning Application Administrator, the user application presents the following interface to allow you to define proxy assignments:

Description: My Proxy Assignments page



3 If you are the Provisioning Application Administrator, select one or more users, groups, and containers for which you want to define a proxy.

   Use the *Object Selector* or the *Show History* tool to select a user, group, or container.

4 If you are a team manager, select one or more users for whom you want to define a proxy.

5 Specify a user to be the proxy in the *Proxy Assigned* field.

6 Specify when the time period ends by clicking one of the following:

Button	Description
No Expiration	Indicates that this proxy assignment does not expire.
Specify Expiration	Lets you specify the end date and time. You can type the date and time, or click the calendar button and select the date and time from the calendar.

7 Click *Submit* to commit your changes.

11.4.3 Deleting Proxy Assignments

To delete an existing proxy assignment:

1 Click *Remove* next to the assignment:

Description: Delete button

11.5 Viewing and Editing Your Delegate Assignments

The *My Delegate Assignments* action allows you to view your delegate assignments. If you are a Provisioning Application Administrator, you can also use this action to edit delegate assignments.

Only Provisioning Application Administrators and team managers can assign delegates, as described below:

- The Provisioning Application Administrator has the ability to define delegate assignments for any user in the organization.
- A team manager might have the ability to define delegate settings for users on his team, depending on how the team rights have been defined. The delegates must also be within the team. To define a delegate, a team manager must use the *Team Delegate Assignments* action.

If a team manager needs to define a delegate relationship for users who are not within his or her scope of authority, he or she must request that the Provisioning Application Administrator define the delegate relationship.

TIP: Before using the *Edit Availability* action, you need to have at least one delegate assignment to work on.

11.5.1 Displaying Your Delegate Settings

1 Click *My Delegate Assignments* in the *My Settings* group of actions.

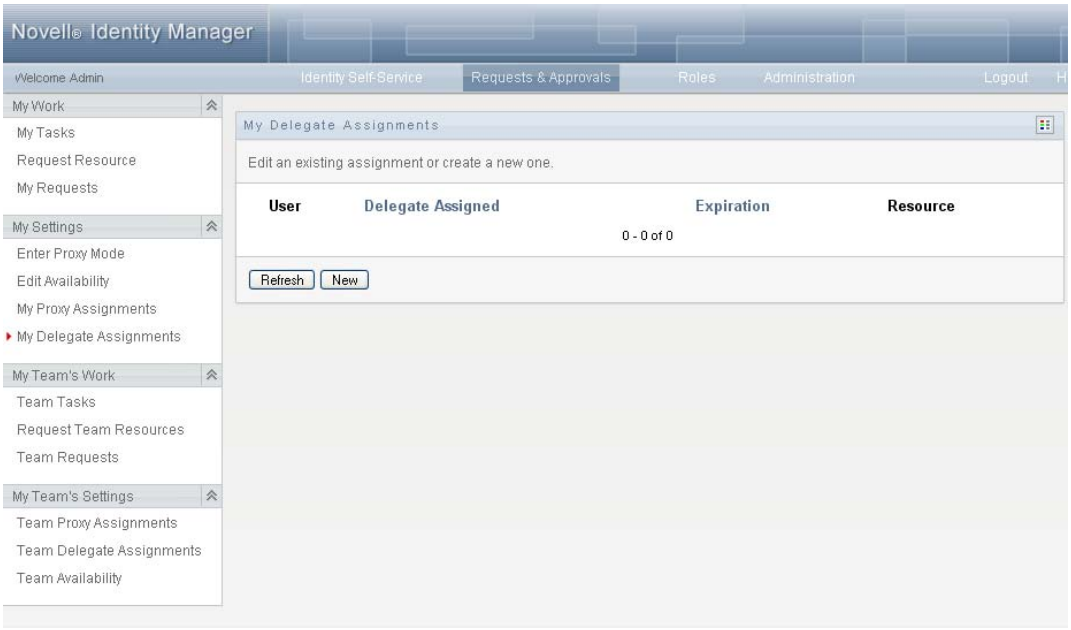
The user application displays your current settings.

If you are not a Provisioning Application Administrator, you see a read-only view of your delegate assignments:

Description: My Delegate Assignments page

If you have administrative privileges, you are provided with buttons that let you create and edit delegate assignments.

Description: My Delegate Assignments page



2 To refresh the list, click *Refresh*.

11.5.2 Creating or Editing Delegate Assignments

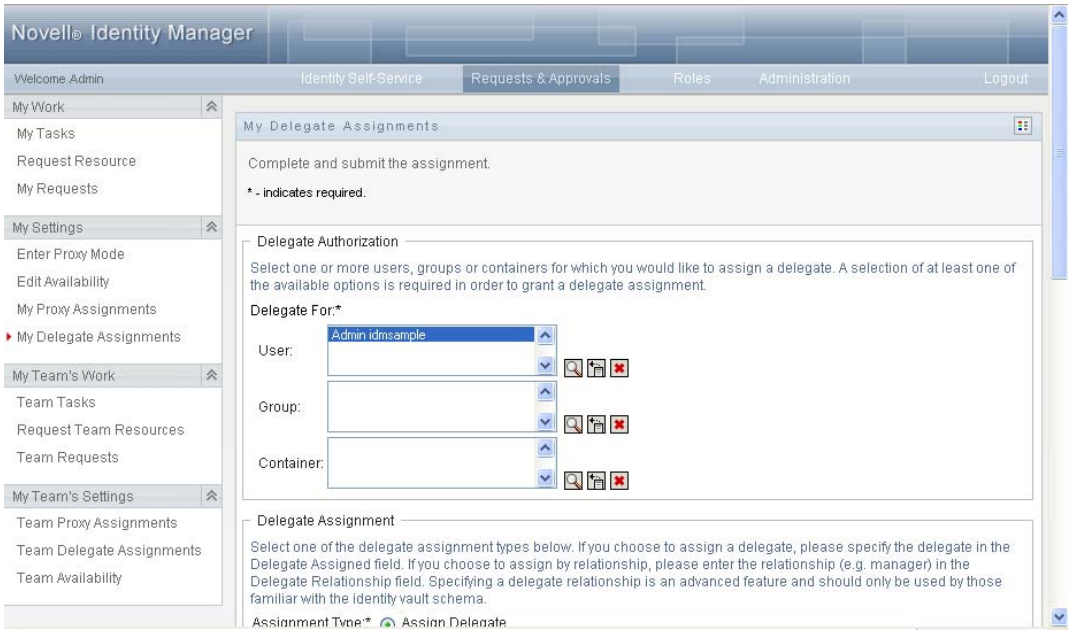
1 To edit an existing delegate assignment, click *Edit* next to the assignment:

Description: Edit button

Or, to create a new delegate assignment, click *New*.

If you are the Provisioning Application Administrator, the user application presents the following interface to allow you to define delegate assignments:

Description: My Delegate Assignments page



2 Select one or more users, groups, and containers for which you want to define a delegate.

Use the *Object Selector* or the *Show History* tool to select a user, group, or container.

3 Click *Assign Delegate*. Specify the user who is the delegate in the *Delegate Assigned* field. Alternatively, click *Assign by Relationship*, then select a relationship in the *Delegate Relationship* field.

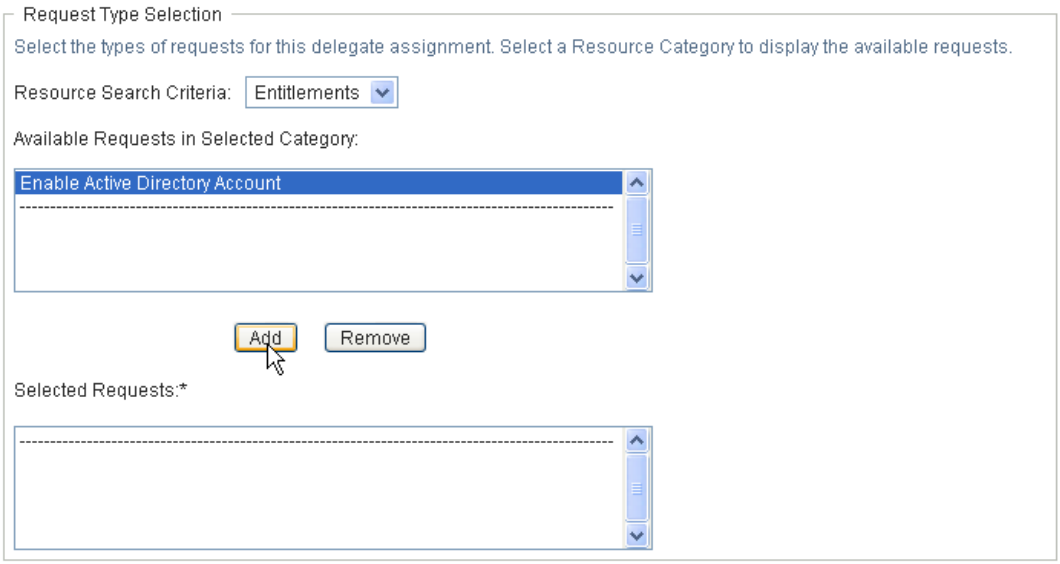
4 Specify when the time period ends by clicking one of the following:

Button	Description
No Expiration	Indicates that this delegate assignment does not expire.
Specify Expiration	Lets you specify the end date and time. You can type the date and time, or click the calendar button and select the date and time from the calendar.

5 Select the category of resource requests in the *Resource Search Criteria* field. Select *All* to include resource requests from all available categories.

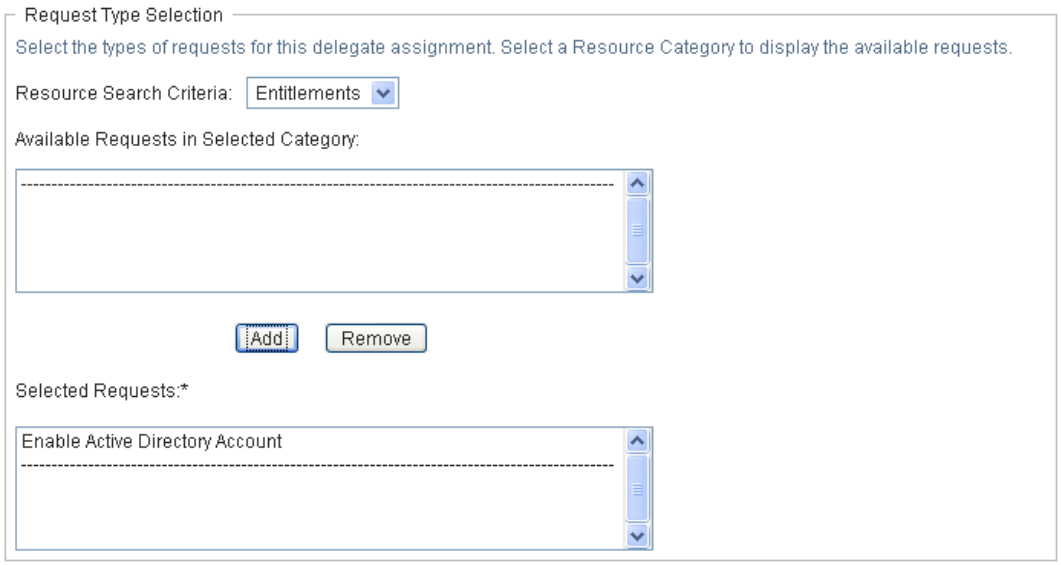
6 Select one or more requests that you want to delegate in the *Available Requests in Selected Category* list, then click *Add*.

Description: Request Type Selection box



Each request you add is included in the *Selected Requests* list.

Description: Selected Requests list



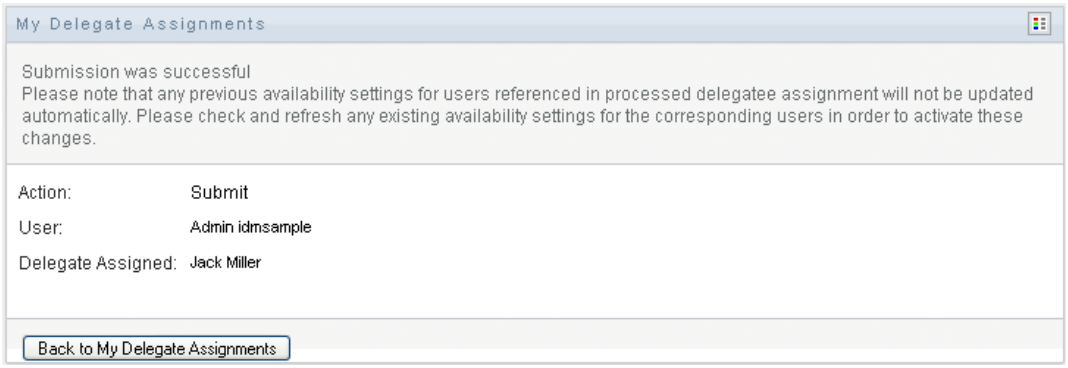
If you add multiple requests, each request is treated as an individual object that can be edited separately.

7 To remove a request from the list, click *Remove*.

8 Click *Submit* to commit your changes.

The user application displays a confirmation message indicating whether the delegate assignment was successfully submitted:

Description: My Delegate Assignments submission message



11.5.3 Deleting a Delegate Assignment

To delete an existing delegate assignment:

1 Click *Remove* next to the assignment:

Description: Remove button

Managing Your Team's Work

12

This section describes how to use the *Requests & Approvals* tab to manage your team's provisioning work. Topics include:

- Section 12.1, "About My Team's Work Actions," on page 161
- Section 12.2, "Managing Your Team's Tasks," on page 162
- Section 12.3, "Make Team Requests," on page 180
- Section 12.4, "Managing Your Team's Requests," on page 186

12.1 About My Team's Work Actions

The *Requests & Approvals* tab in the Identity Manager user application includes a group of actions called *My Team's Work*. The *My Team's Work* actions give you the ability to work with team member tasks and requests in a workflow. Some actions are the same as those described in Chapter 10, "Managing Your Work," on page 121. The actions you can perform are determined by the definition of the team and the team request rights. The *Requests & Approvals* tab works with existing users and teams. To add new users and teams, refer to Chapter 8, "Creating Users or Groups," on page 99.

NOTE: The flow of control for a provisioning workflow, as well as the appearance of forms, can vary depending on how the provisioning request was defined in the Designer for Identity Manager. For details on customizing the design of a provisioning workflow, see the *Identity Manager User Application: Design Guide (http://www.novell.com/documentation/idm35/index.html)*.

12.1.1 About Teams

A *team* identifies a group of users. It determines who can manage provisioning requests and approval tasks associated with this team. The team definition consists of a list of team managers, team members, and team options, as described below:

- The *team managers* are those users who can administer requests and tasks for the team. Team managers can also be given permission to set proxies and delegates for team members. Team managers can be users or groups.
- The *team members* are those users who are allowed to participate on the team. Team members can be users, groups, or containers within the directory. Alternatively, they can be derived through directory relationships. For example, the list of members could be derived by the manager-employee relationship within the organization. In this case, the team members would be all users who report to the team manager.

  NOTE: The Provisioning Application Administrator can configure the directory abstraction layer to support cascading relationships, in which case several levels within an organization might be included within a team. The number of levels to include is configurable by the administrator.

- The *team options* determine the provisioning request scope, which specifies whether the team can act on an individual provisioning request, one or more categories of requests, or all

requests. The team options also determine whether team managers can set proxies for team members and/or set the availability of team members for the purpose of delegation.

The Provisioning Application Administrator can perform all team management functions.

The team definition itself is managed within iManager by one or more administrative managers.

12.1.2 About Team Request Rights

The *team request rights* specify a list of requests that fall within the domain of a team, as well as the actions that team managers can perform on the provisioning requests and tasks.

The team request rights are managed within iManager by one or more administrative managers. The team manager is not permitted to set these rights.

Your administrator has the ability to define a scope of control for team managers depending on the business needs of the specific team. Because of this you might have different rights over requests and tasks, depending on the team for which you are acting as a manager. If you have questions about the access rights for a specific team, please contact your administrator.

12.2 Managing Your Team's Tasks

When a task is in a workflow queue, you can perform the following actions:

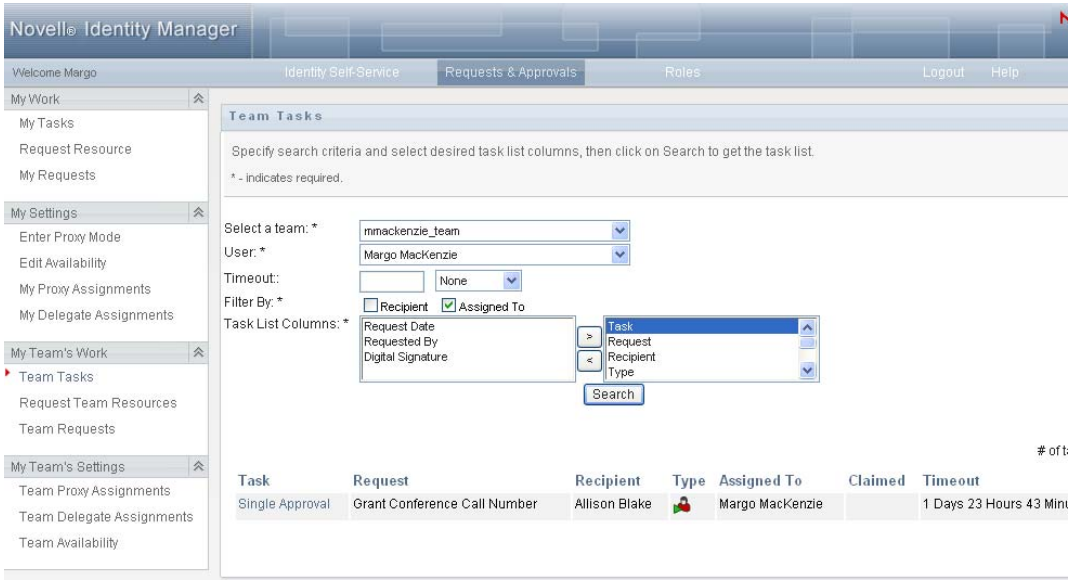
- Section 12.2.1, "Viewing Tasks by Team Member," on page 163
- Section 12.2.2, "Viewing Tasks by User or Group," on page 164
- Section 12.2.3, "Using the Task Displays," on page 166
- Section 12.2.4, "Selecting a Task," on page 170
- Section 12.2.5, "Claiming a Task," on page 175
- Section 12.2.6, "Reassigning a Task," on page 179
- Section 12.2.7, "Releasing a Task," on page 180

12.2.1 Viewing Tasks by Team Member

A team manager can view a team member's tasks. Only tasks available to the team can be listed in the task list.

1 Click *Team Tasks* in the *My Team's Work* group of actions to display the Team Tasks window.

Description: Team Tasks page



2 Click the *Select a team* down-arrow to display teams. Select a team for which you have been designated a team manager.

3 Select a user.

If the *User* selection box contains a name, click the *User* down-arrow to display all the members of the selected team. Click the name of the person whose tasks you want to display.

If the *User* selection box is empty, click the *Object Selector* icon to open the Object Lookup window. Specify search criteria for the team member, click *Search,* and select the team member.

Your administrator defines your team and defines whether you see an automatically populated selection list or an empty list with an *Object Selector* icon Description: Object Selector icon beside the selection box.

4 (Optional) Specify a *Timeout* interval to find tasks that expire within the time you select. Specify one or more digits, for example 10.

If you specify a *Timeout* interval, choose whether the interval is days, weeks, or months.

5 Use *Filter by* to select the subset of tasks you want to see for a team member. To see tasks that grant or revoke resources for the team member, select *Recipient*. To see tasks that the team member is responsible for doing, select *Assigned to*. You can select both kinds of tasks.

6 In the *Task List Columns* selection box, select one or more task columns to display and click the right-arrow to add them to the task list. The order in which you select the columns is the order in which they appear in the display. Columns can include:

Task. (Required.)

Request
Recipient
Request Date
Type
Assigned to
Requested by
Claimed
Timeout
Priority
Digital Signature

7 Click *Search* to list the selected user's tasks.

8 To see another team member's tasks, or tasks for another team, return to Step 2 and define a new search.

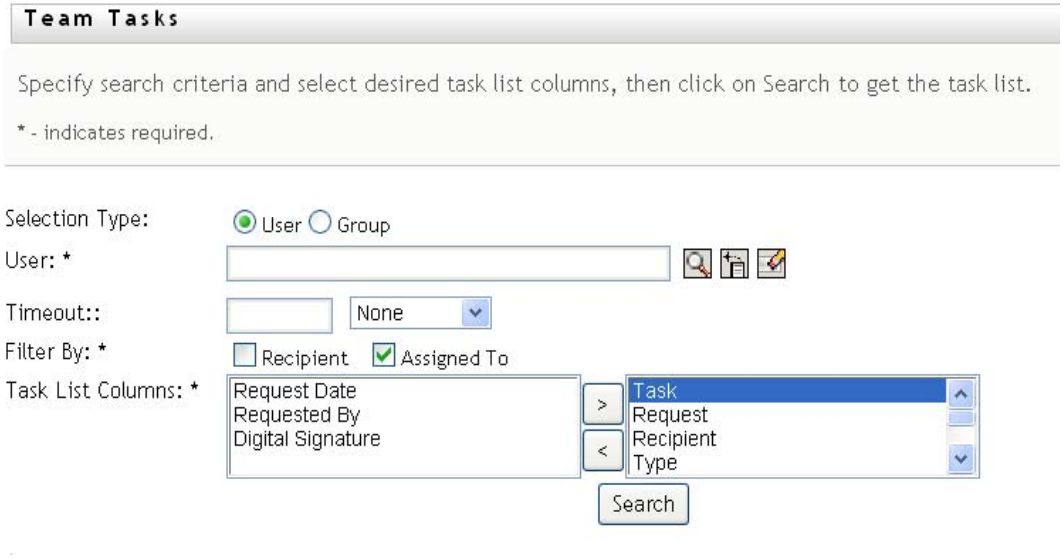
12.2.2 Viewing Tasks by User or Group

A Provisioning Application Administrator can view tasks by user or group.

1 Click *Team Tasks* in the *My Team's Work* group of actions to display the Team Tasks window.

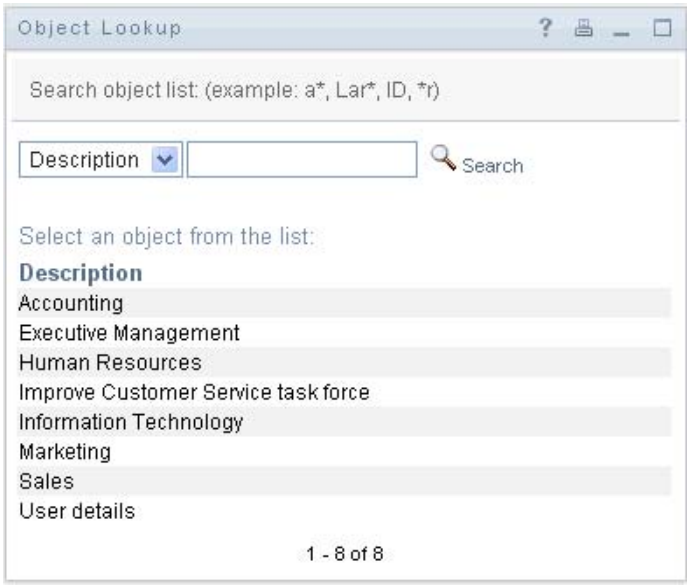
2 For *Selection Type*, choose *User* or *Group*.

Description: Specify Group radio button



3 To look up a name, click the *Object Selector* icon Description: Object Selector icon, specify lookup criteria, and click *Search*.

Click a user name or group name to select it. The following sample of the object lookup page was a lookup of all groups:



4 Optionally, specify a *Timeout* interval to find tasks that expire within the interval. Specify one or more digits.

   If you specify a *Timeout* interval, choose whether the interval is days, weeks, or months.

5 Use *Filter by* to select a subset of tasks. To see tasks that grant or revoke resources to the user or group, select *Recipient*. To see tasks that the user or group is responsible for doing, select *Assigned to*. You can select both kinds of tasks.

6 In the *Task List Columns* selection box, select one or more task descriptions to display, then click the right-arrow to add the descriptions to the task list. The order in which you add the descriptions is the order in which they appear as column headers in the task list. Your choices are:

   Task. (Required.)
   Request
   Recipient
   Request Date
   Type
   Assigned to
   Requested by
   Claimed
   Timeout
   Priority
   Digital Signature

7 Click *Search* to display the tasks.

   Group tasks displayed are those explicitly assigned to the group, not those assigned to each member of the group. To see tasks assigned to an individual, view the tasks for that person.

8 To see tasks for another user or group, return to Step 2 and define a new search.

12.2.3 Using the Task Displays

The task list appears in the Template Display or the Exhibit Display format. Your administrator chooses your display format.

The Template Display Format

The Template Display is the default display format. Figure 12-1 shows an example:

Figure 12-1 *Example of Task List in Template Display Format*

Description: Team Tasks: Template Display

The template display lets you sort columns by value, set the number of tasks per page, and page through the task list.

Sorting a Column by Value

1. Click the heading of a column to sort the values in the column.
2. Click the heading again to reverse the order of the sort.

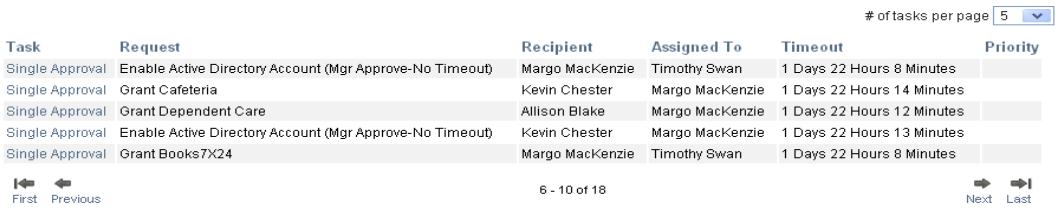
Setting the Number of Tasks per Page

1. Click the down-arrow of the *# of tasks per page* selection box on the right side above the task list.

2 Choose a page length of 5, 10, or 25 tasks per page.

Paging Through the Task List

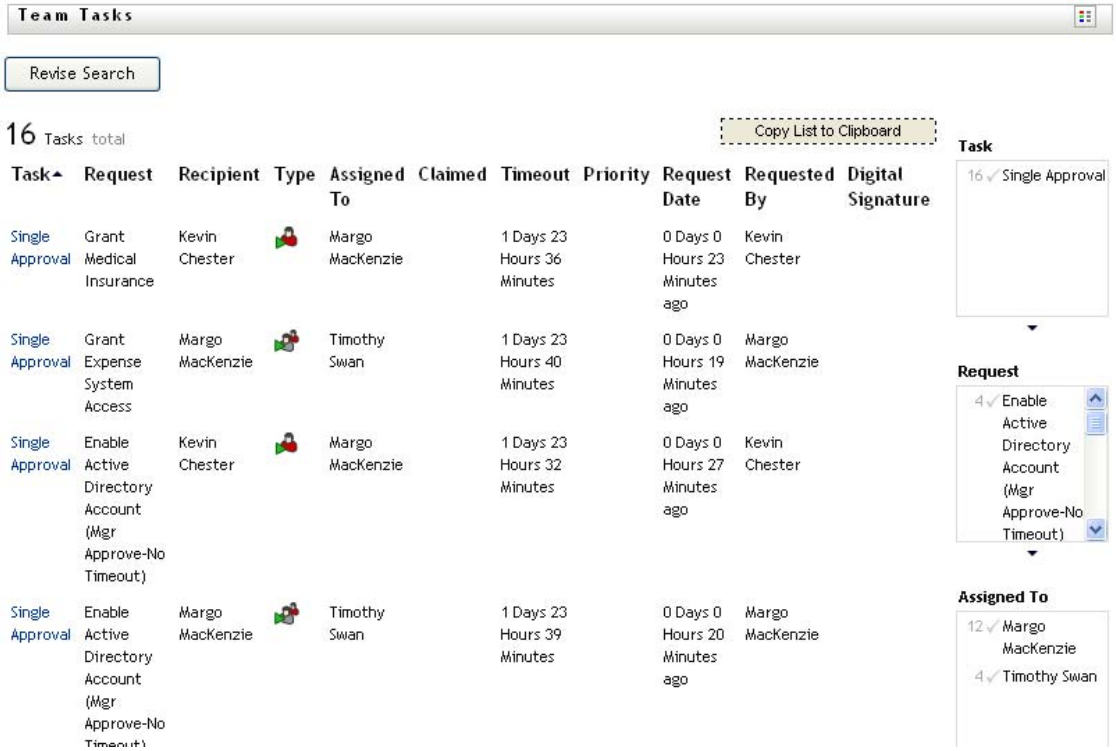
1 Click *First, Previous, Next,* and *Last* to page through the task list.



The Exhibit Display Format

The Exhibit Display format enables you to filter your retrieved data. Figure 12-2 shows an example of the Exhibit Display format:

Figure 12-2 *Example of Task List in Exhibit Display Format*



Sorting a Column by Value

1 Click the heading of a column to sort the values in the column.

2 Click the heading again to reverse the order of the sort.

Filtering Your View of the Data

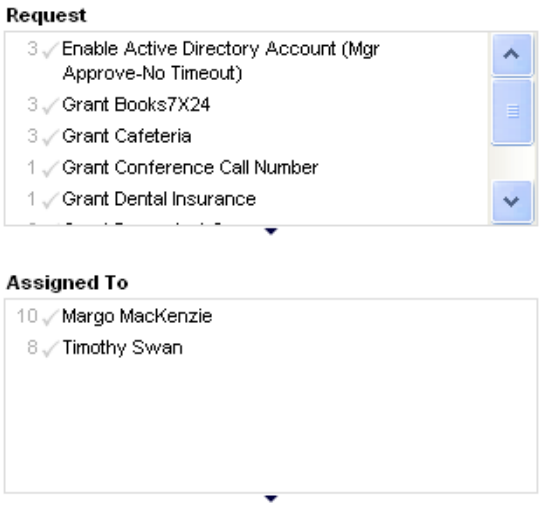
The Exhibit Display format shows the whole data set returned by your search. You can use filters to filter the data set. The filters are on the right side of the display and have the names of column

headings from your search. You can filter the data by *Task, Request, Assigned To,* and *Requested By* column values. Filters only appear if the corresponding columns are included in the display.

NOTE: The Exhibit Display refers to filters as *facets*.

Figure 12-3 shows an example with a Request filter and an Assigned To filter:

Figure 12-3 *Two Filters in the Exhibit Display*



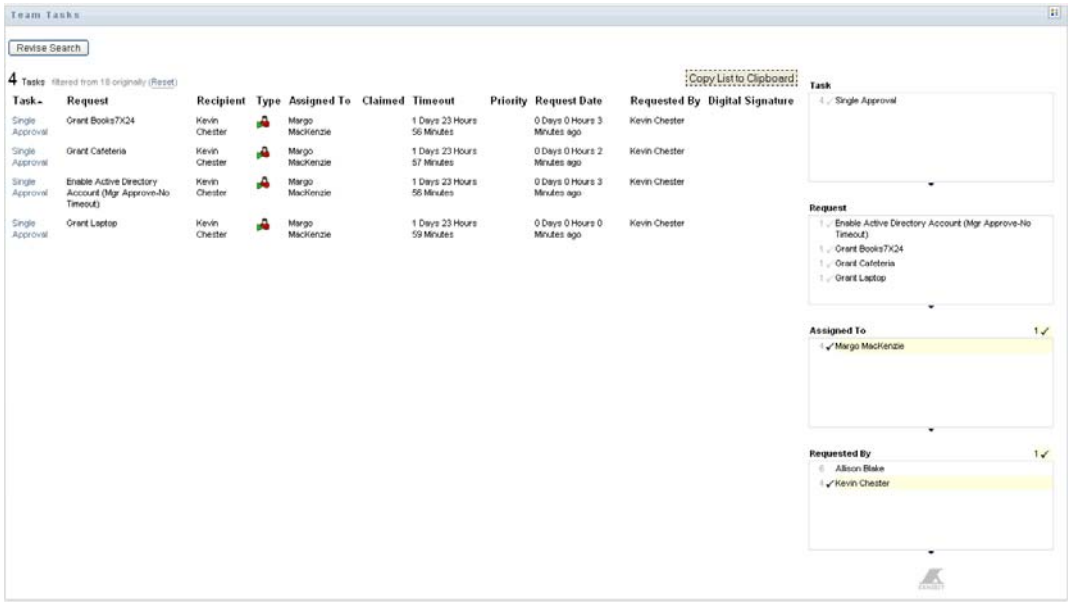
Beside each filter parameter is a number and optionally a check mark. The number indicates the number of tasks that match that parameter within the current filter set. The check mark indicates whether the filter parameter is selected. Initially, all filter parameters are selected, enabling you to see all the data from your search. If a filter has only one parameter, that parameter is automatically selected.

