HP OpenView Management Portal Using Radia

for the Windows operating system

Software Version: 2.1

Installation and Configuration Guide

Manufacturing Part Number: T3424-90101

June 2005

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Revisions

The version number on the title page of this document indicates the software version. The print date on the title page changes each time this document is updated.

You will receive updated or new editions if you subscribe to the appropriate product support service. Contact your HP sales representative for details.

2.0 This icon indicates changes features and documentation changes related to RMP v2.0. These changes from the RMP v1.x release are extensive.

2.0.1 This icon indicates features or documentation changes related to the RMP v2.0 Service Pack 1.

2.1 This icon indicates features or documentation changes related to RMP v2.1.

Removed Topics

- The Novadigm Services chapter was removed.

Chapter 1: Introduction

2.1 Page 21, Introduction: added best practice information. Creating and using device groups for administrative and operational tasks greatly improves Management Portal performance. The Management Portal performs best when operations are run against groups of devices, as opposed to running the same operations against against one device at a time.

2.0 Page 26, What is a Zone?: new topic.

2.0 Page 26, The Zone Directory Structure: new topic.

2.0 Page 27, About Object Names in a Zone: new topic.

2.1 Page 29, New Terminology: added terms for: blade enclosure, rack, and server blade.

Chapter 2: Installing the Management Portal

2.0 Page 34**,** Radia Prerequisites: new topic.

2.0 Page 35**,** Directory Size of a Single Zone: new topic.

- Page 35, System Requirements: added to the Client requirements.

2.0 Page 50, Updating Portal Tasks: modified steps to accommodate selective task updates, and added a caution.

2.0.1 Page 51, Updating RMP Zones with a New Build, new topic explains how to update the Master and Subordinate Zones in your enterprise with a new build.

2.1 Page 52, Specifying the IP Address for a Remote Management Portal: replaced this section with a note.

2.1 Page 52, deleted the post-installation topics: Verifying the Contents of ZTASKEND, and Configuring edmprof.dat. These are no longer needed.

2.1 Page 52, Posting Client Objects to the Management Portal: new post-installation configuration option.

2.0.1 Page 57, Changing Passwords: Step 5 discusses new password support.

Chapter 3: Using the Management Portal

2.0 Page 66, Navigation Modes: History and Location: new topic.

2.0 Page 68, Sample Navigation Session: Viewing Network Objects: new topic.

2.0 Page 70, Accessing and Returning to Your Desktop: new topic.

2.0 Page 72, Removing Shortcuts from Your Desktop: new topic.

2.0 Page 74, Navigating the Portal Directory and the Zone Containers: new topic.

2.0 All procedures have been modified to show the new starting point and navigation path needed to perform the tasks.

Page 79, Taskbar and Task Summary: use the hyperlinks within a task description to quickly locate the procedure for that task.

2.0 Page 79, Taskbar and Task Summary: identifies all new task groups and tasks for this release with a 2.0 bullet or a 2.0.1 bullet.

2.0 Page 80, Infrastructure Task Group: new topic.

2.0 Page 81, Model Administration Task Group: the following tasks have been removed from the Model Administration Task Group: Add Container, Add Organization, Add Groups of Devices, Move Device.

As of version 2.1, you can also add objects types for racks, blade enclosures, enclosure configurations, and slots. See *Configuring Blades, Enclosures and Racks in the Chassis Container* for more information.

The previous Inventory Management Task Group and Notify via Inventory tasks have been removed. See the Radia Reporting Guide for alternative methods of notifying device groups from inventory reports.

2.0 Page 84, Operations Task Group: the following tasks have been removed from the Operations Task Group: Notify by Audience and Notify by Subscription. These tasks are no longer necessary because of the ability to use the Notify command with the audience groups that are automatically created and maintained in the Cross References container. For details, see Notifying an Audience on page 300.

2.0.1 Page 84, Operations Task Group: added Update RMP task which allows you to apply a new version of the Management Portal to the subordinate Zones in your enterprise. For procedures, see Updating Subordinate RMP Zones on page 355.

2.0.1 Page 87, Operations Task Group, added a new task, Update RMP.

2.0.1 Page 87, Policy Task Group: added Resolve Policy task definition (Figure updated). For procedures, see *Resolving Policy* on page 116.

2.0 Page 88, Policy (Advanced) Task Group: new topic.

2.0 Page 88, Policy Task Group: new topic.

2.0 Page 89, RCS Administration Task Group: new topic.

2.0 Page 90, Toolbar Tasks: new topic.

2.0 Page 94, Radia Directory and Zone Objects: new topic.

2.0 Page 96, About the Zone Containers: new topic.

2.0 Page 96, About the Zone Containers: added Chassis Container description.

2.0.1 Page 98, Cross-References (cn=xref) Self Managed, added Subnets Container, Device Architectures and Enclosure Manufactuers Containers. Also added a note to the Managed Services container.

2.0 Page 101, Using the RCS Administration Tasks: new topic.

Page 109, Using RMP to Assign Policy through an LDAP Directory: new topic.

2.0.1 Page 116, Resolving Policy, this task allows you to view the resulting policies for a selected object. For objects in an LDAP directory, you can also limit the resolution to a specific domain filter as defined in your Policy configuration (DNAME), and insert values for host, operating system, UserID, Zcontext, or another attribute normally available to the LDAP Policy Adaptor at resolution time.

Procedures for configuring Customizing Domain Filters (DNAMEs) in the Resolve Policy Task begin on page 120.

2.0 Page 120, Customizing Domain Filters (DNAMEs) in the Resolve Policy Task: new topic.

Chapter 4: Administrative Functions

2.0.1 Page 134, Table 1: modified the NETSCAN entry.

2.0 Page 138, Setting Additional Configuration Parameters: new section.

2.0 Page 140, Configuring Directory Services: new section.

2.0.1 Page 143, Table 4: modified the definitions of Common Name and Use in.

- Page 147, Table 5: Directory Service Properties for Type = ds-rcs: modified the definitions of Common Name and DS Prefix.

2.0 Page 158, Configuring for External LDAP Authentication: new section.

- Page 161, Modifying the Default LDAP Authentication for Specific Users: topic heading changed from "Disabling LDAP Authentication for Specific Users."

2.0.1 Page 164, Establishing Devices and Device Groups: you can now perform installation tasks in the Operations task group directly from a discovered Network or LDAP directory location.

2.0 Page 164, Configuring for a Custom LDAP Policy Extension Prefix: new section.

2.0 Page 164, Establishing Devices and Device Groups: new section.

2.0.1 Page 164, Adding Devices to an RMP Zone: devices can be automatically added to the Devices container as part of an install task.

2.0 Page 166, Basic Procedures for Modifying Groups: new section.

2.0 Page 181, Adding a Single Device: new section.

2.0 Page 187, Adding Groups: new section.

2.0 Page 189, Adding Devices to a New Group: new section.

2.0 Page 193, Moving or Copying Devices into a Group: new section.

2.0.1 Page 193, Moving or Copying Devices into a Group: Using any of the install tasks from the Operations task group against devices in the Network container or devices in an LDAP directory automatically creates entries for the devices in the Zone, Devices container and makes them members of the Default Group.

2.0 Page 199, Removing Groups of Devices: new section.

2.0 Page 200, Importing Devices: new section.

2.0 Page 210, Configuring Blades, Enclosures and Racks: new topic discusses how to use the containers for Blade Enclosure Configurations, Blade Enclosures, and Racks Containing Enclosures for the policy-based management of server blade devices.

2.0.1 Page 243, Adding Users: you must specify the password associated with the External User ID if external authentication is turned on for this user.

Chapter 5: Operations Functions

2.0.1 Page 285, Operations Functions, modified descriptions of the Manage Computer task and the Update RMP task.

2.0 Page 288, Managing Computers in Your Management Portal Zone: new topic.

2.0.1 Page 292, Selecting a Starting Zone, Network, or Directory Location: Install operations can also be started from locations in a Zone, Network container or from an LDAP Directory Services location.

- Page 300, Notifying an Audience by Device Characteristics, removed this section.
- Page 300, Notifying an Audience by Subscription, removed this section.

2.0 Page 304, Using Help Desk Notify: new section.

2.0 Page 314, RMA Registration Throttling: new section.

2.0 Page 314, RMA Registration Schedule and Tasks: new section.

2.0 Page 315, Choosing a Dynamic or Static Port Assignment for the Radia Management Agent: new section.

2.0.1 Page 317, To install the Radia Management Agent, you can select a location in your Zone, Networks container or a currently connected LDAP directory location that contains computers on which you want to install the Radia Management Agent.

2.0.1 Page 321, Installing the Radia Client: added Server Management to the list of Radia clients that can be selected for installation.

2.0.1 Page 322, To install the Radia 4.x Clients with the Management Portal, you can select a location in your Zone, Networks container or a currently connected LDAP directory location that contains computers on which you want to install the Radia Management Agent.

2.0 Page 327, Supporting Remote Installs Using Multiple Profiles: new section.

2.0 Page 328, Adding, Modifying, and Deleting Install Profiles: new section.

2.0 Page 335, Discovering Radia Subscriber Information using Managed Services, modified topic title, deleted three images, and replaced the procedure. Added requirements for obtaining Managed Services entires in the Cross References container.

2.0.1 Page 337, To install the Proxy Server, you can select a location in your Zone, Networks container or a currently connected LDAP directory location that contains computers on which you want to install the Radia Management Agent.

2.0 Page 349, Removing Task Templates: new section.

2.0 Page 349, Installing Additional RMP Zones (Subordinate Zones): new section.

2.0 Page 355, Updating Subordinate RMP Zones: new section.

2.0 Page 355, Scheduling Zone Operations: new section.

2.0 Page 361, Opening a Subordinate Zone: new section.

2.0 Page 363, Sequencing Jobs (In Progress) : new section.

Chapter 6: Troubleshooting

2.0 Page 391, Managing the Portal Zone Directory (ZONE.MK) File: new section.

Contents

1 Introduction

At the end of this chapter, you will:

- Understand the benefits and core capabilities of Management Portal.
- Understand the architecture and Directory Structure of any Management Portal Zone.
- Be familiar with new terminology for this release.
- Understand the process of adding devices to your Management Portal zone and grouping them for operational purposes. Creating and using device groups for administrative and operational tasks greatly improves Management Portal performance.

The Management Portal performs best when operations are run against groups of devices, as opposed running the same operation against against one device at a time.

Introduction

The Management Portal (RMP) is a friendly, Web-based interface that you can use to manage your entire Radia infrastructure, regardless of how small or large your enterprise. Whether you are already using Radia, or are just beginning, you can use the Management Portal to view and manage your existing infrastructure, and remotely install new Radia infrastructure products and applications.

The Management Portal provides the following benefits:

- **Consistency**
  A simple, consistent user experience reduces the learning curve for your administrators. When using the Management Portal, administrators select tasks to manage the infrastructure. Each task follows the same general procedure. Therefore, even if an administrator's role changes, the overall procedure remains the same.
- **Web-based administration**
  Use a browser from anywhere to administer your Radia infrastructure.
- **A single view into a complex environment**
  View and manage your Radia infrastructure, applications, and policy from a single administrative environment.
- **Role-based entitlement**
  Administrators can view and manage only those objects in the infrastructure for which they are responsible.
- **Security**
  Administrators are authenticated against the Management Portal Directory.
- **Extensibility**
  Access any Configuration Server, Radia Database, Active Directory, or other LDAP Directory in your enterprise from within the Management Portal's interface. Administer policy, services, users, and machines directly from the Portal's friendly interface.
- **Enterprise-Wide Solutions**
  Create multiple Management Portal Zones, if desired, to administer the infrastructure at different sites in your enterprise. From any Management Portal, you can access any Zone in your enterprise and perform operations across multiple-zones.

About the Core Capabilities

After installing the Management Portal, you can perform administrative and operational tasks on any piece of your Radia infrastructure. The core capabilities of the Management Portal are:

- **Network Discovery**
  The Management Portal automatically discovers the objects in your networks.
- **Authentication**
  Use the Management Portal Directory to authenticate administrators.
- **Delegated Administration**
  Create roles in the Management Portal so that your administrators have access only to the tasks that are relevant to them and their roles.
- **Remote Installations of Radia Infrastructure Components and RMP Zones**
  Use the Management Portal to install Radia infrastructure products to remote devices running Windows NT, 2000, XP and Server 2003, as well as HP-UX and Solaris. This includes the remote installation of additional Management Portal Zones at other sites in your enterprise. Each Zone manages the infrastructure for a given site, but you can access, open, and run jobs against any Zone in your enterprise from a single Management Portal.
- **Remote Infrastructure Administration**
  Use the Management Portal to manage Radia Management Infrastructure products. For example, you can start or stop services on your remote devices or browse client logs from a central location.
- **Remote Configuration Server and Policy Administration**
  Use the Management Portal to access the Radia Database on any Configuration Server in your enterprise, perform instance-level tasks, and assign and manage Policy through Active Directory.
- **Cross Referenced Device Groups**
  The Management Portal captures detailed information regarding device hardware, operating system, Radia infrastructure and managed services and stores it in the Management Portal Directory in self-managed cross reference groups. This simplifies notification of all devices for a given classification in a single step.
- **Notify**
  Use the Notify task to perform an action on the target device groups that you select. Notify all devices of a given type in one or all zones in your

enterprise. Notify using Wake-On-Lan (WOL) to perform operations during off-peak hours.

- **Querying**
  Use the query feature to extract information from the Management Portal Directory.
- **Scheduling**
  Use the scheduling feature to execute and track the progress of any task.
- **Auditing/Logging**
  Use the auditing and logging features to view information about administrators and the activities they performed within the Management Portal. All audit events will be stored in the log generated by the Management Portal.

About the Product Architecture

Although you will be working with the Management Portal in your Web browser, you may want to be familiar with the base architecture for this product.

The Management Portal is made up of the following:

- The **Portal Run-time** is the run-time technology that integrates Radia infrastructure services. This is made up of the Radia Integration Server (RIS) and the RMP.TKD (in the Radia Integration Server's `\modules` directory).
- The **Portal Zone Directory**, `zone.mk` (in the Radia Integration Server's `\etc` directory), is an LDAP directory service. When it starts, it loads the set of objects that represent a given instance of the Management Portal, or Zone. The objects stored in the `\etc\zone` directory and loaded at startup include all the information needed to manage a given set of infrastructure at a given location:
  - Managed devices (`device.mk`)
  - Device group memberships (`group.mk`)
  - Chassis container for blade enclosures and racks (chassis.mk)
  - Cross Referenced Device Groups (`xref.mk`)
  - Job Status and Job History (`job.ckpt` and `history.mk`)
  - Users (`user.mk`)

— Configurations for Entitlements, Tasks, and Services (`entitlement.mk`, `task.mk`, and `msg.mk`)

— Networks (`dns.mk` and `lanmanredirector.mk`)

Whether you have one or many Management Portal Zones in your enterprise, all zones load the same-named set of directories at startup.

- The **Radia Management Agent (RMA)**, installed on the remote device, performs tasks on behalf of the Management Portal. See Installing the Radia Management Agent on page 314 for more information.

Management Portal Zones Overview

Very large enterprises often find it necessary to use multiple Management Portals to effectively view and manage their existing infrastructure. With multiple portal sites, it becomes desirable to be able to perform operations across all sites from one central location. This release extends the scalability of the Management Portal by defining a Zone and a specific Zone Directory Structure for each Management Portal in your enterprise.

What is a Zone?

A **zone** is a logical set of devices, infrastructure, and software that is represented and managed in directory services and administered by the Management Portal.

A zone is created whenever the Management Portal is installed, and all objects in the zone include the high-level qualifier of the zone name. The first installed zone is called the master zone and others are called subordinate zones. The properties for the Zone object, itself, include the URL information needed to access the zone.

The Zone Directory Structure

Every Management Portal Zone has the same directory structure and same-named containers at the highest levels.

The next figure illustrates the Zone Directory Structure and Containers. See About the Zone Containers on page 96 for a description of each container and how they are used.

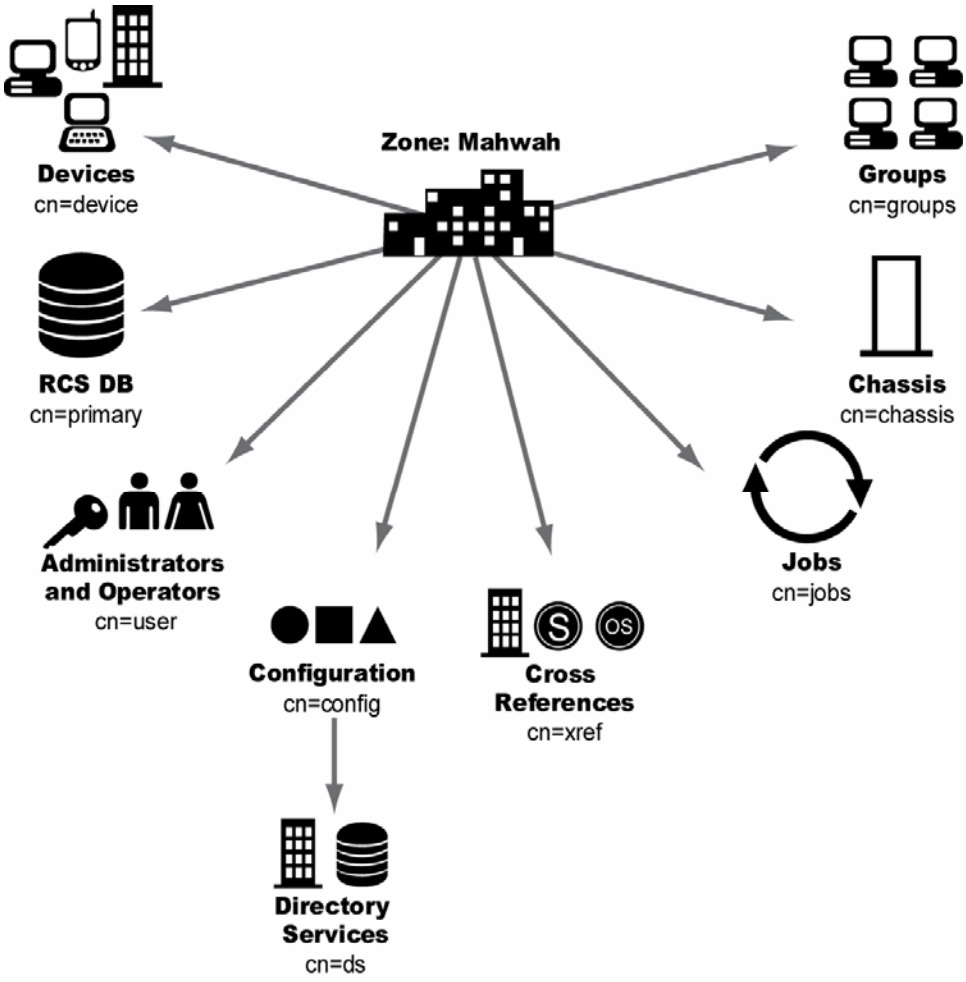


Figure 1: Management Portal Directory of a Zone.

About Object Names in a Zone

The Management Portal, itself, is a Directory Service containing objects of various object classes. Each object is assigned a Common Name (cn=*name*). The common name given to an object must be unique among all objects in that class. For example, all Zone names in your enterprise must be unique. Within a given Zone, all common names of objects of the same class must be

unique. The common names of the Zone containers are pre-assigned and the same across all Zones in your enterprise.

Each entry within a zone may be identified by its location. For example, the location of the **Devices** container entry in the figure above is `cn=device,cn=Mahwah` and the location of the PRIMARY file on the RCS is `cn=Primary,cn=Mahwah`.

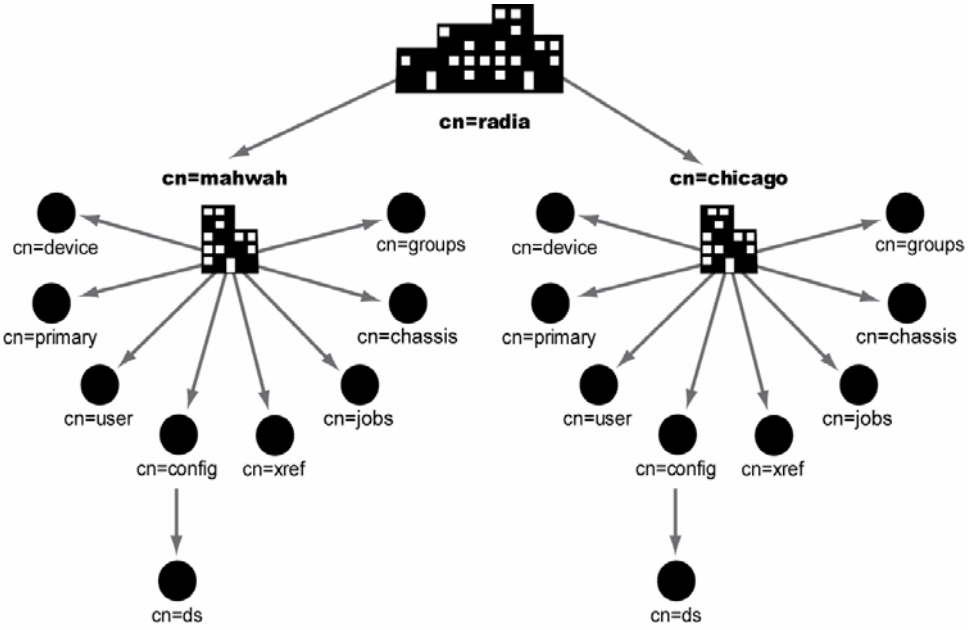


Figure 2: Multiple Zones of the Management Portal.

This naming convention serves to ensure that distinct names exist among devices and other objects across all zones in your enterprise. For example, in the figure above, the location of the Devices container in the Mahwah Zone is: `cn=device,cn=Mahwah,cn=radia` and the location of the Devices container in the Chicago Zone is `cn=device,cn=Chicago,cn=radia`.

The Common Name for any object displays in a small popup window as you hover your mouse pointer over the object's icon or label in the Management Portal.

The Directory Structure and naming context permit name distinction among all objects in all Zones in your enterprise. This allows the Radia

Administrators to schedule operations across devices in the entire enterprise from a single, central site.

New Terminology

The following terms are new to this release. They are often used throughout this guide. It may be helpful to become familiar with them before using this guide.

For a complete Glossary of Terms, see the Glossary at the end of this guide.

Directory Service

A Directory Service in this guide refers to any of the directory service types that can be accessed from the Management Portal. These include any Lightweight Directory Access Protocol (LDAP) directory, the Configuration Server, DSML (allowing access to another Management Portal zone), and metakit (*.MK) files. Metakit files allow access to a customized Management Portal container.

A Management Portal user can connect to other LDAP Directory Services (given proper authority) that have been defined in the Directory Services container.

blade enclosure

A physical container for a set of blades servers. It consists of a backplane that routes power and communication signals and additional hardware for cabling and thermal issues. It also hosts the CPU or server power supplies. See rack and server blade.

managed device

A computer or other hardware device in your network, such as a PDA or printer, that has been added to a Management Portal Zone Device container.

Mount Point

The location in a directory structure to which a connection is made. The mount point becomes the root node of the mounted directory, and thus you can only navigate to nodes at or below the mount point.

Master Zone

The initial Management Portal zone installed at an enterprise. Additional Management Portals are installed as subordinate zones to the Management Portal Master Zone, also called the Master Portal.

rack

A set of components cabled together to communicate between themselves. A rack is a container for an enclosure. See enclosure.

Schedule Zone Operation

The Portal task used to attach a schedule and launch predefined tasks against a device Group in the selected zone or set of zones. The job finds all devices currently in the named Group in all zones that have been selected as the audience of the operation.

server blade

A single circuit board, containing microprocessor(s), memory, and network connections that is usually intended for a single, dedicated application (such as serving Web pages) and that can be easily inserted into a space-saving rack or rack-mountable enclosure with many similar servers. Server blades are more cost-efficient, smaller and consume less power than traditional box-based servers. See enclosure and rack.

subordinate zone

The secondary Management Portal zones installed at an enterprise, usually from the initial Management Portal master zone. All zones across your enterprise must have unique names to allow for unique distinguished names for all objects across all zones in your enterprise.

Zone

A zone is a logical set of devices, infrastructure, and software that is represented and managed in directory services and administered by the Management Portal.

A zone is created whenever the Management Portal is installed, and all objects in the zone include the high-level qualifier of the zone name. The first installed zone is called the Master Zone and others are called Subordinate Zones. The properties of the Zone object specify the URL needed to access that zone.

Zone Access Points

The Zones Access Points container defines all Management Portal zones in your enterprise. Go to the Zone Access Points container to open another zone's Management Portal, as well as schedule zone operations on devices that exist in any zone in your enterprise. See *ZoneJob*.

ZoneJob

A job group scheduled for devices in a named Group across one or more Management Portal zones. Scheduling a ZoneJob requires a predefined Task Template that defines the job, such as the specific notify command, and Group names in each target zone to be the same.

Summary

- The Management Portal is a Web-based interface used to manage your Radia infrastructure across your entire enterprise.
- You can perform administrative and operational tasks on objects in your infrastructure, administer instances in the RCS database, and assign Policy using Active Directory.
- The Management Portal consists of the Portal Run-time, the Management Portal Zone Directory, and the Radia Management Agent (RMA). The set of container objects in a Zone Directory are loaded at startup.
- A zone is a logical set of devices, infrastructure, and software that is represented and managed in directory services and administered by the Management Portal. Each Zone Directory contains the same set of containers.
- Multiple Zones allow for management of unlimited numbers of devices at different device locations. Zone names must be unique. Object names in the same class must be unique in a zone.
- Additional functionality is available via Radia services.

2 Installing the Management Portal

At the end of this chapter, you will:

- Be able to install the Management Portal.
- Modify the `\media` folders to include a `\default` directory for client installs.
- Be able to log on to the Management Portal.
- Be able to change your password.

Preparing for Installation

1. Before installing the Management Portal, locate your HP license file.

   If you need assistance, contact HP Technical Support.

2. Assemble the following set of Radia CD-ROMs that are used during a complete Management Portal install:
   - Management Infrastructure CD-ROMs
   - Management Applications CD-ROM
   - Publications CD-ROM
3. Review the README file delivered with the product for the latest information.

Installing the Management Portal

You can use the Management Portal to view and manage your existing Windows infrastructure, add new Radia infrastructure products and applications, as well as perform service and policy administration on your Radia database, using Active Directory if needed.

This release supports environments with multiple Management Portal (RMP) sites using the new zone architecture and features. Each Management Portal site being managed from the master portal site needs to have version 2.1 installed.

Radia Prerequisites

Management Portal 2.1 has been optimized to work with the REXX method ZTASKEND (Version 1.8 or above) and the Messaging Server (version 2.0 or above).

We recommend using the Management Portal with the latest ZSTASKEND and the latest Messaging Server to improve the information process flow between the Configuration Server and the Management Portal.

- ZTASKEND Version 1.8 is installed automatically when you upgrade to Configuration Server 4.5.4 SP3 or SP4.

- ZTASKEND Version 1.9 is installed automatically when you upgrade to Configuration Server 4.5.4 SP5.

For details on migrating your Configuration Server, refer to the *Radia_RCS_Migrate.PDF* located in the `migrate_RCS` folder of the Radia 4.1 RCS media location.

For details on installing the Messaging Server, refer to the *Messaging Server Guide*.

System Requirements

- **Server**
  - Any of the following Windows platforms:

    NT 4.0 Server, Service Pack 6

    2000, Service Pack 3

    Server 2003, Service Pack 1

    XP Professional, Service Pack 2
  - Installation of the Management Portal requires Administrator authority.
- **Client**
  - Any platform that supports a Web browser.
  - Microsoft Internet Explorer 4.0 or higher or Netscape 4.0 or higher *with cookies enabled*
  - Security for a Microsoft Internet Explorer browser must be set no higher than **medium**.

Directory Size of a Single Zone

The **Portal Directory**, `zone.mk` (in the Radia Integration Server's `\etc` directory), loads all configuration and entitlement information for the Management Portal as well as devices, groups, managed infrastructure, job status, network and mounted services information.

A single Radia Mangement Portal zone has an absolute limit of 10,000 devices. We recommend limiting the number of devices managed by a single zone to the following:

- Recommended: 1,000 to 2,000 devices

- Maximum: 5,000 devices

Multiple Management Portal Zones can be installed to meet the needs of enterprises of any size. To create additional zones in your enterprise, see Installing Additional RMP Zones (Subordinate Zones) on page 349.

Installation Procedures

Do not install this version of the Management Portal on a machine running a 1.x version of the Management Portal. For more information, refer to the `Upgrade Procedures PDF` located in the `management_portal\migrate f`older of the Radia 4.1 Extended Infrastruction media location.

Use the following procedure to install the first Management Portal Zone in your enterprise.

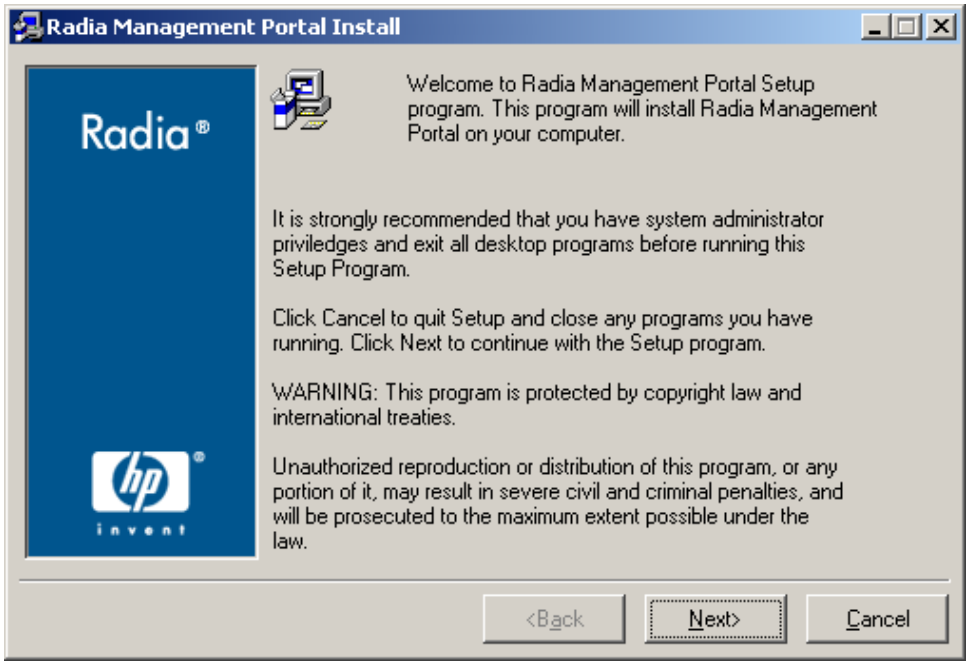
To install additional Management Portal Zones in your enterprise, use the **Install RMP** task in the Operations task group. For details, see Installing Additional RMP Zones (Subordinate Zones) on page 349.

To install the Management Portal 2.x

Stop the service for the Radia Integration Server (httpd) if it is installed and running on the machine on which you are installing the Management Portal.

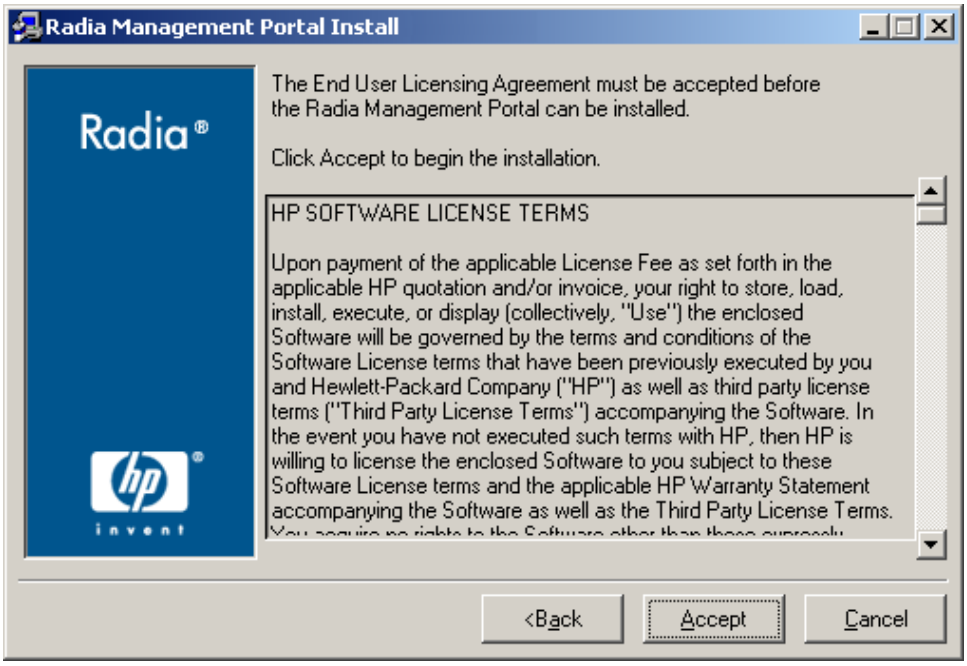
1 On the Management Infrastructure CD-ROM, go to `extended_infrastructure\management_portal\win32` and double-click **setup.exe**.

The Management Portal Install window opens.



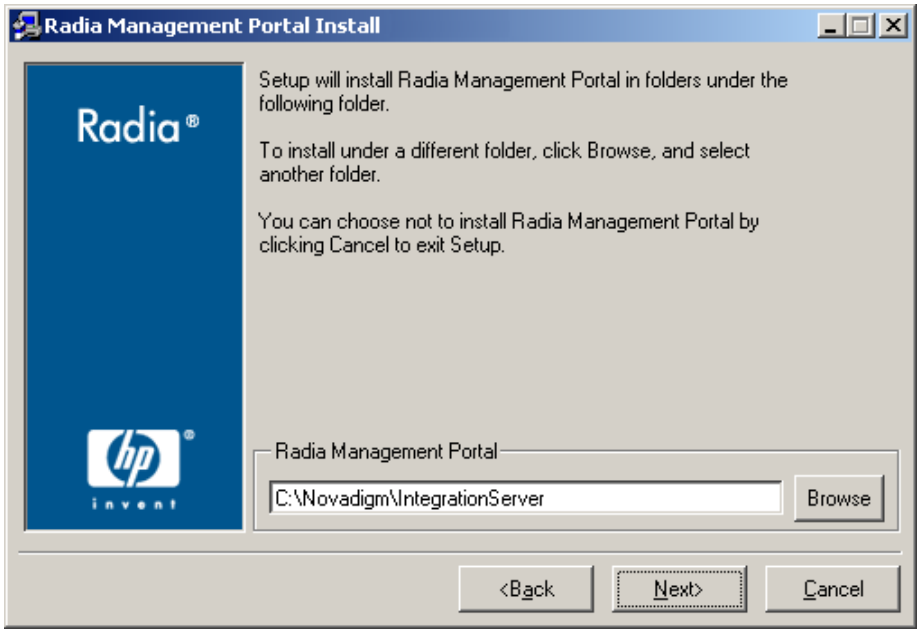
2 Click **Next**.

The End-User License Agreement window opens for you to read the licensing terms for this product. You must accept the terms before the Proxy Server can be installed.



3 Click **Accept** to agree to the terms of the software license and continue with the installation.

The Management Portal Location window opens.

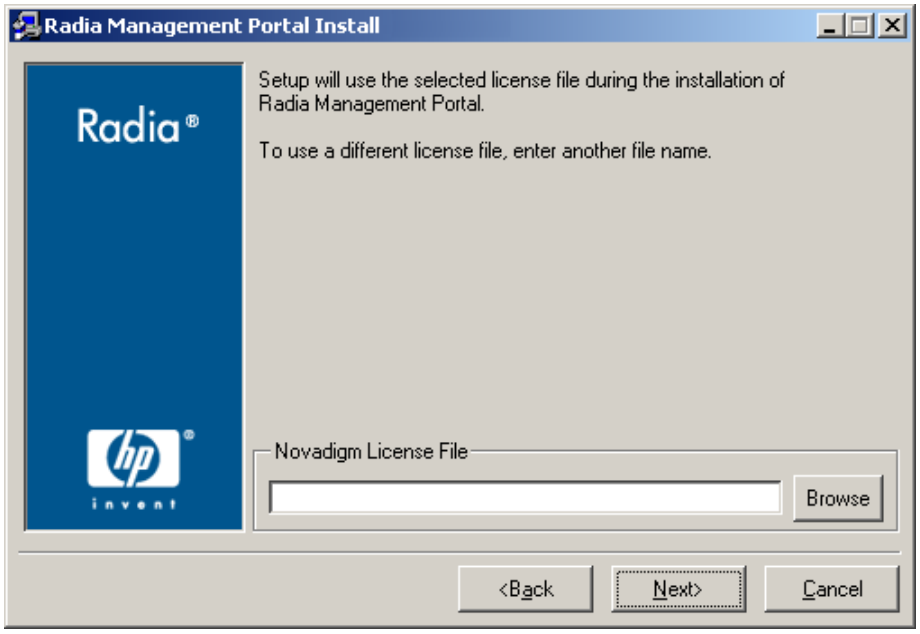


4 Use this window to select the folder where you want to install the Management Portal.

> If the Inventory Manager is already installed on the computer, the Management Portal will be installed in the same directory, and the prompt for an install location is skipped.

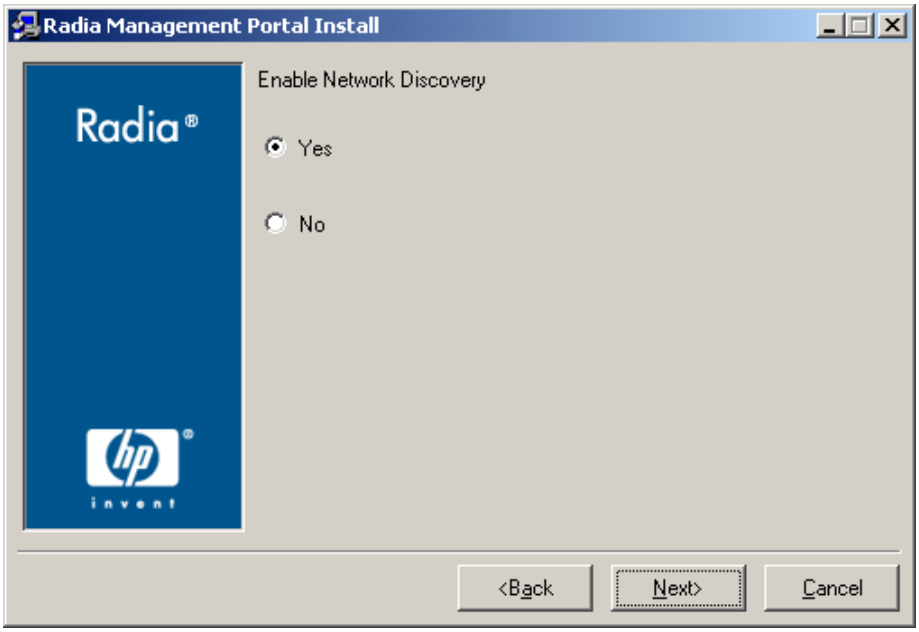
5 Click **Next** to accept the default installation folder specified in the window, or click **Browse** to navigate to and select a different folder, and then click **Next**.

The License File window opens.



6 Click **Browse** to navigate to the location of your license file. If necessary, the installation will rename the license file to `license.nvd`. Then, it will copy the license file into the Radia Integration Server's `\modules` directory.

The Enable Network Discovery window opens.



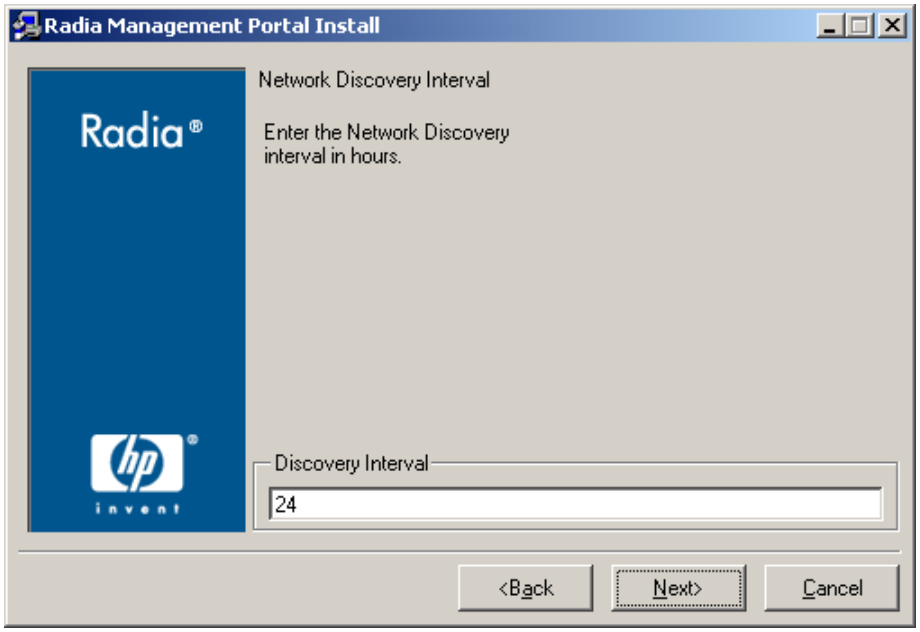
7 Click **Yes** to enable Network Discovery (*recommended*). This option enables the Management Portal to automatically discover all devices in your Windows environment that you can manage.

OR

Click **No** to disable Network Discovery. This option is best used if you are testing the Management Portal and want to prevent the automatic discovery of all machines in your environment from occurring.

8 Click **Next**.

The Network Discovery Interval window opens.

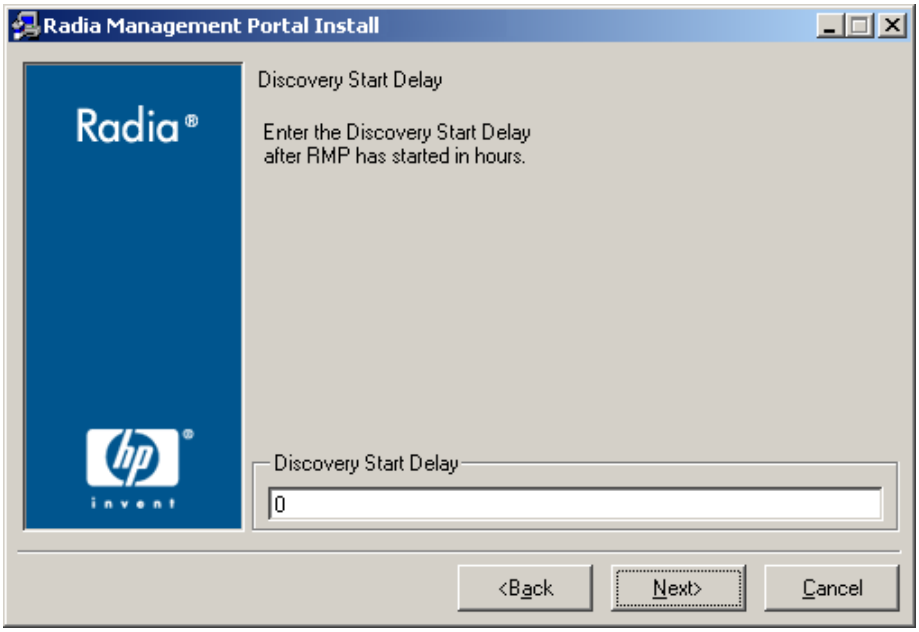


9 In the **Discovery Interval** text box, type how often (in hours) you want the network discovery job to run. Valid entries are 1 to 24. The default is 24 hours.

To modify this Network Discovery Interval after installation, edit the NETSCAN_POLL parameter of the configuration file. For details, see Configuring Network Discovery on page 134.

10 Click **Next**.

The Discovery Start Delay window opens.

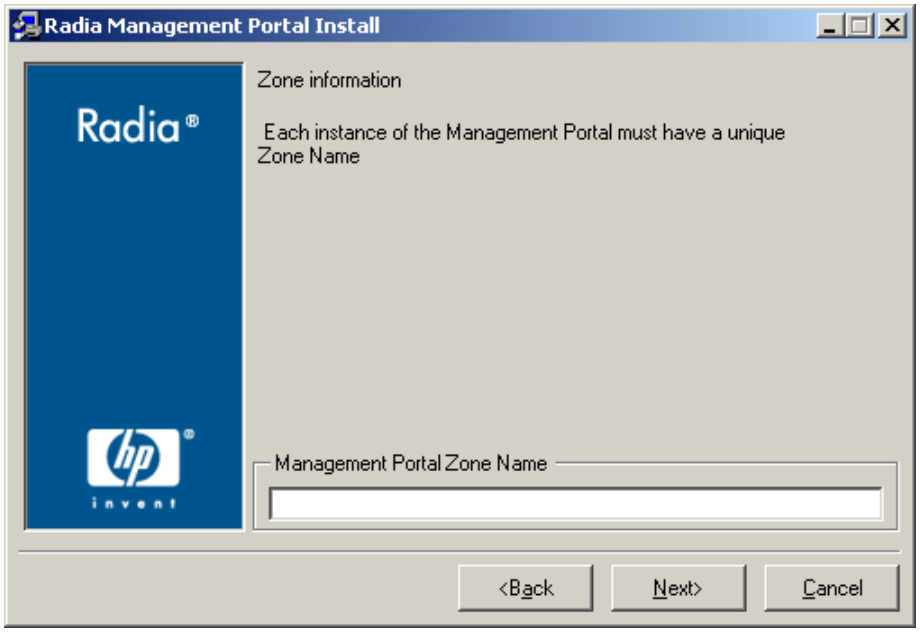


11 In the **Discovery Start Delay** text box, type how long you want to wait (in hours) after the Management Portal starts before starting the network discovery. The delay applies each time the Management Portal is started. Valid entries are 0 to 24 hours. By default, Network Discovery starts when you start the Management Portal.

To modify the Discovery Start Delay after installation, use the NETSCAN_START_DELAY parameter in the configuration file. For details, see Configuring Network Discovery on page 134.

12 Click **Next**.

The first Zone information window opens.



13 In the **Management Portal Zone Name Name** text box, type a zone name to represent this instance of the Management Portal. Each instance of the Management Portal in your enterprise must have a unique zone name.

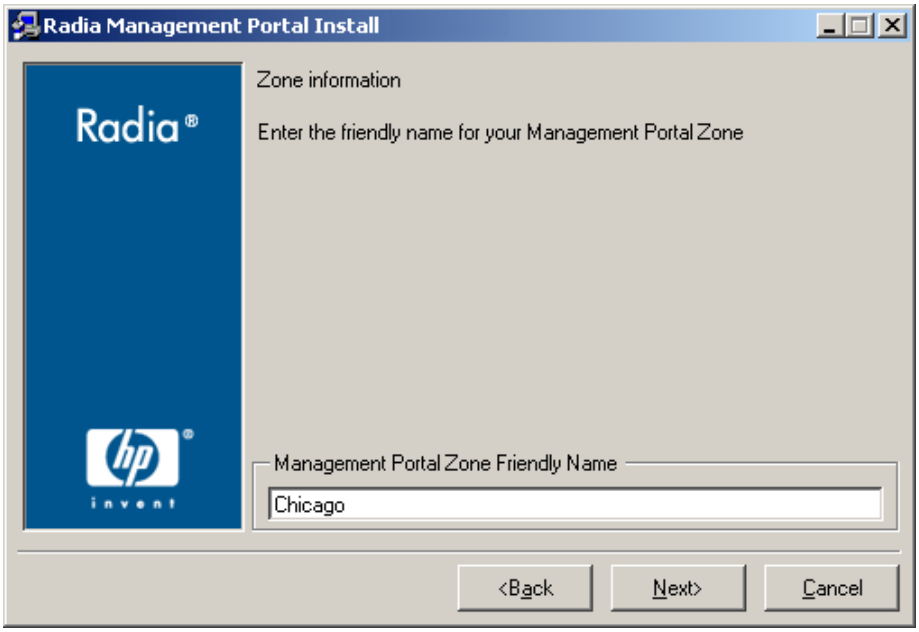
Enter a name up to 64 characters long. Use only letters (a-z and A-Z), numbers (0-9) and the space character. Do not use special characters, such as an underscores, commas, or periods.

Typically, the initial zone name identifies the entire infrastructure being managed, such as ACMECorp. Later installations of subordinate zones are named for the division or location of infrastructure being managed under that zone, such as NorthAmerica or Chicago.

See What is a Zone? on page 26 for more information about Zones.

14 Click **Next**.

The second Zone information window opens.

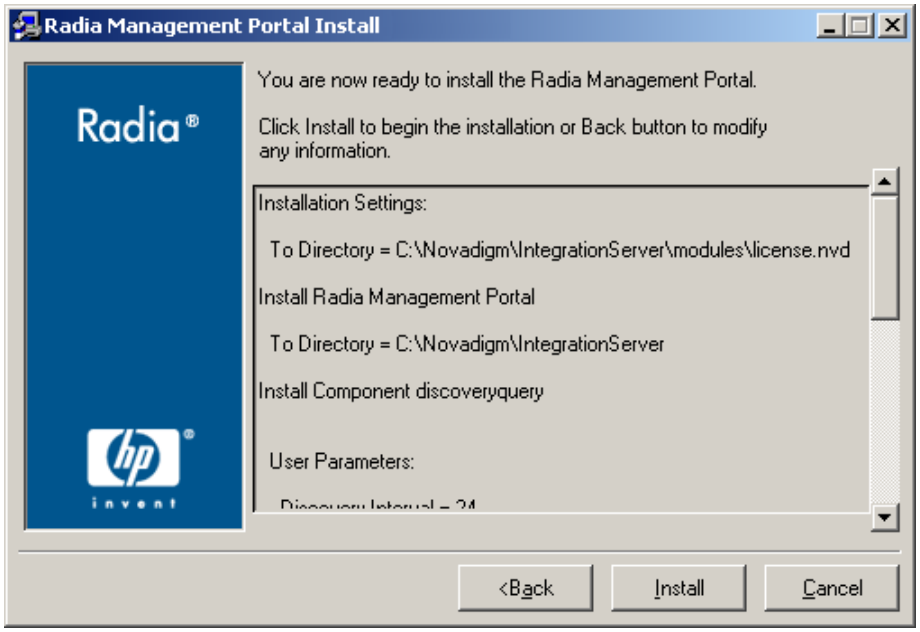


15 In the **Management Portal Zone Friendly Name** text box, type a friendly name for this Management Portal Zone. Optional. If omitted, will default to the Zone Name.

The friendly name is the display name for the Zone in the Management Portal user interface.

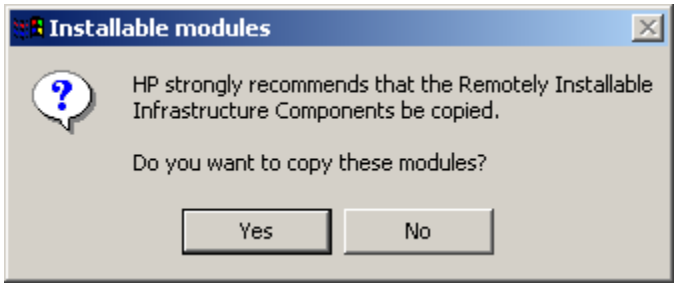
16 Click **Next**.

A summary of the installation information opens.



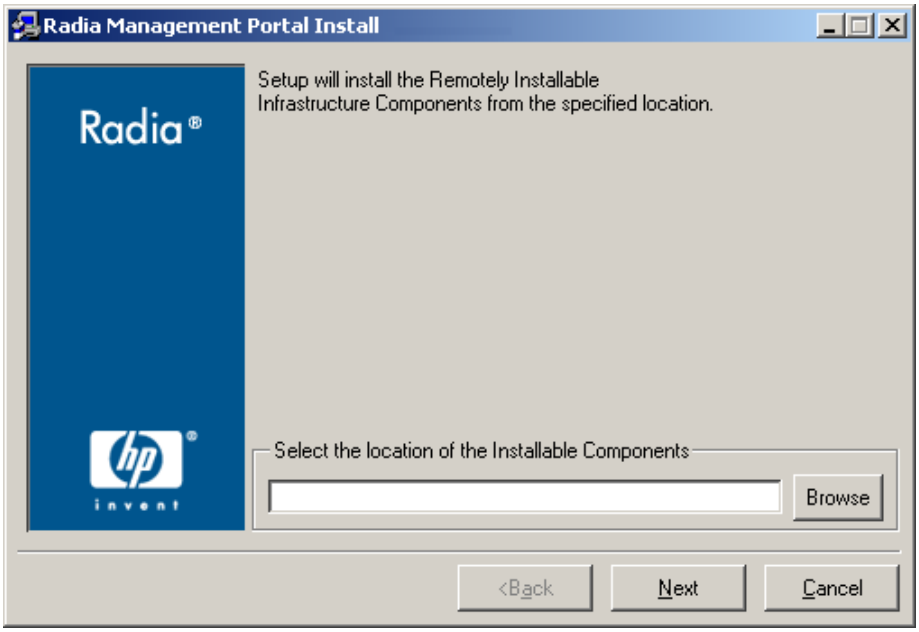
17 Click **Install** to begin the installation.

A message box prompts you to copy the modules used to perform remote installations of the Radia infrastructure components.



18 Click **Yes**.

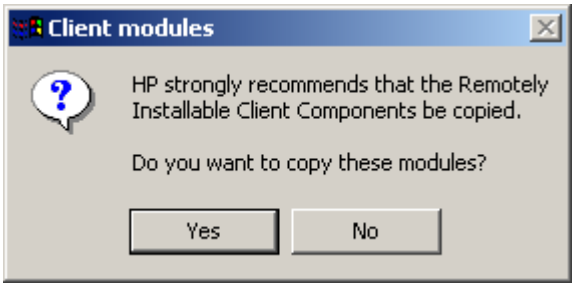
The Remotely Installable Components Location window opens.



If necessary, click **Browse** to navigate to the location of the Management Infrastructure CD-ROM.

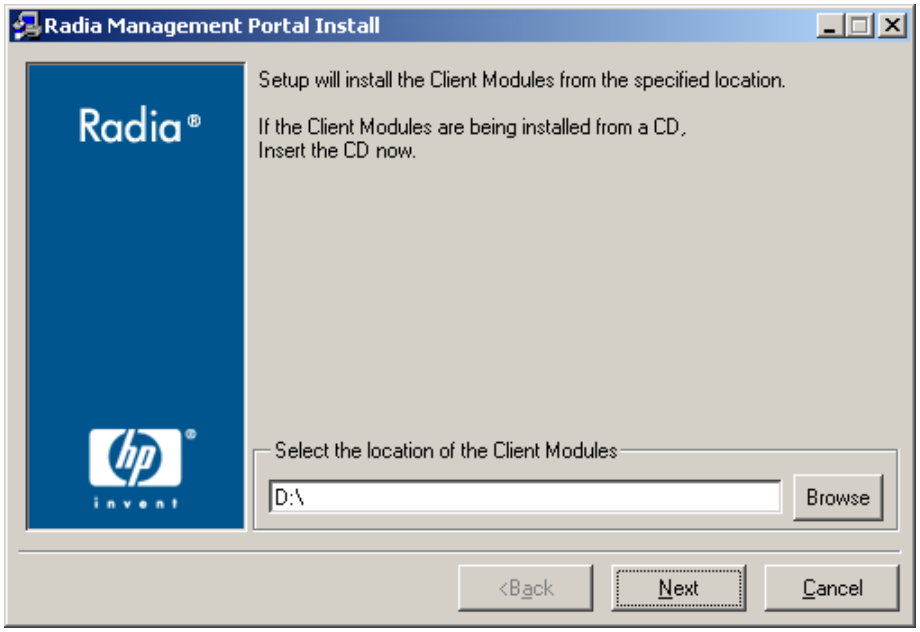
19 Click **Next**. The modules are copied to the Radia Integration Server's `\media` directory.

A message box prompts you to copy the Radia Client modules to be used for remote installations.



20 Click **Yes**.

The Client Modules Location window opens.

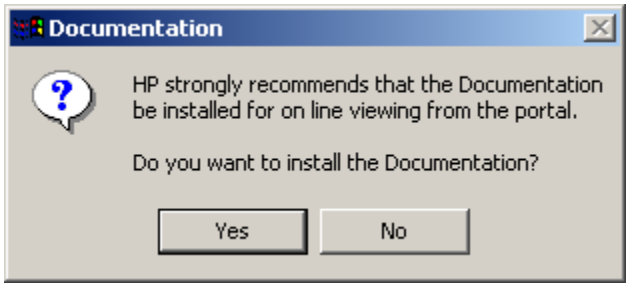


If necessary, remove the Management Infrastructure CD-ROM and insert the Management Applications CD-ROM.

21 Click **Browse** to navigate to the location of the Management Applications CD-ROM for the Radia Client modules.

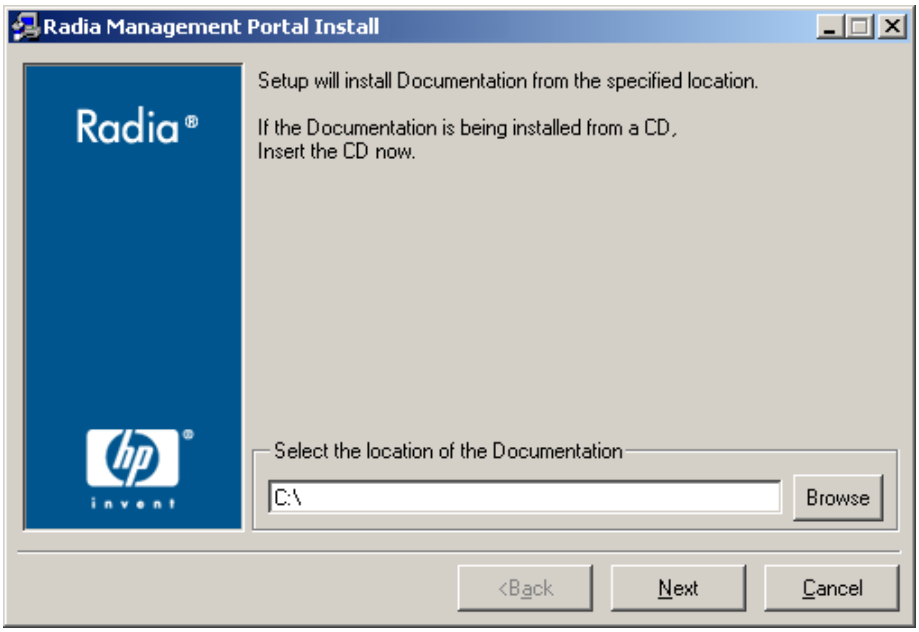
22 Click **Next**.

The Radia Client modules are copied to the Radia Integration Server's `\media` directory. Then, a message box prompts you to install the Documentation (Radia Publications Library).



23 Click **Yes**.

The Publications Location window opens.



If necessary, remove the Management Applications CD-ROM and insert the Publications CD-ROM.

24 In the Publications Location window, select the location where the documentation source is stored.

25 Click **Next**.

The Radia Publications Library is installed to the Management Portal.

26 Click **Finish** when the installation is complete.

The Management Portal opens.

27 Logon as Admin (the password is secret).

Updating Portal Tasks

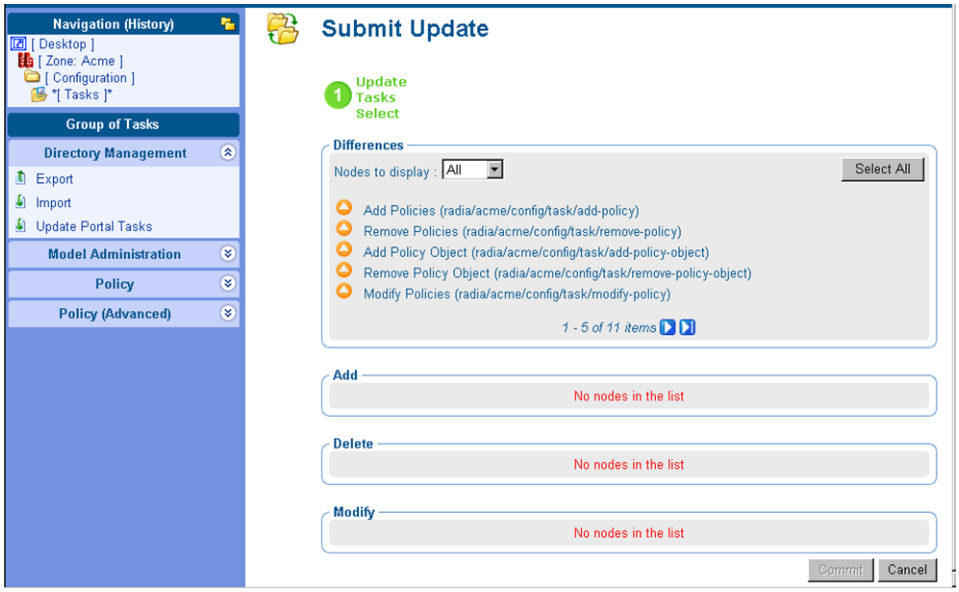
This task is not required the first time you install Management Portal Version 2.x.

Use **Update Portal Tasks** to update the tasks available to you when you receive a new build of the Management Portal. Any tasks not selected for update remain available for selection at a later time.

Tip: The list of tasks to be added or updated when you run Update Portal Tasks automatically tells you "What's New" in any Management Portal release.

1. If necessary, restart the Management Portal, (the Radia Integration Server [httpd] service).
2. Logon as Admin (the password is secret) and run **Update Portal Tasks**. Details for running Update Portal Tasks follow.
3. Use the **Navigation aid** to select **Directory → Zone → Configuration → Tasks**.
4. In the **Directory Management** task group, click **Update Tasks**.
5. The Submit Updates dialog box opens.
6. Review the task changes in the Differences list and select those that you wish to update.
   - To select all task changes, click **Select All**.
   - To select individual task changes, double-click the item.

HP recommends that you do *not* update a task that has been intentionally customized, such as a Notify task. Doing so will overwrite any customizations. The unaccepted task changes remain available for update at a later time.



7 Click **Commit**.

The new and revised tasks that you selected for the latest release are now available.

To log off the Management Portal

- In the banner area, click **Logout**.

Updating RMP Zones with a New Build

Refer to the Release Notes that accompany a new build of the Management Portal for details on how to apply the updates. Generally, the same procedure used to install the initial RMP Zone in your enterprise can also be used to apply updates.

To update the subordinate Zones in your enterprise with a new build, the Management Portal includes an **Update RMP** task that is available as of version 2.0.1. For details, see Updating Subordinate RMP Zones on page 355.

If the new build also includes modifications to the Radia Management Agent (`RMA.TKD`), use the **Install Management Agent** task to update the Radia Management Agent on the device hosting the Management Portal Zone as well all devices being managed by that Zone.

Specifying the IP Address for a Remote Management Portal

When running the Configuration Server with the Messaging Server, it is no longer necessary to specify the IP address and port for the Management Portal in the MGR_RMP section of `edmprof.dat`.

Posting Client Objects to the Management Portal

As of Radia v4.x, all client objects collected by the Configuration Server are routed to external servers and databases by the Messaging Server. When a Messaging Server is installed, it may be configured to post objects to a Management Portal Zone or discard them.

For details on how to how to configure the Messaging Server to post client objects to a Management Portal Zone, refer to the *Installation and Configuration Guide for the HP OpenView Messaging Server using Radia.*

Notifying clients using Wake-On-Lan (WOL) from the Management Portal no longer requires you to route client objects to the Managent Portal. The Radia Management Agent now collects the MAC address and Subnet information needed for WOL directly from any device which has a Radia client installed.

To verify that the Messaging Server is posting objects to the specified Management Portal, you can either monitor the posts in the Messaging Server log or check the Cross References container for Managed Services in the Management Portal (since each client's device will show the services that you deployed to it under the Cross References for Managed Services container).

Starting and Stopping the Management Portal

To start the Management Portal

1. If necessary, go to the Windows Services. For example, in Windows 2000, right-click the **My Computer** icon on your desktop. Then, go to **Manage** → **Expand Services and Applications** → **Services**.
2. Right-click the Radia Integration Server and select **Start**.

To stop the Management Portal

1. If necessary, go to the Windows Services. For example, in Windows 2000, right-click the **My Computer** icon on your desktop. Then, go to **Manage** → **Expand Services and Applications** → **Services**.
2. Right-click the Radia Integration Server and select **Stop**.

Accessing the Management Portal

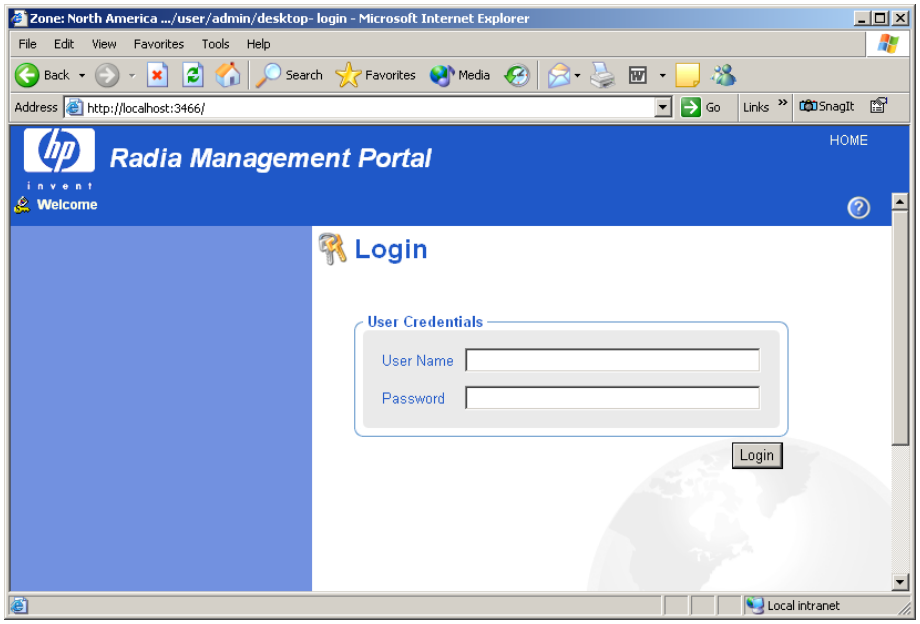
To access the Management Portal

1. Open your Web browser.

   See the Client topic of System Requirements on page 35 to review the Web browser requirements for the Management Portal.

2. In the Address bar, type **`http://<IP_Address or host name>:3466`**.
   - *`IP_Address`* is the IP address of the computer where the Portal Zone Directory is installed.
   - *`Host name`* is the host name of the computer where the Portal Zone Directory is installed.



If the HP OpenView Inventory Manager Using Radia, the HP OpenView Policy Manager Using Radia, or the Radia Publications Library CD-ROM is installed on the same computer as the Management Portal, links for INVENTORY, POLICY or PUBLICATIONS, respectively, will be available in the top-right banner area, next to the link for HOME.

For example, if PUBLICATIONS displays in the banner area of the Management Portal, click on the link to access the Radia Publications Library.

Logging On

To log on to the Management Portal

1 In the **User Name** text box, type a user name.

— **Admin**
Type **`Admin`** to log on with complete access to the Management Portal. We recommend that you do not modify this ID.

The password is **`secret`**.

Be sure to change your password before moving the Management Portal into your production environment. See *Changing Passwords* on page 56 for more information.

— **Guest**
Type **`Guest`** to log on as an unauthenticated user without access to tasks.

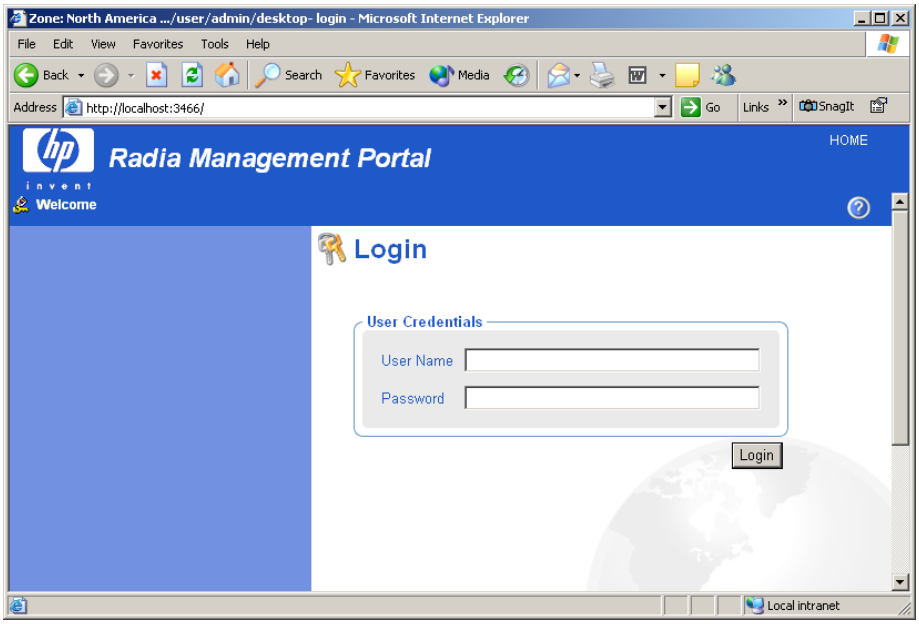
No password is necessary.

— **Operator**
Type **`Operator`** to log on as a user with access to basic operations.

No password is necessary.

— **Test**
Type **`Test`** to log on as a test user with very limited access. You can log on as the Portal Administrator and modify the entitlement options for the Test User. Then, log on as Test to view the results of your changes.

No password is necessary.



2 If necessary, in the **Password** text box, type a password. The password is case-sensitive.

The password for the Admin ID is **secret**. No password is necessary for the other IDs.

3 Click **Login**.

OR

Press **Enter**.

Your User ID appears in the banner area (the top, left area of the interface) and the highest-level representation of your Radia Zone Directory appears in the workspace. See Performing Any Task in the Management Portal on page 62 for more information.

To log off the Management Portal

- In the banner area, click **Logout**.

Changing Passwords

Changing your password requires familiarity with the user interface and the basics of performing a task. It is performed in the Modify Person dialog box for the specific user.

For information about the Management Portal user interface, see page 63.

- For information about performing tasks, see Performing Any Task in the Management Portal on page 62.

To change your password

1 Use the Navigation aid to go to the Zone location; from the initial logon location of your Desktop, click **Directory** in the workspace, and then click **Zone**.

2 In the workspace, click **Administrators & Operators**.

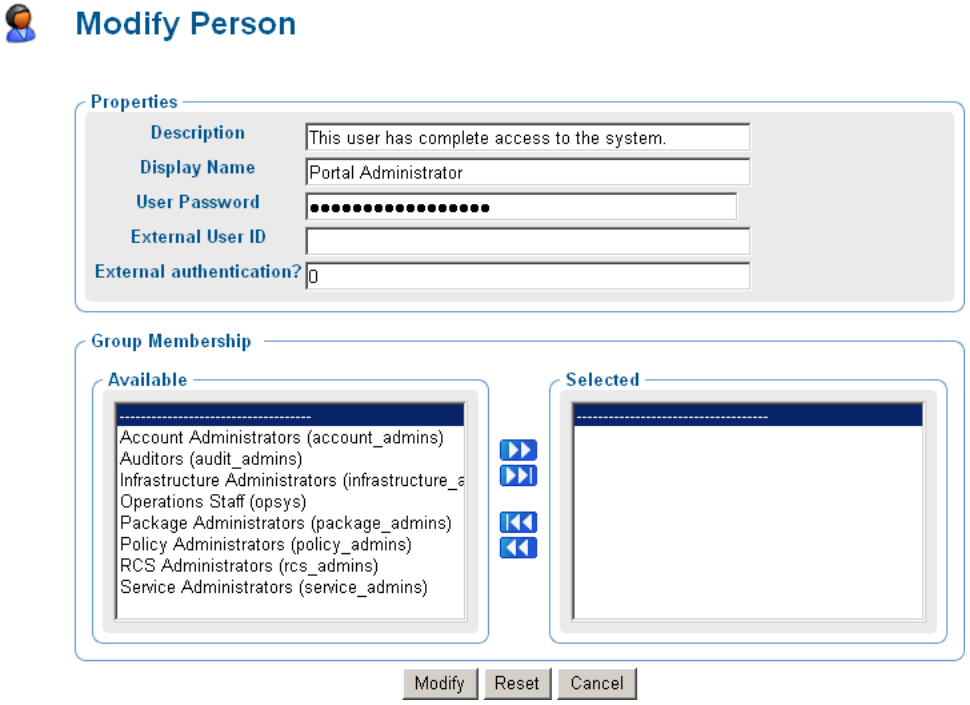
3 In the workspace, select the person whose password you want to change, such as the Portal Administrator.

The workspace displays the Desktop and Sessions container for the Person.

The User Password field is not shown on the Properties dialog box for a Person, but can be changed from the Modify Properties dialog box for that Person.

4 In the Model Administration task group, click **Modify**.

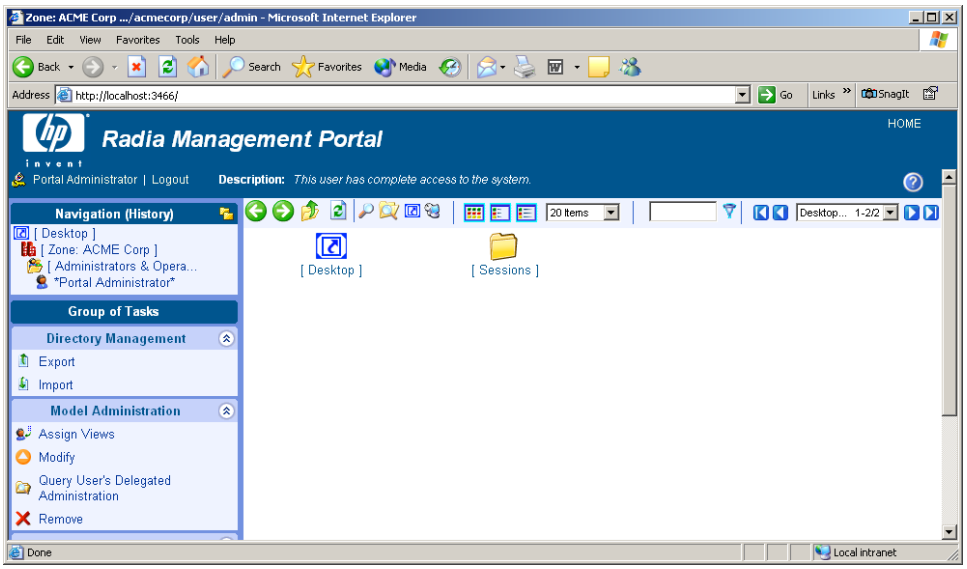
The Modify Person dialog box opens.



5 In the **User Password** text box, select all asterisks masking the old entry, and then type the new password. Passwords may include alphanumeric characters as well as spaces and special characters, such as #, $, and \.

6 Click **Modify**.

The Modify Person dialog closes and the workspace displays the Desktop and Session containers for the Portal Administrator.



The password is changed, but is not displayed for security purposes.

To display the properties for any user, go to the **Zone** → **Administrators and Operators** container, select the user object, and then click the **View Properties Toolbar** icon .

Summary

- Install an initial Management Portal 2.x, giving it a zone name. This installation becomes your enterprise's Master Zone.
- To install additional Management Portal zones, use the Install RMP task in the Operations task group. This task installs subordinate zones remotely. All zones in your enterprise must be unique.
- Click **Logout** in the banner area to log off the Management Portal.
- Change passwords from the Zone, Administrators, and Operators container. Select the user and click **Modify** from the Model Administration task group.
- Run Update Portal Tasks after obtaining a new build of the Management Portal to update the tasks available to you.
- Run Update RMP to update subordinate Zones in your enterprise with a new build, such as a Management Portal Service Pack.
- Optionally, the Messaging Server can be configured to route client-objects from the Configuration Server to the Management Portal.

3 Using the Management Portal

At the end of this chapter, you will:

- Be familiar with the Management Portal user interface for 2.x, including how to use the Navigation aid in location and history mode, how to use the Desktop and shortcuts, and how to use the Toolbar icons.
- Be familiar with the task groups and tasks available in this version fo the Management Portal.
- Be familiar with the new icons that represent the objects in your infrastructure.
- Be familiar with the Zone containers that exist at the highest level of the directory.
- Know how to navigate to any location in the Management Portal Zone.
- Know how to navigate to locations that has been configured for access from the Management Portal, including Networks, the Radia Database on a Configuration Server and an Active Directory or other LDAP Directory in your enterprise.
- Be able to use the RCS Administration tasks to manipulate *instances* in the Radia Database
- Be able to use the Policy and Policy (Advanced) tasks to assign and manage policy through an LDAP Directory, including Active Directory.

Performing Any Task in the Management Portal

One of the benefits to using the Management Portal is consistency. Because of this consistency, you can use the same basic procedure whether you are notifying devices in your infrastructure or installing the Proxy Server on remote computers.

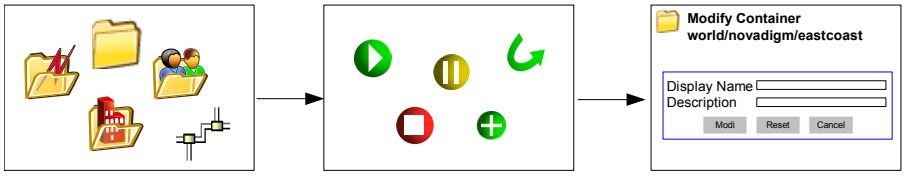
To perform any task in the Management Portal

1. Use the Navigation aid to select where, in your infrastructure, you want to perform a task. Your selected location is also called your **authority**.

   The procedures throughout the guide refer you to the appropriate starting locations. See the Taskbar and Task Summary on page 79 for a list of all tasks.

2. From the **Group of Tasks** taskbar, select a task.

3. In the workspace, enter the information needed to complete the task, such as the device members you want to perform the task on or information about when the job should execute. See About the Task Lifecycle on page 291 for detailed information on completing tasks.



For detailed information about the user interface, see About the Management Portal 2.x Interface on page 63.

For detailed information about specific tasks, see the Administrative Functions and Operations Functions chapters.

For detailed information about using the RCS and Policy tasks, see the topics beginning with Using the RCS Administration Tasks on page 101.

About the Management Portal 2.x Interface

The Management Portal (RMP) user interface contains several distinct areas.

