

HP OpenView Application Manager Using Radia

Radia Application Manager Guide

Software Version: 3.1

for the UNIX operating system



Manufacturing Part Number: T3424-90076

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- Troubleshooting information
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- Support program information

Preface

About this Guide

Note to Reliant Users

This guide contains information pertaining to the 3.1 Limited Availability release of the Radia Application Manager for Reliant.

Who this Guide is for

This book should be used by systems administrators who are implementing Radia in their environments, and who want to publish and deploy applications throughout their enterprises.

What this Guide is about

The *Radia Application Manager Guide for UNIX* describes:

- how to publish applications.
- how to implement entitlement policies.
- how to deploy applications.
- Radia Client objects.

Summary of Changes

This printing of the *Radia Application Manager Guide for UNIX* for use with Radia Application Manager version **3.1** contains the following changes to information and procedures for the following chapters.

Note to Reliant Users

This guide contains information pertaining to the 3.1 Limited Availability release of the Radia Application Manager for Reliant.

3.1 Note

Items with **3.1** represent changes that are specific to version **3.1**. To take full advantage of the new features, you will need the Radia Database version 3.1 or above.

Note

In the past the Radia Database and Radia Configuration Server were released with identical version numbers. We have moved to a new convention where the Radia Database is a separate component represented by its own version number beginning with 3.1. This guide is for use with the Radia Database version 3.11.

Global Changes

- Added information throughout the guide about the Siemens Reliant operating system. The 3.1 Radia Application Manager for Reliant is considered a limited availability release.

Chapter 2: Installing the Radia Application Manager

- 3.1** All graphical and non-graphical Radia Client installations have been updated for version 3.1.
- 3.1** Page 68, *Figure 2.27 ~ Select Components to install: Radia Inventory Manager*: The default for installing the Radia Inventory Manager has changed from **Y** to **N**.
- 3.1** Page 69, *Figure 2.28 ~ Select Components to install: Radia Software Manager*: The default for installing the Radia Software Manager is **N**.
- 3.1** Page 34, *System Requirements*: Updated System Requirements to include SUSE Linux and RedHat Enterprise Linux requirements.

Chapter 5: Publishing Applications and Content

- Page 140, *Published Owner, Group, and Permission Considerations*: updated this section.

Chapter 7: Deploying Applications

- 3.1** Page 256, *Table 7.6 ~ radskman Parameters*: The hreboot parameter replaces the handle_reboot parameter. The default has been changed to **y** to handle reboot requests. There are also eight new parameters that have been added to this table: ask, autofix, preload, rtimeout, sslmgr, sslport, local, and merge.
- 3.1** Page 270, *Table 7.7 ~ Logs Used to Troubleshoot Scheduled Applications*: new log added – connect.log.

Chapter 8: Radia Client Objects

- 3.1** Page 321, *Table 8.2 ~ Variables in ZCONFIG*: Updated to display new Radia 3.1 variables.

Editorial Improvements

In addition to the changes listed above, this version contains various editorial and style updates to each chapter and section as well as the Index.

Conventions

You should be aware of the following conventions used in this book.

Table P.1 ~ Styles

Element	Style	Example
References	<i>Italic</i>	See the <i>Publishing Applications and Content</i> chapter in this book.
Dialog boxes and windows	Bold	The Radia System Explorer Security Information dialog box opens.
Code	Andale Mono	radia_am.exe
Selections	Bold	Click Next to continue.

Table P.2 ~ Usage

Element	Style	Example
Drives (system, mapped, CD)	Italicized placeholder	<i>SystemDrive</i> : \Program Files\Novadigm might refer to C:\Program Files\Novadigm on your computer. <i>CDDrive</i> : \client\radia_am.exe might refer to D:\client\radia_am.exe on your computer.
Files (in the Radia Database)	All uppercase	PRIMARY
Domains (in the Radia Database)	All uppercase	PRIMARY.SOFTWARE May also be referred to as the SOFTWARE domain in the PRIMARY file.
Classes (in the Radia Database)	All uppercase	PRIMARY.SOFTWARE.ZSERVICE May also be referred to as the ZSERVICE class in the SOFTWARE domain in the PRIMARY file.

The table below describes terms that may be used interchangeably throughout this book.

Table P.3 ~ Terminology*

* Depends on the context. May not always be able to substitute.

Term	May also be called
Application	software, service
Client	Radia Application Manager and/or Radia Software Manager
Computer	workstation, server
NOVADIGM domain	PRDMAINT domain Note: As of the 4.0 release of the database, the NOVADIGM domain is being renamed the PRDMAINT domain. Therefore, if you are using an earlier version, you will see the NOVADIGM domain in the database.
Radia Configuration Server	Manager, Active Component Server
Radia Database	Radia Configuration Server Database

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Introduction

At the end of this chapter, you will:

- Understand the components of Radia.
- Know the structure of the Radia Database.
- Understand suggested deployment strategies.
- Know how to use this manual.
- Be familiar with the requirements for a test environment.

About Radia Technology

Enterprises have tried several different software distribution methods to solve the challenge of distributing digital assets. These methods include:

- **Electronic CDs**
Individual users can manually personalize their own software, but this method lacks the ability to standardize software, and does not allow for synchronized installation.
- **Electronic Software Distribution (ESD) tools**
This method ensures synchronized delivery, but at the price of excessive standardization. Everyone in the organization is forced to get a one-size-fits-all copy of the same thing, without any personalization of software, although each department in an organization may have different software needs.
- **Push Products**
Some companies are attempting to deal with the software management challenge with Internet-based push technology. This method, similar to ESD, ensures synchronized delivery, but does not allow for customization.

Radia technology provides high levels of adaptability, flexibility, and automation. Adaptability comes from the embedded intelligence of platform-independent object-oriented technology. Flexibility is provided by the media-independence of Radia technology that enables content to be easily revised and customized. And our solutions automate digital asset management across virtually any kind of network. The following bullets detail each of these distinctive capabilities which are essential to Radia technology:

- **The Embedded Intelligence of Object-Oriented Technology**
Object-oriented technology transforms software and content from file-based media into self-aware, platform-independent, intelligent objects that automatically assess the environment into which they are deployed, and personalize, install, update, and repair themselves accordingly. In other words, as intelligent objects, they know what they need for a particular device or user, where to get what they need, when they need to change, how to change themselves, and how to repair themselves.
- **Revisable Packaging for Revisable Content**
Radia technology enables revision and customization of software and content at any midstream point in the publisher-to-subscriber deployment process. Because Radia technology transforms software and content into objects, these objects can be easily modified midstream – subtracted from, added to, reconfigured – simply by packaging them with other objects or new configuration information. With revisable packaging, value-added service providers and IT administrators can customize standard published software offerings for the needs of their particular users without having to unpack and repackage everything.
- **Self-Managing Infrastructure**
The object-oriented intelligence of Radia technology incorporates a self-managing infrastructure. This capability begins with network-independence, with Radia technology flexibly supporting any deployment environment, whether client/server, local, wide or virtual area network, intranet, extranet, or the Internet. Furthermore, we support whatever distribution media make sense for the target audience and the provider (which might be a software publisher, application service provider (ASP), Internet service provider (ISP),

provider of enterprise application integration (EAI) services, e-business integrator, e-commerce component provider, or in-house IT administrator).

In the Internet age in which software is fundamental to the ability of businesses to compete, change is a constant state, and audience diversity has grown beyond the capacity of older technologies to manage. Radia technology provides the necessary automation, adaptability, and flexibility to solve the software management challenge.

Distribution Models

Radia manages the distribution of digital assets based on your *distribution model*. A distribution model records the identities and intended configurations of the desktop computers whose configurations are managed by Radia. The distribution model can be simple or complex. At a minimum, a Radia distribution model includes the following five elements:

- **Users**
The identity of the computers being managed.

Note

The term computer is used to refer to a workstation or server.

- **Applications**
The digital assets that are being managed.
- **Application Files**
The components that make up the digital assets.
- **Deployment Source**
The location where the application components are centrally stored, such as on a Radia Staging Server or Radia Configuration Server, so they can be deployed to the users.
- **Deployment Destinations**
The location to which the application and its files will be distributed, such as desktop computers, PDAs, and laptops.