1 To view a subset of data, click one or more parameters in one or more filter boxes.

NOTE: Selecting a parameter in one filter can change the parameters available in other filters.

For example, if you click Margo's name in the Assigned To filter and Kevin's name in the Requested By filter, you see only tasks that are both assigned to Margo Mackenzie and requested by Kevin Chester, as shown in Figure 12-4:

Figure 12-4 *Example of Task List After Applying Two Filters*



Exporting Data from Your Display

1. To export the data that you see in your display, click *Copy List to Clipboard* (at the top of the display).
2. Choose *Tab Separated Values* or *Generated HTML of this view*. The Exhibit Display generates a coded text file.
3. Copy the contents to your clipboard.
4. Paste from your clipboard to a destination file.
5. Click *Close* or *ESC* to close the window of coded text.

Understanding the Display Icons

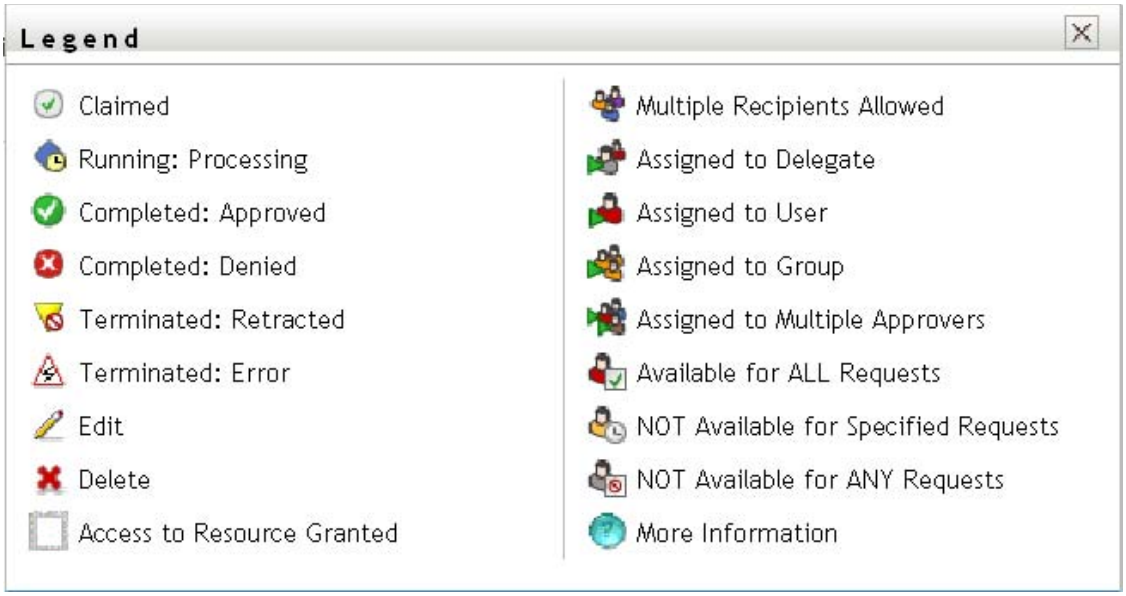
The Template and Exhibit views both show icons that indicate the status of each task in the result set. This section describes the display icons that appear in the task list:

- "Type Column" on page 169
- "Priority Column" on page 170
- "Claimed Column" on page 170
- "Digital Signature Column" on page 170

Type Column

Status flags appear under the *Type* column. Flags are defined in the Legend. To access the Legend, click the multicolored icon in the right side of the Team Tasks title bar. Figure 12-5 on page 170 shows the Legend.

Figure 12-5 *Icons that appear in the Team Tasks displays*



Priority Column

A red flag identifies a high-priority task. This priority is set in the Provisioning Request Definition created by your administrator.

Claimed Column

The *Claimed* icon in the *Claimed* column indicates that the task has been claimed.

Digital Signature Column

The *Digital Signature* icon in the *Digital Signature* column indicates that a digital signature is required to approve or deny the task.

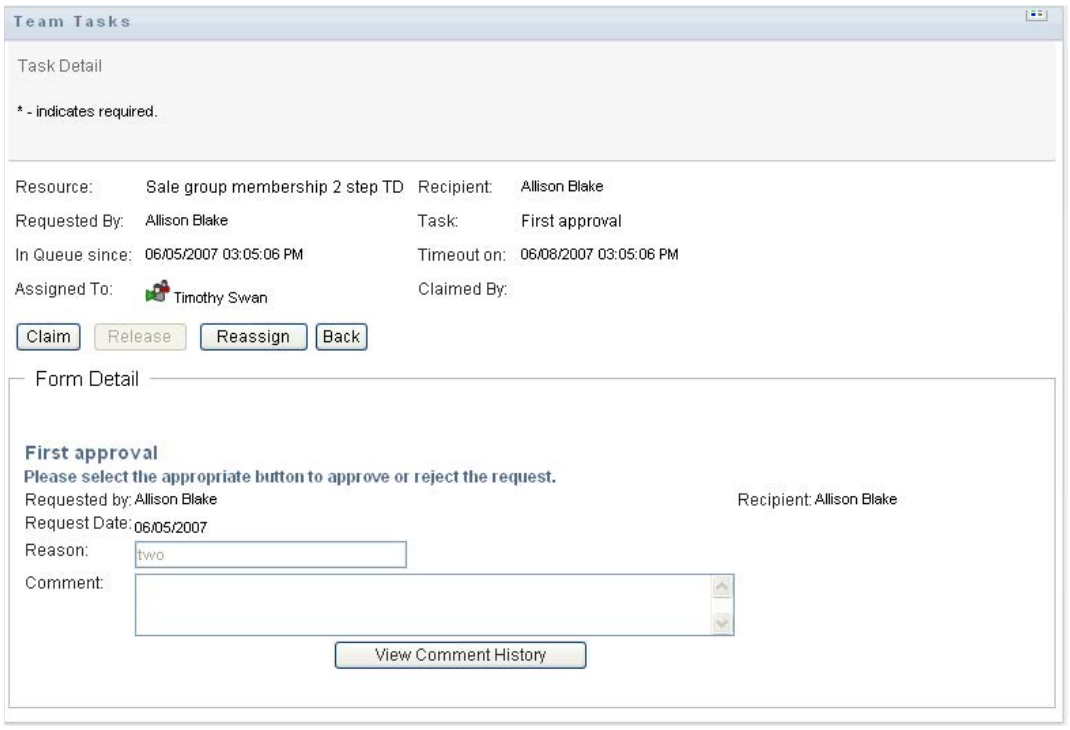
12.2.4 Selecting a Task

To select and open a task in the task list:

1. Click the name of the task.

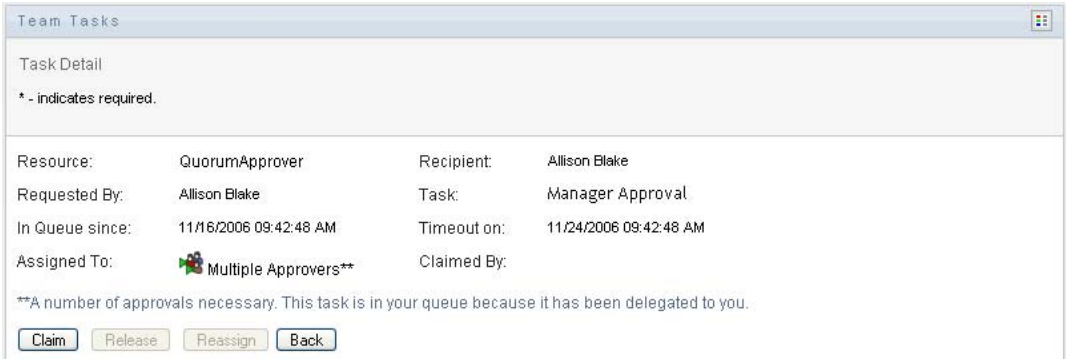
The Team Tasks Task Detail form is displayed.

Description: Task Detail form



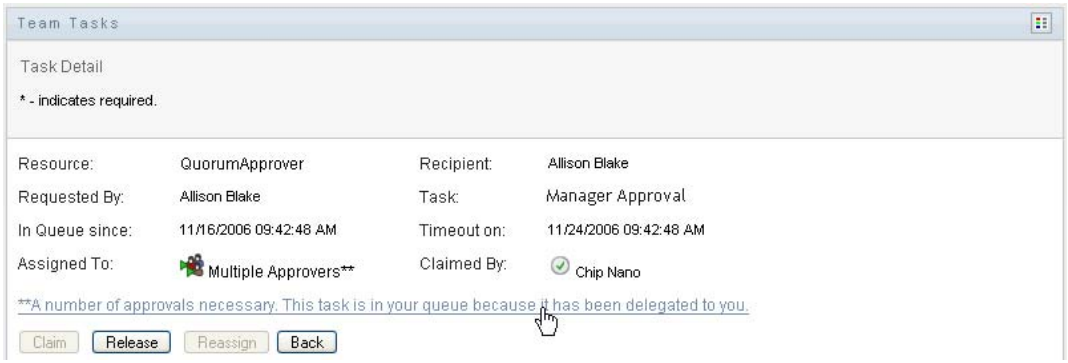
When a task is assigned to multiple approvers, the Task Detail form displays the *Multiple Approvers* icon next to the *Assigned To* field, and displays text below the icon to indicate that multiple approvals are necessary.

Description: Multiple Approvers icon



2 To display more information about a task assigned to multiple approvers, click the text under the *Multiple Approvers* icon:

Description: Multiple Approvers text



A pop-up window displays that indicates how many approvals are required, who the current addressees are, and what the approval status is currently.

Description: Multiple Approvers screen

The requirements for the task depend on how the task was configured by your administrator:

- If the approval type is *group*, the task has been assigned to several users within a group, but only one is expected to claim and approve the task.
- If the approval type is *multiple approvers*, the task has been assigned to several addressees, and all of the addressees must claim and approve the task.
- If the approval type is *quorum*, the task has been assigned to several addressees, and a quorum of addressees is sufficient to approve the task. The definition of a quorum is configured by the administrator. To define the quorum, the administrator specifies an approval condition that specifies the precise number of approvals or the percentage of approvals needed.

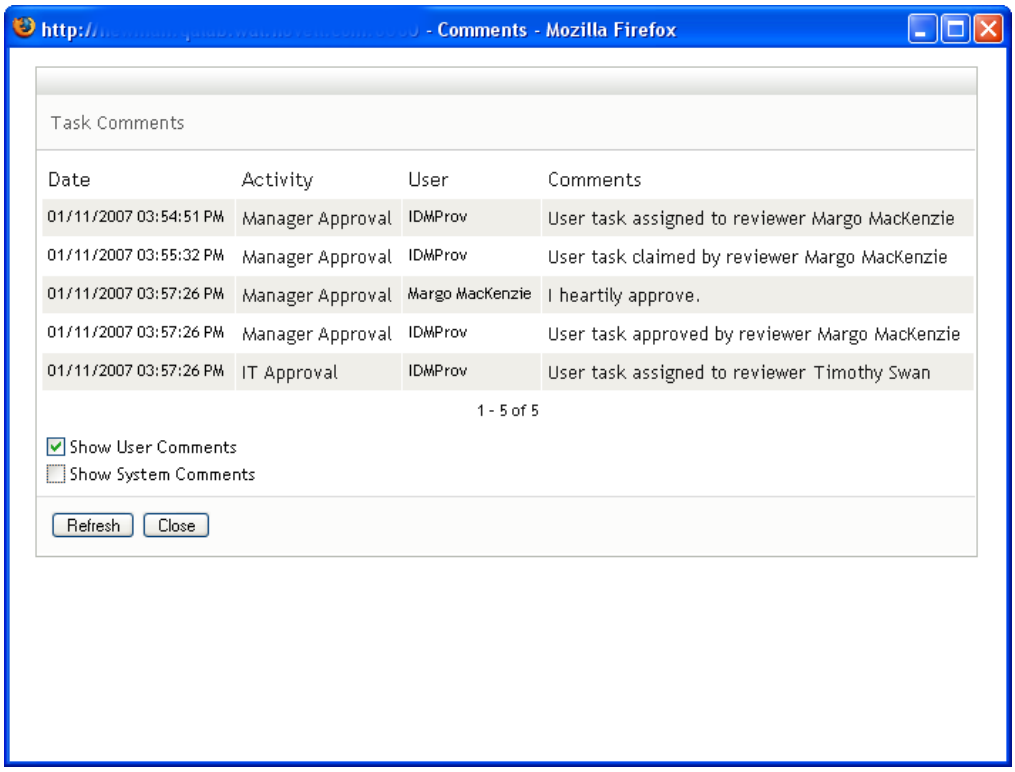
3 To claim a task, follow the instructions at Section 12.2.5, “Claiming a Task,” on page 175.

4 To reassign a task, follow the instructions at Section 12.2.6, “Reassigning a Task,” on page 179

5 To view comment history for the task, click *View Comment History*.

A pop-up window lets you see user and system comments. The order in which comments appear is determined by the time stamp associated with each comment. Comments entered first are displayed first. For parallel approval flows, the order of activities being processed concurrently can be unpredictable.

5a To display user comments, click *Show User Comments*.

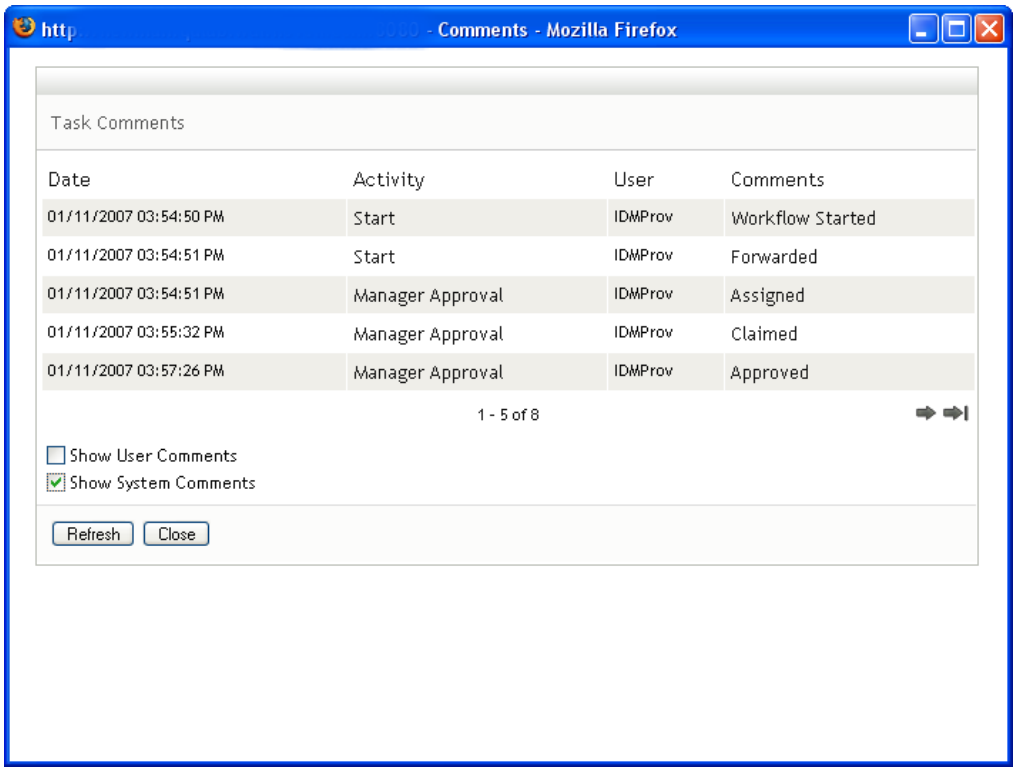


User comments include the following kinds of information:

- The date and time when each comment was added.
- The name of the activity to which each comment applies. The list of activities displayed includes user and provisioning activities that have been processed or are currently being processed.
- The name of the user who made the comment. If the comment is generated by the workflow system, the name of the application (for example, `IDMProv`) is the user name. Comments generated by the workflow system are localized automatically.
- The comment text, which includes the name of the user who is the current assignee for each activity.

NOTE: The workflow designer can disable the generation of user comments for a workflow. For more information, see the *Identity Manager User Application: Design Guide (http://www.novell.com/documentation/idm35/index.html)*.

5b To display system comments, click *Show System Comments*.



System comments include the following kinds of information:

- The date and time when each comment was added.
- The name of the activity to which each comment applies. When you display system comments, all activities in the workflow are listed. The list of activities includes those that have been processed or are currently being processed.
- The name of the user who made the comment. If the comment is generated by the workflow system, the name of the application (for example, `IDMProv`) is the user name. Comments generated by the workflow system are localized automatically.
- The comment text, which indicates what action was taken for the activity.

System comments are intended primarily for debugging purposes. Most business users do not need to look at the system comments for a workflow.

5c To scroll through a long list of comments, click the arrows at the bottom of the screen. For example, to scroll to the next page, click the *Next* arrow.

Description: Next arrow

5d Click *Close* to close the window.

6 To return to the task list, click *Back*.

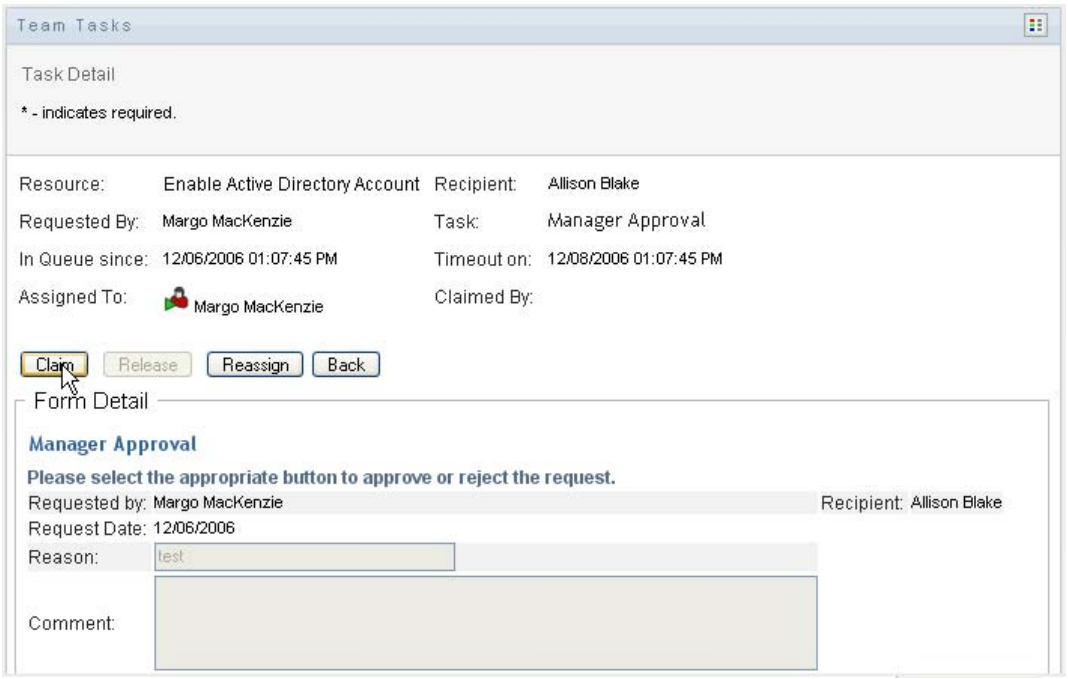
NOTE: The *Claim* and *Reassign* buttons are visible only if these actions are permitted by the team request rights.

12.2.5 Claiming a Task

To claim a team member's task to work on:

1 Click *Claim*.

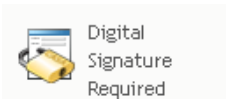
Description: Claim button



The *Form Detail* section of the page is updated to include the *Deny* and *Approve* buttons, as well as any other action buttons included by the flow definition, and the appropriate fields become editable.

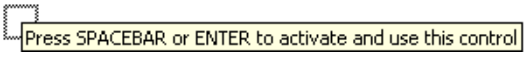
If the resource you've requested requires a digital signature, the Digital Signature Required icon appears in the upper right corner of the page.

Description: Digital Signature Required icon



In addition, on Internet Explorer, a message appears indicating that you need to press the Spacebar or the Enter key to activate the digital signature applet.

Description: Internet Explorer message



2 If you're working on a task that requires a digital signature, perform these steps:

2a If you're using a smart card, insert the smart card into the smart card reader.

2b On Internet Explorer, press the Spacebar or the Enter key to activate the applet.

At this point, your browser might display a security warning message.

Description: Security warning

2c Click *Run* to proceed.

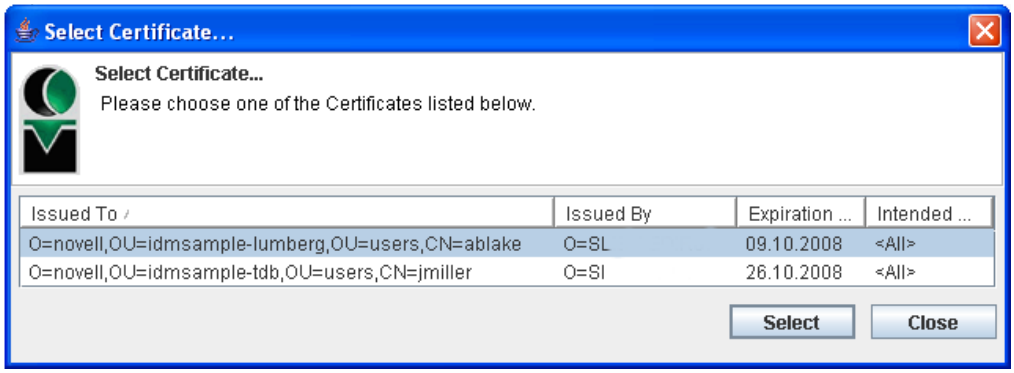
2d Fill in the fields in the approval form. The fields on the form vary depending on which resource you requested.

2e Click the check box next to the digital signature confirmation message to indicate that you are ready to sign.

The digital signature confirmation message varies depending on how the provisioning resource was configured by the administrator.

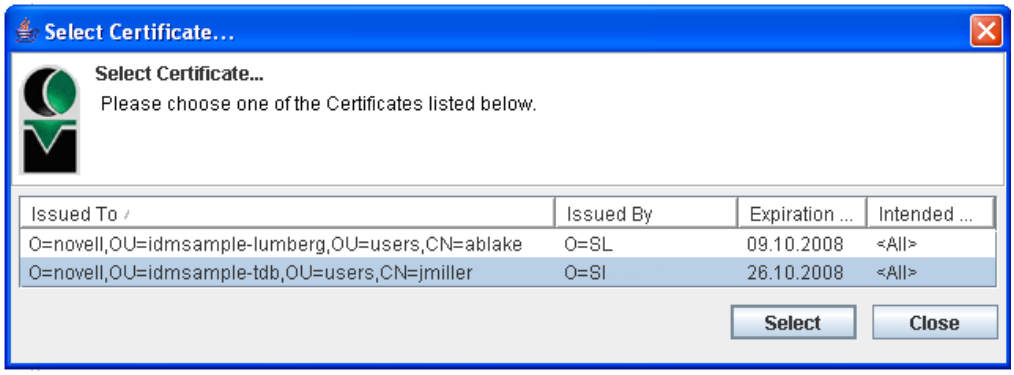
The applet then displays a pop-up window that allows you to select a certificate. The pop-up window lists certificates imported to the browser as well as certificates imported to the smart card (if one is currently connected).

Description: Select Certificate screen



2f Select the certificate you want to use and click *Select*.

Description: Select Certificate screen

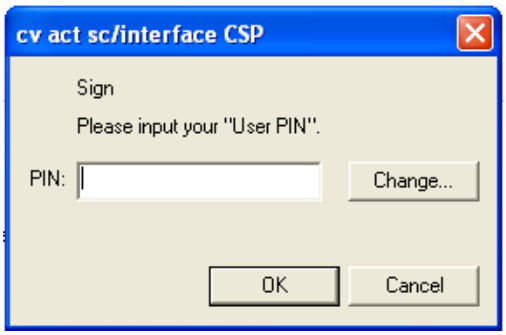


2g If you select a certificate that has been imported into your browser, you need to type the password for the certificate in the *Password* field on the request form.

2h If you select a certificate that has been imported to your smart card, type the PIN for your smart card and click *OK*.

You do not need to type the password for the certificate if you're using a smart card, because the certificate password has already been transmitted to the card.

Description: PIN screen



If your administrator has enabled the ability to preview the user agreement, the *Preview* button is enabled.

2i Click *Preview* to see the user agreement.

If the digital signature type is set to Form, a PDF document is displayed.

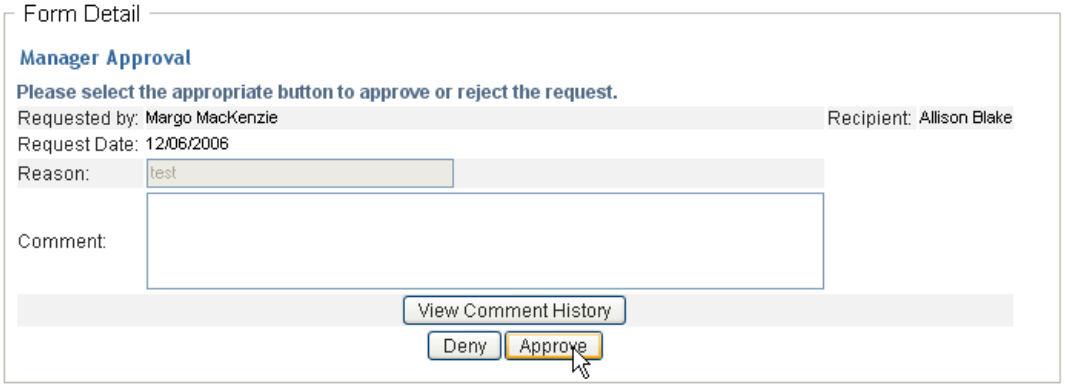
If the digital signature type is set to data, an XML document is displayed.

3 To deny the request, click *Deny*.

Description: Deny button

4 To approve the request, click *Approve*.

Description: Approve button



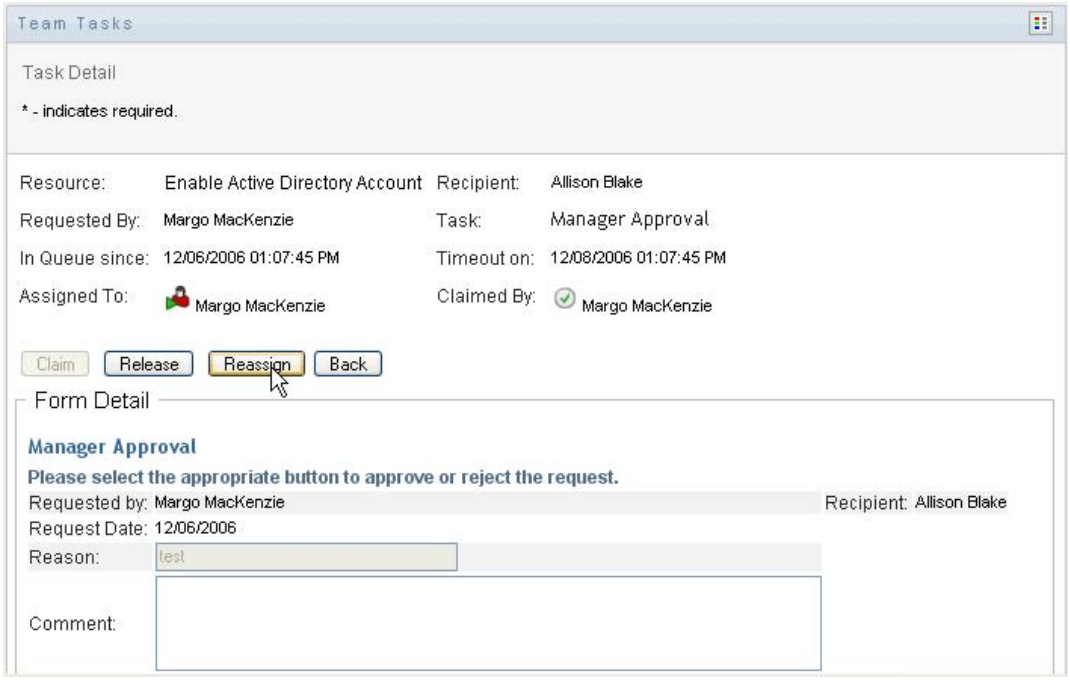
The user application displays a message indicating whether the action was successful.

12.2.6 Reassigning a Task

To reassign a team member's task:

1 Click *Reassign* in the Team Tasks task detail window.

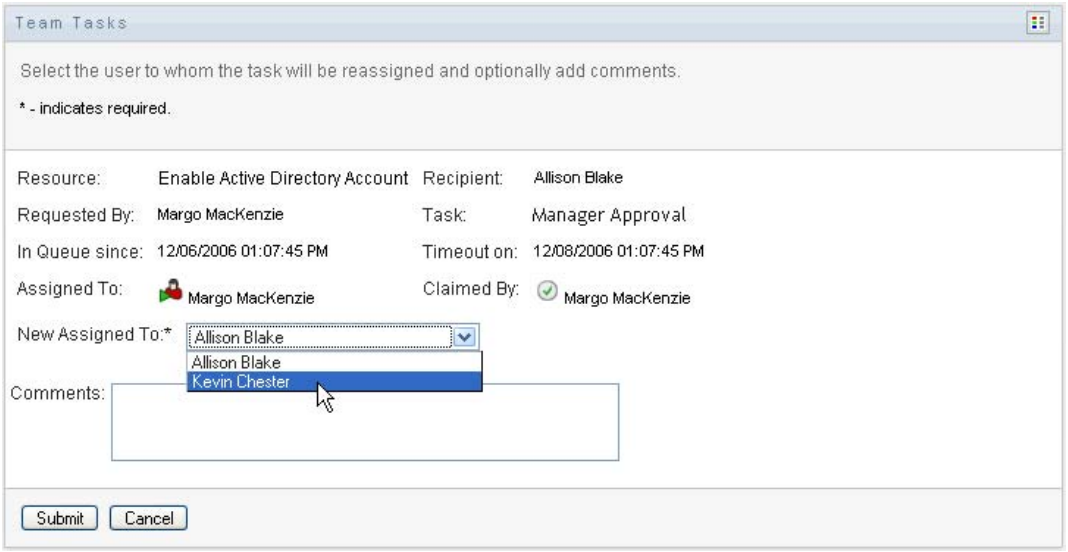
Description: Reassign button



2 Click the *Object Selector* icon Description: Object Selector icon next to your chosen entry box.

3 In the *New Assigned To* drop-down list, select the user to whom you want to reassign the task.

Description: New Assigned To drop-down list



4 (Optional) Type a comment in the *Comments* field to explain the reason for the reassignment.