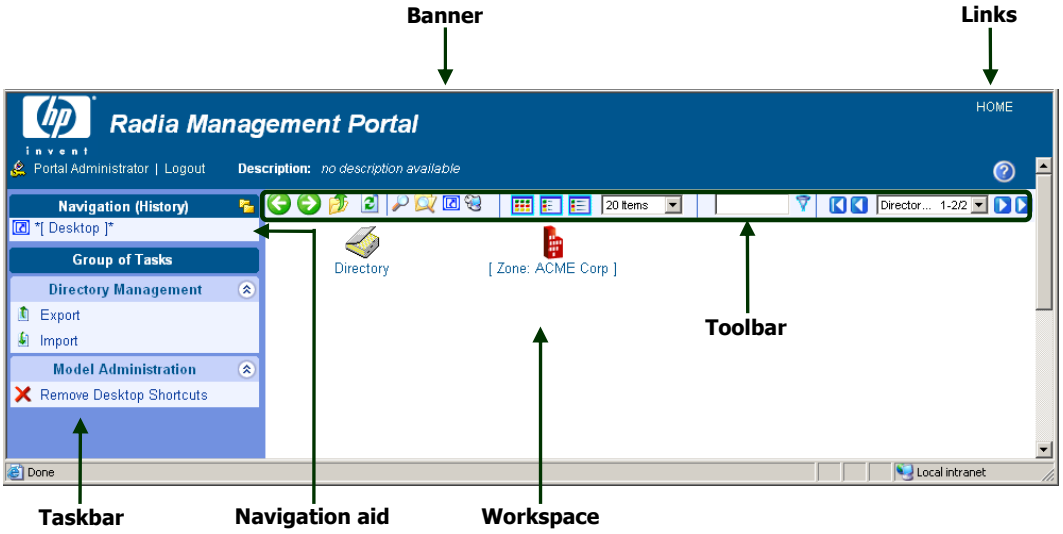


Figure 3: RMP 2.x User Interface

a Banner

b Navigation Aid

c Taskbar

d Links

e Toolbar

f Workspace

- **Banner area.** This area is discussed on page 64.
- **Navigation aid (History or Location mode)**. The previous Authority navigation aid is renamed the Navigation aid. The new Navigation aid has two modes: History (the default) and Location (the mode used in all RMP 1.x releases). Use the icons in the top-right of the Navigation title

bar to quickly switch from one mode to the other. For details, see Navigation Modes: History and Location on page 66.

- **New Desktop location**. When you log on to the Management Portal, you start at the level of your Desktop, in Navigation (History) mode. This starting location gives you quick access to the Management Portal Directory and the containers and objects in the current Management Portal Zone. As you use this version of the Portal, you can add (and then remove) shortcuts for other locations or devices to your desktop. From the level of the Directory, you can access an external Active Directory that has been configured for access by a Portal Administrator. See Accessing and Returning to Your Desktop on page 70 for more information.
- **New Navigation indicators**.
  - *Asterisks* surround the entry in the Navigation aid that is your current location. The objects for this location are displayed in the workspace.
  - [Brackets] indicate an object has children.
- **New Groups of Tasks**. See Taskbar and Task Summary on page 79 for a complete list of Task Groups and a summary of all tasks available from the Portal.
- **New Toolbar icon buttons.** See Toolbar on page 91 for more information.
- **New Container objects** in your Radia Zone. See Radia Directory and Zone Objects on page 94.

Banner

The banner area contains descriptive information about where you are in the Radia Directory, several links, and displays version information for the product.

- Click **Logout** to log off the Management Portal (RMP).
- Click **HOME** to return to the RMP home page. This is the Directory location in Navigation (Location) mode.
- Rest the mouse pointer on the  button to display the Management Portal version number. For example, a display of `RMP V2.1` indicates the Management Portal Version 2.1.

- After logging in, click the button to view detailed version and build level information for the Management Portal component modules. This information is helpful when you are contacting HP Technical Support. For more information, see Viewing the Version Information Window on page 388.

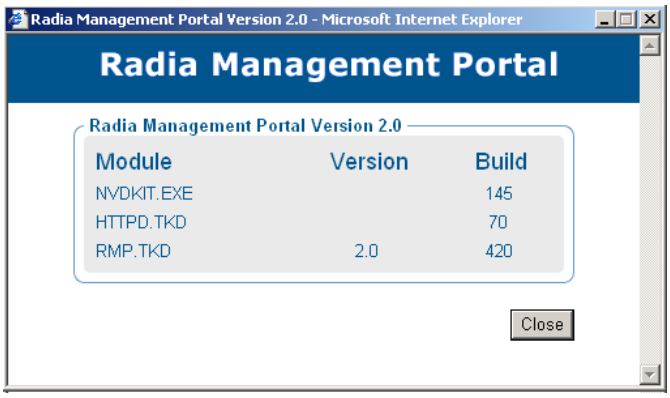


Figure 4: RMP Version Information window.

If the Inventory Manager or Policy Server are installed on the same computer, click the appropriate link (**INVENTORY** or **POLICY**) in the banner of the Management Portal to access them.

If the Radia Publications Library is installed on this computer, click the **PUBS** link in the banner of the Management Portal to access the library.

Using the Navigation Aid

Use the Navigation aid to browse and then select the place in the Management Portal Directory where you want to perform a task. It is important that you understand that every task you select in the Management Portal is performed within the selected authority.

When you logon to the Management Portal, you start at the level of your Desktop, in Navigation (History) mode.

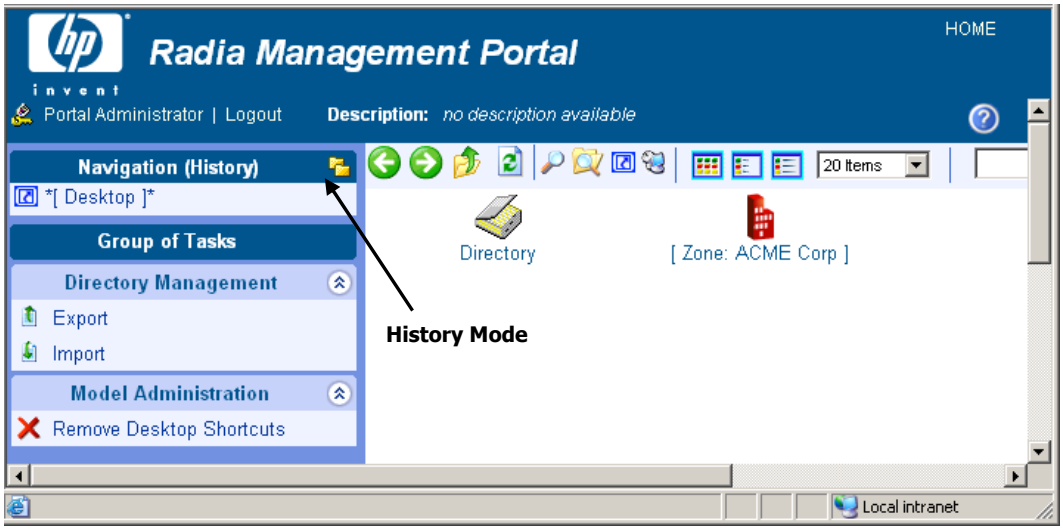


Figure 5: Initial Desktop location in Navigation (History) mode.

This starting Desktop location gives you quick access to the Management Portal Directory and the containers and objects in the current Management Portal Zone.

You can add shortcuts to your desktop to quickly go to objects that you use most often. See Adding Shortcuts to Your Desktop on page 70 for more information.

Navigation Modes: History and Location

There are two modes of navigation: Navigation (History) and Navigation (Location). Click the icon to switch between the modes at any time.

- **Navigation (History)**
  This is the default mode of navigation when you login to the Management Portal. To toggle to the Navigation (Location) mode, click .

  The Navigation (History) aid provides a record of your navigation path. To quickly return to a previously visited location, just click any entry in the Navigation (History) record.

— *Asterisks* surround the entry in the Navigation aid that is your current location. The objects for this location are displayed in the workspace.

— [Brackets] indicate an object has children.

The figure below shows the user's current location is the ACME Corp **Zone** level, but the user previously visited the Microsoft Windows Network within the Zone Networks container.

Use the History mode to jump back and forth among visited locations.

Figure 6: Navigation (History) records visited locations.

- **Navigation (Location)**
  This mode allows you to use the Directory structure to select where in the Directory you want to perform your task. To toggle to the Navigation (History) mode, click .

  The next figure shows the Desktop location when viewed in Navigation (Location) mode. The Desktop is under the current Person's entry within the Zone Administrators & Operators container.

Figure 7: Desktop location in Navigation (Location) mode.

Sample Navigation Session: Viewing Network Objects

Use the steps in the following procedure to become familiar with navigating the Management Portal Zone containers and viewing the objects automatically discovered in your networks.

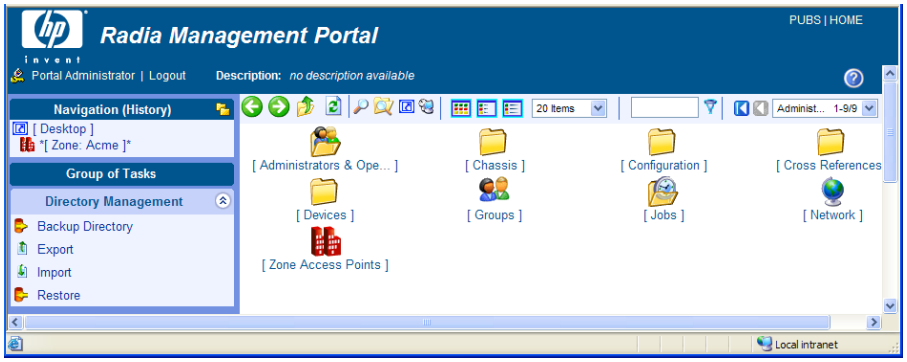
To access the Portal Directory and the Microsoft Windows Network

1 When you first logon, your Desktop displays in the Navigation aid. If you aren't at this location, click **HOME** in the banner area and then click on the **Desktop** entry in the Navigation area.

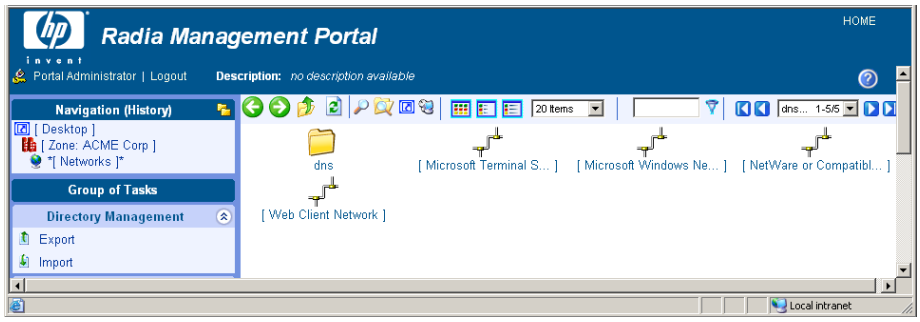
The Management Portal Directory object appears in the workspace.

2 In the Workspace, click **Zone**.

The highest-level objects in the Zone appear in the workspace. See About the Zone Containers on page 96 for more information.



3 In the workspace, click **Network**.



Notice that the navigation aid now lists **Desktop**, **Zone**, and **Network**. This is your selected authority.

Besides the Microsoft Windows Network of discovered objects, there are also entries for DNS, Microsoft Terminal Services, Netware, and Web Client Networks**.** Your list will vary according to your enterprise networks and what networks have been configured as mount points. See Configuring Directory Services on page 140.

4 In the workspace, click **Microsoft Windows Network**.

5 In large networks, use the filtering and paging options to locate objects by their common name:

— For example, enter **`*nt*`** in the filter text box and click to view only those objects whose names include "nt". To remove the filter, delete the entry and click .

— Or, set the maximum number of items per page, and then page through the selections using the **Browse** buttons or the **Page** drop-down list box to select a specific page.

The objects in your Microsoft Windows Network will be different from the ones in this example because information about your environment is auto-discovered.

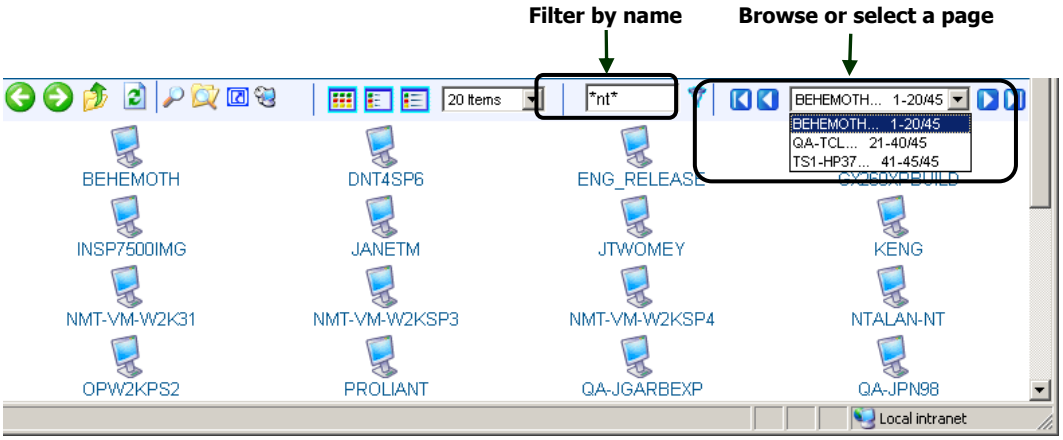


Figure 8: Browse options for objects in MS Windows Network.

6 To return to the Desktop, click **[Desktop]** in the Navigation aid.

Accessing and Returning to Your Desktop

The desktop is the default location you access when you logon. If you want to return to the desktop from any point in your session, do the following:

1 Click **HOME**. HOME is located at the top-right of the Banner.

HOME returns you to Navigation (History) mode, at the Directory level.

2 Click on **Desktop** in the Navigation aid.

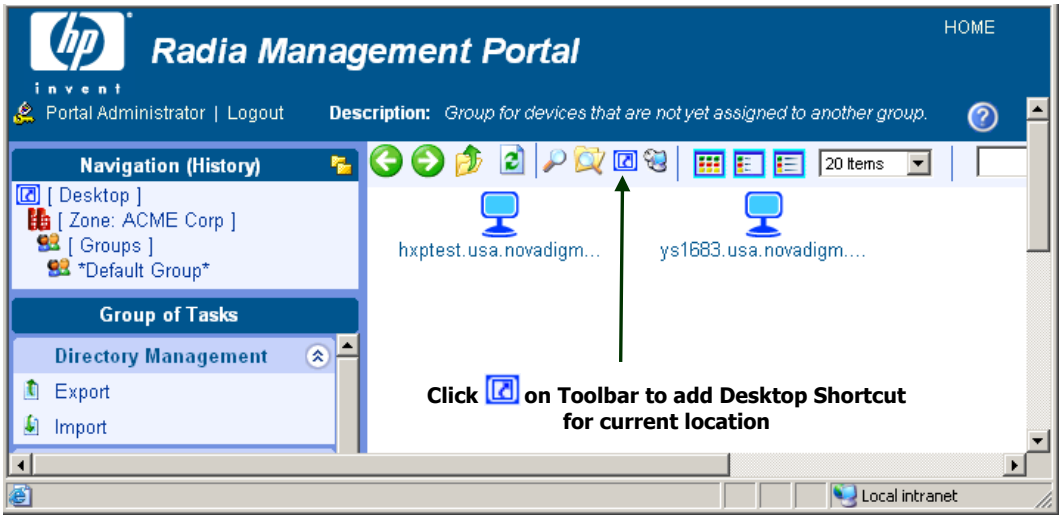
Adding Shortcuts to Your Desktop

This version of the Management Portal introduces the ability to add shortcuts to the new desktop location. The Desktop location is unique to each user.

To add a shortcut to the desktop

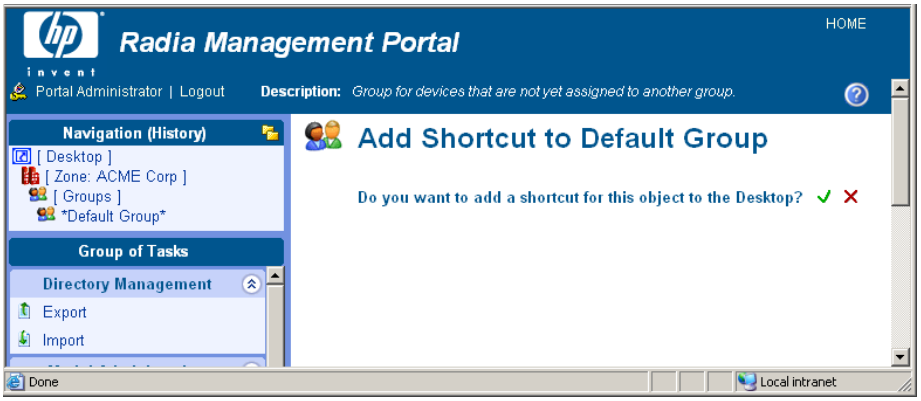
1 Start in Navigation (History) mode.

2 To create a shortcut to a particular device group or location within your infrastructure, navigate to that device or location. For example, the figure shows an example of navigating to the ***Default Group*** for devices by selecting **Zone**, **Groups**, and then **Default Group**.



3 After navigating to the location where you want shortcut, click the **Add Desktop Shortcut** icon on the Toolbar.

The Add Shortcut to (selected location) window opens.



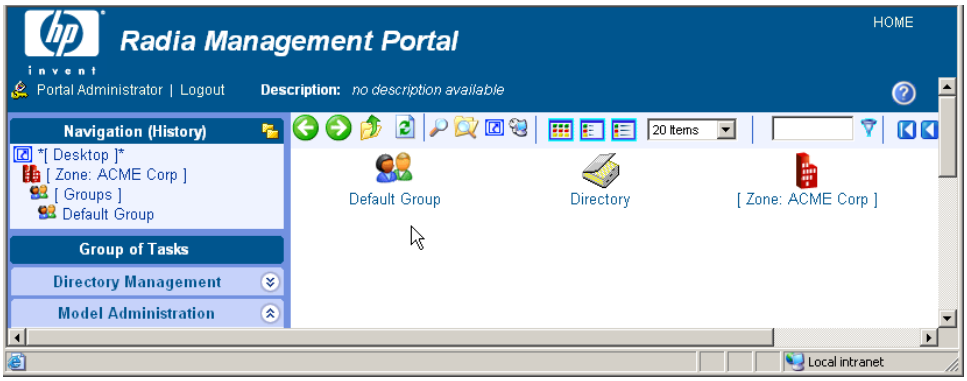
4 Click ✓ to confirm that you want add the shortcut.

OR

Click ✗ to indicate that you do not want to add the shortcut.

If you click ✓, the shortcut is added to the desktop.

Shortcuts remain on the Desktop between sessions until they are removed.

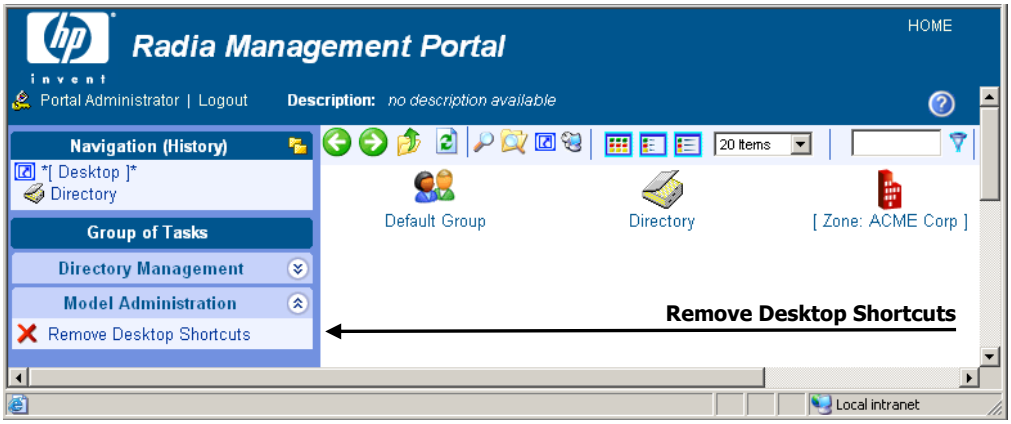


Removing Shortcuts from Your Desktop

You can remove any shortcuts you have added to your Desktop using the Remove Shortcuts from the Desktop task in the Model Administration task group.

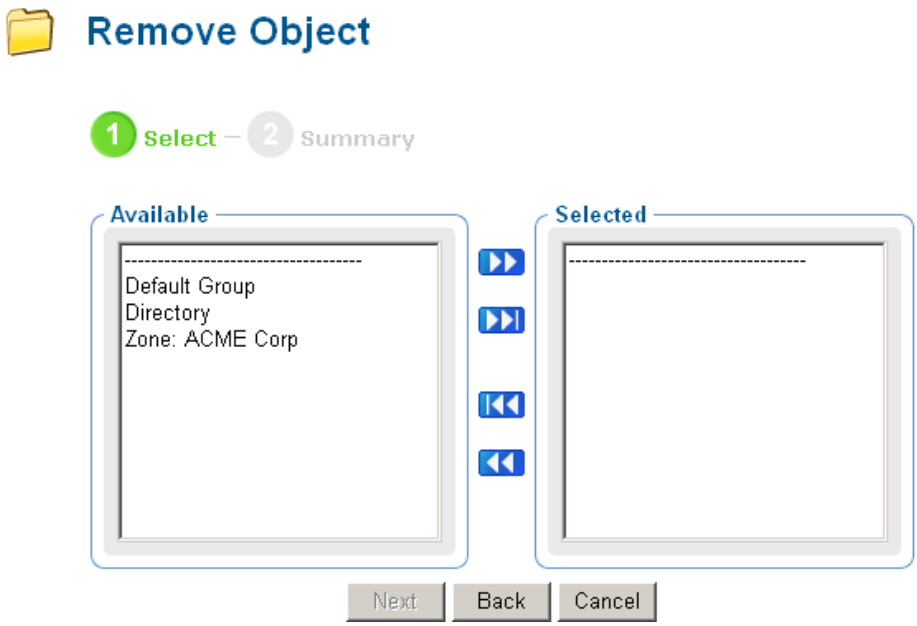
To remove shortcuts from the desktop

1 Return to your Desktop location. If you need help, see Accessing and Returning to Your Desktop on page 70.



2 In the **Model Administration** task group, click **Remove Desktop Shortcuts.**

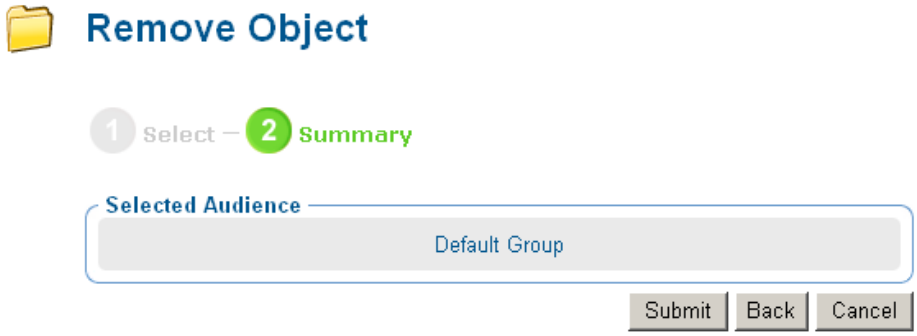
The Remove Objects window opens with all desktop shortcut objects placed in the **Available** column.



3 Move any shortcuts you want removed from your desktop to the **Selected** column. To move the shortcuts between columns, use the Arrow icon buttons or double-click on an entry.

4 After moving all shortcuts to be deleted to the **Selected** column, click **Next**.

The Remove Objects Summary dialog opens. The Selected Audience area lists each shortcut to be removed from your desktop.



5 Click **Submit** to remove the shortcuts listed as the Selected Audience from your Desktop.

You are returned to the Desktop location. Only the shortcuts that you did not remove will be shown.

Navigating the Portal Directory and the Zone Containers

The term Authority Navigation Aid has been changed to Navigation Aid.

Use the Navigation aid to browse your infrastructure and to select the place where you want to perform a task. It is important that you understand that every task you select in the Management Portal is performed within the selected level of authority.

Below is an example of how to select an authority in the Microsoft Windows Network.

To navigate the Zone Containers

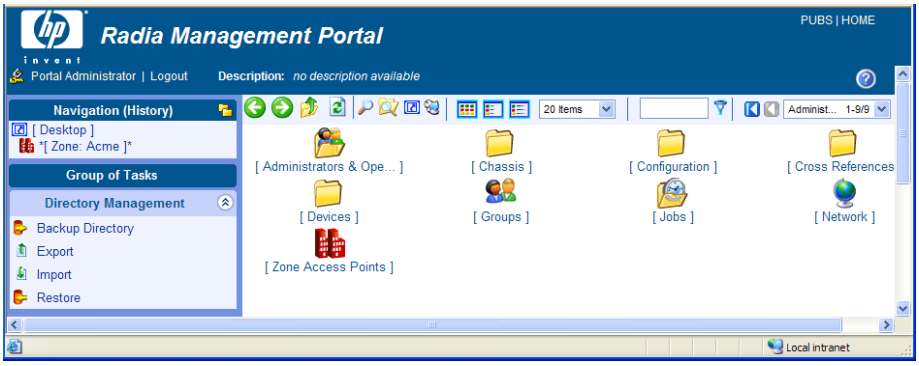
1 To access the Portal Directory Zone containers when in Navigation (History) mode, click on your Desktop.

The Desktop objects appear in the Workspace.

In Navigation (Location) mode, the Desktop is always the top entry in the Navigation aid.

2 In the Workspace, click the Zone icon.

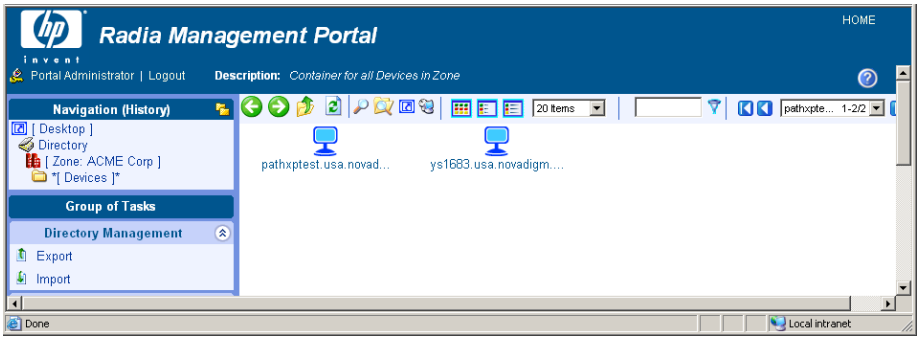
The highest-level objects in the Zone Directory appear in the workspace. These are the Zone containers.



New objects at the Zone Directory level for the 2.0 release include containers for **Configuration**, **Cross References, Devices, Groups,** and **Zone Access Points**.

A **Chassis** container for the racks and enclosures of server blade devices is new to the Zone Directory as of version 2.1.

3 In the workspace, click **Devices**.



Notice that the navigation aid now lists **Desktop**, **Directory, Zone**, and **Devices**. This is your selected authority.

Each device being managed by this Management Portal Zone must have an entry in the Devices container. There are a number of ways to bring devices under management. These are discussed in Establishing Devices and Device Groups on page 164.

In general, the Device container is mostly **self-managed**. That means by performing other tasks, the Management Portal automatically creates or updates the Devices container entries for you.

See About the Zone Containers on page 96 for detailed information on the Devices container and the other Zone containers.

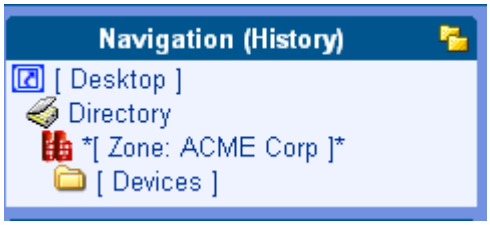
4 Now let's return to the Zone level containers. You can either:

— Click the toolbar icon  to go up one level in the Navigation path.

OR

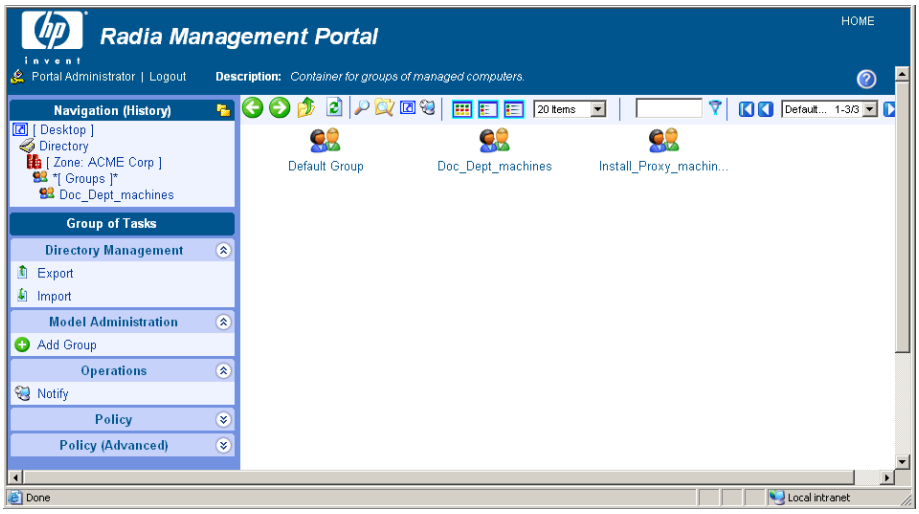
— Click the **[Zone]** entry in the **Navigation aid**.

The workspace displays the Zone containers, again. However, your Navigation path indicates all visited location.



5 Now click the **Groups** container in the Workspace.

The Groups container displays all current groups of devices in the workspace. If you have just installed the Management Portal, only the **Default Group** object appears. If the Management Portal is not newly installed, you will see many user-created groups in this container.



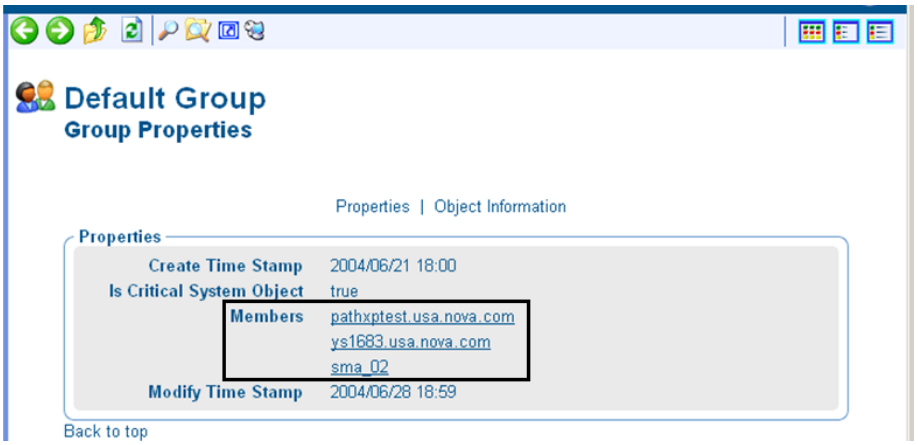
The Groups container is one of the most important containers in the Management Portal for performing operations. Almost all tasks are performed on Groups of Devices.

Devices from the Device container hold **memberships** in these groups; the device objects do not exist within the Group containers. The group memberships can be added or removed, at will.

See Configuring the Zone Infrastructure on page 180 for more information on how to create groups and add or import devices into the groups.

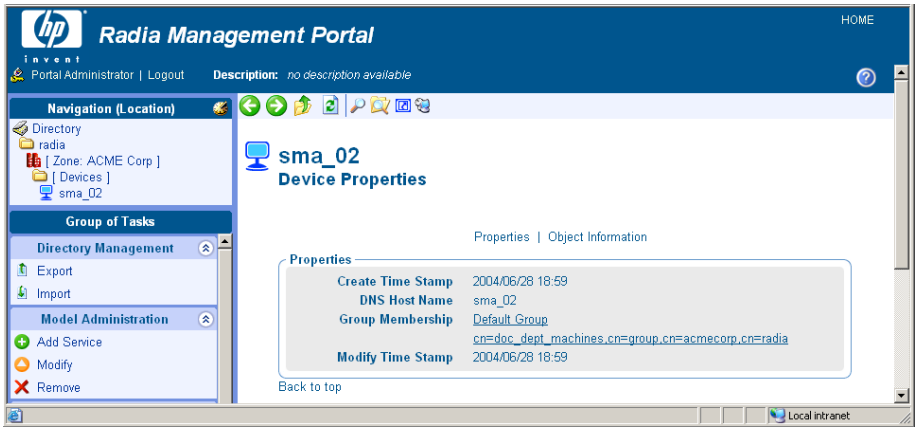
6 Click the **Default Group** object in the Workspace, and then click View Properties icon on the toolbar: .

The Group Properties page for the Default Group object opens.



Notice that each device in the group is listed under the **Members** entry in the Properties area with a link.

7 Click on a link in the **Members** area to go to the device's Properties page.



If you switch to Navigation (location) mode, you see that this page is actually within the Devices container.

Notice that the Properties page for a Device lists Group Memberships. The sample Device shown in the figure above is a member of two groups: the **Default Group**, and a user-created group named **doc_dept_machines**.

8 Click on the **HOME** link in the top-right of the banner area to quickly return to your Desktop.

9 Notice that using HOME clears all entries in the Navigation (History) area.

This completes the navigational discussion of how to access and navigate the Zone containers. The next topics discuss the taskbar and tasks, and the powerful toolbar entries.

Taskbar and Task Summary

When you use the Navigation aid to access your infrastructure, the Taskbar appears. The Taskbar contains logical groups of tasks (called task groups). A task is an activity that a person performs to initiate a job. The tasks that are available vary, based on the selected navigation location, as well as your role.

The standard task groups include:

- Directory Management
- Infrastructure
- Model Administration
- Operations
- Policy Management
- Policy (Advanced)
- RCS Administration

See Toolbar Tasks on page 90 for information about the tasks that can be initiated directly from icons in the Toolbar.

See Configuring Task Groups on page 224 for information about adding, modifying, or removing task groups.

Click  to maximize or  to minimize a group of tasks.

Directory Management Task Group

Use the **Directory Management** task group to manage the Management Portal Directory.

- **Backup Directory**
  Click **Backup Directory** to backup the entire Management Portal Zone Directory. See *Creating a Backup of the Portal Zone* Directory on page 253 for more information.
- **Export**
  Click **Export** to export a subset of your Management Portal Zone Directory to an LDIF (LDAP Data Interchange Format) file. See *Exporting Data from the Portal Directory* on page 262 for more information.
- **Import**
  Click **Import** to import an LDIF (LDAP Data Interchange Format) file into your Management Portal Zone Directory. See *Importing Data into the Portal Directory* on page 264 for more information.
- **Restore Directory**
  Click **Restore Directory** to restore a backup of the entire Portal Zone Directory. See *Restoring the Portal Directory* on page 257 for more information.
- **Update Portal Tasks**
  Click **Update Portal Tasks** when you receive a new build of the Management Portal to update the tasks available to you. Available from the Zone, Configuration, Tasks container. See *Updating Portal* Tasks on page 268 for more information.

Infrastructure Task Group

Use the Infrastructure task group to connect to or disconnect from external services, such as the Radia Database on a Configuration Server or an Active Directory service. Services are configured for access from the Zone, Configuration, Directory Services container.

2.0 Connect to Directory Service

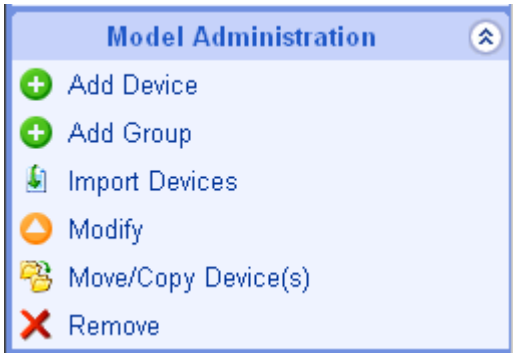
Click **Connect to Directory Service** to connect to the Primary Database on the Configuration Server, or other directory service such as Active Directory. See *Connecting to a Directory Service* on page 153 for more information.

2.0 **Disconnect from Directory Service**

Click **Disconnect from Directory Service** to disconnect an external service, such as the Primary Database on the Configuration Server, or another directory service such as Active Directory. See *Disconnecting from a Directory Service* on page 156.for more information.

Model Administration Task Group

Use the **Model Administration** task group to manage the Management Portal Directory and a Zone.



The following is a list of all potential Model Administration tasks available in the Management Portal. Remember, the available tasks vary based on your selected navigation location; therefore, the figure above does not contain all the tasks described here.

- **Add object-type**

  Click an **Add** task to create an object in your selected authority, such as a device, group of devices, server, person, user group, delegated administration, task group, or directory service.

  As of version 2.1, you can also add objects types for racks, blade enclosures, enclosure configurations, and slots. See *Configuring Blades, Enclosures and Racks in the Chassis Container* for more information.

2.0 **Add Device**

Click **Add Device** to define a new device to the Zone and also give it membership in the Default Group or other group within the Zone

Groups container. This task automatically creates an entry for the device in the Zone Device container. See Adding Devices to an RMP Zone on page 164 for more information.

2.0 **Add Directory Service** 
Click the new **Add Directory Service** task to configure a connection between the Management Portal zone and another Directory Service, including the Configuration Server ZTOPTASK service. The task is available from the Zone, Configuration, Directory Service container. See Adding a Directory Service on page 141 for more information.

2.0 **Add Group (of Devices)** 
Click **Add Group** from the Devices container to create a new Group of Devices for organizing devices for operations. See Adding Groups on page 187 for more information. To move or add members to a group in the same task, or later import devices into a group, refer to the Import Devices task.

2.0 **Add Install Profile** 
Click **Add Install Profile** to define a custom profile for selection during the Install Client task. Add Install Profile is available from the Zone, Configuration container, by browsing to Profiles, Radia Products, and then Client Installs. See Adding, Modifying, and Deleting Install Profiles on page 328 for more information.

- **Disable** 
Click **Disable** to prevent a job or job group from being processed. See *Disabling Jobs or Job Groups* **on page** 278 **for more information.**

- **Enable** 
Click **Enable** to restart a job or job group the next time it is scheduled to run. See Enabling Jobs or Job Groups on page 278 for more information.

2.0 **Import Devices** 
Click the **Import Devices** task to add a list of devices with fully qualified DNS names into the Zone Devices container. The devices become members of the Zone Groups container group from which you begin this task. See Importing Devices on page 200 for more information.

- **Modify** 
Click **Modify** to change an object. For example, you might want to change the areas of the Management Portal that an administrator can access, or change a job group's schedule. See Modifying Objects on page 207 or Modifying Job Groups on page 272 for more information.

2.0 **Move/Copy Device(s)** 

Click the **Move/Copy Device(s)** task to move or copy devices that are members of other groups into the group you have selected from the Zone Groups container. See Moving or Copying Devices into a Group on page 193 for more information.

- **Query** 
  Click **Query** (also available from the Toolbar) to extract information from the directory tree or to narrow the scope of a job. For example, you might want to search for a specific audience for whom you want to schedule a task. See Performing Queries on page 293 for more information.

- **Query Jobs** 
  Click **Query Jobs** to locate existing jobs, review their status, and make changes to them. See Querying Jobs or Job Groups on page 274 for more information.

- **Query User's Delegated Administration** 
  Click **Query User's Delegated Administration** to display information about a user's role. See Querying a User's Delegated Administration on page 242 for more information.

- **Remove** 
  Click **Remove** to remove an object and all of its children from the Management Portal Directory. See Removing Objects on page 207 or Removing Jobs or Job Groups on page 279 for more information.

2.0 **Remove Shortcuts from Desktop** 
Click **Remove Shortcuts from Desktop** to remove any previously added shortcuts from your Desktop location. See Removing Shortcuts from Your Desktop on page 72 for more information.

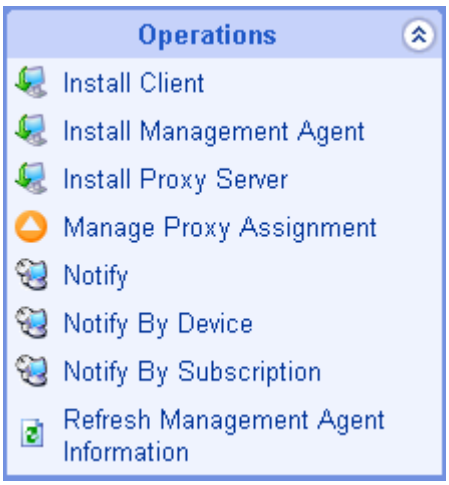
- **Restart Failed Jobs** 
  Click **Restart Failed Jobs** to restart the failed jobs displayed in the current Job Group. See Restarting Failed Jobs in a Job Group on page 276 for more information.

- **Stop** 
  Click **Stop** to stop an active job group from running. See Stopping Job Groups on page 277.

- **View Properties** 
  Click **View Properties** from the Model Administration task group or click  from the Toolbar to display the properties of an object. See Viewing Properties on page 281 for more information.

Operations Task Group

Use the **Operations** task group to perform operations on your Radia infrastructure. This release introduces the following new tasks.



The following describes all of the operations available in the Management Portal. Remember, the tasks available to you vary based on your selected authority: therefore, the figure above above may not contain all of the tasks described here.

2.0 **Add Job Sequence**

Use **Add Job Sequence** to define a job sequence. Access the task from the Jobs container. Sequencing jobs can be an efficient tool for managing jobs common to many devices across many zones. See Sequencing Jobs on page 363 for more information.

2.0 **Add Task Template**

Add **Task Template** is available from the Task Template container within the Zone, Configuration container. Use Add Task Template to preset the options for a Task Type, such as Notify or Install RPS, as a saved Task Template. Task templates can be selected and applied during the Schedule Zone Operations task. See Managing Task Templates on page 346 for more information.

- **Help Desk Notify** 
  Click the **Help Desk Notify** icon on the toolbar to quickly Notify a single computer, whose name you already know. See Using Help Desk Notify on page 304 for more information.

- **Install Client** 
  Click **Install Client** to install the Radia Client on remote computers. See *Installing the Radia Client* on page 321 for more information. Multiple Client Install Profiles are supported. For details, see Supporting Remote Installs Using Multiple Profiles on page 327.

- **Install Management Agent** 
  Click **Install Management Agent** to install the Radia Management Agent on remote computers. See Installing the Radia Management Agent on page 314 for more information.

- **Install Proxy Server** 
  Click **Install Proxy Server** to install the Proxy Server on remote computers. See Installing the Proxy Server on page 337 for more information.

2.0 **Install RMP** 
  Click **Install RMP** to remotely install another Management Portal Zone in your infrastructure. See Installing Additional RMP Zones (Subordinate Zones) on page 349 for more information. Also refer to the tasks for Update RMP, Open Subordinate Zone, and Schedule Zone Operation.

2.0 **Open Subordinate Zone** 
  Click **Open Subordinate Zone** to quickly access the Management Portal of another Zone in your enterprise from the Zone Access Points container. See Opening a Subordinate Zone on page 361 for more information.

- **Purge Dynamic Cache** 
  Click **Purge Dynamic Cache** to purge the dynamic cache of the Proxy Server. See Purging the Dynamic Cache of the Proxy Server on page 343 for more information.

- **Notify** 
  Use the **Notify** tasks to perform an action on the selected audience. See Using the Notify Tasks on page 300 for more information.

- **Purge Dynamic Cache** 
  Click **Purge Dynamic Cache** to purge the dynamic cache of the Proxy Server. See Purging the Dynamic Cache of the Proxy Server on page 343 for more information.

- **Refresh Management Agent** 
  Click **Refresh Management Agent** to have the selected Management Agent immediately update its registered Radia services with the Management Portal. See Refreshing the Radia Management Agent on page 321 for more information.

- **Restart** 
  Click **Restart** to stop a service and then start it again. See Managing Services on page 345 for more information.

- **Resume** 
  Click **Resume** to resume execution of a service that has been paused. See Managing Services on page 345 for more information.

- **Set Password** 
  Click **Set Password** to set the VNC Authentication password prior to the first time you use remote control to access a VNC Server on a Radia client. See Using Remote Control on page 367 for more information.

2.0 **Schedule Zone Operation** 
Click **Schedule Zone Operation** from the Zone Access Points container to run a Notify or Install RPS job on all devices in each of the selected zones in your enterprise. The job options must be predefined as a Task Template. See Scheduling Zone Operations on page 355 for more information.

- **Start** 
  Click **Start** to run a service. See Managing Services on page 345 for more information.

- **Start Viewer** 
  Click **Start Viewer** to start a VNC session on a remote Radia client. See *Using Remote Control* on page 367 for more information.

- **Stop** 
  Click **Stop** to stop a service. See Managing Services on page 345 for more information.

- **Synchronize Proxy Server**
  Click **Synchronize Proxy Server** to force the Proxy Server to connect to the Configuration Server to preload the files to the static cache on the Proxy Server. See Synchronizing the Proxy Server on page 342 for more information.

2.0.1 **Update RMP**
Click **Update RMP** to remotely update the code delivered with a new build to the subordinate Management Portal Zones in your infrastructure. See Updating Subordinate RMP Zones on page 355 for more information.

Policy Task Group

Use the **Policy** task group to assign policy using an LDAP Directory, such as Active Directory.

The following is a list of the available Policy tasks. Remember, the available tasks vary based on your selected authority.

2.0 **Add Policy Object**
Click **Add Policy Object** to create a new group or organizational unit in an LDAP Directory. See on page for more information. See Adding a Policy Object on page 111 for more information.

2.0 **Modify Policies**
Click **Modify Policies** to assign services to the selected policy object. See on page for more information. See Modifying Policies on page 113 for more information.

2.0 **Modify Targets**
Click **Modify Targets** to specify members of a group to be targeted based on the policy assignments. See Modifying Targets on page 114 for more information.

2.0 **Remove Policy Object**
Click **Remove Policy Object** to remove a group or organizational unit from an LDAP Directory. See on page for more information. See Removing a Policy Object on page 112 for more information.

2.0 **Refresh Managed Services Cache**
Click **Refresh Managed Services Cache** to refresh the list of services displayed in the Management Portal. This list is created from information in the Radia Database. See on page for more information. See Refreshing the Managed Services Cache on page 121 for more information.

2.0.1 **Resolve Policy**
Click **Resolve Policy** to resolve the service entitlements for an object. The list is grouped by product type and then policy source, and may be viewed for a specific domain filter (DNAME). For LDAP objects, you can specify values for attributes, such as Hostname, OS, UserID, and Context, which are normally available at the time of resolution. See Resolving Policy on page 116 for more information.

Policy (Advanced) Task Group

Use the **Policy (Advanced)** task group to modify the Radia Policy attributes as described in the Policy Server Guide. These attributes are used to manage policy scope, relationships, and assignments.

Make sure that you have a good understanding of the Policy Server and the Radia Policy attributes before using these tasks.

The tasks available are:

2.0 **Modify Defaults**
Click **Modify Defaults** to set the defaults for the attributes in a service. Using this task modifies edmPolicyDefault. Refer to the *Installation and Configuration Guide for the HP OpenView Policy Server (Policy Server Guide)* for details. See Modifying Defaults on page 126 for more information.

2.0 **Modify Dependencies**

Click **Modify Dependencies** to modify policy links. Using this task modifies the edmLink attribute. Refer to the *Policy Server Guide* for details. See Modifying Dependencies on page 123 for more information.

2.0 **Modify Flags**

Click **Modify Flags** to limit the scope of policy resolution for specific objects. Using this task modifies the edmFlags attribute. Refer to the *Policy Server Guide* for details. See Modifying Flags on page 125 for more information.

2.0 **Modify Overrides**

Click **Modify Overrides** to bypass the pre-set values of one or more attributes for a service and specify alternate values. Using this task modifies the edmPolicyOverride attribute. Refer to the *Policy Server Guide* for details. See Modifying Overrides on page 127 for more information.

RCS Administration Task Group

Use the **RCS Administration** task group to manage instances in the Radia Database.

The following is a list of the RCS Administration tasks. Remember, the available tasks vary based on what you have selected in the navigation aid.

2.0 **Add Connections**
Click **Add Connections** to add connections to the selected instance. See Adding Connections on page 104 for more information.

2.0 **Copy**
Click **Copy** to create a copy of the selected instance. See Copying Instances on page 105 for more information.

2.0 **Create**
Click **Create** to add a new instance to the current class. After adding the new instance, use the Modify and Add Connections tasks to set the attributes and make connections for the instance. See Creating Instances on page 102 for more information.

2.0 **Delete**
Click **Delete** to remove the selected instance from the Radia Database**.** See Deleting Instances on page 106 for more information.

2.0 **Modify**
Click **Modify** to modify the selected instance. Use the Advanced View in the Modify window to modify any attributes that you can modify from the System Explorer. See Modifying Instances on page 106 for more information.

2.0 **Remove Connections**
Click **Remove Connections** to remove connection(s) from the selected instance. See Removing Connections on page 107 for more information.

Toolbar Tasks

2.0 **Add Shortcut to Desktop**
Click **Add Shortcut to Desktop** to add a shortcut icon to the Desktop location within the Management Portal for easy access to frequently visited locations. The desktop location is unique for your Username, and is your initial logon location. See Adding Shortcuts to Your Desktop on page 70 for more information.

2.0 **Help Desk Notify**
This release introduces a streamlined task to Notify a computer from the new Help Desk Notify icon. Use the toolbar icon for Help Desk Notify to quickly Notify a single computer. Typically, this is used by Help Desk staff working on an issue. Available from any location within the Desktop or Zone. A computer DNS name must be entered and cannot be selected from a list. See Using Help Desk Notify on page 304 for more information.

2.0 **View Properties**
Click **View Properties** from the Toolbar to display the properties of an object. See Viewing Properties on page 281 for more information.

Toolbar

The Toolbar appears at the top of the workspace when you are viewing objects in your Radia Directory, such as a list of all computers in your network. This toolbar appears if you are browsing your infrastructure or viewing the results from a query.

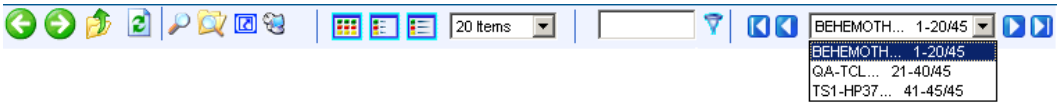


Figure 9: Sample Management Portal Toolbar.

Some Figures throughout this book show an earlier version of the toolbar. Please discregard these earlier images and refer to this topic for toolbar usage information.

Navigation Icons

- Click to go back one page.

- Click  to go forward one page.
- Click  to go up one level in the Management Portal Directory.
- Click  to refresh the information displayed in the workspace.

Task Icons

See Toolbar Tasks on page 90 for more information on these tasks.

- Click  to View the Properties for the *current* object in the navigation aid.
- Click  to Add a Shortcut to your desktop for the *current* Navigation location.
- Click  to Query the Directory for objects at the current level or below.
- Click  to open the Help Desk Notify dialog to notify a single computer whose name you know.

Print and Status Icons

- Click  from the Jobs container to obtain a printable view of the job list.

Several formats are available for viewing most objects.

- Use the Status drop-down list box to view only jobs that meet the selected status. Job status options include:
- All
- Waiting to Start
- Successful
- Failed
- Active
- Disabled

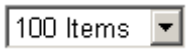
View Icons

- Click  to show the potential targets with large icons.
- Click  to show the potential targets in a list view (small icons).
- Click  to show the potential targets in a detailed view.

Paging and Filtering Icons

The following icons assist in browsing and selecting from large numbers of items.

- Use the drop-down list box to set the maximum number of items for a given page:

- For increased performance, objects in LDAP directories are retrieved one page at a time. Click  to retrieve and go to the next page of objects.

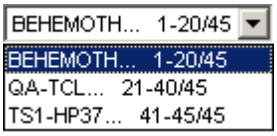
  LDAP-paging applies to RMP Zone directories as well as external LDAP directories such as an Active Directory.

- In the filter text box, type a filter value and click  to filter the items on the current page according to their display names, common names, and cn= values.

  Valid filter entries include text, asterisk (*) and question mark (?) wildcards, cn= values, as well as LDAP attribute values (attribute=*value*).

- To remove a filter, clear the text box and click  . Use the drop-down list box or the arrows to page through multiple pages of retrieved objects.
  - Open and select a specific page from the drop-down list box:

  - Click  to go to the beginning of the retrieved list of objects.

  - Click  to go to the previous page in the retrieved list of objects.
  - Click  to go to the next page in the retrieved list of objects.
  - Click  to go to the last page in the retrieved list of objects.
- Use the scroll bar to scroll to items not currently in view.

Workspace

The workspace is the main work area and will change based on your actions.

Radia Directory and Zone Objects

Once you are familiar with the Management Portal user interface, you need to understand how to access the key areas of the infrastructure that you want to manage. However, first you must be familiar with the objects represented in a Radia Directory and Zone in the Management Portal.

A tree view is used to organize these objects. The tree consists of the following icons, which represent the Zone Directory objects.

- Zone 
  The Zone Directory contains all devices, infrastructure, and software that is managed and administered by the Management Portal at this location. Other Management Portal Zones are accessed from the connections available from the Zone Access Points container.
- Active Directory 
  An Active Directory configured for access by a Management Portal Administrator appears at the Directory level in the Workspace.
- Primary file 
  The Primary file is a Primary file on a Radia Database on a Configuration Server, whose Common Name has been assigned cn=primary. Use the RCS Administration Tasks from the Management Portal to perform instance-level tasks on the Radia Database. To configure the Primary file, see *Adding a Directory Service* on page 141.

- **Containers** 
  A **container** is a grouping of objects used to select a particular object type, or to limit the scope of influence that an administrator can have over the entire infrastructure. The containers at the highest level of a Radia Zone are discussed in *About the Zone Containers* on page 96. All Zones include the same containers and container names. The procedures throughout the guide identify which containers to start from when performing any task.

- **Computer, Servers and Devices** 
  A **server** is a physical device that is running a piece of the infrastructure (service) that you want to manage via the Management Portal. A server must be addressable by an IP address. An example of a server would be an NT Server that is running a Configuration Server.

  A **computer** is a physical device that exists in your infrastructure. If you want it managed by this Management Portal Zone, you must specify Manage Computer to add it to the Zone, Devices container.

  A **device** is a physical device that exists in the Devices container of the Zone, and is being managed from this Zone. Devices also have memberships in groups in the Groups container and the Cross References container.

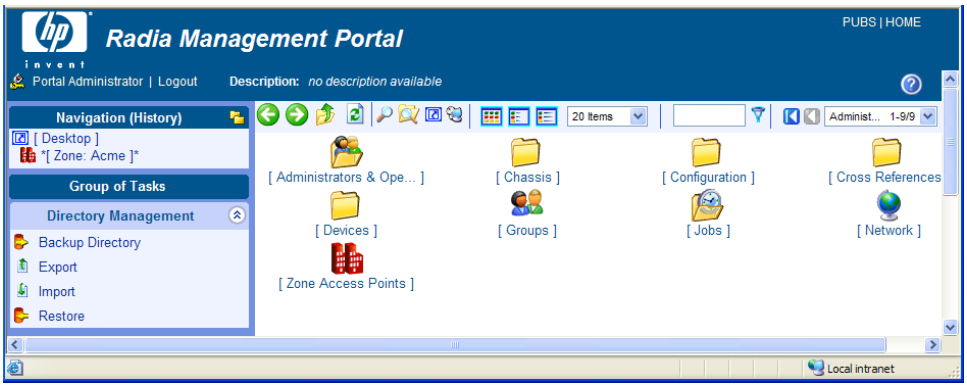
- **Network** 
  A network, such as Microsoft Windows Network, represents an external network directory that has been discovered by the Management Portal. Objects in a network can be selected for management by this Management Portal Zone.

- **Directory Service** 
  External Services are defined to the Management Portal Zone to enable a connection to that service from within the Management Portal. An Active Directory, the Radia Database on the Configuration Server, and other LDAP directories can be configured for access from the Directory Service container.

- **Services** 
  A **service** is an application running on a server such as a Configuration Server or Proxy Server.

About the Zone Containers

This topic defines the Management Portal Zone Containers that are directly beneath the Zone node. Containers designated as self managed are directory areas where no administrative operations are performed.



Numerous containers and objects are new to this release to enable users to do the following:

- Perform operations against groups that are automatically created and managed by the Management Portal (based on known hardware, software, and managed service information for the devices)
- Establish multiple zones in an enterprise, with the ability to access remote zones and perform operations against remote zone device groups.
- Access the Configuration Server and administer services and policy at the instance-level. Apply Policy using an LDAP directory, such as Active Directory.
- Connect to and browse entries in an external LDAP directory, such as Active Directory.
- Connect to and browse your existing network directories.
- Perform modeling and policy-based management of server blade devices in a Zone using the knowledge of their blade enclosures, racks, and enclosure configurations.

- **Administrators and Operators Container (cn=USER)**
  The Administrators and Operators Container is the default, built-in source for authenticating users of the Management Portal and specifying which tasks they are entitled to perform. There are separate user groups for Operators and Auditors, as well as Administrators of the Management Portal, Accounts, Infrastructure, the Network, Packages, Policy, Services, and the Configuration Server.
- **Chassis Container (cn=chassis)**
  The Chassis container is used to manage and apply policy to the blade servers in a Zone using the (physical) enclosures and racks in which they are mounted, as well as their (logical) enclosure configurations. It contains three groups:
  - Blade Enclosure Configurations
  - Blade Enclosures
  - Racks with Enclosures
- **Configuration Container (cn=config)**
  The Configuration container holds the start-up configuration of the Management Portal zone for both internal and external objects and mount points. All objects in the previous containers are "mounted" as directories when the zone is started.

  Directory objects that are defined and mounted from the Configuration container include:
  - Entitlements for Delegated Administrators
  - Management Portal Task Groups and Tasks
  - Radia Products, Client Installs, and Profiles
  - Directory Services
  - Primary file in the RCS database (cn=primary,cn=config)
- **Directory Services Container (cn=ds, cn=config)**
  The Directory Services container is one of the Configuration containers. It defines the external directory services and mount points the zone is to connect with automatically at startup, or make available for connection during operation. Use this container to define access to other LDAP directory services in your enterprise, such as Active Directory, as well as access to the Primary file on the Configuration Server database. Additional Radia Databases can also be defined for access from this container.

The delivered zone template automatically defines configurations for the following mount points:

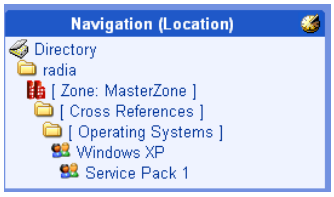
- Domain Name System (DNS)
- Windows Networking
- Radia Messaging

- **Cross-References (cn=xref) Self Managed**
  The Cross References container is a self-managed container of automatically-generated device groups. Most groups are created once the Radia Management Agent is installed on the computers in your Devices container. The Cross References container creates and maintains the memberships for all devices according to the following classifications, using information passed from the Radia Management Agent to the Management Portal for all devices under a zone's management:
  - **Device Manufacturers** – For example, Hewlett-Packard, Dell, and Gateway device groups.
  - **Device Architecture** – For example, HP Itanium, HP PA-RISC, and SUN Architecture.
  - **Enclosure Manufacturers** – For example, Hewlett-Packard and IBM are groups listed under the enclosure manufacturers for server blades.
  - **Infrastructure Services** – For example, Proxy Server, Radia Management Agent, and Configuration Server device groups.
  - **Managed Services** – For example, groups for each service being managed on devices through the Radia Application Manager or Radia Software Manager.

    The Managed Services groups are created and maintained using objects collected at the end of a client-connect session with a Configuration Server, and routed from a Messaging Server to the Management Portal Zone. For more information, see Posting Client Objects to the Management Portal on page 52.

  - **Operating Systems** – For example, Windows XP. Within a specific operating system group are sub-groups for Service Pack levels, as shown in the following figure:



— **Subnets** – For example, Subnet 16 groups all devices whose IP addresses are on that subnet.

As of RMP v2.1, subnet addresses for devices use the format `nnn.nnn.nnn.nnn`. Previously, they used the format `nnn_nnn_nnn_nnn`.

- **Devices Container (cn=device) Self Managed**
  The Devices container holds the object properties for all devices being managed by this Management Portal Zone. Entries are automatically created in this container when other operations are performed, such as adding a device to a group in the Ggroups container or selecting Manage Computer from a computer object in your network.

  Devices in this container have **memberships** in other containers. For example, each device must have membership in at least one group in the Group container to facilitate operations. In addition, devices have **automatic membership** in various Cross-Reference container entries, based on what hardware, software, managed services, and Radia Infrastructure they contain.

- **Groups Container (cn=group)**
  Most Management Portal Operations are performed against groups of devices, as opposed to individual devices. The Group container holds the provided Default Group, as well as any groups you create. Devices hold memberships in at least one group, but as many as you choose. Operations scheduled against a specified target group will include the members of that group at the time the job runs. Groups can be defined with a hierarchy, such that Group A includes a set of devices as well as all devices that are members of GroupAA.

  To schedule jobs against groups in more than one zone, you can establish same-named groups in the Groups container of each Zone, and then select the group for the operation.

- **Jobs Container (cn=jobs)**
  Holds the objects for jobs and job groups scheduled or recently run by the

Management Portal. Within the Jobs Container is the History container, holding daily records of completed jobs.

- **Network Container (cn=network)**
  Container used to access the enterprise networks that have been configured as mount points from the Directory Services container, including DNS and Microsoft Windows Network. Networks are often used to access computers that need to be brought under management in the Management Portal Zone.
- **Zone Access Points Container (cn=zone-sap)**
  Holds an entry for the current Zone and any remote zones in your enterprise that have been configured for access. From this container, you can use the Operations task to open a subordinate zone's Management Portal, or schedule zone operations to launch jobs across multiple zones in your enterprise, at once.

Obtaining Descriptions using Details View

One of the easiest ways to become familiar with the Portal objects is to switch to Details view whenever you come across a new object. Details view includes a one-line Description of each object.

For example, the figure below shows the descriptions available for the objects at the highest level of the Directory.

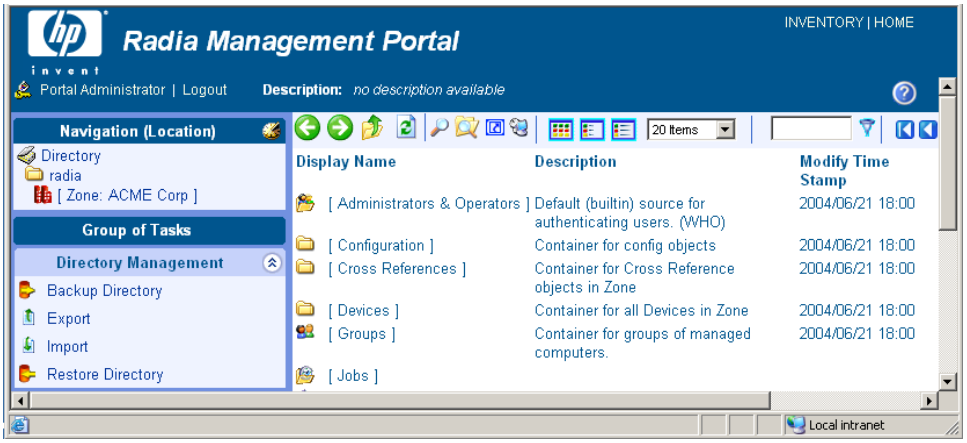


Figure 10: Details View of *Directory* includes Descriptions.

Now that you are familiar with the Management Portal user interface and the key containers in a Radia Zone, you are ready to begin managing your infrastructure.

- To configure your Management Portal Zone and bring devices under management, go to Chapter 4: Administrative Functions.
- To perform operations on devices in your Management Portal Zone, go to Chapter 5: Operations Functions.
- To perform RCS Administration Tasks on the instances in the Radia Database, see *Using the RCS Administration Tasks*, on page 101.
- To perform Policy using an LDAP directory, see *Using RMP to Assign Policy through an LDAP* Directory on page 109.

Using the RCS Administration Tasks

The Management Portal contains several tasks, stored in the RCS Administration task group, that allow you to manipulate instances in the Radia Database.

Prerequisites

- The Configuration Server service must be started on the machine where you want to make changes.
- A Configuration Server directory service must be defined and the RMP must be connected to that directory service. For details, see the following topics in ***Error! Reference source not found.***: ***Error! Reference source not found.***: *Adding a Directory Service* on page 141 and *Connecting to a Directory Service* on page 153.

About the RCS Administration Tasks

Use the **RCS Administration** task group to manage instances in the Radia Database.

The following is a list of the RCS Administration tasks. Remember, the available tasks vary based on what you have selected in the navigation aid.

- **Add Connections**
  Click **Add Connections** to add connection(s) to the selected instance.
- **Create**
  Click Create to add a new instance to the current class. After adding the new instance, use the Modify and Add Connections tasks to set the attributes and make connections for the instance.
- **Copy**
  Click **Copy** to create a copy of the selected instance.
- **Delete**
  Click **Delete** to remove the selected instance from the Radia Database**.**
- **Modify**
  Click **Modify** to modify the selected instance. Use the Advanced View in the Modify window to modify any attributes that you can modify from the System Explorer.
- Remove Connections
  Click **Remove Connections** to remove connection(s) from the selected instance.

Creating Instances

Use the **Create** task in the **RCS Administration** task group to add new instances to the selected class.

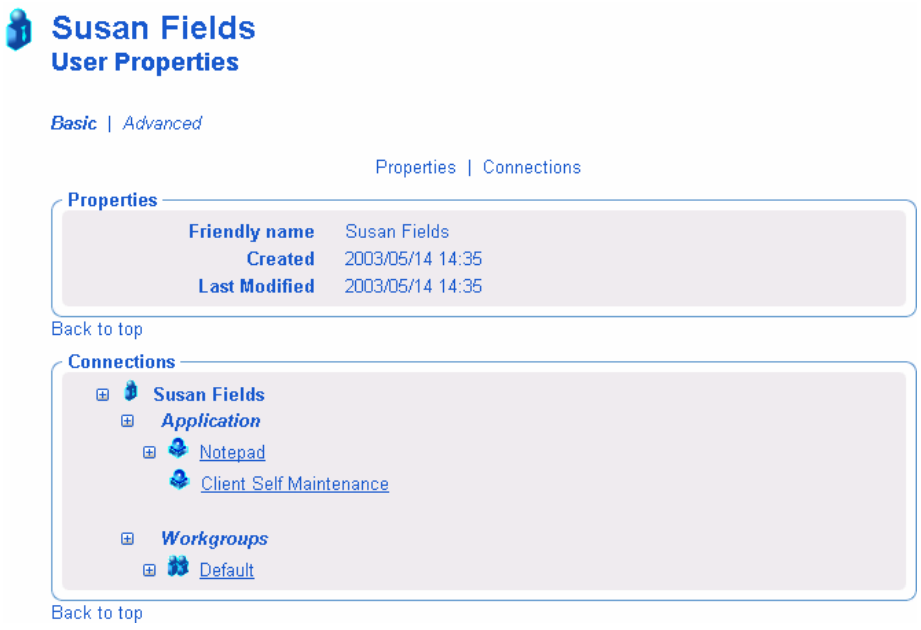
To add an instance

1. Use the navigation aid to go to the class where you want to add a new instance. For example, go to the Accounts class.
2. In the **RCS Administration** task group, click **Create**.

   The Create window opens.

3. In the **Instance** text box, type a name for the new instance.
4. In the **Friendly Name** text box, type the display name for the instance.
5. Click **Create**.

   The Properties window for the new instance opens.



Adding Connections

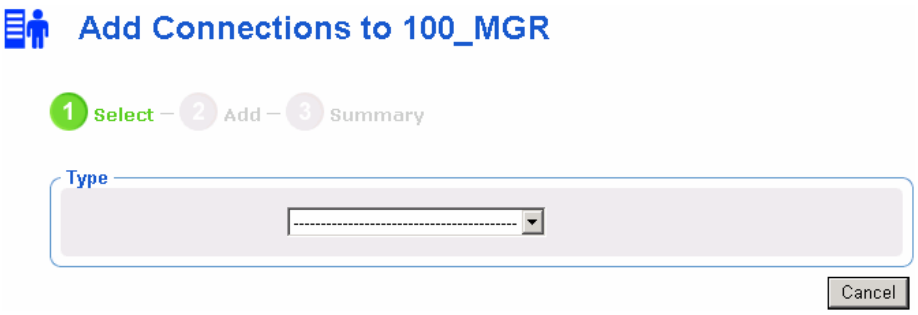
Use the **Add Connections** task to add connections to the selected instance.

To add a connection

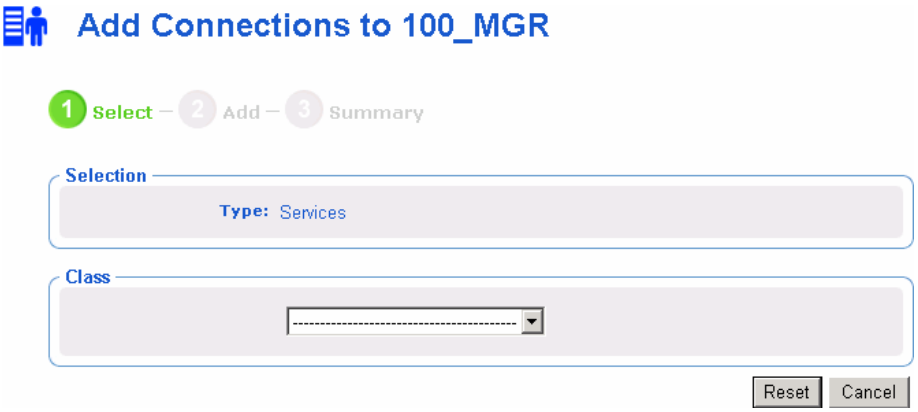
1 Use the navigation aid to go to the instance for which you want to create a connection.

2 In the **RCS Administration** task group, click **Add Connections**.

The Add Connections - Select window opens. The fields in this window vary depending on the object that you have selected in the navigation aid.

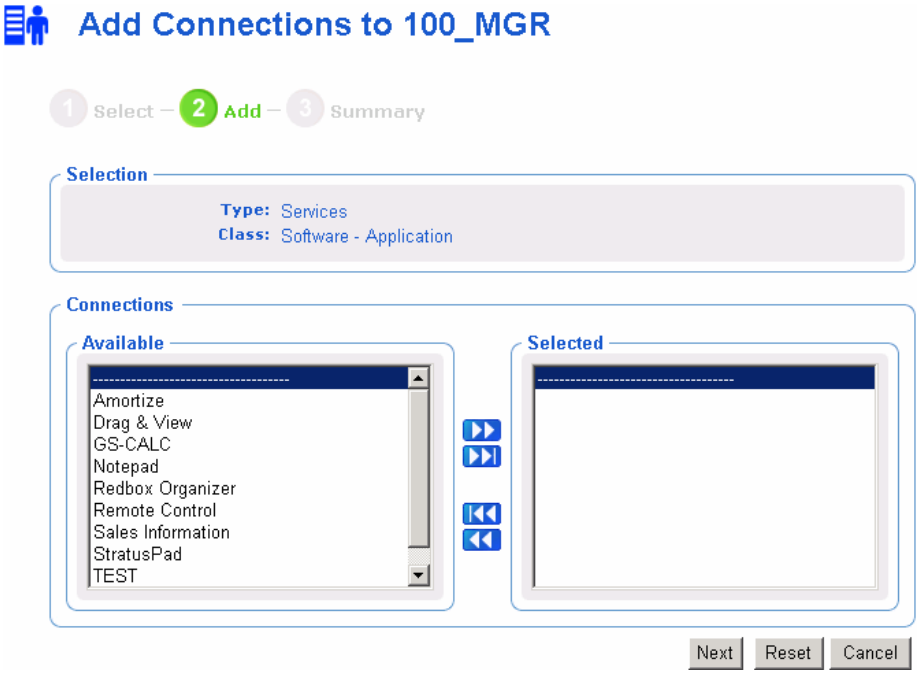


3 If necessary, use the **Type** drop-down list to select the type of connection that you want to make. The type of connection that you select determines which classes you will be able to select from the next drop-down list.



4 From the **Class** drop-down list, select the class that you want to connect to.

The Connections area opens.



5 From the **Available** list, select one or more instances.

6 Click  to add the selected instances to the **Selected** list.

7 Click **Next**.

The Add Connections - Summary window opens.

8 Click **Commit**.

The Properties window opens and displays the new connections.

Copying Instances

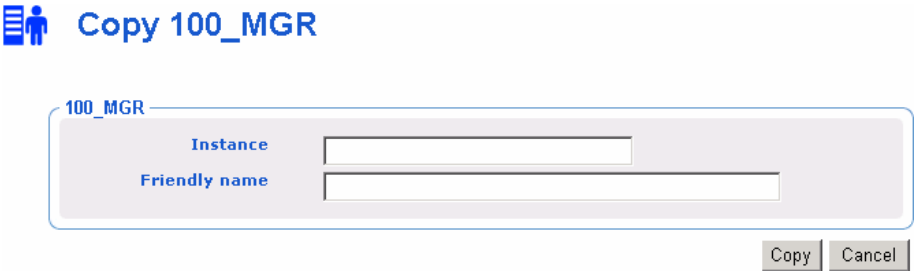
Use the **Copy** task to create a copy of the selected instance.

To copy an instance

1 Use the navigation aid to go to the instance that you want to copy.

2 In the **RCS Administration** task group, click **Copy**.

The Copy window opens.



3 In the **Instance** text box, type a name for the new instance.

4 In the **Friendly Name** text box, type the display name for the instance.

5 Click **Copy**.

The Properties window for the new instance opens.

Deleting Instances

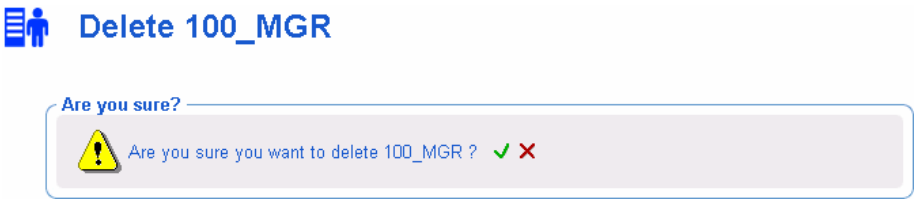
Use the **Delete** task to remove the selected instance from the Radia Database**.**

To delete an instance

1 Use the navigation aid to go to the instance that you want to delete.

2 In the **RCS Administration** task group, click **Delete**.

The Delete window opens.



3 Click ✓ to confirm that you want to remove the selected instance.

OR

Click ✗ to indicate that you do not want to remove the selected instance.

Modifying Instances

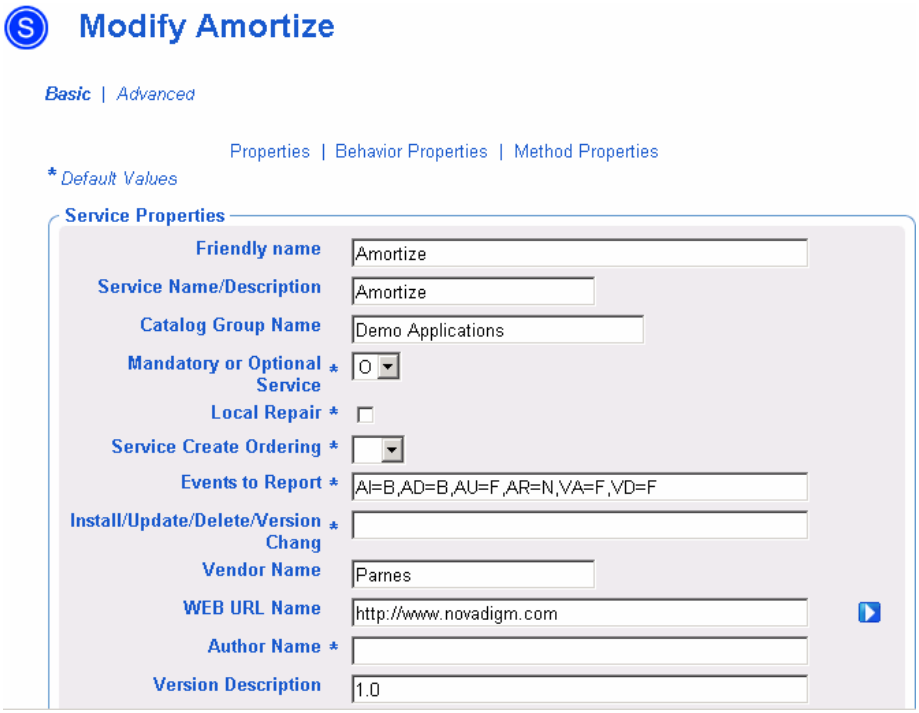
Use the **Modify** task to modify the selected instance.

To modify an instance

1 Use the navigation aid to go to the instance that you want to modify.

2 In the **RCS Administration** task group, click **Modify**.

The Modify window opens.



3 Make any necessary changes.

4 Click **Modify**.

The Properties window opens.

Removing Connections

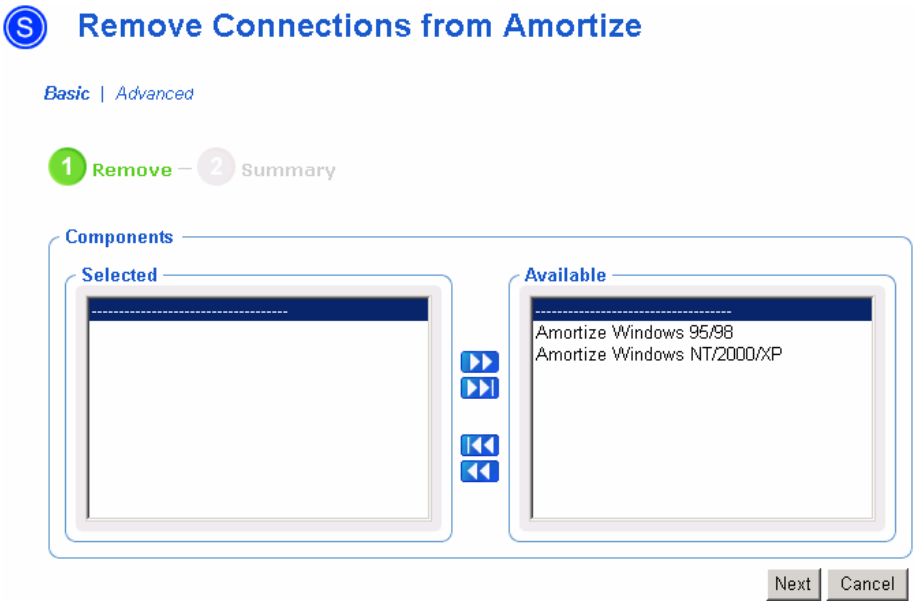
Use the **Remove Connections** task to remove connections from the selected instance.

To remove a connection

1 Use the navigation aid to go to the instance for which you want to remove a connection.

2 In the **RCS Administration** task group, click **Remove Connections**.

The Remove Connections window opens.



3 From the **Available** list, select one or more instances.

4 Click  to move the instances to the **Selected** list.

5 Click **Next**.

The Summary window opens.

6 Click **Commit**.

The Properties window opens and the connections are removed.

Using RMP to Assign Policy through an LDAP Directory

The Management Portal contains several tasks used to assign and manage policy through an LDAP directory. Examples of LDAP directories include Active Directory and the Management Portal, itself.

Prerequisites

- A comprehensive understanding of the Policy Server and assigning policy.
- A connection to the *primary* Configuration Server service so you can access services.

The *primary* Configuration Server service must be defined in the Zone's Directory Services container with the Common Name of **primary**. See *Specifying RCS Directory Service Properties* on page 146 for more information.