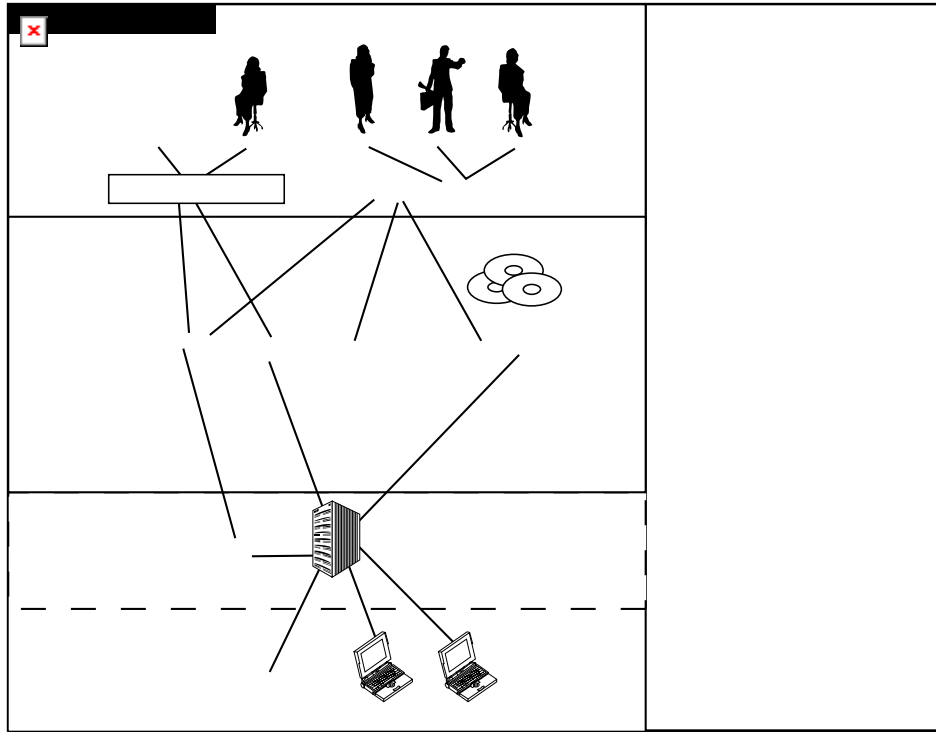


Figure 1.1 ~ Elements in a distribution model.

Use Radia to manage all of these elements. You will publish *packages* of digital assets, assign these packages to users, and define how the packages will be deployed.

Note

A *package* is a unit of distributable software or data.

The Radia Database

The Radia Database, stored on the Radia Configuration Server, records your distribution model. This includes all of the information that Radia uses to manage applications on a client computer, including:

- The software or data that Radia distributes.
- The distribution model for each client computer.
- The policies determining which subscribers are assigned to which packages.
- Security and access rules for Radia administrators.

Use the Radia System Explorer to view and manipulate the Radia Database. The Radia Database is hierarchically structured, and its components consist of files, domains, classes, instances, and attributes.

Note

The Radia System Explorer is currently available for 32-bit Windows platforms. For more information, refer to the *Radia System Explorer Guide*.

Table 1.1 ~ Radia Database Structure

Term	Description
File	Highest level in the hierarchy of the Radia Database. Groups similar domains together. Example: The PRIMARY file is used to define and maintain the distribution model. This is one of the pre-configured files distributed with Radia.
Domain	Logically partitions a Radia file. Groups similar classes together. Example: The POLICY domain contains the classes needed to create users and groups.
Class	A category of the distribution model. The class is a template for the attributes needed to create an instance of the class. Refer to the <i>Radia Class Reference Manual</i> for information on the structure and usage of Radia classes. Example: The USER class of the POLICY domain defines subscribers of Radia-managed applications. It defines all of the attributes necessary to identify the client computer to be managed by Radia.
Class Instance or Instance	An object containing a specific occurrence of a class. This is analogous to a row in a relational data table, or a record in a traditional flat file. The attributes of a class instance object contain data describing one specific entity of that class. Example: A USER instance is an object created from the USER class, containing the information needed to identify a subscriber's client computer.
Attribute Attribute Value	An attribute is a data element of a class. The class contains the definition (e.g., the name, data type, description, and length) for each attribute comprising the class. Each class instance created from the class contains a value for each of the attributes defined in the class. Example: The NAME attribute of a USER class contains the name of the user, and the USERID attribute contains the User ID, as specified by the Radia administrator.

When you install the Radia Configuration Server, LICENSE and PRIMARY are the only two files available. As you use Radia, your Database may change.

- The LICENSE file is read-only and used for Radia Configuration Server processing. This file is for HP use and should not be modified.
- The PRIMARY file is where you will find most information regarding software management. Within the PRIMARY file, there are seven domains.
 - Use the ADMIN domain for defining administrative rights and rules for connecting classes.
 - Use the AUDIT domain to configure tasks that will inventory, or audit, client computers' assets. See the *Radia Inventory Manager Guide* for additional information.
 - Use the NOVADIGM domain to store packages for self-maintenance. See *Radia Application Manager Self-Maintenance* on page 183.
 - Use the PATCH domain to store the list of available patches within a PATCH class. See the *Radia System Explorer Guide*.
 - Use the POLICY domain to create users and groups, and to assign users to groups. See the *Implementing Entitlement Policy* chapter in this book for more information.
 - The SOFTWARE domain contains information about the software being managed and the methods used to deploy the software. See the *Publishing Applications and Content* and *Deploying Applications* chapters in this book.
 - The SYSTEM domain contains administrative and process control definitions.
- The PROFILE file contains information collected from client computers. The file appears after the first client computer has registered with the Radia Configuration Server. This information is used to connect to computers to deploy software managed by Radia, and to see the configuration of the client computer. The PROFILE file is discussed in the *Radia Client Objects* chapter in this book.
- The NOTIFY file contains information about attempts by the Notify function to update, remove, or e-mail subscribers. This file appears after the first attempted Notify. For more information about Notify, see the *Deploying Applications* chapter in this book.

Radia Infrastructure

Use Radia Infrastructure components to take full advantage of Radia's ability to manage your enterprise's computing environment. Depending on your enterprise's configuration, your infrastructure may be enhanced by any combination of these components. The Radia components can be divided into four categories.

- Radia Management Applications
- Radia Management Infrastructure
- Radia Extended Infrastructure
- Radia Management Extensions

Some of the basic Radia Infrastructure components are described below. For more information on all of the Radia products, see the *Radia Getting Started Guide* or the HP OenView web site.

Radia Configuration Server

The Radia Configuration Server is part of the Radia Management infrastructure, and resides on a single server or across a network of servers. Applications and information about the subscribers and client computers are stored in the Radia Database. The Radia Configuration Server distributes packages based on policies established by the Radia administrator. See the *Radia Configuration Server Guide* (also known as the *Manager Guide*) for more information.

Radia Management Portal

The Radia Management Portal is a Web-based interface that you can use to manage your Radia infrastructure. The Radia Management Portal is part of the Radia Extended Infrastructure. Whether you are already using Radia, or are just beginning, you can use the portal to create a graphical representation of your infrastructure. See the *Radia Management Portal Guide* for more information.

Radia Proxy Server

If you want to reduce the load on the Radia Configuration Server, or store your digital assets closer to your client computers, consider using a Radia Proxy Server. The Radia Proxy Server stores a copy of the digital assets that are available to subscribers attached to the Radia Proxy Server. The Radia Proxy Server is also part of the Radia Extended Infrastructure. Evaluate the potential benefits for each server and its attached subscribers individually. For more information, refer to the *Radia Proxy Server Guide*.

Note

Contact your HP representative for details on the Radia Management Portal and the Radia Proxy Server.

Radia Administrator Workstation

Radia comes with a set of tools used to carry out software management functions. You should become very familiar with these tools. This is part of the Radia Management Infrastructure. These include:

- **Radia Publisher**

Use the Radia Publisher to create groups of components, called *packages*, and promote them to the Radia Configuration Server.

- **Radia System Explorer**
Use the Radia System Explorer to view and to manipulate the Radia Database.
- **Radia Client Explorer**
Use the Radia Client Explorer to view and to manipulate Radia objects on the client computer.
- **Radia Screen Painter**
Use the Radia Screen Painter to create custom dialog boxes.

Management Applications

Management Applications (clients) allow you to automate deployment, update, repair, and deletion activities, and inspect hardware and software. Install the Radia Management Applications onto the subscriber's computer.

There are three types of Management Applications available for communicating with the Radia Configuration Server. Install only those clients for which you have obtained a license. The client software is located on the Management Applications CD-ROM.

- **Radia Application Manager (RAM)**
Schedule the distribution of mandatory applications throughout the enterprise. This client is described in this book.
- **Radia Software Manager (RSM)**
Subscribers install, remove, or update optional applications that are available to them in a service list. For more information, see the Radia Software Manager Guide.
- **Radia Inventory Manager (RIM)**
This client allows you to collect hardware information and send it to the Radia Inventory Manager for collection and reporting. See the Radia Inventory Manager Guide for details.