5 Click *Submit*.

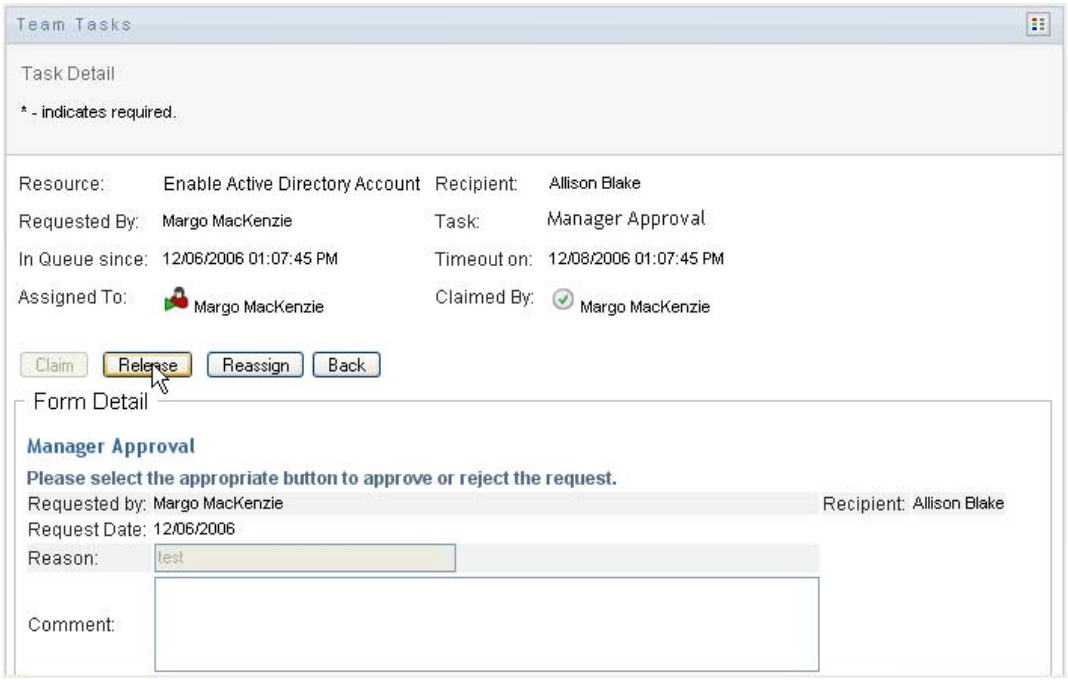
The user application displays a message indicating whether the action was successful.

12.2.7 Releasing a Task

You release a task so that it can be assigned to or claimed by another team member.

1 Click *Release* in the Team Tasks Task Detail window.

Description: Release button



12.3 Make Team Requests

The *Request Team Resources* action enables you to request resources for team members.

1 Click *Request Team Resources* in the *My Team's Work* group of actions.

The Request Team Resources page is displayed.

Description: Request Team Resources page

2 Click *Select a team* to select a team for which you have been designated as a team manager. Then click *Continue*.

The application displays a page that lets you pick a category.

Description: Resource Search Criteria selection list

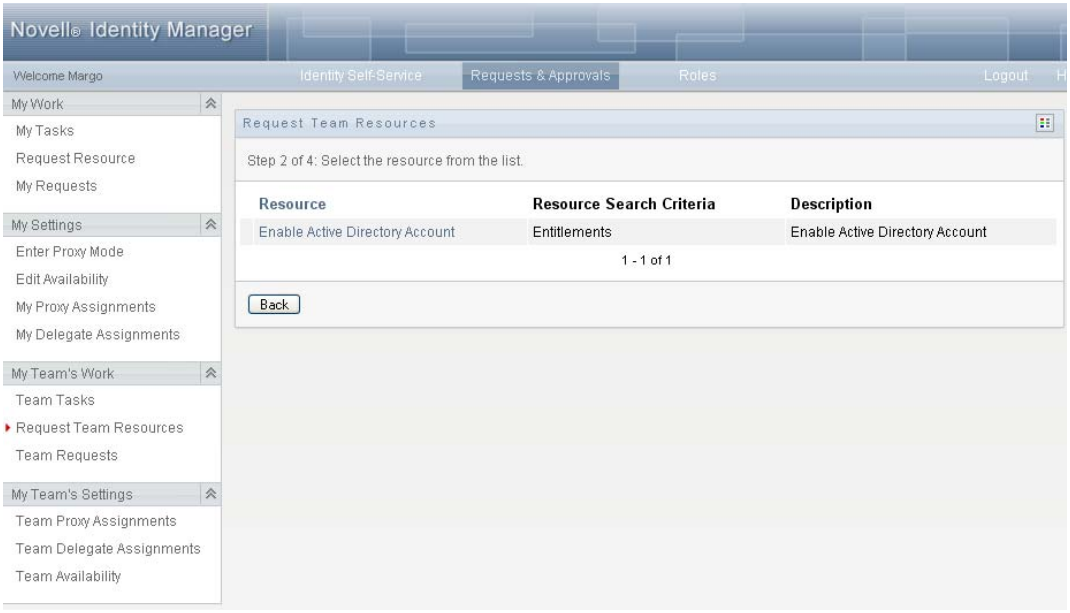
3 Select the category of the resource in the *Resource Search Criteria* drop-down list. Select *All* to include resources from all available categories.

The list of categories available depends on the team request rights. If the provisioning request scope for the team does not include resource categories, the category list is not displayed. In this case, skip to the next step to select a resource.

4 Click *Continue*.

The Request Team Resources page displays a list of resources that you can request. The list includes only those resources for which team managers are permitted to initiate requests.

Description: Request Team Resources page



5 Click a resource name to select it.

6 Click a *Recipient* name to select it. The team member you select is the recipient for the request.

Depending on how the team was defined, you might see an *Object Selector* icon Description: Object Selector icon beside the *Recipient* selection box, instead of a list of team members. In this case, click the icon to open the Object Lookup window. Specify search criteria for the team member, click *Search,* and select the team member.

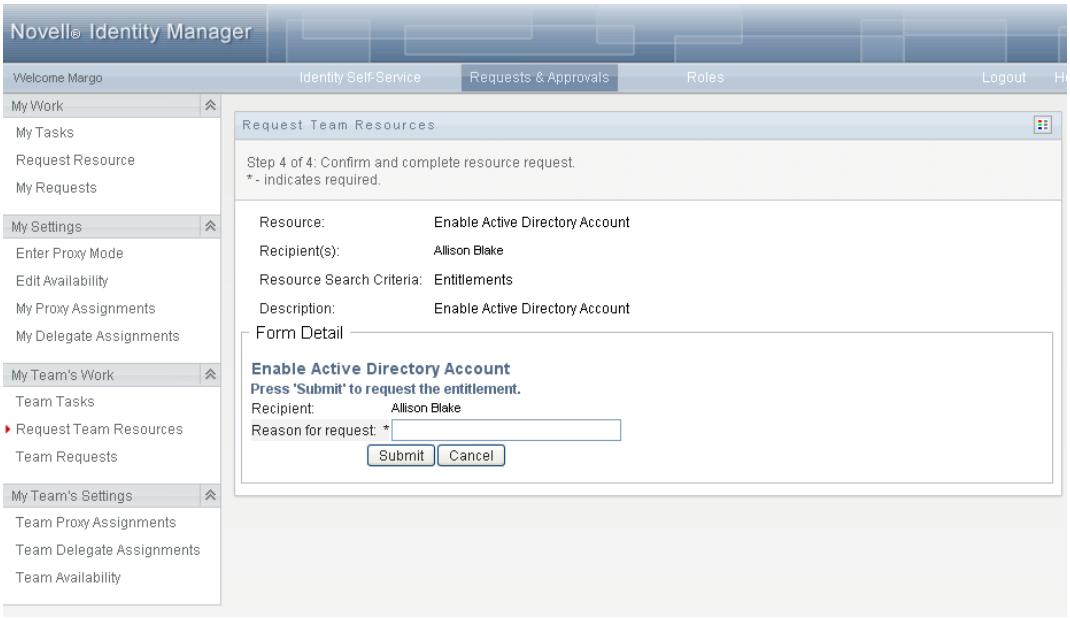
If the *flow strategy* for the workflow has been defined to support multiple recipients, the application lets you pick a group, container, or team as the recipient. Depending on how the workflow is configured, the user application might spawn a separate workflow for each recipient (so that the request can be approved or denied independently for each recipient), or initiate a single flow that includes multiple provisioning steps, one for each recipient. In the latter case, the approval or denial of the request applies to all recipients.

7 Click *Continue*.

8 The Request Team Resources page displays the request form. Fill in the fields on the request form. In the following example, the only required field is *Reason for request*.

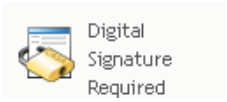
The fields on the form vary according to the resource you requested.

Description: Request Team Resources page



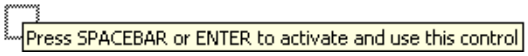
If the resource you've requested requires a digital signature, the *Digital Signature Required* icon appears in the upper right corner of the page.

Description: Digital Signature Required icon



In addition, on Internet Explorer, a message appears indicating that you need to press the Spacebar or the Enter key to activate the digital signature applet:

Description: Internet Explorer message



9 If you're making a request that requires a digital signature, perform these steps:

9a If you're using a smart card, insert the smart card into the smart card reader.

9b On Internet Explorer, press the Spacebar or the Enter key to activate the applet.

At this point, your browser might display a security warning message.

Description: Security warning

9c Click *Run* to proceed.

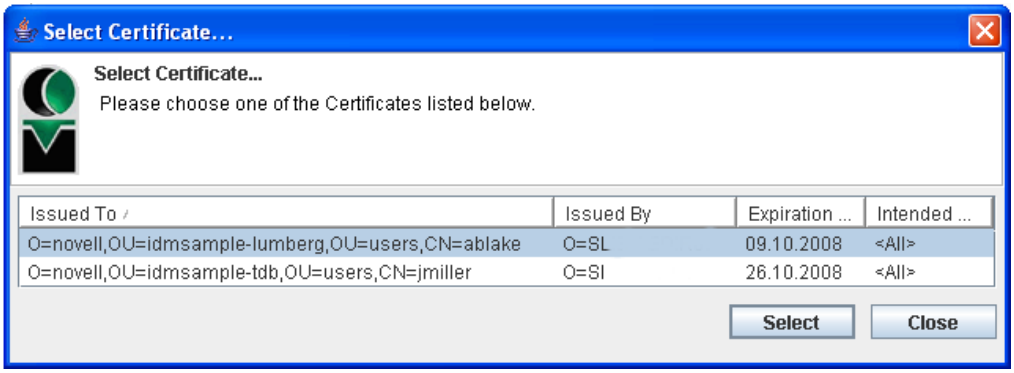
9d Fill in the fields in the initial request form. The fields on the form vary depending on which resource you requested.

9e Click the check box next to the digital signature confirmation message to indicate that you are ready to sign.

The digital signature confirmation message varies depending on how the provisioning resource was configured by the administrator.

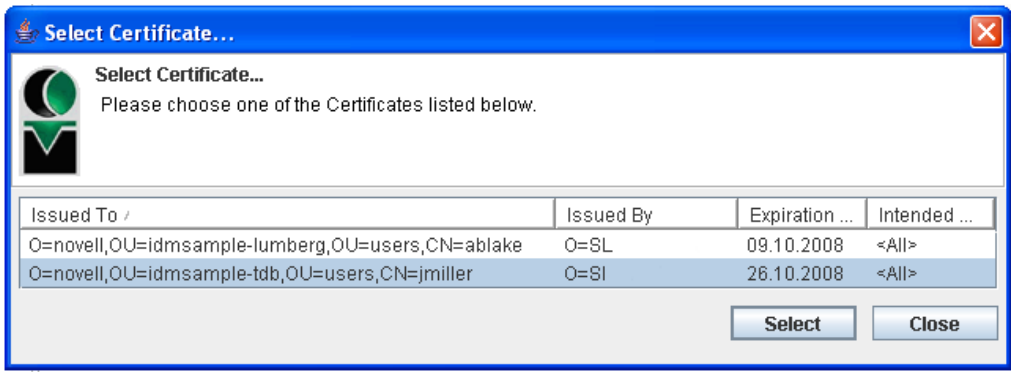
The applet then displays a pop-up window that allows you to select a certificate. The pop-up window lists certificates imported to the browser as well as certificates imported to the smart card (if one is currently connected).

Description: Select Certificate screen



9f Select the certificate you want to use and click *Select*.

Description: Select Certificate screen

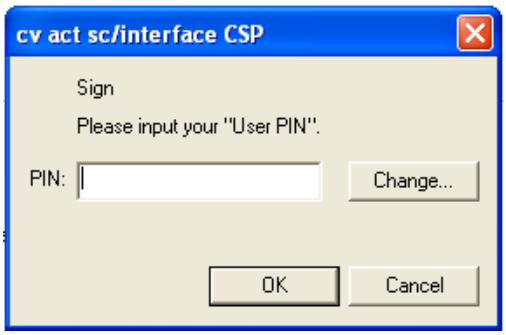


9g If you select a certificate that has been imported into your browser, you need to type the password for the certificate in the *Password* field on the request form.

9h If you select a certificate that has been imported to your smart card, type the PIN for your smart card and click *OK*.

You do not need to type the password for the certificate if you're using a smart card, because the certificate password has already been transmitted to the card.

Description: PIN screen



If your administrator has enabled the ability to preview the user agreement, the *Preview* button is enabled.

Description: Preview button

9i Click *Preview* to see the user agreement.

If the digital signature type is set to Form, a PDF document is displayed. If the digital signature type is set to data, an XML document is displayed.

10 Click *Submit*.

A workflow starts for the user.

The Request Team Resources page displays a status message indicating whether the request was submitted successfully.

If your request requires permission from one or more individuals in an organization, the request starts one or more workflows to obtain those approvals.

12.4 Managing Your Team's Requests

Team managers and the Provisioning Application Administrator can view status and history of resource requests and can retract resource requests.

1 Click *Team Requests* in the *My Team's Work* group of actions.

2 Click *Select a team* to select a team for which you have been designated as a team manager.

If you are a Provisioning Application Administrator, you do not see the *Select a team* box.

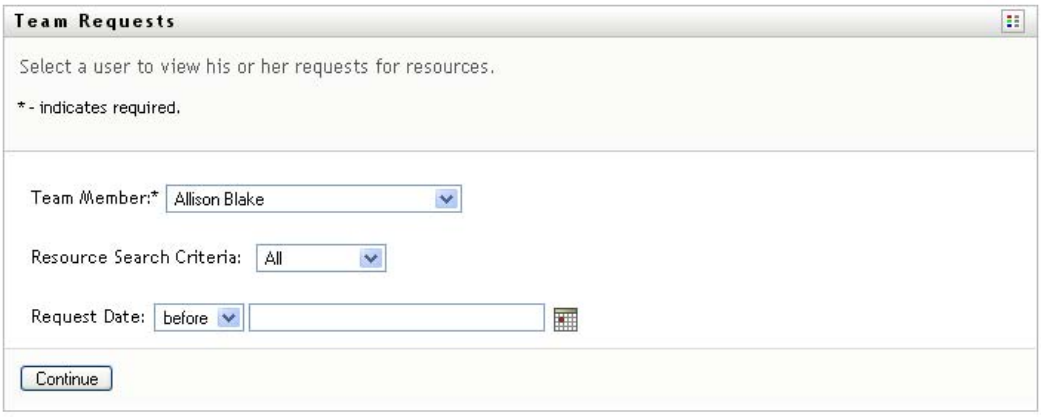
The Provisioning Application Administrator cannot filter the list of team requests by container or group. The administrator must select team members individually.

Description: Team Requests page

3 Click *Continue*.

The Request Team Resources page prompts you to select a *Team Member*, a *Resource Search Criteria* (a category), and a *Request Date* filter.

Description: Team Requests page



4 Click a *Team Member* name to select it.

Depending on how the team was defined, you might see an *Object Selector* icon Description: Object Selector icon beside the *Team Member* selection box, instead of a list of team members. In this case, click the icon to open the Object Lookup window. Specify search criteria for the team member, click *Search,* and select the team member.

5 After you select a team member, you can select the *Resource Search Criteria* (category) and a *Request Date* filter. Click *Continue*.

The Team Requests page lists:

- Each requested resource
- Who is to receive it
- Who requested it
- Status of the request

The team requests are displayed. The list of requests includes only those requests available to the team.

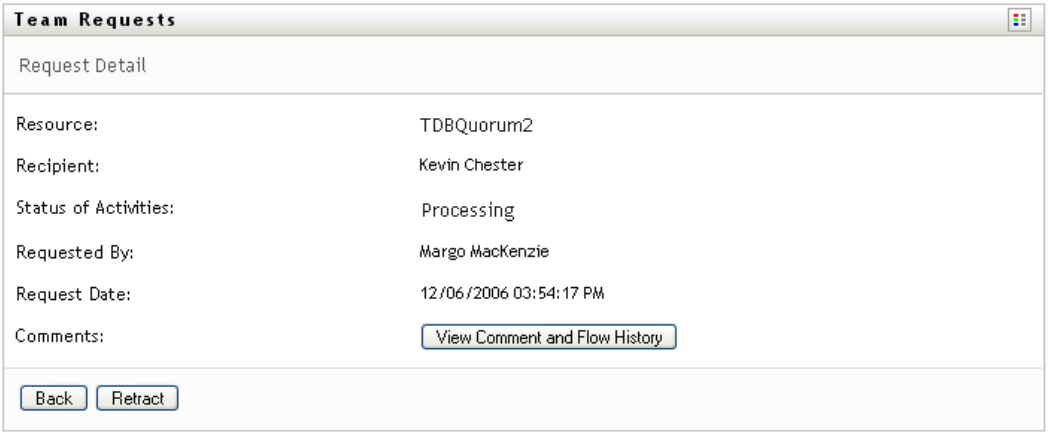
Description: Team Requests resource list

6 To view the details of a resource request, click the request name in the list.

The Request Detail page displays details such as

- Name of resource
- Recipient of resource
- Status of activities supporting the request
- Who requested the resource
- When the request was made
- Comments

Description: Request Detail page

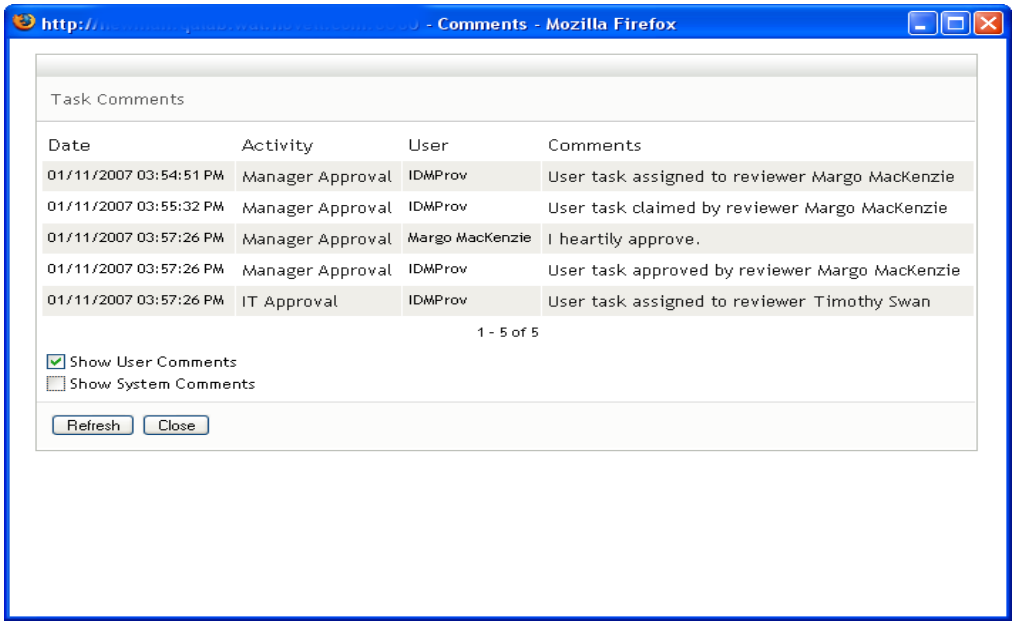


7 To view comment history for the request, click *View Comment and Flow History*.

A pop-up window lets you see user and system comments. The order in which comments appear is determined by the time stamp associated with each comment. Comments entered first are displayed first. For parallel approval flows, the order of activities being processed concurrently can be unpredictable.

7a To display user comments, click *Show User Comments*.

Description: Show User Comments check box



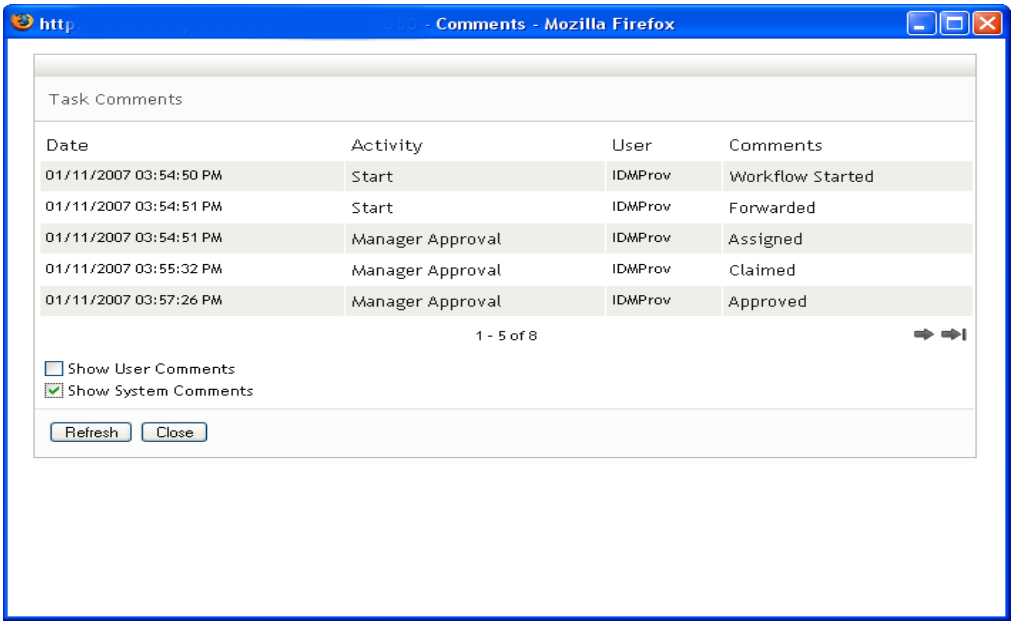
User comments include the following kinds of information:

- The date and time when each comment was added.
- The name of the activity to which each comment applies. The list of activities displayed includes user and provisioning activities that have been processed or are currently being processed.
- The name of the user who made the comment. If the comment is generated by the workflow system, the name of the application (for example, `IDMProv`) is the user name. Comments generated by the workflow system are localized automatically.
- The comment text, which includes the name of the user who is the current assignee for each activity.

The workflow designer can disable the generation of user comments for a workflow. For more information, see the *Identity Manager User Application: Design Guide*. (http://www.novell.com/documentation/idm35/index.html)

7b To display system comments, click *Show System Comments*.

Description: Show System Comments check box



System comments include the following kinds of information:

- The date and time when each comment was added.
- The name of the activity to which each comment applies. When you display system comments, all activities in the workflow are listed. The list of activities includes those that have been processed or are currently being processed.
- The name of the user who made the comment. If the comment is generated by the workflow system, the name of the application (for example, `IDMProv`) is the user name. Comments generated by the workflow system are localized automatically.
- The comment text, which indicates what action was taken for the activity.

System comments are intended primarily for debugging purposes. Most business users do not need to look at the system comments for a workflow.

7c To scroll through a long list of comments, click the arrows at the bottom of the screen. For example, to scroll to the next page, click the *Next* arrow.

Description: Next arrow

7d Click *Close* to close the window.

8 To retract the request, click *Retract* on the Request Detail page. *Retract* is enabled for running processes. In processes that are no longer running, *Retract* is disabled.

The *Retract* button is not displayed unless team managers have been given permission to retract requests in the team request rights.

Configuring Your Team's Provisioning Settings

13

This section tells you how to use the *My Team's Settings* actions on the *Requests & Approvals* tab of the Identity Manager user interface. Topics include:

- Section 13.1, "About the My Team's Settings Actions," on page 191
- Section 13.2, "Viewing and Editing Your Team's Proxy Assignments," on page 191
- Section 13.3, "Viewing and Editing Your Team's Delegate Assignments," on page 195
- Section 13.4, "Specifying Your Team's Availability," on page 201

13.1 About the My Team's Settings Actions

The *Requests & Approvals* tab in the Identity Manager user application includes a group of actions called *My Team's Settings*. The *My Team's Settings* actions let you:

- Create, view, and modify the current proxy assignments for your team.
- Create, view, and modify the current delegate assignments for your team.
- Define and view team members' availability for delegate assignments.

13.2 Viewing and Editing Your Team's Proxy Assignments

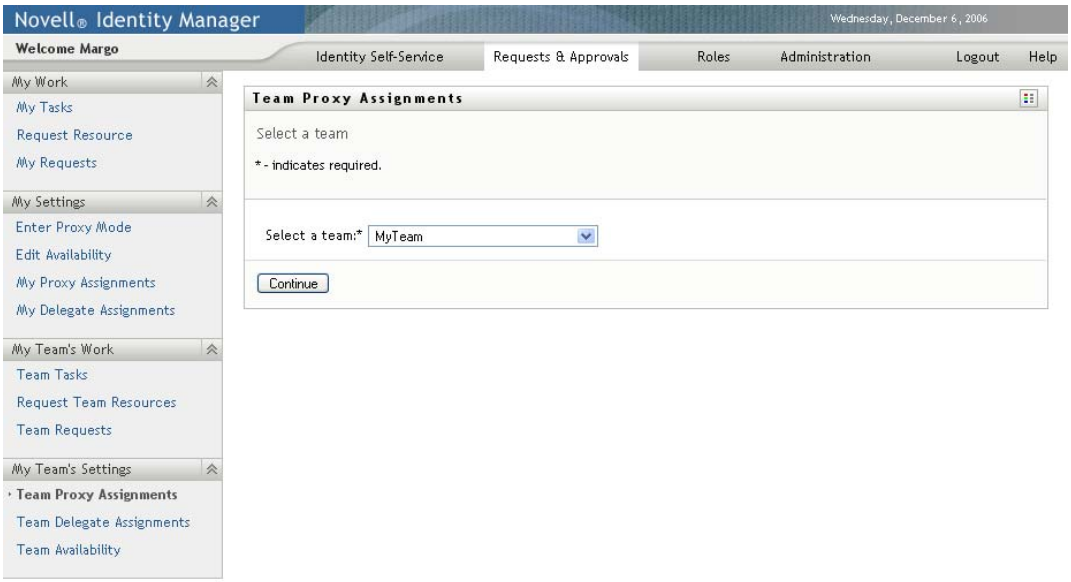
The *Team Proxy Assignments* action lets you manage the proxy assignment for any of your team members. The rules for defining proxies are:

- If you are the team manager, you might be allowed to define proxies for the members of your team. The authority to define proxies is determined by the team definition.
- The people whom you specify as proxies must also be within your team.
- The Provisioning Application Administrator has the ability to set proxies for any user, group, or container in the organization.

To assign a proxy for a team member:

1 Click *Team Proxy Assignments* in the *My Team's Settings* group of actions.

Description: Team Proxy Assignments page



2 Click *Select a team* to select a team for which you have been designated as a team manager.

If you are a Provisioning Application Administrator, you do not see the *Select a team* box.

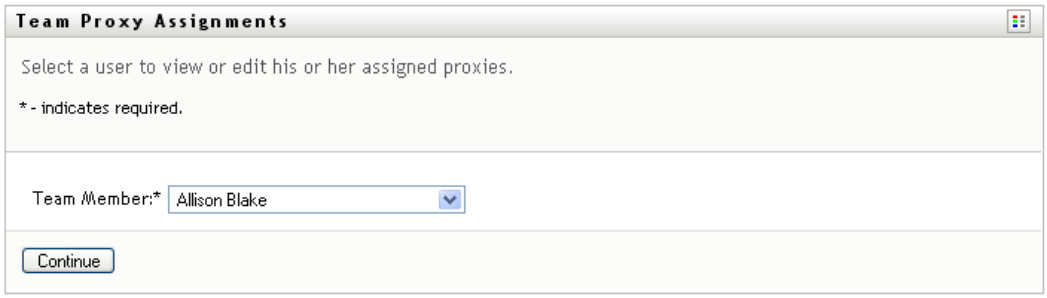
The list of teams includes teams for which team managers are permitted to set proxies, as well as teams for which the ability to set proxies has been disabled. If a particular team definition does not permit team managers to set proxies, the manager can still view proxy settings defined for the team members by the administrator or by a manager of another team to which these users belong. However, the team manager cannot edit these settings, view details for these settings, or create new proxy assignments.

3 Click *Continue*.

4 Click a *Team Member* name to select it.

Depending on how the team was defined, you might see an *Object Selector* icon Description: Object Selector icon beside the *Team Member* selection box, instead of a list of team members. In this case, click the icon to open the Object Lookup window. Specify search criteria for the team member, click *Search,* and select the team member.

Description: Team Proxy Assignments page



5 Click *Continue*.

The proxy assignments for the selected team member, if any, are displayed. You can sort the proxy assignments by clicking the *Proxy Assigned* field.

6 Click *New*.

The *New* button is only enabled for those teams for which team managers are permitted to set proxies for team members.

7 Fill in the fields as follows:

Field	Description
User	Select the team member for whom you want to assign a proxy. You can select multiple users.
Proxy Assigned	Select the team member who is to act as proxy.
Notify other users of these changes	Indicates whether you want to send an e-mail message to notify one or more users of this proxy assignment.
Addressee	Specifies which users should receive e-mail notifications:
	All: Specifies that the user assigned as proxy, as well as the team member(s) for whom the proxy has been assigned, receives e-mail notifications.
	Assign From: Specifies that only the team member(s) for whom the proxy has been assigned receives an e-mail notification.
	Assign To: Specifies that only the team member who is to act as proxy receives an e-mail notification.
	Selective: Allows you to send e-mail notifications to any users you select, including users who are not on the team.
Expiration	**No Expiration:** Select *No Expiration* if you want the proxy assignment to remain in effect until it is removed or modified.
	Specify Expiration: Select *Specify Expiration* to define an *End Date*. Click the Calendar and select a date and time when the proxy assignment expires.

8 Click *Submit* to save your selections.

If the assignment is successful, you'll see a message like this:

```
Submission was successful
Changes will be reflected upon the assigned's next login.
```

9 Click *Back to Team Proxy Assignments* to create a new or edit an existing proxy assignment.

To change existing proxy assignments:

1 Click *Team Proxy Assignments* in the *My Team's Settings* group of actions.

2 Click *Select a team* to select a team for which you have been designated as a team manager.

The list of teams includes teams for which team managers are permitted to set proxies, as well as teams for which the ability to set proxies has been disabled. If a particular team definition does not permit team managers to set proxies, the manager can still view proxy settings defined for the team members by the administrator or by a manager of another team to which these

users belong. However, the team manager cannot edit these settings, view details for these settings, or create new proxy assignments.

If you are a Provisioning Application Administrator, you do not see the *Select a team* box.

3 Click *Continue*.

4 Click a *Team Member* name to select it.

Depending on how the team was defined, you might see an *Object Selector* icon Description: Object Selector icon beside the *Team Member* selection box, instead of a list of team members. In this case, click the icon to open the Object Lookup window. Specify search criteria for the team member, click *Search,* and select the team member.