- A connection to the LDAP Directory service. See *Connecting to a Directory Service* on page 153 for more information.
- The **Used for Policy** field in the directory service must be set to True. To do this, you must modify the Directory Service. See *Modifying Directory Service Properties* on page 151.
- If you defined an LDAP Policy Extension with a prefix other than edm through the Policy Server, you must also define the custom policy prefix to the Management Portal. This is done using the PREFIX parameter in the rmp.cfg file. See *Configuring for a Custom LDAP Policy Extension Prefix* on page 161 for more information.

Please use your discretion when performing Policy Tasks to which you are entitled. Assigning policy to an object in a directory does not guarantee that policy will be applied. For example, if the object containing policy information is not in the scope of your policy search (that is, the search is not going to traverse this object), the policy will not be picked up. See the *Radia Policy Server Guide* for additional information.

About the Policy Tasks

Use the **Policy** task group to assign policy using an LDAP directory, such as Active Directory or another LDAP directory.

The following is a list of the available Policy tasks. Remember, the available tasks vary based on your selected Authority.

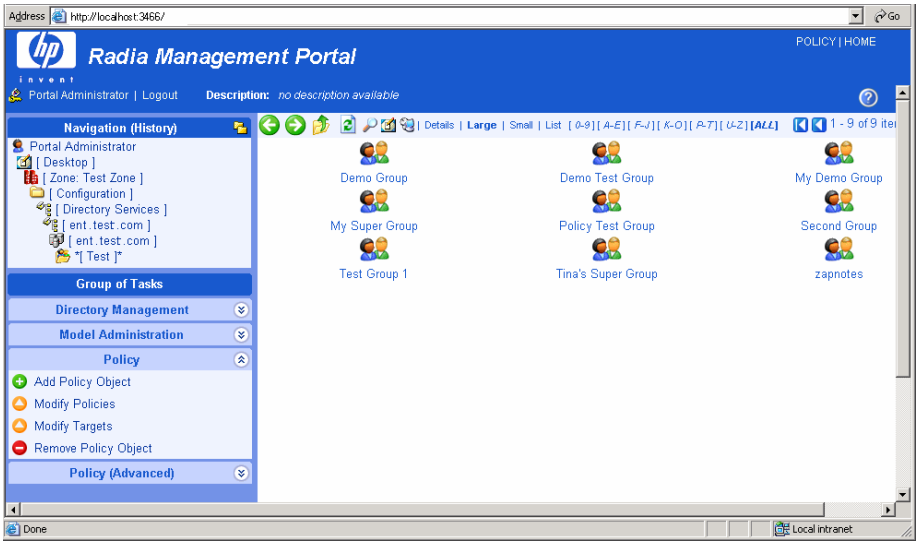
- **Add Policy Object**
  Click **Add Policy Object** to create a new group or organizational unit in the LDAP directory.
- **Modify Policies**
  Click **Modify Policies** to assign services to the selected policy object.
- **Modify Targets**
  Click **Modify Targets** to specify members of a group to be targeted based on the policy assignments.
- **Remove Policy Object**
  Click **Remove Policy Object** to remove a group or organizational unit from the LDAP directory.
- **Refresh Managed Services Cache**
  Click **Refresh Managed Services Cache** to refresh the list of services displayed in the Management Portal. This list is created from information in the Radia Database.
- **Resolve Policy**
  Click **Resolve Policy** to resolve the service entitlements for an object. The list is grouped by product type and then policy source, and may be viewed for a given domain filter (DNAME). For LDAP objects, you can add values for the attributes, such as Hostname, OS, UserID, and Context, which are normally available when the LDAP policy is resolved.

Adding a Policy Object

Use the **Add Policy Object** task to add a group or organizational unit.

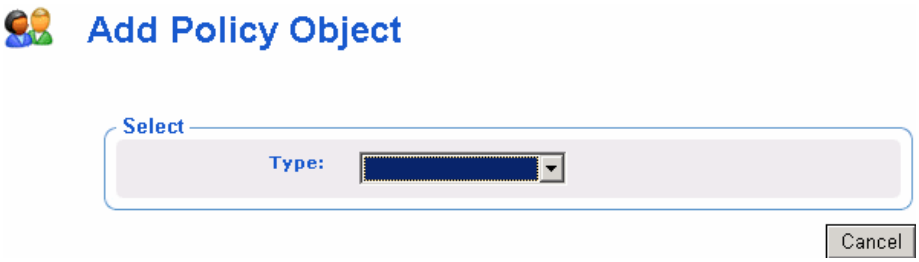
To add a policy object

1 Use the navigation aid to go to the appropriate container in the directory service where you want to add a policy object.



2 In the Policy task group, click **Add Policy Object.**

The Add Policy Object window opens.



3 From the **Type** drop-down menu, select **Group** or **Organizational Unit**.

The Add Group window opens.

4 In the **Common Name** text box, type a unique name for the policy object.

5 In the **Display Name** text box, type a name for the policy object that will appear in the RMP.

6 In the **Description** text box, type a description that will appear in the Details view.

7 Click **Add**.

The Properties window for the policy object opens.

Removing a Policy Object

Use the **Remove Policy Object** task to delete a group or organizational unit.

To remove a policy object

1 Use the navigation aid to go to the policy object that you want to delete.

2 In the Policy task group, click **Remove Policy Object.**

The Remove Group window opens.

3 Click ✓ to confirm that you want to remove the object.

OR

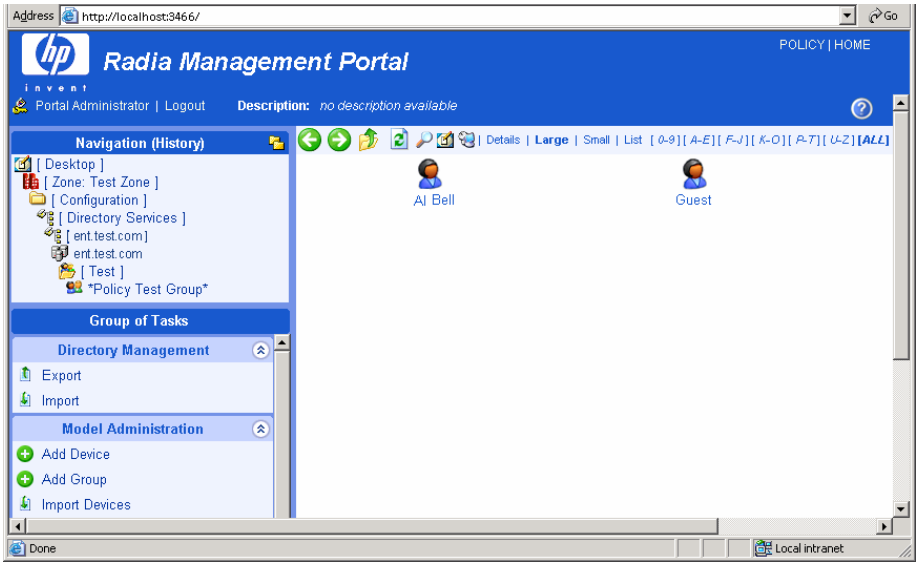
Click ✖ to indicate that you do not want to remove the object.

Modifying Policies

Use the **Modify Policies** task to assign services to the selected policy object.

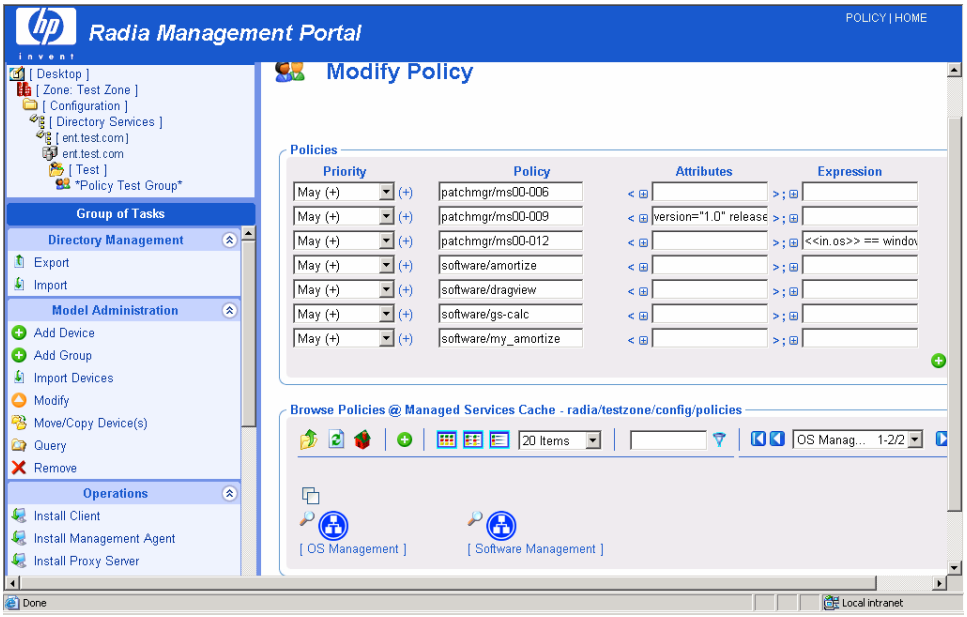
To modify policies

1 Use the navigation aid to go to the policy object that you want to modify.



2 In the **Policy** task group, click **Modify Policies**.

The Modify Policy window opens.



3 Use the Modify Policies window to modify existing policy or to select additional services to be assigned to the policy object. See *Basic Procedures for Modifying Groups* on page 166 for information on how to use this window. Within that section, see *Using* the Attribute Editor on page 171 for information on how to modify service attributes, and see *Using the Expression Editor* on page 174 for information on how to modify the constraints for a service using the expressions editor.

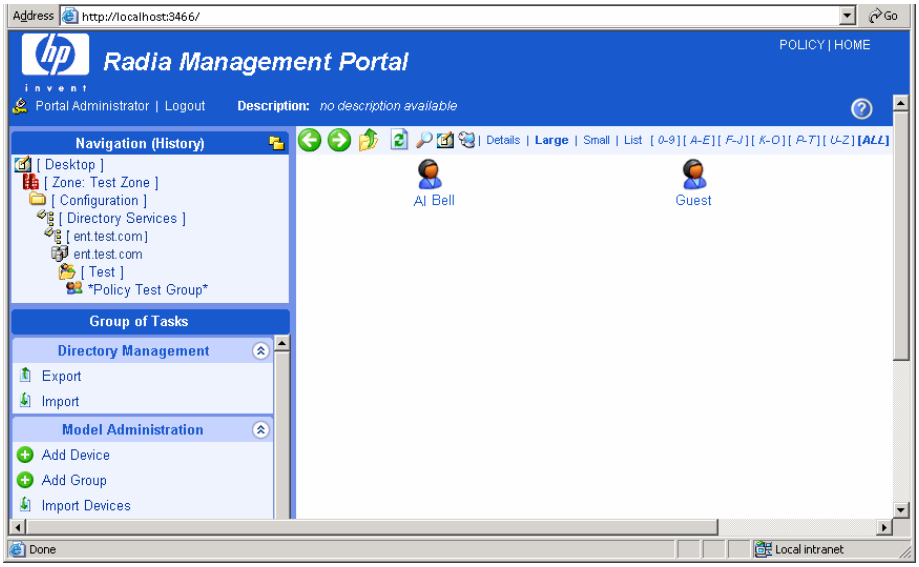
4 When you are done making changes, click **Commit**.

Modifying Targets

Use the **Modify Targets task** to specify members of a group to be targeted based on the policy assignments.

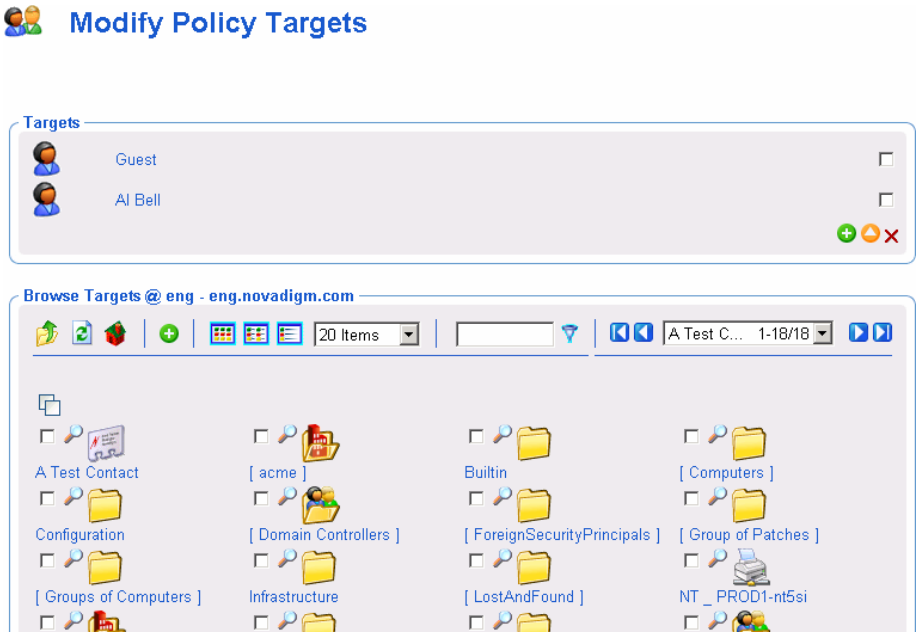
To modify targets

1 Use the navigation aid to go to the appropriate policy object.



2 In the **Policy** task group, click **Modify Targets**.

The **Modify Policy Targets w**indow opens.



3 Use the **Modify Policy Targets** window to select the appropriate targets. See *Basic Procedures for Modifying Groups* on page 166 for information on how to use this window.

4 When you are done making changes, click **Commit**.

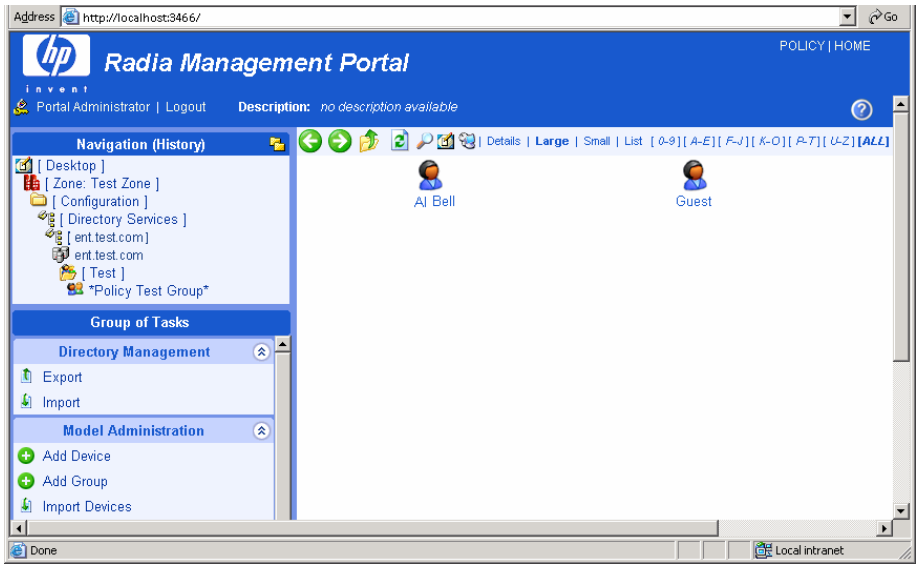
Resolving Policy

Use the **Resolve Policy** task to view resulting policy entitlements for an object. You can limit the view to an established domain filter group by selecting a DNAME. You can also add values for input attributes that are normally available to the LDAP resolve method during an actual resolution, such as host computer, operating system, userID and Zcontext.

If you customized the set of domain filters (DNAMEs) in the Policy Server configuration file (pm.cfg), you can also customize the domain filters available in the Resolve Policy task of the Management Portal. See *Customizing Domain Filters (DNAMEs) in the Resolve Policy Task* on page 120 for details.

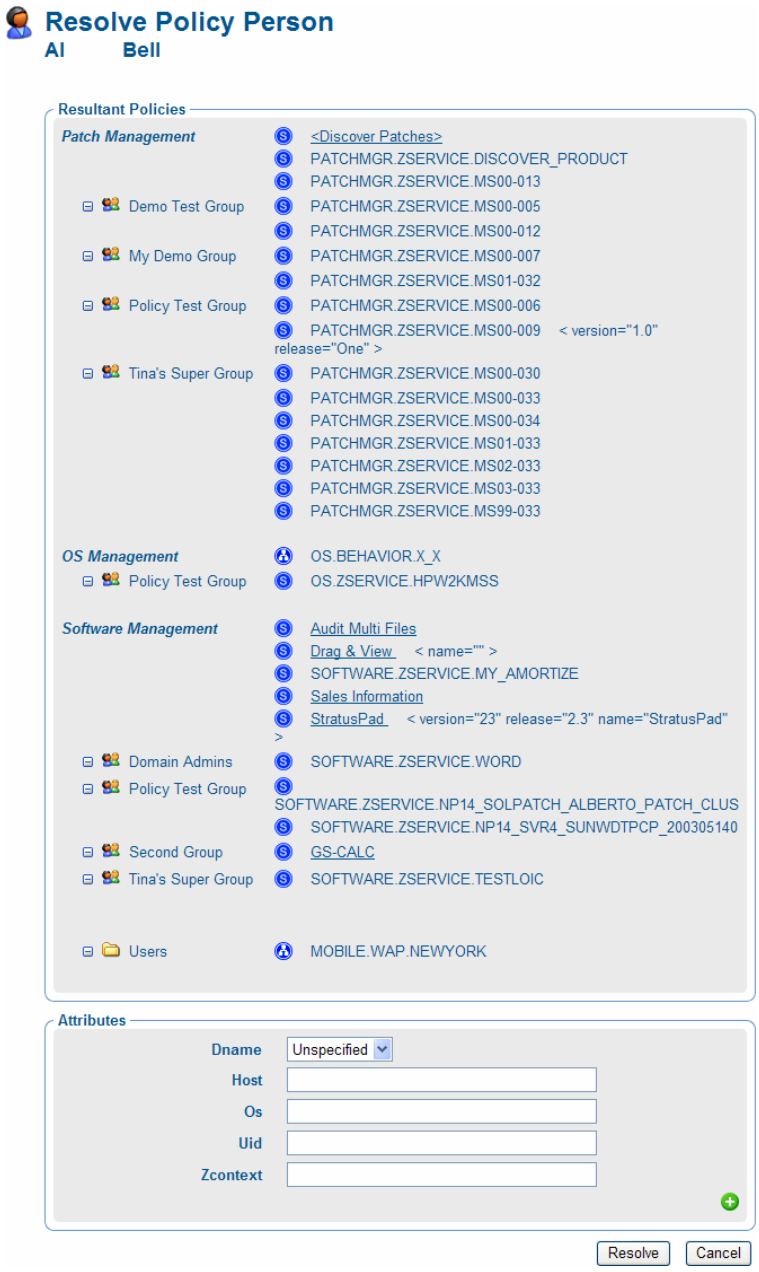
To resolve policy entitlements

1 Use the navigation aid to go to the appropriate policy object.



2 In the **Policy** task group, click **Resolve Policy**.

The Resolve Policy window opens, displaying all policy entitlements for the object.



The top area displays all Resultant Policies for the selected target object.

Upon initial display, Resultant Policies are grouped into categories such as Patch Management, OS Management, and Software Management. Within a category, the direct policy entitlements are listed first, followed by indirect policy entitlements attributable to group memberships.

The sources of indirect entitlements are listed on the left column. The figure below shows the direct policies for Patch Management, followed by the indirect policies inherited for three groups. The policies for the second and third groups have been hidden from view.

— Click the ⊟ icon to hide policies inherited from that group.

— Click the ⊞ icon to view policies inherited from that group.

— Click on a group name to browse that object's properties.

3 Use the Attributes area on the lower half of the page to limit the resolution to a specific domain filter group, or to specify values for attributes normally available at the time of resolution. The attributes correlate to the `in.<attribute>` value normally passed from Radia to the LDAP Policy Adapter.

If you customized the set of DNAMEs in your pm.cfg file, you can modify the Dname selection list values for the Resolve Policy task. See *Customizing Domain Filters (DNAMEs) in the Resolve Policy Task* on page 120 for more information.

— In the **Dname** drop-down list box, select an entry other than Unfiltered to view policy resolution for a specific domain filter group. Default domain filter groups include *, PATCH and OS, where * represents all domains other than PATCH and OS.

— In the **Host** text box, optionally type a host computer name to specify the value of the `<<in.host>>` attribute.

— In the **Uid** text box, optionally type a User ID to specify the value of the `<<in.uid>>` attribute.

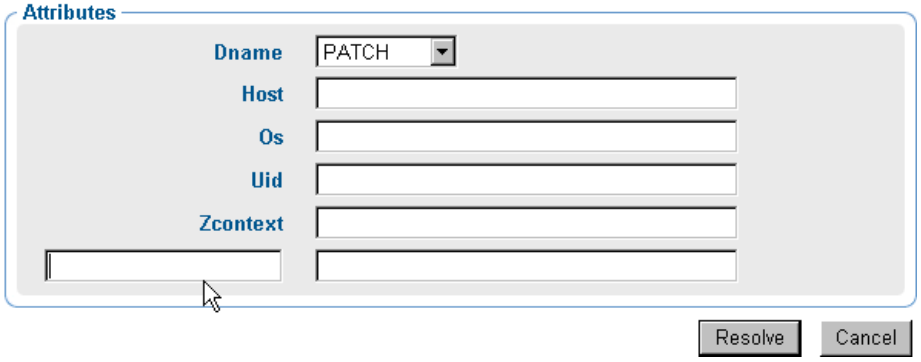
— In the **Os** text box, optionally type an operating system name, such as Win32, to specify the value of the `<<in.os>>` attribute.

— In the **Zcontext** text box, optionally type M for machine or U for user to specify the context of the delivery option for applications configured to accommodate multiple users. This attribute represents the `zservice.zcontext` value in the Radia database.

4 To reference another input attribute for policy resolution, click the  on the bottom-right of the page. This adds a text box area for a new attribute name and value to the bottom of the Attributes list.

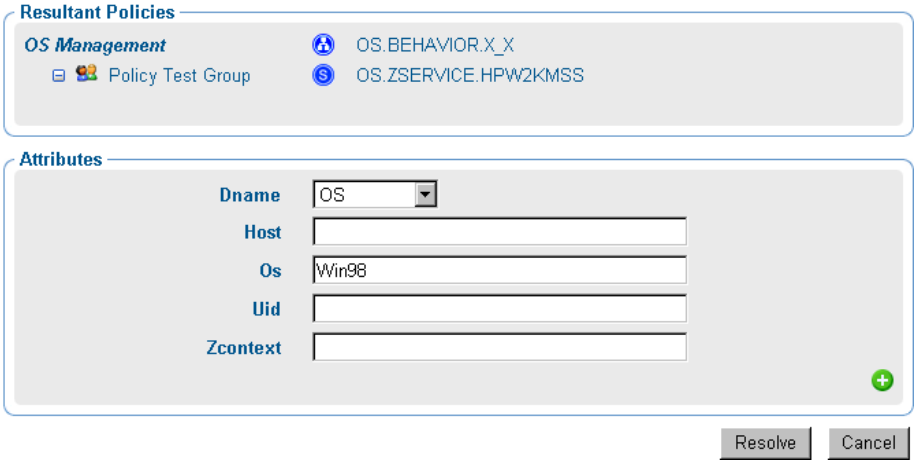
— In the left text box, type the new attribute name.

— In the right text-box, type the value for the new attribute. Enter quotes around values that include spaces.



5 After specifying Attributes for the policy resolution, click **Resolve** on the bottom of the page.

The Resultant Policies area displays the service entitlements for the object, given the selected Dname filter group and any input attribute values entered in the Attributes area.



6 To exit the Resolve Policy page, click an entry in the Navigation area. This returns you to the selected object's properties page.

Customizing Domain Filters (DNAMEs) in the Resolve Policy Task

If you have modified the domain filter settings defined in your Policy Server `pm.cfg` file, you can port your modified filter settings to the Management Portal. The modified filter settings will be available from the Dname drop-down list box on the Resolve Policy task page.

Domain filtering is defined in your Policy Server. Any custom filter settings must be properly defined in the Radia Policy Server configuration file, pm.cfg using the format:

```
DNAME=<DOMAIN NAME>    { rule }
```

Refer to *Appendix C: Domain Filtering* in the *Policy Server Guide* for details on domain filtering and syntax.

To port your custom domain filter settings to the Management Portal Resolve Policy task you must modify the httpd.rc file, which is located in the etc directory of where the Management Portal is installed. Add the following custom code to the end of the httpd.rc file using the format:

```
namespace eval policy {
default cfg(DNAME=<DOMAIN NAME>)    { rule }
```

```
}
```

where DNAME=<DOMAIN NAME> and { rule } correspond to a custom filter setting in your pm.cfg file. The Code sample below displays the end of the httpd.rc file configured for custom policy filters. This example shows a modified definition for the default (*) filter as well as a new AUDIT filter.

```
namespace eval policy {
   default cfg(DNAME=*)          { * !PATCHMGR !OS !AUDIT}
   default cfg(DNAME=PATCH)      { PATCHMGR }
   default cfg(DNAME=OS)         { OS }
   default cfg(DNAME=AUDIT)      { AUDIT }
}
```

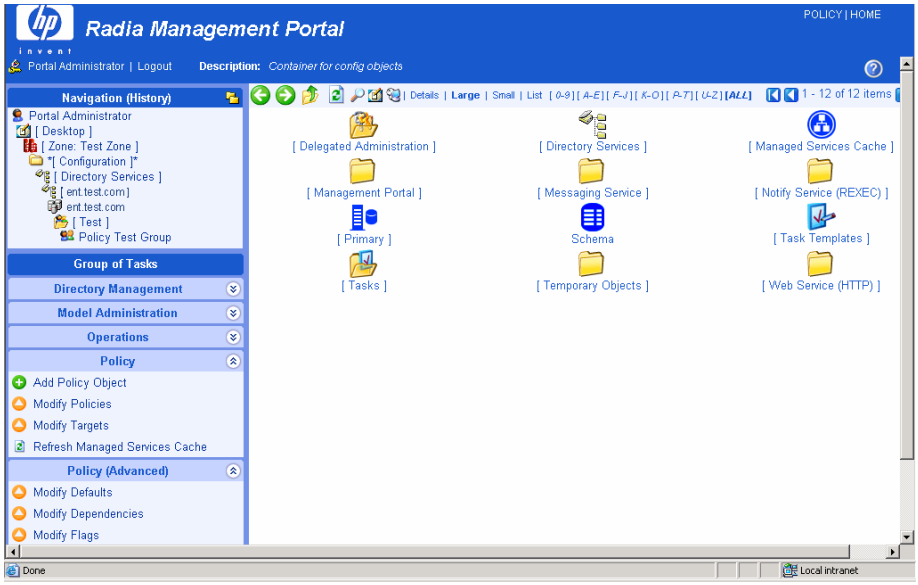
Save the changes to the httpd.rc file and restart the Management Portal service. The modified filter settings will be available from the Dname drop-down list box on the Resolve Policy task.

Refreshing the Managed Services Cache

Use the Refresh Managed Services Cache task to periodically refresh the list of services displayed in the Management Portal. This list is created from information in the Radia Database.

To refresh the managed services cache

1 Use the navigation aid to go to the Configuration container.



2 In the **Policy** task group, click **Refresh Managed Services Cache.**

About the Policy (Advanced) Tasks

Use the **Policy (Advanced)** task group to modify the Radia Policy attributes as described in the Policy Server Guide. These attributes are used to manage policy scope, relationships, and assignments.

Make sure that you have a good understanding of the Policy Server and the Radia Policy attributes before using these tasks.

The tasks available are:

- **Modify Defaults**
  Click Modify Defaults to set the defaults for the attributes in a service. Using this task modifies edmPolicyDefault. Refer to the *Policy Server Guide* for details.
- **Modify Dependencies**
  Click **Modify Dependencies** to modify policy links. Using this task modifies the edmLink attribute. See the *Policy Server Guide* for details.

- **Modify Flags**
  Click **Modify Flags** to limit the scope of policy resolution for specific objects. Using this task modifies the edmFlags attribute. See the *Policy Server Guide* for details.
- **Modify Overrides**
  Click **Modify Overrides** to bypass the pre-set values of one or more attributes for a service and specify alternate values. Using this task modifies the edmPolicyOverride attribute. See the *Policy Server Guide* for details.

Modifying Dependencies

Use the **Modify Dependencies** task to modify policy links. Using this task modifies the edmLink attribute. See the Policy Server Guide for details.

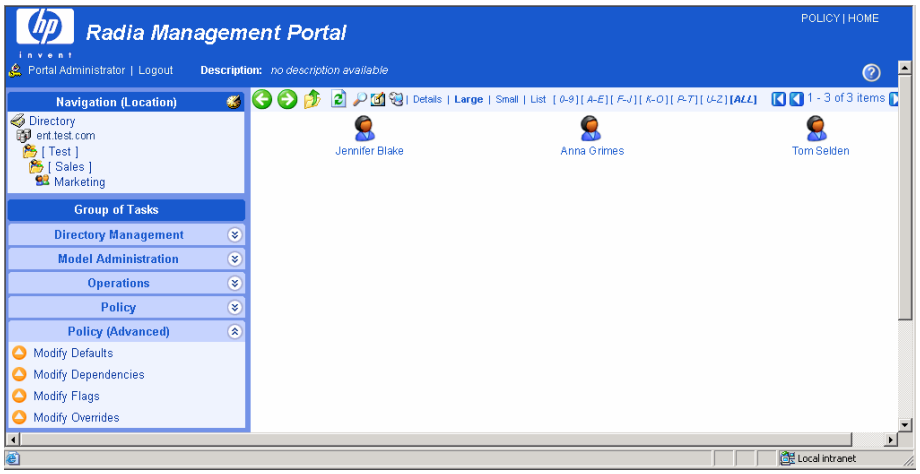
This task allows you to create relationships in addition to your parent and group relationships. It is recommended that you use this task sparingly.

Example

Jennifer Blake is part of the Marketing group, which falls under the Sales organization. Jennifer and the rest of the Marketing group use different machines than the rest of the company. Therefore, the Marketing group must receive several services that are specifically for HP Compaq Notebook nc6000 machines. The following example shows how to create a dependency (also called a link) from the Marketing group to the HP Compaq Notebook nc6000 group.

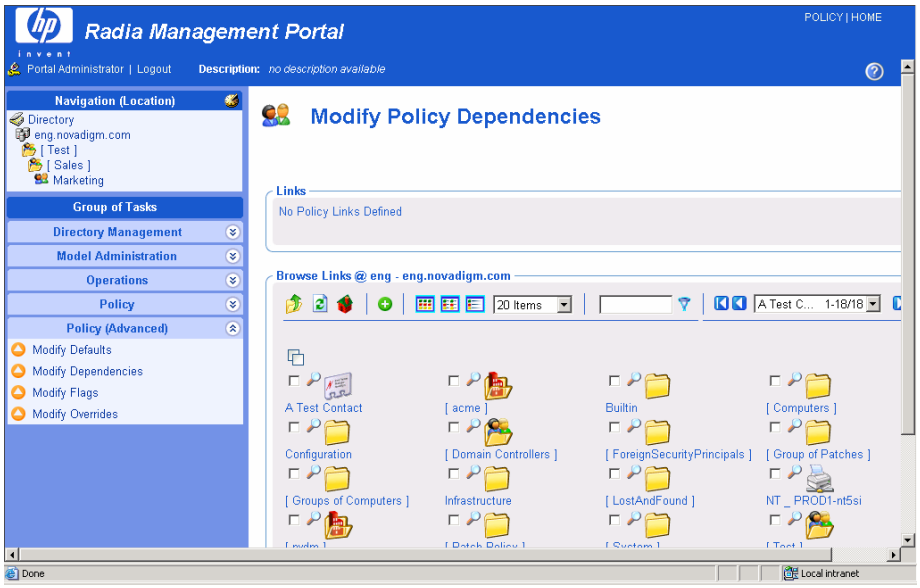
To modify a dependency

1 Use the navigation aid to go to the group for which you want to modify a policy link, such as Marketing.

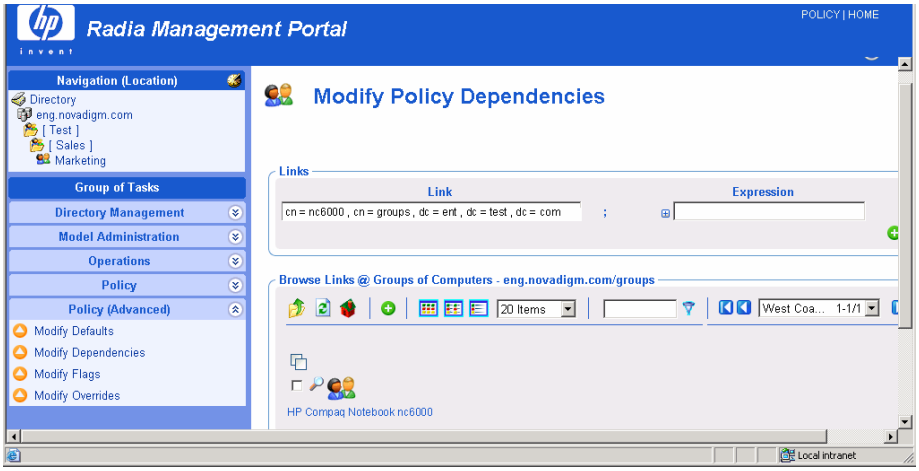


2 In the **Policy (Advanced)** task group, click **Modify Dependencies**.

The Modify Policy Dependencies window opens.



3 Use this window to select the policy link. See *Basic Procedures for Modifying Groups* on page 166 for information about how to use this window.



4 If you want to add any additional constraints use the Expression Editor. See *Using the Expression Editor* on page 174 for more information about how to use this window and the *Policy Server Guide* for more information about expressions.

5 Click **Commit** to save the changes to the policy dependencies.

Modifying Flags

Use the **Modify Flags** task to limit the scope of policy resolution for specific objects. Using this task modifies the edmFlags attribute. See the Policy Server Guide for details.

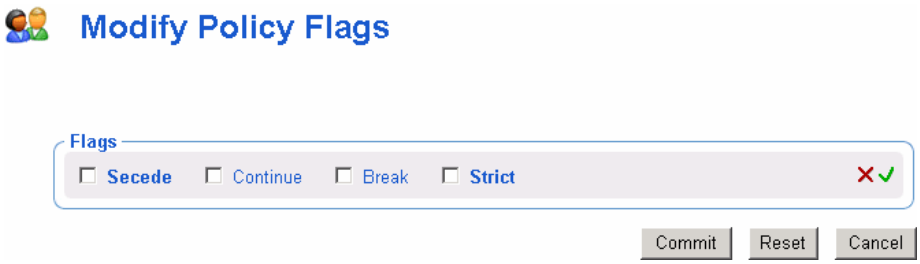
Example

In your organization, the Marketing group is typically a member of Sales. However, the Marketing group should receive the same software applications as Sales. Therefore, you may want to set up a flag that limits policy resolution for the Marketing group.

To modify flags

2 Use the navigation aid to go to the policy object for which you want to limit the scope of policy resolution.

2 In the **Policy (Advanced)** task group, click **Modify Flags.**



3 Select the appropriate check box.

— **Secede**
Instructs the Policy Server not to include any parent objects in the outcome.

— **Continue**
Instructs the Policy Server to ignore all other attributes in this object. The parent object is still processed unless Secede is selected.

— **Break**
Instructs the Policy Server to abort resolution and return the condition to the client. The client device should not apply policy.

— **Strict**
Instructs the Policy Server to ignore 'memberOf' attributes and only process edmFlags, edmPolicy and edmLink.

4 Click ✓ to accept the changes.

5 Click **Commit**.

Modifying Defaults

Use the **Modify Defaults** task to set the defaults for the attributes, such as version, in a service. Using this task modifies edmPolicyDefault. See the *Policy Server Guide* for details.

Example

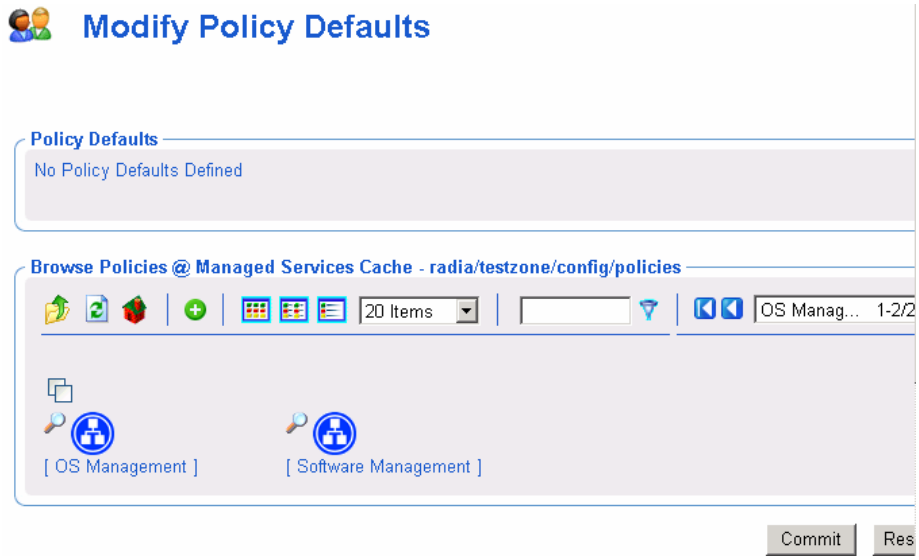
If the Sales application does not have a version specified, you can use this task to specify the default version to be deployed to the target machines.

To modify defaults

1 Use the navigation aid to go to the appropriate policy object.

2 In the **Policy (Advanced)** task group, click **Modify Defaults**.

The Modify Policy Defaults window opens.



3 Use this window to select the service whose attributes you want to define. See *Basic Procedures for Modifying Groups* on page for information about how to use this window.

4 Once you have selected a service, use the Attribute Editor to specify the default values. See *Using* the Attribute Editor on page 171 for information about how to use this editor and the *Policy Server Guide* for details about attributes.

5 Use the Expression Editor to specify any additional constraints. See *Using the Expression Editor* on page 174 for information about how to use this editor and the *Policy Server Guide* for details about expressions.

Modifying Overrides

Use the **Modify Overrides** task to bypass the pre-set values of one or more attributes for a service and specify alternate values. Using this task modifies the edmPolicyOverride attribute. See the Policy Server Guide for details.

Example

Bob Smith is entitled to the Sales application, version 1. You can use this task to override the version information for Bob alone, and entitle him to version 2.

To modify overrides

1 Use the navigation aid to go to the appropriate policy object.

2 In the **Policy (Advanced)** task group, click **Modify Overrides**.

The Modify Policy Overrides window opens.

3 Use this window to select the service whose overrides you want to define. See *Basic Procedures for Modifying Groups* for information about how to use this window.

4 Once you have selected a service, use the Attribute Editor to specify the override values. See *Using* the Attribute Editor on page 171 for information about how to use this editor and the *Policy Server Guide* for details about attributes.

5 Use the Expression Editor to specify any additional constraints. See *Using the Expression Editor* on page 174 for information about how to use this editor and the *Policy Server Guide* for details about expressions.

Summary

- The Management Portal has a consistent user interface, which means that you can follow the same basic procedure to complete any task.
- The Management Portal user interface has a banner area, navigation aid, taskbar, toolbar, and workspace.
- The previous Authority area is now renamed the Navigation area. There are two Navigation modes: Navigation (History) — which traces your Portal navigation path during a session, and Navigation (Location)— which shows the directory path of your current location. You can switch between the two Navigation modes using the icon included in the Navigation title bar.
- Your initial login authority is the Desktop area, which contains links to the Portal Directory and your Radia Zone, by default. You can add or remove Shortcuts to your Desktop that link to frequently used navigation locations.
- The Management Portal tasks are maintained in task groups that reflect their function. The task groups and tasks available at any time vary based on your assigned role as well as your current navigation location.
- The Management Portal Zone is composed of containers. Navigate to the appropriate container and location to perform tasks related to the objects stored in each container.
- The Management Portal contains several tasks, stored in the RCS Administration task group, that allow you to manipulate instances in the Radia Database.
- The Management Portal contains several tasks used to assign and manage policy through LDAP directories. These tasks are available from the Policy and Policy (Advanced) task groups.

4 Administrative Functions

At the end of this chapter, you will:

- Be able to configure the Management Portal Zone for Network Discovery and Directory Services.
- Be able to connect to and disconnect from a Directory Service or RCS Primary Database, or other object defined in the Directory Services container.
- Understand the various methods of bringing devices under management by a Management Portal Zone.
- Be able to create groups of devices for performing operations, and know how to add, move, copy or import devices into the groups.
- Be able to create and configure delegated administration roles, and add administrators and operators to the Management Portal Directory.
- Be able to manage the Management Portal Zone Directory using Backup, Restore, Import, and Export tasks.
- Be able to view and manage active Jobs, and view executed jobs from the Job History container.
- Be able to view the properties for any object in the Management Portal.

Several administrative functions are available for configuring and managing your organization's infrastructure from the Management Portal. Administrative functions allow you to prepare your Management Portal for use by the administrators and operators in your organization, as well as to handle general administrative functions such as creating a backup of the Management Portal Directory.

New for this release is the configuration of Directory Services to allow users access to the RCS Primary file and your existing LDAP directories, such as Active Directory for Policy administration. For details, see *Configuring Directory Services* on page 140.

Also new for this release are the containers and tasks used to bring devices under management by the Management Portal Zone. For details, see *Establishing Devices and Device Groups* on page 164.

Configuring a Management Portal Zone

Following installation, you need to add the following objects to a zone's infrastructure in order to use various new features.

- **Directory Services**
  Add a Directory Service object for each outside directory to which you want the Management Portal to be able to connect, such as the Primary file on your Configuration Server or an existing LDAP Directory in your enterprise.
- **Network Discovery and Mount Points**
  The Management Portal is configured to connect to a set of network directories in your enterprise through mount points. The definitions are also found in the Directory Services container, where the startup can be changed from automatic to manual, if desired.
- **Groups (of Devices)**
  Almost all operations in this release are performed using device Groups. The devices that are imported or added to a specific Management Portal Zone can be further clustered into different Groups to expedite common operations.
- **Subordinate Zones**
  From the initial Management Portal, run the **Install Zone** task to remotely install subordinate zones in your enterprise, each with a unique name. All zones retain an entry in the Zone Access Points container, which can

be used to schedule Zone Operations on devices in all zones in your enterprise.

- **Task Templates**
  Task templates need to be added before scheduling jobs for Zone Operations.
- **Cross References Container**
  The groups in the Cross References container are self-managed. They are automatically created after the Radia Management Agent is installed on devices in the Device container, and dynamically maintained.

Understanding Network Discovery

If enabled during the install, the Management Portal runs the network discovery job upon startup and at regular intervals to automatically discover the resources on your network. The discovered objects are placed in the appropriate network container in the Zone →Networks location, where they can be selected for management by the Management Portal Zone.

To view the network containers of discovered objects in the Management Portal, use the Navigation Location aid to go to the Zone container, and then click **Network**.

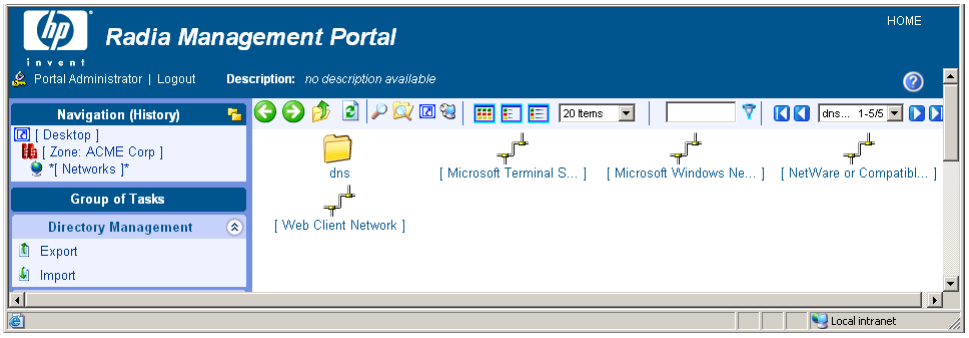


Figure 11: Network container includes discovered Networks.

To view the objects discovered in a specific network, navigate to the Networks container and then click the network in the Workspace. For example:

- Click **Microsoft Windows Network (cn=lanmanredirector)** to view the Windows devices that you can manage.
- Click **Netware or Compatible Networks (cn=nrnwk)** to view Netware devices that you can manage.

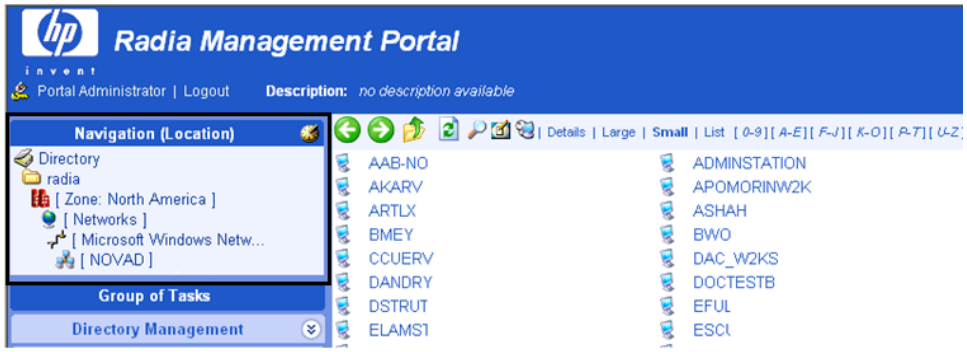


Figure 12: Objects discovered in a MS Windows Network domain.

Configuring Network Discovery

In some environments, you may want to configure your network discovery so that you have more control over network discovery, especially in environments with large networks.

Each time the network discovery job runs, newly discovered objects are added to the Networks container. Additional Network Discovery jobs will only add objects to previously discovered Networks containers, not remove them.

To configure network discovery

1. Stop the Radia Integration Server service.
2. Use a text editor to open the Management Portal configuration file, rmp.cfg, located by default in *SystemDrive*:\Novadigm\IntegrationServer\etc.

```
#
# Copyright (C) 1997-2001 HP. All Rights Reserved.
#
# $Header: /cvs/nvd/rmp/default.rc,v 1.6 2002/02/01 17:56:24 Exp $
#
#
```

```
# RMP Module (Management Portal)
#

# This section provides the core configuration for the
# RMP Sub-system. Please take care when hand-editing this.
#
rmp::init {
    URL         /
# Insert Network Discovery configuration parameters here.

    }
#
# END OF CONFIG
#
```

3 You can insert any of the parameters in Table 1 below into this file before the finishing curly bracket (}) as shown in the code sample above.

4 Use a space to separate the parameter and its value.

Table 1: Parameters to Configure Network Discovery

Parameters	Explanation
NETSCAN	Enables or disables network discovery. Default is disabled. During the install the user can set this value to enabled or disabled. • Type **`NETSCAN 0`** to disable network discovery. • Type **`NETSCAN 1`** to enable network discovery.

NETSCAN_START_DELAY	The time to wait (in seconds) before starting network discovery when the Management Portal starts up. Default is 15 minutes or 900 seconds.
	You can specify this value as:
	`NETSCAN_START_DELAY 900`
	Another way to specify this value is by using a Tcl expression, which would read as follows:
	`NETSCAN_START_DELAY {15*60}`
	where 15 is the number of minutes. When multiplied by 60 seconds, the value becomes 900 seconds.

NETSCAN_POLL	Network Discovery Interval (in seconds). Default setting is 86400 seconds, or 24 hours. Optionally, specify this value using a Tcl expression

Parameters	Explanation
	in curly brackets. For example: to specify 12 hours, enter: **NETSCAN_POLL {12*60*60}** where 12 is the number of hours, multiplied by 60 minutes, multiplied by 60 seconds.

NETSCAN _INCLUDE	For each object class specified, limits network discovery to only those objects named in the include list. Default is to include all discovered objects in all classes within the network.
	Use the following syntax:
	`NETSCAN_INCLUDE { object_class {object_list} object_classn {object_list} }`
	where:
	`object_class` is a class whose discovered objects are to be restricted to the members specified in the following object list. Valid object classes include, but are not limited to: network, tree, domain, computer. Your network may include other classes. Tip: Any object's class is listed when you hover the mouse pointer over its icon.
	`object_list` is a space-separated list of common names within curly brackets. These are the only objects to be included in network discovery for the given object class. Unnamed objects in the specified class are excluded.
	All names are case insensitive.
	Example: The following limits discovery to all objects found in the 2 listed domains in the Microsoft Windows Network. No other networks will be discovered.
	`NETSCAN_INCLUDE { network {lanmanredirector} domain {domain1 domain2} }`
	For additional examples, see Using NETSCAN_INCLUDE to Limit Network Discovery on page 137.

5 Save and close the file.

6 Restart the Radia Integration Server and open the Management Portal.

Using NETSCAN_INCLUDE to Limit Network Discovery

1 The `NETSCAN_INCLUDE { }` parameter allows you to restrict network discovery of the objects and object classes in your network. It is very powerful, and can be extremely restrictive.

2 For general syntax, refer to the NETSCAN_INCLUDE entry in Table 1 on page 135. When using NETSCAN_INCLUDE, be aware of the following implications:

3 Classes are hierarchical, and the include lists are processed for higher-level classes before lower-level classes. For example, the network class include list is processed before the domain include list.

network

domain

computer

4 For a given class, if a class is not named in a NETWORK_INCLUDE list, all objects are included. (This is subject to limits already processed for a higher-class object, discussed in step 3 below.)

5 Once you limit objects of a given class in a NETWORK_INCLUDE list, you are also EXCLUDING the unnamed objects of the same class. In addition, you are also EXCLUDING all lower-class objects contained in the excluded branches.

For example, including a domain list by definition EXCLUDES all domains in the network that are not listed. All computers contained in the excluded domains ARE ALSO EXCLUDED.

Examples:

Use the following examples as reference when coding your own NETSCAN_INCLUDE lists.

- `NETSCAN_INCLUDE {}`
  Discover all objects in the network. This is the default.

- `NETSCAN_INCLUDE { network {lanmanredirector}}`
  Limits discovery to the lanmanredirector network. (Lanmanredirector is the common name for Microsoft Windows Network.) No other network will be discovered. All the objects under lanmanredirector will be discovered.
- `NETSCAN_INCLUDE { computer {gta02 vhr01 kwo04 jra06}` **}**
  Limits discovery of computer objects to the four computers in the list: gta02, vhr01, kwo04, and jra06. Discovers all network objects that are not computers.
- `NETSCAN_INCLUDE { domain {Novad} computer {gta02 vhr01 kwo04 jra06} }`
  Discovers all network objects that are not domains or computer objects. Discovers any of the computers listed *if* they exist in the domain Novad. No other computers will be discovered.

Setting Additional Configuration Parameters

Separate topics discuss how to modify the rmp.cfg file for network discovery (see page 134) or LDAP authentication (see page 158).

Table 2 below, lists the parameters you can add to the `rmp.cfg` file for options that are not related to either of these topics. Refer to the procedure *To configure network discovery* on page 134 for detailed steps on how to modify parameters in the rmp.cfg file.

Table 2: Additional RMP Configuration Parameters

Parameter	Definition
LINKS	Specifies the policy configuration links to enable when policy has been applied to the objects in the Chassis container and related Cross-Reference containers for server blade devices. `See` Enabling Policy Configurations for Blades, Enclosures and Racks on page 222 for the details on specifying the attributes for this parameter.

Parameter	Definition
LISTENING_ADDRESS	Specifies a valid network address (either an IP address, hostname, or DNS address) that is to be passed to Radia Management Agents, and then used by them to connect back to the Management Portal. Use a LISTENING_ADDRESS when the Management Agents are experiencing communication failures with the Management Portal and are successful in registering back to the Portal or performing remote tasks on behalf of the Portal. This can occur when the RMP resides on a machine with dual-NIC cards or is using a dynamic IP address. Specify a network address using the format that works best in your environment: `LISTENING_ADDRESS` *`IPaddress`* *`or`* `LISTENING_ADDRESS` *`hostname`* `Or` `LISTENING_ADDRESS` *`DNS`* Ensure the network address you enter points to the current RMP Zone. If it does not, results are unpredictable.

Parameter	Definition
USE_FQDNSHOST_NAME	Specifies that RMP should contact remote hosts using either fully qualified domain names or short names (that is, the left-most portion of a fully qualified domain name). Customers whose DNS tables contain imperfect entries may want to switch to the use of short names. Sample operations that involve contacting a remote host include a Notify, a Proxy preload or purge, stopping or starting services via the RMA, and contacting the RMA. • Type **USE_FQDNSHOST_NAME 0** to use short names (that is, the left-most portion of a fully qualified name). Customers whose DNS tables contain imperfect entries may want to switch to the use of short names. • Type **USE_FQDNSHOST_NAME 1** to return to the use of fully qualified domain names (the default).
WOL_MCAST_ADDR	Permits Wake-on-LAN (WOL) support in multicast-enabled environments. Default is no support for multicast WOL. • Type **WOL_MCAST_ADDR <***IP_address***>** where the <*IP address*> specifies the multicast address to use to revolve a WOL request. • Type **WOL_MCAST_ADDR 0** to return to standard WOL support (no multicast WOL support). This is the default.

Configuring Directory Services

The Zone Configuration container includes the Directory Services container. This is where an Administrator can define, configure, and connect to or disconnect from another Directory Service, including the Configuration

Server PRIMARY database and an Active Directory service in your enterprise. For details, see the following topic *Adding a Directory Service*.

Figure 13: Directory Services Container Location.

Adding a Directory Service

Use the Add Directory Service task from the Directory Services container to define a connection from the Management Portal's Zone directory service to another directory service. You can add one of the following types of directory services to your RMP zone:

- **LDAP**
  Use this type to connect to another LDAP directory, such as Microsoft Active Directory, DNS, or Netscape Iplanet.
- **RCS**
  Use this type to connect a Configuration Server and access the PRIMARY file in the Radia Database.
- **DSML**
  Use this type to connect to another Management Portal zone in your enterprise or a Radia Information Base (RIB) service. (Note: If you use the Install RMP task, this entry is created automatically.)
- **MK**
  Advanced users who have created a custom metakit container for the zone directory service may use this type to extend the capabilities of the Management Portal.

When you define properties for a Directory Service connection, you need to specify:

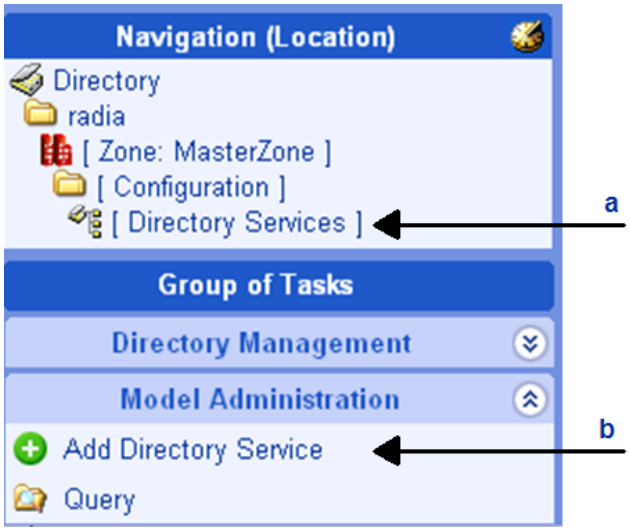
- The **mount point**. This is the highest level of the directory structure to which you will be connecting. You can browse to a lower level, but not

higher. For example, you can define a connection to the highest level of an Active Directory, or to a specific organizational unit within the structure.

- The login credentials for access. These credentials will be passed whenever a connection is made.
- Whether the connection should be automatic, manual, or disabled upon future Management Portal startups.
  - A manual connection requires the user to connect each time they want to access the defined directory. For details, see *To connect to a predefined Directory Service* on page 189.
  - A disabled connection requires an administrator to set the connection to manual or automatic before anyone can access the defined directory. For details, see *Modifying Directory Service Properties* on page 189.

To add a directory service

1 Navigate to the Directory Services container. It is located within the Zone Configuration container, as shown in the following figure.



a Browse to Directory Services

b Click Add Directory Service

2 Click **Add Directory Service** from the **Model Administration** task group.

The Add Directory Service page opens, where you specify the properties.

3 Begin by selecting the Type of directory service from the **Type** drop-down list.

Table 3: Adding a Directory Service by Type

Select Type	Added Directory Service
ds-dsml	DSML: an external Directory Service, such as a RIB or another RMP Zone.
ds-ldap	LDAP: an LDAP Directory Service, including Active Directory.
ds-mk	MK: a custom-built Zone Metakit Container (Advanced Users only).
ds-rcs	RCS: A Radia Configuration Service, which hosts the Radia Database. **Note:** The RCS defined with cn=primary

Once the Type is selected, the Directory Service Properties page shows the set of properties and any defaults specific to that type. For details on specifying the properties, see the following topics:

- *Specifying LDAP Directory Service Properties*
- *Specifying RCS Directory Service Properties*
- *Specifying DSML Directory Service Properties*
- *Specifying Metakit Directory Service Properties*

4 After entering all properties, click **Submit**.

The Directory Service definition is added to the Directory Services container. To connect to the service, see the topic: *Connecting to a Directory Service*.

Specifying LDAP Directory Service Properties

To complete the Directory Service Properties for a Type of ds-ldap (LDAP and AD), use the following table:

Table 4: Directory Service Properties for Type = ds-ldap

Sample	Sample
Common Name	Common name for the Directory Service. Must be unique among Directory Service objects and follow X500 standards. Example: `eng.acme.com` is assigned to the LDAP Directory Service known as dc=eng,dc=acme,dc=com
Display Name	Display Name of the object in the Directory Service container.
Description	Description of this Directory Service.
Startup	Select auto, manual, or disabled. **Auto** Specifies the connection to this Directory Service will be automatic when the RMP Zone starts up. **Manual** Specifies the connection to this Directory Service requires an Administrator or user to use the "Connect to Directory Service" task to connect during an RMP session. **Disabled** Restricts any connection to this Directory Service. The startup must be changed to auto or manual before anyone can connect to this Directory Service during a session.
Type	**ds-ldap** Type required for an LDAP directory service.

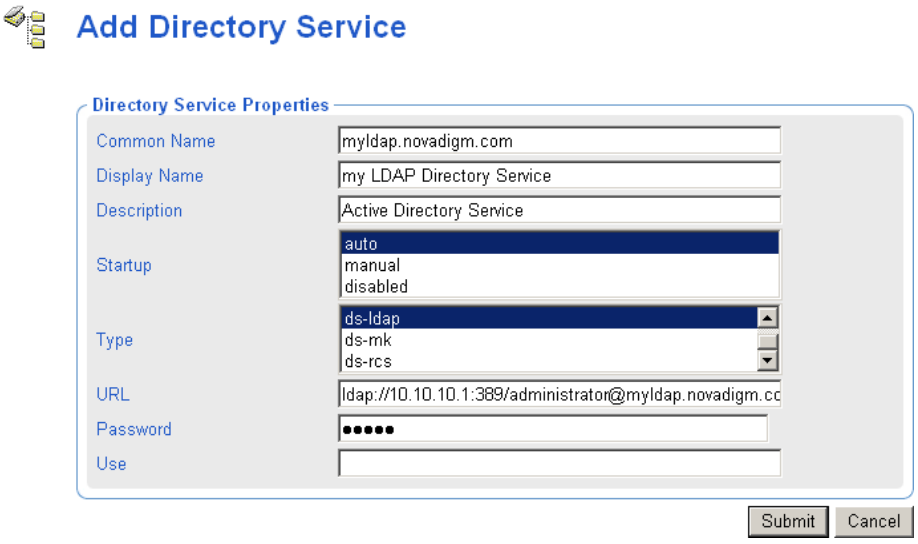
URL
(Web Page Address)
	Format:
	`ldap://<IP address or qualified computer name>:389/ <qualified_Username>`
	Examples:
	`ldap://10.10.10.1:389/administrator@eng.acme.com`
	`ldap://usa.mycompany.com:389/admin@usa.mycompany.com`

Password	Password for the username entered in the URL

Sample	Sample
Used for Policy	Default: false **False** indicates this LDAP directory service is not to be used for policy tasks. **True** enables the use of this Directory Service for all policy tasks. To set this field, use the Modify task.
Use	Specifies a fully-qualified domain at which to mount the directory service. This mount point becomes the highest level of the directory structure that can be accessed from the Management Portal. For example, to mount and limit the use of the eng.acme.com directory to the Computers domain, specify the properties for this Directory Service with a Use value of: cn=computers,dc=eng,dc=acme,dc=com If left blank, the common name is used to mount the directory service at the highest level.

Click **Submit** to enter this Directory Service definition.

The following figure shows a sample set of directory service properties for accessing an LDAP directory service.



To specify an LDAP Directory Service being used for policy, see *Modifying Directory Service Properties* on page 151.

To specify an LDAP Directory Service being used for Policy but with an LDAP policy extension prefix other than edm, also see *Configuring for a Custom LDAP Policy Extension Prefix* on page 161.

Specifying RCS Directory Service Properties

Refer to the following table to complete the Directory Service Properties for an RCS Directory Service connection.

Table 5: Directory Service Properties for Type = ds-rcs

Field	Description
Common Name	Default: **primary** If primary exists, default is RCS*n*. Required. Must be unique among Directory Service objects and follow X500 naming standards. Multiple RCSs may be defined as Directory Service objects. However, only the RCS defined with the Common Name of primary has its services made accessible to the Policy and Advanced Policy tasks.
Display Name	Display Name of the object
Description	Description of this Directory Service
Startup	Select auto, manual, or disabled. **Auto** Specifies the connection to this Directory Service will be automatic when the RMP Zone starts up. **Manual** Specifies the connection to this Directory Service requires an Administrator or user to use the "Connect to Directory Service" task to connect during an RMP session. **Disabled** Restricts any connection to this Directory Service. The startup must be changed to auto or manual before anyone can connect to this Directory Service during a session.
Type	**ds-rcs** Type required to connect to a Configuration Server directory service.

Field	Description
URL (Web Page Address)	Default entry: `rcs://localhost:3464/RAD_MAST` Format: `rcs://<hostname or IP address>:<port #>/<Username>` Example: `rcs://myserver600:3464/RAD_MAST` Change *<localhost>* to specify the qualified host name or IP address of your Configuration Server, and if necessary, change the Username from the RAD_MAST default to the one used at your installation. The port number is normally 3464.
Password	Password for the username entered in the URL.
Path (see Modify task)	Optional entry for expediting a connection to the RCS Primary file. Specifies the fully qualified path of `ZTOPTASK.EXE` on the RCS. For example: `C:/Novadigm/ConfigurationServer/bin/ztoptask.exe`

Click **Submit** to enter this Directory Service definition.

The following figure shows a sample set of directory service properties for accessing the Radia Database Primary file on a Configuration Server.

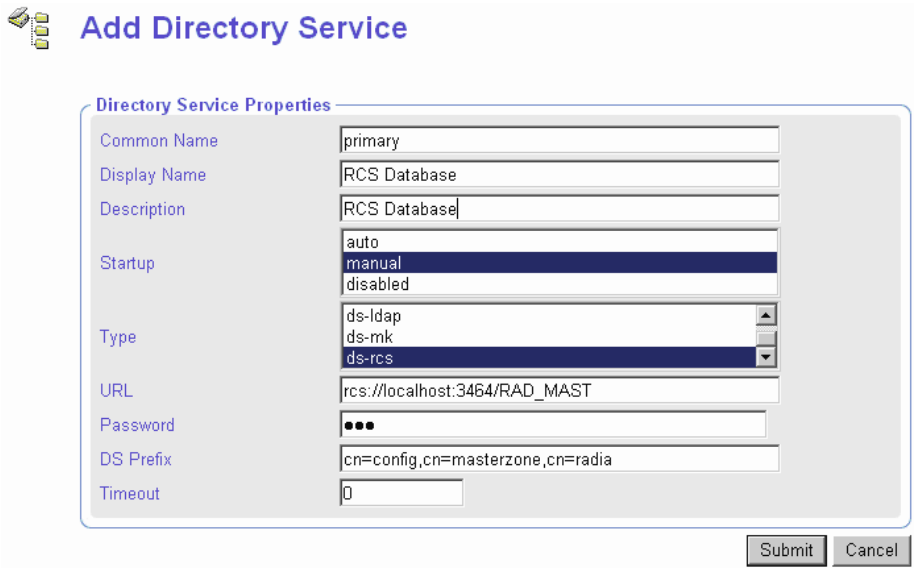


Figure 14: Sample Directory Service Properties for an RCS.

Specifying DSML Directory Service Properties

Directory Service Properties for a DSML connection are specified the same as for LDAP. The only difference is the format of the URL entry, which begins with dsml: instead of ldap:. DSML connections may be defined to connect to another RMP Zone, or to a Radia Information Base (RIB) directory service.

Specifying Metakit Directory Service Properties

Advanced users can extend the capabilities of their Management Portal Zone by adding another Directory Service container to the Zone. Each container in a Zone is loaded as a directory service upon Zone startup using a template (`*.tmpl`) file, LDAP data interchange file (`*.ldif`) file, and metakit (`*.mk`) file.

If you have a customized directory service, add a Directory Service definition for the `*.mk` file. Refer to the following table for guidance on specifying Directory Service properties.

Examples of ds-mk directory services include the Management Portal's own directory service mount points. For examples, refer to the Tasks, Jobs, and Users directory service mount points located in the **Zone → Configuration → Management Portal** container.

Table 6: Directory Service Properties for Type = ds-mk

Field	Description
Common Name	Common name for the Directory Service. Must be unique among Directory Service objects and follow X500 standards. Example: `zone/config/tasks`
Display Name	Display Name of the Directory Service object. Example: Mount Point: Tasks
Description	Description of this Directory Service or mount point.
Startup	Select auto, manual, or disabled. **Auto** Specifies the connection to or mounting of this Directory Service will be automatic when the RMP Zone starts up. **Manual** Specifies the connection to or mounting of this Directory Service requires an Administrator or user to use the "Connect to Directory Service" task to connect during an RMP session. **Disabled** Restricts any connection to or mounting of this Directory Service. The startup must be changed to auto or manual before anyone can connect to this Directory Service during a session.
Type	**ds-mk** Type required to connect to a custom metakit directory service.
Use	Overrides the common name.
Template	Specifies the template file needed for the directory service. Example: `<<module.curpath>>/etc/task.ldif`

Click **Submit** to enter this Directory Service definition.

Modifying Directory Service Properties

Use the Modify task in the Model Administration task group to change the properties of a Directory Service connection defined in your Zone's Directory Services container, such as the startup mode or the flag indicating whether or not an LDAP connection is being used for Policy.

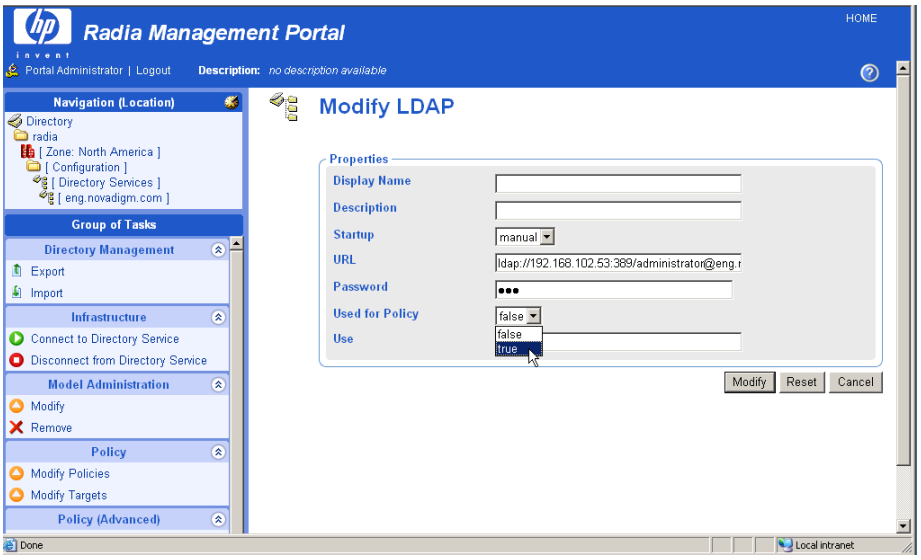
To modify a Directory Service Property

1 Display the Directory Service Properties for the service you want to modify.

To navigate to a Directory Service Properties page, click on the **Zone** container, **Configuration** container, **Directory Services** container, and then select the Directory Service object.

2 Click **Modify** from the **Model Administration** task group.

The Modify page for the specific object type opens. The next figure shows a sample Modify LDAP page.



3 Change any entries to reflect the modified properties. For details on these fields, refer to the appropriate table in the topic *Adding a Directory Service*.

4 If this Directory Service is being used for Policy Administration, open the drop-down list next to the **Use for Policy** field, and click **true**. This setting enables the use of all policy tasks for this Directory Service.

If the LDAP Directory Service is being used for policy but with a custom policy prefix (that is, other than edm as in edmPolicy), you must specify the custom prefix using the PREFIX parameter in the rmp.cfg file. See *Configuring for a Custom LDAP Policy Extension Prefix* on page 161 for more information.

5 To save the property changes, click **Modify**. The Directory Service Properties page opens and displays the modified properties.

Or to cancel any changes you made to the properties, click **Reset**. To exit the Modify page, click **Cancel**.

Removing a Directory Service

Use the Remove task from the Model Administration task group to remove a defined connection to a Directory Service.

Tip: As an alternative to removing a Directory Service entry, you can want to disable it from use. To do this, use the Modify task and set the Startup field to disabled.

To remove a Directory Service object

If you remove a directory service that is in use by another user, the user will be redirected to a parent object and receive an error message.

Follow the same steps as removing any object from the Management Portal:

1. Display the object properties by navigating to the **Zone** , **Configuration**, **Directory Services** container, and click on the directory service to be removed.
2. Click **Remove** from the **Model Administration** task group.

   The Remove Directory Service dialog asks you to confirm this delete.
3. Click the green check mark to confirm the delete, or the red X to cancel the delete.

Connecting to a Directory Service

Use the Connect to Directory Service task in the Infrastructure task group to connect to an external directory service or network mount point.

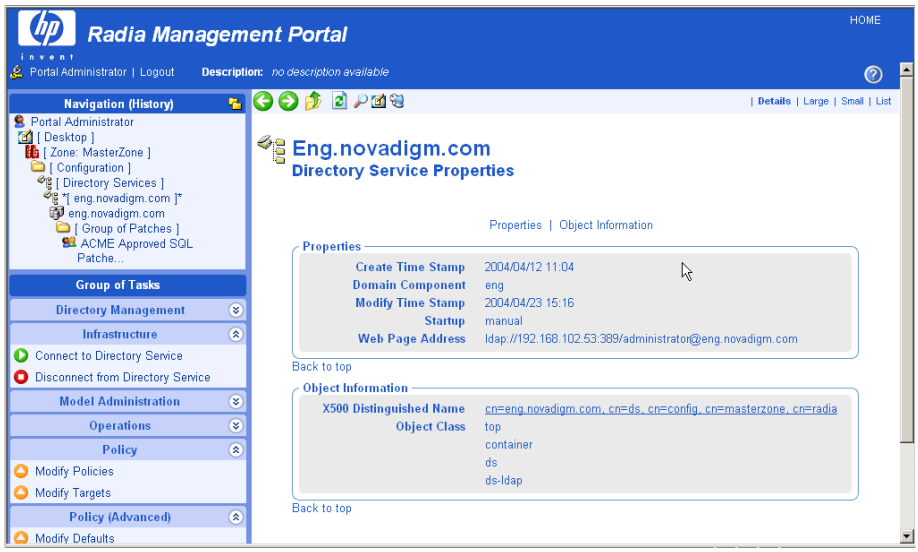
- To connect to a Directory Service that has been defined in the Zone Configuration container, use the procedure starting below. This is needed when the Directory Service is newly defined, or defined with a startup mode of manual or disabled.
- To connect to a Directory Service from its entry in the Devices container, use the procedure starting on page 155. This access will prompt you to add the service to the Directory Services container if it does not currently exist there.

For details on defining or modifying a directory service mount point, see *Adding a Directory Service* on page 141 or *Modifying Directory Service Properties* on page 151.

To connect to a predefined Directory Service

1. Display the Directory Service Properties for the service with which you want to connect.

   To navigate to a Directory Service Properties page, go to the **Zone Configuration** container and click **Directory Services**. In the Workspace, click the **Directory Service** object.



2 Click the Connect to Directory Service task within the Infrastructure task group.

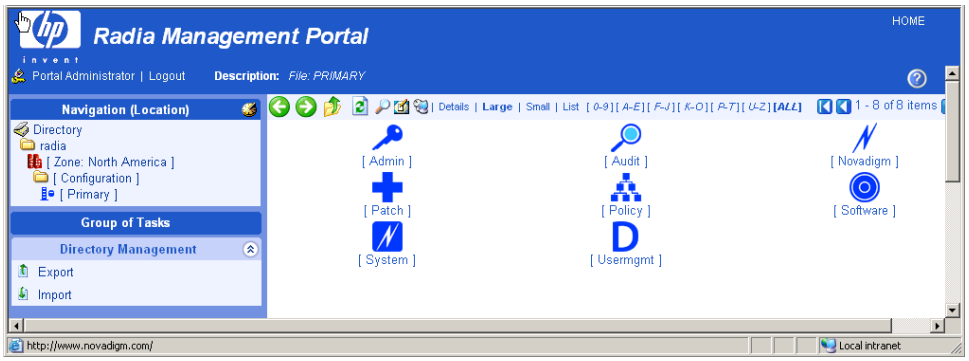
The connection is initiated immediately. The Workspace displays the objects at the highest level of the directory defined by the connection mount point.

Your navigation location changes to where that type of directory service is accessed, and the tasks available for working with the objects also display as you navigate through the structure. See the following table for a list of where each type of Directory Service is accessed from in the Directory.

Table 7: Locations for Accessing Directories and Mount Points

Object	Directory Locations
Active Directory, other LDAP Directory	Directory level – same level as Zone
Primary file of RCS	Zone, Configuration, Primary object
Network mount point	Zone, Networks container
DSML (Subordinate Zone or RIB)	Zone, Zone Access Points container
Metakit directory service (Advanced User)	Defined by Template

The next figure shows a sample connection to an RCS Database.



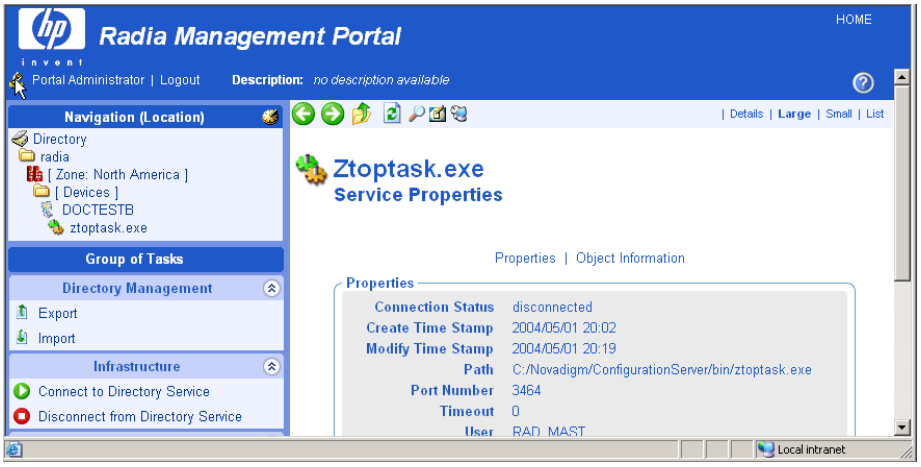
To connect to a service defined for a Device

1 Use the Navigation aid to go to the Zone Devices container.

2 Select the Device containing the service to which you want to connect.

3 In the Workspace, select the service to which you want to connect.

The Service Properties page opens.



4 Click Connect to Directory Service from the Infrastructure task group.

5 If you are connecting to an RCS whose service has not been added as a Directory Service to the Zone Configuration container, the following dialog box opens and gives you a choice of how to continue.

— Click **Add** to first add the RCS as a Directory Service to the Zone Configuration container, and then connect to the service.

Adding a Directory Service entry allows an automatic connection to this RCS directory whenever the Management Portal Zone starts up. If this is the first RCS being added to the Zone, the Common Name will default to primary. If a primary RCS exists in this zone, the Common Name will default to rcs1. For details on adding the RCS as a Directory Service, see *Specifying RCS Directory Service Properties* on page 146.

— Click **Connect** to simply connect to the RCS from this location.

Disconnecting from a Directory Service

Use the Disconnect from Directory Service task in the Infrastructure task group to remove a current connection to an external directory service or device service. After disconnecting, the objects in that Directory Service are no longer available for performing Management Portal operations until another connection is made.

- To disconnect from a service defined as a Directory Service, use the following procedure *To disconnect from a Directory Service*.
- To disconnect from an RCS Service from its Service Properties page within the Device container, use the procedure *To disconnect from a service defined for a Device* on page 157.

To disconnect from a Directory Service

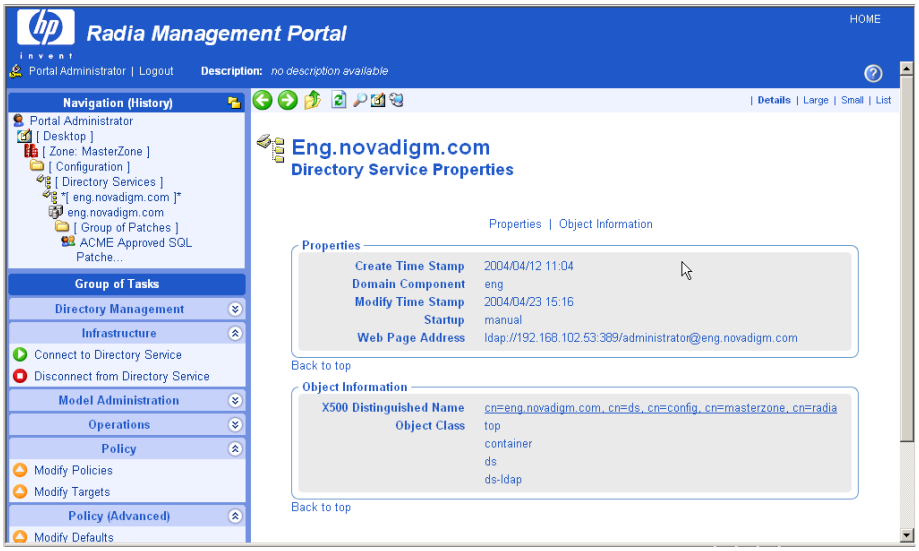
1 Display the Directory Service Properties page from which you want to disconnect.

To navigate to a Directory Service Properties page:

a Use the Navigation aid to go to the Zone, Configuration, Directory Services container.

b In the Workspace, click the Directory Service object.

c If necessary, click the Toolbar View Properties icon .



2 Click the **Disconnect from Directory Service** task within the Infrastructure task group.

The connection is terminated immediately.