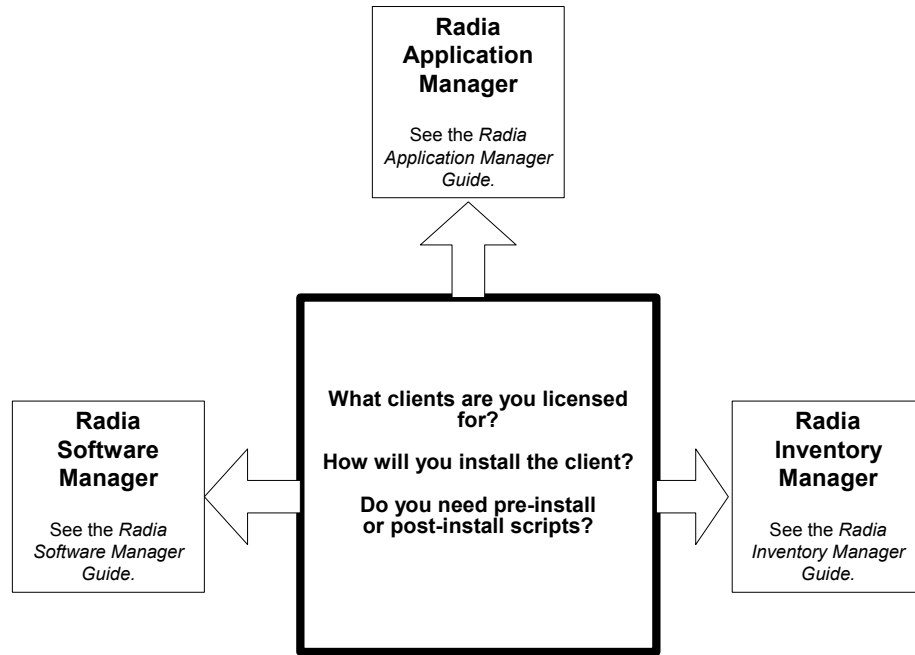


Figure 1.2 ~ Client options.

If you install both the Radia Software Manager and Radia Application Manager feature sets, you decide if an application is mandatory or optional, and specify who controls the installation of the application. By adding the Radia Inventory Manager, you can also find out the hardware and software configurations of the client computer.

Deployment Strategies

Below are two *suggested* strategies for implementing the RAM client. Choose the best strategy based on your enterprise needs. You can use them separately or in combinations.

Scheduled Deployment Strategy

The scheduled deployment strategy ensures that an initial set of mandatory applications is installed when you install the RAM, and that new mandatory applications are checked at an interval you designate.

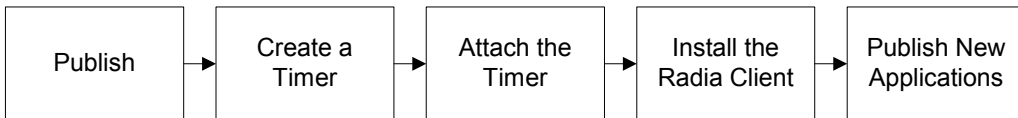


Figure 1.3 ~ Scheduled Deployment Strategy.

Note

The following steps may require the use of the Radia System Explorer, which is currently available for 32-bit Windows platforms. For more information, refer to the *Radia System Explorer Guide*.

1. **Publish** your mandatory applications. See the *Publishing Applications and Content* chapter in this book.
2. **Create a timer** with the appropriate parameters. This ensures that new mandatory applications will be deployed when the timer expires. See *Scheduling (TIMER)* on page 244.
3. **Attach a timer** to the Client Self Maintenance Service. This ensures that all subscribers will receive the timer during Radia Application Manager installation. See *Scheduling (TIMER)* on page 244.
4. **Install the Radia Application Manager client** and download all pre-configured mandatory applications. See the *Installing the Radia Application Manager* chapter in this book.
5. **Publish the new mandatory applications.** The next time the timer expires on the client computer, the new applications will be deployed.

Notified Deployment Strategy

The Notified Deployment strategy allows you to send out an application or applications for immediate installation after installing the Radia Application Manager.

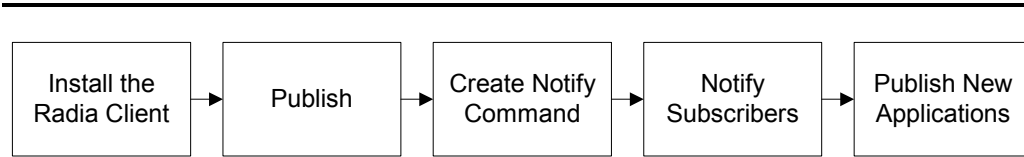


Figure 1.4 ~ Immediate notification deployment strategy.

Note

The following steps may require the use of the Radia System Explorer, which is currently available for 32-bit Windows platforms. For more information, refer to the *Radia System Explorer Guide*.

- 1. Install the Radia Application Manager client** and register the client computer in the PROFILE file in the Radia Database. See the *Installing the Radia Application Manager* chapter in this book.
- 2. Publish** your mandatory applications. See the *Publishing Applications and Content* chapter in this book.
- 3. Create a notification command** that runs the RADSKMAN executable with the appropriate parameters. See *Creating a Drag-and-Drop Notify Command* on page 288.
- 4. Drag the appropriate users** to the notification command.
- 5. Publish the new mandatory applications** and drag the user or group of users to the notification command.

Creating a Test Environment

Before preparing for enterprise-wide deployment of Radia, you may want to set up a test environment and deploy a sample application. In this section, we will:

- Prepare a "new" application for deployment.
- Use a command line to distribute the new mandatory application.

This section is intended to introduce you to using the Radia Application Manager to install mandatory applications in a test environment. For detailed information on our recommended deployment strategy, see *Deployment Strategies* on page 27.

Setting up a Test Environment

We recommend that you have at least three computers in your test environment.

- **Server**
Install the Radia Configuration Server on this computer. See the *Radia Configuration Server Installation Guide* on the HP OpenView web site for information about installing the Radia Configuration Server.
- **Administrator computer**
Install the Radia Administrator Workstation on this computer. The Radia Administrator Workstation must be installed on a 32-bit Windows machine.
You must have a TCP/IP connection to the Radia Configuration Server.
- **Client computer**
Install the Radia Application Manager on this computer. You must have a TCP/IP connection to the Radia Configuration Server.

About This Guide

This guide covers the *suggested* implementation for the Radia Application Manager. Although you will tailor this strategy to meet your organization's needs, it is recommended that you review this guide for a comprehensive understanding of the Radia Application Manager. At the start of each chapter, you will find the following diagram to help you locate where you are in the implementation. The appropriate area will be shaded.

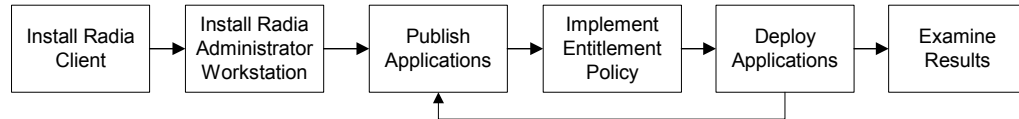


Figure 1.5 ~ Tasks completed in this guide.

The *Radia Application Manager Guide* covers the following:

- **Publishing Applications and Content**
This chapter describes how to publish applications.
- **Implementing Entitlement Policy**
This chapter describes how to integrate Radia with your existing policy information, how to create new users and assign them to groups in simple environments, and how to connect services to groups.
- **Deploying Applications**
This chapter explains how to deploy applications to your client computers.
- **Radia Client Objects**
This chapter shows you how to examine the results of your Radia implementation.

Summary

- Radia gives you the flexibility and control to efficiently manage desktop software using Radia technology.
- Radia includes a set of administrator tools to help you manage your software.
- The Radia Database includes all the information needed to manage your software.
- HP provide suggested deployment strategies that you should tailor to your organization's needs.
- Before preparing for enterprise-wide deployment of Radia, consider setting up a test environment.

Installing the Radia Application Manager

At the end of this chapter, you will:

- Understand the system requirements and permissions necessary to deploy the Radia Application Manager (RAM).
- Be able to install the Radia Application Manager using either the graphical or non-graphical mode.

This guide covers the *suggested* implementation for the Radia Application Manager. Although you will tailor this strategy to meet your organization's needs, it is recommended you review this guide for a comprehensive understanding of the Radia Application Manager. This chapter covers installing the Radia Application Manager.

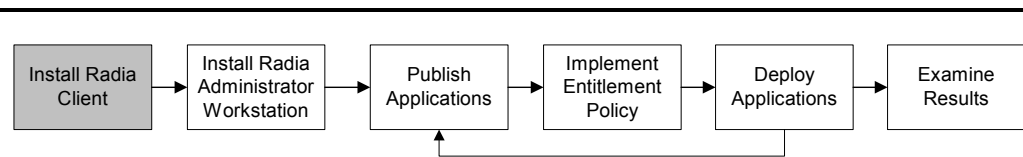


Figure 2.1 ~ Overview of the Radia Application Manager Guide.

Caution

Install only the Radia Clients for which you have licenses. If you do not have a license, the Radia Client will not authenticate with the Radia Configuration Server.