5 Click *Continue*.

The proxy assignments for the selected team member, if any, are displayed.

6 To change a proxy assignment, click the edit button next to the assignment you want to modify.

Description: Edit button

If the team definition does not permit team managers to set proxies, the edit button is disabled.

7 Fill in the fields as follows:

Field	Description
User	Select the team member for whom you want to assign a proxy. You can select multiple users.
Proxy Assigned	Select the team member who is to act as proxy.
Notify other users of these changes	Indicates whether you want to send an e-mail message to notify one or more users of this proxy assignment.
Addressee	Specifies which users should receive e-mail notifications: **All:** Specifies that the user assigned as proxy, as well as the team member for whom the proxy has been assigned, receives e-mail notifications. **Assign From:** Specifies that only the team member(s) for whom the proxy has been assigned receives an e-mail notification. **Assign To:** Specifies that only the team member who is to act as proxy receives an e-mail notification. **Selective:** Allows you to send e-mail notifications to any users you select, including users who are not on the team.
Expiration	**No Expiration:** Select *No Expiration* if you want the proxy assignment to remain in effect until it is removed or modified. **Specify Expiration:** Select *Specify Expiration* to define an *End Date*. Click the Calendar and select a date and time when the proxy assignment expires.

8 Click *Submit* to save your selections.

If the change was successful, you'll see a message like this:

```
Submission was successful
Changes will be reflected upon the assigned's next login.
```

To delete proxy assignments:

1. Click *Team Proxy Assignments* in the *My Team's Settings* group of actions.
2. To remove a proxy setting, click *Delete*.

Description: Delete button

You are prompted to confirm the delete. When the deletion is complete, you'll see a confirmation like this:

```
Submission was successful.Changes will be reflected upon the
assigned's next login.
```

NOTE: As an alternative, you can also delete a proxy assignment during the edit proxy assignment process.

13.3 Viewing and Editing Your Team's Delegate Assignments

The *Team Delegate Assignments* action allows you to manage the delegate assignments for team members. The rules for defining delegates are as follows:

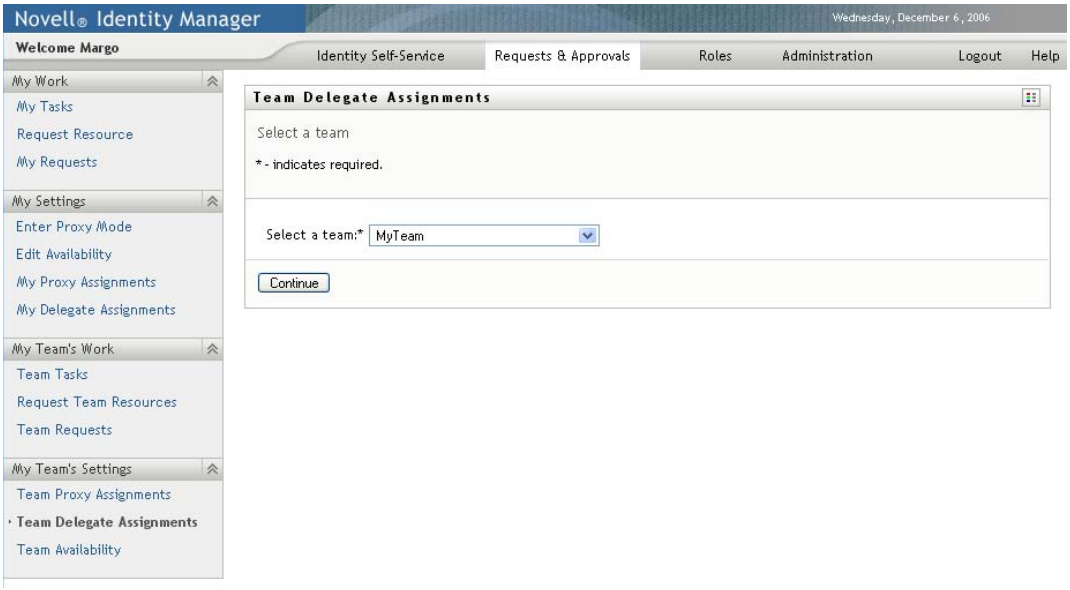
- You are allowed to define delegates for the members of a team for which you have been designated as team manager, as long as the team definition gives you this permission.
- The people whom you specify as delegates must also be within your team.
- The Provisioning Application Administrator has the ability to define delegate assignments for any user, group, or container in the organization.

To define a delegate assignment:

1. Click *Team Delegate Assignments* in the *Team Settings* group of actions.

2 Click *Select a team* to select a team for which you have been designated as a team manager.

Description: Team Delegate Assignments page



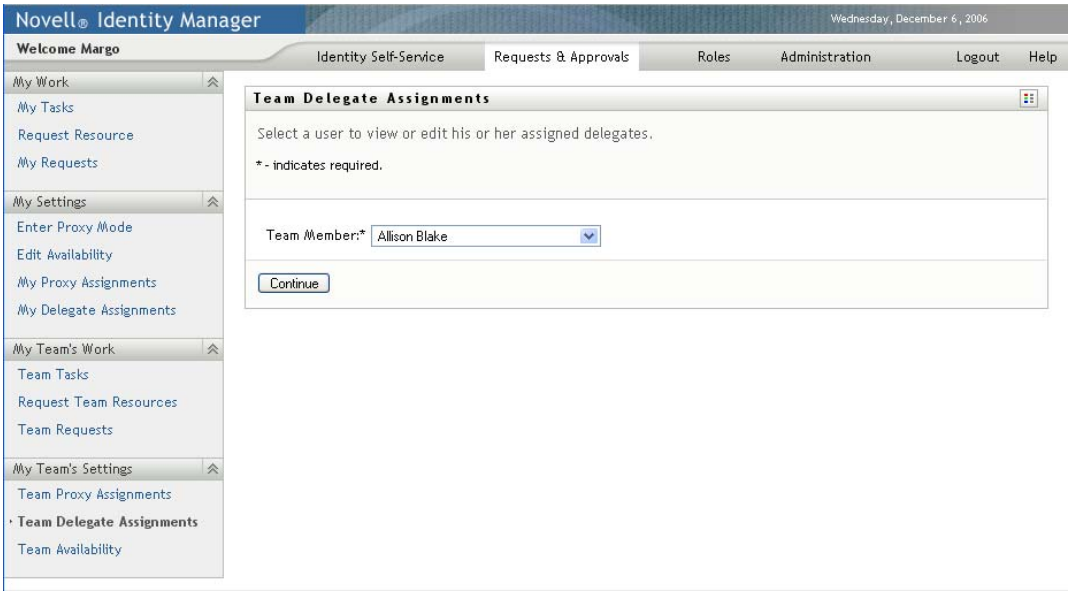
The list of teams includes teams for which team managers are permitted to define delegates (specified in the team request rights), as well as teams for which the ability to set delegates has been disabled. If the team request rights do not permit team managers to define delegates, the manager can still view delegate settings defined for the team members by the administrator or by a manager of another team to which these users belong. However, the team manager cannot edit or delete these settings, view details for these settings, or create new delegate assignments.

If you are a Provisioning Application Administrator, you do not see the *Select a team* box.

3 Click *Continue*.

4 Click a *Team Member* name to select it.

Description: Team Delegate Assignments page



Depending on how the team was defined, you might see an *Object Selector* icon Description: Object Selector icon beside the *Team Member* selection box, instead of a list of team members. In this case, click the icon to open the Object Lookup window. Specify search criteria for the team member, click *Search,* and select the team member.

5 Select a team member from the list, and click *Continue*.

Any existing assignments for the team member are displayed.

6 Click *New.*

The *New* button is only enabled for those teams for which team managers are permitted to define delegates for team members.

7 Fill in the fields as follows:

Field	Description
User	Select one or more users whose work you want to delegate.
Assignment Type	Assign the user who can perform the delegated work by selecting one of the following: ◆ **Assign Delegate:** Select a user from the list. ◆ **Assign by Relationship:** Select the delegate relationship from the drop-down list.
Notify other users of these changes	Indicates whether you want to send an e-mail message to notify one or more users of this delegate assignment.

Field	Description
Addressee	Specifies which users should receive e-mail notifications: **All:** Specifies that the user assigned as delegate, as well as the team member for whom the delegate has been assigned, receives e-mail notifications. **Assign From:** Specifies that only the team member(s) for whom the delegate has been assigned receives an e-mail notification. **Assign To:** Specifies that only the team member who is to act as delegate receives an e-mail notification. **Selective:** Allows you to send e-mail notifications to any users you select, including users who are not on the team.
Expiration	**No Expiration:** Select *No Expiration* if you want the delegation to remain in effect until it is removed or modified. This, in effect, makes the delegation permanent. **Specify Expiration:** Select *Specify Expiration* to define an *End Date*. Click the Calendar and select a date and time when the delegate assignment expires.
Resource Search Criteria	Select a category from the list. This populates the list of *Available Requests* in *Selected Category*.
Available Requests in Selected Category	Select one or more resource requests from this list and click *Add*.
Selected Requests	This list shows the resource request types that have been delegated. To remove a request type, select it from the list and click *Remove.*

8 Click *Submit* to save your assignments.

If the save is successful, you'll see a message like this:

```
Submission was successful
Please note that any previous availability settings for users
referenced in processed delegatee assignment will not be updated
automatically. Please check and refresh any existing availability
settings for the corresponding users in order to activate these
changes.
```

To modify delegate assignments:

1 Click *Team Delegate Assignments* in the *Team Settings* group of actions.

2 Click *Select a team* to select a team for which you have been designated as a team manager.

The list of teams includes teams for which team managers are permitted to define delegates (specified in the team request rights), as well as teams for which the ability to set delegates has been disabled. If the team request rights do not permit team managers to define delegates, the manager can still view delegate settings defined for the team members by the administrator or by a manager of another team to which these users belong. However, the team manager cannot edit or delete these settings, view details for these settings, or create new delegate assignments.

If you are a Provisioning Application Administrator, you do not see the *Select a team* box.

3 Click *Continue*.

4 Click a *Team Member* name to select it.

Depending on how the team was defined, you might see an *Object Selector* icon Description: Object Selector icon beside the *Team Member* selection box, instead of a list of team members. In this case, click the icon to open the Object Lookup window. Specify search criteria for the team member, click *Search,* and select the team member.

The delegate assignments for the selected team member, if any, are displayed.

5 Select a team member from the list, and click *Continue*.

Any existing assignments for the team member are displayed.

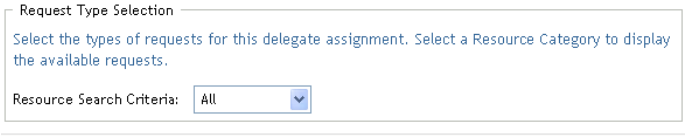
6 To edit a delegate assignment, click the edit button in the same row as the assignment you want to modify.

Description: Edit button

If the team request rights do not permit team managers to define delegates, the edit button is disabled.

7 Fill in the fields as follows:

Field	Description
User	Select one or more users whose work you want to delegate.
Assignment Type	Assign the user who can perform the delegated work by selecting one of the following: ◆ **Assign Delegate:** Select a user from the list. ◆ **Assign by Relationship:** Select the delegate relationship from the drop-down list.
Notify other users of these changes	Indicates whether you want to send an e-mail message to notify one or more users of this delegate assignment.
Addressee	Specifies which users should receive e-mail notifications: **All:** Specifies that the user assigned as delegate, as well as the team member for whom the delegate has been assigned, receives e-mail notifications. **Assign From:** Specifies that only the team member for whom the delegate has been assigned receives an e-mail notification. **Assign To:** Specifies that only the team member who is to act as delegate receives an e-mail notification. **Selective:** Allows you to send e-mail notifications to any users you select, including users who are not on the team.

Field	Description
Expiration	**No Expiration:** Select *No Expiration* if you want the delegation to remain in effect until it is removed or modified. This, in effect, makes the delegation permanent. **Specify Expiration:** Select *Specify Expiration* to define an *End Date*. Click the Calendar and select a date and time when the delegate assignment expires.
Resource Search Criteria	Select a category from the list. This populates the list of *Available Requests* in *Selected Category*. To specify that this delegate assignment applies to all categories, set the resource search criteria for the delegate assignment to *All*.  **NOTE:** The All option is available only if the Provisioning Administrator has enabled the Allow All Requests option for your application.
Available Requests in Selected Category	Select one or more resource requests from this list and click *Add*. The list of provisioning requests includes only those requests that are within the domain of the team. If the team request rights do not permit team managers to define delegates, the provisioning requests associated with the team are not included in the list.
Selected Requests	This list shows the resource request types that have been delegated. To remove a request type, select it from the list and click *Remove*.

8 Click *Submit* to save your selections.

To delete a delegate assignment:

1 Click *Team Delegate Assignments* in the *Team Settings* group of actions to view assignments delegated to this team member and also assignments delegated away from this team member.

2 To remove a delegate assignment, click the delete button in the row of the assignment you want to delete.

Description: Delete button

You are prompted to confirm the deletion. When the deletion is complete, you'll see a confirmation message.

13.4 Specifying Your Team's Availability

The *Team Availability* action allows you to specify the resource requests your team members are not available to work on. During the time period when you or your team members are not available, any resource requests of that type are forwarded to the delegate's queue.

You can specify availability for each resource request individually or globally. You can only specify the availability for users who have delegates already assigned.

1. Click *Team Availability* in the *My Team's Settings* group of actions.
2. Click *Select a team* to select a team for which you have been designated as a team manager.

Description: Team Availability page

The list of teams includes teams for which team managers are permitted to define availability (specified in the team definition), as well as teams for which the ability to define availability has been disabled. If the team definition does not permit team managers to define availability, the manager can still view availability settings defined for the team members by the administrator or by a manager of another team to which these users belong. However, the team manager cannot edit or delete these settings, view details for these settings, or create new availability assignments.

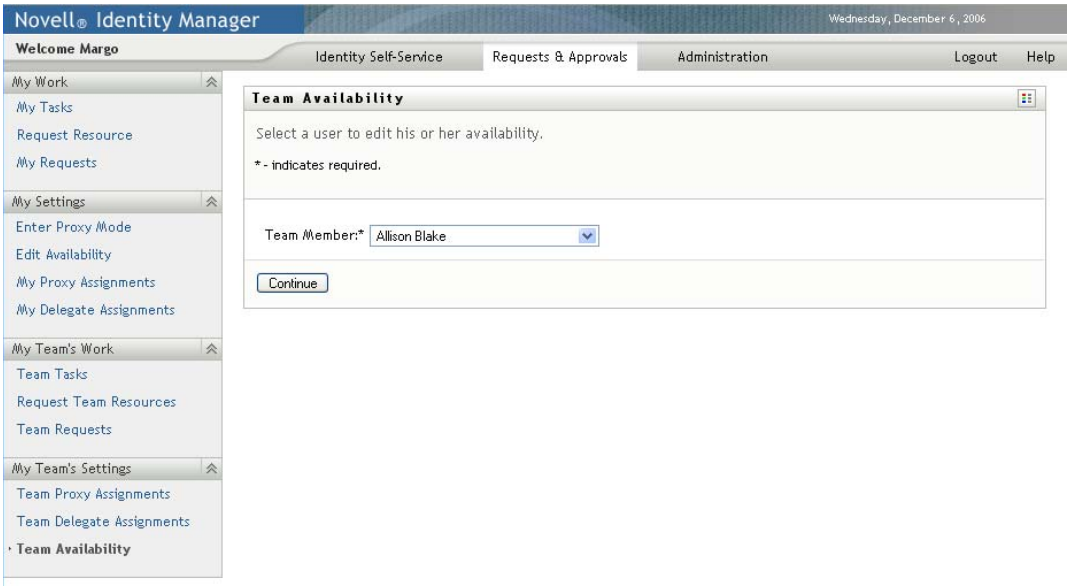
If you are a Provisioning Application Administrator, you do not see the *Select a team* box.

3. Click *Continue*.
4. Click a *Team Member* name to select it, and click *Continue*.

Depending on how the team was defined, you might see an *Object Selector* icon Description: Object Selector icon beside the *Team Member* selection box, instead of a list of team

members. In this case, click the icon to open the Object Lookup window. Specify search criteria for the team member, click *Search,* and select the team member.

Description: Team Availability page



The availability settings for the selected team member, if any, are displayed.

5 To see details about a particular resource associated with an availability assignment, click the name of the resource:

Description: Resource name link

The page then displays a pop-up window that provides information about the delegate assignment:

Description: Delegate Assignment details

This information is particularly helpful in situations where the same resource name appears more than once in the availability settings list.

6 Click *New.*

The *New* button is enabled only for those teams for which team managers are permitted to define availability settings for team members.

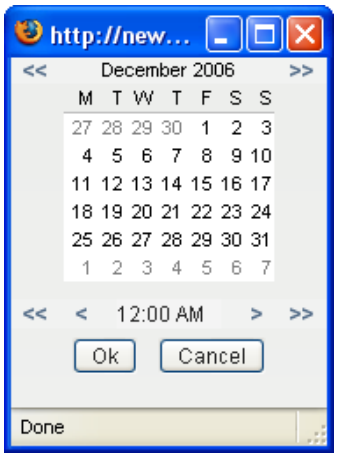
7 Specify the status by selecting one of the options in the *Change Status* drop-down list:

Status	Description
Available for ALL Requests	This is the default status. It indicates that the team member is globally available. When this status is in effect, requests assigned to the team member are not delegated, even if there are delegates assigned. **NOTE:** If you change the status and then change it back to *Available for ALL Requests*, any *Selectively Available* settings previously defined are removed.
NOT Available for ANY Requests	Specifies that the team member is not available for any resource requests currently in the system. (This is also known as globally unavailable.) Choosing this status indicates that the team member is unavailable for each existing delegate assignment and changes the current status to *Not Available for Specified Requests*. Assignments are effective immediately and last until the delegate assignment expires. **NOTE:** This setting does not affect availability for new assignments created after this point.
NOT Available for Specified Requests	When you select this option, you are prompted to specify the team member's availability. (This is the same as clicking the *New* button.) You'll be prompted to specify: ◆ The types of requests the team member is not available for. ◆ The time period when the team member is unavailable. During the time period when the team member is unavailable for a particular request, the user delegated to act on that request can work on it.

8 Specify the time period when the team member is unavailable:

8a Specify when the time period begins by typing the start date and time in the *Unavailable From* box, or by clicking the calendar and selecting the date and time.

Description: Calendar control



8b Specify when the time period ends by clicking one of the following:

Button	Description
No Expiration	Indicates that this unavailability setting does not expire.
Specify Duration	Lets you specify the time period in weeks, days, or hours.
Specify End Date	Lets you specify the end date and time. You can type the date and time, or click the calendar and select the date and time from the calendar.

9 Specify whether you want to send e-mail notifications to other users by filling in these fields:

Field	Description
Notify other users of these changes	Indicates whether you want to send an e-mail message to notify one or more users of this availability assignment.
Addressee	Specifies which users should receive e-mail notifications: **Selective:** Allows you to send e-mail notifications to any users you select, including users who are not on the team.

10 Select one or more requests in the *Types of Requests* list box, then click *Add*.

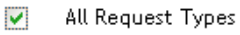
On this page, you select the types of requests that the team member does not accept during the unavailable period. This has the effect of delegating these requests to other users.

Each request you add is included in the *Declined for the Specified Period* list box.

If you add multiple requests for this time period, each request is treated as an individual object that can be edited separately.

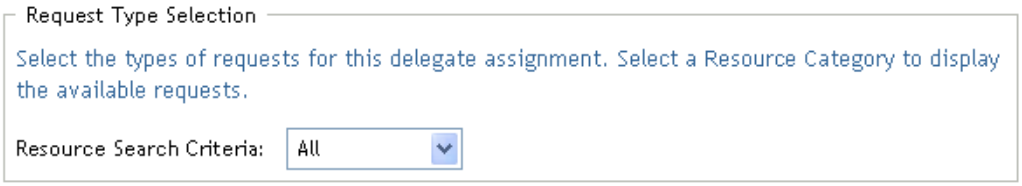
11 To indicate that this availability setting applies to all request types, click *All Request Types* instead of selecting the request types individually.

Description: All Request Types check box



The *All Request Types* check box is only available when the resource search criteria for the delegate assignment is set to *All*.

Description: Resource Search Criteria set to All



12 To remove a request from the list, click *Remove*.

13 Click *Submit* to save your changes.

Using the Roles Tab

IV

These sections tell you how to use the *Roles* tab of the Identity Manager User Application.

- Chapter 14, “Introducing the Roles Tab,” on page 209
- Chapter 15, “Viewing Your Roles,” on page 221
- Chapter 16, “Making Role Assignments,” on page 223
- Chapter 17, “Managing Roles,” on page 245
- Chapter 18, “Creating and Viewing Role Reports,” on page 261

Introducing the Roles Tab

14

This section provides an overview of the *Roles* tab. Topics include:

- Section 14.1, “About the Roles Tab,” on page 209
- Section 14.2, “Accessing the Roles Tab,” on page 215
- Section 14.3, “Exploring the Tab’s Features,” on page 215
- Section 14.4, “Roles Actions You Can Perform,” on page 217
- Section 14.5, “Understanding the Roles Legend,” on page 218

For more general information about accessing and working with the Identity Manager user interface, see Chapter 1, “Getting Started,” on page 15.

14.1 About the Roles Tab

The purpose of the *Roles* tab is to give you a convenient way to perform roles-based provisioning actions. These actions allow you to manage role definitions and role assignments within your organization. Role assignments can be mapped to resources within a company, such as user accounts, computers, and databases. For example, you might use the *Roles* tab to:

- Make role requests for yourself or other users within your organization
- Create roles and role relationships within the roles hierarchy
- Create separation of duties (SoD) constraints to manage potential conflicts between role assignments
- Look at reports that provide details about the current state of the Role Catalog and the roles currently assigned to users, groups, and containers

When a role assignment request requires permission from one or more individuals in an organization, the request starts a workflow. The workflow coordinates the approvals needed to fulfill the request. Some role assignment requests require approval from a single individual; others require approval from several individuals. In some instances, a request can be fulfilled without any approvals.

When a role assignment request 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. In some cases, a separation of duties conflict can cause a workflow to start. The workflow coordinates the approvals needed to allow the separation of duties exception to take effect.

Your workflow designer and system administrator are responsible for setting up the contents of the *Roles* tab for you and the others in your organization. The flow of control for a roles-based workflow or separation of duties workflow, as well as the appearance of forms, can vary depending on how the approval definition for the workflow was defined in the Designer for Identity Manager. In addition, what you can see and do is typically determined by your job requirements and your level of authority.

Proxy mode works only on the *Requests & Approvals* tab and is not supported on the *Roles* tab. If you enter proxy mode on the *Requests & Approvals* tab, and then switch to the *Roles* tab, proxy mode is turned off for both tabs.

NOTE: The *Roles* tab is available only if you have the Roles Based Provisioning Module for Identity Manager.

14.1.1 About Roles

This section provides an overview of terms and concepts used in the *Roles* tab:

- "Roles and Role Assignments" on page 210
- "Roles Catalog and Role Hierarchy" on page 210
- "Separation of Duties" on page 212
- "Roles Reporting and Auditing" on page 212
- "Roles Security" on page 213
- "Role Service Driver" on page 214

Roles and Role Assignments

A *role* defines a set of permissions related to one or more target systems or applications. The *Roles* tab allows users to request *role assignments*, which are associations between a role and a user, group, or container. The *Roles* tab also allows you to define *role relationships*, which establish associations between roles in the roles hierarchy.

You can assign roles directly to a user, in which case these *direct assignments* give a user explicit access to the permissions associated with the role. You can also define *indirect assignments*, which allow users to acquire roles through membership in a group, container, or related role in the role hierarchy.

When you request a role assignment, you have the option to define a *role assignment effective date*, which specifies the date and time when the assignment takes effect. If you leave this blank, it means the assignment is immediate.

You can also define a *role assignment expiration date*, which specifies the date and time when the assignment will automatically be removed.

When a user requests a role assignment, the Roles Subsystem manages the life cycle of the role request. To see which actions have been taken on the request by users or by the Roles Subsystem, you can check the status of the request on the View Request Status page.

Roles Catalog and Role Hierarchy

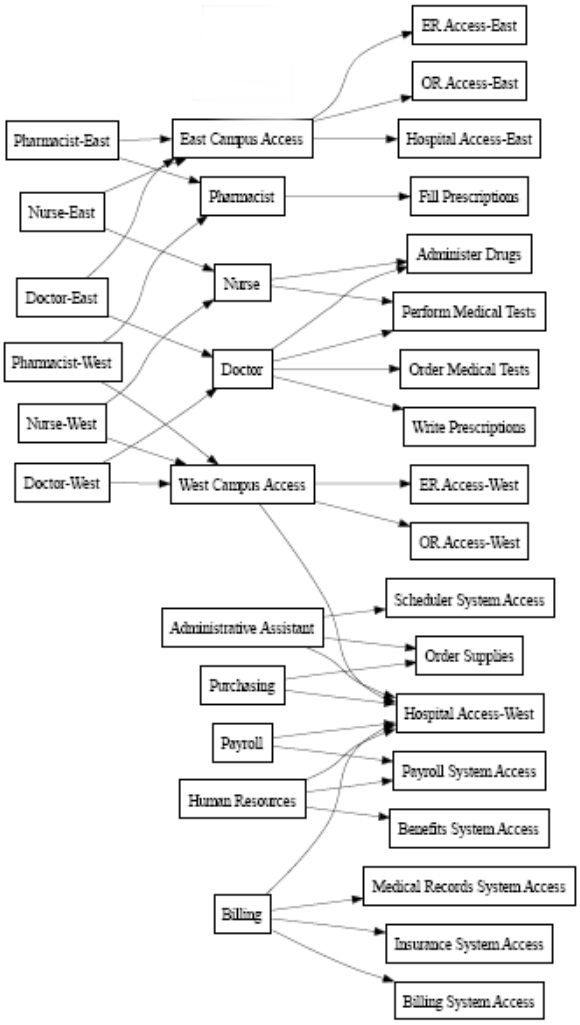
Before users can begin assigning roles, these roles must be defined in the Role Catalog. The Role Catalog is the storage repository for all role definitions and supporting data needed by the Roles Subsystem. To set up the Role Catalog, a Role Module Administrator (or Role Manager) defines the roles and the roles hierarchy.

The *roles hierarchy* establishes relationships between roles in the catalog. By defining role relationships, you can simplify the task of granting permissions through role assignments. For example, instead of assigning 50 separate medical roles each time a doctor joins your organization,

you can define a Doctor role and specify a role relationship between the Doctor role and each of the medical roles. By assigning users to the Doctor role, you can give these users the permissions defined for each of the related medical roles.

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. The following example shows a sample role hierarchy with three levels for a medical organization. The highest level of the hierarchy is on the left and the lowest level is on the right:

Figure 14-1 *Sample Roles Hierarchy*



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.

When you define a role, you can optionally designate one or more owners for that role. A *role owner* is a user who is designated as the owner of the role definition. When you generate reports against the Role Catalog, you can filter these reports based on the role owner. 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.

When you define a role, you can optionally associate the role with one or more role categories. A *role category* allows you to categorize roles for the purpose of organizing the roles system. After a role has been associated with a category, you can use this category as a filter when browsing the Role Catalog.

If a role assignment request requires approval, the role definition specifies details about the workflow process used to coordinate approvals, as well as the list of approvers. The approvers are those individuals who can approve or deny a role assignment request.

Separation of Duties

A key feature of the Roles Subsystem is the ability to define *separation of duties (SoD) constraints*. A separation of duties (SoD) constraint is a rule that defines two roles that are considered to be in conflict. The Security Officers create the separation of duties constraints for an organization. By defining SoD constraints, these officers can prevent users from being assigned to conflicting roles, or maintain an audit trail to keep track of situations where violations have been allowed. In a separation of duties constraint, the conflicting roles must be at the same level in the roles hierarchy.

Some separation of duties constraints can be overridden without approval, whereas others require approval. Conflicts that are permitted without approval are referred to as *separation of duties violations*. Conflicts that have been approved are referred to as *separation of duties approved exceptions*. The Roles Subsystem does not require approvals for SoD violations that result from indirect assignments, such as membership in a group or container, or role relationships.

If a separation of duties conflict requires approval, the constraint definition specifies details about the workflow process used to coordinate approvals, as well as the list of approvers. The approvers are those individuals that can approve or deny an SoD exception. A default list is defined as part of the Role Subsystem configuration. However, this list can be overridden in the definition of an SoD constraint.

Roles Reporting and Auditing

The Roles Subsystem provides a rich reporting facility to help auditors analyze the Role Catalog, as well as the current state of role assignments and SoD constraints, violations, and exceptions. The roles reporting facility allows Roles Auditors and Roles Module Administrators to display the following types of reports in PDF format:

- Role List Report
- Role Detail Report
- Role Assignment Report
- SoD Constraint Report
- SoD Violation and Exception Report
- User Roles Report
- User Entitlements Report

In addition to providing information through the reporting facility, the Roles Subsystem can be configured to log events to Novell® Audit.

Roles Security

The Roles Subsystem uses a set of system roles to secure access to functions within the *Roles* tab. Each menu action in the *Roles* tab is mapped to one or more of the system roles. If a user is not a member of one of the roles associated with an action, the corresponding menu item is not displayed on the *Roles* tab.

The *system roles* are administrative roles automatically defined by the system at install time for the purpose of delegated administration. These include the following:

- Roles Module Administrator
- Roles Manager
- Roles Auditor
- Security Officer

The system roles are described in detail below:

Table 14-1 *System Roles*

Role	Description
Roles Module Administrator	A system role that allows members to create, remove, or modify all roles, and grant or revoke any role assignment to any user, group, or container. This role also allows members to run any report for any user. A person in this role can perform the following functions in the User Application with unlimited scope: ◆ Create, remove, and modify roles. ◆ Modify role relationships for roles. ◆ Request assignment of users, groups or containers to roles. ◆ Create, remove, and modify SoD constraints. ◆ Browse the Role Catalog. ◆ Configure the Roles Subsystem. ◆ View the status of all requests. ◆ Retract role assignment requests. ◆ Run any and all reports.

Role	Description
Roles Manager	A system role that allows members to modify roles and role relationships, and grant or revoke role assignments for users. A person in this role is able to perform the following functions in the User Application and is limited in scope by directory browse rights to the role objects: ◆ Create new roles and modify existing roles to which the user has browse rights. ◆ Modify role relationships for roles to which the user has browse rights. ◆ Request assignment of users, groups, or containers to roles to which the user has browse rights. ◆ Browse the Role Catalog (limited in scope by browse rights). ◆ Browse role assignment requests for users, groups, and containers (limited in scope by directory browse rights to role, user, group, and container objects). ◆ Retract role assignment requests for users, groups, and containers (limited in scope by directory browse rights to role, user, group, and container objects).
Roles Auditor	A system role that allows members to run any reports to which they have directory browse rights.
Security Officer	A system role that allows members to create, remove, or modify SoD constraints. The Security Officer must have browse rights to the SoD constraints.

Authenticated user

In addition to supporting the system roles, the Roles Subsystem also allows access by authenticated users. An authenticated user is a user logged in to the User Application who does not have any special privileges through membership in a system role. A typical authenticated user can perform any of the following functions:

- View all roles that have been assigned to the user.
- Request assignment (for himself or herself only) to roles to which he or she has browse rights.
- View request status for those requests for which he or she is either a requester or recipient.
- Retract role assignment requests for those requests for which he or she is both requester and recipient.

Role Service Driver

The Roles Subsystem uses the Role Service driver to manage back-end processing of roles. For example, it manages all role assignments, starts workflows for role assignment requests and SoD conflicts that require approvals, and maintains indirect role assignments according to group and container membership, as well as membership in related roles. The driver also grants and revokes entitlements for users based on their role memberships, and performs cleanup procedures for requests that have been completed.