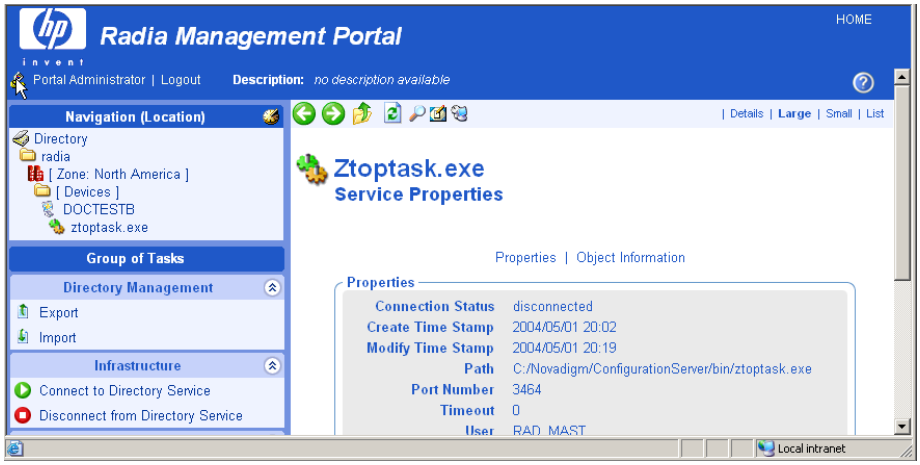
To disconnect from a service defined for a Device

1 Use the Navigation aid to go to the Zone Devices container.

2 Select the Device containing the service to which you want to disconnect.

3 In the Workspace, select the service to which you want to disconnect.

The Service Properties page opens.



4 Click the Disconnect from Directory Service task within the Infrastructure task group.

The connection is terminated immediately.

Configuring for External LDAP Authentication

Use the procedures and the rmp.cfg configuration parameters listed in this topic to implement external LDAP authentication for users of the Management Portal. The LDAP_AUTH parameters specify:

- the default external authentication setting for all users of the Management Portal (on or off)
- the domain a user will bind to
- the hostname and port of the LDAP server

By default, the Admin userID only binds to the local RMP directory.

If you set the default external authentication mode to on, you will also need to specify the external user ID and passwords for each user on the Person properties page. For details, see *Adding Users* on page 96. To disable LDAP

authentication for individual users, see *Modifying the Default LDAP Authentication for Specific Users* on page 161.

If you set the default external authentication mode to off, use the Add Person or Modify Person pages to turn on External authentication as well as specify an External User ID and external password for anyone to be externally authenticated.

To configure external LDAP authentication for the Management Portal

1. Stop the **Radia Integration Server** service.
2. Use a text editor to open the Management Portal configuration file, rmp.cfg, located by default in **SystemDrive:\Novadigm\IntegrationServer\etc**.
3. Insert the LDAP_AUTH, LDAP_AUTH_DN, and LDAP_AUTH_HOST parameters using uppercase into this file before the finishing curly bracket (}), as shown in the sample code below.

```
# RMP Module (Management Portal)
#

# This section provides the core configuration for the
# RMP Sub-system. Please take care when hand-editing this.
#
rmp::init {
    URL            /

    LDAP_AUTH      1
    LDAP_AUTH_DN   <<user>>@mydomain.com
    LDAP_AUTH_HOST myldaphostname:389


    }
#
# END OF CONFIG
#
```

Sample parameters to enable LDAP authentication for all users, by default.

The LDAP_AUTH value determines whether all users are enabled or disabled for LDAP authentication, by default. To override the default LDAP authentication value for specific users, see *Modifying the Default LDAP Authentication for Specific Users* on page 161.

4 Use one or more spaces to separate the parameter and its value. See Table 8 below for details.

Table 8: rmp.cfg Parameters for External LDAP Authentication

Parameter and Value	Definition and Examples

`LDAP_AUTH 1`
or
`LDAP_AUTH 0`
	Sets the default value of external authentication for all users logging onto the Management Portal. Use the External Authentication? field on on the Person properties page to override the default value for any user.
	• Set to **1** to enable external LDAP authentication, by default, for all users.
	• Set to **0** to disable external authentication, by default, for all users.
	• If unspecified, LDAP_AUTH is set to **0.**

`LDAP_AUTH_DN <<user>>@<mydomain.com>`	Defines the domain that a user will bind to. Replace *mydomain.com* with the domain that users will bind to. The `<<user>>` portion will be substituted with the value entered on the login page.
	`LDAP_AUTH_DN <<user>>@mydomain.com`
	`LDAP_AUTH_DN <<user>>@domainA.com`

LDAP_AUTH_HOST hostname:389	The hostname and port of the LDAP server. Where "myldaphostname" is the hostname of the LDAP server.

5 Save and close the file.

6 Restart the Radia Integration Server and open the Management Portal.

Modifying the Default LDAP Authentication for Specific Users

To change the default LDAP authentication value for specific users, use the Modify Person task and reset the value of External authentication for that person to the desired value.

- To enable External authentication, set the value to 1.
- To disable External authentication, set the value to the number 0.

These values are the equivalents of selecting Yes or No for External authentication on the Add Person dialog box. For details, see Adding Users on page 243 and Modifying Users on page 246.

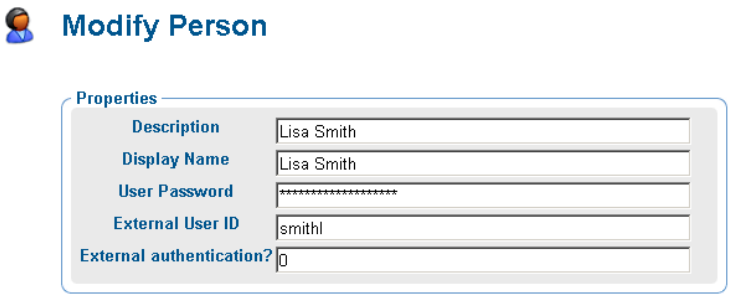


Figure 15: Set External authentication to 0 (zero) to disable LDAP authentication for a user.

By default, any Portal Administrators (Admin) have their external authentication set to No (or 0 on the Modify Person dialog box) when a new directory is created through the Management Portal.

Configuring for a Custom LDAP Policy Extension Prefix

Many Radia Policy Server implementations use the default LDAP Policy Extension prefix of edm—as in edmPolicy. If you have defined an LDAP Directory Service for policy tasks, but it uses a policy extension prefix other

than edm, use the following procedure to define its LDAP Policy Extension prefix value to the Management Portal. This procedure adds a PREFIX parameter to the rmp.cfg file where you specify a policy prefix value other than edm.

See the Radia Policy Server Guide for more information on configuring the Radia Policy Server and the LDAP Policy Extension.

To configure the Management Portal for a Custom LDAP Policy Prefix (other than edm)

1. Stop the **Radia Integration Server** service.
2. Use a text editor to open the Management Portal configuration file, rmp.cfg, located by default in *SystemDrive*:\Novadigm\IntegrationServer\etc.

```
#
# Copyright (C) 1997-2001 HP. All Rights Reserved.
#
# $Header: /cvs/nvd/rmp/default.rc,v 1.6 2002/02/01 17:56:24 Exp $
#
#
# RMP Module (Management Portal)
#

# This section provides the core configuration for the
# RMP Sub-system. Please take care when hand-editing this.
#
rmp::init {
    URL         /

    PREFIX    rad

    }
#
# END OF CONFIG
#
```

3. Insert the PREFIX parameter (must be uppercase) into this file before the finishing curly bracket (}) as shown in the code sample above.
4. Use one or more spaces to separate the PREFIX parameter and its value. Specify the value using the same case as is entered for the LDAP Policy Extension prefix defined in the Radia Policy Server.

Table 9: Parameter to Configure a Custom Policy Prefix

Parameter	Explanation
PREFIX	Defines an LDAP Policy Extension prefix other than the default value of edm. Enter one or more spaces to separate the PREFIX parameter and its value. The value must match the LDAP Policy Extension prefix defined in the Policy Server. For example: `PREFIX rad` defines a Policy prefix of rad instead of edm.

5 Save and close the file.

6 Restart the Radia Integration Server and open the Management Portal.

Configuring Zone Access Points

Access Points to other Management Portal Zones in your enterprise are automatically configured whenever you install multiple portal zones using the Install RMP task.

To access another zone in your Radia Infrastructure, go to the Zone Access Points container, and click on the icon for the Zone you want to view.

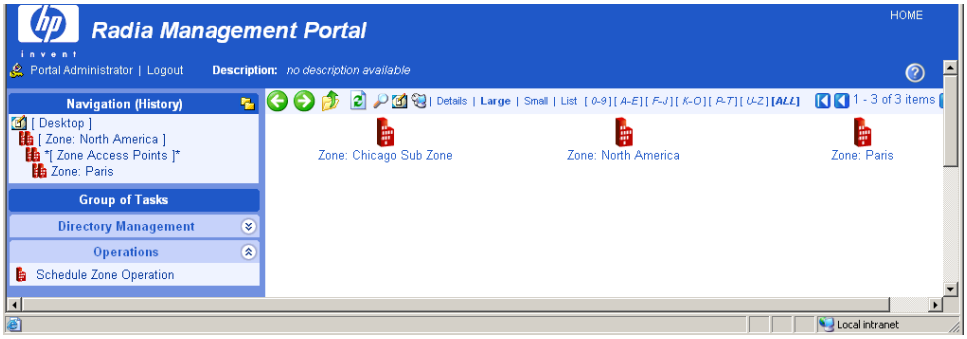


Figure 16: Access Chicago Zone from Zone Access Points container.

Establishing Devices and Device Groups

There are a number of ways to bring devices under the control of a Management Portal Zone.

- The first step is to add computers to the Devices container of the Zone. As part of this step, devices also become members of the Default Group of the Group container. For details, see Adding Devices to an RMP Zone, which follows.

  As of RMP 2.0.1, you can perform the install tasks found in the Operations task group directly from a discovered Network or LDAP directory location. The RMP will add the selected computers to the Devices container of the RMP Zone automatically, and create links between the Network or LDAP directory location and the Zone Device location.

- The next step is to create Groups to facilitate operations on the members of the groups. Topics related to Adding Groups of Devices begin on page 187.
- The third step is to install the Radia Management Agent on devices. By installing the Radia Management Agent on devices, they automatically become members of the appropriate Cross-Reference container groups, which is an advantage when you need to Notify all devices with specific operating, software, or hardware configurations. For details, see Installing the Radia Management Agent on page 314.

Adding Devices to an RMP Zone

There are various ways to add devices to your RMP Zone. Table 10 on page 165 explains the various methods. Choose the methods that are easiest for your enterprise. All computers are added as devices to the Devices container. Unless otherwise specified, devices will also be added as members of the Default Group container, as well.

Table 10: Methods of Adding Computers to a Zone Devices Container

Method	Description and Reference
Network Selection	As of RMP 2.0.1, browse to computers discovered in your Networks and perform any Install task in the Operations task group. If the selected network devices are not currently in the Zone Devices container, they are added automatically to it before the install task is performed. A link is created between the Network location and RMP Zone location of each device. Or Browse to computers in your Networks container and select **Manage Computer** from the Operations task group. For details, see Managing Computers in Your Management Portal Zone on page 288.
Active Directory Selection	As of RMP 2.0.1, browse to computers from a mounted and connected Active Directory location and perform any Install task from the Operations task group. If the devices in the selected LDAP location are not currently in the Zone Devices container, they are added automatically to it before the install task is performed. A link is created between the LDAP location and the RMP Zone location of each device. or Browse to a computer in your LDAP directory and select the **Manage Computer** task in the Operations task group. For details, see Managing Computers in Your Management Portal Zone on page 288.
Hostname List	Prepare a list of hostnames and use the **Import Devices** task. For details, see Importing Devices on page 200.
Individual Entry	Browse to a group in the Groups container and use **Add Device** from the Model Administration task group. For details, see Adding a Single Device on page 181.
Installed Radia Management Agent	Any computer that has the Radia Management Agent from this release installed on it will automatically be added to the Device container when it contacts the Management Portal.

Several of the tasks used to bring devices under control of the Management Portal employ a common browse and select window. Before continuing, we recommend you know how to use the window's features. For details, see Basic Procedures for Modifying Groups below.

Basic Procedures for Modifying Groups

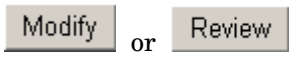
Many tasks in the Management Portal use a similar set of windows to browse and modify items in a group. This topic describes how to use these windows. The same procedures apply regardless of the exact task you are performing.

The tasks using this window use 3 or 4 steps. Three steps apply when you can modify the changes at once; four steps are needed for tasks that present a Review of the changes before they are applied.

Step 1: Navigate to group and click task.

Step 2: Change the items in the group.

Step 3: Modify/Commit/ Review changes.



Step 4: After Review, click Modify.

Using the Browse and Modify Window

The next figure shows a sample Browse and Modify window. The Move Device window opens when you select the Move/Copy Device(s) from the Model Administration task group.

There are three areas of this window: the group list area, the browse area, and the Modify buttons. Please review the use of each area. If you are working with Services or Policy objects, the group list area will also contain editors for service attributes and expressions.

Please review the use of each area, as discussed below.

Figure 17: Browse and Modify window for Move/Copy Devices task.

1 Group list: Delete or change using icons.

2 Browse area: Select items to add, move, or copy to group list.

3 Buttons: Click Review to continue.

You must click **Review** to continue and confirm the modifications.

- **Group List**
  The top area lists the items in the group being modified. For example, the figure above lists the items in New Group, which is a group of devices in the Zone Groups container.

  To modify or remove items listed in the group area, see **Using the Group List Area** on page 168.

  When working with Radia Service objects, you can select a service in the Group List area and use the Attribute Editor to specify values for its attributes. See Using the Attribute Editor on page 171 for more information.

  When working with Radia Service objects, you can also select a service in the Group List area and use the Expression Editor to specify additional constraints. See Using the Expression Editor on page 174 for more information.

- **Browse area**
  The bottom area allows you to browse your Management Portal Zone to select items, and then add, move, or copy the items into the group list. For details on using this area, see *Using the Browse Area* on page 178.

- **Buttons**
  The exact button names will vary, but the first button is the one to use to accept the changes.

  — Click **Modify** or **Commit** to make and save the changes to the group list.

  — If Review is available, you must first review the changes before saving them. Click **Review** to see a window summarizing the changes. Next, click **Modify** to make the changes and complete the task.

  — Click **Reset** to abandon any changes to the group items you made since starting the task.

  — Click **Cancel** to exit the task.

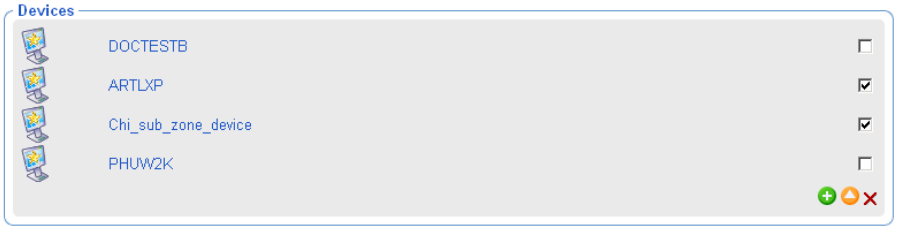
Using the Group List Area

Use the group list area of the Browse and Modify window to delete items from the group and manually modify or add an item. To manually modify or add an item, you must specify its X500 Distinguished Name.

The X500 Distinguished Name is listed in the Object Information area of an item's Properties page. It is also available when you place the mouse over an object's name in the Workspace or the Navigation area.

To delete one or more items in the list

1 Click the check box to the right of each item in the group list area to be removed.



2 Click ✕ to delete the items from the list.

3 Click the **Modify** or **Commit** button below the Browse group area to save the modified list.

Some tasks include a **Review** button instead of a **Modify** button. In this case, click **Review** and then click **Modify** after reviewing the changes.

To modify one or more items on the list

1 Click the check box to the right of each item in the group list area to be modified.

2 Click to modify the checked items.

3 In the text box, modify the X500 Distinguished Name for the item.

4 Click ✓ to accept the changes.

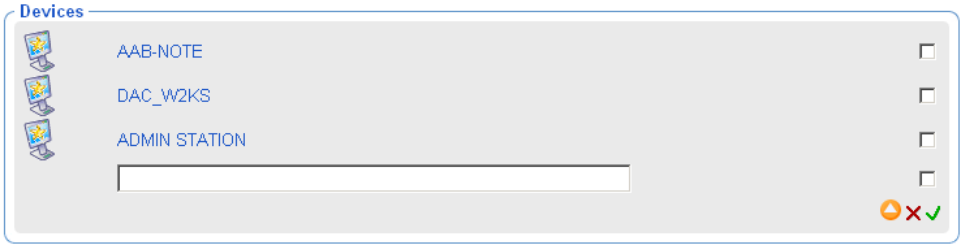
5 Click the **Modify** button at the bottom of the page to save the modified list.

Some tasks include a **Review** button. In this case, click **Review** and then click **Modify** after reviewing the changes.

To manually add an item to the list

1 Click ⊕ to manually add an item to the list.

The list area displays a text box entry area, where you can specify the X500 Distinguished Name for an object.



Tip: The X500 Distinguished Name is listed in the Object Information area of an item's Properties page. It is also available when you place the mouse over an object's name in the Workspace or the Navigation area.

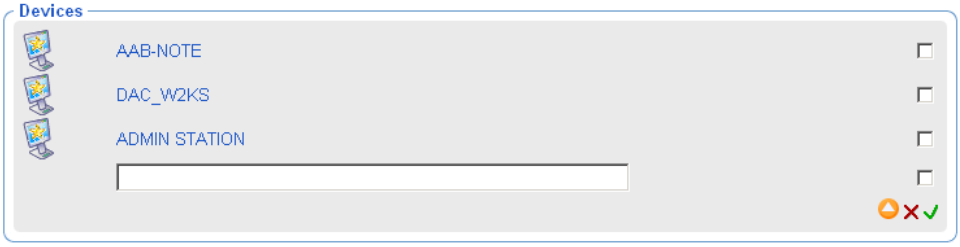
2 In the text-box, type the X500 Distinguished Name for the object to be added. For example, the X500 Distinguished Name for the Default Group of devices is:

```
cn=default,cn=group,cn=myzone,cn=radia
```

3 Click ✓ to accept the changes.

4 Click the **Modify** or **Commit** button below the Browse area to save the modified list.

Some tasks include a **Review** button. In this case, click **Review** and then click **Modify** after reviewing the changes.



5 In the text box, type the X500 Distinguished Name entry for the item.

6 Click ✓ to accept the changes.

7 Click the **Modify** or **Commit** button below the Browse area to save the modified list.

> Some tasks include a **Review** button instead of **Modify** or **Commit**. In this case, click **Review** and then click **Modify** after reviewing the changes.

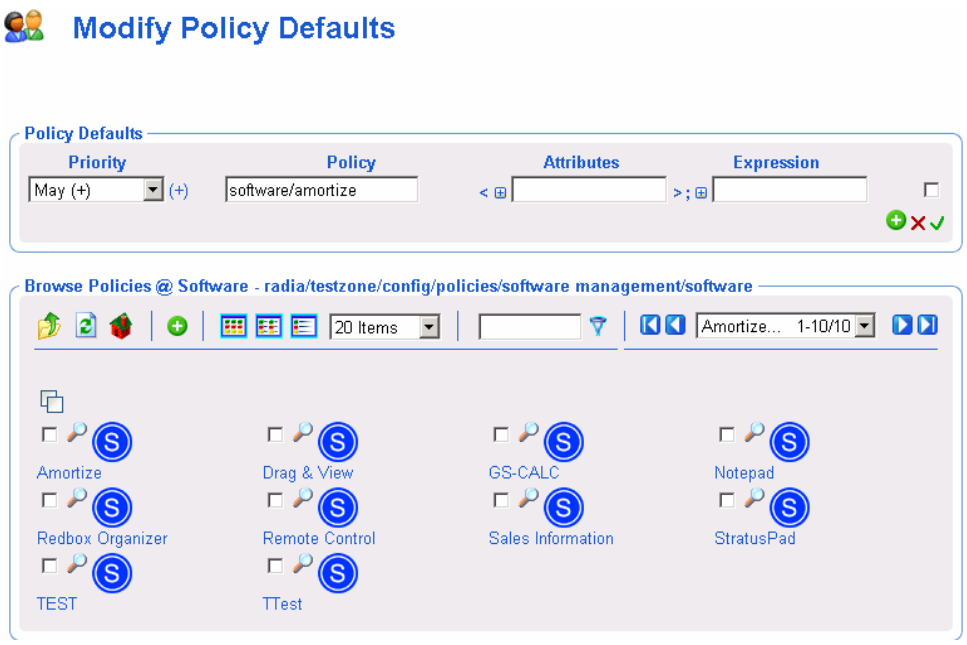
Using the Attribute Editor

After selecting a service in the Browse and Modify window, use the Attribute Editor to specify values for the attributes for Radia services. The values that you are specifying are for policy (see Modifying Policies on page 113), defaults (see Modifying Defaults on page 126) or overrides (see Modifying Overrides on page 127).

The following procedure demonstrates how to use the Attribute Editor to set the default version of the Amortize application to version 1.0.

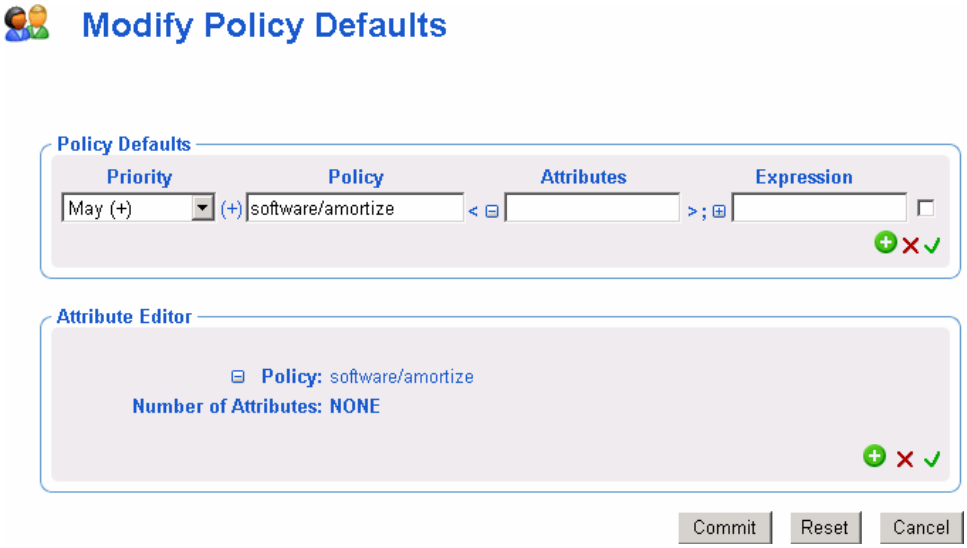
To use the Attribute Editor

1 After selecting the appropriate task from the **Policy (Advanced)** task group, use the Browse window to select the appropriate service, such as Amortize.

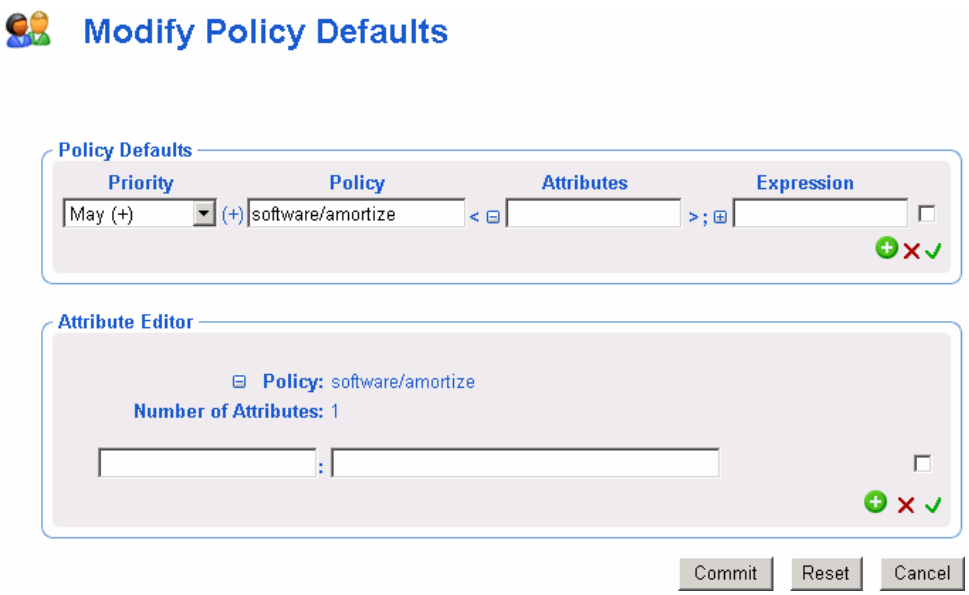


2 Click the ⊞ to the left of the **Attributes** text box.

The Attributes Editor area opens.



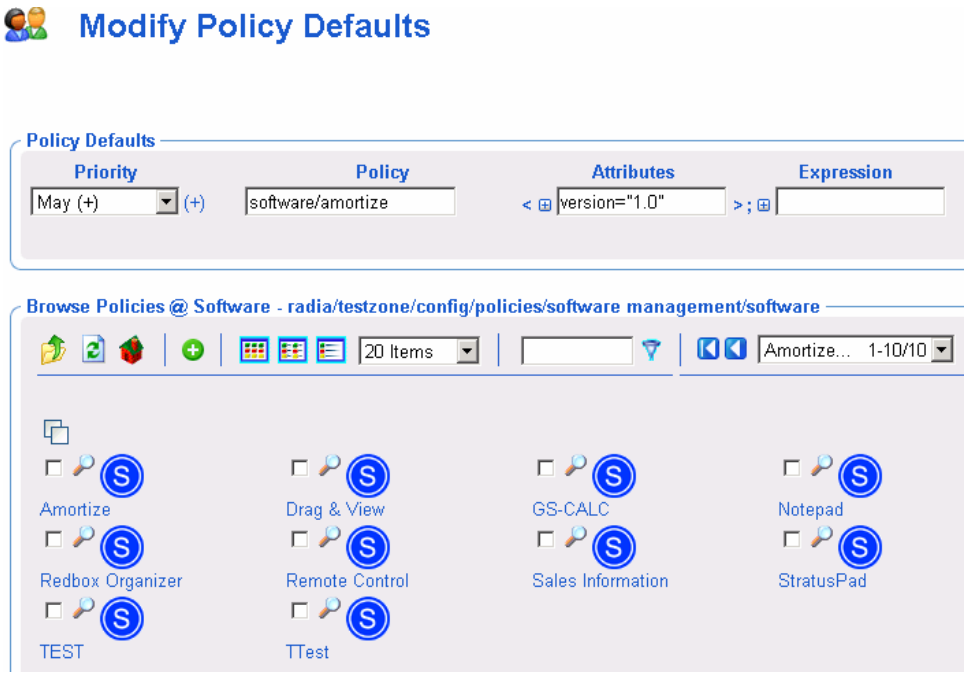
3 In the **Attribute Editor** area, click to add a new attribute.



4 In the text box on the left, type the name of the attribute to be added, such as version. You can specify any attribute that is available for the service.

5 In the text box on the right, type the value for the attribute, such as 1.0.

6 Click to accept the changes to the attribute.



The correct syntax for the attribute and the value you specified appear in the Attributes text box in the Policy Defaults area of the window.

7 When you are done with your changes, click **Commit**.

Using the Expression Editor

After selecting a service in the Browse and Modify window, use the Expression Editor to specify additional constraints for the selected service. The expressions that you are specifying are for policy (see Modifying Policies on page 113), defaults (see Modifying Defaults on page 126) or overrides (see Modifying Overrides on page 127).

The following procedure demonstrates how to use the Expression Editor to set a constraint on the Amortize service so that in addition to deploying version 1.0 (as described in the topic Using the Attribute Editor on page 171), this service will only be deployed to machines with a Windows NT operating system.

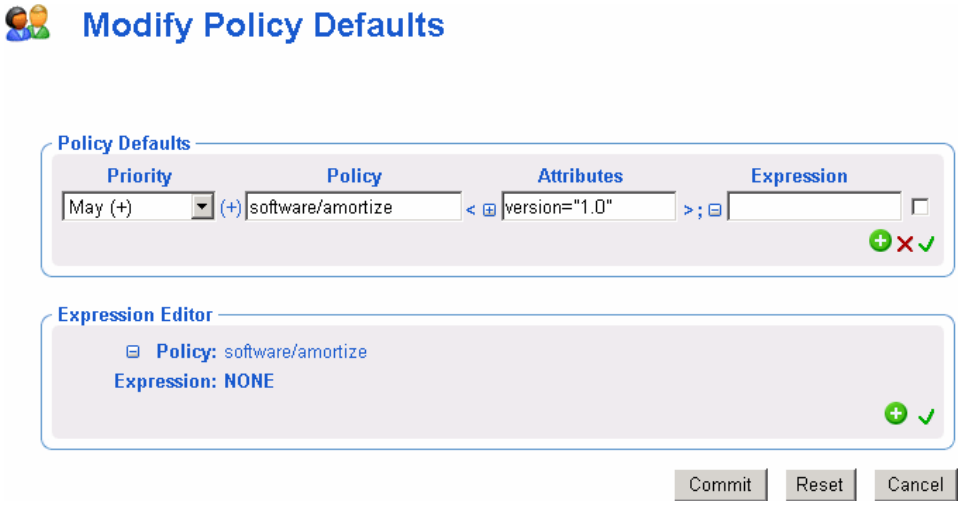
To use the Expression Editor

1 After selecting the appropriate task from the **Policy (Advanced)** task group, use the Browse window to select the appropriate service, such as Amortize.

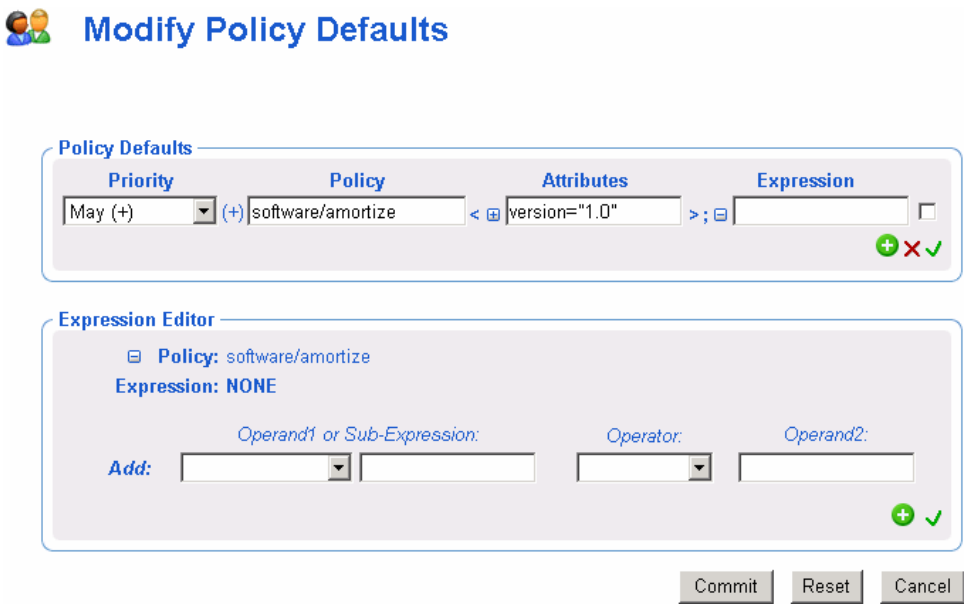
In the example shown in this procedure, the version attribute has also been set to 1.0.

2 Click ⊞ to the left of the **Expression** text box.

The Expression Editor area opens.



3 In the **Expression Editor** area, click ⊕ to add a new expression.



4 From the **Add** drop-down list, select one of the following pre-defined operands:

If you want to use an operand other than the ones that are pre-defined in the **Add** drop-down list, you can type any operand in the text field.

— **<<in.os>>**
References the operating system

— **<<in.uid>>**
References the user ID

— **<<in.host>>**
References the host computer

— **<<in.zcontext>>**
References the ZCONTEXT attribute. See the *Installation and Configuration Guide for the HP OpenView Application Managerusing Radia* for more information about this attribute.

Each of these options represents substitution of attributes that were supplied as input during policy resolution. See the *Policy Server Guide* for more information.

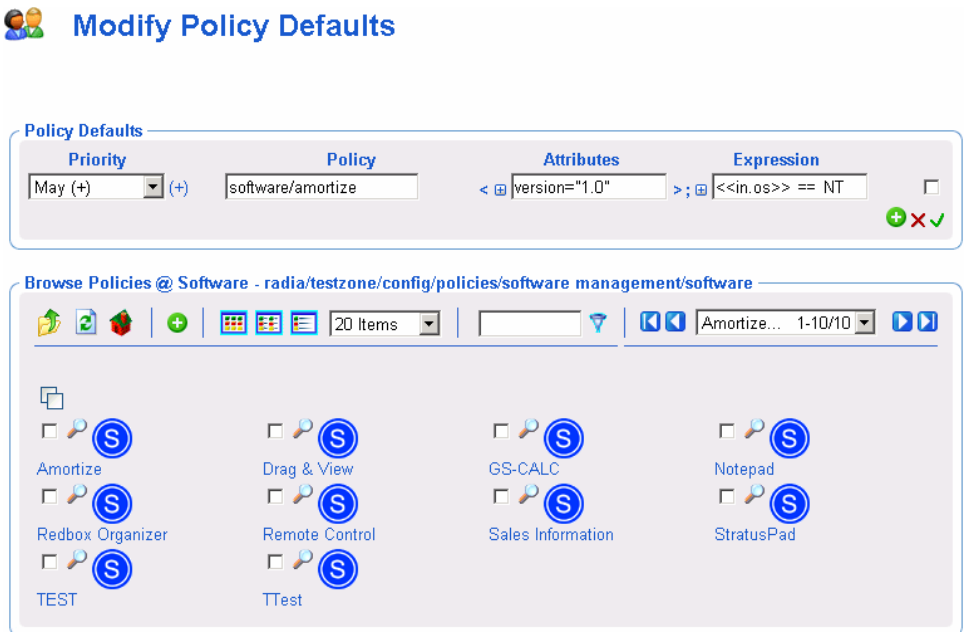
5 If necessary, select an operator from the **Operator** drop-down list, such as ==.

Table 11: Operators

Expression	Meaning
||	Logical OR
&&	Logical AND
==	Test for equality (case-sensitive)
!=	Test for inequality
<=	Dictionary comparison for less than or equal to
>=	Dictionary comparison for greater than or equal to (C locale)
<	Numerical comparison for less than
>	Numerical comparison for greater than
!	Logical NOT
Contains	Is contained anywhere within the string. This is not case sensitive.
Begins with	The beginning of the string matches. This is not case sensitive.
Ends with	The ending of the string matches. This is not case sensitive.
Matches	Exact match. This is not case sensitive.

6 In the **Operand2** text box, type the appropriate value, such as **`NT`**.

7 Click ✓ to accept the changes to the expression.



8 When you are done with your changes, click **Commit**.

Using the Browse Area

The browse area icons provides a toolbar to select the items that are to be added, moved, or copied into the group list on the top.

- Use this topic to become familiar with the browse area toolbar icons and how to use the browse area.
- To become familiar with browsing, selecting and adding items from the browse area to the group list area, we recommend you follow the step-by-step procedures in *Moving or Copying Devices into a Group* on page 181.

After using the browse area to select and add items to the group list area, you must complete the task by clicking one of the buttons on the bottom of the page. For example, **Modify, Commit,** or **Review**. If the button is **Review,** you must also click **Modify** on the next window.

Current Navigation Location

The Browse area label identifies the current navigation location. For example, the following figure shows the browse location is the Default Group within the Radia Zone Groups container.

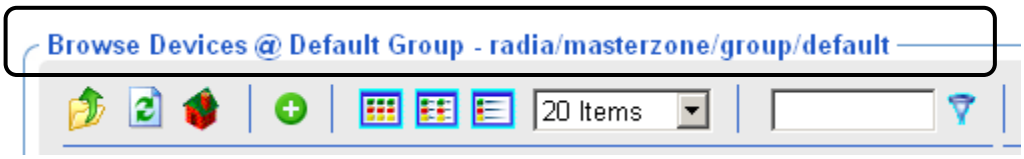


Figure 18: Browse area label identifies current navigation location

Navigation Icons

- Click  to go up one level in your Zone directory.
- Click  to refresh the view.
- Click  to return home to the browse location when you started the task.
- Click  (a group or container icon) to browse the items in that group.

Action Icons

- Click  to add selected objects to the top area.
- Click  to move selected objects to the top area.
- Click  to copy selected objects to the top area.

View Icons

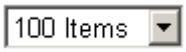
- Click  to show the potential targets with large icons.
- Click  to show the potential targets in a list view.

- Click  to show the potential targets in a detailed view.

Paging and Filtering Icons

The following icons assist in browsing and selecting from large numbers of items.

- Use the drop-down list box to set the maximum number of items for the current page:

- Use the scroll bar to scroll to items not currently in view.
- In the text box, type a filter value and click  to filter the items on the current page. Valid filter characters include the asterisk (*) and the question mark (?).
- Use the drop-down list box and the arrows to page through multiple pages.

Selection Icons

- Click  to select all of the targets listed. The icon will change to  .
- Click the individual check boxes to select specific targets from the list.
- Click  to view the properties for the target.

Configuring the Zone Infrastructure

Use the tasks in this topic to configure the Zone Devices and Device Groups that are being managed by a Management Portal Zone.

Before proceeding, you should be familiar with the use of the Browse and Select Windows. This is discussed in Basic Procedures for Modifying Groups on page 166.

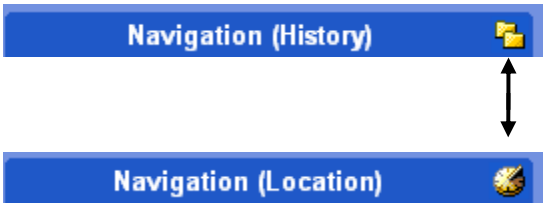
Adding a Single Device

Use the **Add Device** task in the **Model Administration** task group to add a single device to the Zone Devices container. The device becomes a member of the group within the Groups container where you begin the task, as well as the Default Group.

If you want to have this device added to a new group, first create the group using the procedure To add a Group of devices on page 187, and then use the **Add Device** task, below.

To add a single device

1 If necessary, set the Navigate aid to Location mode.

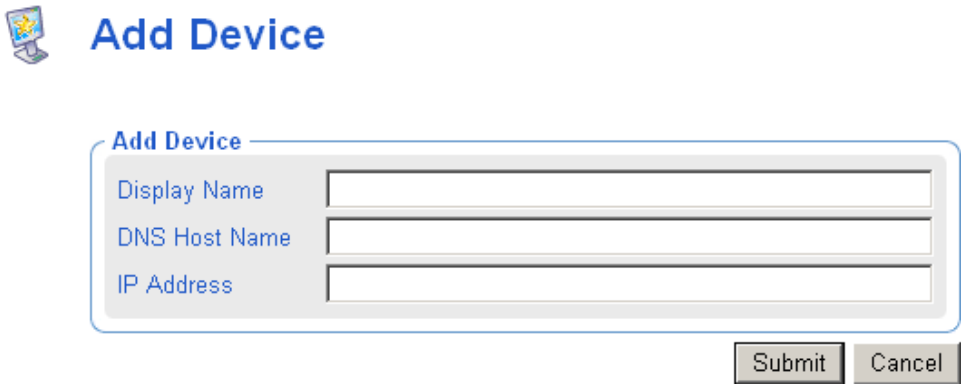


2 Navigate to the **Zone**, **Groups** container.

3 In the Workspace, select the Group in which you want the new device to become a member. If you select a group other than the Default Group, the new device will also become a member of Default Group.

4 From the **Model Administration** task group, click **Add Device**.

The Add Device dialog box opens.



5 Enter the following Add Device Properties for the new device.

— In the **Display Name** text box, type a display name for the device. This name will appear as the label of the object in the infrastructure representation. If omitted, a validated DNS Host Name entry is used. If omitted and a valid DNS Host Name is not available, the Management Portal generates a unique alphanumeric Common Name, and that is also used as the Display Name.

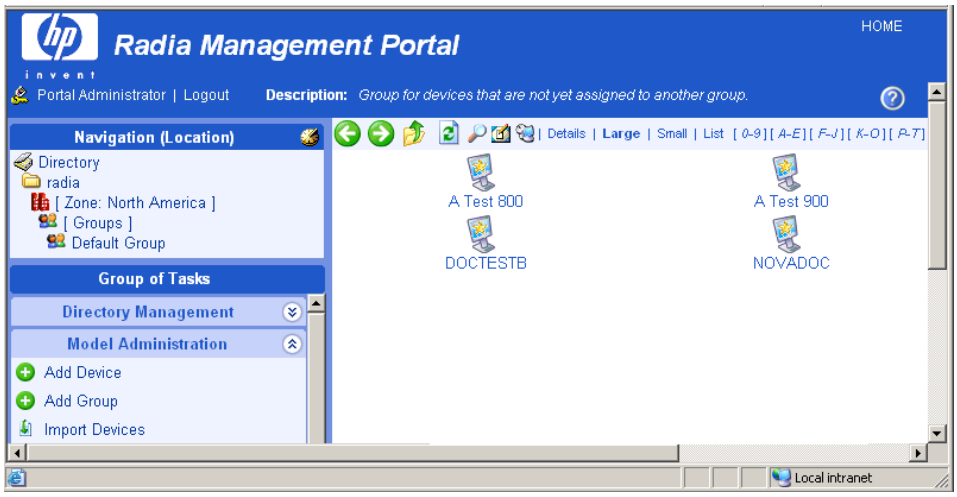
— In the **DNS Host Name** text box, type a fully qualified DNS Host Name for the computer as it is known in the network. For example, test900.usa.mydomain.com.

— In the **IP Address** text box, enter the IP address for the computer, if known.

6 Click **Add**.

The Management Portal adds the device to the Devices container.

— If the device has unique properties (DNS host name and/or IP address), the device is added to the group from which you began the task. You will see a new entry for the device in the Workspace of the Group from which you began the task. Devices are listed alphabetically by Display Name.



— If the device properties match those of an existing device entry, the new device is not added.

Generated Common Names for Devices

All Common Names assigned to device entries must be unique within a given Zone Device container. At times, the Management Portal must generate a unique Common Name for a device. A generated Common Name is illustrated below:

Figure 19: Sample Common Name generated for a Device.

Viewing Device Properties

Click the View Properties icon on the toolbar above the Workspace to View Properties for a Device.

You can do this after navigating to the Device's entry in a Group container, or from the Device's entry in the Devices Container.

Figure 20: Viewing Device Properties for new Device, no RMA installed.

After a Radia Management Agent is installed on a Device, the next figure. The Management Portal uses this information to create memberships for the device in the appropriate Cross-Reference container groups.

- From a Device Properties page, click on any underlined entry to go to the linked location.
- To return, use the back arrow on the toolbar.

Figure 21: Device Properties after installing the RMA.

Adding Groups

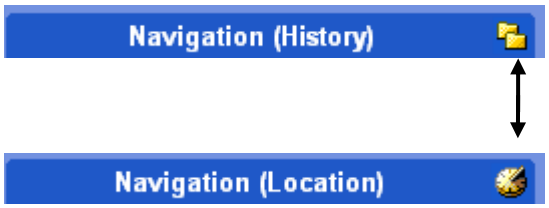
Use the **Add Group** task in the **Model Administration** task group to add a new device group to the Groups container. The **Add Group** task also gives you the option of copying or moving devices into the new group from the other groups in the Groups container.

- For procedures on adding a group without adding or moving devices into it, see the procedure To add a Group of devices, which follows.
- For procedures on adding devices to the new group, see Adding Devices to a New Group on page 189.
- For procedures on import devices into their own group, first use Add Group to create a new group of devices. Then select that group before using the Import Devices task. For details, see Importing Devices on page 200.

To add a Group of devices

Use this procedure to create a new group for devices, but not move or copy any devices into the group at this time.

1 If necessary, set the Navigate aid to Location mode.



2 Navigate to the **Zone** → **Groups** container.

3 From the **Model Administration** task group, click **Add Group**.

The Add Group dialog box opens.

4 Enter the following Properties for the new group.

— In the **Common Name** text box, type a unique group name. The common name must be unique for the object class.

The Common Name for the object must be unique. If you attempt to create an object with a name that has already been used, an error appears in the workspace indicating that the object already exists.

— In the **Display Name** text box, type a display name for the group. This name will appear as the label of the object in the infrastructure representation.

— In the **Description** text box, type a description that reflects the intended membership of the group. The description displays in details view.

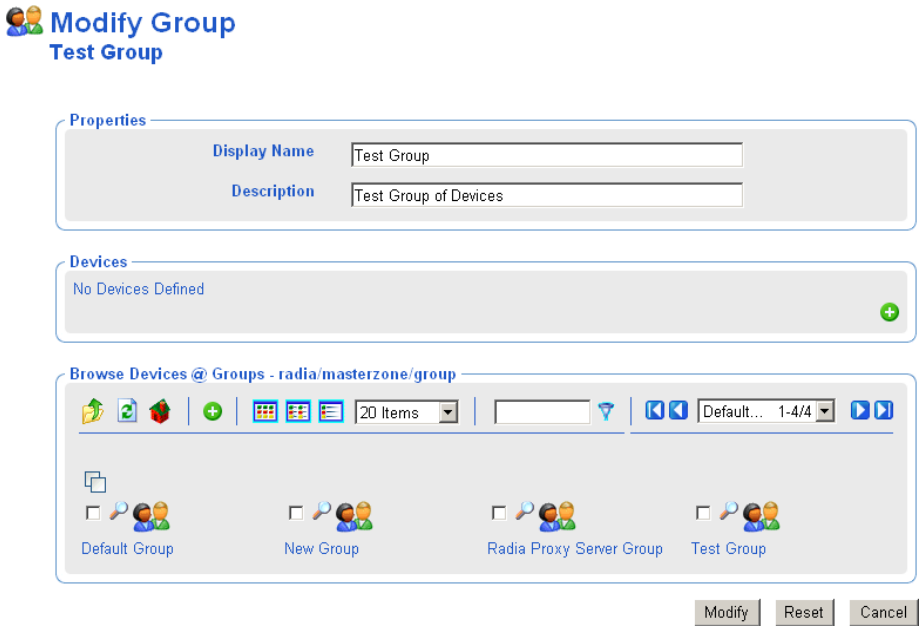
5 Click **Add**.

The Modify Group dialog box opens. It shows:

— Properties previously entered.

— No devices defined in the group list.

— Browse area containing current Groups in the zone.



6 To save the group, click **Modify**.

The task ends, and the Navigation aid indicates the new group location in the Groups container. There won't be any members of the group until you move/copy or import devices into it. Refer to the **Import Devices** or **Move/Copy Device(s)** tasks.

Adding Devices to a New Group

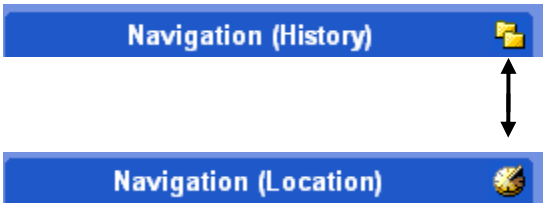
Use the **Add Group** task in the **Model Administration** task group to create a new group and then move or copy devices from other groups in your Zone Groups containers into the group.

The procedure that follows adds a group named Test Group to the Groups container, and then uses the Modify Group page to copy two devices from the Default Group to the Test Group.

Use this sample procedure to become familiar with using the Browse area.

To add devices to a new group

1 If necessary, set the Navigate aid to Location mode.



2 Go to **Zone** → **Groups**.

3 From the **Model Administration** task group, click **Add Group**.

The Add Group dialog box opens.

4 Enter the following Properties for the new group.

— In the **Common Name** text box, type **`Test Group`**.

— In the **Display Name** text box, type **`Test Group`**. This name will appear as the label of the object in the infrastructure representation.

— In the **Description** text box, type **`Test Group of Devices`**. The description displays in details view.

The Common Name for the object must be unique. If you attempt to create an object with a name that has already been used, an error appears in the workspace indicating that the object already exists.

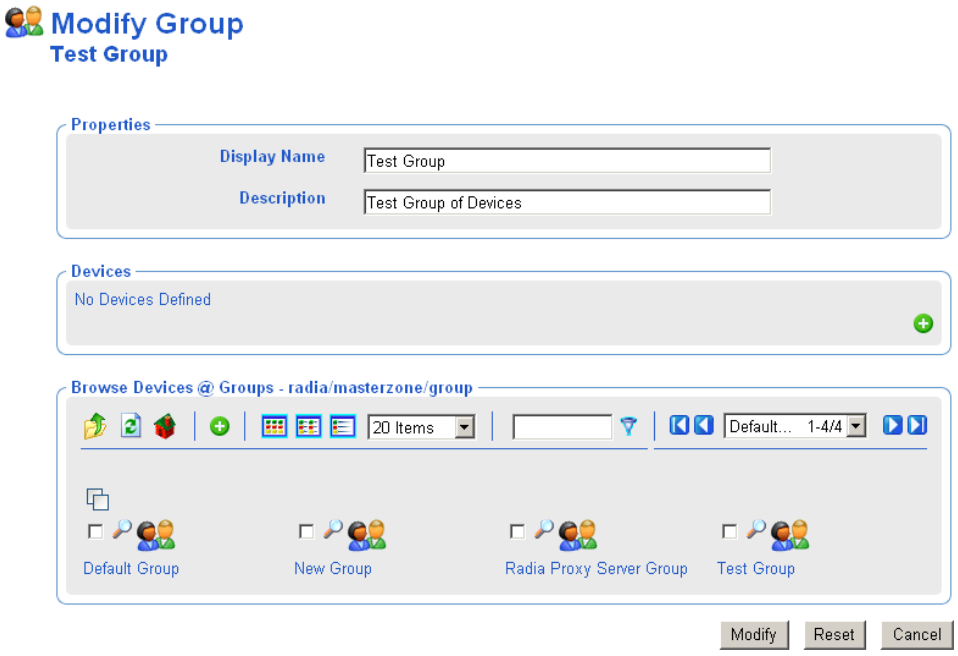
5 Click **Add**.

The Modify Group dialog box opens. It shows:

— Properties previously entered.

— No devices defined in the group list.

— Browse area containing current Groups in the zone.



Your groups listed in the Browse area will vary, but they will always include the Default Group and the newly created Test Group.

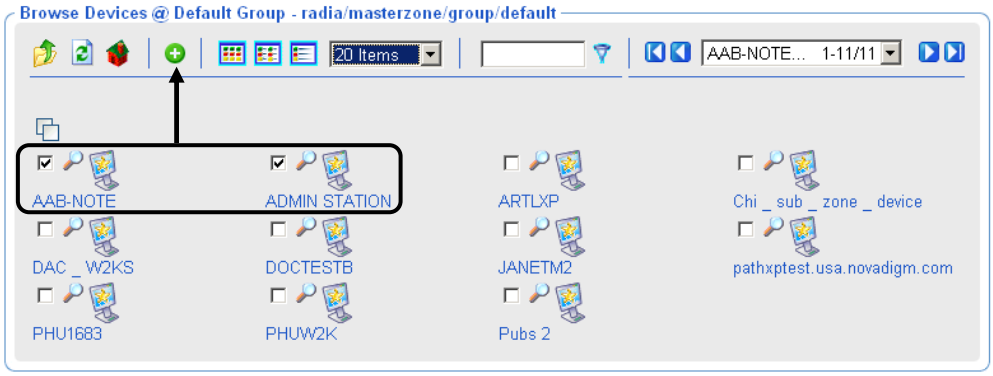
6 In the **Browse Devices** area, click the **Default Group** icon.

7 The Browse area refreshes to display all devices that are members of your Default Group.

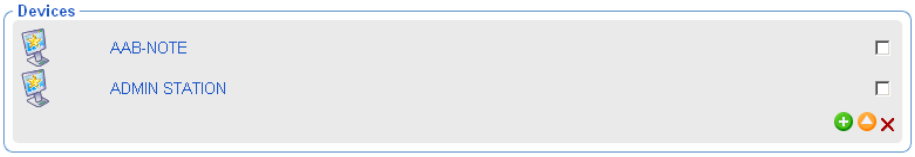
Typically, there will be a large number of devices in the Default Group, since all devices are automatically added to this group unless specified otherwise.

At a minimum, the Default Group includes the device hosting your Management Portal.

8 Click the check box next to at least one device in the browse area.

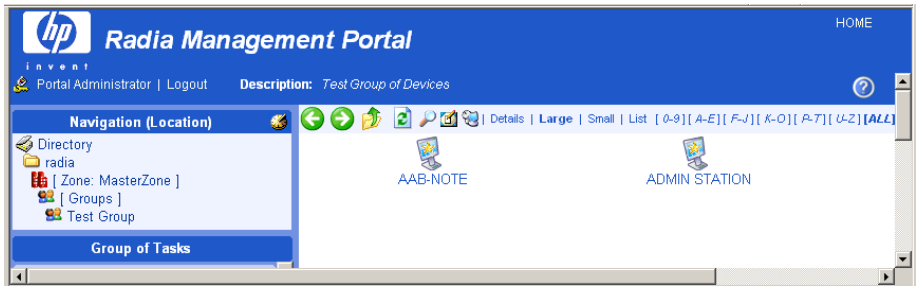


9 Click on the Browse area toolbar to add the selected devices to the group list.



10 Click the **Modify** button below the Browse area to complete the task.

The devices are added to the Test Group, and the Modify Group dialog box closes. The Management Portal indicates the new location of the Test Group within the Groups container, and the Workspace lists the current devices in the group.



Moving or Copying Devices into a Group

Use the **Move/Copy Device(s)** task in the **Model Administration** task group whenever you need to switch members of an existing device group. The task is flexible and allows you to switch device group memberships, copy devices that are members of another group, or remove devices from a group's membership.

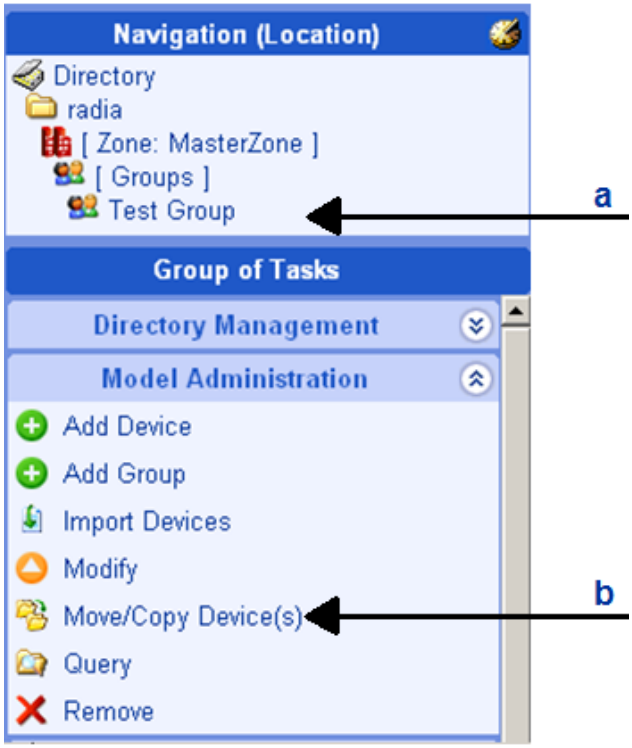
To create a new group for devices, see Adding User Groups on page 189.

Using any of the install tasks from the Operations task group against devices in the Network container or devices in an LDAP directory automatically creates entries for the devices in the Zone Devices container and makes them members of the Default Group. Use this Move/Copy Devices task to switch or add group memberships, as needed.

To remove devices from a group, see the procedure To remove devices from a Group on page 197.

To move or copy devices into a group

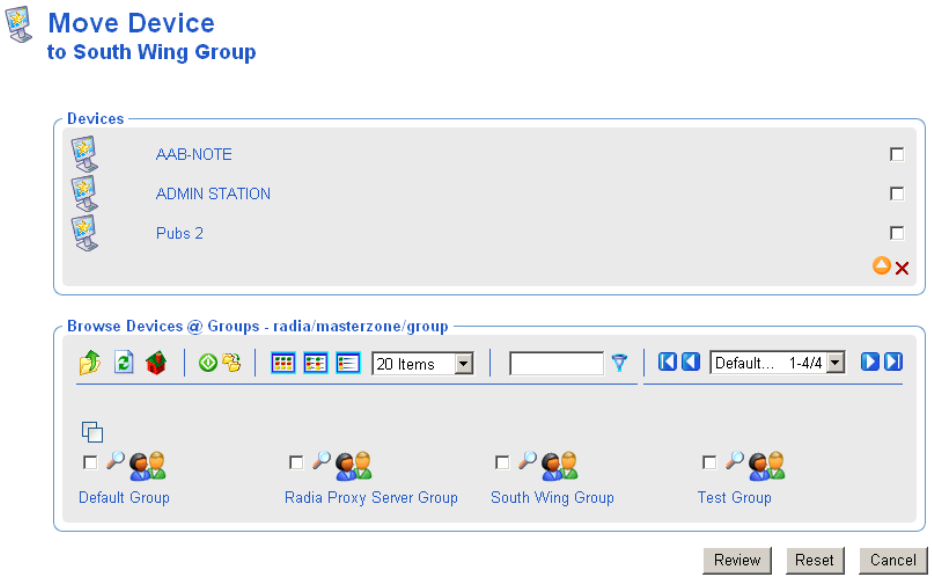
1. Use the Navigation aid to select the group in the Zone Groups container whose members you want to change.
2. In the **Model Administration** task group, click **Move/Copy Device(s)**.



a Locate target Group requiring device changes.

b Click Move/Copy Device(s) task.

The Move Device to <<selected>> Group window opens. Use this window to make any changes to the device membership for this group.



For general instructions on how to navigate and use this window, see the topic Basic Procedures for Modifying Groups on page 166.

3 Use the **Browse Devices** area to browse to the appropriate device targets.

The following devices or device groups can be selected for group membership:

— Devices from the Devices container.

— Devices or Groups from the Groups container.

— Devices or Groups from the Cross References container.

You cannot move or copy devices into Groups until they have been added to the Devices and Groups containers of your Zone. For example, you cannot move or copy devices accessed from the Network container—they first must be added to your Zone. This is done automatically when you use any of the **Install** tasks of the Operations task group. Alternatively, you can also add a device explicitly using the **Manage Computer** task, the **Import Devices** task on page 200, or the **Add Device** task.

4 Select the devices or device groups from the browse area and copy or move them into the **Devices** area.

— Click to copy devices and have the selected devices retain membership in the source group.

— Click to move devices from one group into another. The selected devices will be removed as members of the source group.

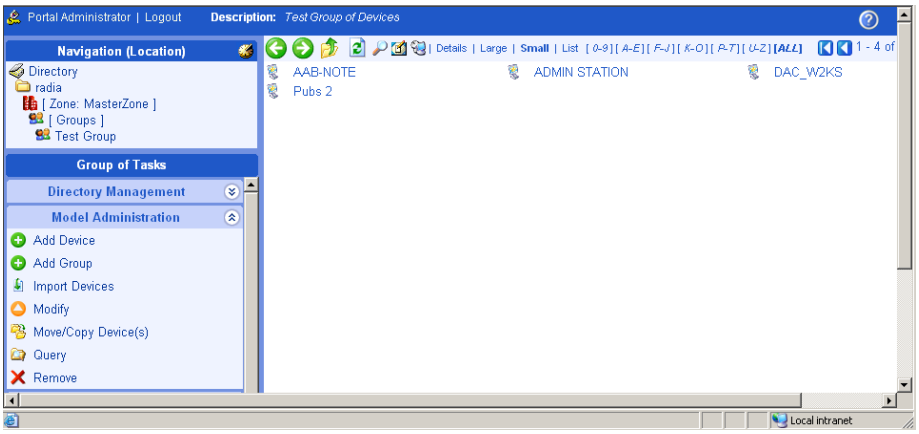
5 If necessary, repeat the browse and move/copy steps until all devices and groups are listed in the **Devices** area.

6 Click the **Review** button on the bottom of the page.

A page listing the summary of devices being added or removed from the current group opens. The following figure illustrates the device **DAC_W2KS** being moved from the **South Wing Group** to the **Test Group**. The device **Pubs 2** is being added to the **Test Group**.

7 To accept the changes, click **Modify**. To revise the changes, click **Reset**.

If you click **Modify**, the changes on the review page are made to the Group. The Move/Copy Device(s) task ends, and the workspace displays the current group members.



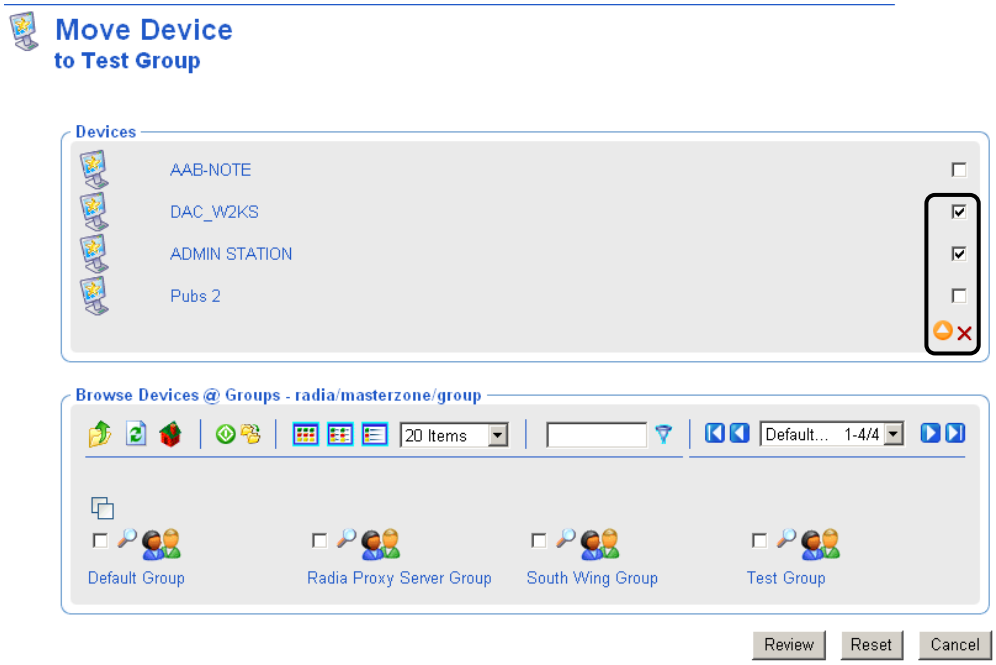
To remove devices from a Group

1 Use the Navigation aid to select the group in the Zone Groups container whose members you want to change.

2 In the **Model Administration** task group, click **Move/Copy Device(s)**.

The Move Device to <<selected>> Group window opens.

3 On the right-side of the **Devices** area, use the check boxes to select the members of the group to be deleted.



4 After selecting the devices to be deleted, click ✕ to delete the checked items.

5 Click **Review** to review the changes.

A window opens to list the devices to remove from the group.

6 Click **Modify** to complete the removal of the devices.

The task ends, and the Workspace displays the devices remaining in the group.

Removing Groups of Devices

Use the Remove task from the Model Administration task group to remove a group of devices from the Groups container that is no longer required for operational purposes. The Default Group of devices cannot be removed.

Removing a group removes all device memberships in that group, but does not remove the devices themselves from the Portal Zone. The group will no longer be available for selection and for use with Operations that can be performed against groups of devices.

To remove a group of devices

1. Use the Navigation aid to go to the appropriate group in the Groups container.
2. In the Model Administration task group, click **Remove**.

   A confirmation appears in the workspace.

3. Click ✓ to confirm that you want to remove the group from the Management Portal Directory.

   OR

   Click ✗ to indicate that you do not want to remove the group.
4. The remove is completed if the group does not have any other groups as its members.

   If the group you want to remove has groups as members (children), a notification and confirmation appears in the workspace.

5 Click ✓ to confirm that you want to remove the group and any groups that are members of it from the Management Portal Directory.

OR

Click ✗ to indicate that you do not want to remove the group and its group members. The remove is cancelled; none of the groups or memberships is removed.

Importing Devices

Use the Import Devices task in the Model Administration task group to add a list of devices with fully qualified DNS names into the Zone Devices container. The devices become members of the Zone Groups container group from which you begin this task, as well as the Default Group of devices.

If you want to import the devices into a separate group, first use Add Group to create the group within the Zone, Groups container. Then use the procedures below to import the devices.

To import devices from a text file or list

1 Outside the Management Portal, prepare a text-based list or text file of the devices to be added to the group. The list needs to specify a fully qualified DNS name for each computer.

You can modify the group members later. However, portal operations can only be performed on the entire group (not a subset). Thus, plan your groups accordingly.

You can cut and paste entries from your prepared list into the text box available in Step 6 of this procedure on page 201, or you can import the text file list.

To automatically input the entire file during this task, place the `txt` file in the `\etc\group` folder of the Radia Integration Server location. By default, this location is:

```
<SystemDrive>:\Novadigm\IntegrationServer\etc\group
```

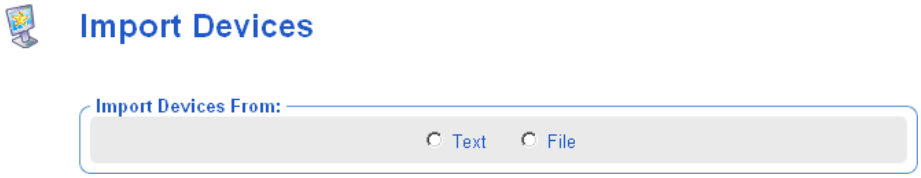
2 From the Management Portal, locate or create a Group within the Zone Groups container where the imported devices will hold membership. For details on adding a new group of devices, see *Adding Groups* on page 187.

All imported devices automatically become members of the **Default Group**. If you import the devices into a group other than the Default Group, they will hold memberships in both groups.

3 Navigate to the Zone Groups container and select the Group to hold the imported devices.

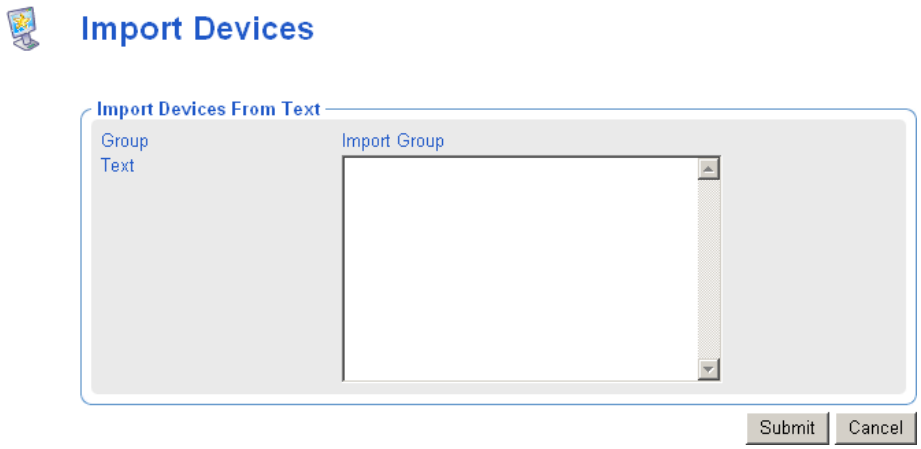
4 From the **Model Administration** task group, click **Import Devices**.

The Import Devices dialog box opens, prompting you to select an input method.



5 Choose how you want to import the members of the group using one of the following methods:

— Click **Text** to type (or cut and paste) the members of your group into a text box in the next dialog box. The following dialog box opens.



Use the **Import Group** text box to type (or cut and paste) the members of the group. Enter DNS hostnames for the devices separated by one or more spaces. You can remove members from this import list in the next step.

— Click **File** on the Import Devices dialog box to select a `txt` file that you have prepared and placed in the `\etc\group` folder of the Management Portal installation directory. The following dialog box opens.

Use the **Filename** list box to select the text file to serve as the source of the group members. You can remove members from this source list in the next step.

As soon as you click **Submit**, all new devices from the input list or text file are added as members of the selected device group in your infrastructure zone.

6 Click **Submit** to add the devices to Zone as members of the selected group.

Once a group is added, you can select that group before performing an operation. The operation will be performed on all members of the selected group.

— To split the devices into different groups, see Moving or Copying Devices into a Group on page 193.

— To move some of the devices into a new group, see Adding Devices to a New Group on page 189.

Dynamic Job Scheduling Against Groups of Devices

Jobs scheduled for the following Operations tasks are dynamic when used against a group of devices:

- Install Client
- Install Management Agent
- Install Proxy Server
- Notify
- Synchronize Proxy Server
- Purge Dynamic Cache (of Proxy Server)

This means the target list is recalculated against the group each time the job is initiated, as opposed to when the job is scheduled.

This dynamic feature can be used to notify a series of devices, for example, with minimal effort. You can create a group of devices and schedule a daily Notify against the group. By changing the members in the group of devices between executions, the job continues to notify the new group members each day.

Adding Services

Use the Add Service task to manually add a service to a Device within your Zone. This can be done before a Radia Management Agent is installed on the Device to manually enable a connection to the service, or to enable the Management Portal tasks available for the specific service.

For example, if you manually add a service for a Proxy Server to a Device, then the Synchronize Proxy Server and Purge Dynamic Cache tasks become available from the Operations task group when you navigate to the service.

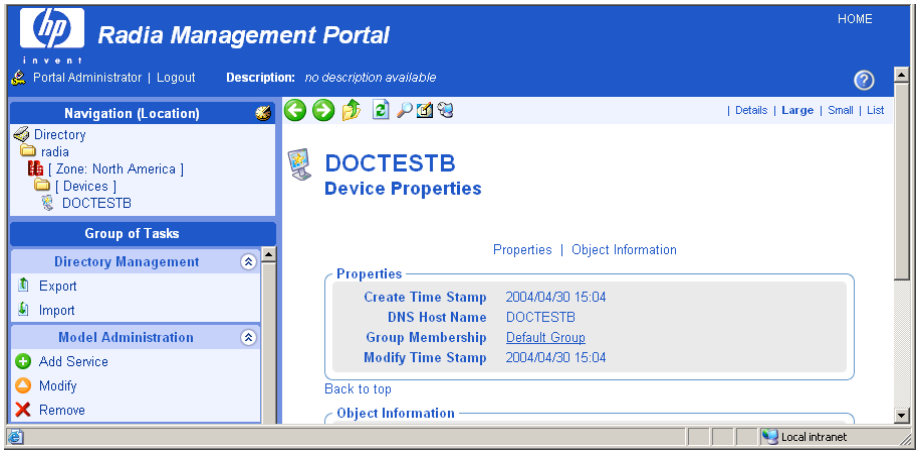
See the following procedure for an example of how to add a service for a Proxy Server to a Device.

Once the Radia Management Agent has been installed on a Device, its Services will be automatically detected.

To add a service

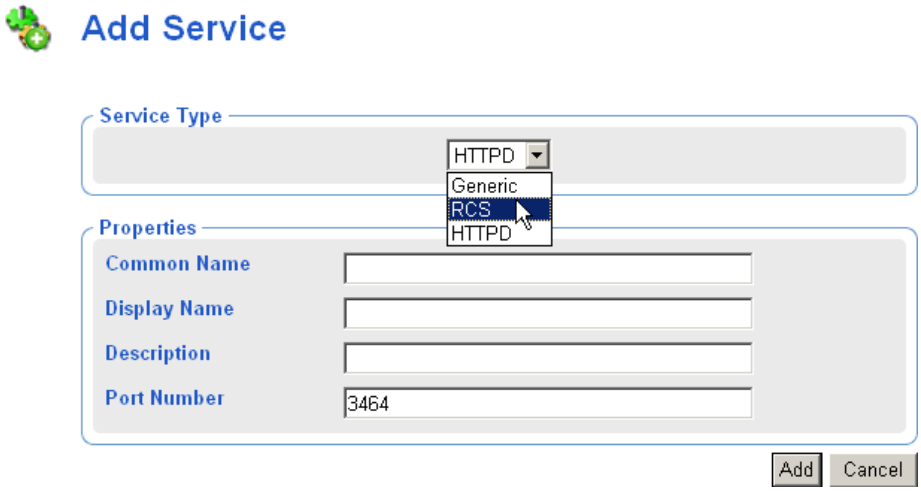
1 Use the Navigation aid to go to the Device entry for which you want to add a service. Devices can be accessed from either the Zone Devices container or from one of the Zone Groups containers.

- If the Device already includes services discovered or entered, the Workspace displays the list of services.
- If the Device does not have any services at this point, the Properties page for the Device opens.



2 In the **Model Administration** task group, click **Add Service**.

The Add Service dialog box opens.



3 In the **Service Type** area, use the drop-down list to select the type of service to add:

— Select **Generic** to add a generic service.

— Select **RCS** to add a `ZTOPTASK.EXE` service on a Configuration Server.

— Select **HTTPD** to add a service running under the Radia Integration Service {httpd}, such a service for the Proxy Server or the Inventory Manager Server.

The page refreshes after your selection to display the appropriate fields for the selected service type.

4 In the **Common Name** text box, type a name for the object.

— To identify a service for a Proxy Server, type rps.

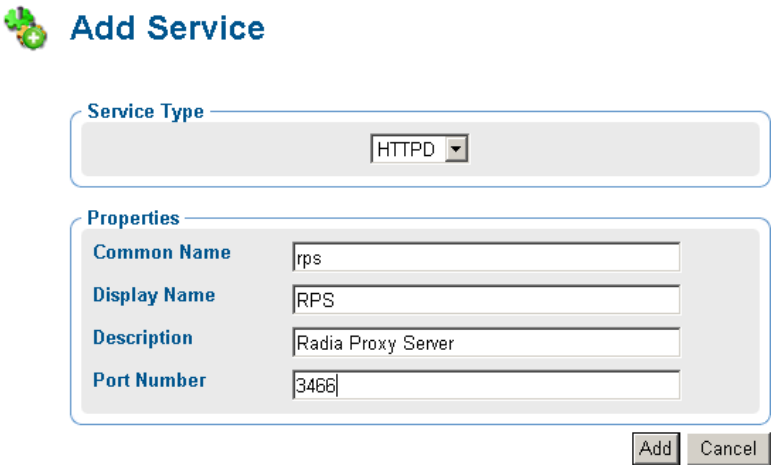
The Common Name for the object must be unique for the device. If you attempt to create an object with a name that has already been used, an error appears in the workspace indicating that the object already exists.

5 In the **Display Name** text box, type a name for the server that will appear in the infrastructure representation.

6 In the **Description** text box, type a description that will appear in the Details view of the infrastructure representation.

7 In the **Port Number** text box, type the port number used to connect to the service.

— 3466 is the default port number for a Radia httpd service, such as for the Proxy Server.



The following fields apply to the RCS Service Type, only. For other types, skip to Step 12.

8 In the **Path** text box, type the exact path of `ztoptask.exe` on the RCS machine. For example:
`C:/Novadigm/ConfigurationServer/bin/ztoptask.exe`.

9 In the **User** text box, type the Username needed to use to connect to the RCS.

10 In the **User Password** text box, type the password for the user to connect to the RCS.

11 In the **Timeout** text box, leave the default value of 0 to never have an RCS connection timeout. To have the RCS connection timeout after a specific period of inactivity, type the timeout period in seconds in the **Timeout** text box.

12 Click **Add** to add the service to your Device.

The new service is added to the properties for the Device. The Service Properties page for the new service opens in the Workspace.

To connect to the service just defined, use the **Connect to Directory Service** task in the Infrastructure task group. For details, see Connecting to a Directory Service on page 153.

Modifying Objects

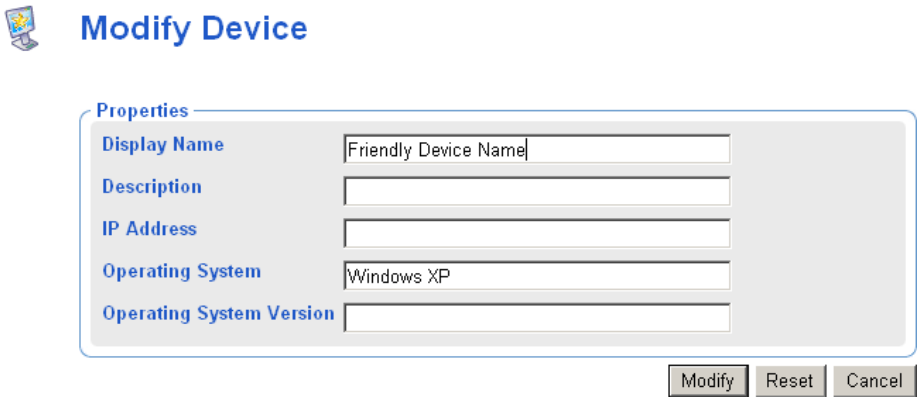
Use the **Modify** task in the **Model Administration** task group to make changes to any object in the representation of your infrastructure. If you are modifying group objects, also refer to the topic Basic Procedures for Modifying Groups on page 166.

To modify an object

1 Use the Navigation aid to go to the object that you want to modify.

2 In the **Model Administration** task group, click **Modify**.

The Modify <<object type>> dialog box opens.



3 Make the necessary changes.

4 Click **Modify** to save your changes.

or

Click **Reset** to undo the changes that you made.

or

Click **Cancel** to cancel the modify task.

Removing Objects

Use the **Remove** task in the **Model Administration** task group to remove an object from the Zone. If the object has children, you are given the option of reviewing and then removing all of the children as well. For example, if you remove a Group of devices whose members include other Groups of devices,

you are prompted as to whether or not you want to remove the children of the objects.

Prior to removing an object with children, you may want to navigate through the child-objects to make sure you want everything removed.

To remove an object and its children

1 Use the Navigation aid to go to the appropriate object.

2 In the **Model Administration** task group, click **Remove**.

A confirmation appears in the workspace.

3 Click ✓ to confirm that you want to remove the object from the Management Portal Directory.

OR

Click ✗ to indicate that you do not want to remove the object.

4 The remove is completed if the object has no children.

If the object you want to remove has children, a notification and confirmation appears in the workspace.

5 To first review the Child Objects, click **Selective Delete of Child Objects**.

6 Click ✓ to confirm that you want to remove the object and all its children from the Management Portal Directory.

OR

Click ✖ to indicate that you do not want to remove the object and its children. The remove is cancelled; none of the objects is removed.

Configuring Blades, Enclosures and Racks

The Chassis container extends the device-based Radia infrastructure zone architecture to include the server blades, blade enclosures (both stand-alone and rack-mounted), and racks in a zone. The Chassis container also includes enclosure configurations, whose set of pre-defined entries can be extended, as necessary, to permit logical groupings of the blade enclosures in any enterprise.