System Requirements

- HP-UX Operating System Version 10.20 or above, PA Risc CPU, Motif 1.2 libraries.
- RedHat Enterprise Linux Version 2.1 and 3.0, Intel Pentium processor or compatible CPU.
- SUSE Linux versions 8 and 9, Intel Pentium processor or compatible CPU.
- Solaris Operating System Version 2.5.1 or above, SPARC CPU, Motif 1.2 libraries.
- AIX Operating System Version 4.3.1, 5L, Motif 1.2 libraries.
- Siemens Reliant operating system Version 5.43 or 5.45 Reliant UNIX, R400, R4000 Risc.
- TCP/IP connection to a computer running Radia Configuration Server.
- Radia Client requires 20 MB free disk space.

Prerequisites

- We strongly recommends installing the Radia Clients as root.
- Install the Radia Client on a local file system.
- The installation program must be run from within UNIX. Although you can continue to work within UNIX (performing other tasks and operations) while the installation program is being executed, we strongly recommend that you don't.
- If you intend to run any of the graphical components of the Radia Client software, make sure the UNIX environment variable DISPLAY is set in your environment. If it is not, you will

need to set this variable to indicate the hostname or IP address to which you would like to redirect the graphical display.

Table 2.1 ~ Setting the DISPLAY Variable

In a.....	Type....
C shell	setenv DISPLAY IP address or hostname:0.0
Bourne, Bash, or Korn shell	DISPLAY=IP address or hostname:0.0 export DISPLAY

Caution

If there is an existing installation in the current working directory, you are urged to relocate it before beginning installation. You will be prompted for this during the installation. If you choose to overwrite your existing client, all your customized data will be lost.

When installing the Radia Client, you must know the subscribers' operating systems. After setup and configuration, Radia executables and library files will not be changing with the same frequency as that of your site's user files.

To successfully run Radia applications, standard UNIX environment variables are required, as shown in *Table 2.2 ~ Environment Variables* on page 36. Minimally, these environment variables should include the fully qualified path of the installed client executables, the path to the operating system-specific Motif libraries, and the standard UNIX operating system paths for operating system executables and shared libraries. We recommend these be included as part of the logon scripts of the UNIX user ID who installs, and will maintain the Radia Clients.

Note to HP users

In order for Radia to install correctly on HP-UX platforms, you must mount the Radia Infrastructure CD-ROM using `pfs_mount`.

The Radia Infrastructure CD-ROM is created using the Rock Ridge format. Since the HP-UX standard mount procedure is incompatible with the Rock Ridge file system type, HP has made available the PFS package (Portable File System) that allows their workstations to recognize this format. Specific instructions follow:

- Insert the CD-ROM and mount by typing:

```
/usr/sbin/pfs_mount -v -x unix /cdrom/mnt
```

 where **/cdrom** is your physical CD-ROM device.
- To un-mount, type:

```
/usr/sbin/pfs_umount /mnt
```

See your local UNIX systems administrator and UNIX man pages for more information.

Table 2.2 ~ Environment Variables

Platforms	Examples
Solaris	LD_LIBRARY_PATH=/lib:\$IDMSYS:\$MOTIF:\$LD_LIBRARY_PATH PATH=/bin:/usr/bin:\$IDMSYS:\$MOTIF:\$PATH
HP-UX	SHLIB_PATH=/lib:\$IDMSYS:\$MOTIF:\$SHLIB_PATH PATH= /bin:/usr/bin:\$IDMSYS:\$MOTIF:\$PATH
AIX	LIBPATH=/lib:\$IDMSYS:\$MOTIF:\$LIBPATH PATH=/bin:/usr/bin:\$IDMSYS:\$MOTIF:\$PATH
Linux	LD_LIBRARY_PATH=/lib:/usr/lib:\$IDMSYS:\$LD_LIBRARY_PATH PATH=/bin:/usr/bin:\$IDMSYS:\$PATH

In *Table 2.2 ~ Environment Variables* above, IDMSYS represents the fully-qualified path to the Radia Client executables, often referred to as the IDMSYS location. MOTIF represents the fully-qualified path to the Motif libraries installed with the operating system.

Note

The inclusion of the MOTIF libraries is required only when running Radia Client or Radia Administrator Workstation graphical tools such as the Radia Publisher, the Radia Client Explorer, and the presentation of the Radia Client logon panel.

After the Radia Client is installed, the file **.nvdrc** is placed in the HOME directory of the UNIX user ID who performed the installation. This file aids you in setting the required environment variables needed to use the Radia Clients. We recommend adding a line to the appropriate logon scripts to invoke this shell script:

```
. $HOME/.nvdrc
```

Troubleshooting

Should you encounter any problems while installing the Radia UNIX Client, please perform the following steps before contacting technical support:

1. Enable diagnostic tracing by appending the text **-loglevel 9** to the installation command line and re-run the installation.
2. Have this log file (tmp/setup/setup.log) located in the home directory of the UNIX user ID who ran the install.

Note

The installation option **-loglevel 9** should only be used to diagnose installation problems.

About Radia Daemons in UNIX

The Radia Client installation program installs the following daemon executables:

- **Radia Notify (default port 3465)**

Use Radia Notify, **radexecd**, to push updates to subscribers or to remove applications. A Notify message is sent from the Radia Configuration Server to this daemon. When the daemon receives the Notify message, the Radia Application Manager connects to the Radia Configuration Server and performs the action initiated by the Notify operation.

Important Note

If you want to send a Notify to subscribers of a particular application, that application *must* be installed on their computers in order for them to be eligible for notification.

- **Radia Scheduler**

Use the Radia Scheduler service, **radsched**, to schedule timer-based deployments of applications.

The installation of **radexecd** and **radsched** as services on a UNIX workstation is not automated within the context of the installation. The starting of services on UNIX workstations is operating system dependent. For information about installing Radia daemons as system services at boot time, see your local UNIX system administrator or refer to your UNIX operating system's manual.

Sample Shell Scripts

The installation of the Radia Client includes a subdirectory called "sample". It contains a sample shell script called **daemons.sh** that may be used to start, stop, and restart the **radexecd** and **radsched** daemons.

- To start the radexecd and radsched daemons, type: **daemons.sh start**
- To stop the radexecd and radsched daemons, type: **daemons.sh stop**
- To stop, then restart the radexec and radsched daemons, type: **daemons.sh restart**

Recommendations

- We strongly recommend that you install and run the Radia Client as root.

Note

Root authority is required to apply owner and group designators to managed resources.

- After you perform an installation, make sure the Radia Application Manager is successfully connected to the Radia Configuration Server. This registers the subscriber in the Radia Database. Once registered, the subscriber appears in the PROFILE file. Make sure to verify that all ports are active and that you have full connectivity to the Radia Configuration Server.

Before you install the Radia Client, consider the following:

- You can perform a local installation of the Radia Clients.
- Your Radia systems administrator can perform a Remote Installation Setup. This process stores the installation media in a selected directory path. Later client installations can be initiated from any number of intended client workstations providing they have access to the directory path selected during the Remote Installation Setup.
- Performing an installation from a customized configuration file provides a number of benefits.
 - Replication of precise installation details on multiple clients.
 - Ability to use a pre-installation method that runs any script or executable before the Radia Client installation.
 - Ability to use a post-installation method, which runs any script or executable after the Radia Client is installed.
 - You can configure the installation to force a client connection to the Radia Configuration Server immediately after the installation.
 - You can pre-configure the IP address and port number of the Radia Configuration Server that the Radia Client will be connecting to.
 - Ability to use an object update text file that can be used to update Radia objects after the installation.

Installation Methods

You can install the Radia Clients by:

- Executing the installation procedure directly from the CD-ROM.
- Copying the files from the CD-ROM into a temporary directory and executing the installation procedure.

Several parameters can be used on the command line when installing the Radia Clients. These parameters are used to install the Radia Client using the graphical mode, non-graphical mode, plain mode, or silent mode.

Table 2.3 on page 40 describes the installation parameters.

Table 2.3 ~ Command Line Parameters

Parameter	Example	Description
-mode plain	./install -mode plain	Installs the Radia Client in plain mode. The installation graphics are displayed with no animations. This is useful for remote installations where network bandwidth may be an issue.
-mode text	./install -mode text	Installs the Radia Client in text mode using the non-graphical installation. The installation takes place completely on the command line. The installation will default to text mode if the DISPLAY environment variable is not set.

Installing the Radia Client

This section describes both the graphical (using a GUI) and non-graphical (using a command line) installations of the Radia Client for UNIX.

Note to HP Users

In order for Radia to install correctly on HP-UX platforms, you must mount the Radia Infrastructure CD-ROM using `pfs_mount`.

The Radia Infrastructure CD-ROM is created using the Rock Ridge format. Since the HP-UX standard mount procedure is incompatible with the Rock Ridge file system type, HP has made available the PFS package (Portable File System) that allows their workstations to recognize this format. Specific instructions follow:

- Insert the CD-ROM and mount by typing:

```
/usr/sbin/pfs_mount -v -x unix /cdrom/mnt
```

where */cdrom* is your physical CD-ROM device.

- To un-mount, type:

```
/usr/sbin/pfs_umount /mnt
```

See your local UNIX systems administrator and UNIX man pages for more information.