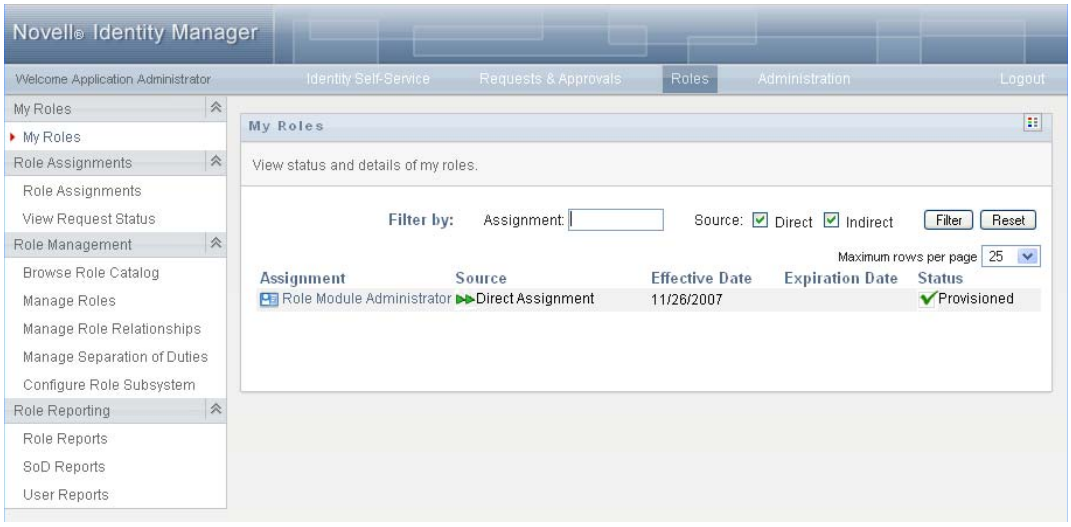
For details on the Role Service driver, see the *Identity Manager User Application: Administration Guide* (http://www.novell.com/documentation/idmrbpm36/index.html).

14.2 Accessing the Roles Tab

To access the *Roles* tab:

1 Click *Roles* in the User Application.

By default, the *Roles* tab opens and displays the My Roles page.



If you go to another tab in the user interface but then want to return, you just need to click the *Roles* tab to open it again.

14.3 Exploring the Tab's Features

This section describes the default features of the *Roles* tab. (Your tab might look different because of customizations made for your organization; consult your system administrator or workflow designer.)

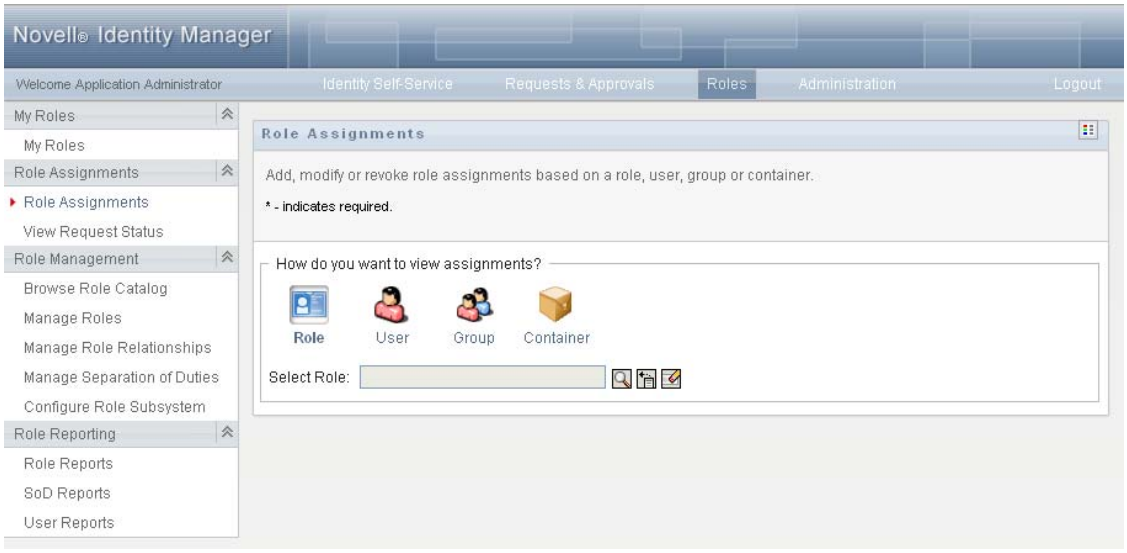
The left side of the *Roles* tab displays a menu of actions you can perform. The actions are listed by category (*My Roles, Role Assignments, Role Management,* and *Role Reporting*):

Description: Roles menu

The *Role Management* actions are only displayed if you are a Role Module Administrator or Role Manager. The *Manage Separation of Duties* action within *Role Management* is only displayed if you are a Role Module Administrator or Security Officer. The *Role Reporting* actions are only displayed if you are a Role Module Administrator or Role Auditor.

When you click an action, it displays a corresponding page on the right. The page typically contains a window that shows the details for that action. For example, it might display a list or a form where you can enter data or make a selection, as shown below:

Figure 14-2 *Page Displayed for an Action*



Most pages you work with on the *Roles* tab include a button in the upper right corner that lets you display the *Roles* legend:

Description: Roles legend button

For details on the *Roles* legend, see Section 14.5, “Understanding the Roles Legend,” on page 218.

14.4 Roles Actions You Can Perform

Here’s a summary of the actions that are available to you by default on the *Roles* tab:

Table 14-2 *Roles Actions*

Category	Action	Description
My Roles	My Roles	Lets you look at the status and details for your approved roles. It shows roles that have a status of Provisioned or Pending Activation, but not roles that have not yet been approved. For details, see Chapter 15, “Viewing Your Roles,” on page 221.
Role Assignments	Role Assignments	The *Role Assignments* action lets users request role assignments. This action is available to Role Module Administrators, Role Managers, and other authenticated users not specifically assigned to any of the installed system roles. ◆ Role Module Administrators can request assignment of users, groups, and containers to roles. The Role Module Administrator has unlimited scope within the directory. ◆ Role Managers can request assignment of users, groups, and containers to roles to which they have browse rights. ◆ Other authenticated users can request assignment for themselves to roles to which they have browse rights. For details, see Section 16.2, “Assigning Roles,” on page 223.
	View Request Status	Allows you to see the status of your role requests (including requests you’ve made explicitly as well as role assignment requests for groups or containers to which you belong). It lets you see the current state of each request. In addition, it gives you the option to retract a request that has not been completed or terminated if you have changed your mind and do not need to have the request fulfilled. For details, see Section 16.3, “Checking the Status of Your Requests,” on page 233.

Category	Action	Description
Role Management	Browse Role Catalog	Lets you look at existing roles in the Roles Catalog. For details, see Section 17.1, “Browsing the Role Catalog,” on page 245.
	Manage Roles	Allows you to create, modify, or delete a role. For details, see “Managing Roles” on page 246.
	Manage Role Relationships	Allows you to define how roles are related in a higher and lower role containment hierarchy. This hierarchy enables you to group permissions or resources contained by lower level roles into a higher level role that makes assignment of permissions easier. For details, see “Managing Role Relationships” on page 251.
	Manage Separation of Duties	Allows you to define a Separation of Duties (SoD) constraint. An SoD constraint represents a rule that makes two roles mutually exclusive. If a user is in one role, they cannot be in the second role, 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. For details, see “Managing Separation of Duties Constraints” on page 255.
	Configure Roles Subsystem	Allows you to specify administrative settings for the Roles Subsystem. For details, see “Configuring the Role Subsystem” on page 259.
Role Reporting	Role Reports	Enables you to create and view reports that describe the current state of roles and role assignments. For details, see Section 18.2, “Role Reports,” on page 261.
	SoD Reports	Enables you to create and view reports that describe the current state of Separation of Duties constraints, violations, and approved exceptions. For details, see Section 18.3, “SoD Reports,” on page 265.
	User Reports	Enables you to create and view reports that describe the current state of role memberships and entitlements for users. For details, see Section 18.4, “User Reports,” on page 267.

14.5 Understanding the Roles Legend

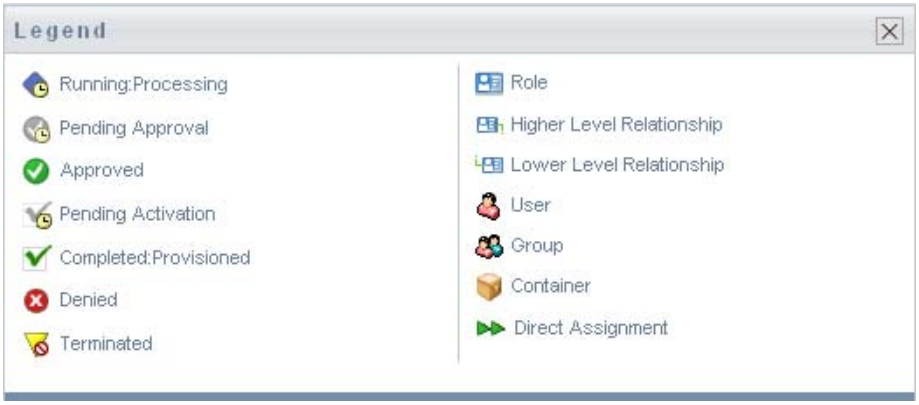
Most pages you work with on the *Roles* tab include a button in the upper right corner that lets you display the *Roles* legend. To display the legend, click the *Legend* button, shown in Figure 9-2:

Figure 14-3 *The Legend Button*

Description: Legend button

The legend provides a brief description of the icons used throughout the *Roles* tab. The figure below shows the legend.

Figure 14-4 *Roles Legend*



The table below provides detailed descriptions of the icons in the legend:

Table 14-3 *Legend Icons*

Icon	Description
Running: Processing	Indicates that a role request is still in process. Appears on the View Request Status page.
Pending Approval	Indicates that a role request is awaiting approval, either for a separation of duties exception or for the role assignment itself. Appears on the View Request Status page.
Approved	Indicates that a role request has been approved. If a separation of duties exception was detected, this status can also be used to indicate that the exception was approved. Appears on the View Request Status page.
Pending Activation	Indicates that a role request has completed its processing and has been approved, but has an activation date that is in the future. Appears on the My Roles and View Request Status pages.
Completed: Provisioned	Indicates that a role request has been approved and the role has been assigned to the recipient (user, group, or container). Appears on the My Roles, Role Assignments, and View Request Status pages.

Icon	Description
Denied	Indicates that a role request has been denied. If a separation of duties exception was detected, this status may also be used to indicate that the exception was denied. Appears on the View Request Status pages.
Terminated	Indicates that a role request terminated before completion, either because the user cancelled the request or because an error occurred during the course of processing. Appears on the View Request Status pages.
Role	Indicates that an object is a role. Appears on the My Roles, Role Assignments, and View Request Status pages.
Higher Level Relationship	Indicates that a role has a higher-level relationship to the currently selected role, which means that it contains the currently selected role. Appears on the Manage Role Relationships pages.
Lower Level Relationship	Indicates that a role has a lower-level relationship to the currently selected role, which means that is contained by the currently selected role. Appears on the Manage Role Relationships pages.
User	Indicates that an object is a user. Appears on the My Roles and Role Assignments pages.
Group	Indicates that an object is a group. Appears on the My Roles and Role Assignments pages.
Container	Indicates that an object is a container. Appears on the My Roles and Role Assignments pages.
Direct Assignment	Indicates that a role was assigned directly to the currently selected user, group, or container. Appears on the My Roles and Roles Assignments pages.

Viewing Your Roles

15

This section provides instructions for looking at your roles. Topics include:

- Section 15.1, “About the My Roles Actions,” on page 221
- Section 15.2, “Looking at Your Approved Role Requests,” on page 221

15.1 About the My Roles Actions

The *Roles* tab in the Identity Manager user application includes a group of actions called *My Roles*. The *My Roles* actions give you the ability to look at your roles.

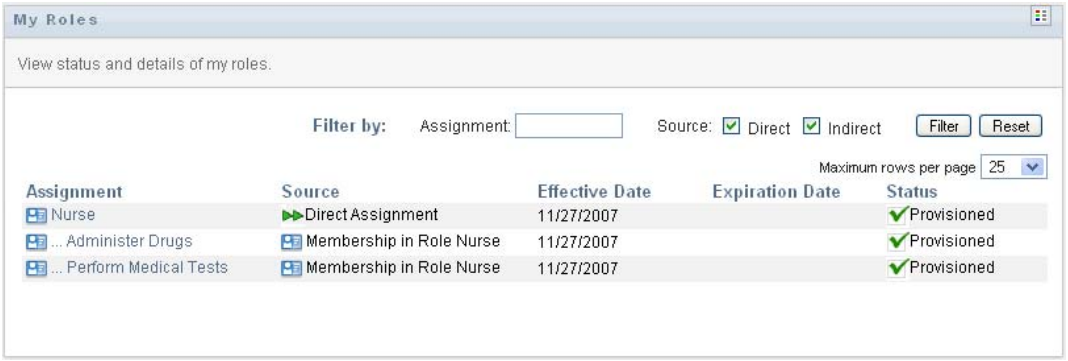
15.2 Looking at Your Approved Role Requests

The *My Roles* action lets you look at the status and details for your approved roles. It shows roles that have a status of Provisioned or Pending Activation, but not role requests that have not yet been approved.

To look at your approved roles:

1 Click *My Roles* in the list of *My Roles* actions.

The User Application displays the current status of role assignments for the currently authenticated user.



The columns in the assignment list table are described below:

- The *Assignment* column provides the name of the role assigned to the current user.
- The *Source* column indicates the manner in which the role assignment was made for the user, as described below:

Source	Description
Direct Assignment	Indicates that this role was assigned directly to the current user.
Membership in Role *role name*	Indicates that the user received this role by being a member in a related role.

Source	Description
Membership in Group *group name*	Indicates that the user received this role by being a member in a group.
Membership in Container *container name*	Indicates that the user received this role by being a member in a container.

- The *Effective Date* column shows the date when the assignment goes into effect. If no date is displayed, the assignment went into effect immediately after it was requested.
- The *Expiration Date* column shows the date when the assignment expires. If no date is displayed, the assignment remains in effect indefinitely.
- The *Status* column shows whether the assignment has been granted:

Status	Description
Provisioned	Approved (if necessary) and activated.
Pending Activation	Approved (if necessary) but not yet activated because the effective date for the role assignment is in the future.

2 You can filter the list of assignments as follows:

2a To view only those assignments that start with a particular string of characters, see "Filtering Data" on page 26 for information about what to enter in the *Assignment* box.

2b To view those roles that were assigned directly to the user, select the *Direct* box.

2c To view those assigned roles that the user receives through a role relationship, or by being a member in a group or container only, select the *Indirect* box.

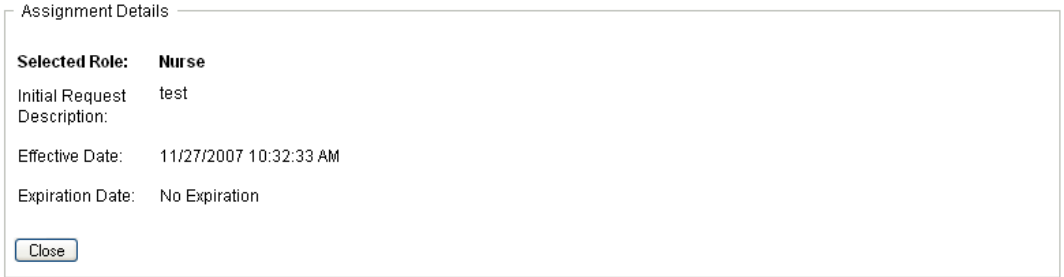
2d To apply the filter criteria you've specified to the display, click *Filter*.

NOTE: Filtering does not occur automatically. You must click the *Filter* button to apply your criteria.

2e To clear the currently specified filter criteria, click *Reset*.

3 To set the maximum number of assignments displayed on each page, select a number in the *Maximum rows per page* drop-down list.

4 To see the details for a particular role assignment, click the assignment name in the *Assignment* column and scroll down until you see the Assignment Details group box.



Making Role Assignments

16

This section provides instructions for making role assignments. Topics include:

- Section 16.1, “About the Role Assignments Actions,” on page 223
- Section 16.2, “Assigning Roles,” on page 223
- Section 16.3, “Checking the Status of Your Requests,” on page 233

16.1 About the Role Assignments Actions

The *Roles* tab in the Identity Manager user application includes a group of actions called *Role Assignments*. The *Role Assignments* actions give you the ability to make role assignment requests and check the status of requests you’ve made.

16.2 Assigning Roles

The *Role Assignments* action lets users request role assignments. This action is available to Role Module Administrators, Role Managers, and other authenticated users not specifically assigned to any of the installed system roles.

- Role Module Administrators can request assignment of users, groups, and containers to roles. The Role Module Administrator has unlimited scope within the directory.
- Role Managers can request assignment of users, groups, and containers to roles to which they have browse rights.
- Other authenticated users can request assignment to roles to which they have browse rights.

16.2.1 Assigning Users, Groups, and Containers to a Role

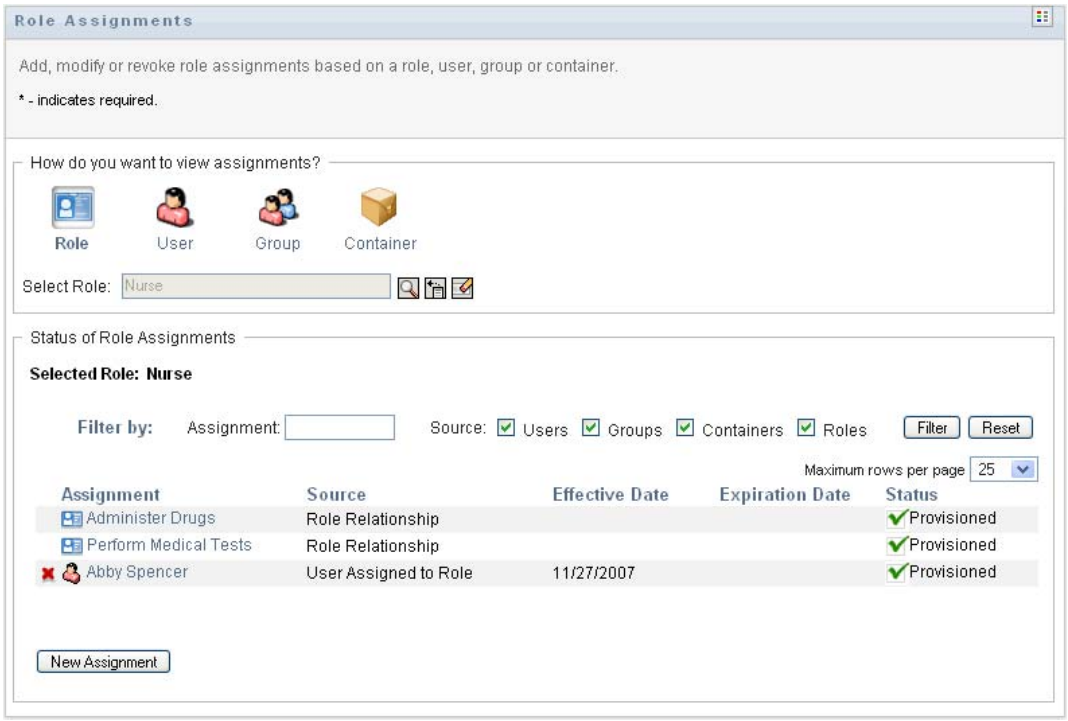
To request assignment of one or more users, groups, or containers to a single role:

1. Click *Role Assignments* in the list of *Role Assignments* actions.
2. Click the *Role* icon under *How do you want to view assignments?*.

3. Select the role to which you want to assign the users, groups, or containers.

Use the *Object Selector* or the *Show History* tool to select the role. For details on using the *Object Selector* and *Show History* tools, see Section 1.4.4, "Common User Actions," on page 24.

The User Application displays the current status of assignments for the selected role.



The columns in the assignment list table are described below:

- The *Assignment* column provides the name of the object assigned to the currently selected role.
- The *Source* column indicates the manner in which the object has been assigned to the role, as described below:

Source	Description
Role Relationship	Indicates that this assignment represents a role relationship. The name in the Assignment column is the name of the related role.
User Assigned to Role	Indicates that the user named in the Assignment column has been previously assigned to the currently selected role.
Group Assigned to Role	Indicates that the group named in the Assignment column has been previously assigned to the currently selected role.
Container Assigned to Role	Indicates that the container named in the Assignment column has been previously assigned to the currently selected role.

- The *Effective Date* column shows the date when the assignment goes into effect. If no date is displayed, the assignment went into effect immediately after it was requested.
- The *Expiration Date* column shows the date when the assignment expires. If no date is displayed, the assignment remains in effect indefinitely.
- The *Status* column shows whether the assignment has been granted:

Status	Description
Provisioned	Approved (if necessary) and activated.

4 You can filter the list of assignments, as follows:

4a To view only those assignments, see "Filtering Data" on page 26 for information about what to enter in the *Assignment* box.

4b To view users assignments only, select the *Users* box.

4c To view group assignments only, select the *Groups* box.

4d To view container assignments only, select the *Containers* box.

4e To view role relationships only, select the *Roles* box.

4f To apply the filter criteria you've specified to the display, click *Filter*.

4g To clear the currently specified filter criteria, click *Reset*.

5 To set the maximum number of assignments displayed on each page, select a number in the *Maximum rows per page* drop-down list.

6 To create a new assignment, click *New Assignment*.

Specify the details for the assignment in the *Assignment Details* group box.

- In the *Type of Assignment* drop-down, select *User*, *Group*, or *Container* to indicate what type of object you want to assign to the currently selected role.
- In the *Select User(s)* field, specify the users to assign.

NOTE: If you select *Group* as the type of assignment, the user interface displays the *Select Group(s)* field. If you select *Container*, it displays the *Select Container(s)* field.

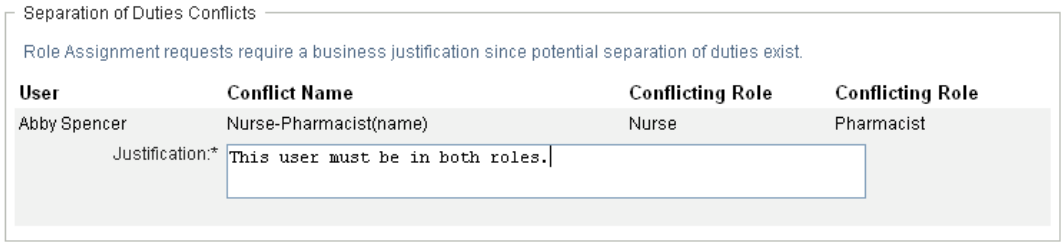
- In the *Initial Request Description* field, type text to describe the reason for the assignment request.
- In the *Effective Date* field, specify the date when you want the assignment to take effect. You can use the Calendar control to select the date.
- In the *Expiration Date* field, indicate whether you want the assignment to have an expiration date. If the assignment will remain in effect indefinitely, select *No Expiration*. If you want to define an expiration date, select *Specify Expiration* and use the Calendar control to select the date.
- Click *Submit* to submit the role assignment request.

NOTE: The *Role Assignments* action allows you to see roles that are related to the currently selected role, but does not permit you to create role relationships. To do this, you need to use the *Manage Role Relationships* action.

If a separation of duties conflict will occur if a role is assigned to one or more users, the user interface displays the *Separation of Duties Conflicts* box at the bottom of the page. In this case, you need to provide a business justification for the role assignment.

To provide a justification:

1 Type a description in the *Justification* field that explains why an exception to the separation of duties constraint is needed in this situation.



NOTE: You do not need to provide a justification in cases where the new role assignment conflicts with an existing assignment that the user acquired indirectly, either through a role relationship, or by membership in a group or container. If a user is added to a role indirectly, and a potential separation of duties conflict is detected, the User Application allows the new assignment to be added, and records the violation for reporting and audit purposes. If necessary, role administrators can correct the violation by redefining roles.

16.2.2 Assigning Roles to a Single User

To request assignment of one or more roles to a single user:

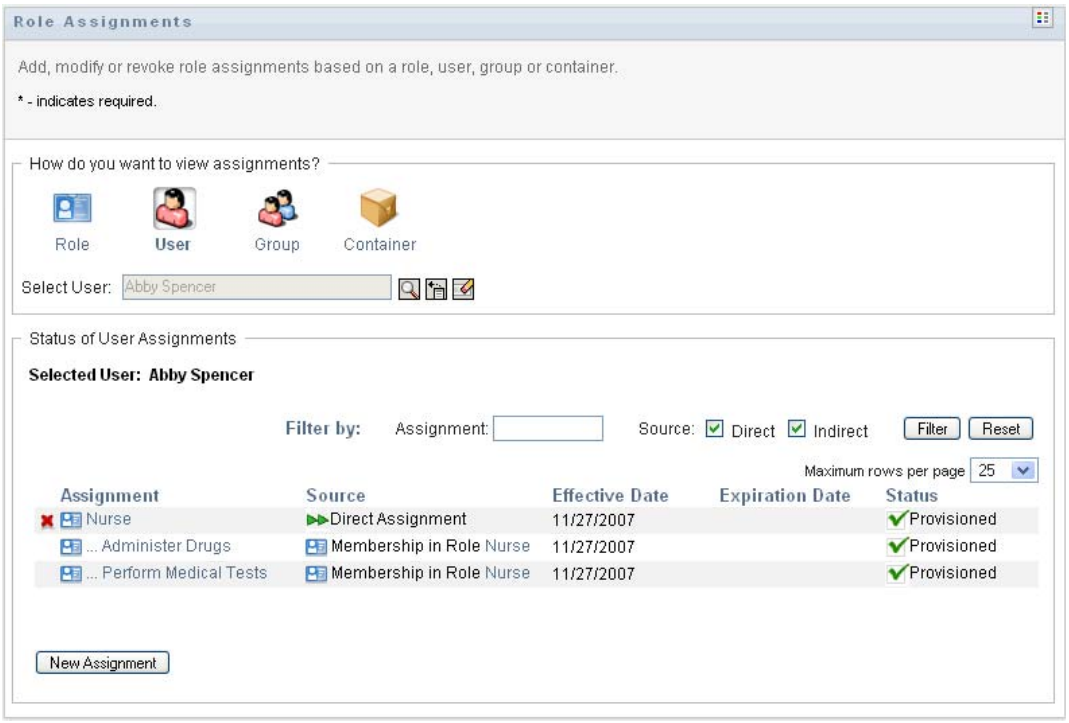
1 Click *Role Assignments* in the list of *Role Assignments* actions.

2 Click the *User* icon under *How do you want to view assignments?*.

3 Select the user to whom you want to assign one or more roles.

Use the *Object Selector* or the *Show History* tool to select the user. For details on using the *Object Selector* and *Show History* tools, see "Using the Object Selector Button for Searching" on page 25.

The User Application displays the current status of assignments for the selected user.



The columns in the assignment list table are described below:

- The *Assignment* column provides the name of the role assigned to the currently selected user.
- The *Source* column indicates how the role was assigned to the user, as described below:

Source	Description
Direct Assignment	Indicates that this role was assigned directly to the currently selected user.
Membership in Role *role name*	Indicates that the user received this role by being a member in a related role.
Membership in Group *group name*	Indicates that the user received this role by being a member in a group.
Membership in Container *container name*	Indicates that the user received this role or by being a member in a container.

- The *Effective Date* column shows the date when the assignment goes into effect. If no date is displayed, the assignment went into effect immediately after it was requested.
- The *Expiration Date* column shows the date when the assignment expires. If no date is displayed, the assignment remains in effect indefinitely.
- The *Status* column shows whether the assignment has been granted and provisioned:

Status	Description
Provisioned	Approved (if necessary) and activated.

4 You can filter the list of assignments, as follows:

4a To view only those assignments that start with a particular string of characters, see "Filtering Data" on page 26 for information about what to type in the *Assignment* box.

4b To view only those assignments that were assigned directly to the user, select the *Direct* box.

4c To view only those assignments that were assigned indirectly, select the *Indirect* box. Indirect assignments are those assignments that a user receives through a role relationship, or by being a member in a group or container.

4d To apply the filter criteria you've specified to the display, click *Filter*.

4e To clear the currently specified filter criteria, click *Reset*.

5 To set the maximum number of assignments displayed on each page, select a number in the *Maximum rows per page* drop-down list.

6 To create a new assignment, click *New Assignment*.

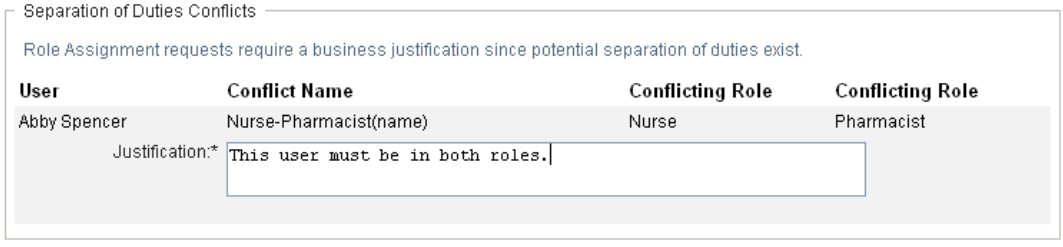
Specify the details for the assignment in the *Assignment Details* group box.

- In the *Select Role(s)* field, specify the roles to assign.
- In the *Initial Request Description* field, type text to describe the reason for the assignment request.
- In the *Effective Date* field, specify the date when you want the assignment to take effect. You can use the Calendar control to select the date.
- In the *Expiration Date* field, indicate whether you want the assignment to have an expiration date. If the assignment will remain in effect indefinitely, select *No Expiration*. If you want to define an expiration date, select *Specify Expiration* and use the Calendar control to select the date.
- Click *Submit* to submit the role assignment request.

If a separation of duties conflict will occur if a role is assigned to the currently selected user, the user interface displays the *Separation of Duties Conflicts* box at the bottom of the page. In this case, you need to provide a business justification for the role assignment.

To provide a justification:

1 Type a description in the *Justification* field that explains why an exception to the separation of duties constraint is needed in this situation.



Indirect role assignments and SoD conflicts You do not need to provide a justification in cases where the new role assignment conflicts with an existing assignment that the user acquired indirectly, either through a role relationship, or by membership in a group or container. If a user is added to a role indirectly, and a potential separation of duties conflict is detected, the User Application allows the new assignment to be added, and records the violation for reporting and audit purposes. If necessary, role administrators can correct the violation by redefining roles.