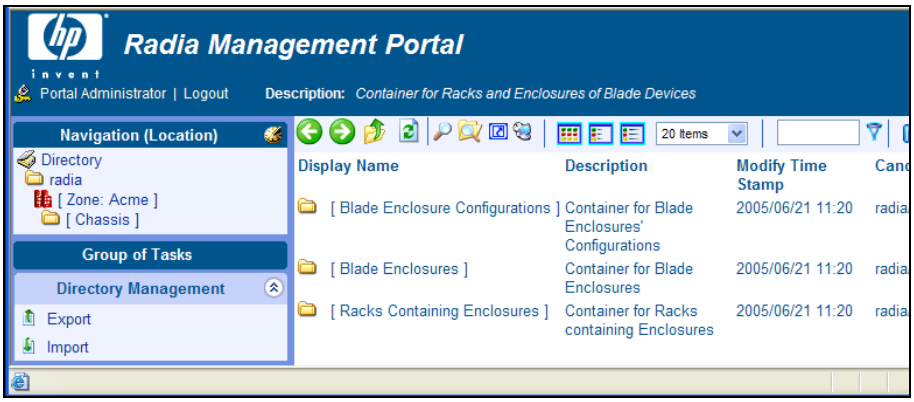


Figure 22: Chassis Container Contents

Table 1 lists the Chassis container contents and Table 2 lists the related Cross-References containers for these objects.

Table 12: Chassis Container Objects

Chassis Container Group	Contents and Notes
Racks Containing Enclosures	Rack instances containing enclosures. • Physical racks IDs must be unique within all racks in a Zone. • Multiple enclosure instances may be linked to a single rack.

Chassis Container Group	Contents and Notes
Blade Enclosures	Planned or actual enclosure instances. Each instance contains a set of slots. Slots are either *occupied* by a server blade or *empty*. • Enclosure instance names must be unique within a zone. HP recommends using names that are independent of their rack location, to allow for relocation. • Enclosures can be linked to an Enclosure Manufacturer and Model Number (in the Cross References groups). • Enclosures can be linked to a single enclosure configuration and a single rack instance. • Occupied slots are linked to a managed blade device.
Blade Enclosure Configurations	Predefined enclosure configurations (an enclosure model number and a predefined set of slots and server blades). • To add configurations, see the Add Enclosure Configuration task on page on page 213.

Table 13: Cross References Container Groups for Blade Enclosures

Cross References Group	Group Objects	Description
Enclosure Manufacturer	Manufacturers of blade enclosures, such as HP, IBM	Members include enclosure instances made by that manufacturer.
Enclosure Models	Models of blade enclosures, such as: HP Signal Blade	Members include enclosure instances with that model number.

Figure 23 on page 212 presents an architectural model for the server blade devices, containers, and racks in a zone. Notice the model emphasizes the relationships between these entities, allowing for a variety of policy assignment types. For example, policy assignments can be based on physical groupings (rack policies), logical configurations (policies for pre-defined enclosure configurations), as well as the manufacturers and model numbers of the enclosure instances. The openness of the underlying architecture

allows solution architects to assign policies practically anywhere, and enables implementations that fit the particular requirements of any modern enterprise.

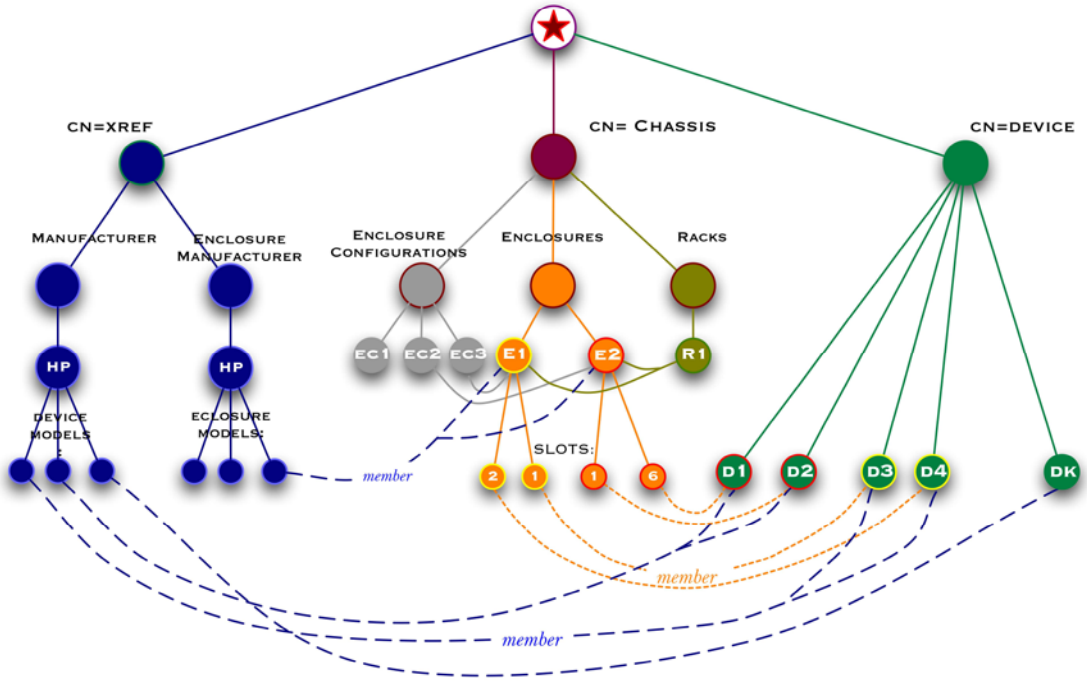


Figure 23: Architecture model for server blades, enclosures and racks.

a Server blades in your Zone are devices with membership links to their respective enclosure slots within the Chassis → Enclosures container. For example, Device D1 is linked to Slot 6 of the enclosure E2.

b Server blade devices also hold membership links to the appropriate Manufacturer group in the Cross References containers. Device D1 is a member of the HP Device Models listed in the Cross-References → Manufacturers container.

c The enclosures defined in the Chassis container can hold memberships in a single enclosure configuration, enclosure model, or rack. For example, enclosure E2 is linked to the configuration EC2, an HP Enclosure Model (within the Cross References → Enclosure Manufacturers container) and rack R1.

About the Predefined Blade Enclosure Configurations

The Blade Enclosure Configurations container includes several predefined configurations for the HP Signal Backplane enclosureas described in Table 14 below.

To view these configurations, navigate to the **Zone → Chassis → Blade Enclosure Configurations** location in the Management Portal.

Table 14: Provided Blade Enclosure Configurations

Displayname	Description
HP Sgnl Backplane/BL20	8 HP/BL20 Blade Slots
HP Sgnl Backplane/BL30	16 HP/BL20 Blade Slots
HP Sgnl Backplane/BL40	2 HP/BL40 Blade Slots

If your environment uses different blade enclosure configurations, add the configurations you require. For details, see Adding an Enclosure Configuration below.

Adding an Enclosure Configuration

Use the **Add Enclosure Configuration** task in the Model Administration task group to define a new configuration for a blade enclosure in the **Zone → Chassis → Blade Enclosure Configurations** container.

Policy may be assigned to individual slots of the enclosure or to the enclosure configuration as a whole. The enclosure instances in your Zone that have an enclosure configuration added to their properties will be members of the

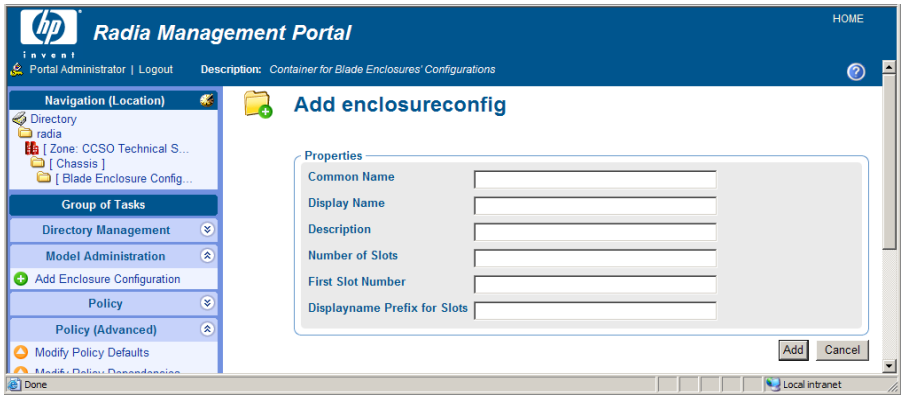
Enclosure Configuration group, and will inherit the policy applied to the configuration. Likewise, enclosure slots will inherit policies that are applied to their respective slots of a their assigned enclosure configuration.

To add an enclosure configuration

1 Navigate to the **Zone → Chassis → Blade Enclosure Configurations** group container.

2 Click **Add Enclosure Configuration** from the Model Administration task group.

The Add enclosure config window opens.



3 Complete the Properties for the enclosure configuration using the following guidelines.

Common Name – Required. Common names must be unique among all enclosure configurations in the same Zone.

Display Name – Name that displays next to the object in the Portal. Defaults to the common name. HP recommends using display names that are also unique among all enclosure configurations in the same Zone.

Description – Optional description of the enclosure configuration, such as the number of slots of each server type.

Number of Slots – Defines the number of slots to create for this enclosure configuration.

Fist Slot Number – The first slot number of an enclosure is either 1 or 0 (zero). The default value is 1. Enter 0 if this enclosure assigns 0 to the first slot number.

Displayname Prefix for Slots – Enter a prefix to easily identify each slot number for this configuration. Each slot for the configuration will be identified as the prefix entered here followed by a slot number. Figure 25 on page 217 shows an example of slot display names which were given a prefix of "HP-New".

4 Click **Add.**

The Modify Enclosure Configuration window opens.

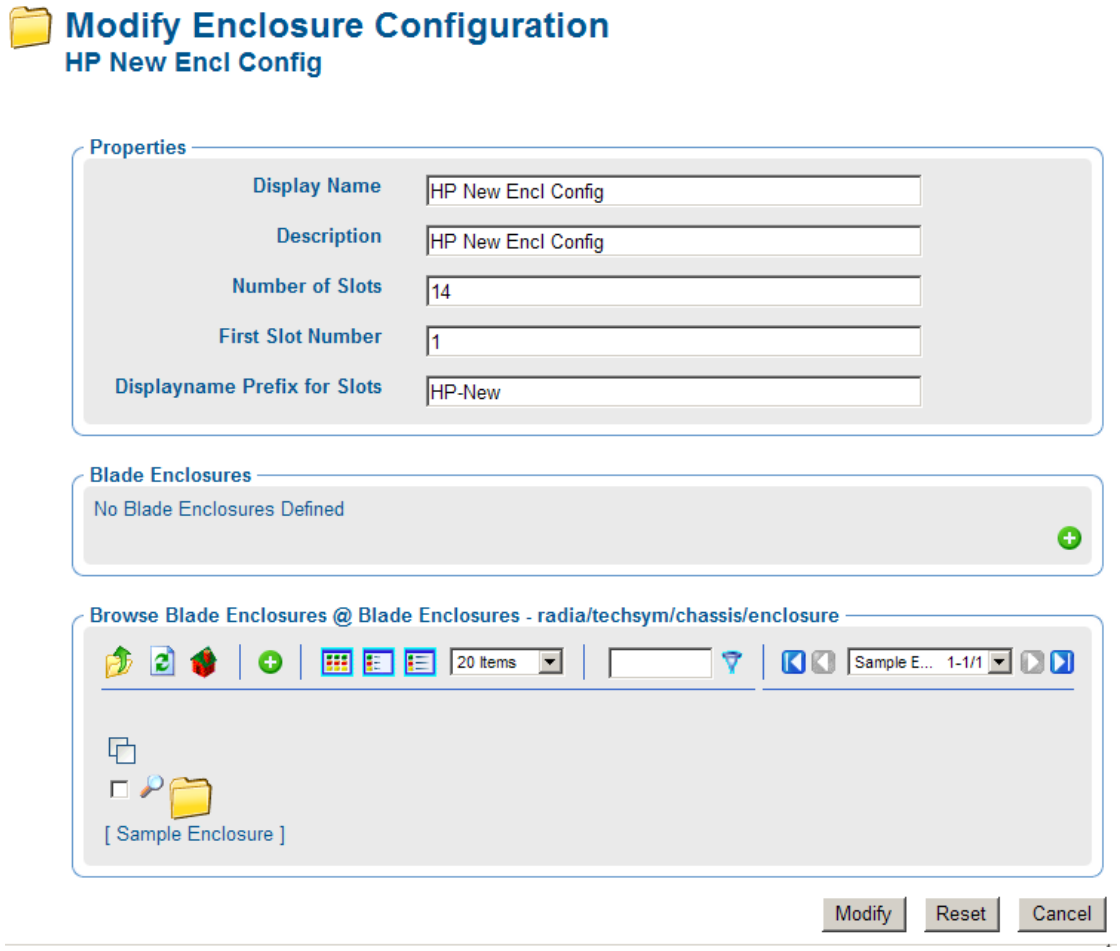


Figure 24: Modify Enclosure Configuration Window.

a Properties displayed in the top area reflect your previous entries, and can be modified here, if necessary.

b Blade Enclosures area displays Blade Enclosures in your Zone that are defined as members of this configuration. Currently, this configuration has no members.

c Browse Blade Enclosures area is used to select blade enclosures to define as members of this configuration.

5 If desired, modify the values of any of the properties.

6 To define existing enclosures in your Zone as members of this configuration, use the Browse Blade Enclosures area (c) to add members to the Blade Enclosures area (b). See Using the Browse and Modify Window on page 167 for more information on how to use this area.

7 Click **Modify** to create the Blade Enclosure Configuration.

The new configuration is added to the Blade Enclosure Configuration container. The configuration contains instances of each slot defined in the previous task. In the image below, a configuration was added with 14 slots.

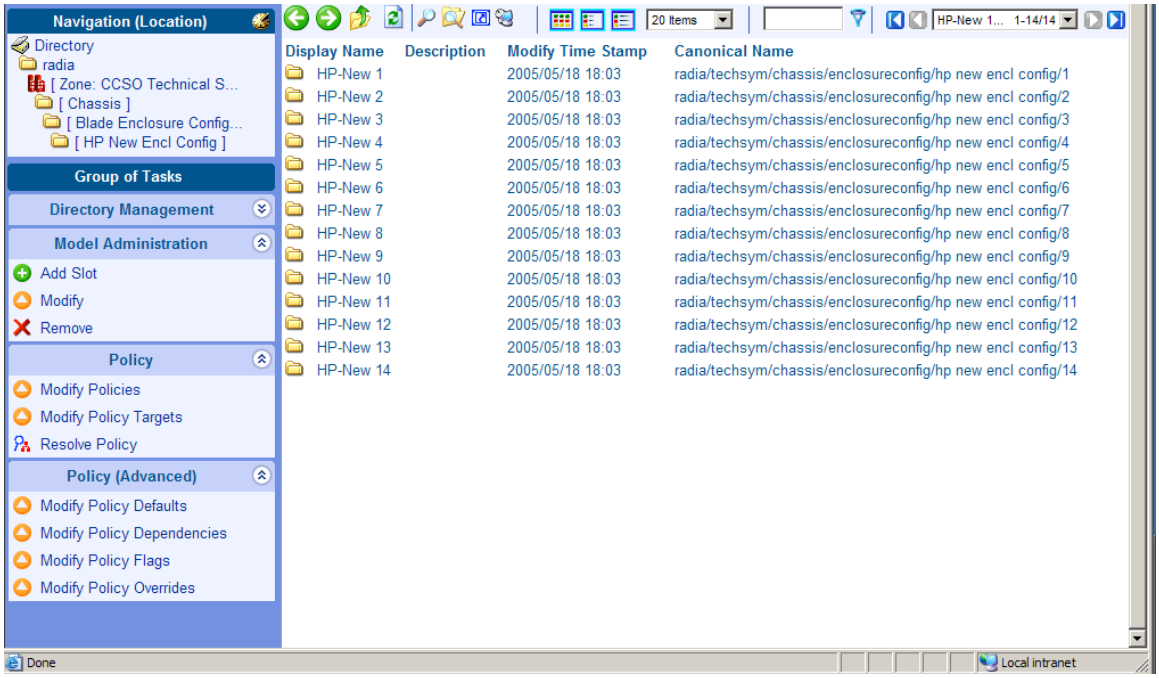


Figure 25: Blade Enclosure Configuration added with 14 slots.

8 From this location, you can also add slots to the configuration. To do this, click **Add Slot** from the Model Administration task group.

The task to add an enclosure configuration is complete.

Adding an Enclosure

Use the **Add Enclosure** task in the Model Administration task group to create instances for the existing and/or planned enclosures in your Zone. This is performed from the **Zone → Chassis → Enclosures** group container.

When defining an enclosure, be aware of the following:

- If you base the enclosure on a predefined enclosure configuration, the new enclosure automatically includes the same number of slots as the Enclosure Configuration. (This is done on the Modify Enclosure window.) Defining an enclosure configuration for the enclosures in your zone is the recommended approach for applying policies.

- If you add manufacturer and model details for the enclosure, you will be able to cross-reference the enclosure from the **Cross References** → **Enclosure Manufacturers** groups. In general, applying policies to the groups within the enclosure manufacturers containers have limited use, since all enclosures of a specific model will have the same set of policies.
- Defining a configuration for the enclosure also makes the enclosure a member of the selected enclosure configuration group. The membership enables any policies applied to the configuration to be inherited by the enclosure instance, as well as any policies applied to a slot number of the configuration to be applied to the same slot number of the enclosure instance.

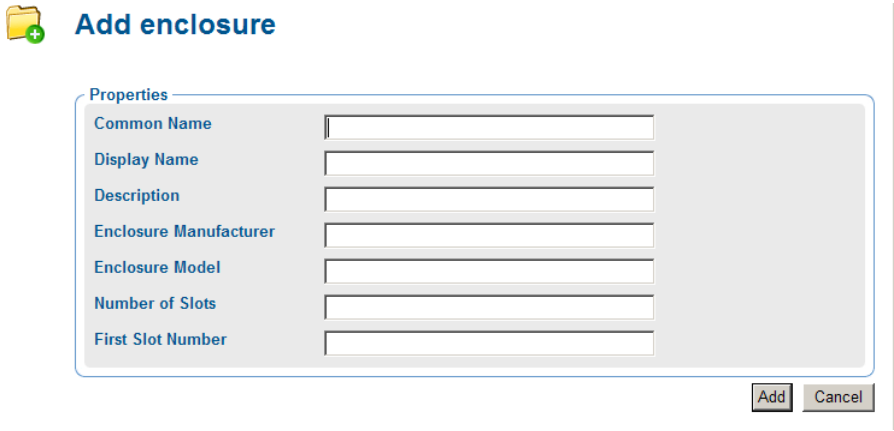
Blade enclosure names must be unique within a zone. Enclosure names should be independent of the racks in which they are mounted.

To add an enclosure

1 Navigate to the **Zone** → **Chassis** → **Blade Enclosures** container.

2 Click **Add Enclosure** from the Model Administration task group.

The Add enclosure window opens.



3 Complete the Properties group fields using the following guidelines.

Common Name – Required. Common names for enclosures must be unique among all enclosures in the same Zone. HP recommends using names that are independent of the racks where the enclosures are mounted.

Display Name – Name that displays next to the object in the Portal. Defaults to the common name.

Description – Optional description of the enclosure.

Enclosure Manufacturer – The manufacturer of the enclosure, such as HP or IBM. Enter this field to create a link to the Cross References container for Enclosure Manufacturers. Match the name exactly if the manufacturer is already listed in the Cross References containers.

Enclosure Model – The specific model of enclosure for the given manufacturer. To manually create a link to the Cross References container for Enclosure Manufacturers, enter a model name for the enclosure. Match the name exactly if the model is already listed in the Cross References containers.

Number of Slots – Defines the number of slots to create for this enclosure. Leave blank to have the slot numbers automatically defined from an enclosure configuration (defined on the next Modify Blade Enclosure dialog).

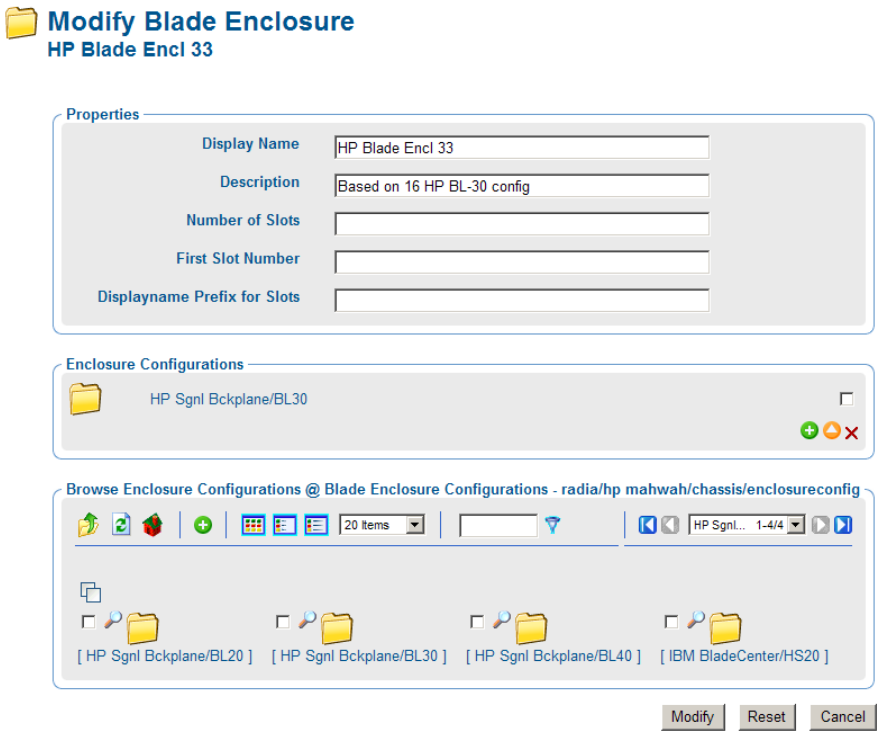
Fist Slot Number – The first slot number of an enclosure is either 1 or 0 (zero). The default value is 1. Enter 0 if this enclosure assigns 0 to the first slot number.

4 Click **Add.**

The Modify Blade Enclosure window opens.

5 Optionally, modify any entry in the **Properties area** for Display Name, Description, Number of Slots, or First Slot Number. Definitions for these fields are given earlier in this procedure.

6 Slot names are automatically generated using the format "Slot n". To add a prefix to these slot names, enter the prefix in the **Displayname Prefix for Slots** text area.



The lower areas on the Modify dialog allow you to define an enclosure configuration for this enclosure instance. Defining a configuration:

— Adds the Slots defined in the configuration to the enclosure instance.

— Makes this enclosure a member of the selected Enclosure Configuration group. The membership enables any policies applied to the configuration to be inherited by the enclosure instance.

7 To optionally define an enclosure configuration for the enclosure, use these steps:

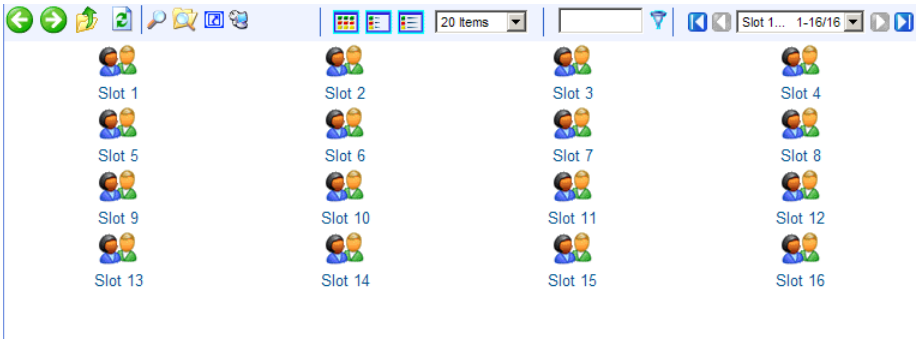
b Slot names are automatically generated using the format "Slot n". To add a prefix to these slot names, enter the prefix in the **Displayname Prefix for Slots** text area.

d Use the **Browse Enclosure Configurations** area to select the target configuration on which to base this enclosure. See Using the Browse and Modify Window on page 167 for more information on how to use the Browse area features.

c After selecting a configuration from the Browse area, click  to add it to the **Enclosure Configurations** area.

8 Click **Modify** at the bottom of the page.

The Enclosure configuration instance is created in that group. If Slot numbers were entered or defined from an existing configuration, the workspace displays the slots created for the enclosure.



9 Click  on the toolbar to view the Blade Enclosure Properties.

Notice the properties for an enclosure indicate the **Enclosure Configuration** defined for it. Optionally, click on the linked entry to view the configuration.

This completes the entry for the enclosure instance of HP Blade Enclosure 33. Its configuration of 16 slots is based on the Enclosure Configuration named HP Sgnl Bckplane/BL30.

This enclosure instance is linked to that enclosure configuration, and will inherit any policies applied to the configuration.

Applying Policy to Blades, Enclosures and Racks

Policy may be applied to many entities related to the blades, enclosures and racks in your zone. There are several approaches that are discussed on the topics that follow.

- Before applying policy, however, you must first add a LINKS entry to the Management Portal configuration file, `rmp.cfg`, as discussed in Enabling Policy Configurations for Blades, Enclosures and Racks below.
- After enable the LINKS in the `rmp.cfg` file, use the tasks in the Policy and Advanced Policy tasks groups to assign policy that will apply to the server blade devices in your zone. For details on how to perform these tasks, see Using RMP to Assign Policy through an LDAP Directory on page 109.

Enabling Policy Configurations for Blades, Enclosures and Racks

Resolution of policy applied to the objects related to blades, enclosures and racks in a Zone requires a LINKS entry in the `rmp.cfg` file, as shown below:

```
rmp::init  {
   LINKS   { enclosureslotnumberdn enclosuremodeldn
             enclosureconfigdn rackdn osdevicearchitecturedn }
}
```

The specific set of links to include in the LINKS entry will vary for each enterprise, depending on which entities and containers have been used for policy. Table 15 on page 223 describes the policy link that is enabled when the value is added to the LINKS list. For example, if you have not assigned policy to the rack instances in your Zone, `rackdn` may be omitted from the set of LINKS shown above.

Table 15: Policy Resolution Links to Define in RMP.CFG

LINKS Parameter	Description
enclosureslotnumberdn	Links the blade device to the enclosure slot.
enclosuremodeldn	Links the blade device to the enclosure model.
enclosureconfigdn	Links the enclosure to its enclosure configuration.
osdevicearchitecturedn	Links the device to its device architecture (which is added by default).
rackdn	Links the enclosure to its rack (when policies are assigned to racks).

Assigning Policy Based on Enclosure Model Types

To assign policies based on enclosure manufacturer model types, do the following:

1. Modify the `rmp.cfg` file to include the necessary policy links. See Enabling Policy Configurations for Blades, Enclosures and Racks on page 222.
2. If available, enable the server blade devices in your Zone to report the model of the enclosure in which the blade occupies. When this attribute is reported, it is used for cross-referencing of the enclosures in the Enclosure Manufacturer cross-references container.
3. Optionally, add slots to the models in the Enclosure Manufacturer containers. This allows you to define policy for some or all slots for a given Enclosure Manufacturer model number.
4. Establish a set of enclosure configurations for your Zone.

Assigning Policy Based on Enclosure Configurations

To assign policies based on predefined enclosure configurations, do the following:

1. Modify the `rmp.cfg` file to include the necessary policy links. See Enabling Policy Configurations for Blades, Enclosures and Racks on page 222.

2 Establish a set of enclosure configurations that reflect the various configurations of server-blades in the enclosures in your enterprise. Use the predefined configurations or add your own.

3 For each enclosure instance in your enterprise, define it as member of an enclosure configuration. This can be done from the Modify Enclosure Configuration window using the Browse Blade Enclosures area. See Figure 24 on page 215 for details.

Once an enclosure is defined as a member of the enclosure configuration instance, all the slots of the enclosures have member of/member connections to the corresponding slots of the respective configuration.

4 Apply policy to the Enclosure Configuration itself, or to a Slot of the Configuration.

The enclosure instances and slot instances will inherit the policies of the enclosure configuration to which it is linked. A server that occupies a slot number in the enclosure will also inherit policy that is applied to the same-numbered slot in the enclosure configuration.

Configuring Task Groups

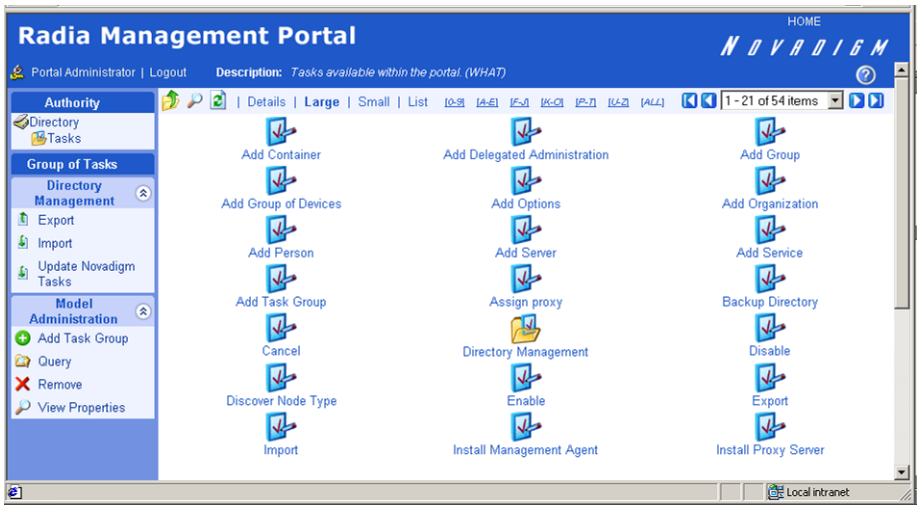
The Taskbar contains logical groups of tasks (called task groups). A task is an activity that a person performs to initiate a job. The available tasks vary based on the selected Authority, as well as your role. In addition to the standard task groups (see *Taskbar* on page 79 for more information), you can create your own task groups.

Adding Task Groups

To add a task group

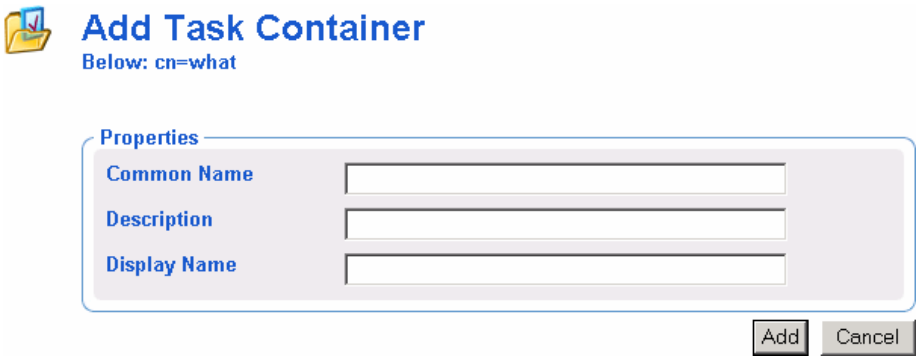
1 Use the Navigation aid to go to **Directory** → **Zone** → **Configuration** → **Tasks**.

The workspace displays the current set of Tasks and Task Groups. Task Groups are represented by the yellow folder icons, tasks by the blue page icons.



2 In the **Model Administration** task group, click **Add Task Group**.

The Add Task Container dialog box opens.



3 In the **Common Name** text box, type a name for the task group object.

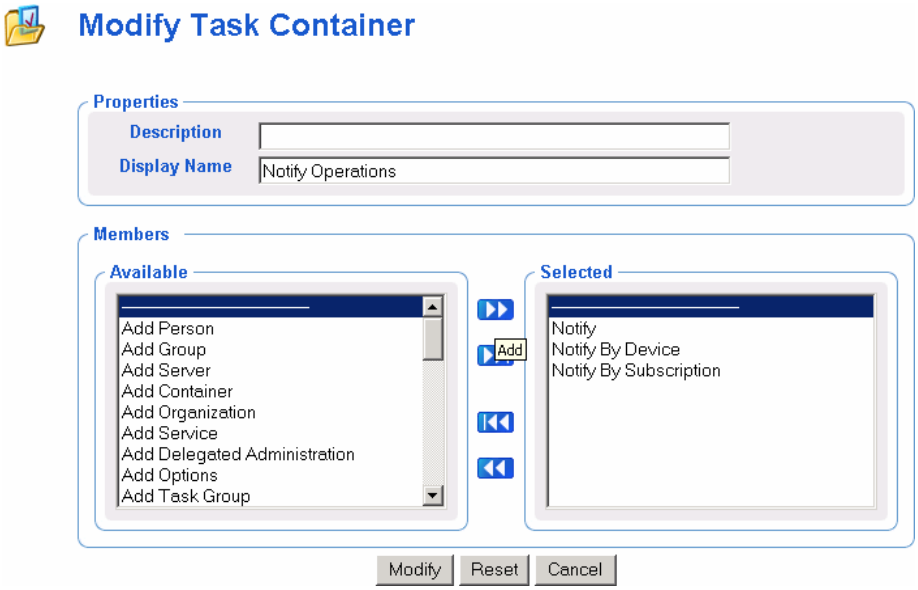
The Common Name for the object must be unique. If you attempt to create an object with a name that has already been used, an error appears in the workspace indicating that the object already exists.

4 In the **Description** text box, type a description that will appear in the **Details** view.

5 In the **Display Name** text box, type a name for the task group. If omitted, the Common Name is used.

6 Click **Add**.

The Modify Task Container dialog box opens.



7 From the **Available** list, select one or more tasks to add to the task group.

8 Click  to add the selected groups to the **Selected** list.

9 Click **Modify**.

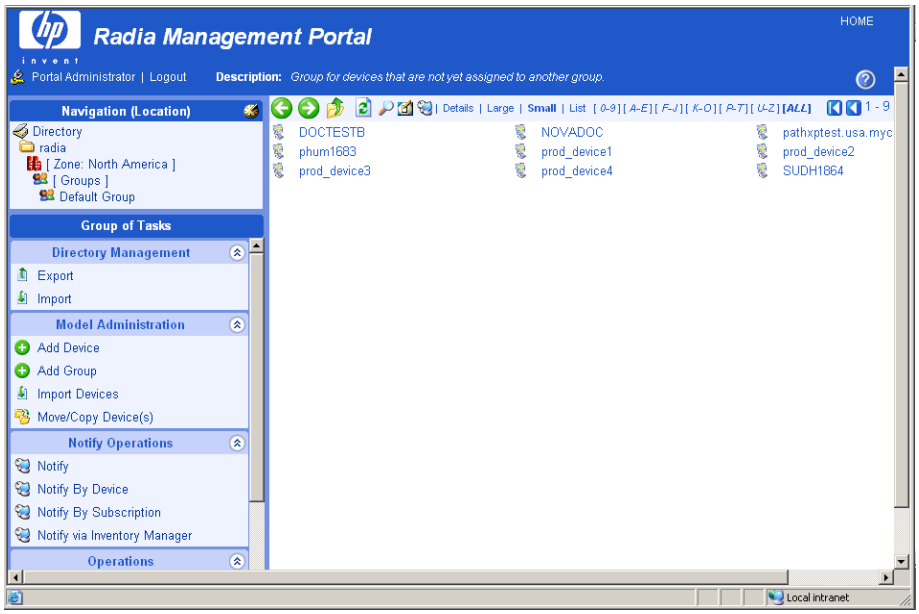
The Workspace displays the contents of the new **Notify Operations** task group.

10 In the toolbar above the workspace, click the View Properties icon:  .

The Task Container Properties for Notify Operations opens.

11 To see this new Task Group, use the Navigation aid to go to **Directory** → **Zone** → **Groups** → **Default Groups**.

In the Taskbar, your new task group, such as Notify Operations (as shown in the next figure), is available. Task Groups are listed alphabetically.



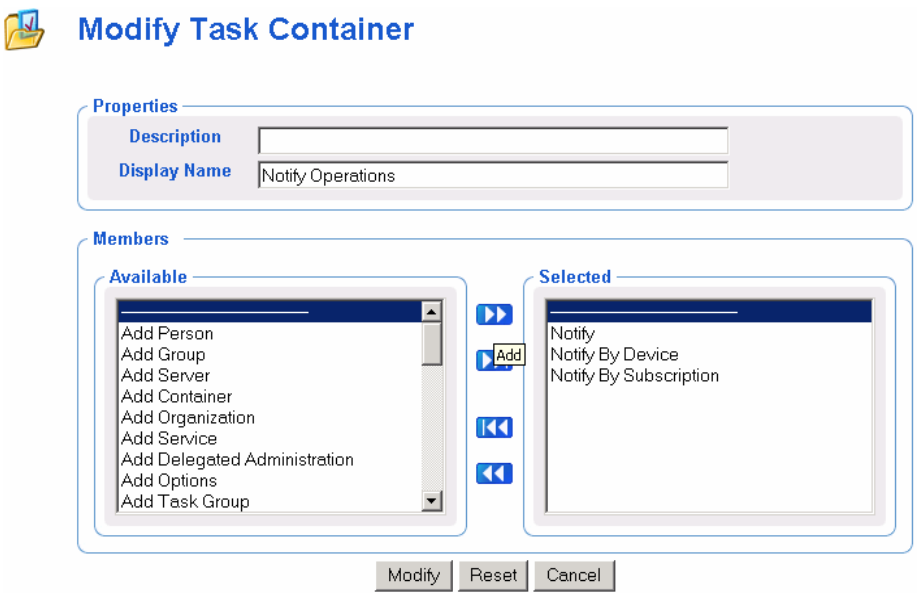
If you would like to configure the Management Portal so that only some administrators can access this task group, see Configuring Delegated Administration on page 231 for more information.

Modifying Task Groups

To modify a task group

1. Use the Navigation aid to go to **Directory** → **Zone** → **Configuration** → **Tasks**.
2. In the Workspace, select the task group that you want to modify.
3. In the **Model Administration** task group, click **Modify**.

   The Modify Task Container dialog box opens.



4 Make any necessary changes. For detailed information about configuring task groups, see Adding Task Groups on page 224 for more information.

5 Click **Modify** to save your changes.

OR

Click **Reset** to undo the changes that you made to this role.

OR

Click **Cancel** to close this dialog box without saving your changes.

The Workspace displays the objects in the selected task group and you can see your changes.

Removing Task Groups

To remove a task group

1 Use the Navigation aid to go to **Directory** → **Zone** → **Configuration** → **Tasks**.

2 In the workspace, select the task group that you want to remove.

3 In the **Model Administration** task group, click **Remove**.

The Remove Task Container dialog box opens.

4 Click ✓ to confirm that you want to remove the task group from the Management Portal Directory.

OR

Click ✗ to indicate that you do not want to remove the task group.

Configuring Delegated Administration

Use the Management Portal to configure delegated administration information so that your administrators can access only the tasks that are relevant to them and their roles. A task is a single operational function, or an action, that is performed on the selected target audience. A role is a logical grouping of tasks that defines an administrative function. In other words, you will configure who can do what, and specify where, in the infrastructure, they may do it.

The Management Portal contains several standard roles. To view the existing roles in the navigation aid go to **Directory → Zone → Configuration**. Then, in the workspace, click **Delegated Administration**.

The following roles are used to perform Core Management Portal operations:

- **Global Default Policy**
  Allows the Management Portal administrator to access Model Administration and Operations tasks in the following Scopes of Action—Zone, Administrators & Operators, Tasks and Job History.
- **Operations Policy**
  Allows operations staff to access Operations tasks in the following Scopes of Action—Zone, Administrators & Operators, and Tasks.
- **System-Wide Access**
  Allows the Management Portal administrator to access all tasks in all Scopes of Action.

  This role cannot be modified in order to prevent you from being locked out of the Management Portal.
- **Test Global Policy**
  Allows you to experiment with entitlement options.

The following roles are used to administer the RCS database and Policy:

- **Account Administration**
- **Advanced Policy Administration**
- **Auditing Administration**
- **Infrastructure Administration**
- **Package Administration**
- **Policy Administration**

- **RCS Administration**
- **Service Administration**

In the workspace, click any of these delegated administration roles to view the properties for the role.

Adding Delegated Administration Roles

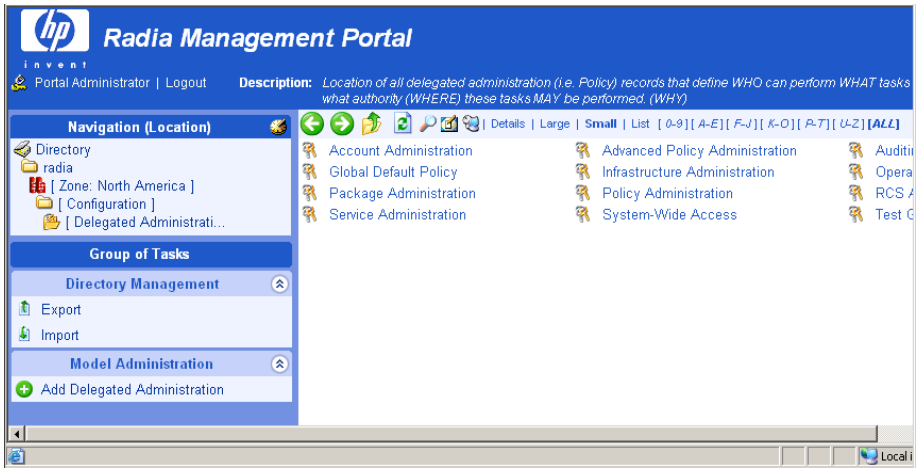
Adding new delegated administration information for your administrators is a three-step process. First, you will assign administrators and operators to the role. Next, you will specify what tasks the administrators or operators will be able to perform. And, finally, you will select where, in the infrastructure, the administrators or operators can perform these tasks.

To add a delegated administration role

The Figures in this procedure do not reflect the latest changes to the Management Portal.

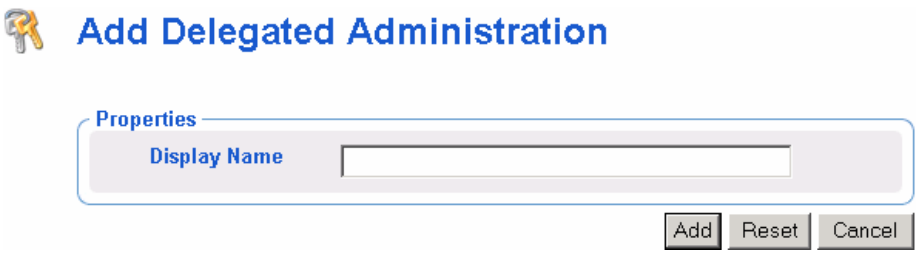
1 Use the Navigation aid to go to **Directory → Zone → Configuration**.

2 In the workspace, click **Delegated Administration**.



3 In the **Model Administration** task group, click **Add Delegated Administration**.

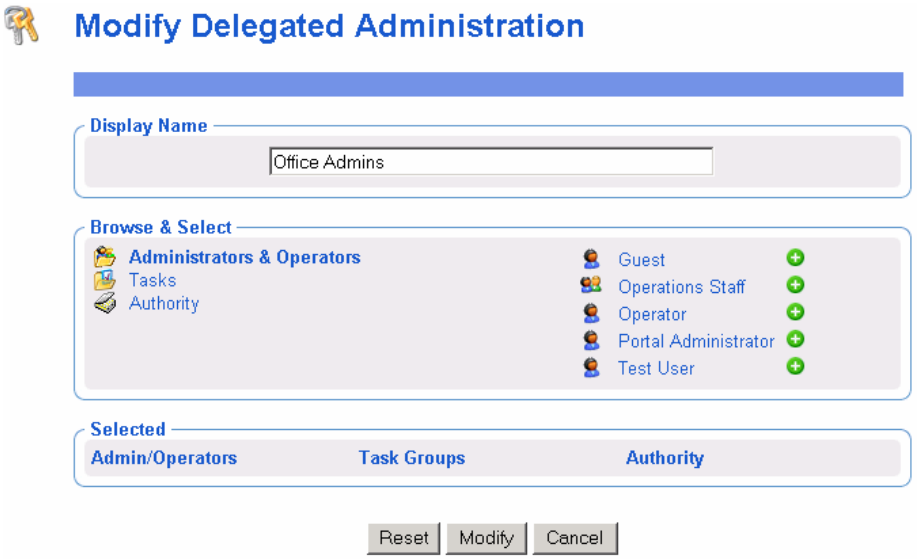
The Add Delegated Administration dialog box opens.



4 In the **Display Name** text box, type a name for the role.

5 Click **Add**.

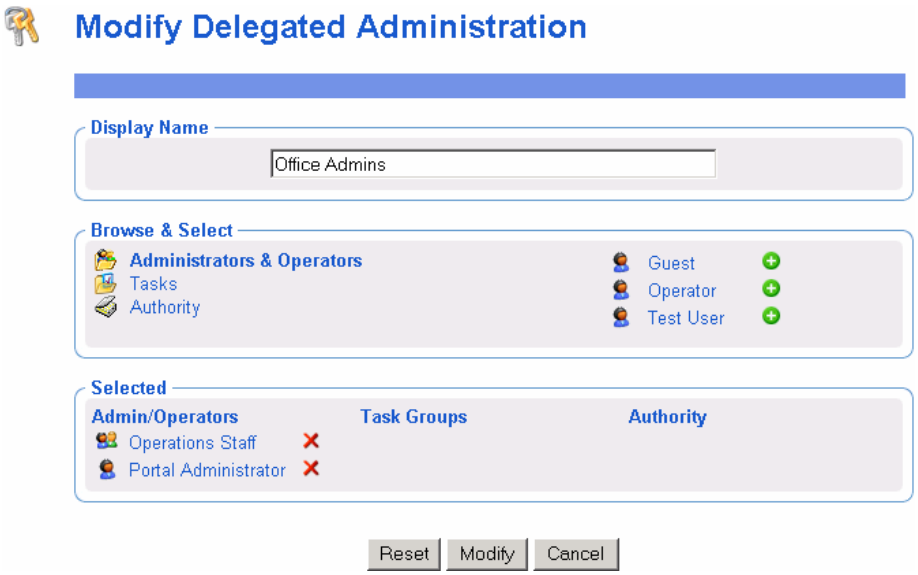
The Modify Delegated Administration dialog box opens. First, you will select the administrators and operators that you want to assign to this role.



6 In the **Browse & Select** area of the dialog box, make sure that **Administrators & Operators** is selected. Selected text is bold.

7 Click  next to the each of the administrators and operators that you want to add.

Notice that as you select administrators and operators, they appear in the **Selected** area of the dialog box under the **Admin/Operators** column.

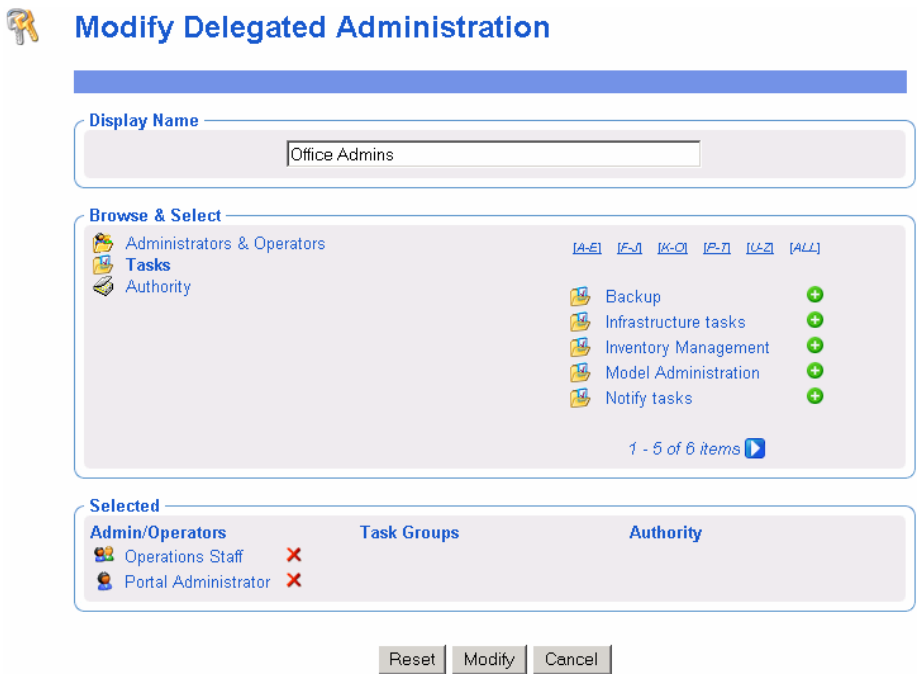


If you want to remove an administrator or operator from the list of selected items, click  .

Next, select the tasks that you want to include in this role.

8 In the **Browse & Select** area of the dialog box, click **Tasks**.

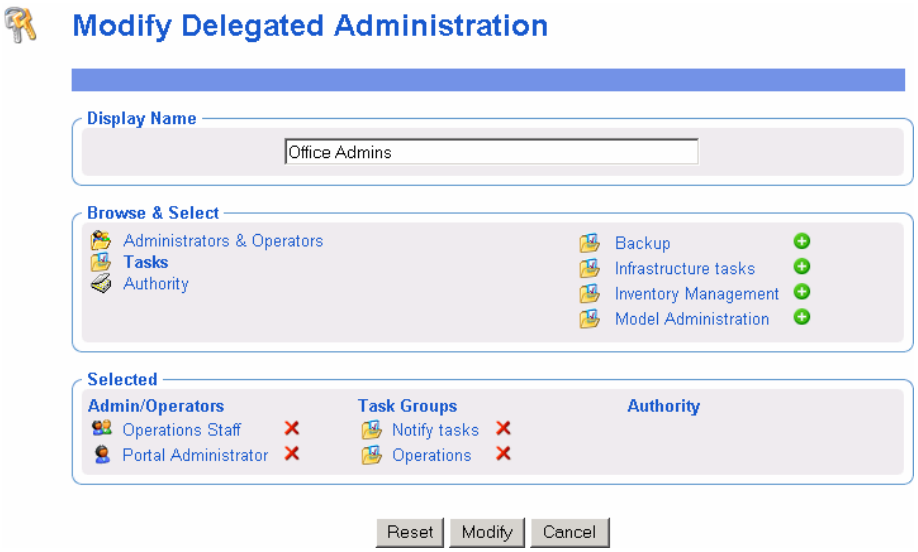
The **Browse & Select** area updates to allow you to select *what* groups of tasks to include in this role.



9 Click below the list, if you do not see the container that you want to select. If there are five or more task groups to select from, you can click the appropriate range of letters above the list to narrow it.

10 Click next to the each of the task groups that you want to add.

Notice that as you select task groups, they appear in the **Selected** area of the dialog box in the **Task Groups** column.

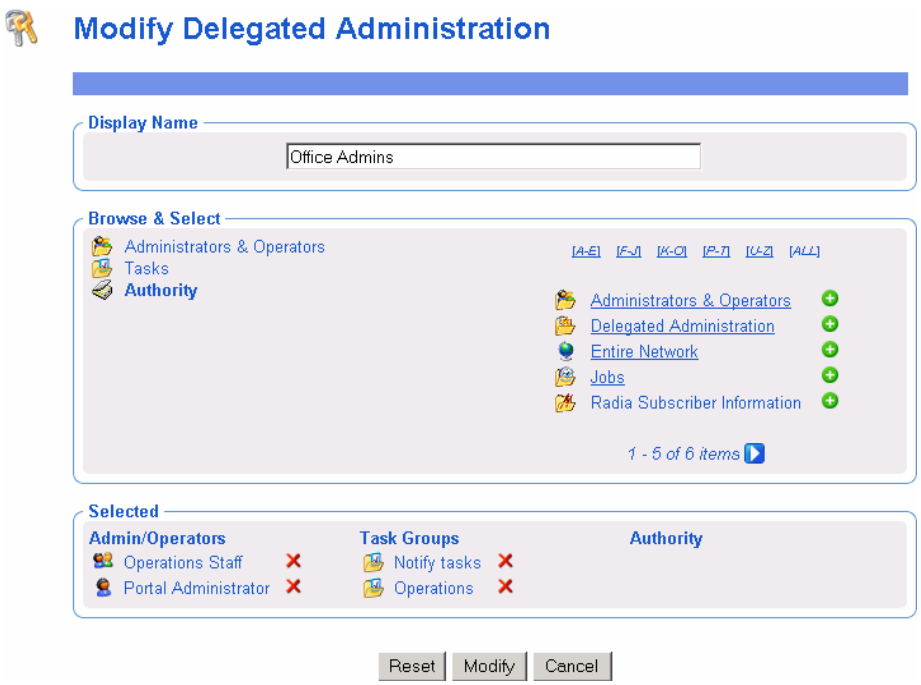


If you want to remove a Task Group from the list of selected items, click  .

Next, select the areas in the infrastructure that administrators and operators assigned to this role are entitled to manage.

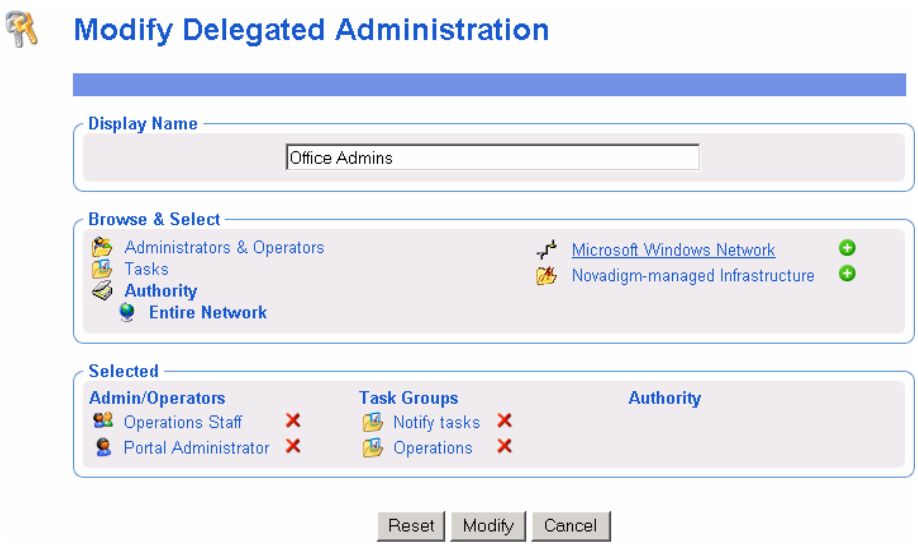
11 In the **Browse & Select** area of the dialog box, click **Authority**.

The **Browse & Select** area updates to allow you to select *where*, in the infrastructure, the administrators and operators assigned to this role are entitled to manage.

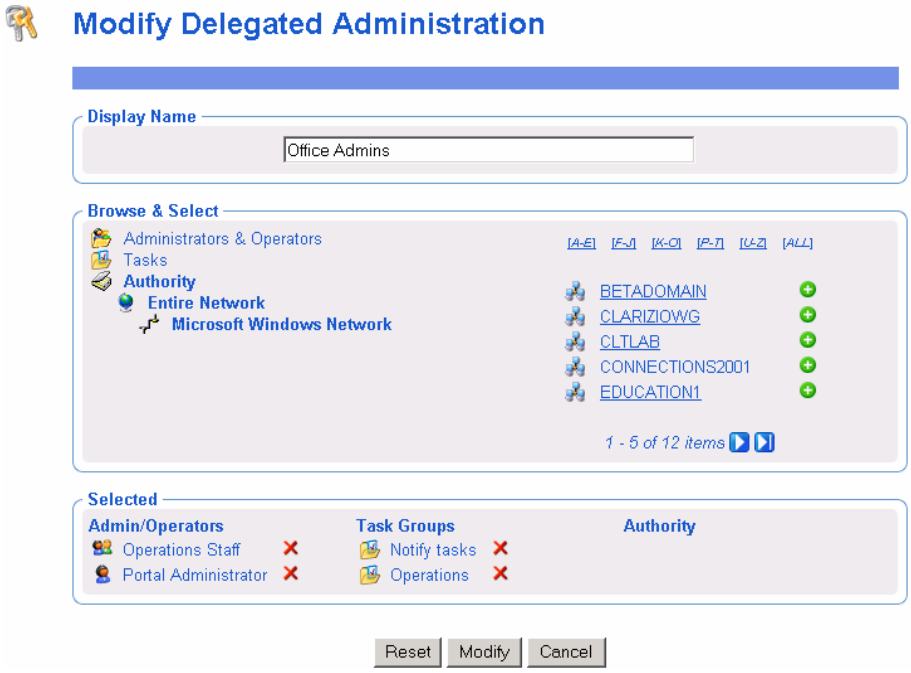


12 Click  below the list, if you do not see the container that you want to select. If there are five or more task groups to select from, you can click the appropriate range of letters above the list to narrow it.

13 If necessary, you can browse the containers on the right to limit the Authority further. To do this, click the name of the container that you want to browse, such as **Zone**, and then **Networks**.



Notice that the list of items that you can add to the delegated administration role narrows as you browse further into a specific container. For example, click **Microsoft Windows Network**.

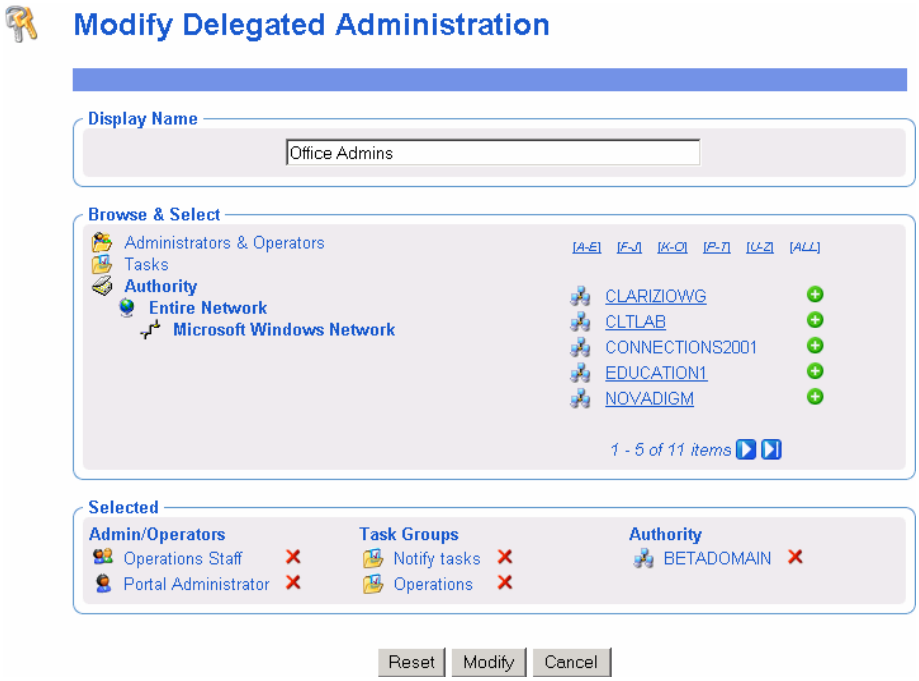


Now, you can select a specific domain, such as the **BETADOMAIN.** This allows you to limit the administrator's access to a very specific area of your network.

At any time, you can click an item on the left (such as Entire Network) to return to a broader authority.

14 Click next to the items that you want to add.

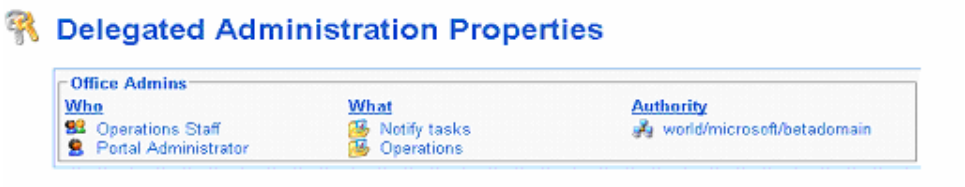
Notice that as you select an Authority, it appears in the **Selected** area of the dialog box in the **Authority** column.



If you want to remove an Authority from the list of selected items, click .

15 Click **Modify**.

The Delegated Administration Properties dialog box opens.

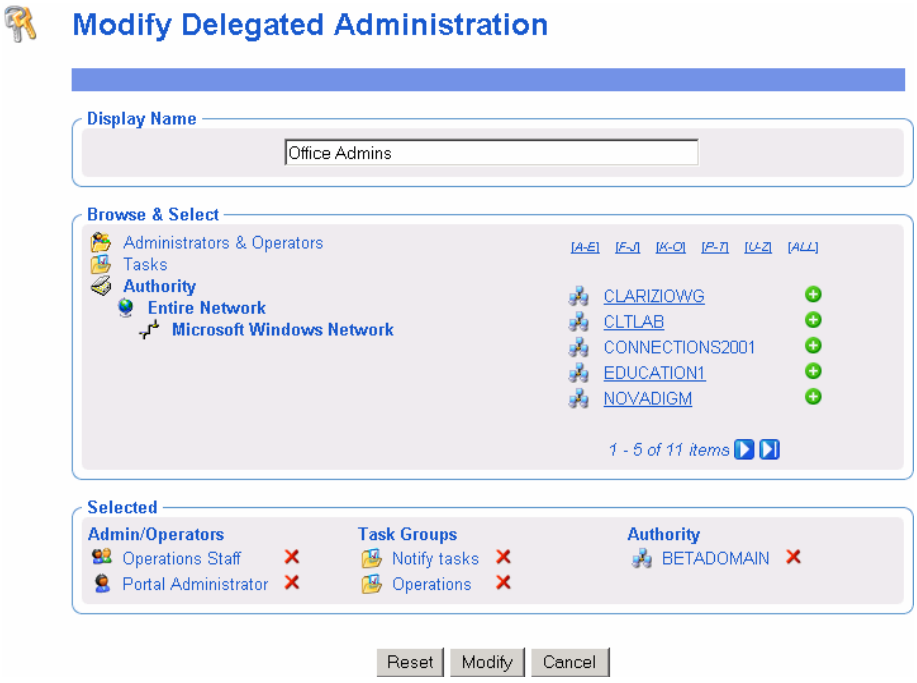


Modifying Delegated Administration Roles

To modify a delegated administration role

1. Use the Navigation aid to go to **Directory** → **Zone** → **Configuration** → **Delegated Administration**.
2. In the workspace, select the delegated administration role that you want to modify.
3. In the **Model Administration** task group, click **Modify**.

   The Modify Delegated Administration dialog box opens.



4 Make any necessary changes. For detailed information about configuring delegated administration roles, see Adding Delegated Administration Roles on page 232.

5 Click **Modify** to save your changes.

or

Click **Reset** to undo the changes that you made to this role.

or

Click **Cancel** to close this dialog box without saving your changes.

The Delegated Administration Properties dialog box opens and you can review your changes.

Removing Delegated Administration Roles

To remove a delegated administration role

1 Use the Navigation aid to go to **Directory** → **Zone** → **Configuration** → **Delegated Administration**.

2 In the workspace, select the delegated administration role that you want to remove.

3 In the **Model Administration** task group, click **Remove**.

The Remove Delegated Administration message opens.

4 Click ✓ to confirm that you want to remove the Delegated Administration role from the Management Portal Directory.

OR

Click ✗ to indicate that you do not want to remove the Delegated Administration role.

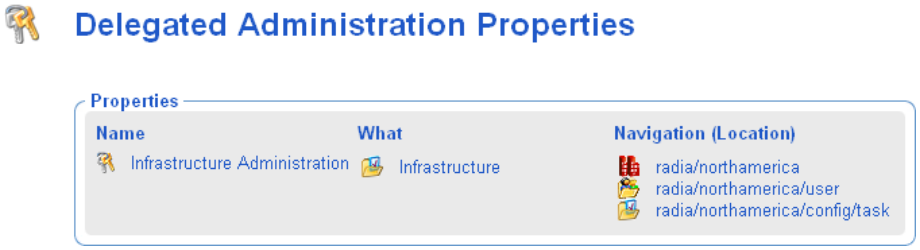
Querying a User's Delegated Administration

Use the **Query User's Delegated Administration** task in the **Model Administration** task group to display information about the selected user's role.

To query a user's delegated administration

1. Use the Navigation aid to go to **Directory** → **Zone** → **Administrators & Operators**.
2. In the workspace, select the appropriate user.
3. In the **Operations** task group, click **Query User's Delegated Administration**.

   A table similar to the following appears.



4. Click any link in the table to view the properties for that object.

Configuring Administrators and Operators

The Administrators & Operators container in the Management Portal Zone Directory stores authentication information. Every administrator must be added at the top level of this container. After adding administrators and assigning them to groups, you can assign them to the appropriate delegated administration policies. See Modifying Delegated Administration Roles on page 240 for more information.

Adding Users

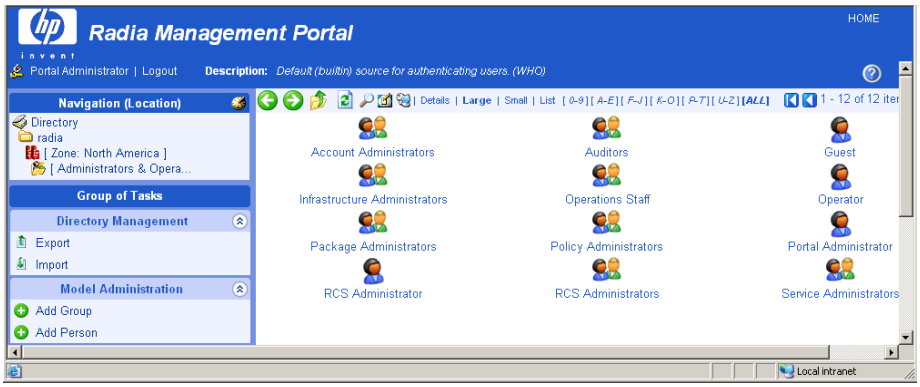
When adding a user, assign the person a unique user ID and password. You can also assign the user to groups. If LDAP Authorization has been enabled for all users, you can assign an External User ID or disable LDAP authorization for this user.

External LDAP Authentication is disabled for all users by default. To enable it, see Configuring for External LDAP Authentication on page 158 for details.

To add a user

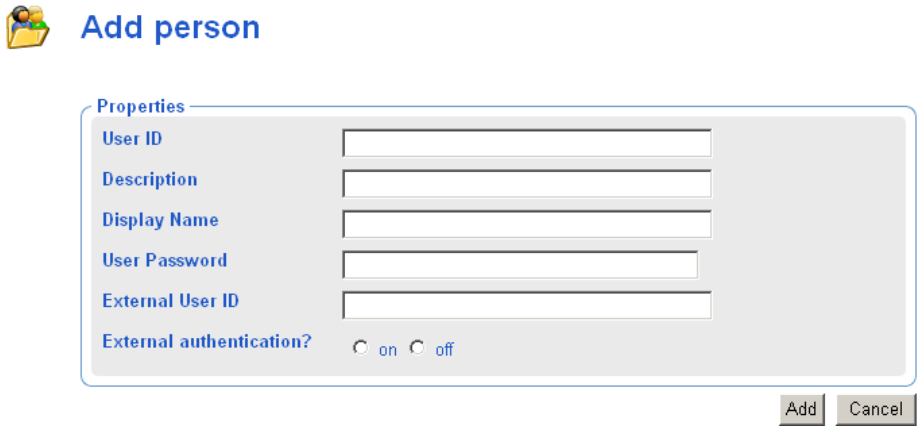
1 Use the Navigation aid to go to **Directory** → **Zone**.

2 In the workspace, click Administrators & Operators.



3 In the **Model Administration** task group, click **Add Person**.

The Add Person dialog box opens.



4 In the **User ID** text box, type the user name.

> The User ID for the person must be unique. If you attempt to create an object for a person with a user ID that has already been used, an error appears in the workspace indicating that the object already exists.

5 In the **Description** text box, type a description that will appear in the Details view.

6 In the **Display Name** text box, type a name for the user that will appear in the Management Portal.

7 In the **User Password** text box, type the user's password. Specify the password associated with the **External User ID** if external authentication is turned on for this user.

Passwords may include alphanumeric characters as well as spaces and special characters, such as #, $, and \.

8 In the **External User ID** text box, type an external user ID that should be accepted for authentication by an external service, such as AD or another LDAP service.

> The out-of-the-box default for external LDAP Authentication is **off**. To enable the default value to **on**, see Configuring for External LDAP Authentication on page 158.

9 Using the **External authentication?** radio buttons, select whether or not to permit external authentication of this person when LDAP authentication has been enabled for the Radia Management Poral.

— Click **off** to disable external authentication for this user.

— Click **on** to enable external authentication for this user.

10 Click **Add**.

The Modify Person dialog box opens.

Instead of radio buttons, the **External authentication?** values on the **Modify Person** dialog box are viewed or entered using the numbers **1** for **on**, and **0** for **off**.

11 From the **Available** list, select one or more groups to add the user to.

12 Click  to add the selected groups to the **Selected** list.

OR

If you want to select all of the groups in the list, you do not need to select anything from the **Available** list. Simply click  to add all of the groups to the **Selected** list. See Selecting an Audience on page 295 for more information about how to use this dialog box.

13 Click **Modify**.

The Person Properties dialog box opens.

Modifying Users

To modify a user

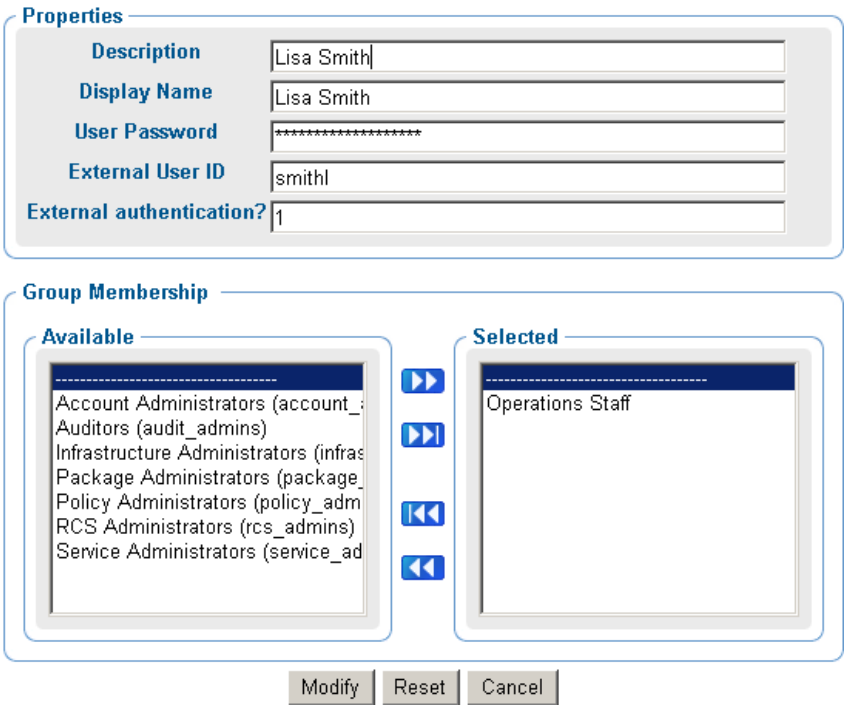
1 Use the Navigation aid to go to **Directory** → **Zone**.

2 In the workspace, click **Administrators & Operators**.

3 Select the user that you want to modify.

4 In the **Model Administration** task group, click **Modify**.

The Modify Person dialog box opens.



5 Make any necessary changes. For detailed information about configuring users, see Adding Users on page 243.

Instead of radio buttons, the **External authentication?** field on the **Modify Person** dialog box displays a text box. Valid values are the numbers **1** for Yes (allow external authentication for this user), and **0** for No (disable external authentication for this user).

6 Click **Modify** to save your changes.

or

Click **Reset** to undo the changes that you made to this role.

or

Click **Cancel** to close this dialog box without saving your changes.

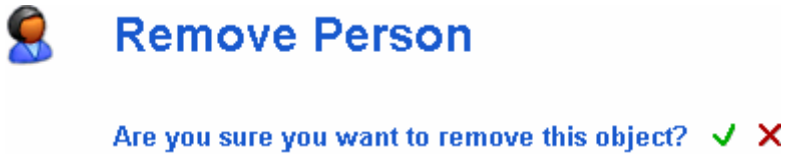
The View Properties dialog box opens and you can review your changes.

Removing Users

To remove a user

1. Use the Navigation aid to go to **Directory** → **Zone**.
2. In the workspace, click **Administrators & Operators**.
3. Select the user that you want to remove.
4. In the **Model Administration** task group, click **Remove**.

   The Remove Person message opens.



5. Click ✓ to confirm that you want to remove the user from the Management Portal Directory.

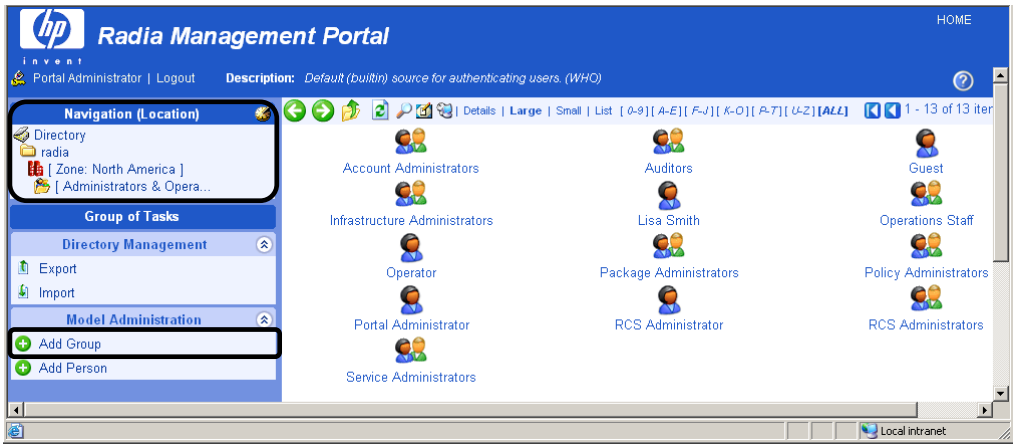
   or

   Click ✗ to indicate that you do not want to remove the user.

Adding User Groups

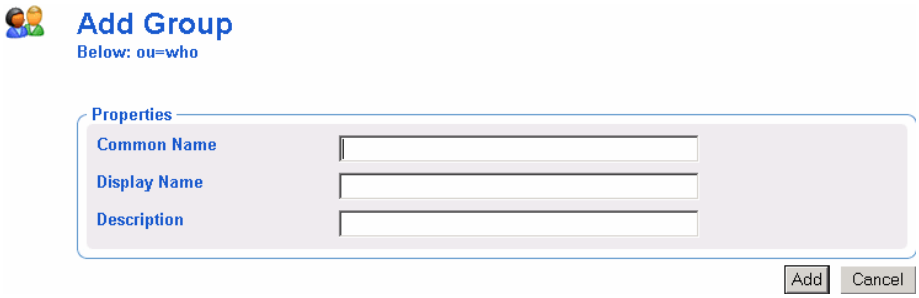
To add a group

1. Use the Navigation aid to go to **Directory**.
2. In the workspace, click **Administrators & Operators**.



3 In the **Model Administration** task group, click **Add Group**.

The Add Group dialog box opens.



4 In the **Common Name** text box, type a name for the container object.

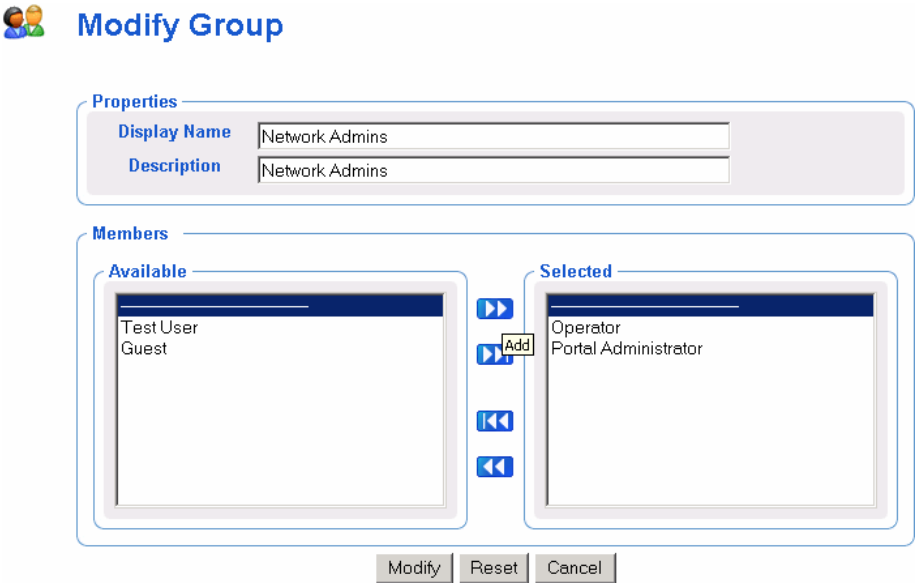
> The Common Name for the object must be unique. If you attempt to create an object with a name that has already been used, an error appears in the workspace indicating that the object already exists.

5 In the **Display Name** text box, type a name for the group that will appear in the Management Portal.

6 In the **Description** text box, type a description that will appear in the Details view.

7 Click **Add**.

The Modify Group dialog box opens.



8 From the **Available** list, select the users and groups that you want to assign to this group.

9 Click  to add the selected users to the **Selected** list.

OR

If you want to select all of the users in the list, you do not need to select anything from the **Available** list. Simply click  to add all of the users to the **Selected** list. See *Selecting an Audience* on page 295 for more information about how to use this dialog box.

10 Click **Modify**.

The new group is added to the Administrators & Operators containers.

11 To display the Properties, click the View Properties icon in the toolbar:  .

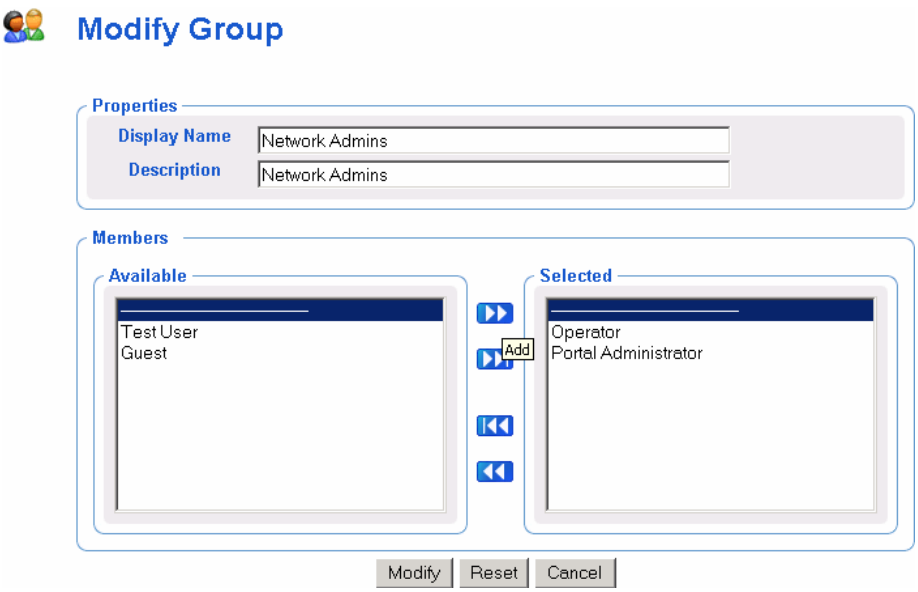
The Group Properties dialog box opens and you can review your changes.

Modifying Groups

To modify a group

1. Use the Navigation aid to go to **Directory** → **Zone**.
2. In the workspace, click **Administrators & Operators**.
3. Select the group that you want to modify.
4. In the **Model Administration** task group, click **Modify**.

   The Modify Group dialog box opens.