Note to Reliant Users

The Radia Application Manager installation for Reliant is available in text mode only. Refer to the non-graphical installation section, *To install the Radia Client for Unix using a command line* on page 67 for installation instructions.

Graphical Installation

This section describes how to install the Radia Clients both to a local and to a remote computer using a graphical user interface (GUI).

Local Installation

This section describes how to install the Radia Clients to a local computer using a GUI.

To install the Radia Client to a local computer using a GUI

Note

These instructions will guide you through the local graphical installation of the Radia Client. For the non-graphical installation instructions, see *Non-graphical Installation* on page 67.

1. Depending on your version of UNIX, change your current working directory to the correct /client subdirectory on the installation media.

Example:

For Solaris, type: `cd /cdrom/solaris`

2. Type `./install`, and then press ENTER.

The **Welcome** window opens.

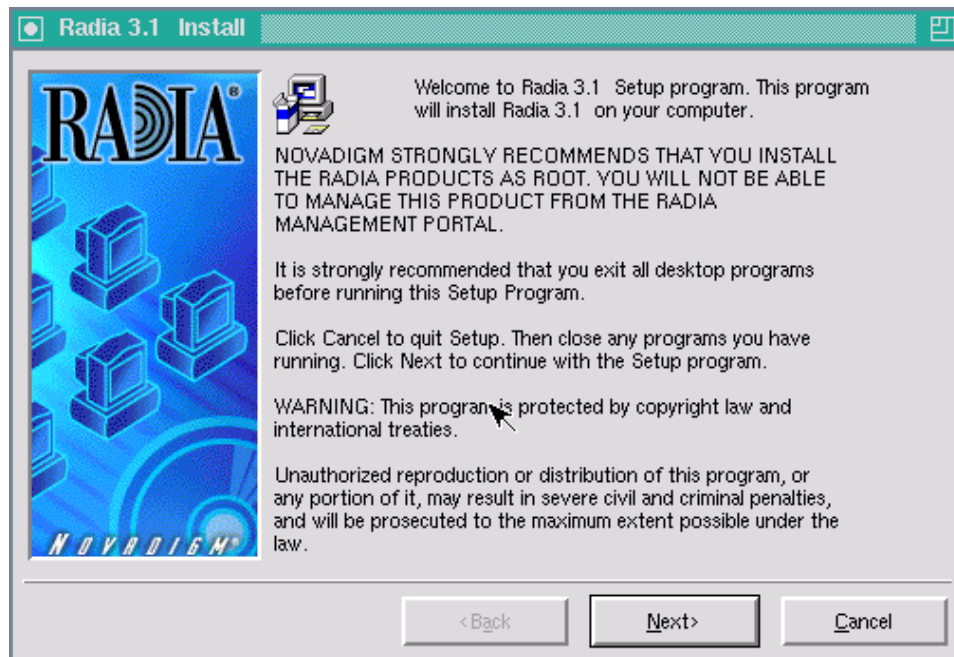


Figure 2.2 ~ Welcome window of the Radia Products Setup program for a local installation.

Note

At any point during the installation, you can return to a previous window by clicking **Back**. Also, if you would like to exit the installation at any time, click **Cancel**.

3. Click **Next**.

The **Select Components to Install** window opens.

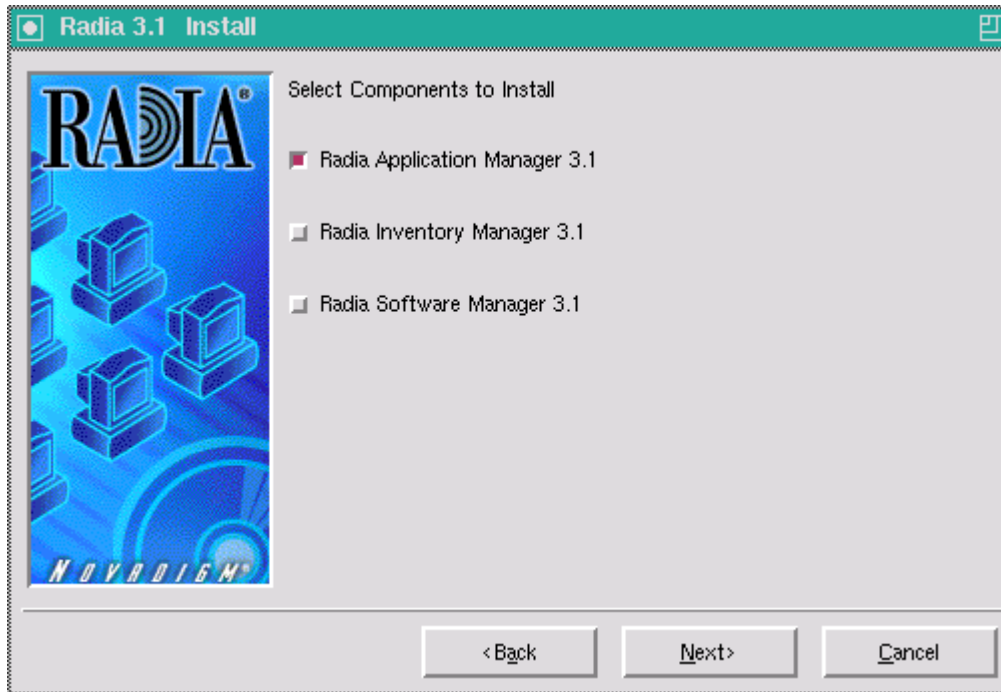


Figure 2.3 ~ Select Components to Install window.

- 4.** Select the **Radia Application Manager** check box.
- 5.** Click **Next**.

The **Select Installation Type** window opens.

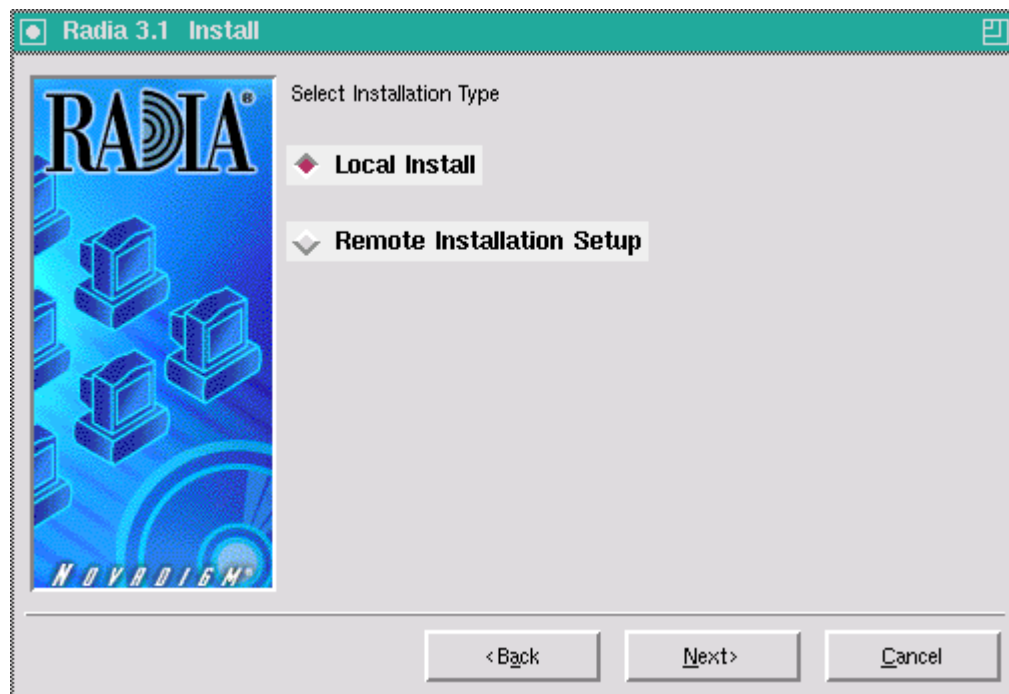


Figure 2.4 ~ Select Installation Type window.

-
6. Select **Local Install** to install the Radia Client onto a local computer, and then click **Next**.

The **Radia Client Location** window opens.