16.2.3 Assigning Roles to a Single Group

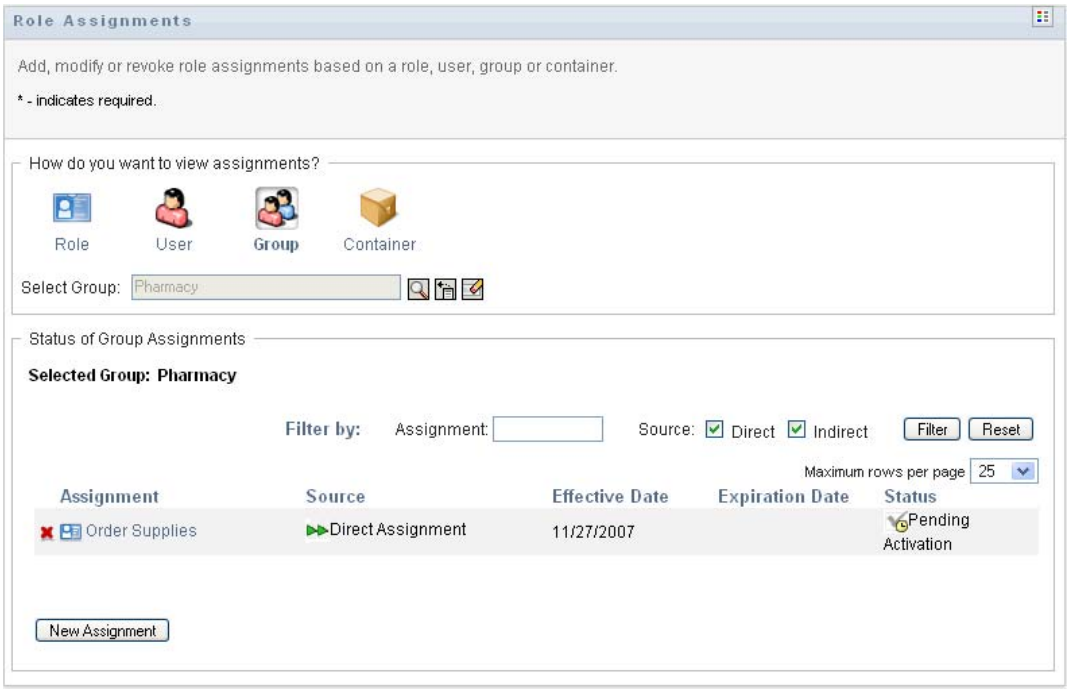
To request assignment of one or more roles to a single group:

1. Click *Role Assignments* in the list of *Role Assignments* actions.
2. Click the *Group* icon under *How do you want to view assignments?*.

3. Select the group to which you want to assign one or more roles.

   Use the *Object Selector* or the *Show History* tool to select the group. For details on using the *Object Selector* and *Show History* tools, see "Using the Object Selector Button for Searching" on page 25.

The User Application displays the current status of assignments for the selected group.



The columns in the assignment list table are described below:

- The *Assignment* column provides the name of the role assigned to the currently selected group.
- The *Source* column indicates how the role was assigned to the group, as described below:

Source	Description
Direct Assignment	Indicates that this role was assigned directly to the currently selected group.
Membership in Role *role name*	Indicates that the group was given this role because it is assigned to a related role.

- The *Effective Date* column shows the date when the assignment goes into effect. If no date is displayed, the assignment went into effect immediately after it was requested.
- The *Expiration Date* column shows the date when the assignment expires. If no date is displayed, the assignment remains in effect indefinitely.
- The *Status* column shows whether the assignment has been granted and provisioned:

Status	Description
Provisioned	Approved (if necessary) and activated.

4 You can filter the list of assignments, as follows:

4a To view only those assignments that start with a particular string of characters, see "Filtering Data" on page 26, for information about what to enter in the *Assignment* box.

4b To view only those assignments that were assigned directly to the group, select the *Direct* box.

4c To view only those assignments that were assigned indirectly, select the *Indirect* box. Indirect assignments are those assignments that a group receives through a role relationship.

4d To apply the filter criteria you've specified to the display, click *Filter*.

4e To clear the currently specified filter criteria, click *Reset*.

5 To set the maximum number of assignments displayed on each page, select a number in the *Maximum rows per page* drop-down list.

6 To create a new assignment, click *New Assignment*.

Specify the details for the assignment in the *Assignment Details* group box.

- In the *Select Role(s)* field, specify the roles to assign.
- In the *Initial Request Description* field, type text to describe the reason for the assignment request.
- In the *Effective Date* field, specify the date when you want the assignment to take effect. You can use the Calendar control to select the date.
- In the *Expiration Date* field, indicate whether you want the assignment to have an expiration date. If the assignment will remain in effect indefinitely, select *No Expiration*. If you want to define an expiration date, select *Specify Expiration* and use the Calendar control to select the date.
- Click *Submit* to submit the role assignment request.

16.2.4 Assigning Roles to a Single Container

To request assignment of one or more roles to a single container:

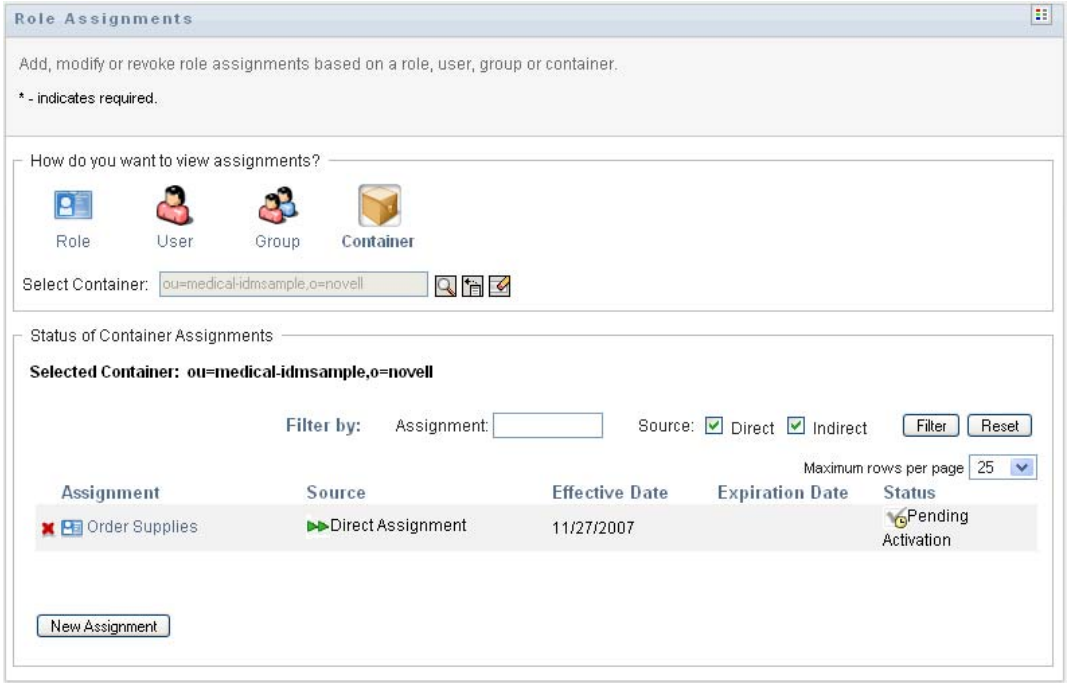
1 Click *Role Assignments* in the list of *Role Assignments* actions.

2 Click the *Container* icon under *How do you want to view assignments?*.

3 Select the container to which you want to assign one or more roles.

Use the *Object Selector* or the *Show History* tool to select the container. For details on using the *Object Selector* and *Show History* tools, see "Using the Object Selector Button for Searching" on page 25.

The User Application displays the current status of assignments for the selected container.



The columns in the assignment list table are described below:

- The *Assignment* column provides the name of the role assigned to the currently selected container.
- The *Source* column indicates how the role was assigned to the container, as described below:

Source	Description
Direct Assignment	Indicates that this role assignment was assigned directly to the currently selected container.
Membership in Role *role name*	Indicates that the container was given this role because it is assigned to a related role.
Membership in Container *container name*	Indicates that the container was assigned this role because it is nested within a higher-level container.

- The *Effective Date* column shows the date when the assignment goes into effect. If no date is displayed, the assignment went into effect immediately after it was requested.
- The *Expiration Date* column shows the date when the assignment expires. If no date is displayed, the assignment remains in effect indefinitely.
- The *Status* column shows whether the assignment has been granted and provisioned:

Status	Description
Provisioned	Approved (if necessary) and activated.

4 You can filter the list of assignments, as follows:

4a To view only those assignments that start with a particular string of characters, see "Filtering Data" on page 26 for information about what to enter in the *Assignment* box.

4b To view only those assignments that were assigned directly to the container, select the *Direct* box.

4c To view only those assignments that were assigned indirectly, select the *Indirect* box. Indirect assignments are those assignments that a container receives through a role relationship.

4d To apply the filter criteria you've specified to the display, click *Filter*.

4e To clear the currently specified filter criteria, click *Reset*.

5 To set the maximum number of assignments displayed on each page, select a number in the *Maximum rows per page* drop-down list.

6 To create a new assignment, click *New Assignment*.

Specify the details for the assignment in the *Assignment Details* group box.

- In the *Select Role(s)* field, specify the roles to assign.
- In the *Initial Request Description* field, type text to describe the reason for the assignment request.
- In the *Effective Date* field, specify the date when you want the assignment to take effect. You can use the Calendar control to select the date.
- In the *Expiration Date* field, indicate whether you want the assignment to have an expiration date. If the assignment will remain in effect indefinitely, select *No Expiration*. If you want to define an expiration date, select *Specify Expiration* and use the Calendar control to select the date.
- To propagate this role assignment to users in all subcontainers, select *Apply role assignment(s) to sub-containers*.
- Click *Submit* to submit the role assignment request.

16.3 Checking the Status of Your Requests

The *View Request Status* action allows you to see the status of your role requests, including requests you've made directly as well as role assignment requests for groups for containers to which you belong. It lets you see the current state of each request. In addition, it gives you the option to retract a request that has not been completed or terminated if you have changed your mind and do not need to have the request fulfilled.

The *View Request Status* action shows all role assignment requests, including those that are running, pending approval, approved, completed, denied, or terminated. The *View Request Status* action also shows requests made to create role relationships through the *Manage Role Relationships* action.

What you can see and do on the View Request Status page depends on your security role, as described below:

Table 16-1 *Capabilities of Each Security Role*

Security Role	Capabilities
Roles Module Administrator	A Roles Module Administrator can perform these functions on the View Request Status page: ◆ View all role assignment requests. ◆ Filter requests based on status, as well as User. When the Roles Module Administrator filters requests on User, the results show requests where the specified user is requester or recipient. The controls for filtering requests based on requester or recipient are not available to the Roles Module Administrator. ◆ Retract any role assignment requests, provided these requests are still in a retractable state (not yet approved, denied, completed, or terminated).
Roles Manager	A Roles Manager can perform these functions on the View Request Status page: ◆ View the status of requests for which the user has browse rights to the role, and for which the user is either the requester or recipient. ◆ Filter requests based on status, as well as User. When the Roles Manager filters requests on User, the results show requests where the specified user is requester or recipient. The controls for filtering requests based on requester or recipient are not available to the Roles Manager. ◆ Retract requests for users, groups, and containers for which the user has directory browse rights for the role and target (user, group, or container) objects. The requests must still be in a retractable state (not yet approved, denied, completed, or terminated).

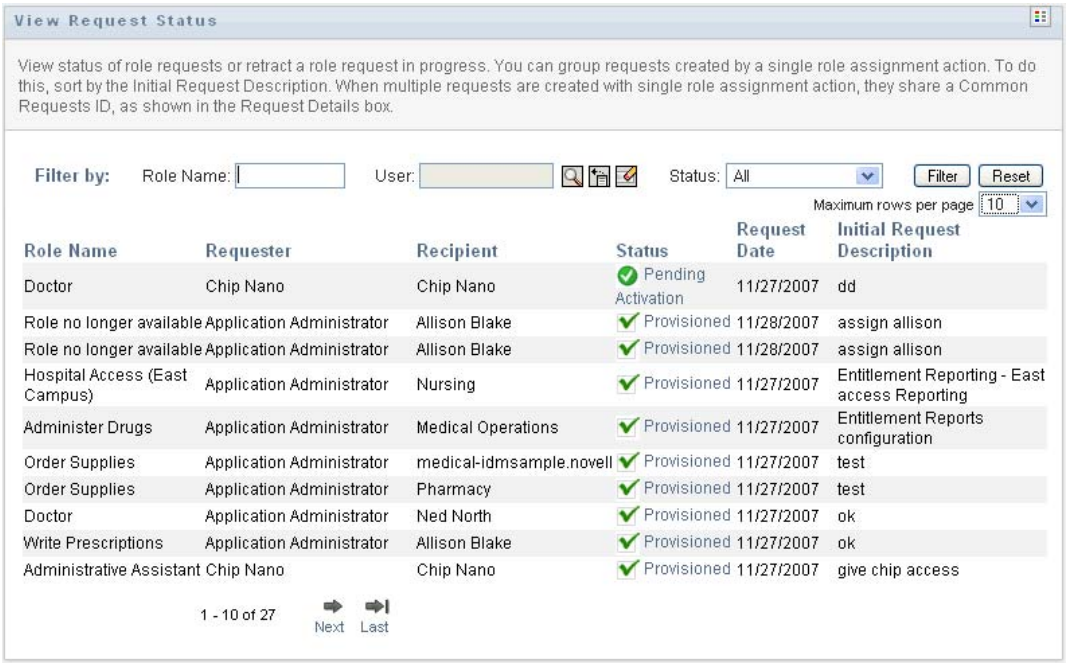
Security Role	Capabilities
Authenticated user	A typical user logged in to the User Application who is not a member of a system role can perform any of the following functions on the View Request Status page: ◆ View the status of requests for which the user is either a requester or recipient. ◆ Filter the requests based on status, as well as requester or recipient. The control for filtering requests based on User is not available to the authenticated user, since the authenticated user can see only requests for himself. ◆ Retract requests for which the user is both requester and recipient. The requests must still be in a retractable state (not yet approved, denied, completed, or terminated), and the user must have browse rights to the role as well.

Large result sets By default, the View Request Status retrieves up to 10,000 request objects. If you attempt to retrieve a larger result set, you will see a message indicating that you have reached the limit. In this case, you should narrow your search (by specifying a particular user or status, for example) to limit the number of objects returned in the result set. Note that when you apply a filter to a role name, the filter limits what you see and its order, not the number of objects returned.

To look at your role requests:

1 Click *View Request Status* in the list of *Role Assignments* actions.

The User Application displays the current status of role requests for the currently authenticated user.



The columns in the role request list are described below:

- The *Role Name* column provides the name of the role specified for the request.
- The *Requester* column identifies the user who made the request.
- The *Recipient* column identifies the user, group, or container that will receive the role, if the request is approved. In the case of role relationships, the *Recipient* column shows the name of the role related to the role named in the *Role Name* column.
- The *Status* column shows a detailed status for the request as well as an icon that indicates the status summary. The status summary shows the general status of the request and can be selected from the Filter menu to narrow the results when searching for requests with a particular status:

Status summary icon	Detailed Status	Description
	New Request	Indicates that this is a new request that is currently being processed. A request with this status can be retracted.
	SoD Approval Start - Pending	Indicates that the Role Service driver is attempting to restart a separation of duties approval process for the request following an SoD Approval Start - Suspended condition. A request with this status can be retracted.

Status summary icon	Detailed Status	Description
	SoD Approval Start - Suspended	Indicates that the Role Service driver is unable to start a separation of duties approval process and the process has been suspended temporarily. When the Role Service driver tries to start a workflow and cannot (for example, when the User Application is down or unreachable), the request transitions to a pending retry state to wait for up to a minute before transitioning to a retry state (SoD Approval Start - Pending state) that triggers the driver to try and start the workflow again. These states prevent requests that don't depend on workflows from being backed up behind requests that are blocked by a workflow that can't be started. If a request shows this status for an extended period of time, make sure the User Application is running. If it is running, check the connection parameters given to the Role Service driver to be sure they are correct. A request with this status can be retracted.
	Approval Start - Pending	Indicates that the Role Service driver is attempting to restart an approval process for the request following an Approval Start - Suspended condition. A request with this status can be retracted.

Status summary icon	Detailed Status	Description
	Approval Start - Suspended	Indicates that an approval process has been initiated for the request, but the process has been suspended temporarily. When the Role Service driver tries to start a workflow and cannot (for example, when the User Application is down or unreachable), the request transitions to a pending retry state to wait for up to a minute before transitioning to a retry state (Approval Start - Pending state) that triggers the driver to try and start the workflow again. These states prevent requests that don't depend on workflows from being backed up behind requests that are blocked by a workflow that can't be started. If a request shows this status for an extended period of time, make sure the User Application is running. If it is running, check the connection parameters given to the Role Service driver to be sure they are correct. A request with this status can be retracted.
	SoD Exception - Approval Pending	Indicates that a separation of duties approval process has been started and is waiting for one or more approvals. A request with this status can be retracted.
	Approval Pending	Indicates that an approval process has been started for the request and is waiting for one or more approvals. A request with this status can be retracted.
	SoD Exception - Approved	Indicates that a separation of duties exception has been approved for this request. A request with this status can be retracted.
	Approved	Indicates that the request has been approved. A request with this status can be retracted.

Status summary icon	Detailed Status	Description
	Provisioning	Indicates that the request has been approved (if approvals were required), and the activation time for the role assignment has been reached. The Role Service driver is in the process of granting the role assignment. You are not permitted to retract a request with this status.
	Pending Activation	Indicates that the request has been approved, but the activation time for the role assignment has not yet been reached. A request with this status can be retracted.
	SoD Exception - Denied	Indicates that a separation of duties exception has been denied for this request. You are not permitted to retract a request with this status.
	Denied	Indicates that the request has been denied. You are not permitted to retract a request with this status.
	Provisioned	Indicates the request has been approved (if approvals were required), and the role assignment has been granted. You are not permitted to retract a request with this status.
	Cleanup	Indicates that the request has been processed and the Role Service driver is in the process removing the internal objects created for the request. You are not permitted to retract a request with this status.
	Canceling	Indicates that the Role Service driver is canceling the request because of a user action. You are not permitted to retract a request with this status.

Status summary icon	Detailed Status	Description
Terminated	Canceled	Indicates that the request has been canceled by a user action. You are not permitted to retract a request with this status.
Terminated	Provisioning Error	Indicates that an error occurred during the course of provisioning (granting) or deprovisioning (revoking) the role assignment. The precise error message for a provisioning error is written to the trace or audit log, if either is active. If a provisioning error occurs, check your trace or audit log to see if the error message indicates a serious problem that must be fixed. You are not permitted to retract a request with this status.

NOTE: If the system clock on the server where the Role Service driver resides is not synchronized with the system clock on the server where the User Application is running, the request status might appear to be different on the View Request Status and Role Assignments pages. For example, if you request a role assignment that does not require approval, you might see the status as Provisioned on the View Request Status page, but the status on the Role Assignments page shows Pending Activation. If you wait for a minute or so, you might then see the status on the Role Assignments page changes to Provisioned. To ensure that the status is shown correctly throughout the User Application, check your system clocks to be sure they are synchronized appropriately.

- The *Request Date* column shows the date when the request was made.
- The *Initial Request Description* column shows the description provided by the requester at the time the request was made.

2 You can filter the list of requests, as follows:

2a To view only those assignments that start with a particular string of characters, see "Filtering Data" on page 26 for information about what to type in the *Role Name* box.

2b To view only those requests that apply to a particular user, use the *Object Selector* or the *Show History* tool to select the user. To see your own requests, you need to select yourself from the User list. For details on using the *Object Selector* and *Show History* tools, see "Using the Object Selector Button for Searching" on page 25.

NOTE: The User control is not available if the logged in user is not a Role Module Administrator or Role Manager.

2c To view those role requests that have a particular status summary, select the status in the *Status* drop-down list.

Status	Description
All	Includes all requests.
Running	Includes requests that have been started and are currently being processed.
Pending Approval	Includes requests that are awaiting approval, either for a separation of duties exception or for the role assignment itself.
Approved	Includes requests that have been approved, as well as requests for which a separation of duties exception was detected and approved.
Completed	Includes requests that have been approved and where the role has been assigned to the recipient (user, group, or container).
Denied	Includes requests that have been denied, as well as requests for which a separation of duties exception was detected and denied.
Terminated	Includes requests that have terminated before reaching completion, either because the user cancelled the action or because an error occurred during the course of processing.

2d To view only those requests for which you are a requester, select the *Requester* box.

NOTE: The *Requester* control is not available if the current user is a Role Module Administrator or Role Manager.

2e To view only those requests for which you are a recipient, select the *Recipient* box.

NOTE: The *Recipient* control is not available if the logged in user is a Role Module Administrator or Role Manager.

2f To apply the filter criteria you've specified to the display, click *Filter*.

2g To clear the currently specified filter criteria, click *Reset*.

3 To set the maximum number of requests displayed on each page, select a number in the *Maximum rows per page* drop-down list.

4 To sort the list of requests, click on the column heading that contains the data you want to sort.

If several role assignment requests share a *Common Requests ID*, you might want to sort the data by the Initial Request Description to see the set of related requests together. The Common Requests ID is an internal identifier (shown only in the Request Details group box) that correlates a set of role assignments that were requested at the same time. Here are some situations in which a set of role assignments will share a Common Requests ID:

- A single request assigns multiple roles to a single user.
- A single request assigns a single role to multiple users. This might occur when a requester assigns a role to a group or container.

When a set of role assignments share a Common Requests ID, a user can retract each assignment individually. In addition, each role assignment can be approved or denied separately.

5 To see the details for a particular request, click on the status in the *Status* column and scroll down until you see the Request Details group box.

The Status field shows the status for the request, along with the status summary icon and text describing the icon. The icon (and the associated text) provides a convenient way to see the status at a glance. The table below shows how the various status codes are mapped to the status icons:

Status Icon	Associated Status Codes
Running:Processing	◆ New Request ◆ SoD Approval Start - Pending ◆ SoD Approval Start - Suspended ◆ Approval Start - Pending ◆ Approval Start - Suspended
Pending Approval	◆ SoD Exception - Approval Pending ◆ Approval Pending
Approved	◆ SoD Exception - Approved ◆ Approved ◆ Pending Activation ◆ Provisioning
Pending Activation	◆ Pending Activation
Denied	◆ SoD Exception - Denied ◆ Denied
Completed: Provisioned	◆ Provisioned ◆ Cleanup
Terminated	◆ Canceling ◆ Canceled ◆ Provisioning Error

6 To retract a request, click *Retract Request*.

The *Retract Request* button is disabled if the request has been completed or terminated.

If a request shares a Common Requests ID with a set of related requests, you can retract each of the role assignments individually.

novdocx (en) 6 April 2007

Managing Roles

17

This section tells you how to work with the *Role Management* category of actions. It includes these sections:

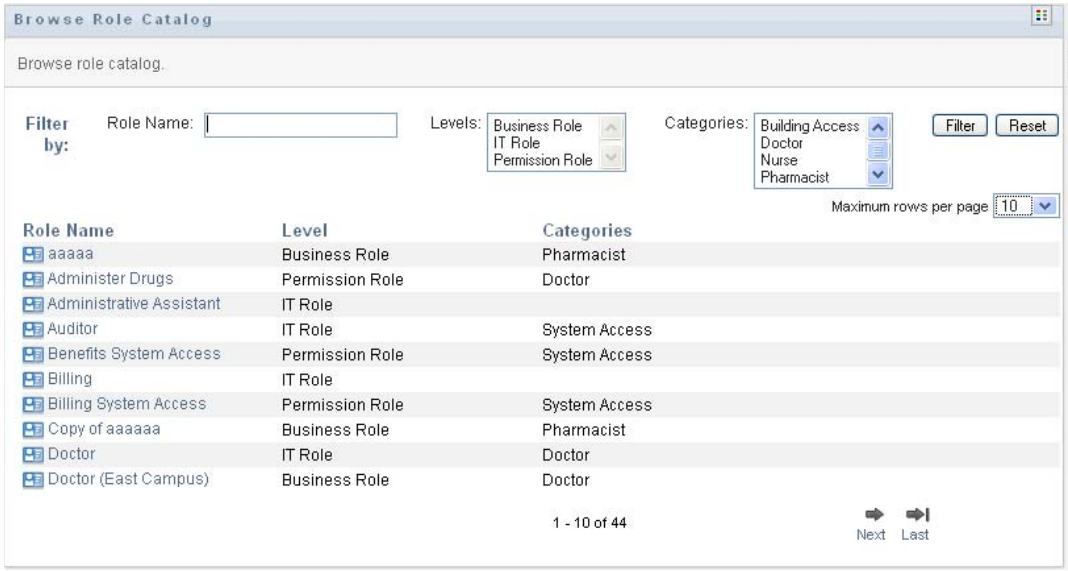
- Section 17.1, “Browsing the Role Catalog,” on page 245
- Section 17.2, “Managing Roles,” on page 246
- Section 17.3, “Managing Role Relationships,” on page 251
- Section 17.4, “Managing Separation of Duties Constraints,” on page 255
- Section 17.5, “Configuring the Role Subsystem,” on page 259

17.1 Browsing the Role Catalog

To browse the Role Catalog:

1 Click *Browse Role Catalog* in the list of *Role Management* actions.

The User Application displays the current list of roles in the Role Catalog.



The columns in the assignment list table are described below:

- The *Role Name* column provides the name of each role in the catalog.
- The *Level* column indicates the level of the role within the catalog. By default, the catalog supports three levels with the following names:

Level	Description
Business Role	The highest level in the roles hierarchy.
IT Role	The middle level in the roles hierarchy.

Level	Description
Permission Role	The lowest level in the roles hierarchy.

- The *Categories* column lists the categories associated with the role. Categories allow a business to organize the roles in the Role Catalog. Once a role has been associated with a category, it can be used as a filter when browsing the catalog.

2 You can filter the list of roles, as follows:

2a To view only those assignments that start with a particular string of characters, see "Filtering Data" on page 26 for information about what to enter in the *Role Name* box.

2b To view those roles that have a specific level in the hierarchy, select the desired level in the *Levels* box.

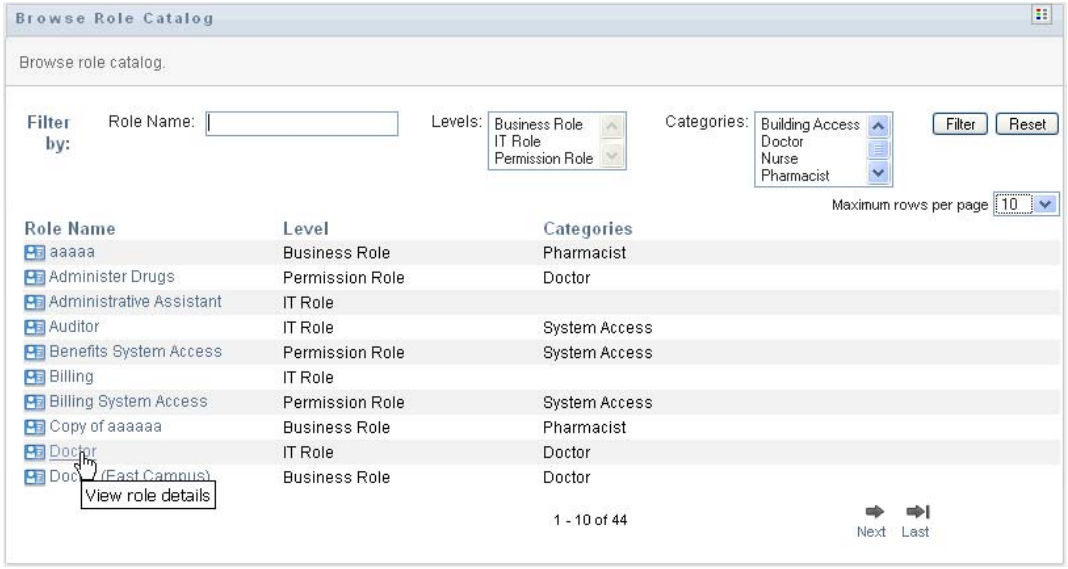
2c To view those roles that have been associated with a particular category, select the desired category in the *Categories* box.

2d To apply the filter criteria you've specified to the display, click *Filter*.

2e To clear the currently specified filter criteria, click *Reset*.

3 To set the maximum number of assignments displayed on each page, select a number in the *Maximum rows per page* drop-down list.

4 To see the details for a particular role, click the role name in the *Role Name* column.



The User Application takes you to the Manage Roles page, where you can view details of the role or make changes.

17.2 Managing Roles

The *Manage Roles* action on the *Roles* tab of the Identity Manager user interface allows you to create a new role or modify or delete an existing role.

- Section 17.2.1, "Creating New Roles," on page 247
- Section 17.2.2, "Modifying or Deleting Existing Roles," on page 249

- Section 17.2.3, “Role Properties,” on page 250

NOTE: You cannot use this action to create new or delete existing system roles. You can use it to modify system roles.

What you can see and do on this page depends on your security role, as described in Table 17-1.

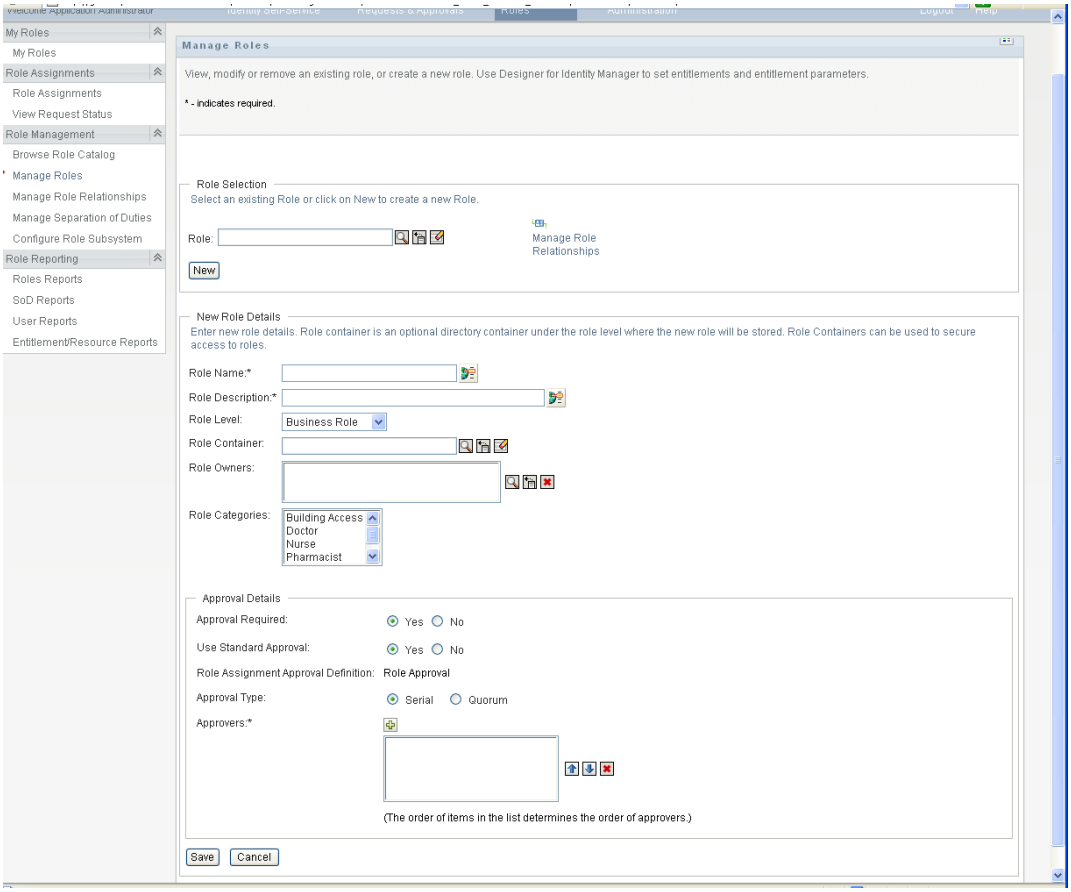
Table 17-1 *Security Role Capabilities*

Security Role	Capabilities
Roles Module Administrator	A Roles Module Administrator can: ◆ Create new roles in all containers. ◆ Modify all existing roles. ◆ Delete all existing roles (except system roles).
Roles Manager	A Roles Manager can: ◆ Create new roles in all containers (even the containers for which they do not have browse rights.) All required rights are granted for the user upon role creation. ◆ Modify only the roles for which they have browse rights. ◆ Delete only the roles for which they have browse rights.

17.2.1 Creating New Roles

1. Click *Manage Roles* in the list of *Role Management* actions.
2. Click *New*.

The User Application prompts you to provide a *Role Name* in the *New Role Details* section of the Manage Roles page. For more information on each of the fields in this section, see Table 17-2, “Role Details,” on page 250.