5 Make any necessary changes. For detailed information about configuring users, see Adding User Groups on page 248.

6 Click **Modify** to save your changes.

or

Click **Reset** to undo the changes that you made to this role.

or

Click **Cancel** to close this dialog box without saving your changes.

Use the View Properties icon in the toolbar to review your changes: .

Removing Groups

To remove a group

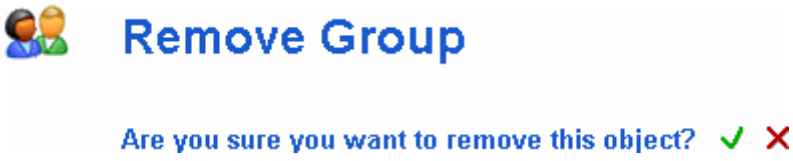
1 Use the Navigation aid to go to **Directory** → **Zone**.

2 In the workspace, click Administrators & Operators.

3 Select the group that you want to remove.

4 In the **Model Administration** task group, click **Remove**.

The Remove Group message opens.



5 Click ✓ to confirm that you want to remove the group from the Management Portal Directory.

or

Click ✗ to indicate that you do not want to remove the group.

Managing the Portal Zone Directory

The Management Portal Zone Directory, zone.mk, together with the set of metakit (`*.mk`) files that it loads as services, contains all configuration and entitlement information for the Management Portal Zone, as well as infrastructure and job status and history information. This section describes how to backup, restore, or query the Management Portal Directory, as well as how to import and export subsets of the Management Portal Directory.

Creating a Backup of the Portal Zone Directory

Use the **Backup Directory** task to create a backup copy of the entire Management Portal Zone Directory. If you are entitled to create backups, this task is available when you navigate to the authority of Zone.

- Before running a backup, we recommend reading the topic Backup Directory Naming, Contents, and Maintenance on page 254.
- The procedure To backup the Management Portal Directory begins on page 256.
- If you would like to export a portion of the Management Portal Directory, see Exporting Data from the Portal Directory on page 262 for more information.

Prior to release 2.0, the Backup Directory task created a single directory file, rmp.mk. As of release 2.0, the rmp.mk directory file no longer exists. Instead, the Management Portal directory is represented by the zone.mk directory file together with the set of *.mk files that the zone loads as services.

Backup Directory Naming, Contents, and Maintenance

This topic explains where backups are located, named, their contents, and how you can easily use the naming convention to have the Management Portal automatically maintain the backups for you.

Each backup creates a new subdirectory in the `\etc\backup` directory of where the Management Portal was installed. By default, this location is:

SystemDrive`:\Novadigm\IntegrationServer\etc\backup\`

Backup Subdirectory Name

A backup's subdirectory name is composed of a user-assigned name, appended by the creation date and time of the backup. The prefix is the name assigned during the Backup Directory task. The addition of the creation date and time makes it easy to identify the appropriate backup directory for a restore.

Thus, the full name of each backup directory includes the format:

`<name>.YYYYMMDD-HHMM`

where:

- `<name>` is the user-entered name entered for the backup directory.
- `YYYYMMDD` is the backup date in year, month, and day format.
- `HHMM` is the backup time in hours and minutes.

The next figure shows a sample backup subdirectory created after running the Backup Directory task. The directory prefix of chicagodaily reflects the name given during the backup task. The date and time is appended to the given name. This backup was created in 2004 on April 30th, at 3:07 pm.

Backup Subdirectory Contents

The backup subdirectory includes the zone.mk file, as well as additional directories that contain the `*.mk` files for the zone's configuration and loaded services. Table 16 summarizes the location of additional `*.mk` files in a typical zone backup subdirectory.

Table 16: Sample Backup Subdirectory Contents

Location	Contents (*.mk files)
`<<backup-subdirectory>>\zone`	`chassis, device, group, user, xref`
`<<backup-subdirectory>>\zone\config`	`entitlement, msg, task`
`<<backup-subdirectory>>\zone\jobs`	`history`
`<<backup-subdirectory>>\zone\network`	`dns, lanmanredirector`

Backup Directory Maintenance

The Management Portal automatically manages backup directories using the assigned-name prefix. It saves up to seven sets of backups with the same assigned name. After that, it deletes the oldest one when a new one is saved. If you assign the same name to a daily backup, this allows you to keep seven days of backups. If you assign another name to a backup made once a week, this means you can keep seven weeks of backups.

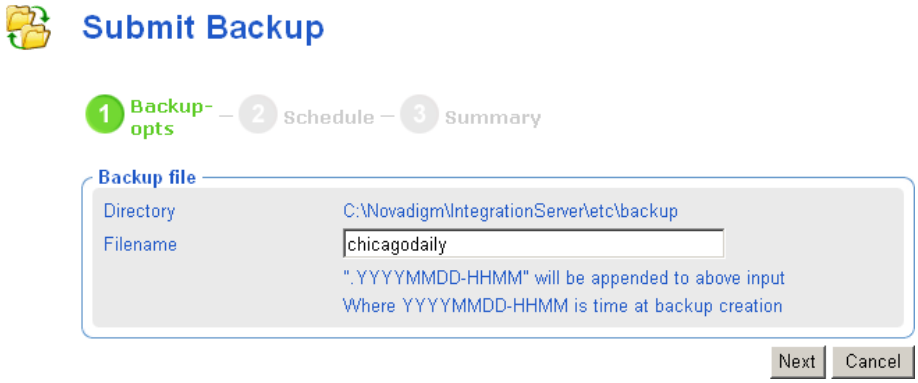
Tip: Create a Management Portal backup job to run periodically to ensure that you back up data. If you create a daily backup with the same assigned name, the appended dates and times will keep the backup directories unique. The Management Portal keeps up to seven backup directories with the same initial name, then automatically deletes the oldest one when the next one is saved.

To backup the Management Portal Directory

1 Use the Navigation aid to go to the **Zone** level.

2 In the **Directory Management** task group, click **Backup Directory**.

The Submit Backup—Backup Opts dialog box opens.



3 In the **Filename** text box, type a name for the subdirectory for this backup within the backup directory. The creation date and time of the backup will be appended to this assigned name. Thus, the directory name for this backup will be:

```
<assigned name>.YYYYMMDD-HHMM
```

For details, see Backup Directory Naming, Contents, and Maintenance on page 254.

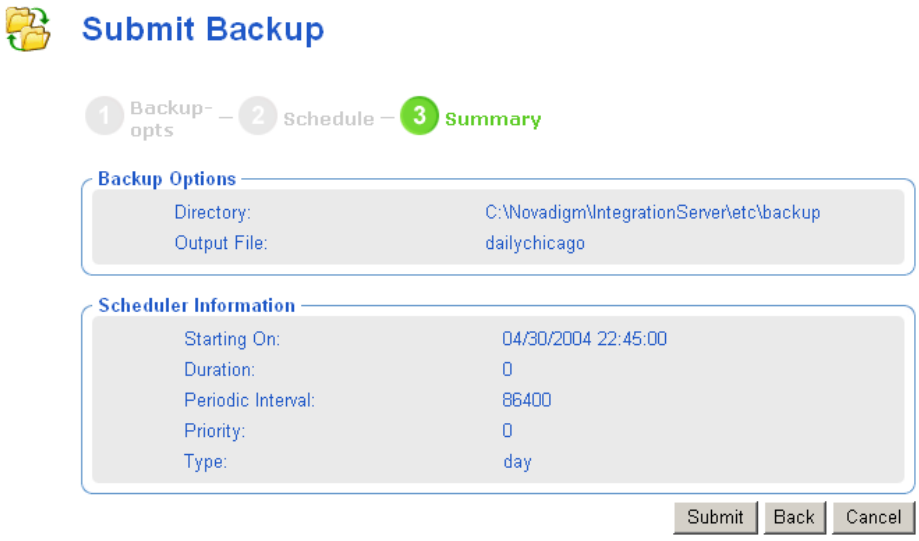
4 Click **Next**.

The Schedule dialog box opens.

5 In the Schedule dialog box, specify when you want this job to run. Backups may be scheduled once or periodically. For more information, see Scheduling Jobs on page 297.

6 Click **Next**.

The Submit Backup—Summary dialog box opens.



7 Click **Submit**.

A list of the jobs appears. Now, you can use the **View Properties** task to view detailed information, such as the status of the job. See Viewing Properties on page 281 for more information.

8 Go to *SystemDrive*:\Novadigm\IntegrationServer\etc\backup to access the backup directories for the Management Portal.

The Management Portal maintains up to seven backup directories with the same assigned name, and then automatically purges the oldest one if an eighth one is created. This allows you to keep seven daily backups with the same name, and keep seven weekly backups with the same assigned name.

Restoring the Portal Directory

Use the **Restore Directory** task to restore a backup of the entire Management Portal Directory.

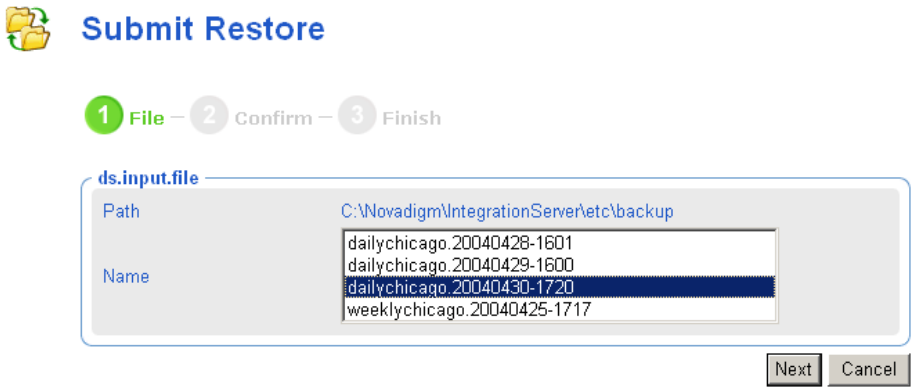
The Restore Directory task can only restore backups created from version 2.x or later of the Management Portal.

To restore the Management Portal Directory

1 Use the Navigation aid to go to the **Zone** level.

2 In the **Directory Management** task group, click **Restore Directory**.

The Submit Restore—File dialog box opens.

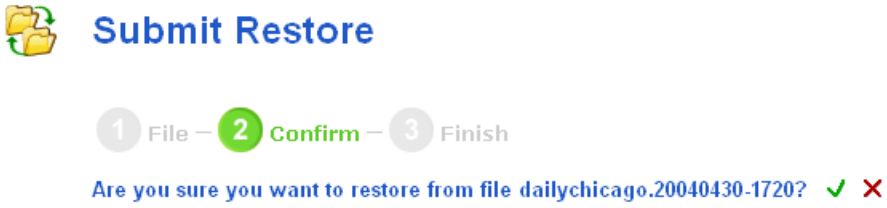


3 From the **Name** list, select the backup that you want to restore.

Use the appended date-time stamps of the backups to select a backup directory based on its creation date. The format of the date-time stamp used is: `YYYYMMDD-HHSS`, which indicates the Year Month Day – Hours Minutes. For example, the name `chicagodaily.20030515-1641` represents a backup created in the year 2003 on May 15 at 16:41, or 4:41 PM.

4 Click **Next**.

A confirmation dialog box opens.

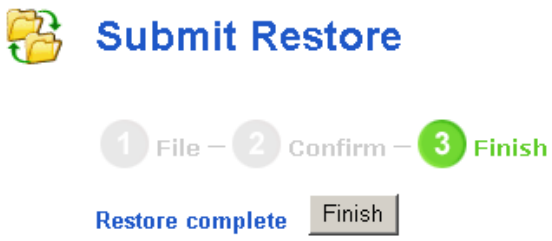


5 Click ✓ to confirm that you want to restore the Management Portal Directory.

or

Click ✖ to indicate that you do not want to restore the Management Portal Directory.

6 After the confirmation of a restore, the Finish dialog box opens when the restore is complete. Click **Finish** to continue.



The restore of the selected backup is complete.

Querying the Portal Directory

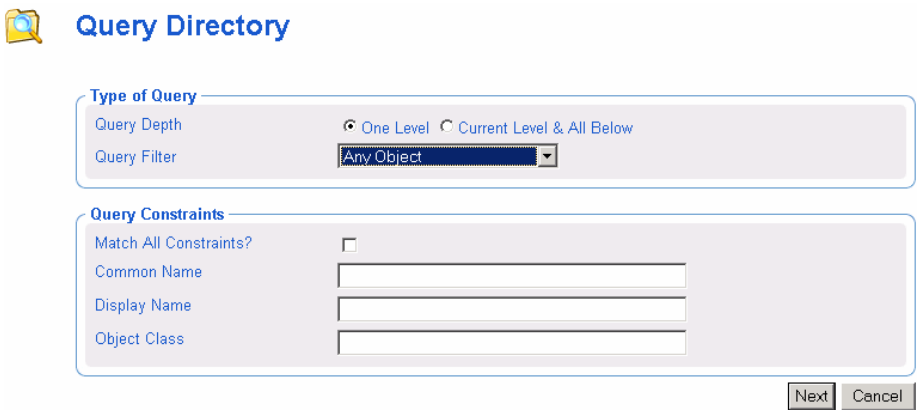
Use the Query task icon on the Toolbar to locate objects in the Management Portal Directory. You may use the results of the query to view information, or to select the authority for a job.

To perform a query

1 Use the Navigation aid to go to the place in your infrastructure where you want to perform a query.

2 Click the Query icon on the Toolbar  .

The Query Directory dialog box opens.



3 In the **Type of Query** area, select the **Query Depth**.

— **One Level**
Queries one level below the selected Authority.

— **Current Level & All Below**
Queries the current level and all levels below the selected Authority.

4 From the **Query Filter** drop-down list, select the type of object that you want to find.

For example, if your selected authority is **Administrators & Operators**, you might select **Users** from this drop-down list so that your query results contain only the users that match your criteria.

The fields in the **Query Constraints** area change based on this selection.

5 If you want to constrain your query, type the appropriate information in the text boxes listed in the **Query Constraints** area.

You can use wildcards in these text boxes. For example, if you want to search for all Administrator and Operators, users and groups, beginning with the letter "a":

—Select **Current Level & All Below** in the Query Depth area.

—Select **Administrators & Operators** from the **Query Filter** drop-down list.

—In the **Common Name** text box, type **`a*`**.

A list of all Administrators and Operators, users and groups, beginning with the letter "a" is returned.

You can also search for more than one pattern in the **Common Name** text box by typing the following characters directly between each pattern (do not use spaces): **`)(cn=`**
For example, if you want to search for all users and groups beginning with either the letter **a** or the letter **o**:

—Select **Current Level & All Below** in the **Query Depth** area.

—Select **Administrators & Operators** from the **Query Filter** drop-down list.

—In the **Common Name** text box, type **`a*)(cn=o*`** .

A list of all Administrator & Operators, users and groups, beginning with the letters **a** or **o** is returned.

6 Select **Match All Constraints?** if you want the results of your query to match all of the specifications that you typed in the **Query Constraints** area.

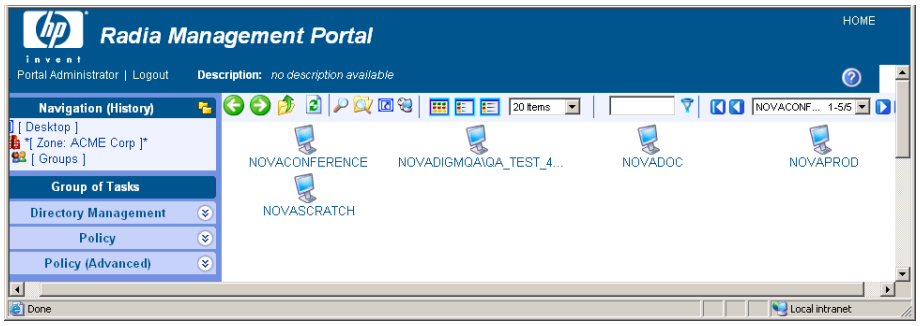
7 Click **Next** to initiate the query.

The results of the query appear in the workspace.

The query results contain information intended only for viewing.

If you want to perform a task on an object in the query results, click the object to set the Authority. Then, select the appropriate task from the task group.

For example, if you searched the current level and below for Computers with a common name of **`nova*`**, the results might appear as shown in the figure below.



If you want to perform a task on an object in the query results, first click the object to set its Authority.

Exporting Data from the Portal Directory

Use the **Export** task to export a subset of your Management Portal Directory to an LDIF (LDAP Data Interchange Format) file. LDIF is a standard format that allows you to transfer data between LDAP-compliant directory services in ASCII format.

The default export location is the Radia Integration Server's `\etc\export` directory.

To export the Management Portal Directory

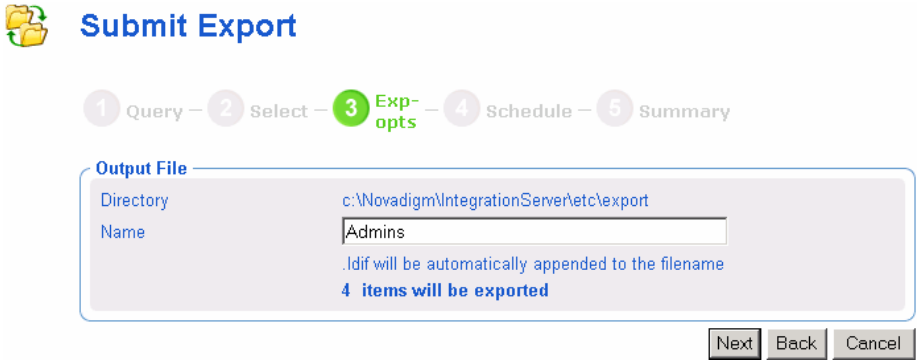
1. Use the Navigation aid to select the place in your infrastructure that you want to export.
2. In the **Directory Management** task group, click **Export**.

   The Query dialog box opens.
3. Specify criteria to narrow the scope of the job. See Performing Queries on page 293 for more information.
4. Click **Next**.

   The Select dialog box opens.
5. Select the audience from the **Available** list, and then click  to add it to the **Selected** list. See Selecting an Audience on page 295 for more information.

6 Click **Next**.

The Submit Export—Exp opts dialog box opens.



7 In the **Name** text box, type a name for the LDIF file that will be saved in the directory.

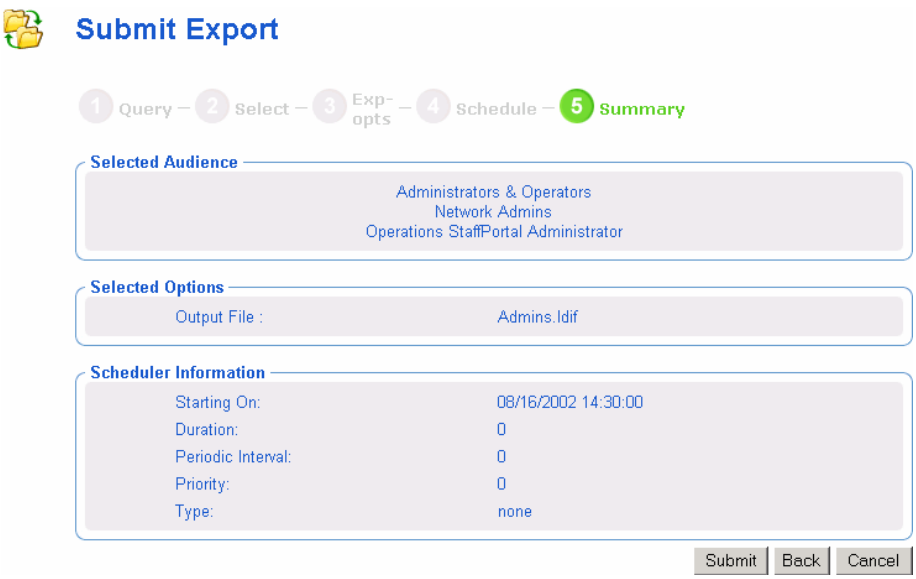
8 Click **Next**.

The Schedule dialog box opens.

9 In the Schedule dialog box, specify when you want this job to run. For more information, see Scheduling Jobs on page 297.

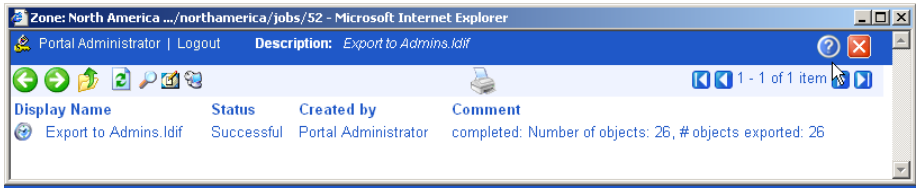
10 Click **Next**.

The Submit Export—Summary dialog box opens.



11 Click **Submit**.

A window listing the job group opens. Click the Display Name entry to view the job properties. To return to the previous job window, click on the job window toolbar. See Viewing Properties on page 281 for more information.



12 Go to *SystemDrive*:\Novadigm\IntegrationServer\etc\export to access the LDIF file that you exported from the Portal Directory.

Importing Data into the Portal Directory

Use the **Import** task to import an LDIF file into your Management Portal Directory. For example, if you prefer to modify the Management Portal Directory manually, in a text file, rather than through the Management Portal user interface, you can export the directory, make your modifications, and then import the file into the Management Portal Directory.

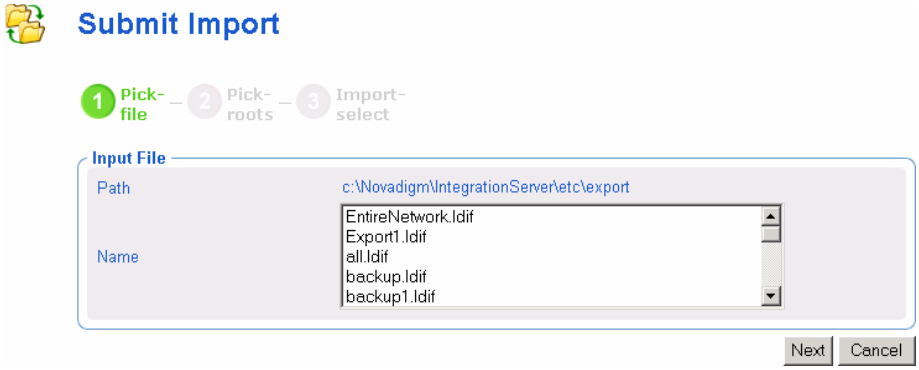
Be sure to back up your Management Portal Directory before importing any data. See Creating a Backup of the Portal Zone Directory on page 253 for more information.

To import the Management Portal Directory

1 Use the Navigation aid to select the place in your infrastructure where you want to place the imported data.

2 In the **Directory Management** task group, click **Import**.

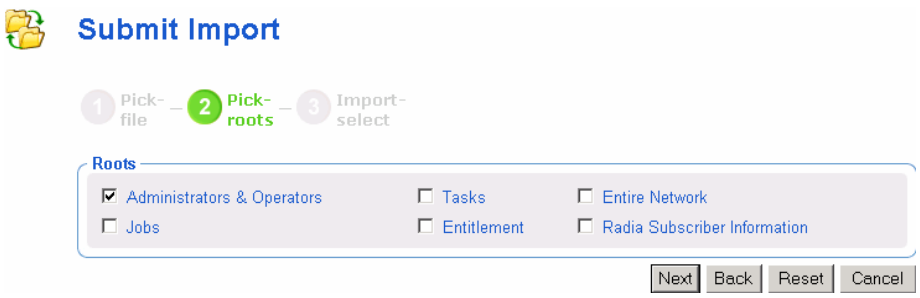
The Submit Import—Pick File dialog box opens and contains a list of the files stored in the default export location (the Radia Integration Server's `\etc\export\` directory).



3 Click the file that you want to import.

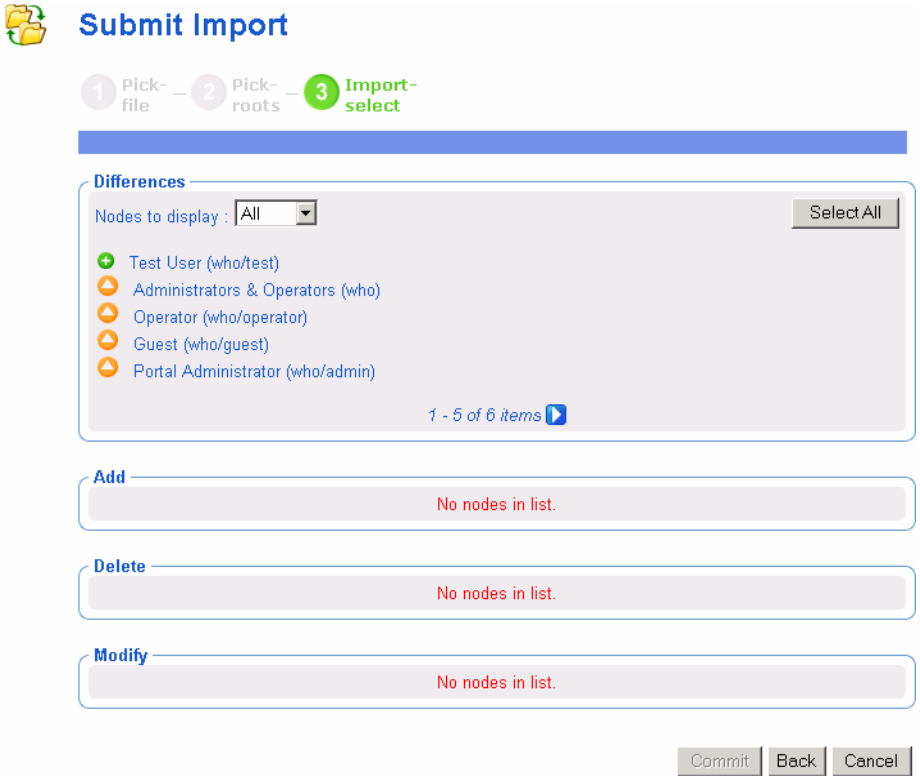
4 Click **Next**.

5 The Submit Import—Pick roots dialog box opens. Use this dialog box to select which pieces (or, root domain names) of the imported LDIF file to compare to the existing Portal directory. For example, if you exported the entire directory, then made changes to only one area of the directory, such as Administrators & Operators, you would select Administrators & Operators as the "root" during the import. The rest of the LDIF file will be ignored.



6 Click **Next**.

The Submit Import—Import select dialog box opens. This dialog box displays the differences between the LDIF file that you are importing and the Portal directory.



7 If necessary, use the **Nodes to display** drop-down list to limit the information that appears in the Differences area.

— Select **All** to review all items changed to the LDIF file at once.

— Select **Add** to review only those items that have been added to the LDIF file.

— Select **Delete** to review only those items that have been removed from the LDIF file.

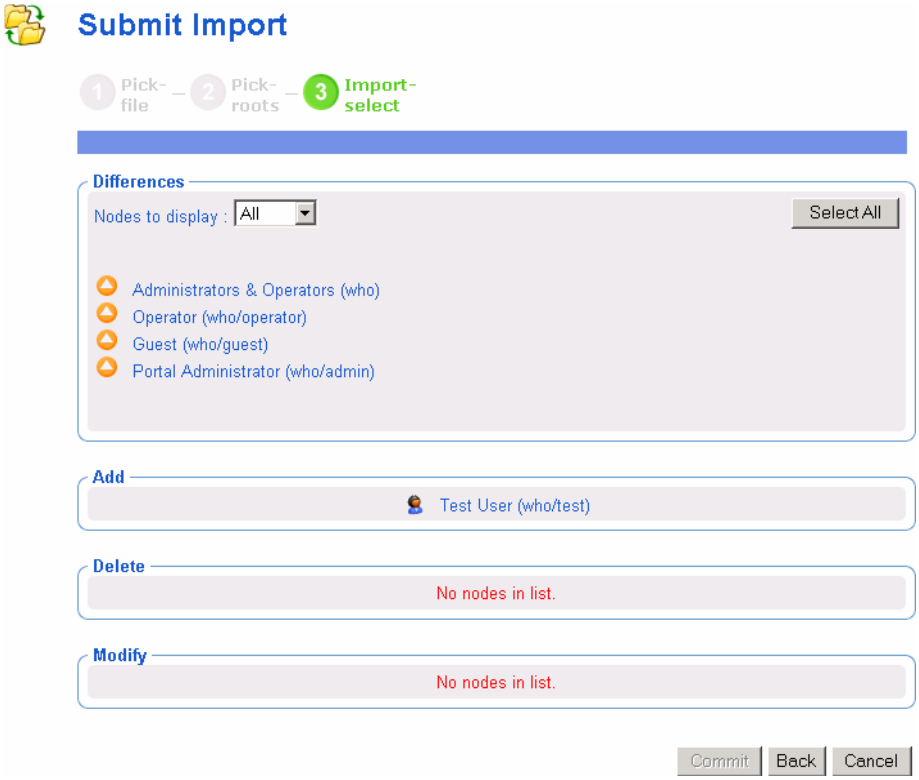
— Select **Modify** to review only those items that have been modified in the LDIF file.

8 In the `Differences` area, click the items that you want to accept as changes. For example, if you want to add Test User to the Portal Directory, click .

OR

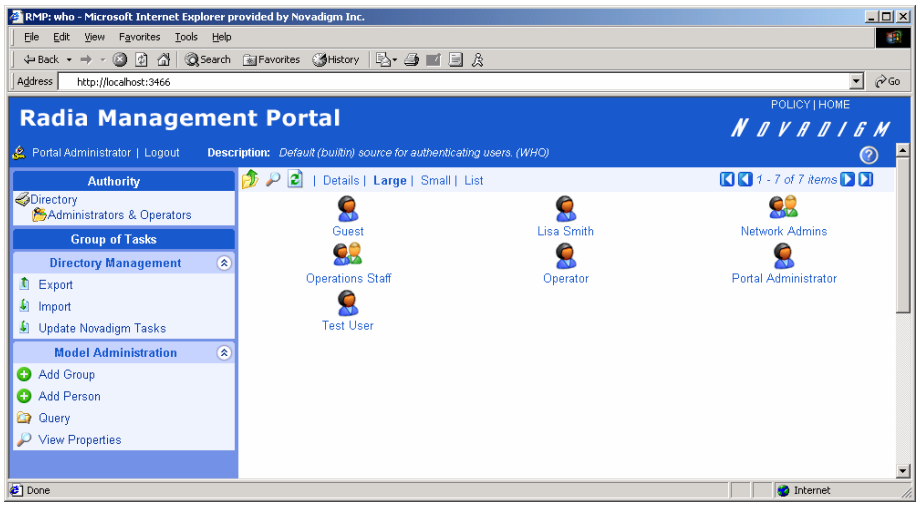
If you want to accept all of the changes, click **Select All**.

The items that you selected are added to the appropriate list below. If you want to remove an item from the list, click its name.



9 Click **Commit**.

The items are added to the Portal directory.



Updating Portal Tasks

Use **Update Portal Tasks** to update the tasks available to you when you receive a new build of the Management Portal.

To update Portal tasks

1 Stop the Management Portal. See Starting and Stopping the Management Portal on page 52 for more information.

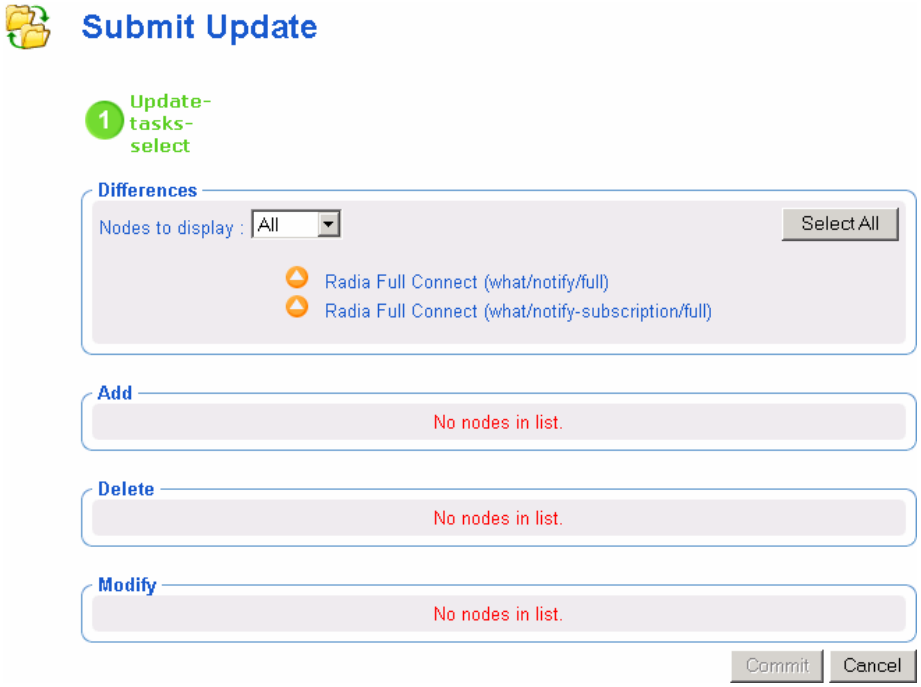
2 Copy the new `rmp.tkd` into the `\modules` folder of your Radia Integration Server directory (by default *`SystemDrive`*`:\Novadigm\IntegrationServer\modules`).

3 Start the Management Portal. See Starting and Stopping the Management Portal on page 52 for more information.

4 Use the Navigation aid to go to the Zone Configuration Tasks container.

5 In the **Directory Management** task group, click **Update Portal Tasks**.

6 The Update tasks – select dialog box opens.



7 If necessary, use the **Nodes to display** drop-down list to limit the information that appears in the **Differences** area.

— Select **All** to review all task changes at once.

— Select **Add** to review only those tasks that can be added to the Management Portal.

— Select **Delete** to review only those tasks that can be removed from the Management Portal.

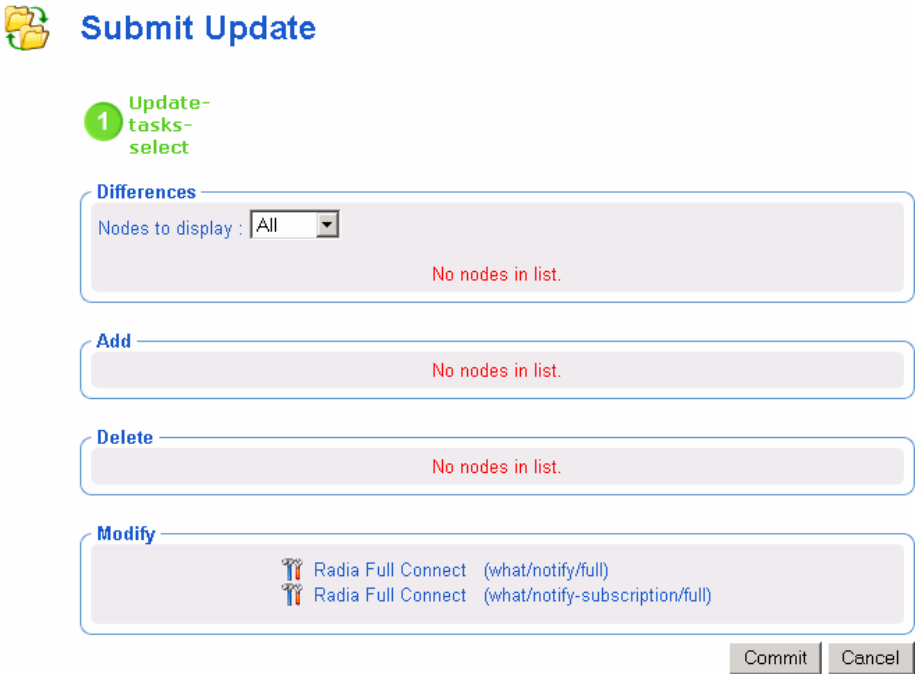
— Select **Modify** to review only those tasks that can be changed in the Management Portal.

8 In the **Differences** area, click the items that you want to accept as changes.

OR

If you want to accept all of the changes, click **Select All**.

The tasks that you selected are added to the appropriate **Add**, **Delete**, or **Modify** list. If you want to remove a task from the list, click its name.



9 Click **Commit**.

The selected tasks (shown in the **Add**, **Delete**, and **Modify** areas) are updated in the Management Portal Tasks container.

Managing Jobs

The Jobs container in the Management Portal Zone Directory stores objects that represent all of the current jobs in the system, and jobs completed within the past four days.

Jobs can be viewed in the History Container as soon as they are executed. See Viewing Job History on page 280.

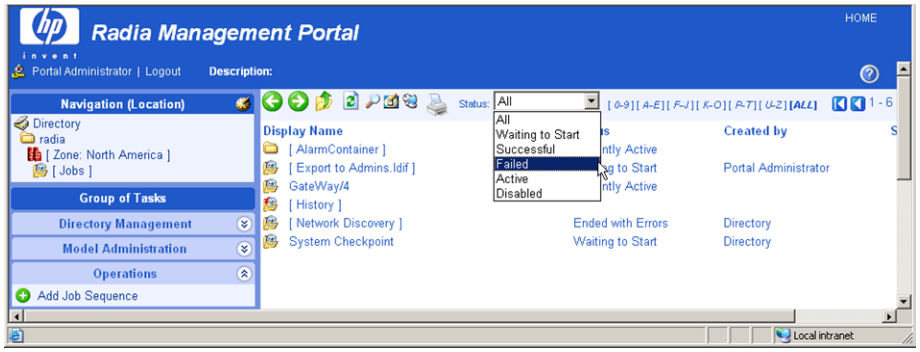
Filtering Job Groups or Jobs by Status

Use the Status list box on the Authority toolbar to quickly filter a Jobs container display by job status. For example, if you are viewing all Jobs (that is, a list of all Job Groups), select a Status of "Failed" to view only the Job Groups having one or more failed jobs. Or, if you are viewing a specific Job group, you can select a status of "Waiting to Start" to see how many jobs in the group have yet to run.

Use the Query Jobs task to further locate a set of jobs that meet additional criteria, such as a scheduled start time or period, the target audience, and who submitted the job or job group. For details, see Querying Jobs or Job Groups on page 274.

To filter Jobs by Status

1. Use the Navigation aid to go to **Directory** → **Zone** containers.
2. In the workspace, click **Jobs**.
3. From the toolbar, open the **Status** drop-down list, and click a job status.



The workspace displays only the jobs with the selected status.

4 To return to a view of all jobs in the container, open the **Status** drop-down list, and select **All**.

Modifying Job Groups

Use the **Modify** task to make changes to job groups that are not currently in progress.

To modify a job group

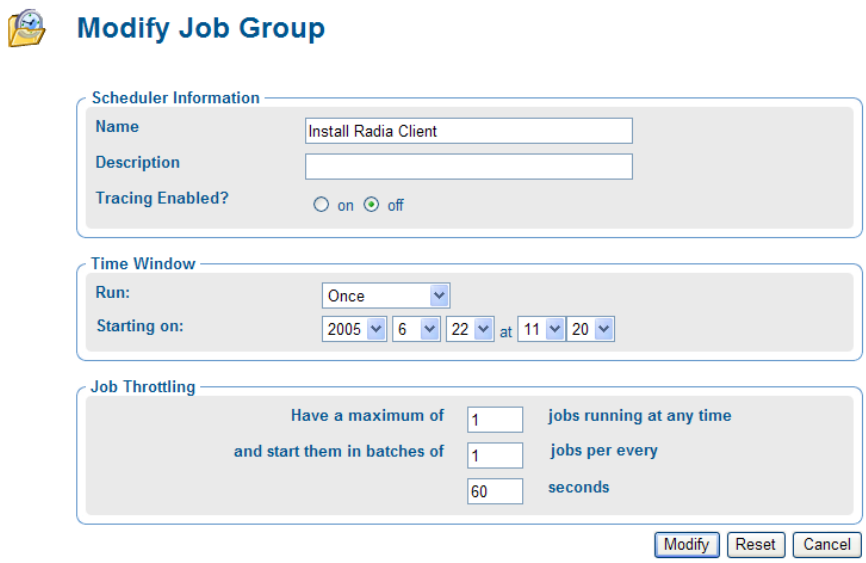
1 Use the Navigation aid to go to **Directory** → **Zone** containers.

2 In the workspace, click **Jobs**.

3 Select the job group that you want to modify.

4 In the **Model Administration** task group, click **Modify**.

The Modify Job Group dialog box opens.



5 Modify the job as necessary.

To modify Scheduler Information:

— In the **Name** text box, change the name of the job group.

— In the **Description** text box, change the description of the job group.

— In the **Tracing Enabled?** field, select the **on** option so that additional messages are written to the log about the execution of the job group. It is recommended that you leave this option set to **off** unless otherwise instructed by HP Technical Support.

To modify Time Window information:

— In the **Run** drop-down list box, change how often the job group runs.

— In the **Starting on** drop-down list box, change the date and time when the job group should start.

To modify Job Throttling information:

— In the **Have a maximum of n jobs running at any time** text box, type the total number of jobs that can be active at any time within this job group. An entry of 0 means there is no limit. The default is 30.

— In the **and start them in batches of n jobs per minute** text box, type the number of jobs that can start within a specified time period, as

defined by the following Per seconds field. An entry of 0 (zero) means there is no limit.

— In the **Per seconds** text box, specify the time period (in seconds) to wait before starting the next batch of jobs. An entry of 0 (zero) means there is no limit. The default is one batch per minute, or per 60 seconds.

6 When you are done making changes, click **Modify**.

The changes are saved and the Job Group is the selected Authority.

Querying Jobs or Job Groups

Use the **Query Jobs** task in the Model Administration task group to locate existing jobs or job groups, review their status, and make changes to the job groups. You can focus your query on jobs or job groups or both, and limit your query to a scheduled start time or period, a specific job status (such as Failed), the target audience, and who submitted the job or job group. For example, you can query all jobs that failed in the last 12 or 24 hours.

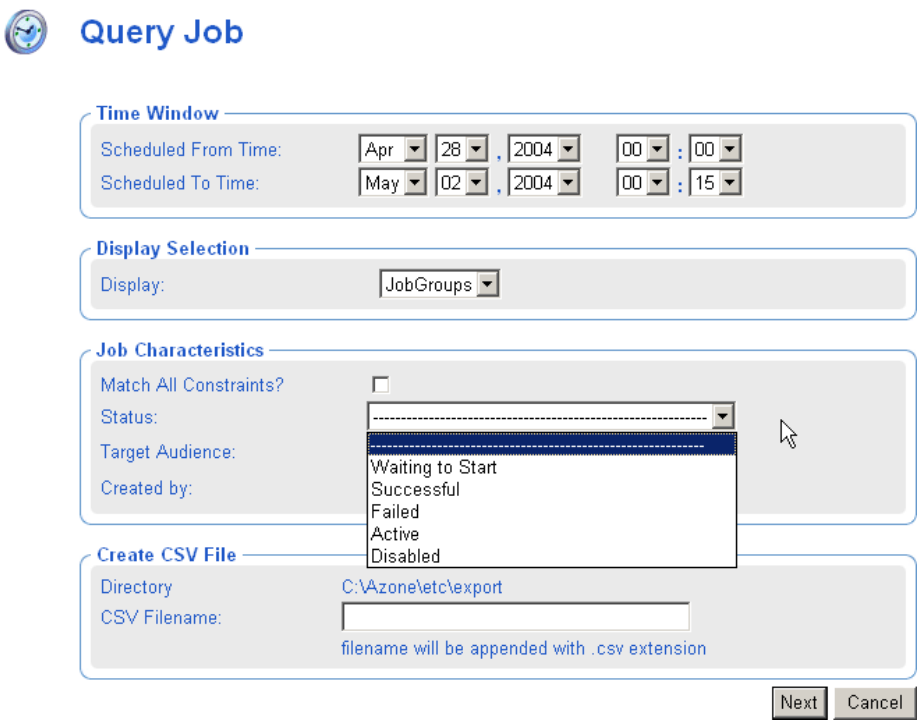
To perform a query for a job or job group

1 Use the Navigation aid to go to the **Directory** → **Zone** containers.

2 In the workspace, click **Jobs**.

3 In the **Model Administration** task group, click **Query Jobs**.

The Query Job dialog box opens.



Use the **Time Window** area to limit your query to those jobs or job groups scheduled to start between the dates and times you select.

4 In the **Scheduled From Time** drop-down lists, select the earliest date and time when the job or job group was scheduled to start.

5 In the **Scheduled To Time** drop-down lists, select the latest date and time when the job or job group is scheduled to start.

Use the **Display Selection** area to specify whether you want to limit your query to Jobs, to Job Groups, or to both Jobs and Job Groups.

6 In the **Display** drop-down list, select **Jobs** or **Job Groups**.

If you want to restart failed jobs, query for **Job Groups**. The **Restart Failed Jobs** task is only available at the level of a Job Group.

Use the **Job Characteristics** area to further limit your query.

7 Select **Match All Constraints?** if you want the results of your query to match all of the specifications that you will set in the fields below.

8 In the **Job Status** drop-down list, optionally select a specific job status to limit the query to jobs or job groups with that status. Specific job statuses include **Waiting to Start**, **Successful**, **Failed**, **Active**, and **Disabled**.

9 In the **Target Audience** text box, optionally type the name of the computer on which the job or job group is being performed. You can use the asterisk (*) as a wildcard in your entry.

10 In the **Created By** text box, optionally type the logon ID of the user who scheduled the job or job group. You can use the asterisk (*) as a wildcard in your entry.

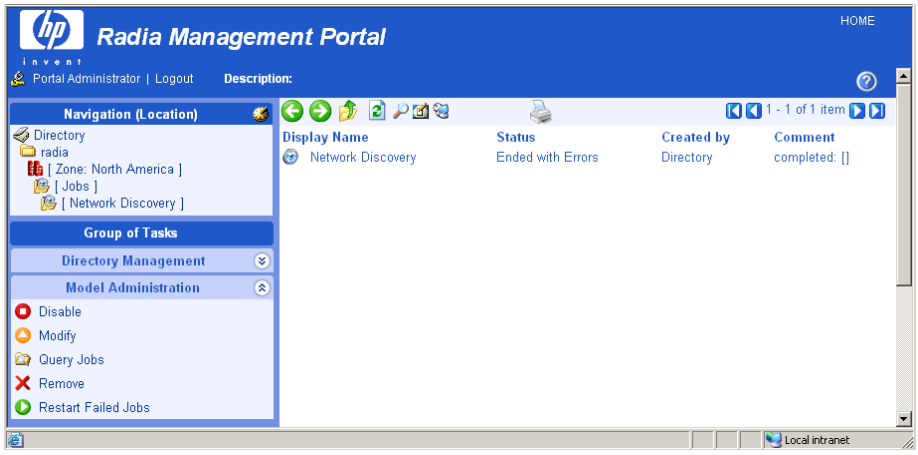
11 Click **Next**.

A list of the jobs or job groups that match the criteria opens.

Restarting Failed Jobs in a Job Group

1 Go to the **Jobs** container, and display a job group containing one or more failed jobs.

If the jobs failed due to an incorrect User log on or Password, restarting and/or modifying the job will not fix the problem. You must create a new job with the correct Administrator-authorized User and Password entries.



2 In the **Model Administration** task group click **Restart Failed Jobs** to restart the failed jobs in this job group.

The jobs are restarted immediately, as shown in the active jobs page (see the next figure).

3 Close the job status page when the restarted jobs finish.

Stopping Job Groups

Use the **Stop** task to stop an active job group from running. If the job group is set to recur, it will run as scheduled in the future.

This task applies to job groups only and is not available for individual jobs.

To stop job groups

1 Use the Navigation aid to go to the **Directory** → **Zone** containers.

2 In the Workspace, click **Jobs**.

3 Click the job group that you want to stop.

4 In the **Model Administration** task group, click **Stop**.

A confirmation appears in the workspace.

5 Click ✓ to confirm that you want to stop the job group.

OR

Click ✗ to indicate that you do not want to stop the job group.

Disabling Jobs or Job Groups

Use the **Disable** task to prevent a job or job group from being processed. You must use the **Enable** task to reinstate processing of a disabled job or job group.

To disable jobs or job groups

1. Use the Navigation aid to go to the **Directory** → **Zone** containers.
2. In the workspace, click **Jobs**.
3. Click the job or job group that you want to disable.
4. In the **Model Administration** task group, click **Disable**.

   A confirmation appears in the workspace.

5. Click ✓ to confirm that you want to disable the job or job group.

   OR

   Click ✗ to indicate that you do not want to disable the job or job group.

Enabling Jobs or Job Groups

Use the **Enable** task to restart a disabled job or job group the next time it is scheduled to run.

To enable jobs or job groups

1. Use the Navigation aid to go to the **Directory** → **Zone** containers.
2. In the workspace, click **Jobs**.
3. Click the job or job group that you want to enable.
4. In the **Model Administration** task group, click **Enable**.

A confirmation appears in the workspace.

5 Click ✓ to confirm that you want to enable the job or job group.

OR

Click ✗ to indicate that you do not want to enable the job or job group.

Removing Jobs or Job Groups

Use the **Remove** task to completely disable a job or job group and remove it from the list of jobs.

To remove jobs or job groups

1 Use the Navigation aid to go to the **Directory** → **Zone** containers.

2 In the workspace, click **Jobs**.

3 Click the job or job group that you want to remove.

4 In the **Model Administration** task group, click **Remove**.

A confirmation appears in the workspace.

5 Click ✓ to confirm that you want to remove the job or job group.

OR

Click ✗ to indicate that you do not want to remove the job or job group.

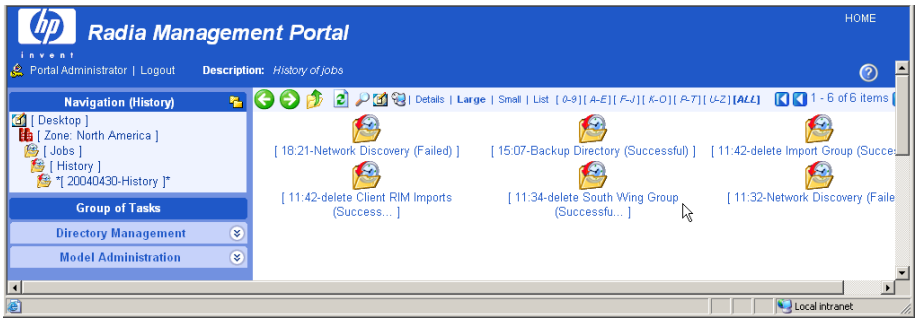
Viewing Job History

The History Container stores daily histories of all executed jobs, displayed in reverse date and time order. Jobs are written to the current day's history file as soon as execution stops (with or without errors).

To view job history

1. Use the Navigation aid to go to the **Directory** → **Zone** containers.
2. In the workspace, click **Jobs**.
3. In the workspace, click **History**.
4. Job histories are listed in reverse chronological order by date and time. History files include the date in the format: `YYYYMMDD`.
5. Click the history file for the date whose jobs you want to review.

   Click **Details** to view a concise summary of the job groups for that day.



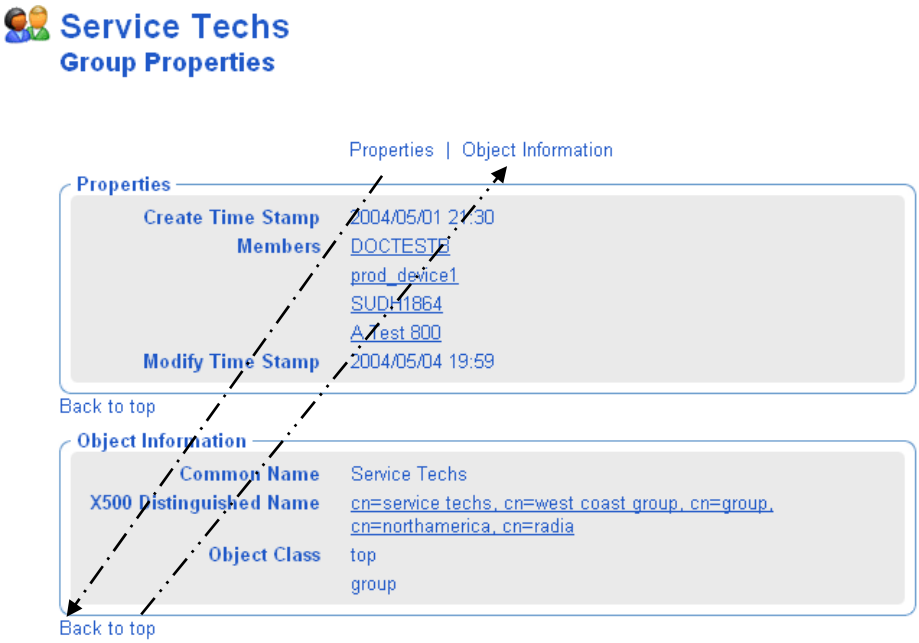
6. Click a specific job group from those displayed in the workspace.

   The workspace lists the jobs that ran in that job group.
7. Click a job in the workspace.

   The Job Properties dialog box displays the details of the job.

Viewing Properties

Click the View Properties icon on the toolbar to display the properties for an object or a job. The properties that appear vary based on the selected object.



Most Properties pages will display the group areas shown in the figure above. To easily navigate a Properties page:

- Click one of the top labels to jump to that group area. Some objects contain an Advanced label giving you access to advanced properties for that object.
- Click on a **Back to top** label to return to the top of the page.

Any items underlined on a Properties page represent an active link to that object. For example, in the previous figure, all Members listed in the Properties area and the Parent Object in the Object Information area are underlined.

- Click on any underlined object to jump to that object's Properties.
- Click the **Back** button on your web browser to return.

Summary

- Run **Update Portal Tasks** when you receive a new build of the Management Portal to update the tasks available to you.
- You can add, modify, and remove task groups.
- Adding delegated administration roles is a three step process that consists of:
  - Assigning administrators and operators to a role.
  - Specifying the tasks that the administrators and operators in the role will have access to.
  - Selecting where, in the infrastructure, the administrators and operators can perform the tasks.
- Use the **Backup Directory** task to backup the entire Management Portal Zone Directory. The creation date and time is appended to the given backup directory name to make it easy to select the appropriate backup directory for a restore.
- Use the **Restore Directory** task to restore a backup of the entire Management Portal Zone Directory.
- Use the **Export** task to export a subset of your Management Portal Directory to an LDIF file.
- Use the **Import** task to import an LDIF file into your Management Portal Directory.
- Use the **Move/Copy Device(s)** task to move devices among your Groups defined in the Groups container.
- Use the **Query Jobs** task to locate existing jobs or job groups, or both, by scheduled start time, status, submitter, or target audience. From the results of the query, you can view job properties and even make changes to a job or job group.
- Use the **Modify**, **Disable**, **Enable**, **Remove**, and **Stop** tasks to manage your jobs or job groups.
- Use the **Restart Failed Jobs** task to restart all failed jobs in a job group.
- Use the **History** container to review jobs already executed.

- Use the **View Properties** task to display the properties for any object. From any Properties page, you can use the links available with a member or parent object's listing to jump to the properties page from that object.

5 Operations Functions

At the end of this chapter, you will:

- Be familiar with the lifecycle of every task.
- Be familiar with the basic procedures that you will follow for every operations task.
- Be able to select computers for management by the Portal Zone.
- Be able to use Help Desk Notify to quickly notify a computer by name.
- Be able to install the Radia Clients using default or customized profiles.
- Be able to add, modify, or delete Client Install Profiles.
- Be able to install the Radia Management Agent using a Static or Dynamic port assignment.
- Be able to install the Proxy Server.
- Be able to synchronize the Proxy Server.
- Be able to install, update, and open a remote Management Portal Zone.
- Be able to add Task Templates for scheduling jobs.
- Be able to schedule jobs to run in multiple Management Portal Zones.
- Be able to run a sequence of jobs in a single task.
- Be able to use Remote Control to manage Radia Clients.

The Management Portal offers several core tasks. A task is an activity that a person performs to initiate a job. A job is a unit of work performed by the computer that is initiated by a person (via a task) or a scheduled operation.

This chapter discusses the operational details of how to perform these tasks using the Management Portal and assumes that you have an understanding of how to use the HP OpenView Radia product suite.

If you are not familiar with the operations, please refer to the HP OpenView web site for more information.

The core tasks in the Management Portal are:

- **Manage Computer**
  Click **Manage Computer** to explicitly bring one or more computers into your Management Portal Zone. Managed computers have an entry in the RMP Zone Devices container, and an automatic membership in the Default Group. For details, see Managing Computers in Your Management Portal Zone on page 288.
- **Add Task Template**
  Use **Add Task Template** to preset the options for a Task Type, such as Notify or Install RPS, as a saved Task Template. Task templates can be selected and applied during the Schedule Zone Operations task, as well. Add Task Template is available from the Task Template container within the Zone, Configuration container.
- **Install Client**
  Click **Install Client** to install the Radia Client on remote computers. See Installing the Radia Client on page 321 for more information. Multiple Client Install Profiles are supported. For details, see Supporting Remote Installs Using Multiple Profiles on page 327.
- **Install Management Agent**
  Click **Install Management Agent** to install the Radia Management Agent on remote computers. See Installing the Radia Management Agent on page 314 for more information.
- **Install Proxy Server**
  Click **Install Proxy Server** to install the Proxy Server on remote computers. See Installing the Proxy Server on page 337 for more information.
- **Synchronize Proxy Server**
  Click **Synchronize Proxy Server** to force the Proxy Server to connect to the Configuration Server to preload the files to the static cache on the Proxy Server. See Synchronizing the Proxy Server on page 342 for more information.

- **Purge Dynamic Cache**
  Click **Purge Dynamic Cache** to purge the dynamic cache of the Proxy Server. See Purging the Dynamic Cache of the Proxy Server on page 343 for more information.
- **Notify Devices**
  Use the **Notify** tasks to perform an action on the selected audience. See Using the Notify Tasks on page 300 for more information.
- **Help Desk Notify** 
  Click the Help Desk Notify icon on the toolbar to quickly Notify a single computer, whose name you already know. See Using Help Desk Notify on page 304 for more information.
- **Sequence Task**
  Use **Sequence Task** to enter and submit a series of jobs, in a single step, from a master portal. Access the task from the Jobs container. Sequencing jobs can be an efficient tool for managing jobs common to many devices across many zones. Future plans include the ability to select conditions that must be met before executing the next job in the sequence.
- **Install Management Portal**
  Click **Install RMP** to remotely install another Management Portal Zone in your infrastructure. See Installing Additional RMP Zones (Subordinate Zones) on page 349 for more information. Also refer to the tasks for Open Subordinate Zone and Schedule Zone Operation.
- **Update RMP**
  Click **Update RMP** to remotely update the code delivered with a new build to the subordinate Management Portal Zones in your infrastructure. See Updating Subordinate RMP Zones on page 355 for more information.
- **Open Subordinate Zone**
  Click **Open Subordinate Zone** to quickly access the Management Portal of another Zone in your enterprise from the Zone Access Points container. See Opening a Subordinate Zone on page 361 for more information.
- **Schedule Zone Operation**
  Click **Schedule Zone Operation** from the Zone Access Points container to run a Notify or Install RPS job on all devices in each of the selected zones in your enterprise. The job options must be predefined as a Task Template. See Scheduling Zone Operations on page 355 for more information.

Managing Computers in Your Management Portal Zone

Use the Manage Computer task to bring the computers in your network or external directories under the control of the Management Portal Zone explicitly.

As of RMP 2.0.1, you do not need to perform the Manage Computer task prior to performing an install task against a device in your Network or LDAP directory. Prior to performing the install, the RMP will bring any selected devices under management automatically.

To learn other ways to add devices to your RMP Zone, see Adding Devices to an RMP Zone on page 164.

The Manage Computer task:

- Places the selected computers in the Zone Devices container, which establishes it as a unique device in the Zone directory.
- Makes the devices members of the Zone Groups container Default Group.

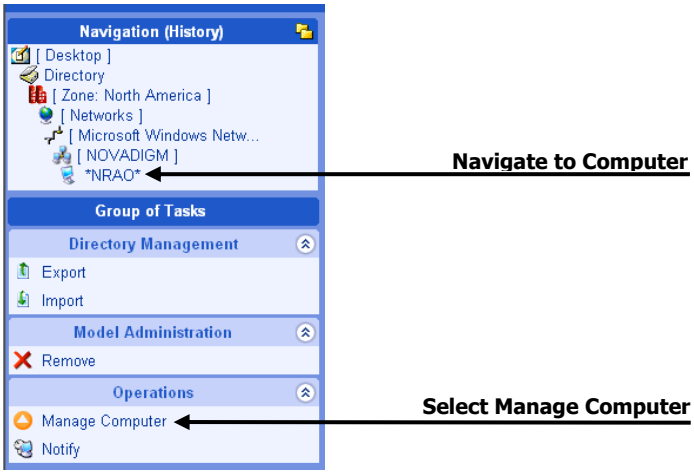
Once a device is under management of the Management Portal Zone, it can be selected for an operation or for other group memberships.

Use the following procedures to manage computers that are located in your network. If your Administrator has configured access to an Active Directory, you can also use the same procedures to manage computers that exist in locations in your Active Directory.

To manage a computer in your network

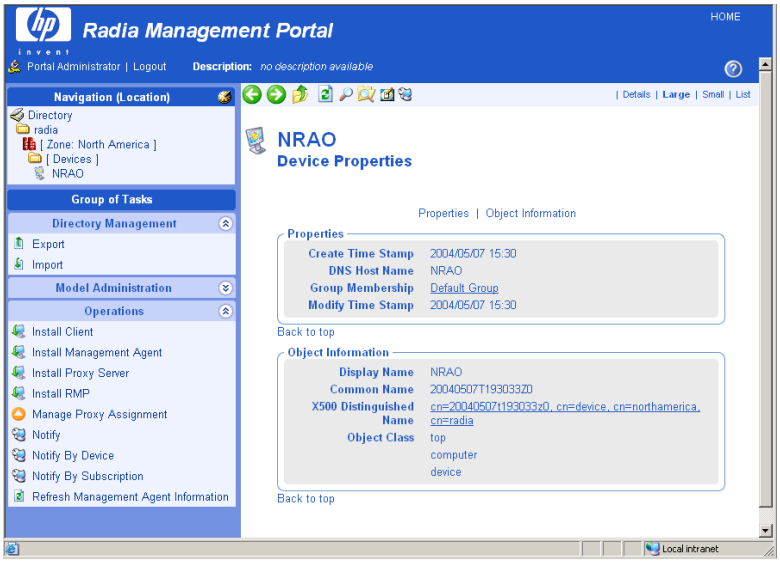
As of RMP 2.0.1, you do not need to perform this task before running an install task; the RMP install tasks will automatically bring a device in your network under management before proceeding with the install.

1. Use the Navigation aid to go to the **Zone → Network** container.
2. In the Workspace, select the Network containing the computer to be managed. For example, **Microsoft Windows Network**.
3. In the Workspace, navigate through the Network hierarchy to the computer object. For example, select the Domain and then select the Computer.



4 Click **Manage Computer** in the **Operations** task group.

At this point, the Management Portal creates a unique device entry in the Zone Devices container for this computer. The Navigation location switches to the Device object in the Devices container.



Notice that the **Operations** task group now displays many tasks that are available for this managed Device. To take the best advantage of the Management Portal, after adding a device you'll want to:

- Move or copy it into all appropriate Groups of devices that are needed for operations on this device. For details, see Moving or Copying Devices into a Group on page 193.
- Install the Radia Management Agent on the Device to make use of Cross References groups. For more advantages of adding the Radia Management Agent, see Installing the Radia Management Agent on page 314.

To manage a group of computers in your network

As of RMP 2.0.1, you do not need to perform this task before performing an install task; the RMP install tasks will automatically bring any devices in a targeted network group under managemement before proceeding with the installs.

Before selecting a group of computers, you should become familiar with the dialogs to browse and select devices for a group as discussed in Basic Procedures for Modifying Groups on page 166.

1. Go to the **Zone** → **Network** container.
2. Navigate to a Network level containing the group of computers that you want to have managed by the Management Portal.
3. Click **Manage Computer** in the **Operations** task group.
4. Complete the selection of the computers to be brought under management.
5. Click **Modify**.

   All selected computers are added to the **Zone**, **Devices** container and the **Default Group** of the **Zone Groups** container.

   To move or copy these devices into different groups, see Moving or Copying Devices into a Group on page 193.

To manage one or more computers located in Active Directory

As of RMP 2.0.1, you do not need to perform this task prior to performing an install task; the RMP install tasks will automatically bring selected LDAP directory devices under management before proceeding with an install.

An Active Directory can be configured for access by a Radia Administrator. In this case, it will appear as an object in the Management Portal at the same level as your Zone.

You can use the **Manage Computer** task to add one or more computers in a connected Active Directory to your Zone Devices container.

For details on configuring or connecting to an Active Directory, see Adding a Directory Service on page 141.

About the Task Lifecycle

Operational tasks are performed on devices and device groups under management by the Management Portal Zone. These devices and group membership exist in one of three locations:

- Device Container (individually)
- Groups Container (Default Group and created Groups)
- Cross References Container Groups (groups generated from devices with installed Radia Management Agents)
- To perform any operational task, you select a device or group of devices and then select the task to perform from the Operations task group. Each operational task follows a similar lifecycle, as shown in the next figure.

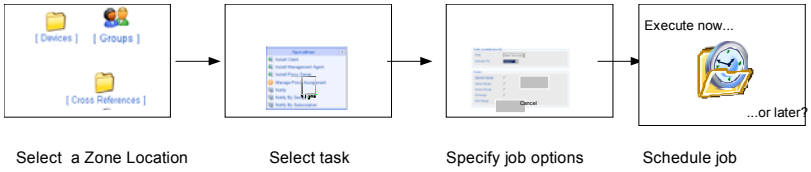


Figure 26: The task lifecycle.

1 **Select a Zone location.**
Begin by navigating to a Zone location that includes the member objects on which to perform some action. These members are also called the audience of the task.

Typically, a starting location is the Zone's Device, Groups, or Cross References containers, depending on whether you are performing a task on either an individual device or a group of devices.

If you select a starting location with a wide device audience, a Query dialog opens to narrow the scope of the job. For example, if you begin a task from a navigation location of Zone, you can query the directory for a list of Groups in your Management Portal Directory.

The query does *not* check status information because the environment may change in the time between when the query is performed, and when the job runs.

2 **Select the task.**
The tasks available are filtered according to your selected starting location. For example, the Synchronize Proxy Server task is available when the starting location is the Radia Proxy Service object under a Device object, or a Cross Reference container of all Proxy Servers.

3 **Specify job options.**
The options vary depending on the selected task. For example, if you are performing a notify task, specify the command line that you want to run on the target devices.

4 **Specify scheduling options**.
Specify when you want the job to run.

5 **Review the summary**.
When you are done specifying the information for the job, a summary of your selections opens. When you are done viewing the summary, submit the job.

Basic Procedures for Operations Tasks

Because the task lifecycle is the same for each task, you will encounter several basic procedures every time you want to perform some action. When you select a task, these basic procedures appear as a series of dialog boxes in the workspace of the Management Portal. When you finish entering the necessary information, a job is created.

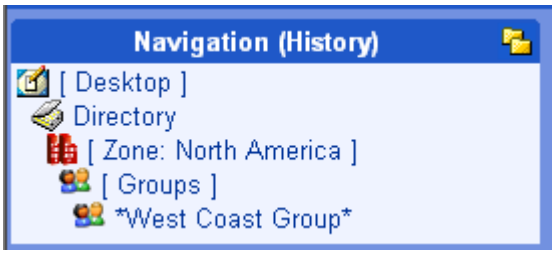
This section covers these basic procedures in detail.

Selecting a Starting Zone, Network, or Directory Location

When starting an operation, select a Zone location for performing the task that includes all objects on which you want to perform the task. Become

familiar with the Zone containers, as discussed in About the Zone Containers on page 96. Different Zone containers contain different object classes.

- Most operational tasks are started from a Zone's Device, Groups, or Cross References containers—depending on whether you are performing a task on either an individual device or a group of devices. For details on creating and modifying groups of devices, see Establishing Devices and Device Groups on page 164.
- As of RMP 2.0.1, Install operations can also be started from locations in a Zone, Network container or from an LDAP Directory Services location. The Management Portal will first bring the devices targeted for the install under management before performing the install operation.
- Operations related to other Zones that exist in your enterprise are started from the Zone Access Points container.
- For details on how to navigate to the different Zone containers, see Navigating the Portal Directory and the Zone Containers on page 74.



Performing Queries

Use the Query dialog box to narrow the scope of the job. For example, if you want to export information about all computers that begin with the letter "N", use the Query dialog box to search for a list of all of the computers discovered in the Microsoft Windows Network that begin with the letter "N".

If you selected a single Authority, such as a particular computer, and then select a task, you will bypass the **Query** dialog box.

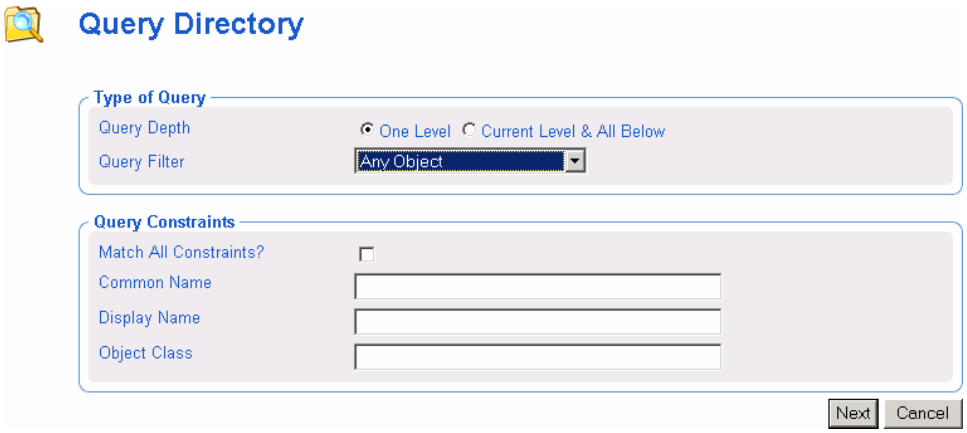


Figure 27: Query dialog box.

To perform a query

1 In the **Type of Query** area, select the **Query Depth**.

- **One Level**
  Queries one level below the selected Authority.
- **Current Level & All Below**
  Queries the current level and all levels below the selected Authority.

2 From the **Query Filter** drop-down list, select the type of object that you want to find.

For example, if your selected Authority is **Administrators & Operators**, you might select **Users** from this drop-down list so that your query results contain only the users that match your criteria.

The fields in the **Query Constraints** area change, based on this selection.

3 If you want to constrain your query, type the appropriate information in the text boxes listed in the **Query Constraints** area.

You can use wildcards in these text boxes. For example, if you want to search for all Administrator and Operators, users and groups, beginning with the letter "a":

—Select **Current Level & All Below** in the Query Depth area.

—Select **Administrators & Operators** from the **Query Filter** drop-down list.

—In the **Common Name** text box, type **a***.

A list of all Administrators and Operators, users and groups, beginning with the letter "a" is returned.

You can also search for more than one pattern in the **Common Name** text box by typing the following characters directly between each pattern (do not use spaces): **)(cn=**
For example, if you want to search for all users and groups beginning with either the letter **a** or the letter **o**:

—Select **Current Level & All Below** in the **Query Depth** area.

—Select **Administrators & Operators** from the **Query Filter** drop-down list.

—In the **Common Name** text box, type **a*)(cn=o*** .

A list of all Administrator & Operators, users and groups, beginning with the letters **a** or **o** is returned.

4 Select **Match All Constraints?** if you want the results of your query to match all of the specifications that you typed in the **Query Constraints** area.

5 Click **Next** to initiate the query and to move to the next step in the task.

Selecting an Audience

Use the Select dialog box to narrow your audience. An audience is a group of devices or objects on which you want to perform some action.

You will bypass the Select dialog box if your starting Zone location is a single object when you select the task, or, if the result of the Query is a single object.

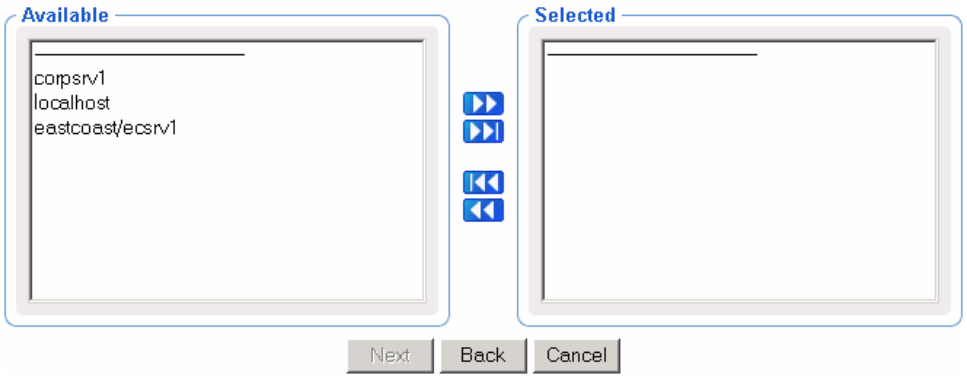


Figure 28: Select dialog box.

This window displays the potential audience based on your starting Navigation location when you selected the task. Therefore, if you began the task from the Zone level, the potential audience is much greater than if your starting location is the Zone, Administrators & Operators, Account Administrators Group.

To select an audience

1 From the **Available** list, select one or more devices.

2 Click  to add the selected devices to the **Selected** list.

OR

If you want to select all of the devices in the list, you do not need to select anything from the **Available** list. Simply click  to add all of the devices to the **Selected** list.

3 If you want to remove devices from the audience list, select the appropriate devices from the **Selected** list and then click  .

OR

If you want to remove all of the devices from the list, simply click  to remove all of the devices from the **Selected** list.

4 Click **Next** to move to the next step in the task.

The next step in the task is to specify the job options. The information that you need to enter in this window varies depending on the specific task. See the instructions for the task that you are performing for detailed information.

Scheduling Jobs

Use the Schedule dialog box to set the scheduling options for the job. By default, a job will begin immediately and run only once. However, you can modify these settings.

Jobs are organized in a tree view. At the highest level is the Scheduler, which is used to schedule and dispatch jobs. The next level contains Job Groups, which contain groupings of jobs. For example, you might have a job group that is intended to notify 10 computers. Below this job group 10 jobs are listed—one for each computer to be notified.

Job groups are scheduled to run within a specified time frame. In order to run, the job group has to get permission from the Scheduler. Similarly, a job must get permission to run from its job group. Therefore, all jobs receive permission to run from their parent object—whether that is a job group or the Scheduler.

The Scheduler sorts jobs based on their priorities. So, if two jobs are set to run at the same time, the one with the highest priority will receive permission to run first. If the time period expires and the Scheduler has not been able to run a job, it will be cancelled.

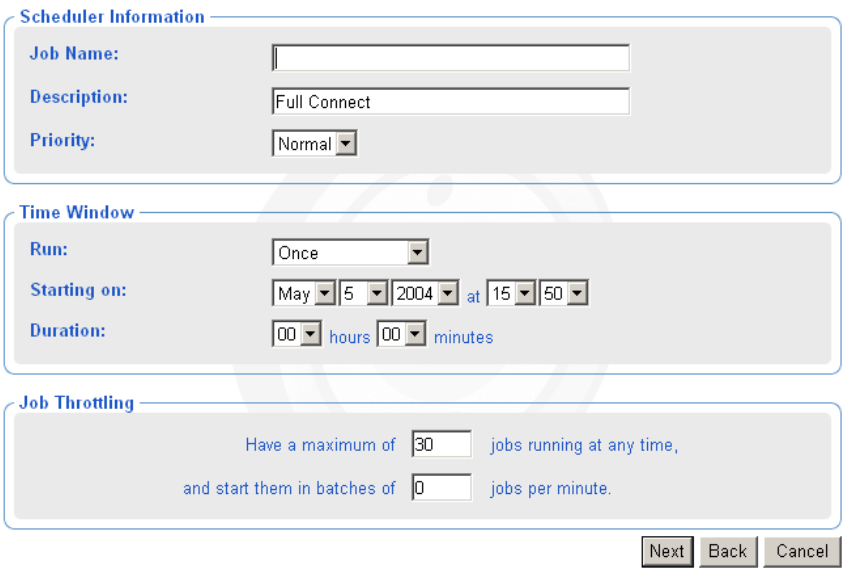


Figure 29: Submit Notify—Schedule dialog box (Windows).

To schedule a job

1 Complete the **Scheduler Information** group items.

- For Notify jobs, in the **Job Name** text box, type a name for the job group. The Job Name appears in the **Alias** column of a Job Summary, next to the **Display Name**.
- In the **Description** text box, type a description for the scheduled job. The description appears in the View Properties dialog box for the job.
- In the **Priority** drop-down list, select the priority for the job. The Scheduler sorts all of the jobs scheduled to run at a specific time by priority.

2 Complete the **Time Window** group items.

- In the **Run** drop-down list, specify how often you want the job to run.

The other Time Window options change based on the schedule type that you selected.

- In the **On Day** drop-down list, select which day of the week the job should run on. (Applies only to jobs set to run Every Week)
- In the **Starting on** drop-down lists, select:

- The date when you want the job to run.
- The time (in hours and minutes) when you want the job to run.
- How often you want the job to run (in days or hours). (Applies only to jobs set to run Every *n* Days or Every *n* Hours)

— In the **Duration** drop-down lists, indicate how long (in hours and minutes) you want the job to run. When the duration expires, the job is cancelled.

3 Complete the **Job Throttlin**g group items to limit the number of jobs running concurrently, and the number of jobs started per minute for this job group. The Job Throttling settings are especially beneficial when scheduling job groups with a large number of jobs.

— Have a maximum of *n* jobs running at any time.
Accept or change the maximum number of jobs to be active at any time from this job group. The default will vary according to the job type. An entry of 0 means there is no limit.

— And start them in batches of n jobs per minute.
If this number is not zero, the jobs in this job group will be batched, and one batch is started each minute. Type the number of jobs to be placed in each batch. An entry of 0 means there is no batch-size limit.

4 Click **Next** to view the Summary dialog box for the job.

The Summary dialog box contains a summary of the job. Review the summary and then click **Submit** to save the job.

Core Tasks

The Management Portal contains a core set of tasks. Use this section to learn how to use each of the core tasks.

Using the Notify Tasks

The Notify tasks can be used to quickly notify a target audience or a single device.

- **Notify**
  Allows you to perform an open-ended query to create the target audience that you want to notify.

  Once Radia Management Agents are installed on devices in your Zone, you can also use the **Notify** task from the **Zone → Cross References** container groups to quickly identify a target audience based on the characteristics of a device, such as the same Hardware, Operating System, IP address Subnet, Radia Infrastructure or Managed Services.

  Use the Notify task from the Cross References container groups (Hardware, Operating System, IP address Subnet, or Radia Infrastructure) to quickly identify a target audience based on device characteristics. This feature in RMP 2.x replaces the Notify by Audience task available in RMP 1.x.

  Use the Notify task from the Cross References Managed Services container to quickly identify a target audience based on an application currently being managed by Radia. This RMP 2.x feature replaces the Notify by Subscription task available in RMP 1.x

- **Help Desk Notify** 
  Click the Help Desk Notify icon on the toolbar to quickly Notify a single computer, whose name you already know. See *Using Help Desk Notify* on page 304 for more information.

Refer to the *Installation and Configuration Guides for the HP-OpenView Application Manager Using Radia* or *HP-OpenView Software Manager Using Radia* for more information about notifying Radia Clients..