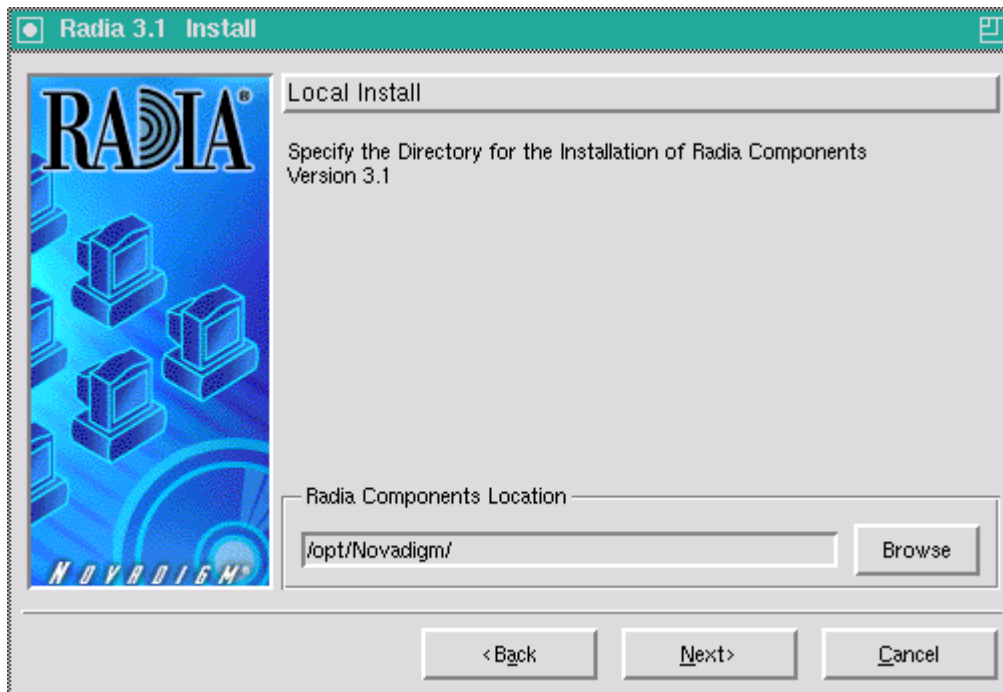


Figure 2.5 ~ Radia Client Location window.

7. Type the name of the directory where you want to install the Radia Client, or click **Browse** to navigate to it.
8. Click **Next**.

If the specified directory already exists you will be prompted to verify this location.

- If you would like to update the existing directory, click **OK**.
- If you want to specify a different location, click **Cancel**.

The **Lib Directory** window opens.

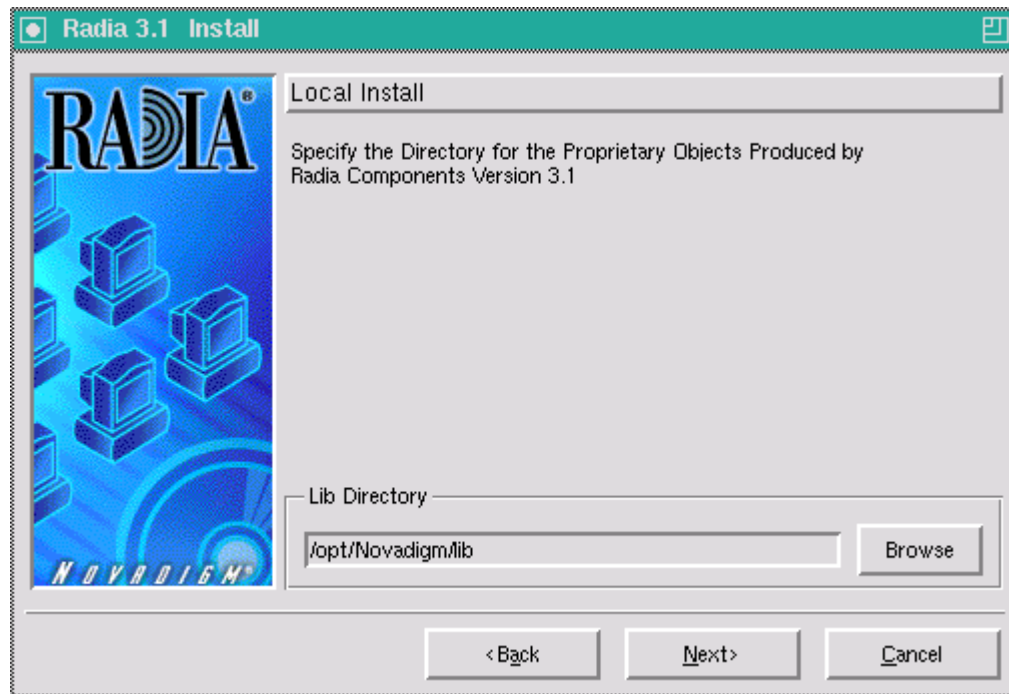


Figure 2.6 ~ Lib Directory window.

9. Type the name of the directory where you would like to store proprietary information created by Radia (the lib directory), or click **Browse** to navigate to it.
10. Click **Next**.

The **Log Directory** window opens.

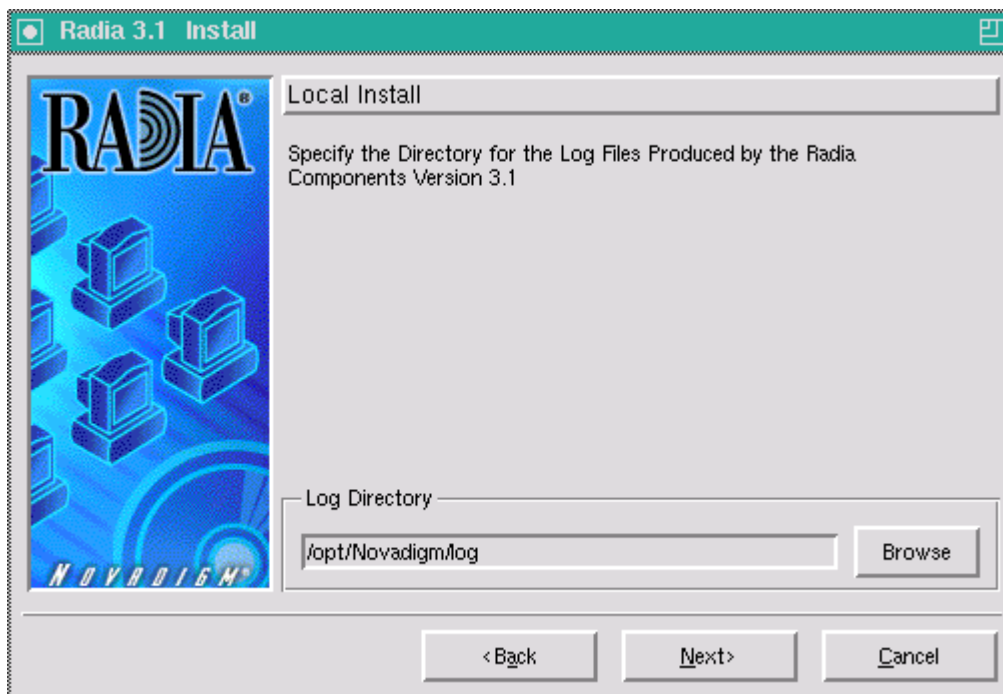


Figure 2.7 ~ Log Directory window.

11. Type the name of the directory where you would like to store the log files generated by Radia, or click **Browse** to navigate to it.
12. Click **Next**.

The **Radia Configuration Server IP Address** window opens.

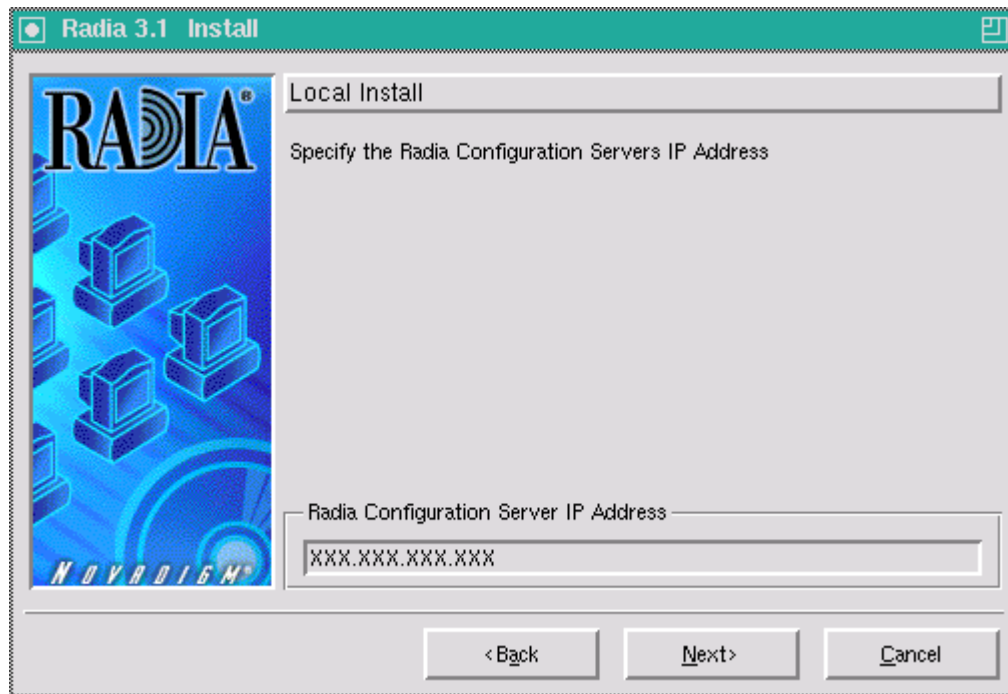


Figure 2.8 ~ Radia Configuration Server IP Address window.