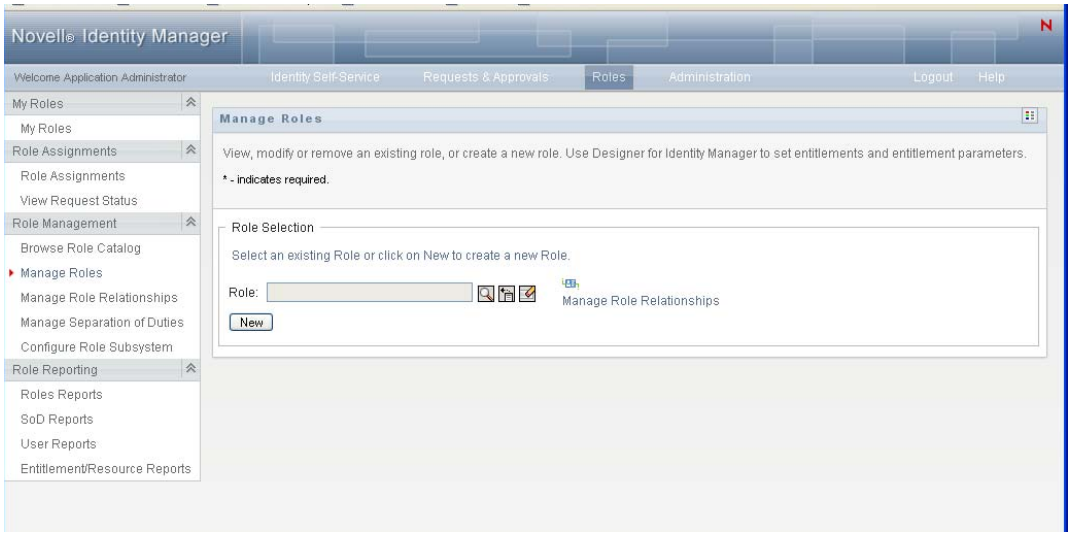


3 Navigate to *Approval Details*, and complete the fields as described in Table 17-3, “Approval Details,” on page 251.

4 Click *Save* to make your changes permanent.

17.2.2 Modifying or Deleting Existing Roles

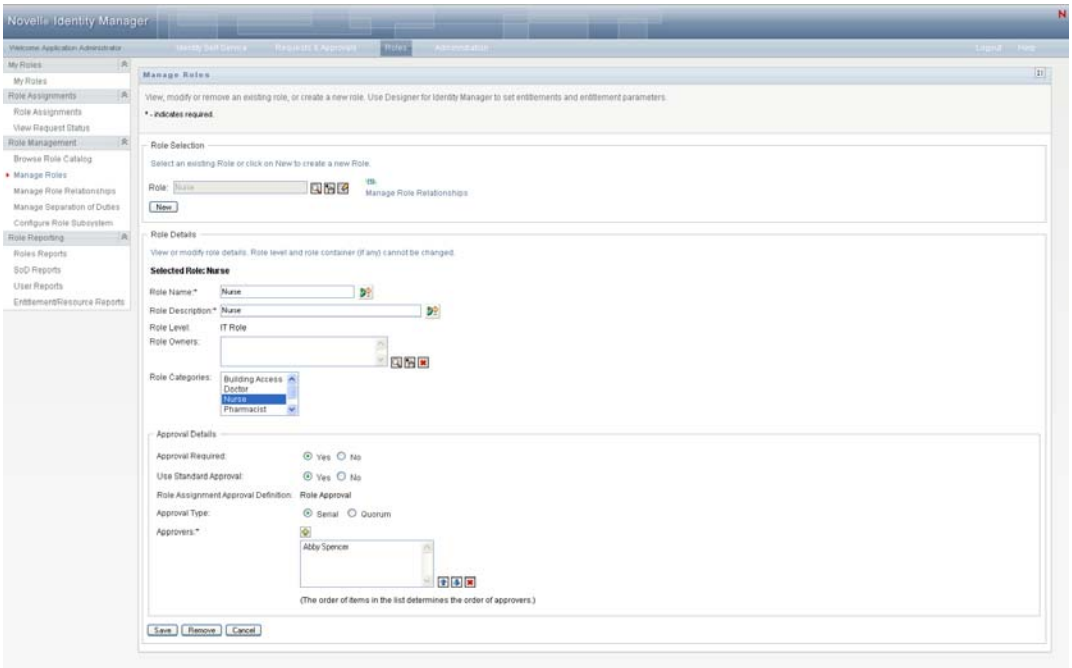
1 Click *Manage Roles* in the list of *Role Management* actions.



2 To find the role whose details you want to modify, use the *Object Selector* or the *Show History* tool to select the constraint. For details on using the *Object Selector* and *Show History* tools, see "Common User Actions" on page 24.

3 When you select the role you want from the list, the lookup page closes and displays the *Role Details* and *Approval Details* for the selected role.

The Manage Roles page displays the name of the role that is currently selected in the *Role Details* section.



TIP: The *Manage Role Relationships* link provides quick way access to the *Manage Role Relationships* page. If you have selected a role, it displays the contents of the selected role for editing.

4 To delete the currently selected role, click *Remove*.

For more information on the role details you can modify, see Table 17-2, “Role Details,” on page 250.

For more information on the Approval Details you can modify, see Table 17-3, “Approval Details,” on page 251.

5 After you complete the changes, click *Save*.

17.2.3 Role Properties

- “Role Details Properties” on page 250
- “Approval Details Properties” on page 251

Role Details Properties

Table 17-2 *Role Details*

Field	Description
Role Name	The text used when the role name displays in the User Application. You can translate this name in any of the user application’s supported languages. For more information, see Table 1-1, “Common Buttons,” on page 24.
Role Description	The text used when the role description displays in the User Application. Like the Role Name, you can translate it to any of the user application’s supported languages. For more information, see Table 1-1, “Common Buttons,” on page 24.
Role Level	(Read-only when modifying a role.) Choose a role level from the drop-down list. Role levels are defined using the Designer for Identity Manager Role Configuration editor. For more information about Role levels, see Section 14.1, “About the Roles Tab,” on page 209.
Role Container	(Read-only when modifying a role.) The location for the role objects in the driver. Role containers reside under role levels. The user application shows only the role containers that reside under the role level that you choose. You can create a role either directly in a role level, or in a container within the role level. Specifying the role container is optional.
Role Owners	A user who is designated as the owner of the role definition. When you generate reports against the Role Catalog, you can filter the report based on the role owner. The role owner does not automatically have the authorization to administer changes to a role definition.
Role Categories	Allow you to categorize roles for role organization. Categories are used for filtering lists of roles. Categories are multi-select.

Approval Details Properties

Table 17-3 *Approval Details*

Field	Description
Approval Required	Select *Yes* if the role requires approval when requested, and you want the approval process to execute the standard role assignment approval definition. Select *No* if the role does not require approval when requested.
Use Standard Approval	Select *Yes* if this role uses the standard role assignment approval definition specified in the Role Subsystem. The name of the approval definition displays as read-only in the *Role Assignment Approval Definition* below. You must select the type of approval (*Serial* or *Quorum*) and the valid approvers. When you select *No*, you are prompted for the name of a custom Role Assignment Approval Definition.
Role Assignment Approval Definition	The name of the provisioning request definition executed when the role is requested. If the value of *Use Standard Approval* is *Yes*, the value is derived from the Role Subsystem configuration settings. If the value is *No*, then you must select the name of the custom provisioning request definition to use.
Approval Type	Select *Serial* if you want the role to be approved by all of the users in the *Approvers* list. The approvers are processed sequentially in the order they appear in the list. Select *Quorum* if you want the role to be approved by a percentage of the users in the *Approvers* list. The approval is complete when the percentage of users specified is reached. For example, if you want one of four users in the list to approve the condition, you would specify Quorum and a percentage of 25. Alternatively, you can specify 100% if all four approvers must approve in parallel. The value must be an integer between 1 and 100. **TIP:** The Serial and Quorum fields have hover text that explains their behavior.
Approvers	Click + to modify the approvers list. Select *User* if the role approval task should be assigned to one or more users. Select *Group* if the role approval task should be assigned to a group. To locate a specific user or group, use the *Object Selector* or *History* buttons.To change the order of the approvers in the list, or to remove an approver, see Section 1.4.4, “Common User Actions,” on page 24.

17.3 Managing Role Relationships

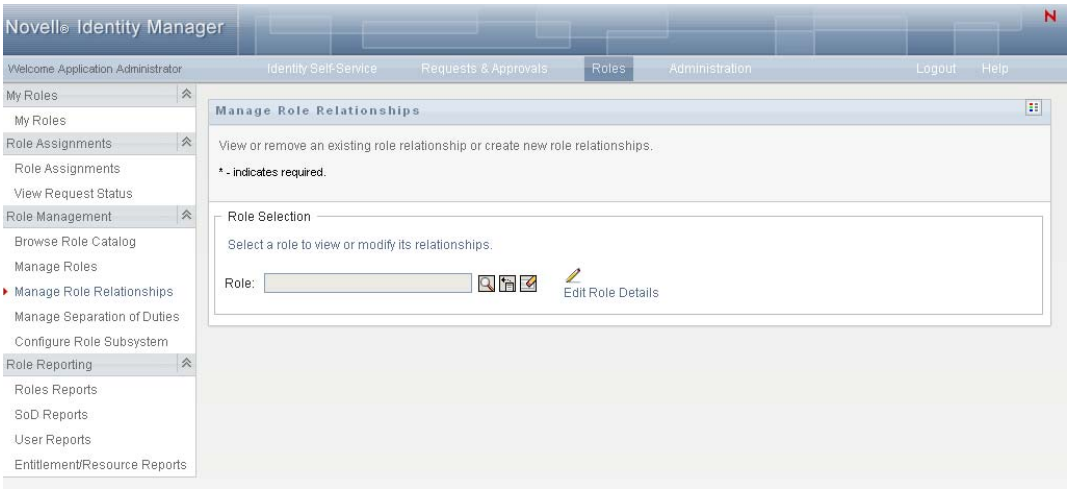
The *Manage Role Relationships* action on the *Roles* tab of the Identity Manager user interface allows you to define how roles are related in a higher and lower role containment hierarchy. This

hierarchy enables you to group permissions or resources contained by lower-level roles into a higher-level role that makes assignment of permissions easier. The allowed relationships are:

- Top-level roles (business roles) can contain lower-level roles. They cannot be contained by other roles. If you select a top-level role, the Role Relationships page allows you to add a New Lower Level Roles relationship only.
- Mid-level roles (IT roles) can contain lower-level roles, and they can be contained by higher-level roles. The Role Relationship page allows you to add either New Lower Level Roles or New Higher Level Roles.
- Bottom-level roles (permission roles) can be contained by higher-level roles, but they cannot contain other bottom-level roles. The Role Relationship page allows you to add only a New Higher Level Role.

17.3.1 Creating and Removing Role Relationships

1 Click *Manage Role Relationships* in the *Role Management* group of actions.

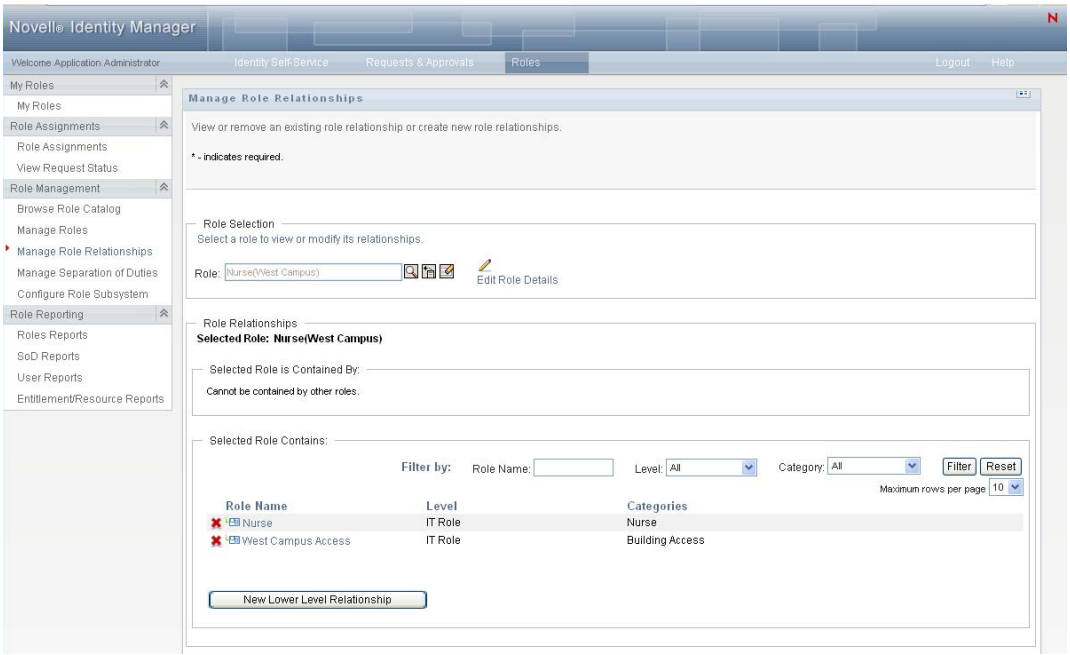


TIP: The *Edit Role Details* link provides quick way access to the *Manage Roles* page. If you have selected a role, it displays the contents of the selected role for editing.

2 To find the role for which you want to add or remove a relationship, use the *Object Selector* or *Show History* tool as described in Section 1.4.4, “Common User Actions,” on page 24.

3 Select the role.

In this example, the Role is Nurse (West Campus). Because this role is at the highest level in the hierarchy of roles, the user interface displays a message in the *Selected Role Is Contained By* section.



Depending on the level of the role you chose, you see one or both of these buttons:

- *New Higher Level Relationship*
- *New Lower Level Relationship*

4 To add a relationship, click one of the buttons and fill out the Lower Level Relationship or Higher Level Relationship Details as described in Table 17-4 on page 254

5 You can filter the list of higher and lower level relationships, as follows:

5a To view only those relationships that start with a particular string of characters, see "Filtering Data" on page 26 for information about what to enter in the *Role Name* field.

5b To view those roles of a certain level, select it from the *Level* list box.

5c To view those roles of a specific category, select it from the *Category* list box.

5d To apply the filter criteria you've specified to the display, click *Filter*.

5e To clear the currently specified filter criteria, click *Reset*.

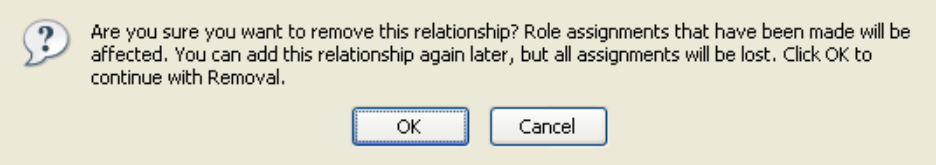
6 Click *Submit* to create a request to add the role relationships.

You can check the status of the request by going to *View Request Status*. When the status is *Provisioned*, the role relationship has been added.

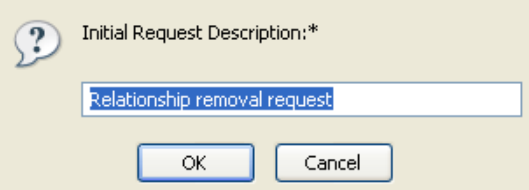
7 To remove a relationship:

7a Navigate to the relationship you want to remove and click .

You are asked to confirm that you want to remove it.



7b Click *OK* to continue with the removal or *Cancel* to return to the *Manage Role Relationships* page. You are prompted for an *Initial Request Description*.



The default text is *Relationship removal request*, but you can modify it as needed. This text displays in the *View Request Status* page.

7c Click *OK* to submit the removal request. You can view the status of this request in the *View Request Status* page. A status of *Provisioned* means that the relationship has been removed.

17.3.2 Managing Role Relationships Properties

Table 17-4 *Role Relationships Properties*

Field	Description
Initial Request Description	This value appears in *View Request Status*. You can use this option to group multiple requests created by one user interaction because they share the same Common Requests ID.
Add Roles to Selected Role	Available when you click *New Lower Level Relationship*. Use the Object Selector or History buttons to locate the lower-level role to add to the selected role. See "Using the Object Selector Button for Searching" on page 25.
Add Selected Role to Roles	Available when you click *New Higher Level Relationship*. Use the Object Selector or History buttons to locate the higher level role to add to the current role. See "Using the Object Selector Button for Searching" on page 25.

17.4 Managing Separation of Duties Constraints

The *Manage Separation of Duties* action on the *Roles* tab of the Identity Manager user interface allows you to:

- Define a Separation of Duties (SoD) constraint (or rule).
- Define how to process requests for exceptions to the constraint.

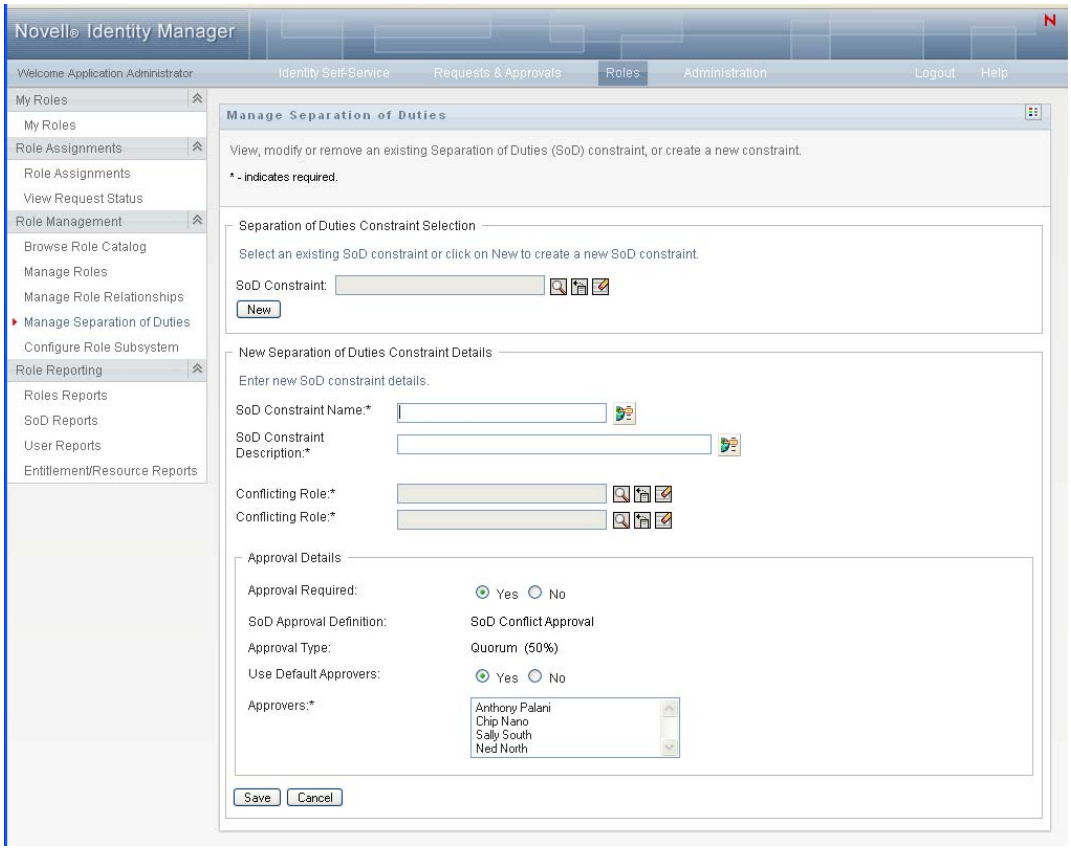
An SoD constraint represents a rule that makes two roles, of the same level, mutually exclusive. If a user is in one role, they cannot be in the second role, unless there is an exception allowed for that constraint. You can define whether exceptions to the constraint are always allowed or are only allowed through an approval flow.

- Section 17.4.1, “Creating New Separation of Duties Constraints,” on page 255
- Section 17.4.2, “Modifying Existing SoD Constraints,” on page 256
- Section 17.4.3, “SoD Constraint Property Reference,” on page 257

Page Access The Manage Separation of Duties page can be accessed by the Role Administrator or Security Officer. The Security Officer requires Browse rights to the SoDDef container in the Identity Vault, but does not require browse rights to roles.

17.4.1 Creating New Separation of Duties Constraints

1. Click *Manage Separation of Duties* in the list of *Role Management* actions.
2. Click *New*.



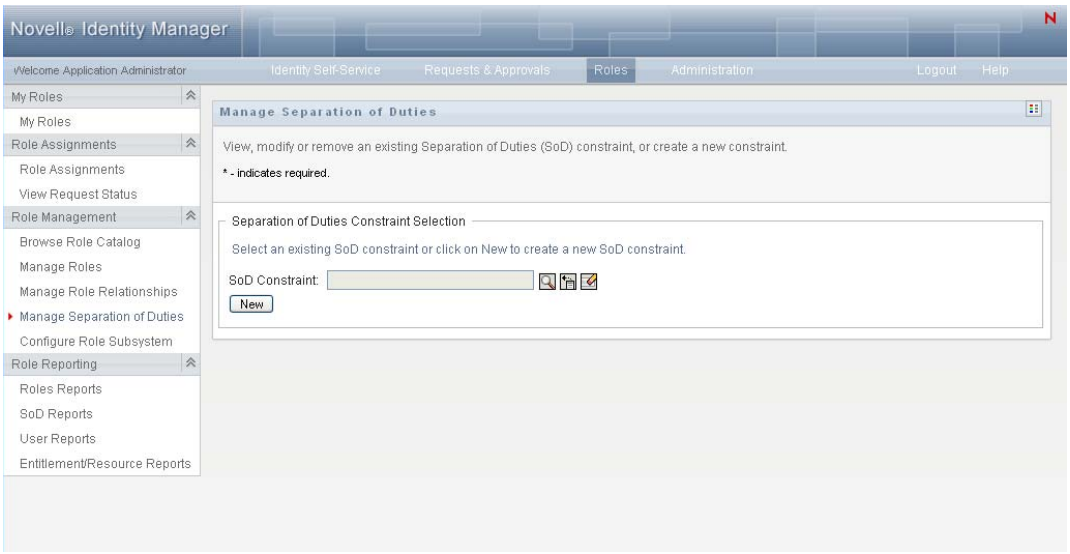
3 Navigate to the *New Separation of Duty Constraint Details*. For information on completing the fields, see Table 17-5 on page 257.

4 Navigate to the *Approval Details* section. For information on completing the fields, see Table 17-6 on page 258.

5 Click *Save* to make your changes permanent.

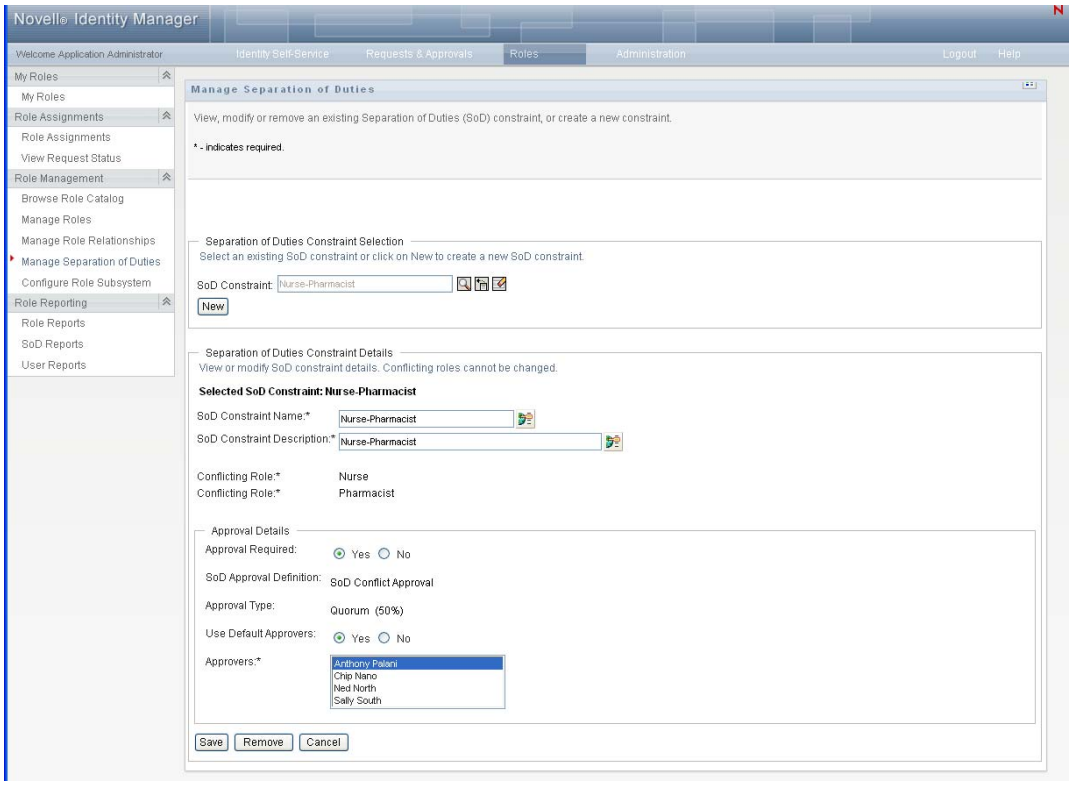
17.4.2 Modifying Existing SoD Constraints

1 Click *Manage Separation of Duties* in the *Role Management* group of actions.



2 To view or modify an existing SoD constraint, use the Use the *Object Selector* or the *Show History* tool to select the constraint. For details on using the *Object Selector* and *Show History* tools, see "Using the Object Selector Button for Searching" on page 25.

3 Select the SoD you want from the list. The lookup page closes and displays the *Separation of Duties Constraints Details* and *Approval Details* for the selected SoD.



4 For information on filling in the fields, see Table 17-5, “Separation of Duty Constraint Details,” on page 257 and Table 17-6, “Approval Details,” on page 258.

5 Click *Save* to make your changes permanent.

17.4.3 SoD Constraint Property Reference

- Table 17-5, “Separation of Duty Constraint Details,” on page 257
- Table 17-6, “Approval Details,” on page 258

Table 17-5 *Separation of Duty Constraint Details*

Field	Description
SoD Constraint Name	The name of the constraint. It is displayed in reports and when the user requests a constraint exception. You can localize it in any of the supported languages by clicking . This name can also be supplied in the SoD Editor in Designer for Identity Manager.

Field	Description
SoD Constraint Description	The description of the constraint. You can localize it in any of the supported languages by clicking . This name can be supplied in the SoD Editor in Designer for Identity Manager.
Conflicting Role	The name of the role for which you want to define a constraint. A role defines a set of privileges related to one or more target systems or applications. This field is read-only during a modify operation.
Conflicting Role	The name of the role in conflict. Click *Browse* to locate an existing role from the available roles. This field is read-only during a modify operation.

NOTE: It is important to specify the two roles in conflict. The order that you specify the roles in conflict does not matter.

Table 17-6 *Approval Details*

Field	Description
Approval Required	Select *Yes* if you want to launch a workflow when a user requests an exception to the SoD constraint. **NOTE:** If the is SoD Exception results from an implicit assignment, such as through group or container membership, choosing Yes does not result in approval workflow starting. The SoD exception is always granted, and it is logged as such. Select *No* if the user can request an exception to the SoD constraint and no approval is required. In this case, the exception is always approved.
SoD Approval Definition	Displays the read-only name of the provisioning request definition that executes when a user requests an SoD constraint exception. The value is derived from the Roles Configuration object. It is only executed when the *Approval Required* is *Yes*.
Approval Type	A read-only field that displays the processing type for the provisioning request definition displayed above. This value is derived from the Roles Configuration object.

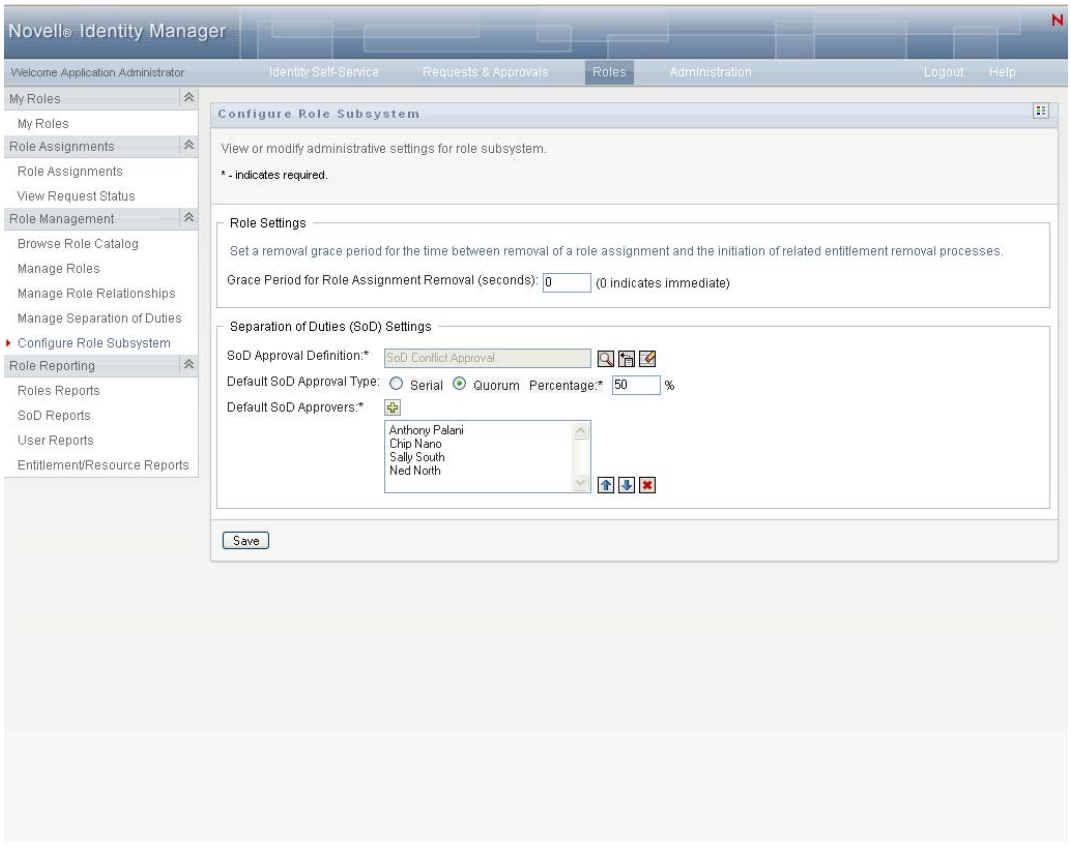
Field	Description
Use Default Approvers	Select *Yes* if the approvers are specified in the Role Subsystem. Select *User* if the SoD approval task should be assigned to one or more users.Select *Group* if the SoD approval task should be assigned to a group. To locate a specific user or group, use the Object Selector or History buttons as described in Section 1.4.4, “Common User Actions,” on page 24. To change the order of the approvers in the list or to delete an approver, use the buttons as described in Section 1.4.4, “Common User Actions,” on page 24.

17.5 Configuring the Role Subsystem

The *Configuring Role Subsystem* action on the *Roles* tab of the Identity Manager user interface allows you to specify administrative settings for the Role Subsystem.

To define Role subsystem administrative settings:

1 Click *Configure Role Subsystem* in the *Role Management* group of actions.



2 Specify (in seconds) a *Grace Period for Role Assignment Removal*.

This value specifies the amount of time, in seconds, before a role assignment is removed from the Role Catalog (0 by default). A grace period of zero means that when someone is removed from a role assignment, the removal happens immediately and the subsequent revocation of entitlements is initiated immediately. You might use the grace period to delay the removal of an account that would subsequently be re-added (for example if a person was being moved between containers). An entitlement can disable an account (this is the default) rather than removing it.