Notifying an Audience

Use the **Notify** task to perform an action on the target devices that you select.

A group of devices can be selected as the audience for the Notify task.

> The Management Portal has embedded support for Wake-on-LAN (WOL). If you attempt to notify a machine that is not "awake" and the machine supports the Wake-on-LAN capability, the Notify job will send a WOL message to wake up the machine and will subsequently try to notify the machine two more times at intervals of 120 seconds. The WOL message is sent only if the MAC address and Subnet of the targeted machine is available in the device properties.

To notify an audience

1. Use the Navigation aid to select the Authority.
2. From the **Operations** task group, click **Notify**.

   > If you selected a single Authority, such as a particular computer or a group of devices, and then selected Notify, you will bypass the **Query** and **Select** dialogs. Go to step 6.

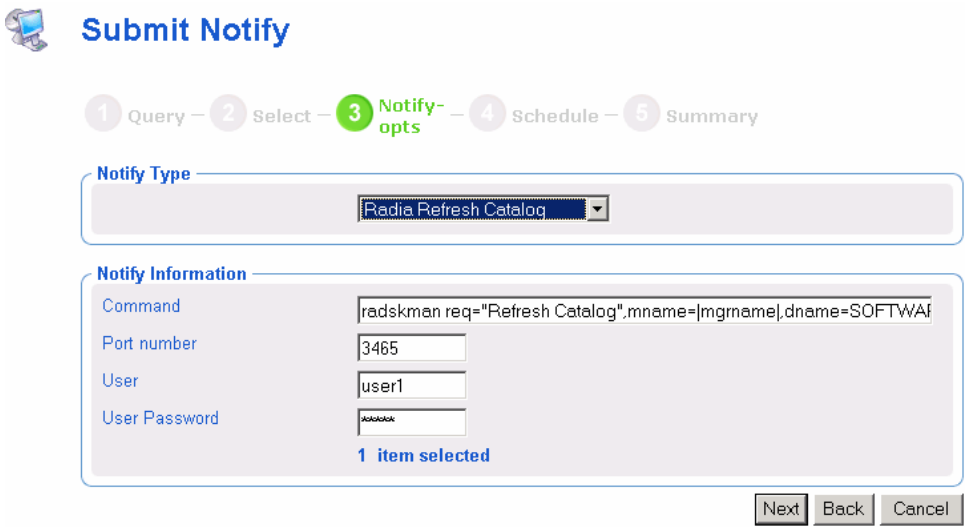
   The Query dialog box opens.
3. Specify criteria to narrow the scope of the job. See Performing Queries on page 293 for more information.

   > To target one or more groups of devices for a Notify, do not select Computers as your Query Filter, since you want to select from available Group objects in the next step.

4. Click **Next**.

   The Select dialog box opens.
5. Select the audience from the **Available** list, and then click  to add it to the **Selected** list. See Selecting an Audience on page 295 for more information.
6. Click **Next**.

   The Submit Notify—Notify Opts dialog box opens.



7 In the **Notify Type** drop-down list, select the type of Notify that you would like to perform. The **Command** text box changes based on your selection.

In the **Command** text box, modify the command line as necessary. For example, if you select **Radia Refresh Catalog** in the **Notify Type** drop-down list, the **Command** text box is pre-filled with the following command line:

```
radskman.exe req="Refresh Catalog",mname=|mgrname|,
dname=SOFTWARE,ip=|mgr_ip|,port=|mgr_port|,cat=y
```

You must replace information between the pipes (|) with the necessary information to perform the notification. For example, you might modify the command line above to read:

```
radskman.exe req="Refresh Catalog",mname=EastCoast,
dname=SOFTWARE,ip=10.10.10.1,port=3464,cat=y
```

If you repeat a Notify operation often, you may want to modify the appropriate Notify task so that it has default options that pertain to your organization. See *Setting Default Options for Notify Commands* on page 305 for more information.

8 In the **Port number** text box, type the port number that the Notify daemon will be listening on. By default, the port number is 3465.

9 If necessary, in the **User** text box, type the user name for the target device.

10 If necessary, in the **User Password** text box, type the password for the target device.

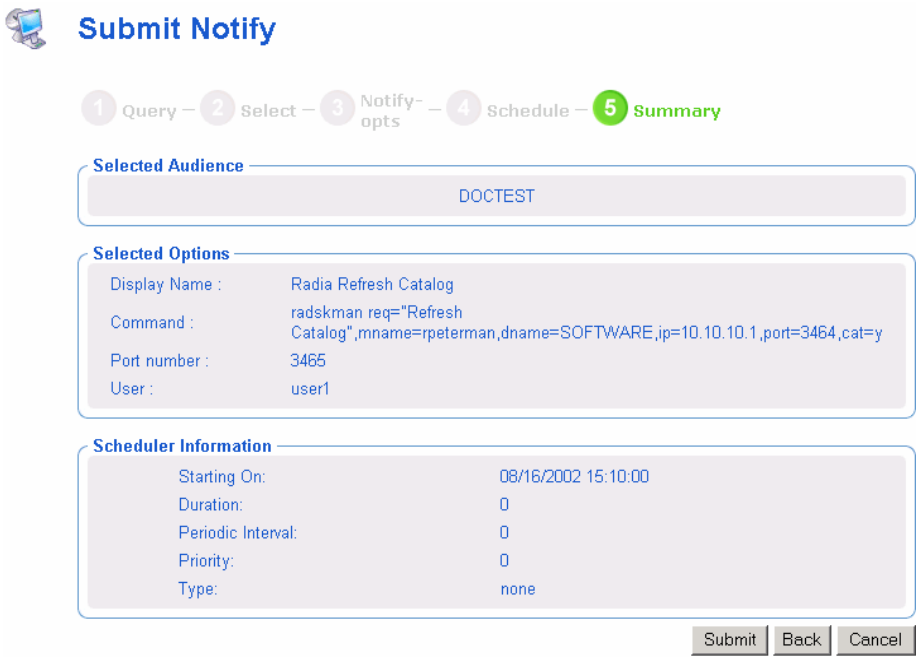
11 Click **Next**.

The Schedule dialog box opens.

12 In the Schedule dialog box, specify when you want this job to run. For more information, see Scheduling Jobs on page 297

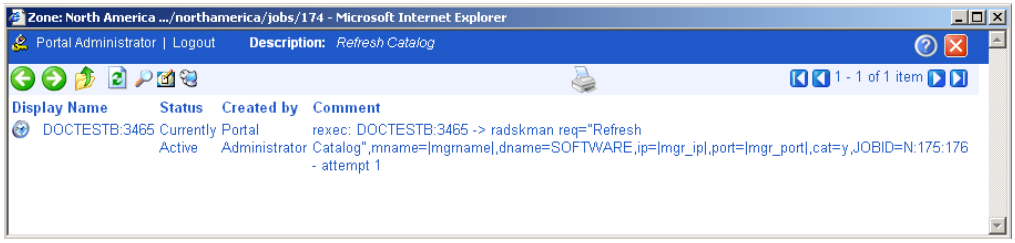
13 Click **Next**.

The Summary dialog box opens.



14 Click **Submit**.

The Job Status window opens with list of the jobs. This dialog box automatically refreshes every 60 seconds.



— Click to go up one level in the job or directory tree. For example, after viewing job details, click this icon to return to the Job Group Summary.

— Click if you want to refresh the window to display the latest status.

— Click to view detailed properties for the job or job group. This gives you detailed information on the job status.

— Click to add a shortcut for Jobs to your Desktop.

— Click to obtain a printable view of the Jobs Status page.

15 When you are done viewing the job status, click to close the Job Status dialog box, and return to the Management Portal.

Using Help Desk Notify

Use to quickly submit an immediate, one-time, Notify task to a specific computer whose DNS name is known. Typically, this is used by Help Desk staff working on an issue, and includes a single window to speed this one-time Notify.

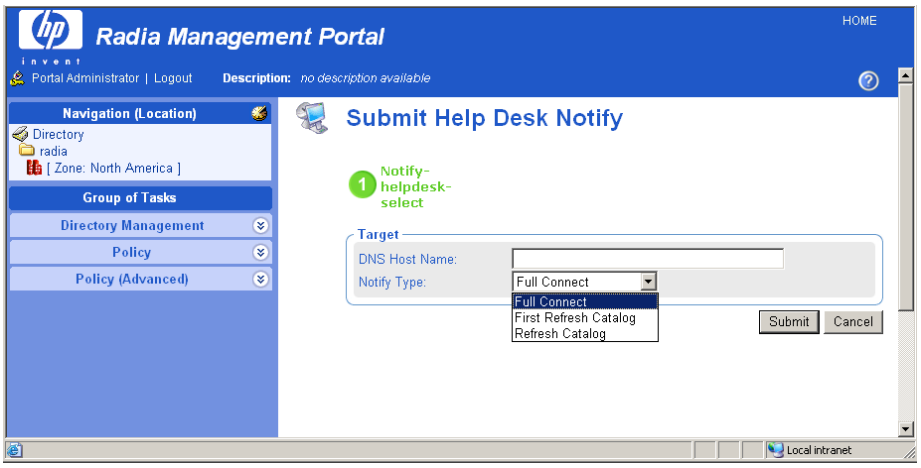
The options and command syntax for the Notify task submitted through the Help Desk Notify need to be previously set or customized. For details, refer to one of the following sections:

- Setting Default Options for Notify Commands on page 305.
- Creating Custom Notify Commands on page 310.

To notify a single computer from the Help Desk Tasks group

1 From anywhere in the Directory Zone, click the toolbar icon for Help Desk Notify

The Submit Help Desk Notify window opens.

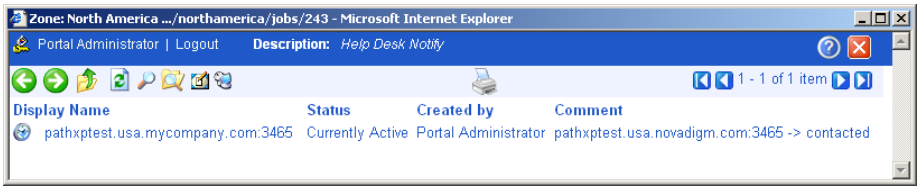


2 In the **DNS Host Name** field, type the DNS Host Name of the client computer to be notified.

3 In the **Notify Type** field, open the drop-down list and select the type of Notify to be performed. The options for each type of Notify must be preset, as discussed in Setting Default Options for Notify Commands below.

4 Click **Submit**.

The selected Notify is run immediately, and the Job Status window opens.



5 Press **F5** to refresh this status window. To see the job details, click on the Display Name for the job.

Setting Default Options for Notify Commands

If you often repeat a Notify operation, you may want to modify the appropriate Notify task so that it has default options that pertain to your organization. To do this, you will navigate to a specific Notify task and then

modify the properties for the appropriate type of Notify, such as Radia Full Connect.

Prior to using the Help Desk Notify task, you must use these procedures to preset the default options and command syntax for the available Help Desk Notify Task operations.

You can set default options for Notify operations issued from the following tasks:

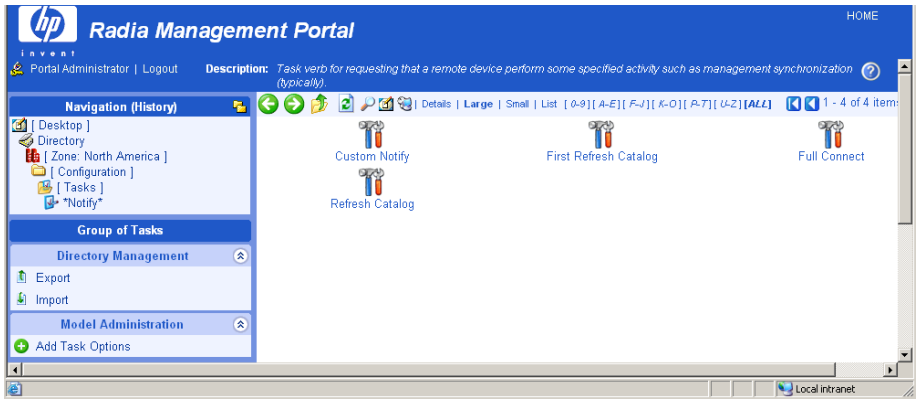
- Help Desk Notify (listed under H's)
- Notify

To set default options for Notify commands

1 In the Navigation area, go to **Directory** → **Zone** → **Configuration**.

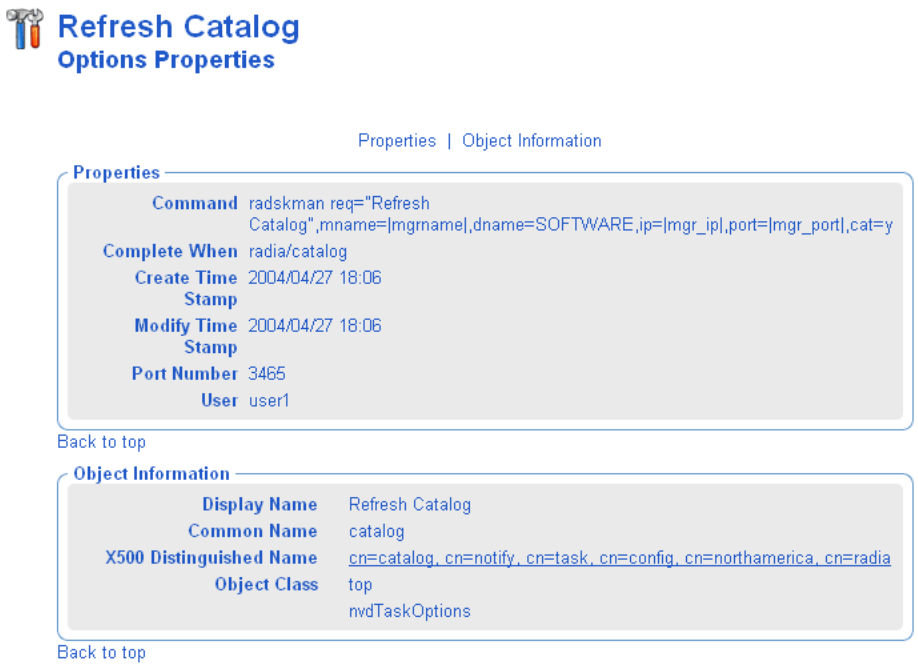
2 In the workspace, click **Tasks**.

3 In the workspace, click the Notify task that you want to modify, such as **`Notify`**.



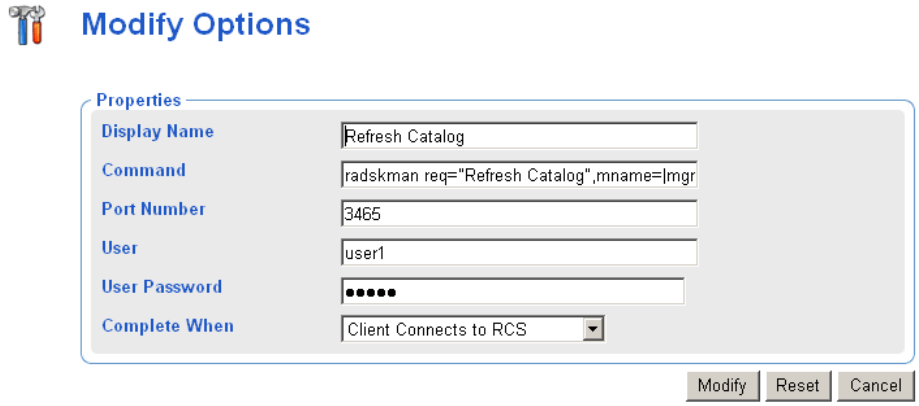
4 In the workspace, click the type of Notify operation for which you want to set defaults, such as **Refresh Catalog**.

The Options Properties dialog box opens.



5 In the **Model Administration** task group, click **Modify**.

The Modify Options dialog box opens.



6 Modify the fields as necessary.

— In the **Display Name** text box, change the display name of the task.

— In the **Command** text box, change the default command line for the Notify that you want to perform.

— In the **Port number** text box, change the default port number that the Notify daemon will be listening on.

— If necessary, in the **User** text box, type the default user name for the target device.

— If necessary, in the **User Password** text box, type the default password for the target device.

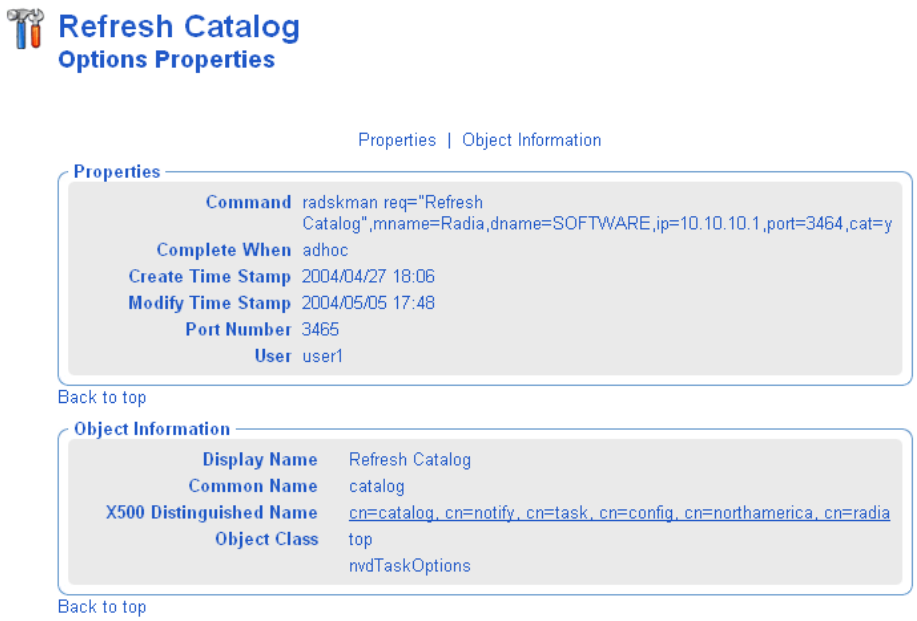
— From the **Complete When** drop-down list, indicate when the Notify is considered completed. See the HP OpenView web site for detailed information about the Radia Client and the Application Event (APPEVENT) object. If you are unsure about which option to select, select **Client Contacted**.

Complete When Selection:	Complete When Job Property:
Client Contacted	adhoc
Client Connects to RCS	radia/catalog
Client Sends Application Event	radia/service

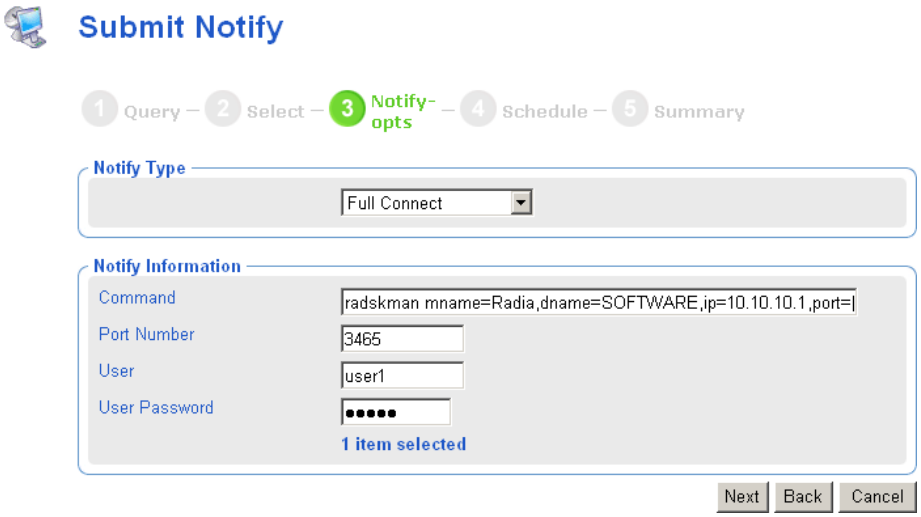
7 Click **Modify**.

The **Options Properties** dialog box opens and you can review your changes.

The command line in the following figure is used for illustrative purposes only.



The next time you initiate a Notify and select the notification type that you modified, such as **Refresh Catalog**, the new default settings appear in the Submit Notify—Notify Opts dialog box. For example, notice that the properties specified in the figure above match the default settings for the fields in the next figure.



See Notifying an Audience on page 300 for more information about the Options dialog box.

Creating Custom Notify Commands

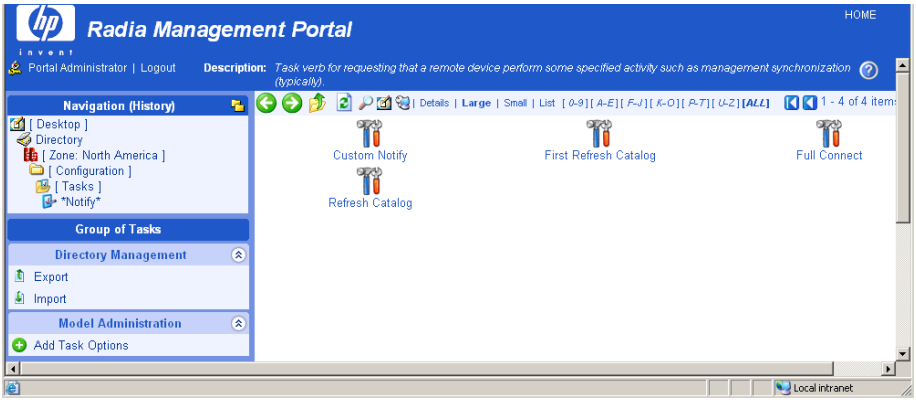
If you want to create your own Notify commands, you can use the **Add Task Options** task in the **Model Administration** task group.

To add a new Notify command

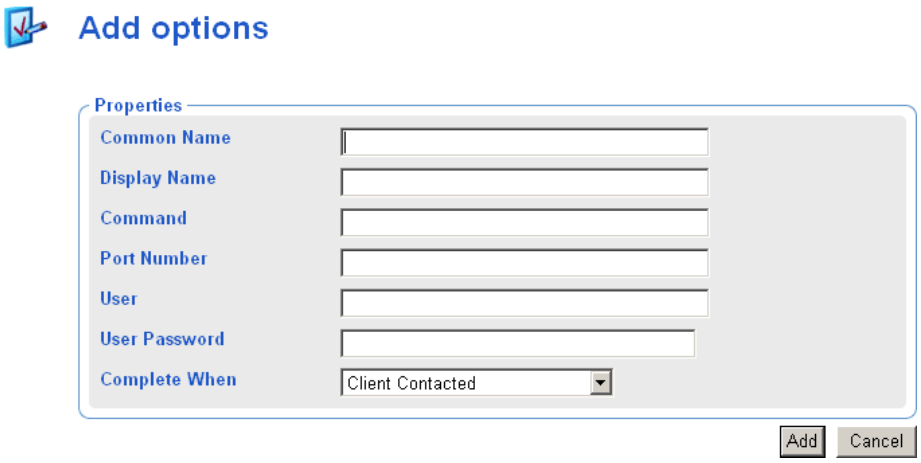
1 In the Navigation area, go to **Directory** → **Zone** → **Configuration**.

2 In the workspace, click **Tasks**.

3 In the workspace, click the Notify task object to which you want to specify a command. For example, click **Help Desk Notify** or **Notify**.



4 In the **Model Administration** task group, click **Add Task Options**.



5 In the **Common Name** text box, type a name for the custom Notify task.

> The Common Name for the object must be unique. If you attempt to create an object with a name that has already been used, an error appears in the workspace indicating that the object already exists.

6 In the **Display Name** text box, type a name for the Notify task that will appear in the infrastructure representation.

7 In the **Command** text box, type the Radia command line that you want to run on the selected target devices.

8 In the **Port number** text box, type the port that the Notify daemon is listening on.

9 In the **User** text box, type the administrator ID to obtain administrative authority on the target device's domain.

10 In the **User Password** text box, type the administrator password to obtain administrative authority on the target device's domain.

If you do not enter the password and administrative authority is required, the job may fail. Check the job status for specific information.

11 In the **Complete When** drop-down list, select the client action that is to indicate this notify task is complete. The following table shows how your selection is reported on a Task Property or Job Property dialog box.

Table 17: Notify Job Completion Options

"Complete When" Selections	Equivalent Entry on Task Property and Job Reports
Client contacted	Adhoc
Client connects to RCS	Radia/catalog
Client sends APP event	Radia/service

12 Click **Add**.

The Options Properties dialog box opens.

The next time you initiate a Notify, the new command appears in the **Notify Type** drop-down list on appropriate Notify dialog box.

- For more information about the Submit Notify-Notify Opts dialog box, see Notifying an Audience on page 300.
- For more information about the Submit Help Desk Notify dialog box, see Using Help Desk Notify on page 304.

Deploying Radia Management Infrastructure Products and Applications

Use the Management Portal to install Radia infrastructure products and applications to remote devices.

Requirements for Remote Installations

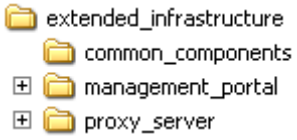
In order to install Radia Infrastructure products, you must be aware of the following requirements.

- For Windows, the remote computer must be running Windows NT 4 SP 6, 2000 SP3, XP SP2, or Server 2003 SP1.

  In some cases, Windows XP may need to be configured to support a remote installation. See the HP OpenView web site for more information.

- For HP-UX, the remote computer must be running the HP-UX operating system Version 10.20 or above, PA Risc CPU.
- For Solaris, the remote computer must be running the Solaris operating system Version 2.5.1 or above, SPARC CPU.
- The installation files for the Radia product must be stored in the Radia Integration Server's `\media` directory. The Management Portal installation program will copy these files automatically. See Installation Procedures on page 36 for more information.

  If you did not use the installation program to copy the files, you must manually copy these files from the appropriate CD-ROM to the Radia Integration Server's `\media` directory. The directory structure of the media directory should mirror the CD-ROM layout.

- A packing list, which contains a list of the files to be transferred across the network, must exist in the directory with the installation files. The Management Portal creates the packing list when you launch the remote installation.
- The Management Agents must be able to communicate back to the Management Portal successfully. If they appear to be having

communication problems with the Portal, consider specifying a valid network address using the `LISTENING_ADDRESS` parameter in the `RMP.CFG` file. For more information, see Table 2 on page 138.

Specific instructions about how to use the Management Portal to perform each remote install follows.

Installing the Radia Management Agent

You can use the Management Portal to perform operational and administrative tasks on the Radia infrastructure; however, the Management Portal cannot always perform these tasks remotely. Therefore, the Radia Management Agent, which is a thin delegate, is installed on the remote device to perform these tasks on behalf of the Management Portal. It cannot perform any tasks on its own.

When you use the Management Portal to install Radia management services or applications, the Radia Management Agent is automatically installed on the same device. Use the **Install Management Agent** task to install, and optionally re-install, the Radia Management Agent to remote devices. After registering with the Management Portal, the Radia Management Agent performs the task initiated by the Management Portal, such as a remote installation.

The Radia Management Agent is installed as a Windows Service on all supported Windows platforms and is configured to contact the Management Portal at regular intervals in order to make its presence known. The Radia Management Agent will notify the Management Portal when normal operations occur, such as system shut down or restarts.

RMA Registration Throttling

As of RMP 2.0.1, an internal throttling feature is built into the RMP to efficiently manage the processing of large numbers of first-time RMA registrations. This throttling feature avoids a potential RMP-processing deadlock situation that can occur when very large numbers of RMAs are installed at the same time. The registration throttling feature can be fine tuned, if required, in consultation with customer support.

RMA Registration Schedule and Tasks

The Radia Management Agent is configured, by default, to contact the Management Portal every 14 days (this is the keepalive value in rma.cfg), but also report any changes every 24 hours (this is the updatefreq value in rma.cfg). Typical registration changes include a different RMA port number

for RMAs using dynamic port assignments, or a different IP address in DHCP environments.

If the Radia Management Agent has no changes to report from the previous day, it does not contact the Management Portal.

Consider using RMAs wih a static port assignment if you want to eliminate the RMA-registration updates that are generated by RMAs using dynamic port assignments.

The following is a list of some, but not all, of the tasks that the Radia Management Agent can handle on Windows NT, 2000, XP, and Server 2003 systems on behalf of the Management Portal.

- Starting or stopping services.
- Performing remote installations.
- Discovering all Radia services that are currently running on the device, such as the Notify daemon, Radia Client Scheduler, Radia Configuration Service, and the Radia Integration Service and sub-services.
- Discovering the Radia-managed services on the device.
- Discovering Hardware and Operating system details of the device, including Service Pack levels, MAC address and IP subnet.

Viewing Device Information Discovered by the Radia Management Agent

For examples of the information collected by the Radia Management Agent, display the Device Properties for the computer hosting your Configuration Server. In addition, take a look at the groups automatically generated and maintained in the Cross-References container of the Zone. These groups are created from the information collected by the Radia Management Agent.

Choosing a Dynamic or Static Port Assignment for the Radia Management Agent

For all tasks that install the Radia Management Agent, you can specify whether the Management Portal should communicate with the Radia Management Agent using a dynamically assigned port or a static port.

- Using a dynamic port assignment for the Radia Management Agent reduces the risk of security attacks on well-known ports.
- Using a static port assignment for the Radia Management Agent is available to communicate to an Agent that is behind a firewall, and to

reduce daily registrations from a Radia Management Agent due to a new port number (which occurs with dynamic port assignments).

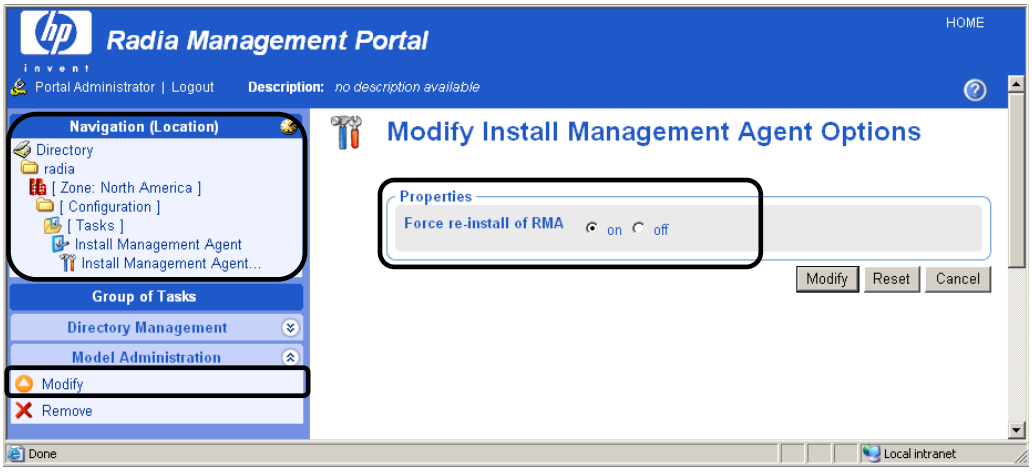
Modifying the Radia Management Agent Re-Install Option

To facilitate the deployment of newer versions, the **Install Management Agent** task includes an option to force a re-install of the Radia Management Agent. This option is turned on by default. To review or turn off this option, access the Modify Install Management Agent Options dialog box.

To set the Install Radia Management Agent task options

1. Go to the **Directory** → **Zone** → **Configuration** → **Tasks.**
2. From the Workspace, page forward and then select **Install Management Agent**.
3. Select **Install Management Agent Options**.
4. Click **Modify** in the **Model Administration** task group.

   The Modify Install Management Agent Options dialog box opens.



5. Click the desired option for the **Force re-install of RMA** property. If set to **on**, you can push out a newer version of the `RMA.TKD` to a machine with an existing one. If set to **off**, machines with existing `RMA.TKD`s will not have the Radia Management Agents updated using the **Install Management Agent** task.

To install the Radia Management Agent

Be sure to read Requirements for Remote Installations on page 313 before performing this procedure.

1 Use the Navigation aid to select the place in your infrastructure where you want to install the Radia Management Agent.

As of RMP 2.0.1, you can select a location in your Zone, Networks container or a currently connected LDAP directory location that contains computers on which you want to install the Radia Management Agent. If the Management Portal is not currently managing the targeted Network or LDAP devices, the Management Portal will bring them under management as part of the install task.

2 From the **Operations** task group, click **Install Management Agent**.

If you selected a single Authority, such as a particular computer or a group of devices, and then selected **Install Management Agent**, you will bypass the **Query** and **Select** dialogs. Go to step 6.

3 If the Query dialog opens, specify criteria to narrow the scope of the job.

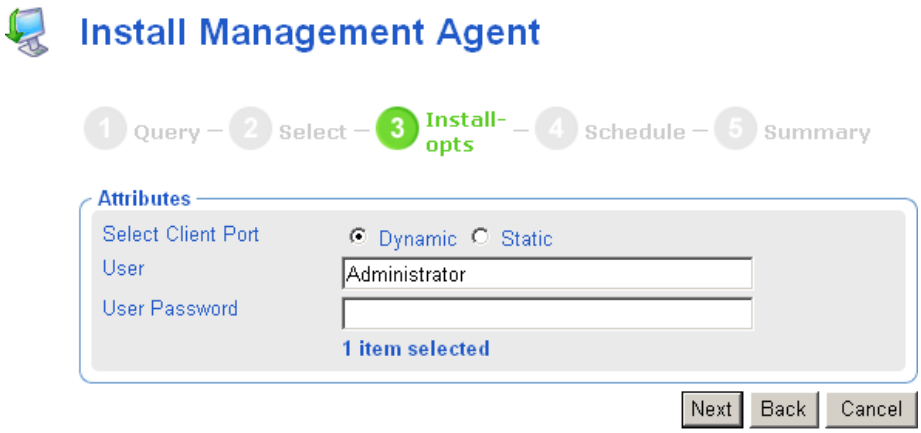
4 Click **Next**.

The Select dialog box opens.

5 Select the audience from the **Available** list, and then click  to add them to the **Selected** list.

6 Click **Next**.

The Install Management Agent — Install Opts dialog box opens.



In order to install a Windows service on a remote device, you may need to obtain administrative authority on the target device's domain. Use this dialog box to type the user name and password necessary to obtain access.

If you are installing the Radia Management Agent on the same computer as the Management Portal, delete Administrator from the **User** text box.

7 Use the **Select Client Port** radio buttons to specify whether the Management Portal should communicate with the Radia Management Agent using a dynamically assigned port number or a static port number.

- Using a dynamic port assignment reduces the risk of security attacks on well-known ports. However, dynamic port assignments also require daily registrations of new port numbers by the Management Agents.
- Using a static port assignment is available to communicate to an Agent that is behind a firewall. This option also eliminates daily registrations of new port numbers by the Management Agents.

8 If you selected a Client Port type of **Static**, type the port number in the **Port Number** text box.

9 In the **User** text box, type the administrator ID to obtain administrative authority on the target device's domain.

10 In the **User Password** text box, type the administrator password to obtain administrative authority on the target device's domain.

If you do not enter the password and administrative authority is required, the job may fail. Check the job status for specific information.

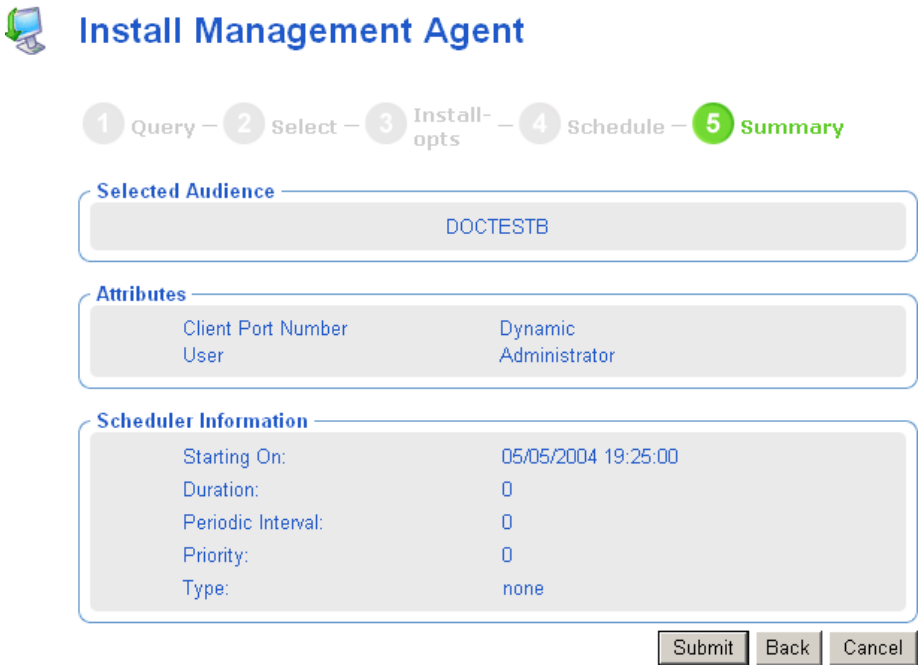
11 Click **Next**.

The Schedule dialog box opens.

12 In the Schedule dialog box, specify when you want this job to run.

13 Click **Next**.

The Install Management Agent—Summary dialog box opens.



14 Click **Submit**.

The Job Status page opens with list of the jobs. This window automatically refreshes every 60 seconds.

— Click  to go up one level in the job or directory tree. For example, after viewing job details, click this icon to return to the Job Group Summary.

— Click  if you want to refresh the window to display the latest status.

— Click to view detailed properties for the job or job group. This gives you detailed information on the job status.

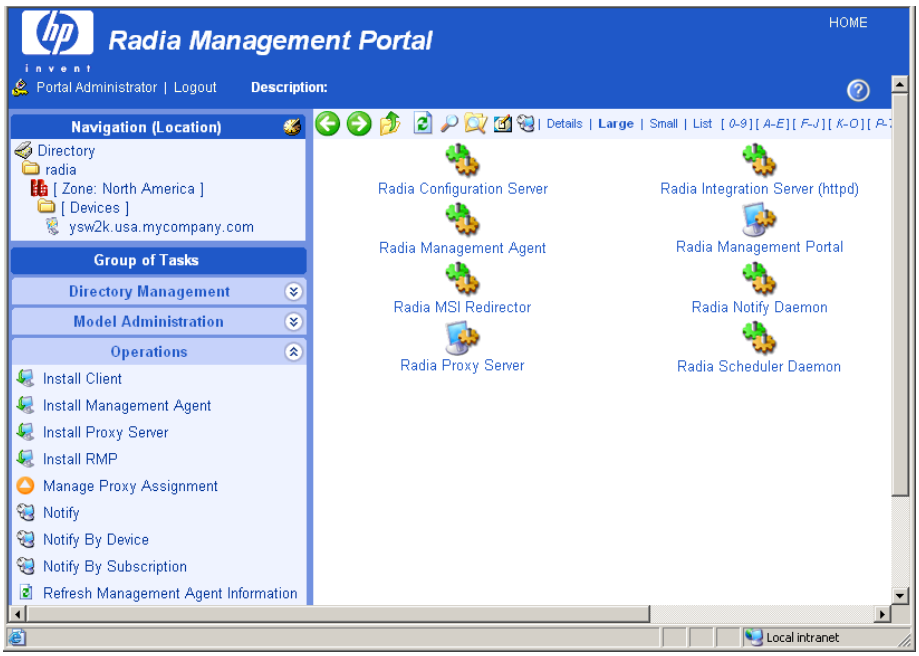
— Click to add a shortcut for Jobs to your Desktop.

— Click to obtain a printable view of the Jobs Status page.

15 When you are done viewing the job status, click to close the Job Status page, and return to the Management Portal.

Below is an example of the Radia Management Agent (RMA) service that has been installed on a remote computer. You can also see that the RMA discovers and registers the Radia Integration Server (RIS) sub-services installed on the remote computer.

The Management Portal uses the information discovered by the Radia Management Agent to add the device to the appropriate groups in the Cross-Reference container of the Zone.



When the Radia Management Agent is installed to the remote device and the service is started, a log (`rma.log`) is created in the directory where the RMA is installed. The RMA is installed to *`SystemDrive`*`:\Novadigm\ManagementAgent`.

Refreshing the Radia Management Agent

An installed Radia Management Agent discovers and registers the Radia Integration Server (RIS) sub-services installed on the remote computer. If additional RIS sub-services are installed on the remote computer after the Radia Management Agent's last discovery, use the Refresh Management Agent task from the Operations task group to immediately update the registered sub-services on the Management Portal.

The Refresh Management Agent task will also remove the registration of services that have been uninstalled since the previous registration. For example, if a Radia Client has been removed from a computer since the previous registration, running refresh management agent will remove the machine's client-related services, such as the Radia Notify Daemon and the Radia Scheduler Daemon, from the Management Portal's registry.

To refresh a Radia Management Agent's sub-service discovery

1 In the Navigation area, navigate to the appropriate device object whose Management Agent service discovery needs to be refreshed.

You do not need to navigate to the Management Agent, just to the device object.

2 From the **Operations** task group, click **Refresh Management Agent**.

Click  to refresh the Workspace area of the Management Portal. You'll see the current, newly registered Radia services and sub-services for the object.

Installing the Radia Client

Use the **Install Client** task to install the Radia Clients to remote devices. The Radia Client installation program uses the Microsoft MSI format for Windows Installer. The program consists of one MSI package, with six feature sets, one for each client—Application Manager, Software Manager, Inventory Manager, OS Manager, Patch Manager, and Server Management.

Use the **Manage Proxy Assignment** task prior to the **Install Client** task if you want to deploy a set of Radia Clients from pre-assigned Proxy Servers, instead of directly from the Management Portal. This option allows for existing Proxy Servers in your infrastructure to handle some or all of the client deployment workload, instead of requiring the Management Portal to do all the work. For details, see Managing Proxy Assignments on page 331.

The Management Portal supports multiple client profiles. For details, see Supporting Remote Installs Using Multiple Profiles on page 327.

To install the Radia 4.x Clients with the Management Portal

Be sure to read Requirements for Remote Installations on page 313 before performing this procedure.

For detailed information, such as system requirements and customization options, refer to the *Application Manager Guide* or the *Software Manager Guide*. These guides are available from the HP OpenView web site.

1 Use the Navigation aid to select the device or group of devices on which you want to install the Radia Clients.

As of RMP 2.0.1, you can select a location in your Zone → Network container or a currently connected LDAP directory location that contains computers on which you want to install the Radia Clients. If the Management Portal is not currently managing the targeted Network or LDAP devices, the Management Portal will bring them under management as part of the install task.

2 From the **Operations** task group, click **Install Client**.

If you selected a single Authority, such as a particular computer or a group of devices, and then selected Notify, you will bypass the **Query** and **Select** dialogs. Go to step 6.

The Query Dialog opens.

3 Specify criteria to narrow the scope of the job. See Performing Queries on page 293 for more information.

4 Click **Next**.

The Select dialog box opens.

5 Select the audience from the **Available** list, and then click  to add it to the **Selected** list. See Selecting an Audience on page 295 for more information.

6 Click **Next**.

The Install Client—Client Opts dialog box opens.

7 From the **Profile** drop-down list, select a client profile to use for the installation. For details on creating Client Profiles, see Adding, Modifying, and Deleting Install Profiles on page 328.

8 In the **Initialization File** area, select the appropriate installation INI file from the drop-down list. This file contains parameters necessary for the Radia Client to run, such as the IP address of the Configuration Server.

The Management Portal will honor settings placed in a customized `*.INI` file when it installs the client.

9 In the **Product** area, select the clients that you want to install on the target devices.

Be sure to install only the clients for which you have licenses. If you install a client for which you do not have a license, the client will not authenticate with the Configuration Server.

10 In the **RCS Host Name** text box, type the IP address or host name that the Radia Client will use to access the Configuration Server.

11 In the **RCS Port number** text box, type the port number that the Radia Client will use to access the Configuration Server.

12 Select the **Perform Silent Install?** check box if you want to install a client without any user interface.

13 Select the **Perform Connect After Install?** check box if you want the client computer to connect to the Configuration Server after the installation. This allows the client computer to register with the Configuration Server. Refer to the *Application Manager Guide* for more information.

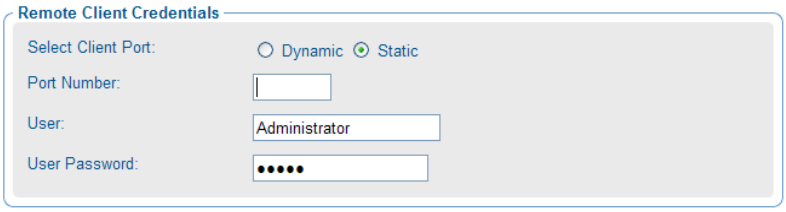
When the client computer connects to the Configuration Server, the Management Portal also captures information about your subscribers and stores it in the Management Portal Directory. SeeDiscovering Radia Subscriber Information on page 335 for more information.

14 Using the **Select Client Port** radio buttons, select whether to communicate with the Radia Management Agent on the Client using a Dynamic or Static port number.

— Using a dynamic port assignment reduces the risk of security attacks on well-known ports. However, dynamic port assignments also require daily registrations of new port numbers by the Management Agents.

— Using a static port assignment is available to communicate to an Agent that is behind a firewall. This option also eliminates daily registrations of new port numbers by the Management Agents.

If you select a Client Port type of **Static**, a **Port Number** text box appears.



15 Type the static port number in the **Port Number** text box.

16 In the **User** text box, type the administrator ID to obtain administrative authority on the target device's domain.

17 In the **User Password** text box, type the administrator password to obtain administrative authority on the target device's domain.

If you do not enter the password and administrative authority is required, the job may fail. Check the job status for specific information.

18 Click **Next**.

The Schedule dialog box opens.

19 In the Schedule dialog box, specify when you want this job to run. For more information, see Scheduling Jobs on page 297.

20 Click **Next**.

The Install Client—Summary dialog box opens.

21 Click **Submit**.

The Job Status page opens with list of the jobs. This page automatically refreshes every 60 seconds.

Supporting Remote Installs Using Multiple Profiles

This version of the product allows you to remotely install more than one version of the Radia Clients from the Management Portal. For example, you may want to install Radia 4.x Clients on some computers, but Radia 3.x Clients on others. Or, you may want to minimize the size of the client

package being installed, and create a client code set that eliminates the required Microsoft .NET code (for those machines you know already have the required .NET installed).

Adding, Modifying, and Deleting Install Profiles

Use the **Add Install Profile** task in the **Model Administration** task group to add a new profile for a Client Install. The profile points to a code source for the product that is different from the default code source provided by Management Portal.

Topics in this section identify where to place the source code for Client Install Profiles, and procedures for adding, modifying, and deleting them.

Client Install Profiles –Source Code Required Locations

The code source needs to be placed at the following location:

`Client Installs: <RIS>\media\client\<profile>\<OS>`

Where:

<RIS> is the Radia Integration Server location

<profile> is your folder name for the install profile

<OS> is the Operating System folder name.

For Windows, <*OS*> is `Win32`.

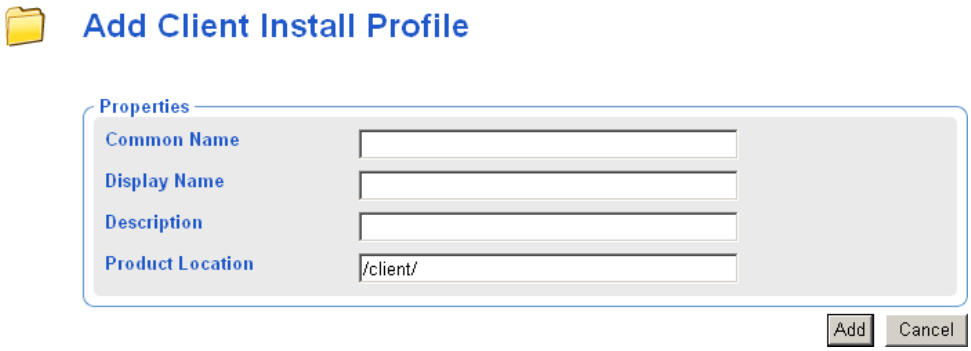
The code source for the product needs to be in the <*OS*> folder. It may contain more than one `*.ini` file.

To add a Client Install Profile

1 Navigate to the following location in the Management Portal.

2 Click **Add Install Profile** from the **Model Administration** task group.

The Add Client Install Profile window opens.



3 Complete the Properties for the Add Client Install Profile, as follows:

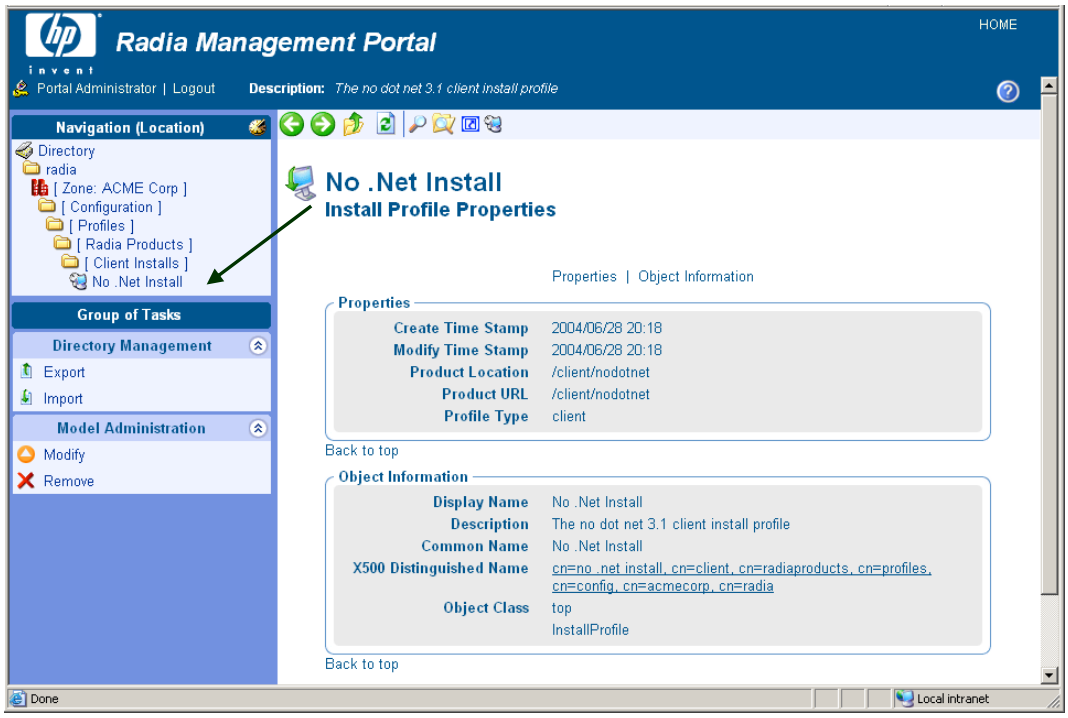
`Common Name`	A unique name for the Client Install Profile object in the RMP.
`Display Name`	The display name for this Client Install Profile in the RMP.
`Description`	A full description of the source code installed by this profile.
`Product Location`	The directory in the base-RMP `/media/client` directory that contains the code source. Use forward slashes.

For example: `/client/nodotnet`

Below the folder specified in the **Product Location** must be subdirectories for each supported operating system, such as `win32`. The client source code is located in these operating system-level folders.

4 Click **Add**.

The Properties page for the Client Install Profile opens. The Navigation area includes the new entry for this Client Install profile.



5 Management Portal users will now be able to select this profile from the Options page when using the **Install Client** task.

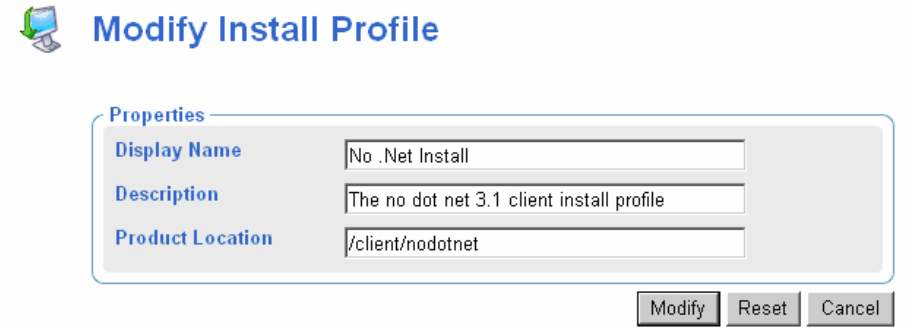
To modify a Client Install Profile

1 Navigate to the where the profiles for Client Installs are located, shown in the following figure.

2 Click on the install profile object to be modified. You cannot modify the Default Client Install object.

3 Click on **Modify** from the Model Administration task group. The Modify Install Profile page opens.

4 Modify any of the fields, and click **Modify**.



5 The Properties page opens, showing your modifications.

To delete a Client Install Profile

Deleting an install profile deletes the RMP user's ability to select this profile during the **Install Client** task. It does not delete the source code from the Product Location.

1 Navigate to the [Client Installs] container and click on the profile to be deleted.

The Properties page for the Install Profile opens.

2 Click **Delete** from the **Model Administration** task group.

A prompt asks you to confirm the delete.

3 Click the green check mark to confirm the delete.

The profile object is removed from the [Client Installs] container.

Managing Proxy Assignments

Use the **Manage Proxy Assignments** task to designate Proxy Servers in your infrastructure to handle the deployment of client installation scripts for designated devices.

To assign a set of devices to a Proxy Server, first create a group for all devices to be assigned to a given Proxy Server in the Groups container. Create separate groups for devices being managed by different Proxy Servers. See Adding Devices to a New Group on page 328 for more information on how to create groups of devices. Then use the **Manage Proxy Assignment** task to assign a Proxy Server to all members of the group. Repeat the **Manage Proxy Assignment** task for each Proxy Server receiving node assignments.

After making all Proxy Server assignments, use the **Install Client** task to schedule the installation of the clients. If a device that is scheduled for a client installation has been assigned to a Proxy Server, the Management Portal will first synchronize with the Proxy Server, and then the Proxy Server will complete the client installation on the device.

To change or remove proxy assignments, first change the group members, and then repeat the same Manage Proxy Assignment steps used to assign nodes to the Proxy Server.

Requirements for Managing Proxy Assignments

- One or more previously installed Proxy Servers.
- For each Proxy Server, an installed Radia Management Agent that has also successfully discovered the Proxy Server service.

If these requirements have been met, when you navigate to a device containing the RMA-discovered Proxy Server, the Proxy Server icon will display in the Workspace of the Management Portal.

For example, the next figure shows the Proxy Server installed and discovered by the Radia Management Agent on the computer DOCTEST. If you had multiple devices in your RMP Zone with a Proxy Server, all would be listed in the Zone Cross References container. Go to the Infrastructure Services group and click on Proxy Server. All devices that have Radia Management agents and Proxy Servers on them are automatically added to this Cross References group.

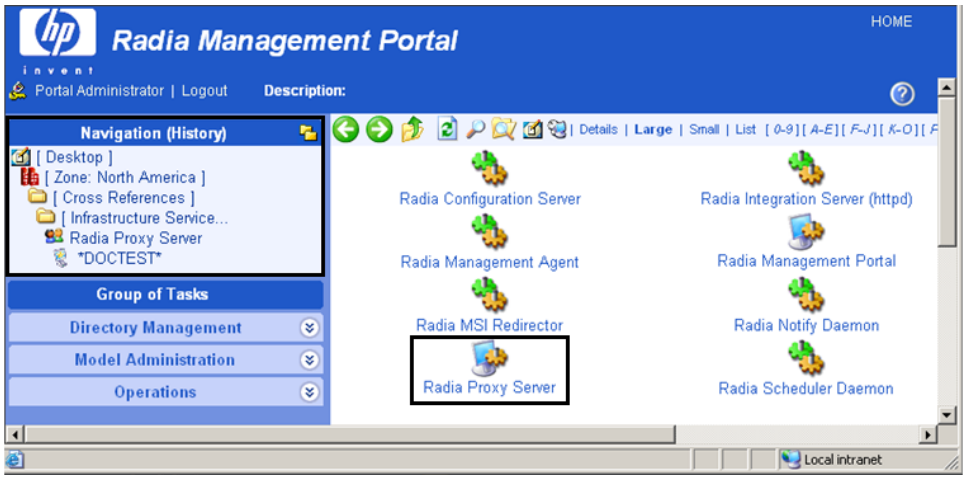
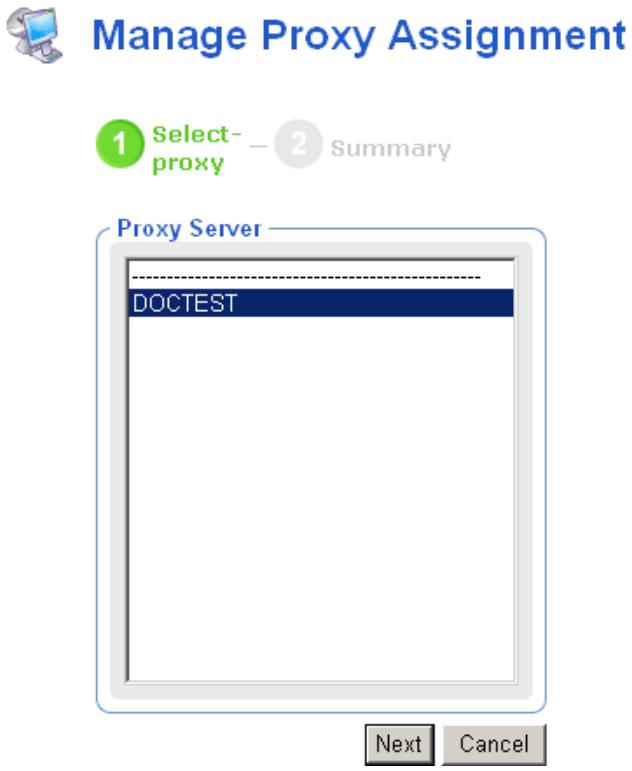


Figure 30: Proxy Server discovered by the Management Agent on DOCTEST.

To assign devices to a Proxy Server

1. Create a group of Devices in the Groups container. Move all devices that are to be assigned to a single Proxy Server in the new Group. For details, refer to Adding Devices to a New Group on page 328.
2. Use the Navigation aid to select the new Group for making proxy assignments.
3. From the **Operations** task group, click **Manage Proxy Assignment**.

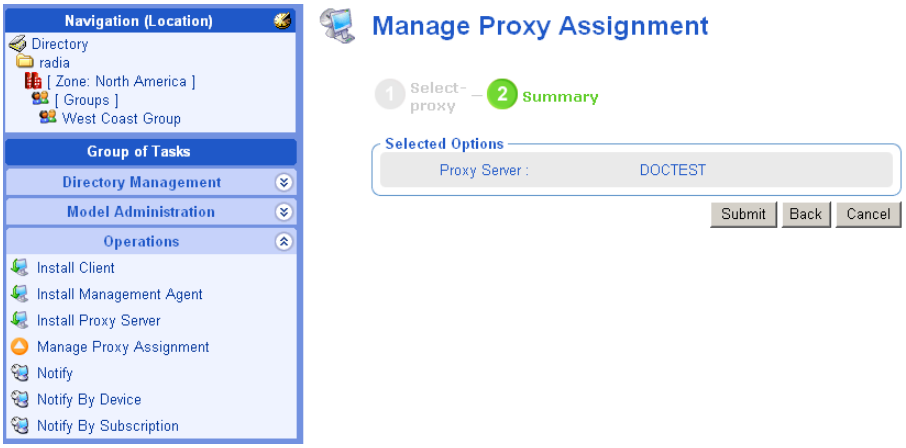
   The Manage Proxy Assignment - Select proxy dialog box opens.



4 Select a Proxy Server from the list to handle the client deployment for the set of devices that are members of the selected Group.

5 Click **Next**.

The Manage Proxy Assignment — Summary dialog box opens.



6 Click **Submit** to save the proxy assignment of nodes to the selected server.

7 After completing all proxy assignments, run the **Install Client** task from the Management Portal **Operations** task group as discussed in Installing the Radia Client on page 321. If a proxy-assigned node is selected for the Client Install, the Proxy Server performs the client script deployment, as opposed to the Management Portal.

Discovering Radia Subscriber Information using Managed Services

The Management Portal can be enabled to capture information about your subscribers and stores it in the Management Portal Directory. In the Cross References container, there is a group named Managed Services. The information about subscribers is used to create automatic groups for each service being managed by Radia for your subscribers.

Radia Services will appear in the cross references container as long as:

- Client reported objects have been enabled for posting to the Management Portal. For more information, see Posting Client Objects to the Management Portal on page 52.
- Application Event reporting is turned on for the services being installed.
- A client has installed at least one service.

When the Radia client computers connect to the Configuration Server, information is captures from the client reporting objects, and then the Messaging Server routes the appropriate client objects, such as APPEVENT, to the Management Portal. Refer to the *Installation and Configuration Guide for the HP OpenView Messaging Server using Radia* on the HP OpenView

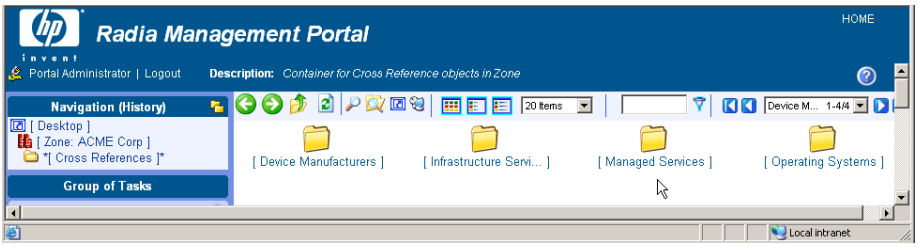
web site for more information on how to install and configure the Radia Messaging Service to route messages to the Management Portal.

To view Radia Managed Services information

1 Navigate to the **Zone** → **Cross References** container.

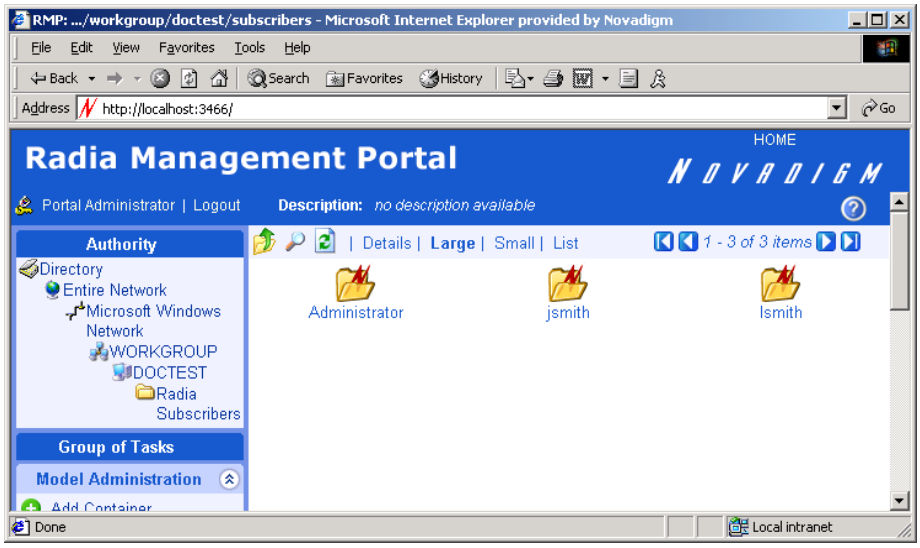
2 Select **Managed Services**.

The Managed Services container includes groups of devices for which the Configuration Server has reported Radia managed applications.



3 In the workspace, you will see one or more groups, each representing the name of a service being managed by Radia on devices in this Management Portal Zone.

4 Click on a group in the Managed Services container to see all the devices in the Zone for which Radia is managing that service.



Installing the Proxy Server

Use the **Install Proxy Server** task to install the Proxy Server to remote devices. During the installation, you will receive status information and if the installation fails, it can be rescheduled. The Install Proxy Server Task will prompt you to select a specific CFG file, if multiple ones exist.

Refer to the *Installation and Configuration Guide for the HP OpenView Proxy Server using Radia* for more information.

See Preparing and Locating Configuration Files for Proxy Server Installs on page 340 for details on preparing and locating customized CFG files for this task.

In order to take advantage of the **Install Proxy Server** task, consider creating a standard administrator ID across the domains in your network.

To install the Proxy Server

Be sure to read Requirements for Remote Installations on page 313 before performing this procedure.

You may also want to check the HP OpenView web site for the latest information on this topic.

1 Use the Navigation aid to select the place in your infrastructure where you want to install the Proxy Server.

As of RMP 2.0.1, you can begin to install the Proxy Server by selecting one or more devices from a location in your Zone, Networks container or LDAP directory. If the Management Portal is not currently managing the targeted Network or LDAP devices, the Management Portal will bring them under management as part of the install task.

2 From the **Operations** task group, click **Install Proxy Server**.

If you selected a single Authority, such as a particular computer or a group of devices, and then selected Notify, you will bypass the **Query** and **Select** dialogs. Go to step 6.

The Query dialog box opens.

3 Specify criteria to narrow the scope of the job. See Performing Queries on page 293 for more information.

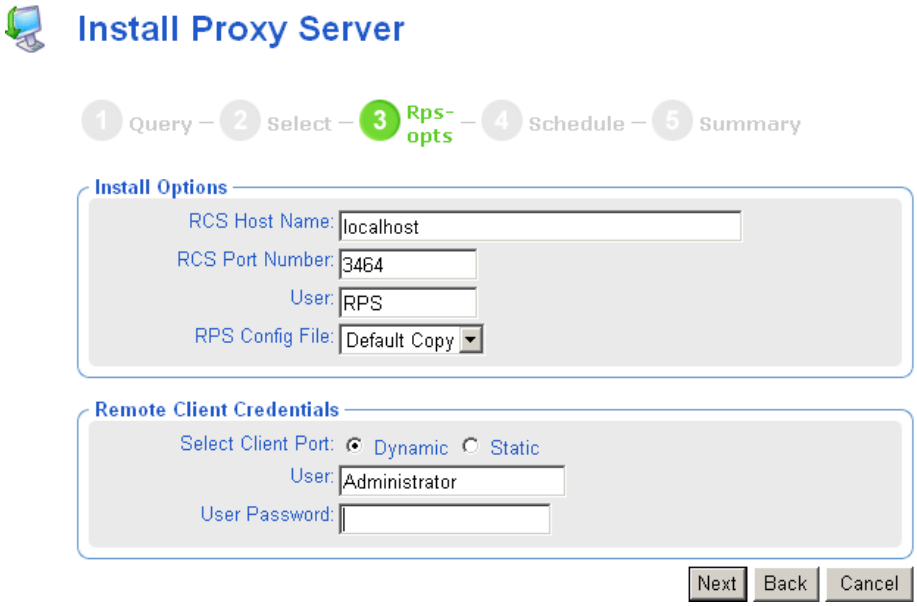
4 Click **Next**.

The Select dialog box opens.

5 Select the audience from the **Available** list, and then click  to add it to the **Selected** list. See Selecting an Audience on page 295 for more information.

6 Click **Next**.

The Install Proxy Server—RPS Options dialog box opens.



7 In the **RCS Host Name** text box, type the name or IP address for the Configuration Server.

8 In the **RCS Port number** text box, type the port number for the Configuration Server.

9 In the **RCS User** text box for Install Options, type the user ID to use to connect to the Configuration Server.

10 If available, select which RPS configuration file to use during the installation from the **RPS Config File** drop-down list. This field only appears if customized configuration files have been added to the Management Portal.

To make customized Proxy Server configuration files available for selection during this task, see Preparing and Locating Configuration Files for Proxy Server Installs on page 340.

11 In the **User** text box for Remote Client Credentials, type the administrator ID to obtain administrative authority on the target device's domain.

12 In the **User Password** text box, type the administrator password to obtain administrative authority on the target device's domain.

If you do not enter the password, and administrative authority is required, the job may fail. Check the job status for specific information.

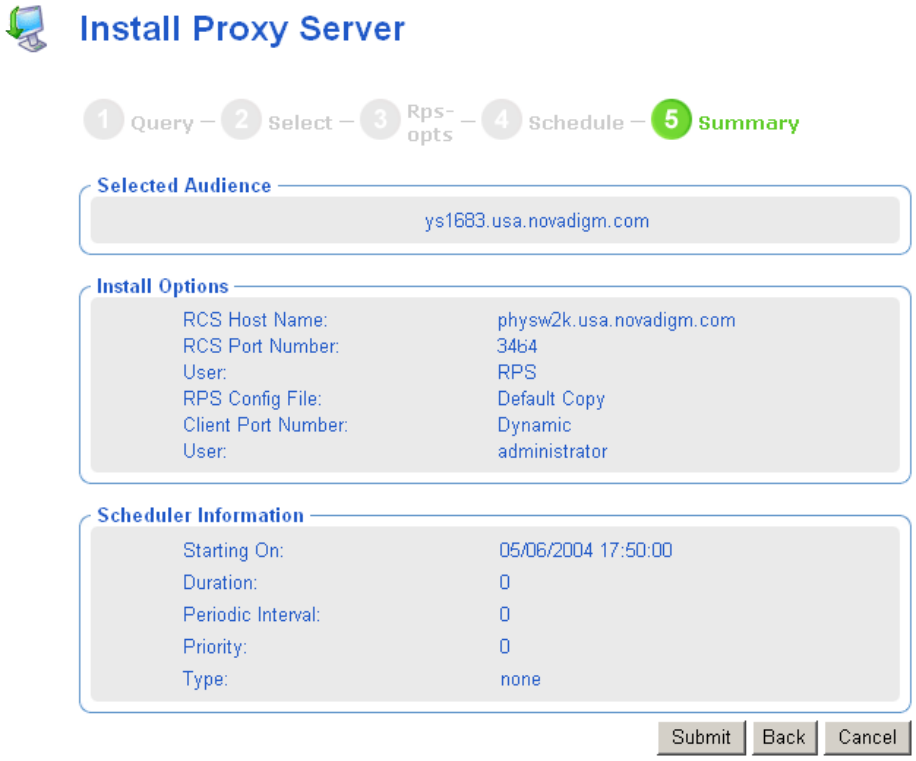
13 Click **Next**.

The Schedule dialog box opens.

14 In the Schedule dialog box, specify when you want this job to run. For more information, see Scheduling Jobs on page 297.

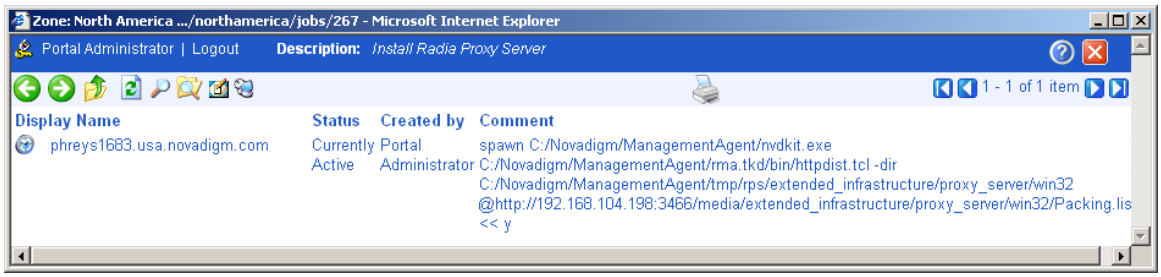
15 Click **Next**.

The Install Proxy Server—Summary dialog box opens.



16 Click **Submit**.

The Job Status page opens with list of the jobs. This page automatically refreshes every 60 seconds. Press **F5** to manually refresh it.



— Click  to go up one level in the job or directory tree. For example, after viewing job details, click this icon to return to the Job Group Summary.

— Click  if you want to refresh the status of the installation.

— Click  to view detailed properties for the job or job group. This gives you detailed information on the job status.

— Click  to add a shortcut for Jobs to your Desktop.

— Click  to obtain a printable view of the Jobs Status page.

17 When you are done viewing the job status, click  to close the Job Status page, and return to the Management Portal.

Preparing and Locating Configuration Files for Proxy Server Installs

Use these procedures to prepare one or more fully configured `RPS.CFG` files for the Install Proxy Server task. The CFG files must be placed in a specific media location for the Management Portal to use them. When you run the Install Proxy Server task from the Management Portal, the task will prompt you to select a specific `CFG` file, if multiple ones exist. Select your pre-configured `CFG` file, and the installed Proxy Server will be installed fully configured and ready to go.

To prepare a pre-configured RPS.CFG file for use the Install Proxy Server task

1 Prepare a fully configured `rps.cfg` file.

Perform a local installation of the Proxy Server on a test machine that is the same platform as the intended Proxy Server platform. Edit the resulting `rps.cfg` file using the directions given in the *Proxy Server Guide* in the section *Configuring the Proxy Server*.

2 Place the configured `rps.cfg` file in a specific Management Portal media directory.

The appropriate location of a configured `rps.cfg` file will vary according to the platform on which you are installing the Proxy Server: win32, hpux, or solaris. For example, the location for a Windows Proxy Server installation is similar to this:

```
C:\Novadigm\IntegrationServer\media\extended_infrastruct
ure\proxy_server\win32\media\etc
```

a Go to the directory where the Management Portal is installed.

The default is either

SystemDrive`:\Novadigm\Radia Integration Server`

OR

SystemDrive`:\Novadigm\IntegrationServer`

depending on when it was installed.

b Go to the following folder location in the Management Portal directory:

`\media\extended_infrastructure\proxy_server\<`*platform*`>\m edia`

where *<platform>* is `win32`, `hpux`, or `solaris`, according to which platform you are installing the Proxy Server on.

c Add an `\etc` folder to the `\media` directory.

d Copy the `rps.cfg` file to this platform-specific `\media\etc` folder. For example, if the Management Portal is installed on `C:\Novadigm\IntegrationServer`, and the Proxy Server will be installed on a Windows platform, then place the rps.cfg file in the following location:
`C:\Novadigm\IntegrationServer\media\extended_infrastruct ure\proxy_server\win32\media\etc`

3 Run the **Install Proxy Server** task from the Management Portal, as usual. The installation task will also transfer the fully configured `rps.cfg` file.

Synchronizing the Proxy Server

Use the **Synchronize Proxy Server** task to force the Proxy Server to connect to the Configuration Server to preload the files to the static cache on the Proxy Server. The task is available for Devices whose properties include a Proxy Server (cn=rps) service.

- For devices that have a Radia Management Agent installed, the rps service is automatically discovered.
- For devices that do not have a Radia Management Agent installed, you can manually add a service for the Proxy Server to enable the task. For details, refer to Adding Services on page 203.

See the Proxy Server Guide for more information on the Proxy Server.

To synchronize one or more Proxy Servers

1. Use the Navigation aid to select the Proxy Server(s) that you want to synchronize.
   - To synchronize an individual Proxy Server, navigate to the Device's properties from a Group or Device container, and select the service for the Proxy Server.
   - To synchronize all Proxy Servers identified by the Radia Management Agents in a Zone at once, navigate to the Proxy Server group in the **Zone → Cross References → Infrastructure Services** container.
2. In the **Operations** task group, click **Synchronize Proxy Server**.

   The Schedule dialog box opens.
3. In the Schedule dialog box, specify when you want this job to run. For more information, see Scheduling Jobs on page 297.
4. Click **Next**.

   The Submit Synchronize—Summary dialog box opens.

5 Click **Submit**.

A list of the jobs appears. Now, you can use the View Properties toolbar icon to view detailed information, such as the status of the job.

The status of the synchronize proxy job will report the following events:

— Submission of the job request to the Proxy Server.

— Start of session between Proxy Server and Configuration Server (for preloading the files to the static cache on the Proxy Server).

— Job successful.

See Viewing Properties on page 281 for more information.

Purging the Dynamic Cache of the Proxy Server

Use the **Purge Dynamic Cache** task to purge the dynamic cache of the Proxy Server. The task is available for Devices whose properties include a Proxy Server (cn=rps) service.

- For devices that have a Radia Management Agent installed, a Proxy Server service is automatically discovered. These devices are automatically listed in the Zone Cross References Container, within the Infrastructure Services group for Proxy Servers.
- For devices that do not have a Radia Management Agent installed, you can manually add a service for the Proxy Server to enable the task. For details, refer to Adding Services on page 203.

See the Proxy Server Guide for more information.

To purge the dynamic cache of the Proxy Server

1 Use the Navigation aid to select the Proxy Server service on the Device whose cache you want to purge.

   — To purge the dynamic cache of an individual Proxy Server, navigate to the Device's properties from a Group or Device container, and select the service for the Proxy Server.

   — To purge the dynamic cache of all Proxy Servers identified by the Radia Management Agents in a Zone at once, navigate to the Proxy Server group in the Zone, Cross References, Infrastructure Services container.

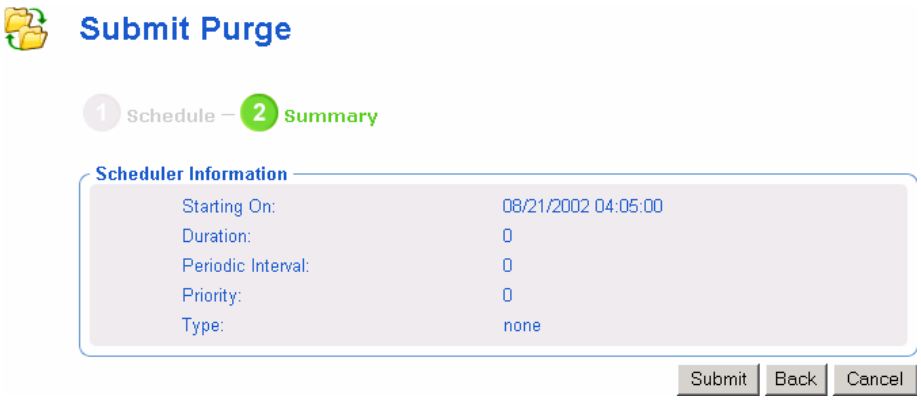
2 In the **Operations** task group, click **Purge Dynamic Cache**.

   The Schedule dialog box opens.

3 In the Schedule dialog box, specify when you want this job to run. For more information, see Scheduling Jobs on page 297.

4 Click **Next**.

   The Submit Purge—Summary dialog box opens.



5 Click **Submit**.

A list of the jobs appears. To view a job's details and the status of the job, click on the toolbar or click the **View Properties** task. See Viewing Properties on page 281 for more information.

Managing Services

Use the Management Portal to manage services. For example, you can start or stop services on your remote devices.

To manage services

1 In the Navigation area, select the service that you want to manage.

You can access a service from a Device's entry in the Zone Device container, Groups container, or Cross-References Infrastructure Services container. After selecting the Device, select the Service.

2 In the **Operations** task group, click the appropriate action.

- Click **Pause** to temporarily suspend the execution of a service. The service continues to run, but does not perform any action.
- Click **Restart** to stop a service and then start it again.
- Click **Resume** to resume execution of a service that has been paused.
- Click **Start** to run a service.
- Click **Stop** to stop a service.

You cannot stop the Radia Management Agent service.

3 The Job Status page opens. This page automatically refreshes every 60 seconds.

— Click to refresh the page to display the latest status.

— Click to view detailed information, such as the status of the installation.

4 When you are done viewing the job status, click to close the Job Status page, and return to the Management Portal.

Managing Task Templates

Use the **Add Task Template** task in the Operations task group to preset options for each type of task needed when scheduling zone operations.

Adding Task Templates

Add task templates for use with the Notify or Install RPS tasks.