- 13.** Type the IP address (format: xxx.xxx.xxx.xxx) of the Radia Configuration Server to which the Radia Client will connect. Specify a valid IP address or hostname recognized by the client workstation.
- 14.** Click **Next**.

The **Radia Configuration Server Port Number** window opens.

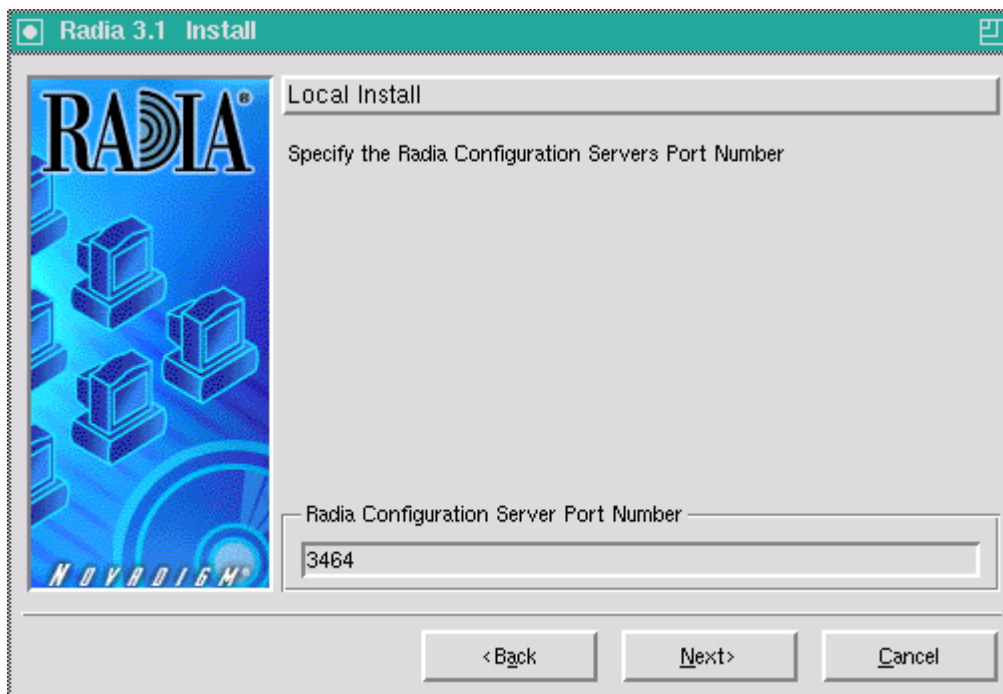


Figure 2.9 ~ Radia Configuration Server Port Number window.

15. Type the Radia Configuration Server's port number (default is 3464).
16. Click **Next**.

The **Package Settings** window opens.

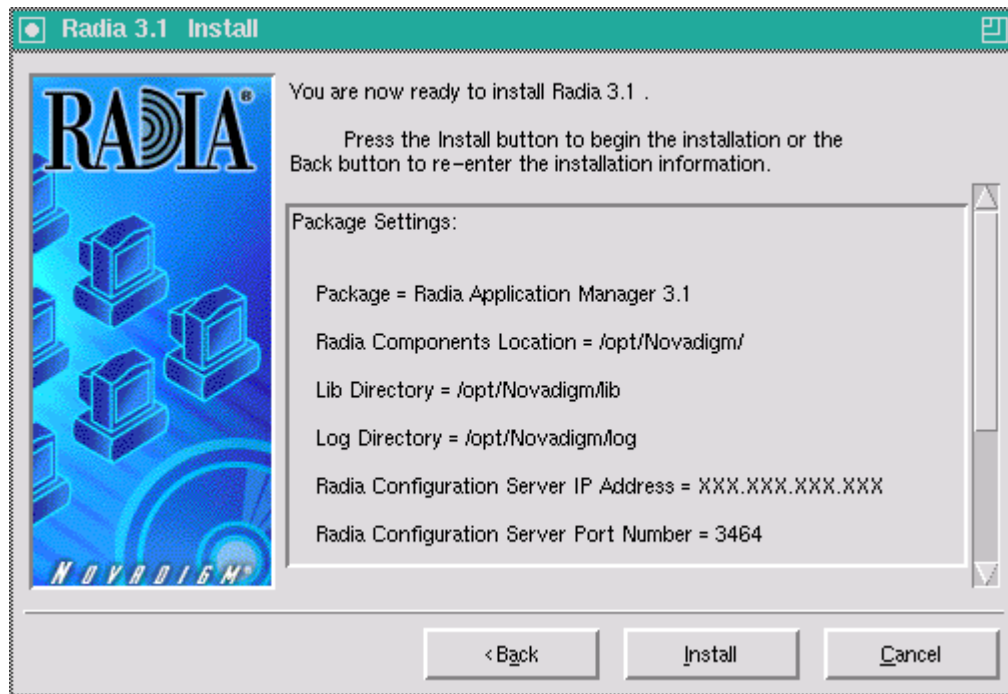


Figure 2.10 ~ Package Settings window.

- 17.** Review the settings displayed in the **Package Settings** window. If you would like to change any of the settings, click **Back** until you get to the appropriate window.
- 18.** When you're satisfied with the settings, click **Install** to install the Radia Client with these settings.

The **Installation Progress** window opens.

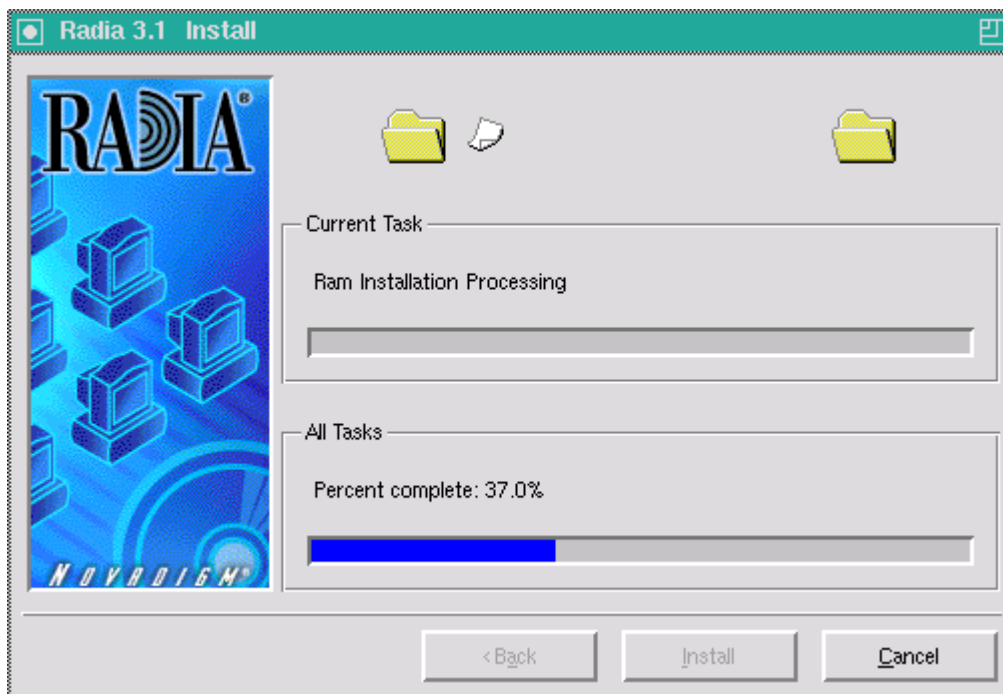


Figure 2.11 ~ Installation Progress window.

19. Click **Finish** to exit the installation.

The Radia Client has been successfully installed.

Remote Installation Setup

This section describes how to install the Radia Client to a remote computer using a GUI.

To install the Radia Client to a remote computer using a GUI

1. Depending on your version of UNIX, change your current working directory to the correct subdirectory on the installation media.

Example:

For Solaris, type: `cd /cdrom/solaris`

2. Type `./install`, and then press ENTER.

The **Welcome** window opens.