3 Choose the provisioning request definition to run when an SoD exception request is made. You can specify one definition per User Application driver.

3a To find a provisioning request definition use the Object Selector or History buttons as described in Section 1.4.4, "Common User Actions," on page 24.

4 Choose a *Default SoD Approval Type* of *Serial* or *Quorum*.

Field	Description
Serial	Select *Serial* if you want the role to be approved by all of the users in the *Approvers* list. The approvers are processed sequentially in the order they appear in the list.
Quorum	Select *Quorum* if you want the role to be approved by a percentage of the users in the *Approvers* list. The approval is complete when the percentage of users specified is reached. For example, if you want one of four users in the list to approve the condition, you would specify Quorum and a percentage of 25. Alternatively, you can specify 100% if all four approvers must approve in parallel. The value must be an integer between 1 and 100.

5 Click + to modify the *Default SoD Approvers*.

Field	Description
Approvers	Select *User* if the role approval task should be assigned to one or more users.Select *Group* if the role approval task should be assigned to a group. Only one member of the group needs to approve. To locate a specific user or group, use the Object Selector or History buttons. To change the order of the approvers in the list or to remove an approver, see Section 1.4.4, "Common User Actions," on page 24

6 Click *Save* to make your choices permanent.

Creating and Viewing Role Reports

18

This section describes Role reports and how to create and view them. Each report is a read-only PDF display of data about the current state of the Role Catalog. To track roles information for compliance, please use your audit logs.

Topics in this section include:

- Section 18.1, “About the Role Reporting Actions,” on page 261
- Section 18.2, “Role Reports,” on page 261
- Section 18.3, “SoD Reports,” on page 265
- Section 18.4, “User Reports,” on page 267

18.1 About the Role Reporting Actions

The Roles tab enables you to create and view reports that describe the current state of roles. These reports can help you to monitor, add, modify, and delete roles or separations of duties.

You must be a Role Administrator or Role Auditor to create and view the role reports. The User Application Administrator has Role Administrator rights by default.

18.2 Role Reports

Two role reports are available:

- Role List Report
- Role Assignment Report

18.2.1 The Role List Report

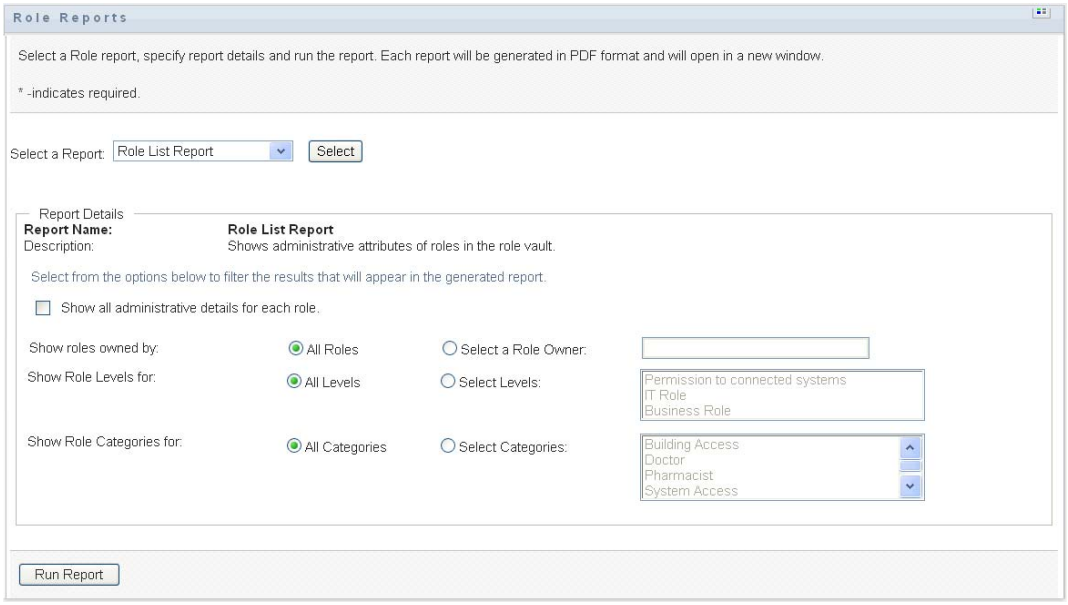
The Role List Report shows:

- All roles, grouped by role level
- The business name of each role
- The container and description for each role
- Optionally, Quorum percentages, contained roles, containing roles, groups and containers the role is indirectly assigned to, and entitlements that are bound to the role

To create and view the Role List Report:

1. Open the User Application and choose *Roles* > *Role Reports*.

2 Choose *Role List Report* in the *Select a Report* drop-down menu and click *Select*. The Role Reports page prompts you to select the parameters to include in the report.



3 Check *Show all administrative details for each role* to see the following information if applicable and available:

- Quorum percentage
- Contained roles
- Containing roles
- Groups that this role is indirectly assigned to
- Containers that this role is indirectly assigned to
- Entitlements that are bound to the role

4 Choose whether to show all roles or roles owned by a selected owner. When you choose *Select a Role Owner*, the owner selection box activates. Use these icons to make your selection:

Open the object selection dialog.

To select a user, choose First or Last name and type one or more characters of the name to retrieve a selection list. Choose from the selection list.

To select a group of users, choose from the Description list of groups, or type characters in the Description box to select a shorter list of groups. Choose from the selection list.

To select a container of users, click a container in the directory tree.

Open the history selection dialog. Choose from the Description list of objects, or type characters in the Description box to filter your search and retrieve a shorter list of objects.

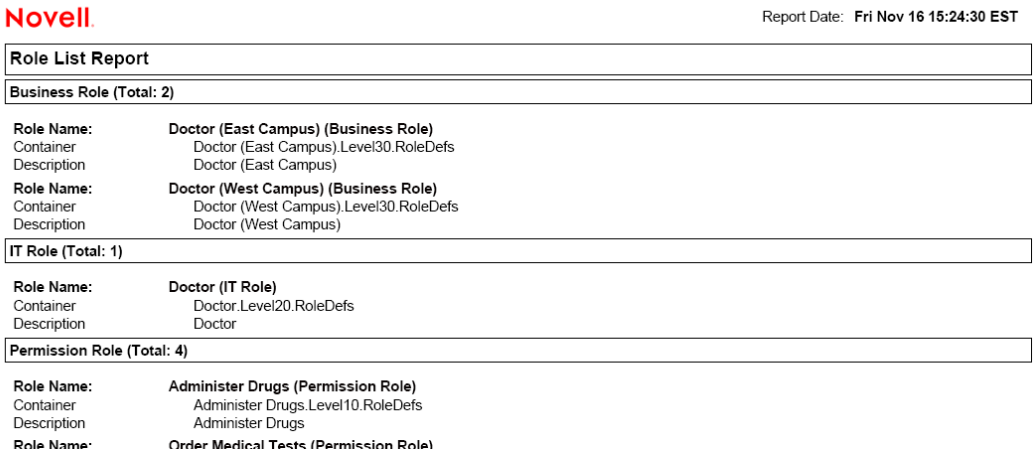
Reset the current selection to no selection.

5 Choose whether to show roles at all security levels, or select one or more levels to show. To select a level, click it in the selection pull-down box. To select more than one level, hold down the Shift key or Ctrl key as you click.

6 Choose whether to show roles in all categories, or select one or more categories to show. To select a category, click it in the selection pull-down box. To select more than one category, hold down the Shift key or Ctrl key as you click.

7 Click *Run Report* to create and view a PDF report similar to the sample in Figure 18-1.

Figure 18-1 *Sample Role List Report*



Novell

Report Date: **Fri Nov 16 15:24:30 EST**

Role List Report

Business Role (Total: 2)

Role Name: **Doctor (East Campus) (Business Role)**
Container Doctor (East Campus).Level30.RoleDefs
Description Doctor (East Campus)

Role Name: **Doctor (West Campus) (Business Role)**
Container Doctor (West Campus).Level30.RoleDefs
Description Doctor (West Campus)

IT Role (Total: 1)

Role Name: **Doctor (IT Role)**
Container Doctor.Level20.RoleDefs
Description Doctor

Permission Role (Total: 4)

Role Name: **Administer Drugs (Permission Role)**
Container Administer Drugs.Level10.RoleDefs
Description Administer Drugs

Role Name: **Order Medical Tests (Permission Role)**

8 To save the report, choose *File* > *Save A Copy* in the Adobe Reader window. Specify a directory to save the file in and specify a filename for the report.

18.2.2 The Role Assignment Report

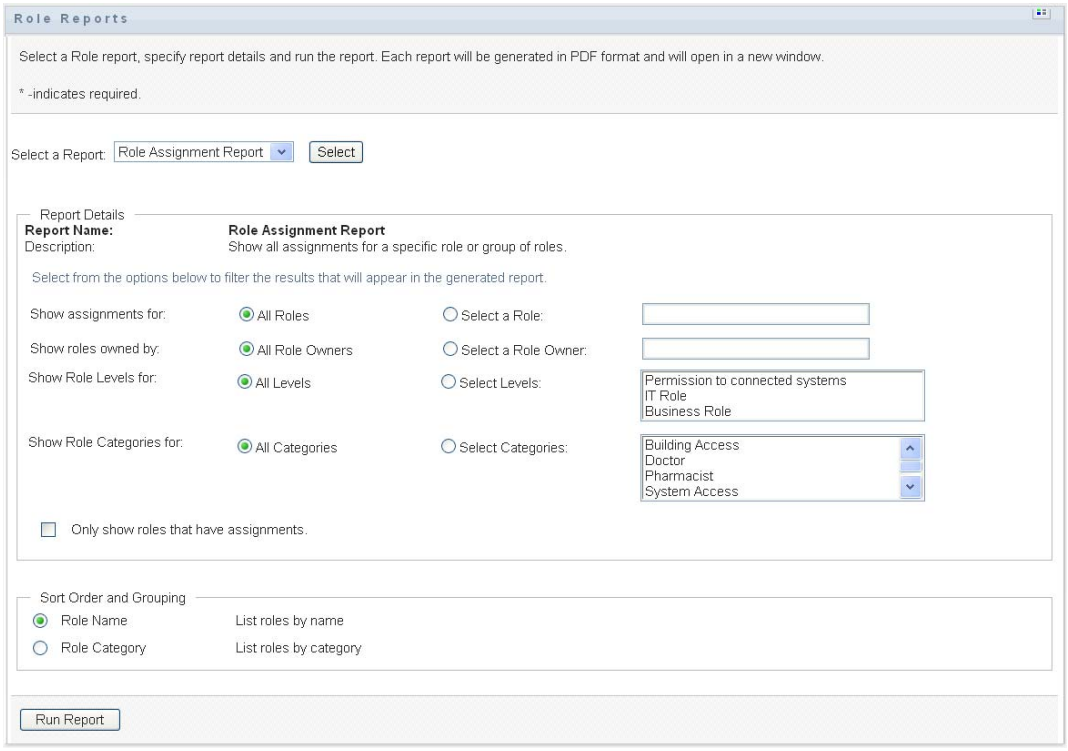
The Role Assignment Report shows:

- Roles grouped by role level
- Each role's business name, container, category, and description
- Users assigned to the role and names of people who approved the assignments

To create and view the Role Assignment Report:

1 Open the User Application and choose *Roles* > *Role Reports*.

2 Choose *Role Assignment Report* in the *Select a Report* drop-down menu and click *Select*. The Role Reports page prompts you to select the parameters to include in the report.



3 Choose to show all role assignments or to show assignments for a selected role. If you choose *Select a Role*, the selection box activates and presents the selection icons described in Step 4 on page 262.

4 Choose to show roles owned by all role owners or by a selected role owner. If you choose *Select a Role Owner*, the selection box activates and presents the selection icons described in Step 4 on page 262.

5 Choose to show roles for all role levels or to select one or more role levels. To select a level, click it in the selection pull-down box. To select more than one level, hold down the Shift key or Ctrl key as you click each level.

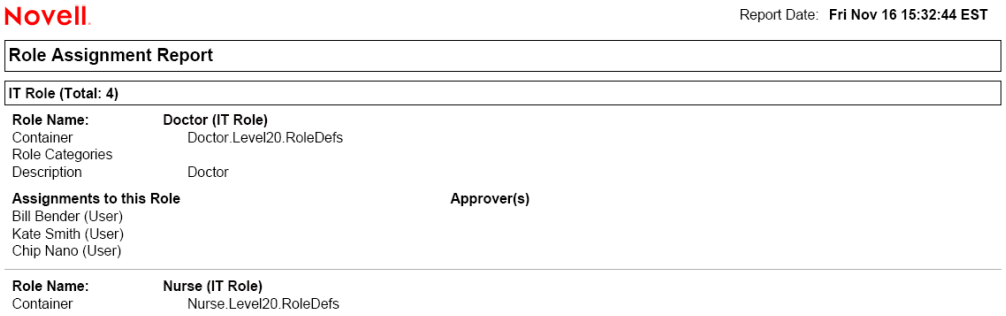
6 Choose to show roles for all role categories or to select one or more role categories. To select a category, click it in the selection pull-down box. To select more than one category, hold down the Shift key or Ctrl key as you click each category.

7 Click *Only show roles that have assignments* to filter the report to include only roles that have been assigned.

8 If you are choosing to show assignments for all roles rather than just one role, under *Sort Order and Grouping* choose to group roles by either name or category.

9 Click *Run Report* to create and view a PDF report similar to the sample in Figure 18-2.

Figure 18-2 *Sample Role Assignment Report*



Novell

Report Date: **Fri Nov 16 15:32:44 EST**

Role Assignment Report

IT Role (Total: 4)

Role Name:	**Doctor (IT Role)**
Container	Doctor.Level20.RoleDefs
Role Categories	
Description	Doctor

Assignments to this Role	**Approver(s)**
Bill Bender (User)	
Kate Smith (User)	
Chip Nano (User)	

Role Name:	**Nurse (IT Role)**
Container	Nurse.Level20.RoleDefs

10 To save the report, choose *File* > *Save A Copy* in the Adobe Reader window. Specify a directory to save the file in and specify a filename for the report.

18.3 SoD Reports

Two reports describe the current state of separation of duties:

- SoD Constraint Report
- SoD Violations and Exceptions Report

18.3.1 SoD Constraint Report

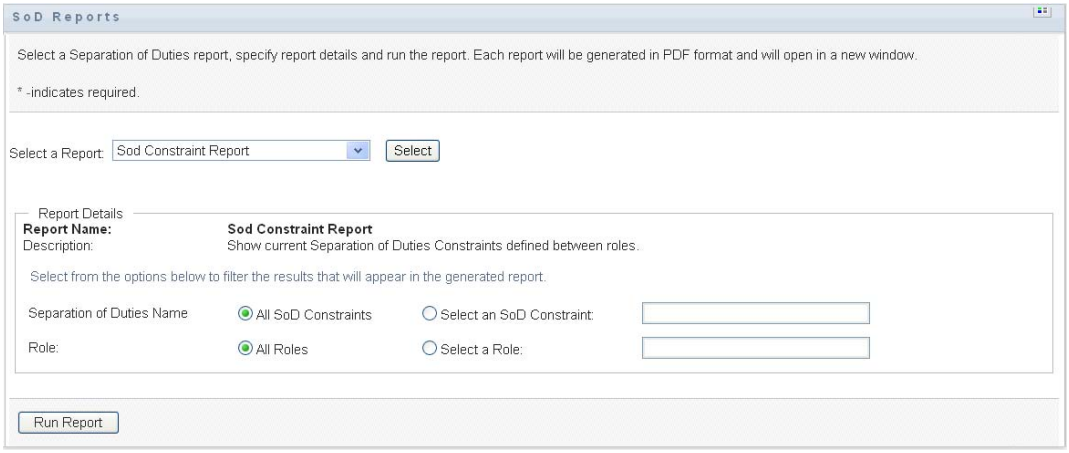
The SoD Constraint Report shows:

- Currently defined separation of duties constraints by name
- The description of the separation of duties
- The list of the conflicting roles
- The list of people with permission to approve an exception to a violation of separation of duties

To create and view the SoD Constraint Report:

1 Open the User Application and choose *Roles* > *SoD Reports*.

2 Choose *SoD Constraint Report* in the *Select a Report* drop-down menu and click *Select*. The Role Reports page prompts you to select the parameters to include in the report.

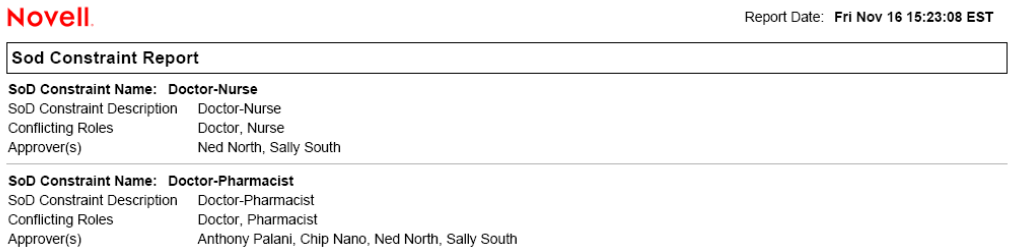


3 Choose to list all SoD Constraints, or select one SoD Constraint. If you choose *Select an SoD Constraint*, the selection box activates. See the description of selection box icons at Step 4 on page 262.

4 Choose to list all roles or select a role. If you choose *Select a Role*, the selection box activates. See the description of selection box icons at Step 4 on page 262.

5 Click *Run Report* to create and view a PDF report similar to the one in Figure 18-3.

Figure 18-3 *Sample SoD Constraint Report*



6 To save the report, choose *File* > *Save A Copy* in the Adobe Reader window. Specify a directory to save the file in and specify a filename for the report.

18.3.2 SoD Violations and Exceptions Report

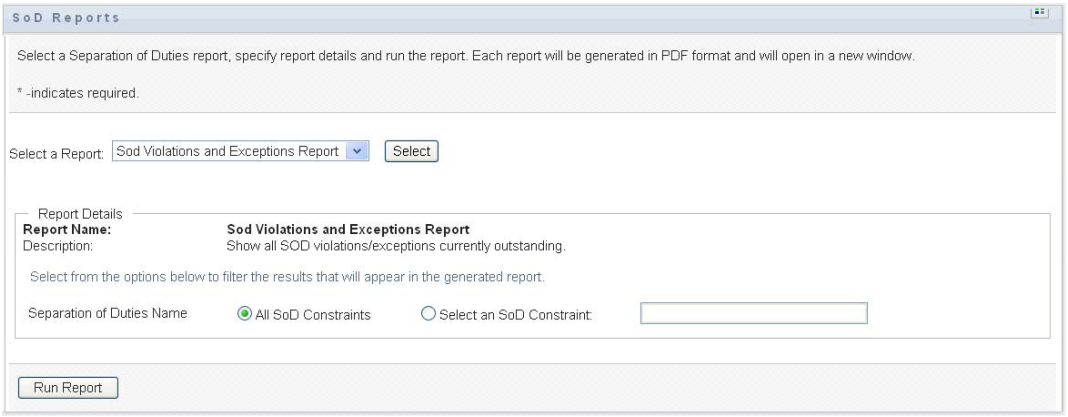
The SoD Violations and Exceptions Report shows:

- The name of each separation of duties constraint, its description, and the conflicting roles
- The users in violation of the constraint, including both approved exceptions and unapproved violations. Users can be in violation by being members of a group or container that grants them a conflicting role.
- Approved exceptions. These are violations that have been approved as exceptions to the separation of duties.

- The names of those who approved or denied the exceptions and the date and time of the approval or denial.

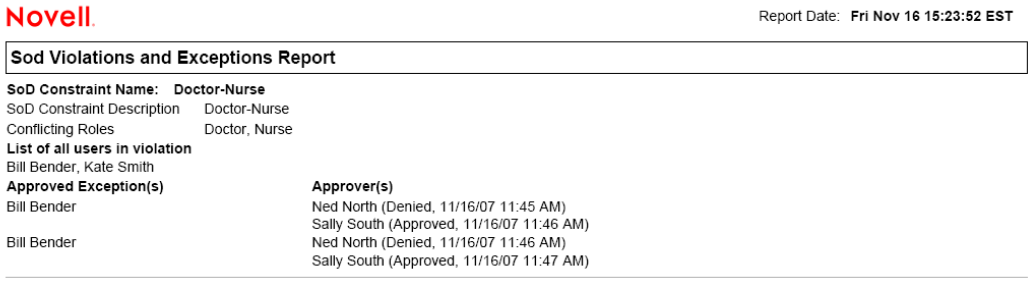
To create and view the SoD Violations and Exceptions Report:

1. Open the User Application and choose *Roles* > *SoD Reports*.
2. Choose *SoD Violations and Exceptions Report* in the *Select a Report* drop-down menu and click *Select*. The Role Reports page prompts you to select the parameters to include in the report.



3. Choose *All SoD Constraints* to show any violations and exceptions outstanding across all SoD constraints. Or, choose *Select an SoD Constraint* to focus the report on violations of a single SoD constraint.
4. Click *Run Report* to create and view a PDF report similar to the sample in Figure 18-4.

Figure 18-4 *Sample SoD Violations and Exceptions Report*



5. To save the report, choose *File* > *Save A Copy* in the Adobe Reader window. Specify a directory to save the file in and specify a filename for the report.

18.4 User Reports

Two user reports are available:

- User Roles Report
- User Entitlement Report

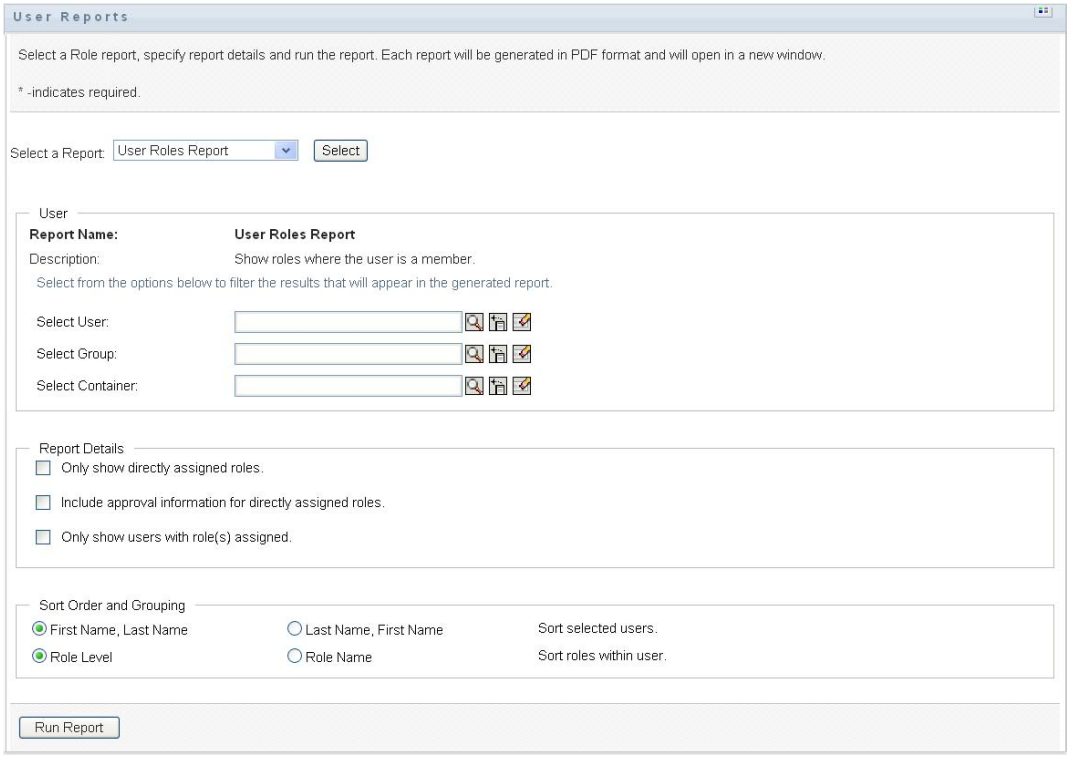
18.4.1 User Roles Report

The User Roles Report shows:

- Selected users, groups of users, or containers of users
- The Roles in which each user holds membership
- The date at which membership in the role became or becomes effective
- The expiration date of the role membership
- Optionally, the source of the membership in the role

To create and view a User Roles Report:

1. Open the User Application and choose *Roles* > *User Reports*.
2. Choose *User Roles Report* in the *Select a Report* drop-down menu and click *Select*.



3. In the *User* pane, choose either a user, group, or container for whom or which you want to view roles. See the description of selection box functions at Step 4 on page 262.
4. In the *Report Details* pane, choose one or more types of detail to report:

Detail	Meaning
Only show directly assigned roles.	The User Roles Report shows any roles that are directly assigned to the selected user, if any. The report does not show roles inherited from membership in a group or container.

Detail	Meaning
Include approval information for directly assigned roles.	The User Roles Report shows who approved each directly assigned role for each user.
Only show users with role(s) assigned.	The User Roles Report shows selected users who have assigned roles. The report does not show users who do not have directly or indirectly assigned roles.

5 In the *Sort Order and Grouping* pane, choose to sort users by first name or last name.

6 In the *Sort Order and Grouping* pane, choose to sort each user's roles by level or name.

7 Click *Run Report* to create and view a report similar to the sample in Figure 18-5.

Figure 18-5 *Sample User Roles Report*

Novell

Report Date: **Fri Nov 16 15:22:32 EST**

User Roles Report

User: Allison Blake

Role	Source	Effective Date	Expiration Date
Order Medical Tests	Direct Assignment	11/16/07 11:41 AM	

User: Bill Bender

Role	Source	Effective Date	Expiration Date
Nurse	Direct Assignment	11/16/07 11:46 AM	12/29/07 12:00 AM
Doctor	Direct Assignment	11/16/07 11:47 AM	12/29/07 12:00 AM
Pharmacist	Membership in Group Pharmacy	11/16/07 11:50 AM	
Order Medical Tests	Membership in Role Relationship Doctor	11/16/07 11:47 AM	
Write Prescriptions	Membership in Role Relationship Doctor	11/16/07 11:47 AM	
Administer Drugs	Membership in Role Relationship Doctor	11/16/07 11:46 AM	
Fill Prescriptions	Membership in Role Relationship Pharmacist	11/16/07 11:50 AM	
Perform Medical Tests	Membership in Role Relationship Doctor	11/16/07 11:46 AM	

8 To save the report, choose *File* > *Save A Copy* in the Adobe Reader window. Specify a directory to save the file in and specify a filename for the report.

18.4.2 User Entitlements Report

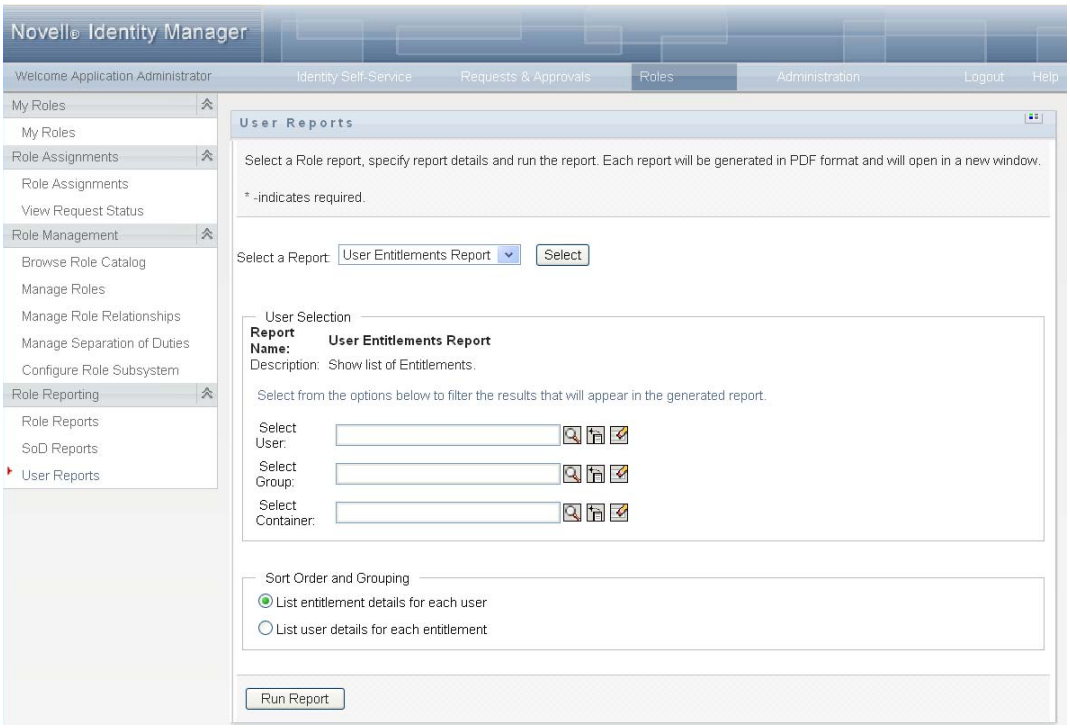
The User Entitlements Report shows:

- All entitlements by their distinguished names
- Users that hold each entitlement
- The date at which the user's entitlement becomes effective
- The date at which the user's entitlement expires
- The role the user holds that grants the entitlement

To create and view a User Entitlements Report:

1 Open the User Application and choose *Roles* > *User Reports*.

2 Choose *User Entitlements Report* in the *Select a Report* drop-down menu and click *Select*.



3 In the *User Selection* pane, select the kind of user: an individual user, group, or container. Descriptions of the selection icons are at Step 4 on page 262.

4 In the *Sort Order and Grouping* pane, choose one of the following:

- *List entitlement details for each user*
- *List user details for each entitlement*

5 Choose *Run Report* to see a PDF report similar to one of the samples in Figure 18-6 and Figure 18-7.

Figure 18-6 *Sample User Entitlements Report: Entitlement Details for Each User*

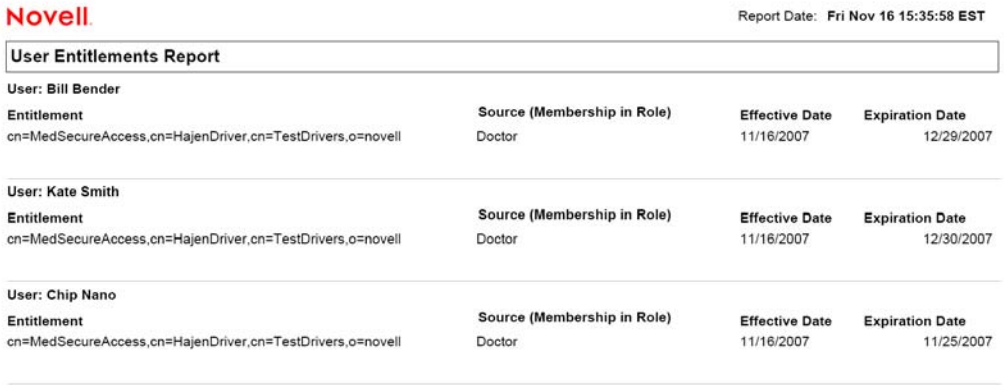


Figure 18-7 *Sample User Entitlements Report: User Details for Each Entitlement*

Novell

Report Date: Fri Nov 16 15:36:25 EST

User Entitlements Report

Entitlement: cn=MedSecureAccess,cn=HajenDriver,cn=TestDrivers,o=novell

User	Source (Membership in Role)	Effective Date	Expiration Date
Bill Bender	Doctor	11/16/2007	12/29/2007
Kate Smith	Doctor	11/16/2007	12/30/2007
Chip Nano	Doctor	11/16/2007	11/25/2007

6 To save the report, choose *File* > *Save A Copy* in the Adobe Reader window. Specify a directory to save the file in and specify a filename for the report.