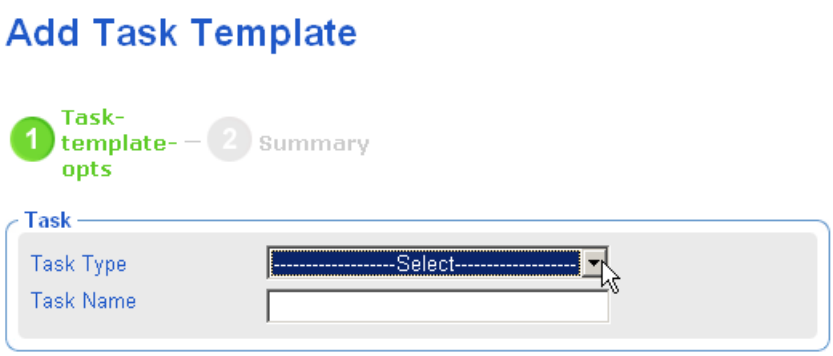
To add a task template

1 Use the Navigation aid to go to **Zone** → **Configuration** → **Task Templates**.

The existing Task Templates (if any are available) are displayed in the Workspace.

2 In the **Operations** task group, click **Add Task Template**.

The Add Task Template options page opens.



3 Use the **Task Type** drop-down menu to select the type of task for which you are adding a template.

When you select a Task Type, additional fields for defining that task are displayed on the page.

4 Type a **Task Name** for the template in the list box.

Enter a Task Name that clearly identifies the job to be run. This allows you to easily select it from other templates in the Task Templates container.

You don't need to repeat the Task Type when entering the Task Name; it is automatically included in the Display Name for the template. For example, a Notify task object is labeled "Notify <*Task Name*>".

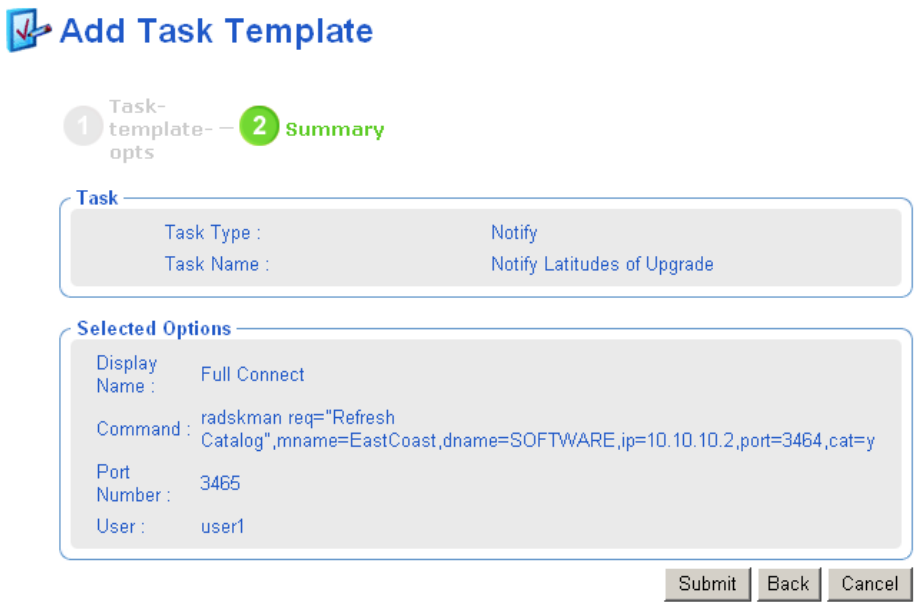
5 Complete the options for the task you selected. For details, refer to the appropriate topics:

— To complete Notify tasks, see Using the Notify Tasks on page 300.

— To complete Install Proxy tasks, see Installing the Proxy Server on page 337.

6 Click **Next**.

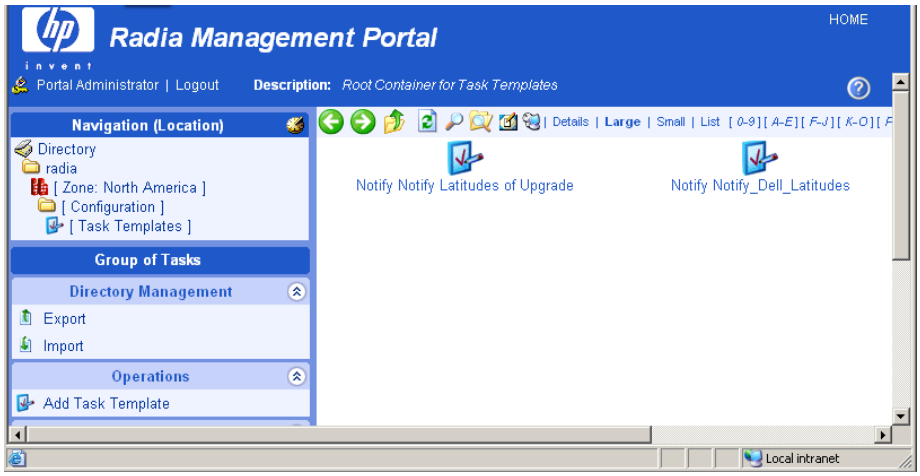
The Add Task Template Summary page opens.



7 Review the **Selected Options**. To change them, click **Back** and revise the options. To save them, click **Submit.**

8 The Task Template is added to the Task Templates container, and thus can be selected during the **Schedule Zone Operation** task.

Note that the options of a task template exist as children of the task template, itself.



Removing Task Templates

To remove task templates

1. Navigate from the Directory to the Zones, Configuration, Task Templates container.
2. Click on the task template to be deleted.

   The Workspace displays the object for the selected Task Template.
3. In the Model Administration Task group, click **Remove.**

   A message asks you to confirm the removal of the template.
4. Click the green checkmark ✓ to confirm the removal.

   Since the task's Options are considered a child of the Task Template, another prompt asks you to confirm the removal of the child object.
5. Click the green check mark to confirm the removal of the Task Template and children.

   The Task Template and its Options are removed from the Portal Directory.

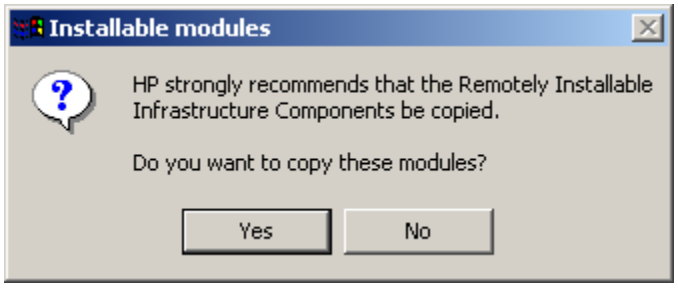
Installing Additional RMP Zones (Subordinate Zones)

Once your initial Management Portal zone is installed, you can use the Management Portal to remotely install additional Management Portal zones in your enterprise. These zones are called subordinate zones.

Prerequisite for Install RMP task

- The media that is needed to run the Install RMP task must be stored in the Radia Integration Server `\media` directory, in a structure that mirrors the original Management Portal installation media.

- The Management Portal installation program, `setup.exe`, automatically copies the needed files to the appropriate locations when you select **Yes** to the following prompt:



- To verify that your Management Portal includes the needed install media, you can check that the following directory structure exists:

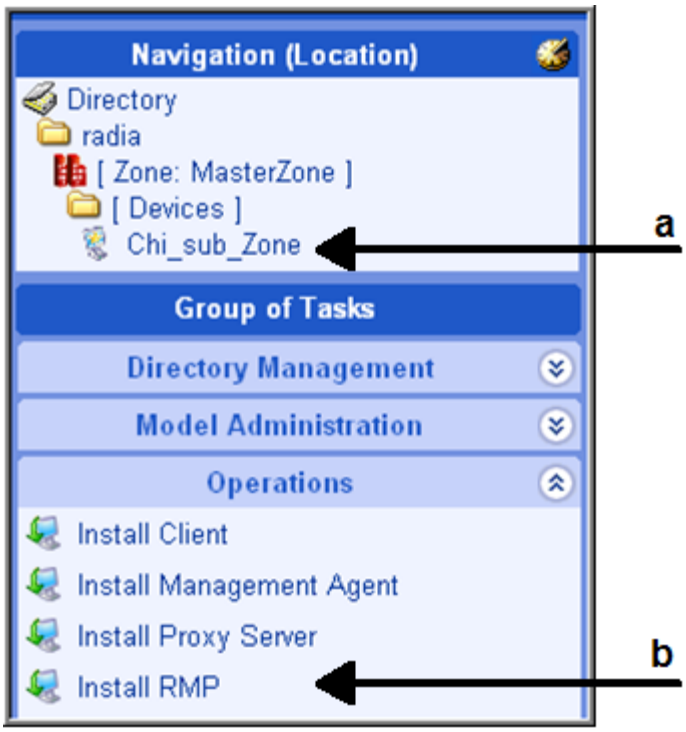
  `<<RMP_install_directory>>\media\extended_infrastructure\management_portal\<platform>\`

- Below each `<platform>` directory will be subdirectories for `\media\modules`. A copy of your license.nvd file must exist in the `<platform>\media\modules` directory.

If the needed directory structure and files are missing, just rerun the `setup.exe` program and elect to update the installable components. When prompted to copy the Remotely Installable Infrastructure Components, choose **Yes**. See Installation Procedures on page 36 for more information.

To install an RMP Zone from the Master Zone

1. Login to the Master Zone Management Portal as **`Admin`**.
2. The device on which you are installing the RMP zone needs to have a device entry in the Master Portal zone.
   - If the device currently exists, browse to and display the Device Properties from a Zone Groups container or Zone Devices container entry.
   - If the device entry does not currently exist, add an entry for the device. (For details, see Adding a Single Device on page 181.) After adding the device, navigate to and display the Device Properties.



a Locate Device.

b Select Install RMP.

3 Click **Install RMP** from the **Operations** task group to install a subordinate zone onto the selected device.

The **Rmp opts** panel of the Install RMP page opens (Step 3 of 5). Complete the Zone Options and Remote Client Credentials using the following information.

Table 18: Zone Options for Install RMP

Field	Example	Description
Zone Name	Chicago	Zone name becomes the high-level qualifier for all nodes in this RMP directory. All zone names in an enterprise must be unique.
Zone Display Name	Chicago_RMP	Zone display name is the label for the Zone in RMP.

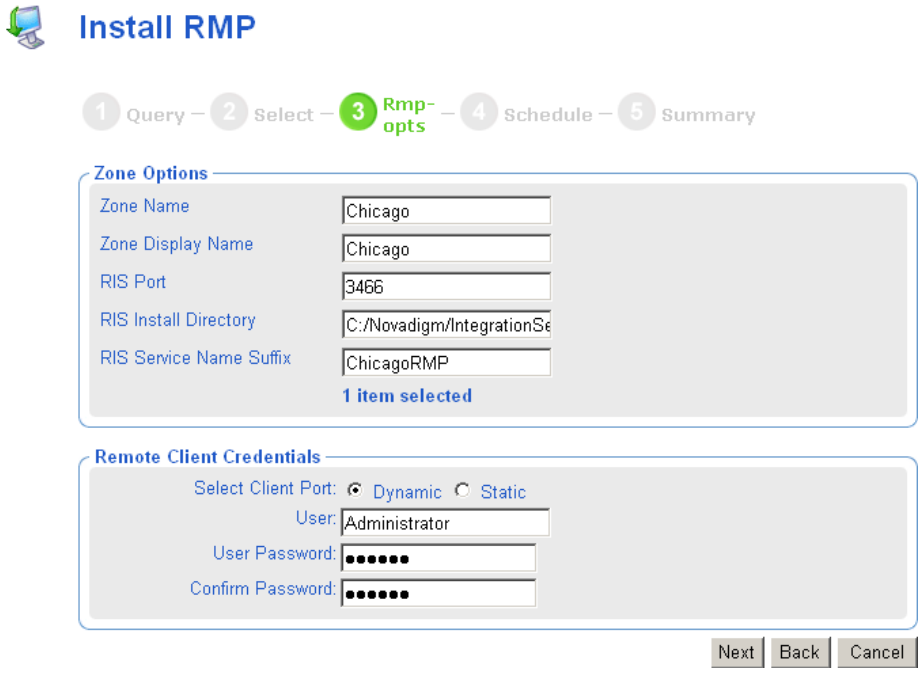
Field	Example	Description
RIS Port	3466	The port number of the Management Portal RIS service. Default is 3466.
RIS Install Directory	C:/Novadigm/IntegrationServer	The base directory for the Management Portal on the remote device. Important: Use *forward* slashes for both Windows and UNIX path syntax.
RIS Service Name Suffix	ChicagoRMP	Optional entry. If used, this suffix is appended to the Radia Integration Service name, httpd, to allow for a distinct entry from other RIS entries that may be running on the same server. If a suffix is entered, the RMP install checks to see if there is either an existing service with this suffix to allow for a refresh of an RMP service. Otherwise, the RMP install only continues if the above RIS directory is empty. Note: If you enter a suffix, then append this suffix to the `<httpd>` entry when you start the Portal from a command line. For example: `nvdkit start httpdChicagoRMP.tkd`

Table 19: Remote Client Credentials for Install RMP

Field	Example	Description
Select Client Port	Select Dynamic Or Select Static	Dynamic is the default. To use a static port number (normally needed with a firewall), select Static. Also enter a Static Port number.
Port Number		If Client Port is set to Static, a Port Number field allows you to specify the Client Port number to use.
User	Administrator	An RMP Install requires Administrator access to the remote computer. Enter a User ID that has Administrator privileges on the remote computer.
User Password	●●●●●●●●●●●●	Enter the password associated with the User login to gain access to the remote computer. Entries are encrypted.

Field	Example	Description
Confirm Password	●●●●●●●●●●●●	Repeat the User Password entry. If the Confirm Password and User Password entries do not match, you will be prompted to correct them.

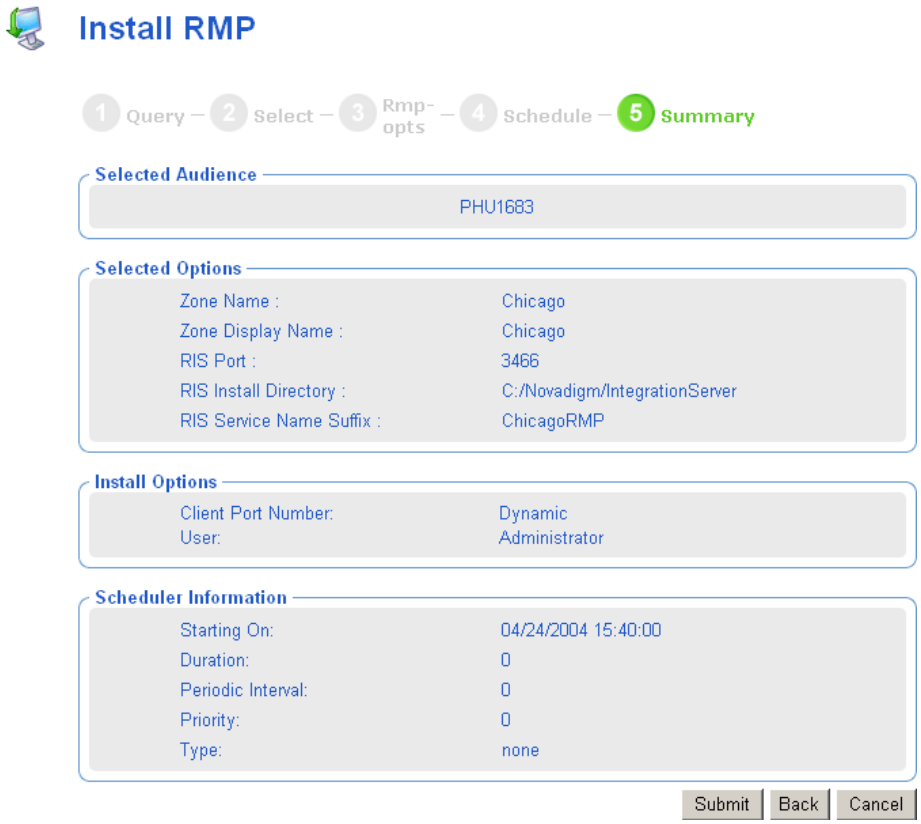
4 After completing all entries, click **Next**.



The Schedule panel (Step 4 of 5) of the Install RMP page opens. The default schedule is to run the **Install RMP** task immediately.

5 To schedule the install immediately, click **Next**. To schedule it at a later time (for example, during a period of lower activity), change the time or date and click **Next**.

The Summary panel of the Install RMP page opens, as shown in the following figure.



6 Review all entries are as desired, and then click **Submit**.

A job summary window opens for the Install RMP job.

— To view the Job Properties, click the Display Name entry.

— To return to the job summary page, click .

— To refresh the status, click .

7 When the install job finishes, the Management Portal Zone will be installed on the remote device, with the following new entries also made to the Master Zone. These entries permit access to the new zone:

— The Zone, Configuration, Directory Services container will include a ds-dsml definition. When the startup mode is set to auto, the new zone will automatically be connected to the master zone upon startup. If the startup mode is manual, use the Connect to Directory Service task to manually make a connection during the session.

— The Zone Access Points container will show an entry for the new Zone.

Updating Subordinate RMP Zones

After you install an update to the Master Portal for a service pack or release, use the **Update RMP** task in the **Operations** task group to propogate the code updates to the Subordinate RMP Zones in your enterprise. This task allows you to synchronize the RMP module build numbers throughout the Zones in your enterprise.

When applying a service pack update to the Master Zone, respond **Yes** when prompted to install the **Remotely Installable Infrastructure Components**. This will place the code in the necessary media location.

To apply code updates to Subordinate RMP Zones from the Master Zone

1 From the Master Portal, navigate to the **Zone Access Points** container.

2 To update all RMP Zones at once, click **Update RMP** from the **Operations** task group.

or

To update a single RMP Zone, select the individual Zone object and click **Update RMP** from the **Operations** task group.

The code updates are immediately applied to the subordinate zones.

3 Task changes are often delivered with a service pack or new release. To also update the tasks available to a subordinate zone, use the **Open Subordinate Zone** task to access a Zone remotely, and run **Update Tasks** from the Zone Configuration Tasks container. Repeat this step for each subordinate Zone in your enterprise.

4 If the Radia Management Agent was updated by the service pack or new release, it must be re-installed on the subordinate zone host machines as well as all managed devices in the subordinate zones. See Installing the Radia Management Agent on page 314 for more information.

Scheduling Zone Operations

Scheduling Zone Operations requires you to have the following objects in your Zone directory:

- Zones in the Zones Access Points container. When you use Install RMP to install additional Zones in your enterprise, access points to these Zones are automatically created in the Zone Access Points container. For details, see About the Zone Containers on page 96.
- Task Templates for the job being scheduled. For details, see Managing Task Templates on page 346.
- Groups with member devices in each Zone that represent the devices to be operated upon by the schedule zone operation. For details on creating and adding devices to groups, see the topics in Chapter 4, Administrative Functions..

  Groups can be selected from the Groups container, or the Cross References container. If you are using Groups of devices from the Groups container, give the Groups in each Zone the same name. To use the automatically generated groups in the Cross References container, make sure the devices in your Zones have the Radia Management Agent installed on them.

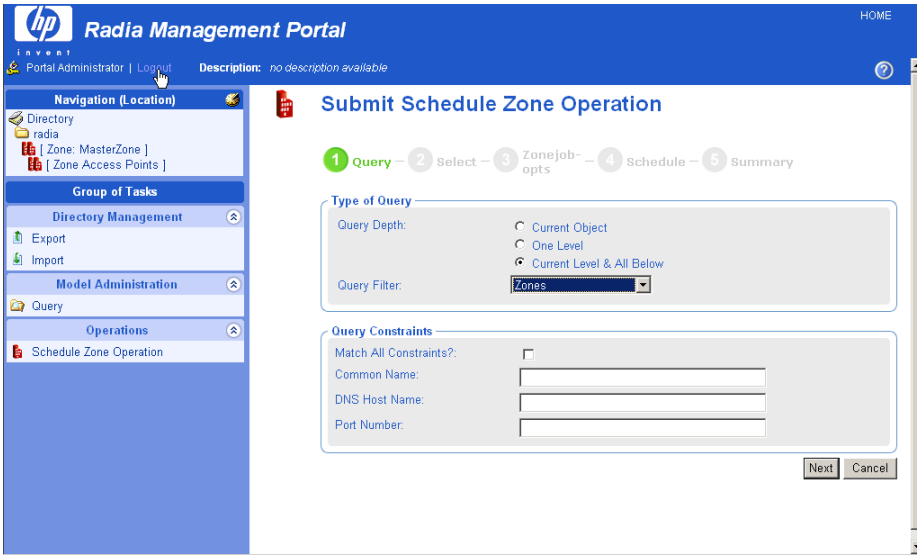
To schedule zone operations

1 Navigate to the **Zone** → **Zone Access Points** container to schedule zone operations for one or more zones.

You may want to add the Zone Access Points container to your desktop. To do this, navigate to the Zone Access Points container and click on the toolbar above the Workspace.

2 From the **Operations** task group, select the **Schedule Zone Operation** task.

The Schedule Zone Operations - Query window opens for you to Query and Select the zones to be included in this schedule.



3 If you have a large number of zones, use the fields on this Query window to limit the list of zones from which to select zones for operations. For example, you can enter a Common Name of B* to limit the list of zones to those starting with B. After entering any filter or Query Constraints, click **Next**.

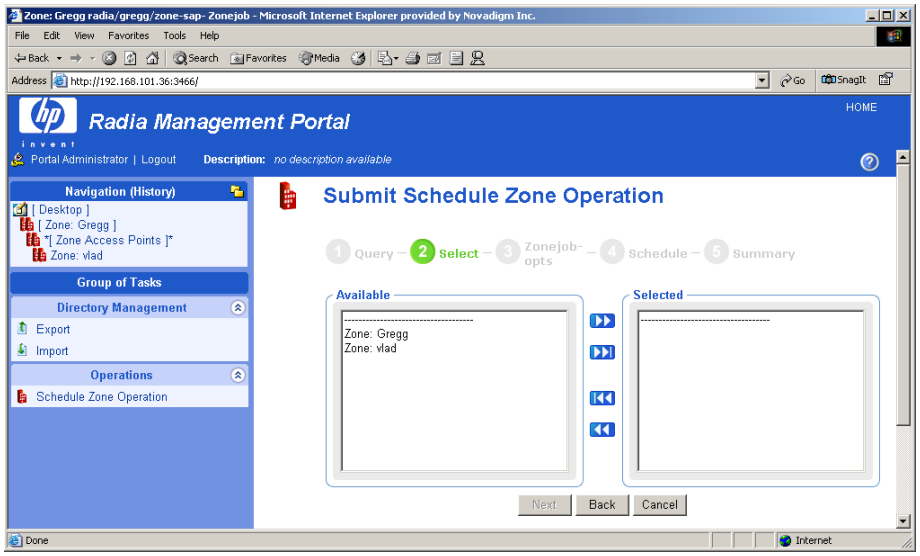
OR

To view and then select from all available zones, click **Next**.

If there is more than one zone meeting your Query constraints, the Submit Schedule Zone Operation – Select window opens. The Zones meeting your query constraints are listed in the **Available** column.

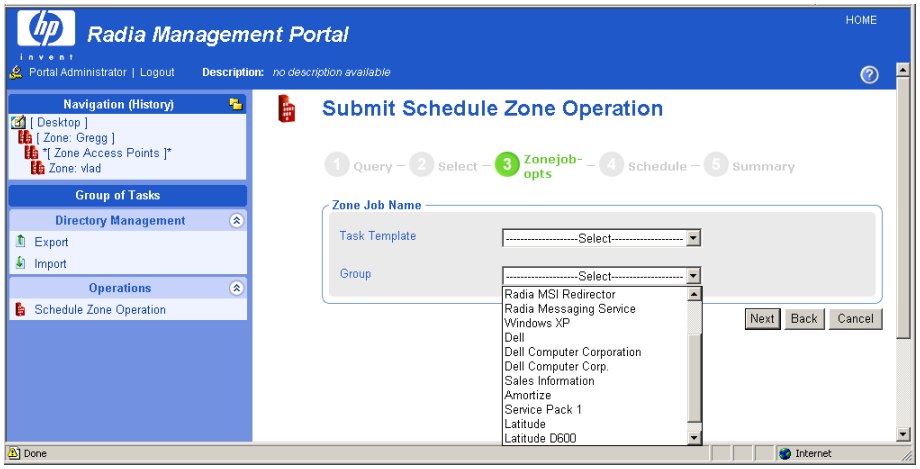
If there is only one Zone meeting your Query constraints, skip to Step 6.

4 Move the zones for the job to be scheduled to the **Selected** column using the Arrow icons, or, by double-clicking on an entry.



5 Click **Next** to schedule the job against the zones listed in the **Selected** column.

The Submit Schedule Zone Operation – ZoneJob opts window opens.



6 Use the **Zone Job Name** group fields to select the task template and the Group of Devices for the scheduled zone jobs. The task template defines the job type and options to be scheduled (the WHAT). The Group represents the group of devices to which the job is to apply (WHICH objects in the selected zones).

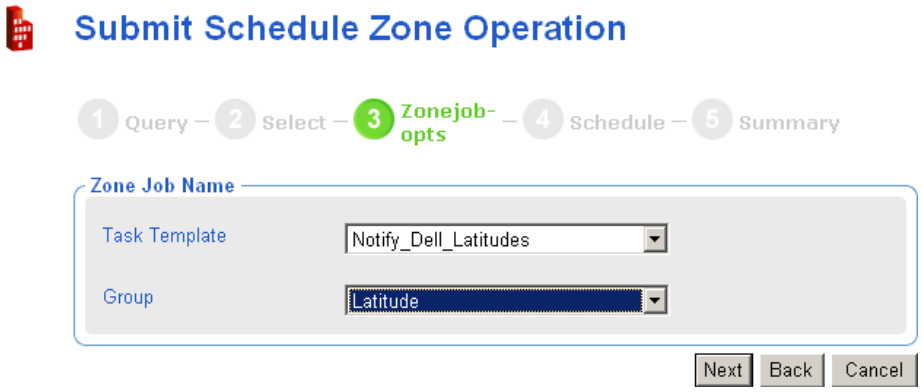
— Select a **Task Template** from the drop-down list. The list represents the task templates that have been entered in the Task Template container at the Directory level of the Management Portal.

— Click the **Group** drop-down list to select one of the groups of devices. The list represents the self-managed groups in the Cross-Reference container as well as the Groups created in the Zone Groups container.

The Cross References groups are automatically created from the hardware, software, managed services, and known Infrastructure services that are installed on the devices within any zone.

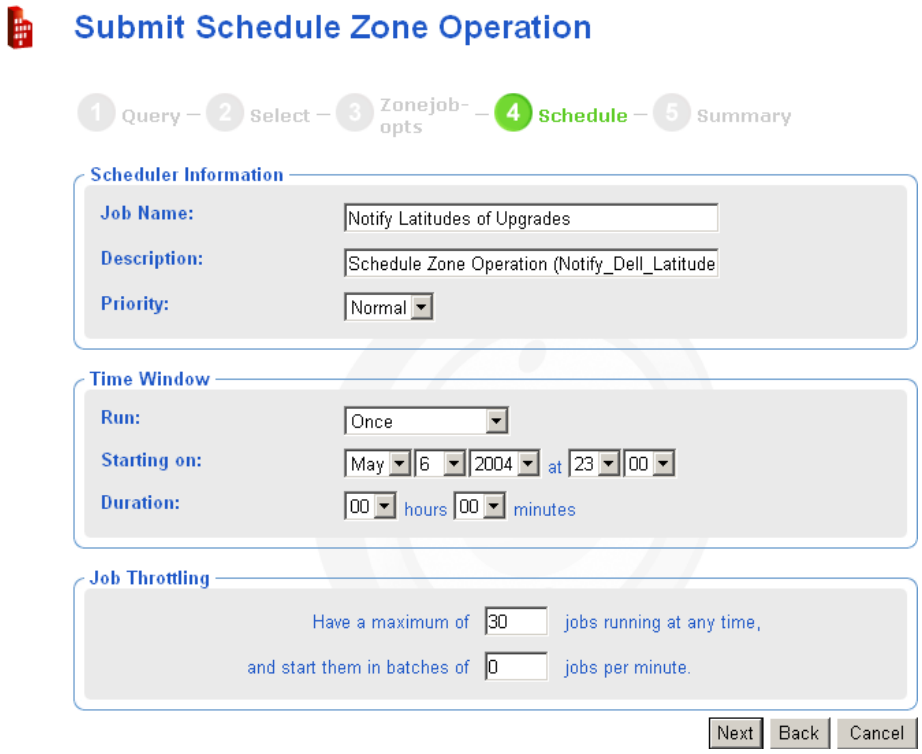
The Groups of devices in the Groups container should exist in each of the Zones you want to target for the Operation.

The following selections in the next figure show the **Notify Dell Latitudes** task template has been selected for the **Latitude** group. The Latitude group is automatically generated in the Cross References groups.



7 Click **Next** to add a schedule to the zone operation.

The Submit Schedule Zone Operations – Schedule window opens.



8 In the **Scheduler Information** area, enter a **Job Name**, such as **`Notify Latitudes of Upgrades`**. If desired, modify the **Description** and **Priority**.

9 In the **Time Window** area, use the **Run** drop-down box to select a frequency for the zone operation job. Complete the schedule options the same as for any other job.

You can select **Do Not Schedule** to save the Job and select the Job for use in the **Sequence Tasks** operation.

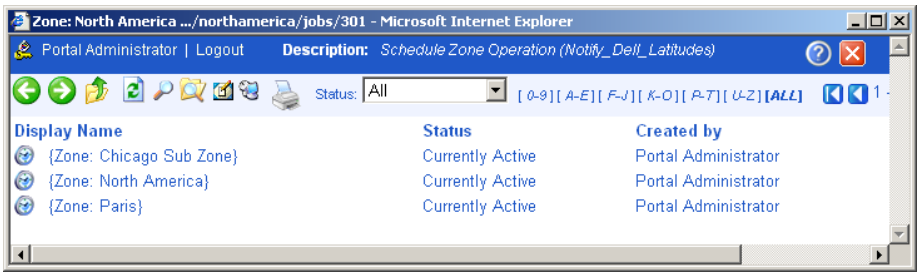
10 In the **Job Throttling** area, enter the maximum jobs to run at any time, and how many can run per minute. The throttling options apply to each zone from which the jobs will run.

11 Click **Next** to review the summary and submit the job.

The Submit Schedule Zone Operation – Summary window opens.

12 Click **Submit** to submit the job for the selected zones.

The Job window opens, and lists a group job for each zone. Note the **Description** in the banner area lists the Zone Operation Job Description.



13 To View Job Properties for any of these zone jobs, click on the job listing, then click on the View Properties toolbar icon: .

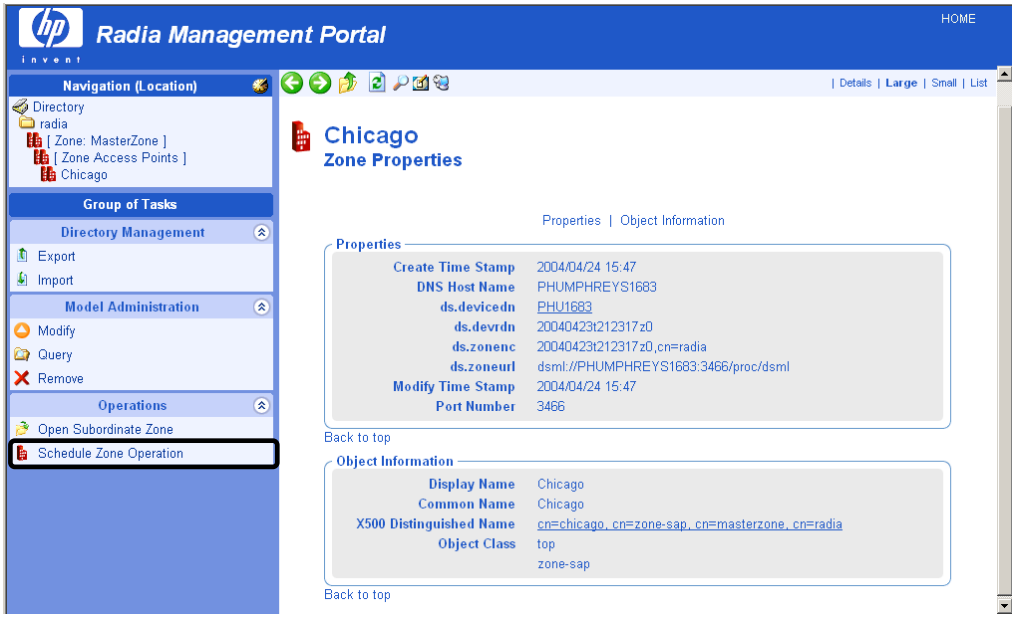
What happens with jobs scheduled from Remote Zone Operations?

A job scheduled using zone operations launches remote zone job groups and jobs at the scheduled time. These jobs can be seen at the remote zone's job directory.

Opening a Subordinate Zone

Use **Open Subordinate Zone** in the **Operations** task group to open any Zone from another one. This task is available when a Zone is selected from the Zone Access Points container. You can use it to view jobs launched from another Zone using the Schedule Zone Operation task.

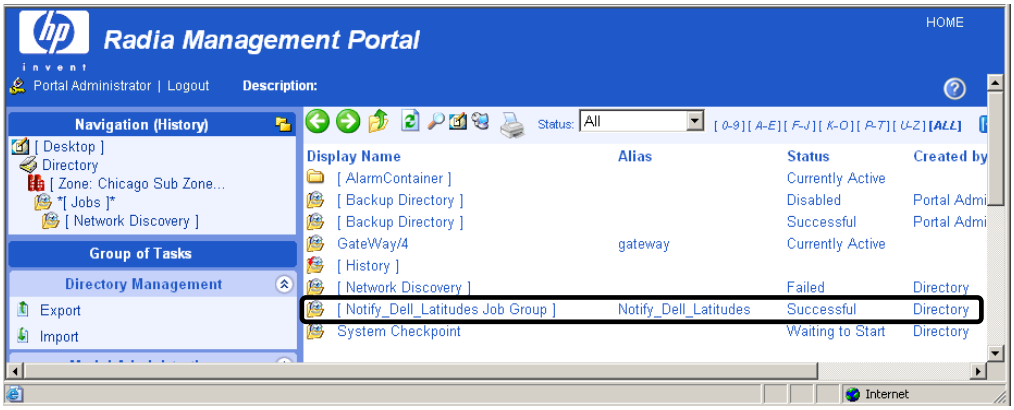
To view the job groups and jobs started at each zone, navigate to the managed zone object in the Zone Access Points container, and then click **Open Subordinate Zone** in the **Operations** task group.



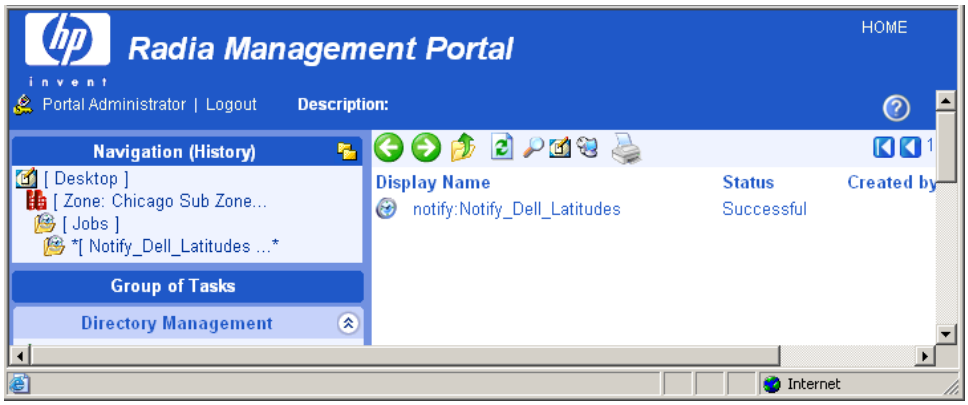
The **Open Subordinate Zone** task opens a new Browser window, accesses the remote Portal Zone, and logs you on using the same credentials as your current login.

Navigate to the **Zone → Jobs** container to see jobs launched from another Portal.

In the following sample figures, the Job Name Scheduled for Zone Operations is **Notify Dell Latitudes**. The zone audience included the Zone of **Chicago**.



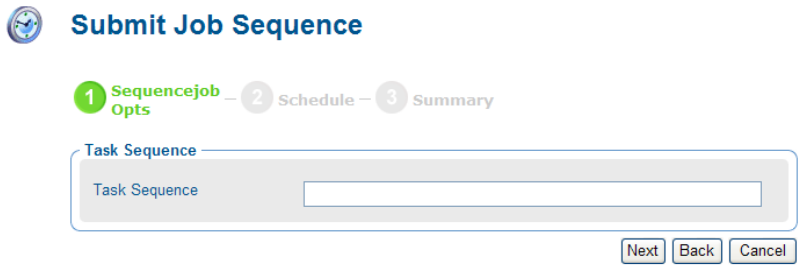
Select the **Notify Dell Latitudes** job group to see the Job details.



To exit a Zone, click **Logout** in the banner area above the Navigation aid, and close the Browser window.

Sequencing Jobs (In Progress)

Use **Add Job Sequence** in the **Operations** task group to schedule a set of tasks to run at one or multiple portal sites. To begin the task, go to the **Jobs** container, and click **Add Job Sequence** in the **Operations** task group.



This feature is currently under development. Sequence Tasks will support selecting task templates and then conditions. For example, you will be able to establish and then run the following set of tasks and conditions from a series of selection menus:

Run: DMA *{if not fail}* Proxy Preload *{if not fail}* Client Notifies

The benefit is that you only need to create and run this job sequence once from the Master Portal, and it will launch a series of jobs at each individual site (named in your Group of Sites), honoring your conditions.

Remote Control (Windows Clients Only)

Use Radia's Remote Control to manage Radia Clients running on a supported Windows platform with TightVNC: Enhanced VNC Distribution through the Management Portal. TightVNC: Enhanced VNC Distribution is a freely re-distributable solution that allows you to control Radia Clients from a remote location. The source code for TightVNC is available for download from **http://www.tightvnc.org**.

HP does not provide technical support for the TightVNC product.

System Requirements

- The remote device must be running Windows NT, 2000, or XP.
- The Radia Management Agent must be installed on the remote device.
- A Web browser that supports Java applets.

Prerequisites

- Ability to use the Radia System Explorer.

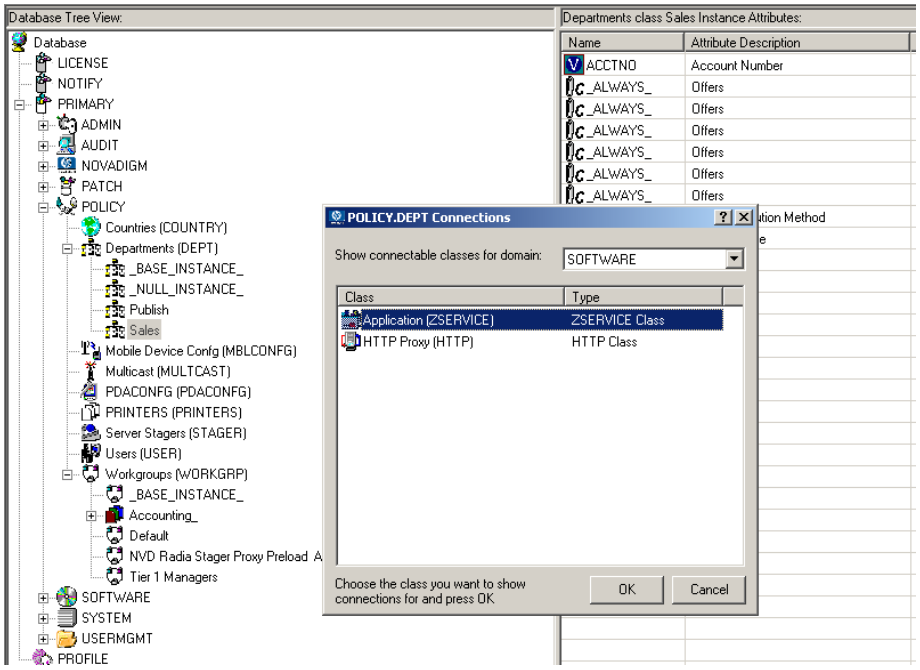
- Ability to distribute applications (with the Radia Client or using a Notify operation).
- In the ZSERVICE class of the Radia Database, the service installation methods (such as ZCREATE and ZDELETE) must be set to a length of at least 57 characters to prevent values from being truncated during the import.
- Ability to connect the Remote Control Service to the appropriate users. See Connecting the Remote Control Service to Users below for more information.
- Distribute the Remote Control service to the devices to be managed by Radia. Some examples of ways to do this are to use the Radia Client or the Notify task in the Management Portal.

Connecting the Remote Control Service to Users

Use the Radia System Explorer on the Radia Administrator's Workstation to connect the Remote Control Service to the appropriate users, servers, or groups, representing the devices to be managed by Radia. Make a service connection between the Application (ZSERVICE).Remote Control service and the appropriate class instance in the PRIMARY.POLICY domain, such as a USER, DEPT, or WORKGRP class instance.

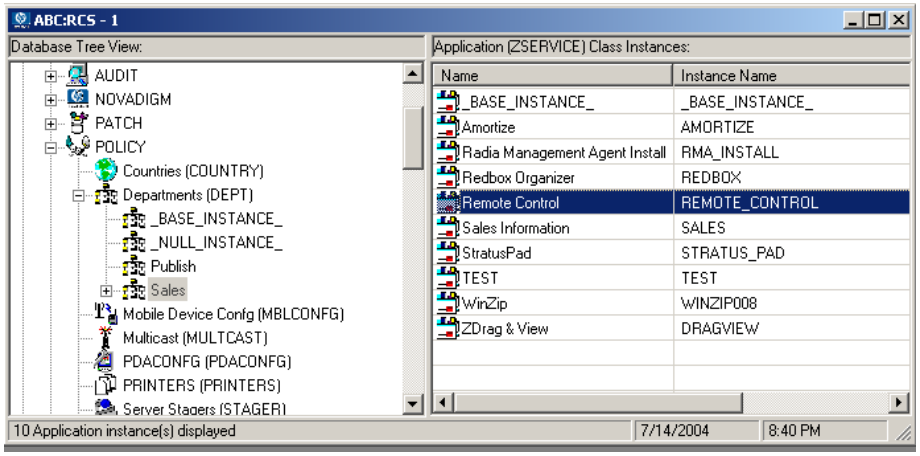
To connect the remote control service to users

1. Use the Radia System Explorer and go to the PRIMARY.POLICY domain.
2. Navigate to the appropriate DEPT, USER, or WORKGRP class instance you want connected to the Remote Control Service. The next figure uses the Sales Department instance as an example.
3. Right-click the selected instance (in the tree view) and select **Show Connections**. The POLICY.DEPT Connections dialog box opens. This dialog box displays a list of classes you can connect the selected instance to.



4 From the **Show connectable classes for domain** drop-down list, select **SOFTWARE**, then select **Application (ZSERVICE)**, and then select **Remote Control**.

5 Drag the **Remote Control** instance to the appropriate POLICY instance (in this example, **DEPT.Sales**). When your cursor turns to a paper clip, release the mouse button.

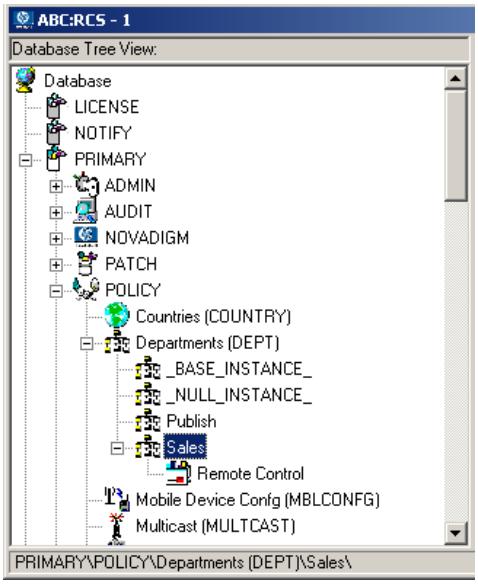


6 Click **COPY** to create the connection from Department Sales to Application.Remote Control.

7 Click **Yes** to confirm the connection.

8 Click **OK** when you receive the confirmation message that "Sales has been connected to Remote Control."

9 Notice that Remote Control is listed under the Sales department instance, which indicates that the entire department is now authorized to receive the Remote Control application.



Now you can distribute the Remote Control service to the devices to be managed using the Radia Client or the Notify task.

Using Remote Control (*Windows Clients Only*)

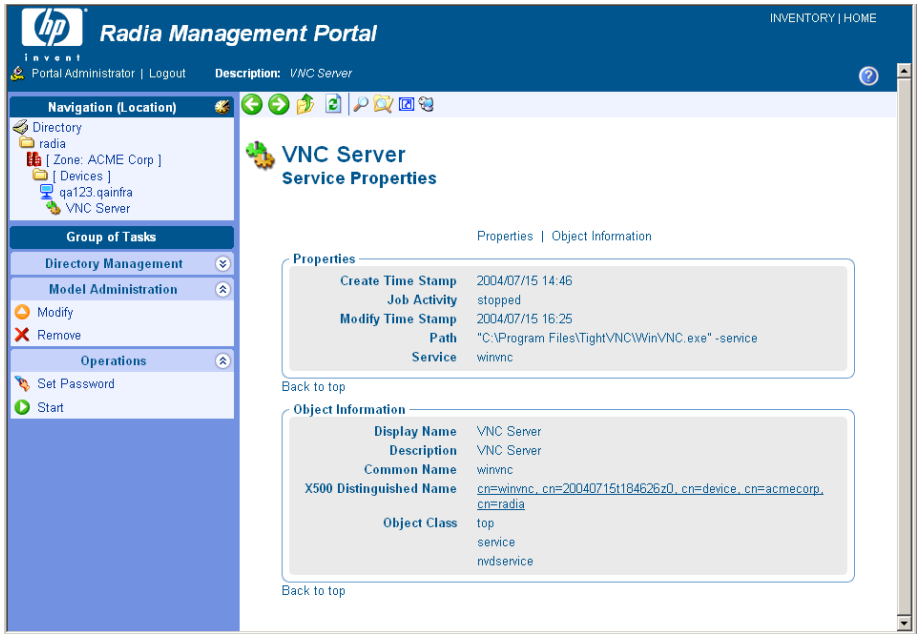
After using the Radia client or the Notify task to distribute the Remote Control service to the remote device, you can use Remote Control to manage the Radia Clients using TightVNC.

To use the remote administration capabilities

1 In the Navigation area, select a device that has the VNC server installed.

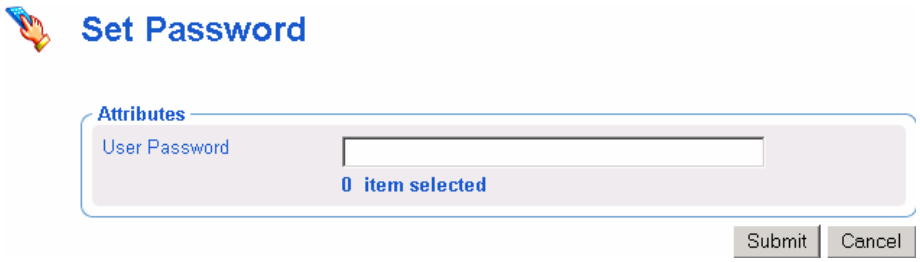
2 Click the **VNC Server**.

The Server Properties page opens for the VNC Server.



3 If this is your first time using the VNC Server, go to the **Operations** task list and click **Set Password**. (If this is not your first time, go to step 8.)

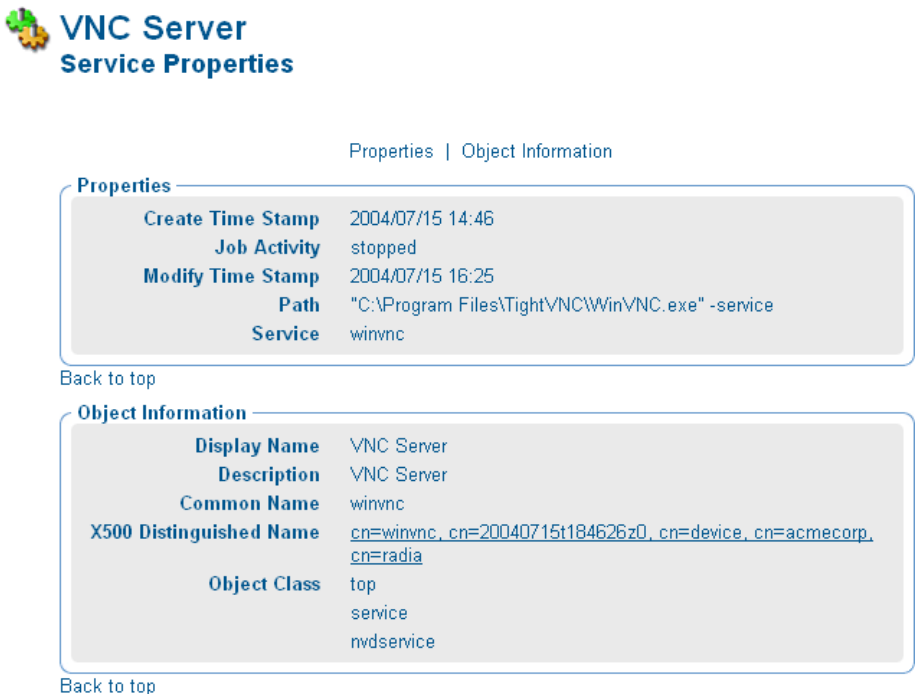
The Set Password dialog box opens.



4 In the **User Password** text box, type the password for the VNC session.

5 Click **Submit**.

The View Properties Service dialog box opens.



6 In the **Operations** task list, click **Start** to start the VNC server.

The **Job Status** page opens with list of the jobs. This page automatically refreshes every 60 seconds.

— Click  if you want to refresh the page to display the latest status.

— Click  to view detailed information, such as the status of the installation.

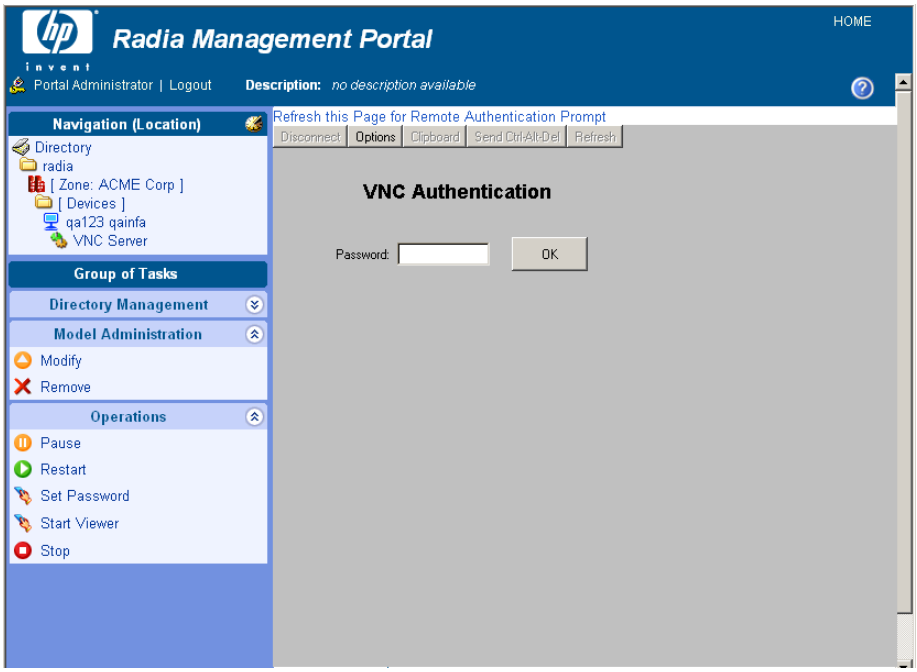
When you are done viewing the job status, click  to close the Job Status page, and return to the Management Portal.

7 In the workspace, click  to refresh the view and see that the service started.

8 In the **Operations** task list, click **Start Viewer** to start the VNC session.

A prompt for VNC authentication opens.

If your Web browser does not support Java applets, you may see this message "Refresh this page for remote authentication" prompt. Be sure to install the Java component.



9 In the **Password** text box, type the password for the VNC session.

10 Click **OK**.

Now, you can control the Radia client from the remote location.

You can customize the **Start Viewer** task to have the VNC session open a new window, or display the VNC session in the Workspace area of the Management Portal. For details, see the topic Customizing the Start Viewer Task Properties on page 372.

The initial request temporarily uses Port 5800. The connection uses Port 5900.

To disconnect the VNC session

1. At the top of the workspace, click **Disconnect** to disconnect the session. If you browse to another page in the RMP, the session will automatically be disconnected.
2. Click **Stop** in the **Operations** task group to stop the VNC server. You may need to click to refresh the view and see that the service started.

Customizing the Start Viewer Task Properties

You can customize the Start Viewer task of the Management Portal to display the remote session in a new window, as opposed to displaying the remote session within the Management Portal workspace area (the default). To do this you will modify the Start Viewer task from the Management Portal before you begin the VNC session.

To customize the Start Viewer Task from the Management Portal

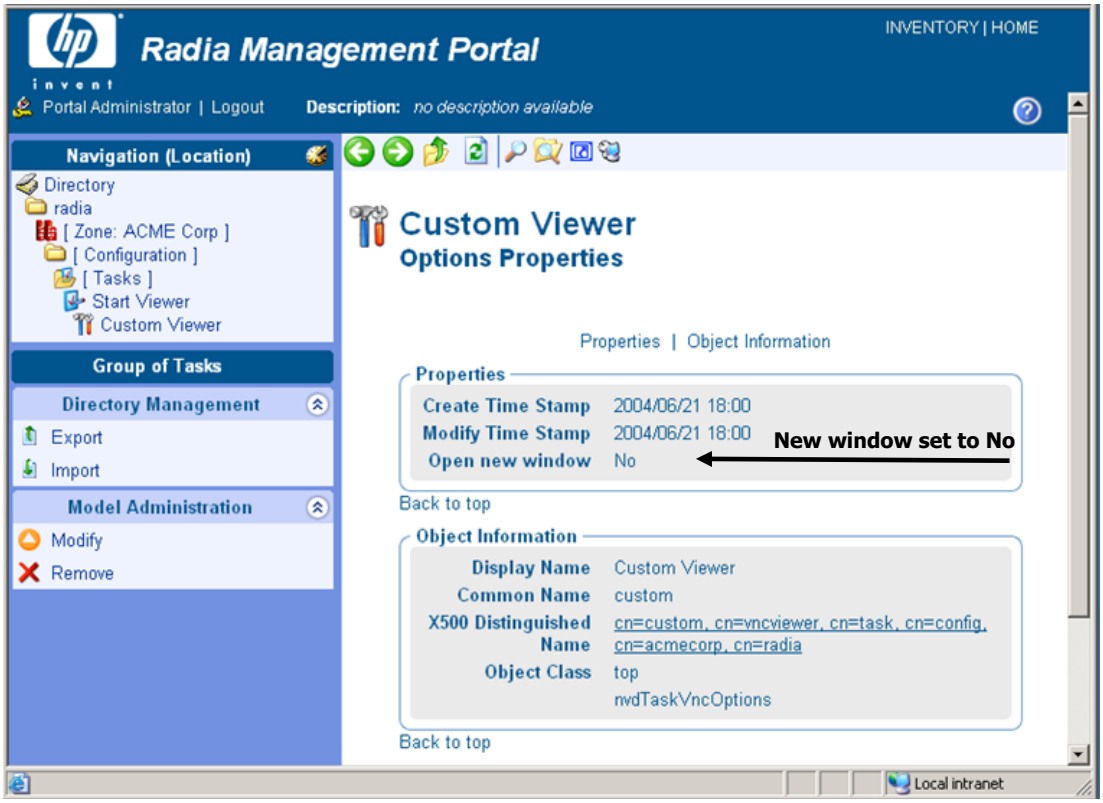
1. Navigate to the Zone Configuration container.

2 In the workspace, click **Tasks**.

3 Browse to and select the **Start Viewer** task.

4 Select **Custom Viewer**.

5 The Options Properties dialog box opens.



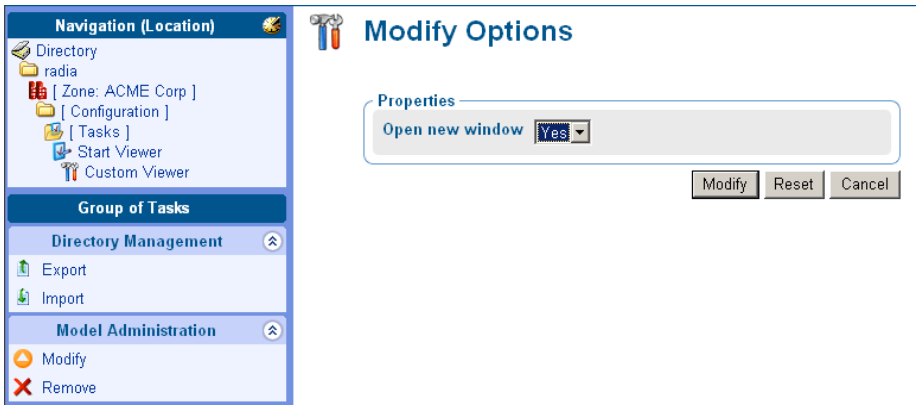
The **Open new window** property can be set to **No** (the default) or **Yes**.

— **No** means the VNC Remote Control session is displayed within the Workspace of the Management Portal.

— **Yes** means the remote session is displayed in a new, separate window.

6 To modify the **Open new window** property, click **Modify** in the **Model Administration** task group.

7 The Modify Options dialog box opens. Use this dialog box to change the value for the **Open new window** property.



8 Select **Yes** or **No** from the **Open new window** drop-down selection list.

— **No** means the VNC Remote Control session is displayed within the Workspace of the Management Portal.

— **Yes** means the remote session is displayed in a new, separate window.

9 Click **Modify** to save your selection.

Configuring Remote Control

You can configure several parameters in the Remote Control Service to control the server's behavior. To do this you will use the Registry Editor in the Radia System Explorer.

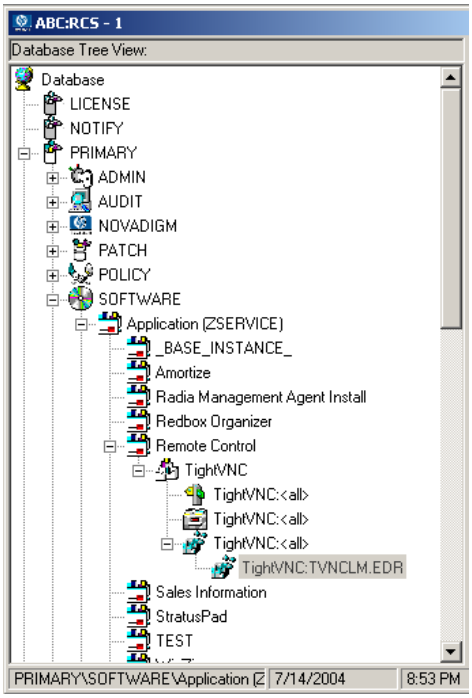
To configure remote control parameters

1 Go to **Start** → **Programs** → **Radia Administrator** → **Radia System Explorer**.

2 In the Radia System Explorer Security Information dialog box, type your User ID and Password, and then click **OK**.

3 Go to **PRIMARY** → **SOFTWARE** → **Application (ZSERVICE)** → **Remote Control**.

4 Double-click **TightVNC** and then double-click the registry resource for TightVNC (the last one).



5 Right-click **TightVNC:TVNCLM.EDR** and select **Edit Registry Resource**.

6 Navigate to **WinVNC3** to view the local machine-specific settings.

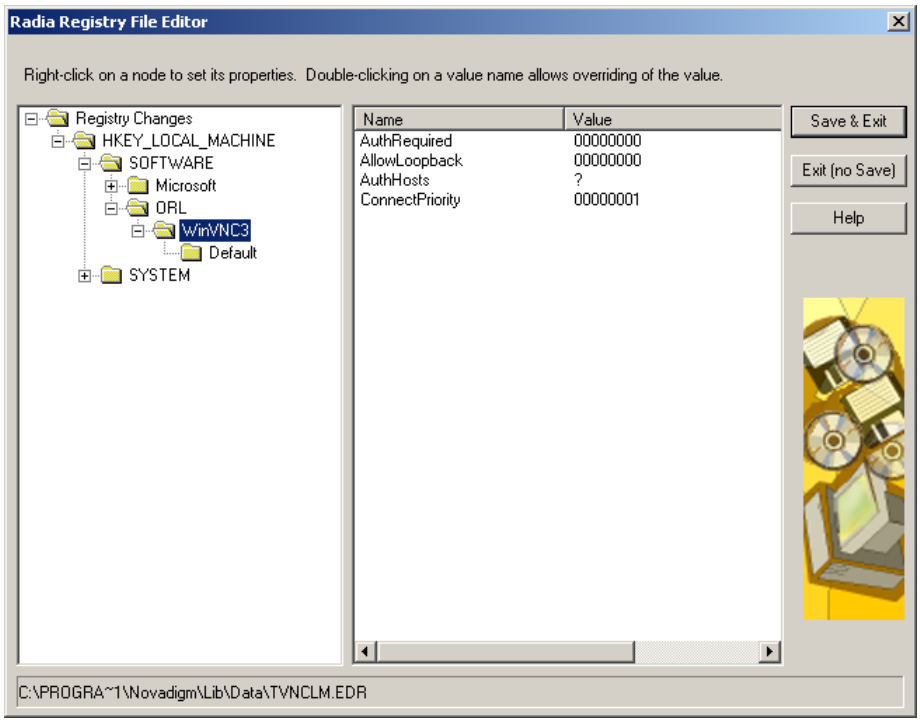


Table 20: Local Machine-Specific Settings for TightVNC Service

Field	Description
AuthRequired	Set AuthRequired = 1 (default) to ensure that a password is set when you start the service. Set AuthRequired = 0 to disable null password checking by WinVNC. Use DWORD format.
AllowLoopback	Set AllowLoopback = 0 to disable the ability to remote control the local machine. Set AllowLoopback = 1 to allow the ability to remote control the local machine. Use DWORD format.

Field	Description
AuthHosts	Specifies a set of IP address templates that incoming connections must match in order to be accepted. By default, the template is empty and connections from all hosts are accepted. Three settings are available: - IP address – Specifies a range of IP addresses that are not authorized to connect ? IP address – Specifies a range of IP addresses that you want to be prompted for + IP address – Specifies a range of IP addresses that are authorized to connect Example: +192.10,-192.10.12 This parameter is used in conjunction with the QuerySettings parameter. Use STRING format.
ConnectPriority	By default, the TightVNC server disconnects existing connections when a non-shared connection authenticates. You can change this behavior by setting this value to: 0 - to disconnect all existing connections 1 - to continue all existing connections. 2 - to refuse any new connections. Use DWORD format.

7 Click **Default** to see the local default user properties that you can set.

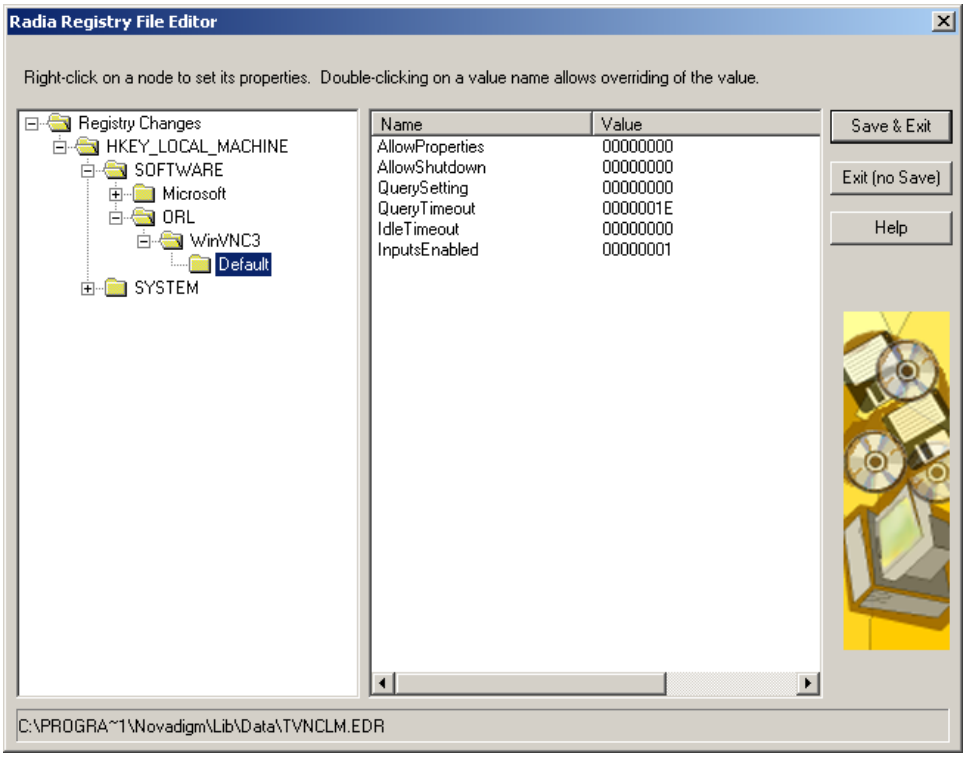


Table 21: Local Default User Properties for TightVNC Service

Field	Description
AllowProperties	Set AllowProperties = 0 to prevent your users from accessing the Properties dialog box to modify settings. Set AllowProperties = 1 to allow your users to access the Properties dialog box and modify settings. Use DWORD format.
AllowShutdown	Set AllowShutdown = 0 to prevent your users from shutting down the TightVNC server. Set AllowShutdown = 1 to allow your users to shut down the TightVNC server. Use DWORD format.

Field	Description
QuerySetting	Sets whether you want to prompt the user about an incoming connection. This setting must be used in conjunction with AuthHosts. Set this value to: 0 or 1 – Does not prompt on incoming connection. 2 – Prompts on incoming connection (default). Use DWORD format.
QueryTimeout	Specifies how long (in seconds) the prompt panel appears to the user when you begin a remote control session. This panel prompts the user to accept the session. Use DWORD format.
IdleTimeout	Indicates how long (in seconds) a VNC client can remain idle for before being disconnected. If this is blank or set to 0, a timeout is not enforced. Use DWORD format.
InputsEnabled	Allows incoming connections to send input. If InputsEnabled = 1 you can interact with the remote computer. If InputsEnabled = 0 you can view the remote computer, but cannot interact with it. Use DWORD format.

Summary

- Bring computers in your network under control of the Management Portal using the Manage Computer task. This is required before performing any other operation from the Portal.
- Each task in the Management Portal follows a similar lifecycle.
- The starting location of a task determines the audience for the task. Typical starting locations are groups in the Groups container and Cross Reference Containers.
- You will encounter a series of dialog boxes that you must complete in order to create the job. These dialog boxes are used to narrow the scope of the job, select from available objects, specify job options, specify scheduling information, and review a summary of the job.
- Use the Notify tasks to perform an action on a set of target devices.
- Add Task Templates to streamline tasks for Notifies, Proxy Server installations, and Scheduling Jobs to run in multiple Zones.
- Before performing remote installations, you must copy the appropriate files to the Management Portal's media directory.
- Use the **Install Management Agent** task to deploy the Radia Management Agent on remote devices.
- Use the **Install Client** task to deploy the Radia Clients to remote devices.
- Use the **Install Proxy Server** task to deploy the Proxy Server to remote devices.
- Use the **Synchronize Proxy Server** task to preload files from the Configuration Server to the static cache on the Proxy Server.
- Use the **Purge Dynamic Cache** task to purge the dynamic cache of the Proxy Server.
- You can use the Start, Stop, Pause, Restart, and Resume tasks to manage remote infrastructure products.
- Use the Install RMP task to create additional Zones in your enterprise. You can access remotely installed Zones using Open Subordinate Zones from the Zone Access Points container.
- Use the Update RMP task to apply the code delivered in an RMP service pack to the remote RMP Zones in your enterprise.

- Use like-named Groups or Cross Reference Groups to schedule jobs to run on multiple zones in your enterprise.
- You can use Remote Control to manage Radia Clients with TightVNC from a remote location.

6 Troubleshooting

At the end of this chapter, you will:

- Be familiar with the Management Portal log files.
- Be familiar with the common message types.
- Be familiar with the information that you need to collect for HP Technical Support.
- Be familiar with the Portal Zone Directory (ZONE.MK) file compression and backup utilities.

About the Log Files

The Management Portal writes several logs, which can be used to track progress and diagnose problems. The log files are stored by default in *SystemDrive*:\Novadigm\ IntegrationServer\logs for the Management Portal for Windows.

The log files are:

- httpd-*port*.log
  This is the main log for the Management Portal. It contains information about the actions that you perform in the Management Portal, operational statistics, as well as the version and build number of the Management Portal.

  Replace *port* with your port number, for example, httpd-3466.log.

  Each time you start the Web server a new log is written. The old log is saved as httpd-*port*.*nn*.log.

- httpd-port.YY.MM.DD.log
  This log contains the Web server activity for each day. If the log is empty, it means that there was no activity that day.

- httpd-3466.error.txt
  This log contains messages written to any logs that contain the prefix ERROR. This allows you to view all errors in a single location.

Setting Trace Levels

By default the trace level is set to 3, which is the informational tracing level. This displays INFO, WARNING, and ERROR messages. See Common Message Types on page 386 for more information.

To change the trace level for the logs

1 Open the file *SystemDrive*:\Novadigm\IntegrationServer\etc\httpd.rc for Windows, which is located on the computer that is running the Management Portal. The following is an excerpt from this file.

```
# Config Array
# Element Default
# ======= =======
```

```
# HOST          [info hostname]
# PORT          3466
# HTTPS_HOST    [info hostname]
# HTTPS_PORT    443
# DEBUG         0
# DOCROOT [file join $home htdocs]
# IPADDR  {}
# HTTPS_IPADDR  {}
# WEBMASTER     support@novadigm.com
# UID           50
# GID           100
# NAME          $tcl_service
# LOG_LEVEL     3
# LOG_LIMIT     7
#
Overrides Config {
    PORT  3466
    HTTPS_PORT  443
    LOG_LEVEL   4
}
#
# (Re)Initialize Logging
#
Log_Init
```

2 Type **LOG_LEVEL** and the appropriate trace level, space delimited, within the Overrides Config starting and ending brackets { }. Select the appropriate trace level, as follows.

Table 22: Trace Levels

Trace Level	Description
0	No logging.
1	Logs errors only.
2	Logs warnings and errors.
3	Logs informational messages, warnings, and errors. *Recommended trace level setting for customers.*
4	Logs all debug information. *Recommended for experienced customers only.*
5 - 9	Full trace *Not recommended for customer use.*

3 Save the file changes and restart the Radia Integration Server service.

Common Message Types

The following message types are used in the main Management Portal log (`httpd-port.log`).

Table 23: Common Message Types

Message Type	Description/Example

Info	Provides general information. For example:
	`20010913 12:37:55 Info: LdifImport/4: BEGIN`
	Indicates that a job to import an LDIF has begun.
	`20010913 12:37:55 Info: RMP: Starting Scheduler...`
	Indicates that the RMP Scheduler service is started.
	`20010913 12:37:55 Info: RMP: Management Portal ready`
	Indicates that the Management Portal is up and running.

Message Type	Description/Example
Audit/success	Indicates a successful change to an object in your Management Portal Directory. For example: `20010913 12:46:43 Audit/success: RMP: (who/admin) add: uid=jbanks, cn=opsys,ou=who` Indicates that a new user was added.
Audit/failure	Indicates an unsuccessful change to an object in your Management Portal Directory. For example: `20010913 16:26:31 Audit/failure: RMP: (who/admin) add: uid=Guest, ou=who, object "uid=guest,ou=who" already exists` Indicates that you were not able to add a user with the ID Guest to the organizational unit "who" because it already exists.
Error	Indicates a critical problem.
Warning	Indicates a non-critical problem. `20010913 16:20:42 Warning: to: output to 1 job-create-reply 2 resume: no gate`

Collecting Information for HP Technical Support

If you need to contact HP Technical Support for assistance, be sure to collect the following information:

1. The log directory, stored by default in the following locations:

   For Windows, *SystemDrive*:\Novadigm\IntegrationServer\logs

2. Version information for nvdkit.exe. See Viewing the Version Information Window, below.

3. The zone.mk file and zone.ldif file, stored by default in the following location:

   For Windows, SystemDrive:\Novadigm\IntegrationServer\etc

   See Creating a Backup of the Portal Zone Directory on page 253 for information about these files.

4. The etc directory files and complete etc/zone subdirectory contents), stored by default in the following location:

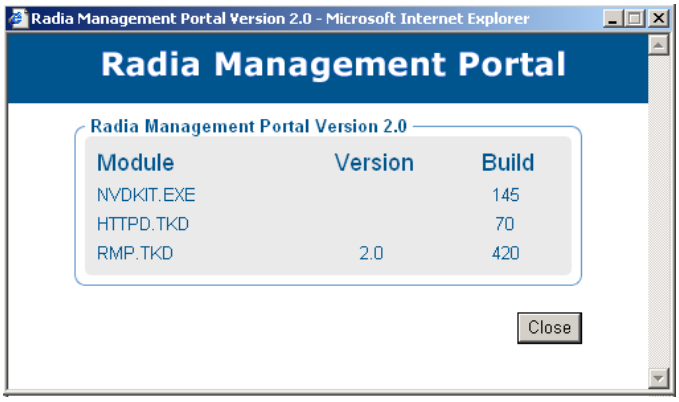
   /opt/Novadigm/IntegrationServer/etc

   The etc/zone subdirectory holds the *.mk, *.ldif, and *.chkp files for loading all objects in a Management Portal zone.

   - device
   - group (of devices)
   - jobs
   - user
   - xref
   - In the config folder are entitlement, msg, and task files.
   - In the jobs folder are the history files.
   - In the network folder are the dns and lanmanredirector files.

Viewing the Version Information Window

After logging into the Management Portal, click the Information button  on the banner area to open the Version Information Window, shown in the following figure.



This window displays the installed Module, Version, and Build levels for the Management Portal, including `NVDKIT.EXE`, `HTTPD.TKD`, and `RMP.TKD`.

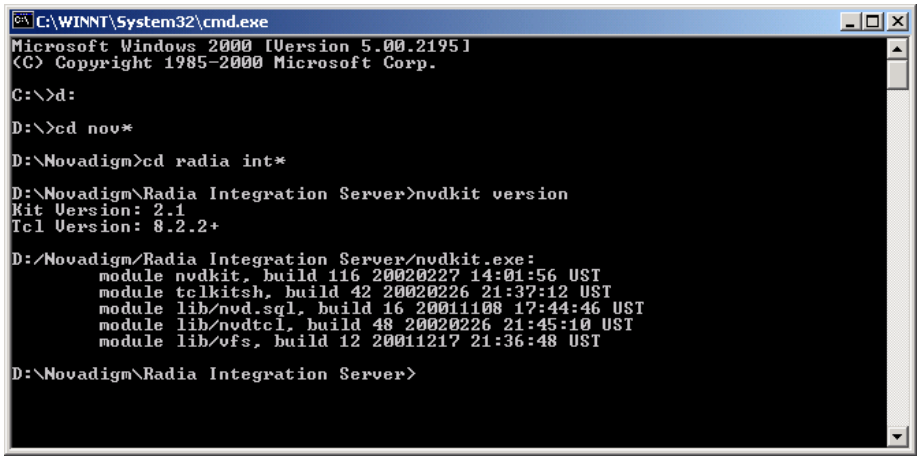
Gathering Version Information for NVDKIT.EXE

Use this command-line method of obtaining version information for `NVDKIT.EXE` as an alternative to viewing it from the Version Information window of an active Management Portal session.

To gather the version information for NVDKIT.EXE

1. Open a command prompt.
2. Navigate to the location of `nvdkit.exe` (by default, *`SystemDrive`*`:\Novadigm\IntegrationServer`)
3. Type **`nvdkit version`**, and press **Enter**.

   Below is an example of the version information.



The httpd-*port*.log also contains version and build information.

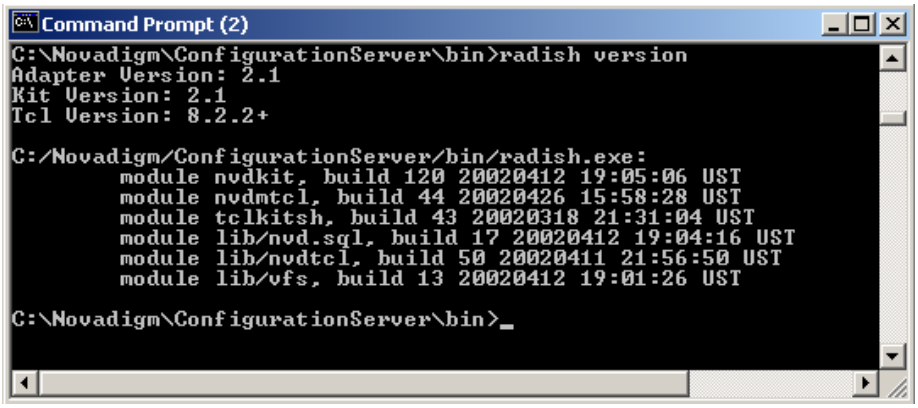
Gathering Version Information for RADISH.EXE

Radish.exe runs on the Configuration Server. Its build (version) information can be found using this procedure.

To gather the version information for RADISH.EXE

1. Locate the directory of your radish.exe on the machine running the Configuration Server. The default is *SystemDrive*:\Novadigm\ConfigurationServer\bin for Windows.
2. Open a command prompt and change to the directory for radish.
3. Type **`radish version`**, and press **Enter**.

   Below is an example of the version information.



4 The build number for `radish.exe` is actually given in the build number for module nvdmtcl (its predecessor's name) in the line:

`module nvdmtcl, build xx <date> <time>`

For example, the figure above illustrates a Configuration Server running Build 44 of radish (which is shown as module nvdmtcl, build 44 in the output).

`Radish.exe` replaced an earlier program named `nvdmtcl`.

Managing the Portal Zone Directory (ZONE.MK) File

The Portal Directory, `zone.mk` (in the Radia Integration Server's `\etc` directory), loads all configuration and entitlement information for the Management Portal as well as devices, groups, managed infrastructure, job status, network and mounted services information. A single zone has an absolute upper limit of 10,000 devices.

We recommend limiting the number of devices managed by a single zone to the following:

- Recommended: 1,000 to 2,000 devices
- Maximum: 5000 devices

To create additional zones in your enterprise, see Installing Additional RMP Zones (Subordinate Zones) on page 349.

Summary

- The `httpd-port.log` is the main log for the Management Portal.
- The default trace level is set to 3, which tracks informational messages, warnings, and errors.
- Collect your logs and version information if requesting support from HP Technical Support.
- Version and build information can be found by clicking  on the Management Portal's banner area after logging on. Alternatively, from a command prompt you can run "nvdkit version" on the client side, and "radish version" on the Manager (Configuration Server) side..

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