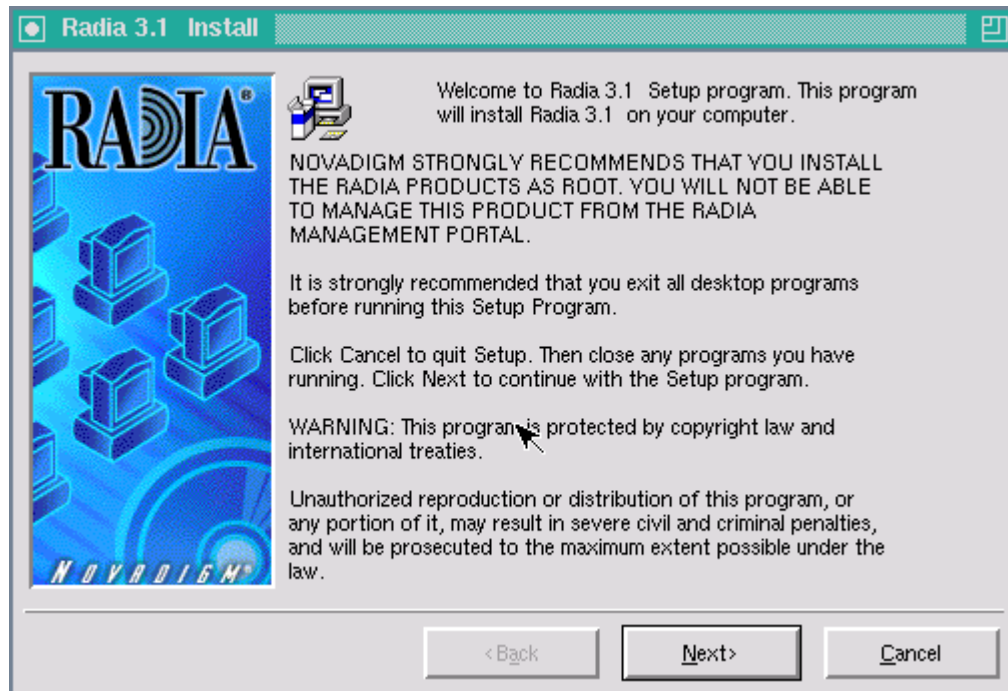


Figure 2.12 ~ Welcome window of the Radia Products Setup program for a remote installation.

Note

At any point during the installation, you can return to a previous section by clicking **Back**. Also, if you would like to exit the installation at any time, click **Cancel**.

3. Click **Next**.

The **Select Components to Install** window opens.

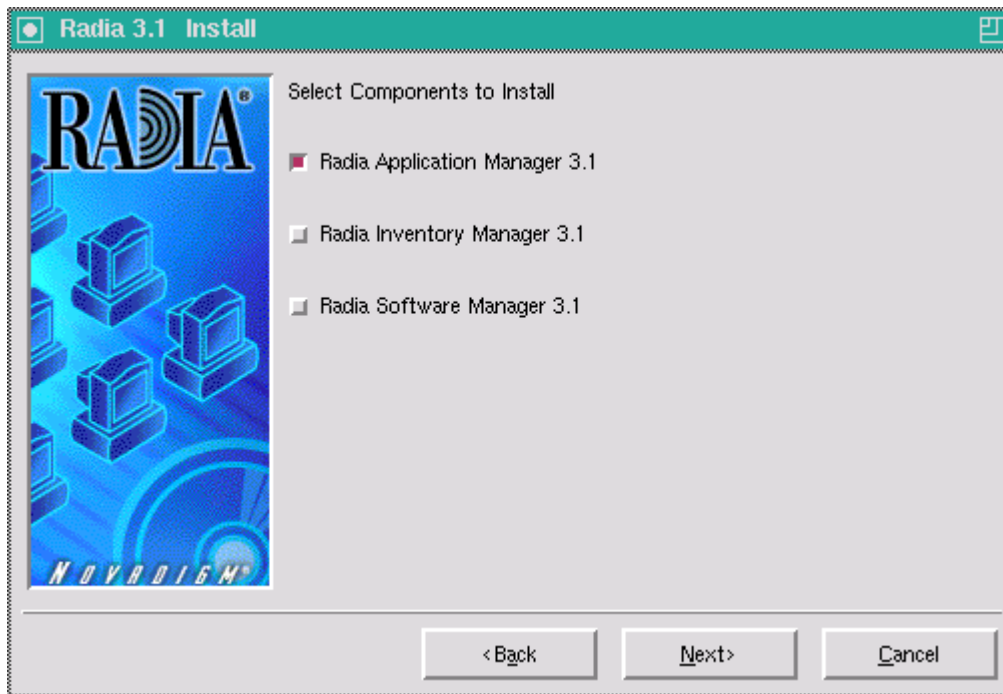


Figure 2.13 ~ Select Components to Install window.

4. Select the **Radia Application Manager** check box.
5. Click **Next**.

The **Select Installation Type** window opens.

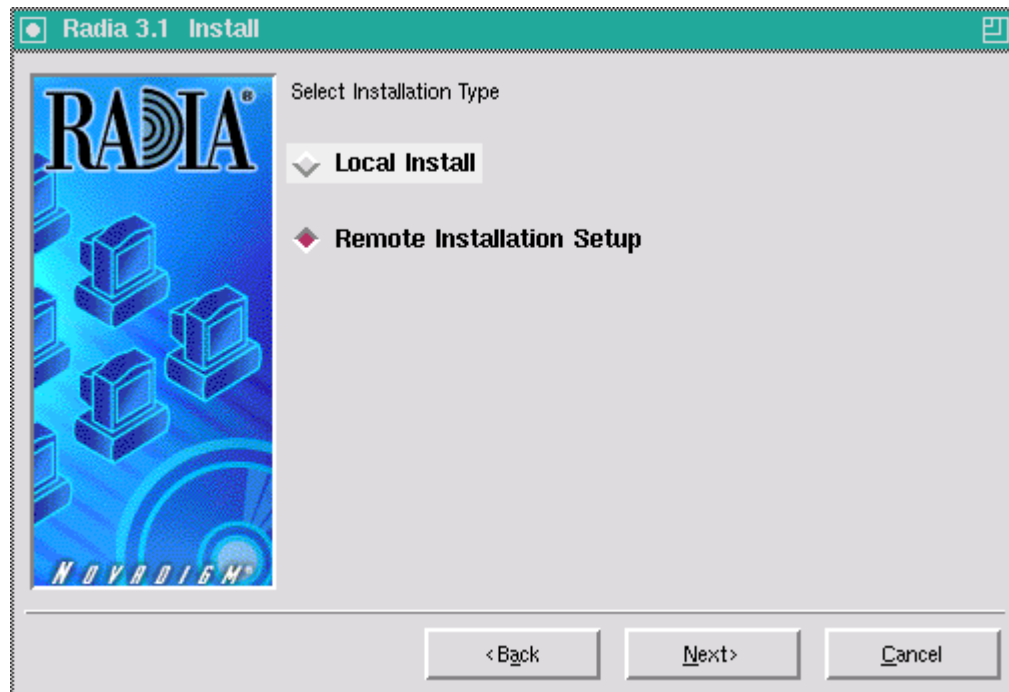


Figure 2.14 ~ Select Installation Type window.

6. Select **Remote Installation Setup**.

This will store the installation media to another location on disk to be used later as the source for other client installations.

7. Then click **Next**.

The **Radia Client Location** window opens.

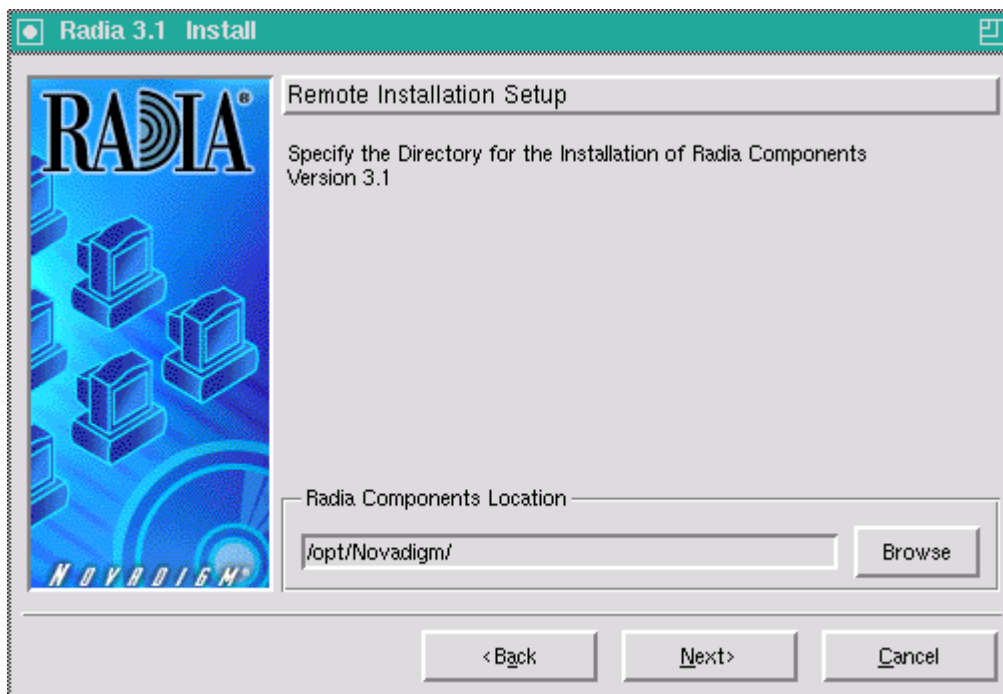


Figure 2.15 ~ Radia Client Location window for the Remote Installation Setup.

8. Type the name of the directory where you want to install the Radia Client executables for a silent installation, or click **Browse** to navigate to it.
9. Click **Next**.

The **Lib Directory** window opens.

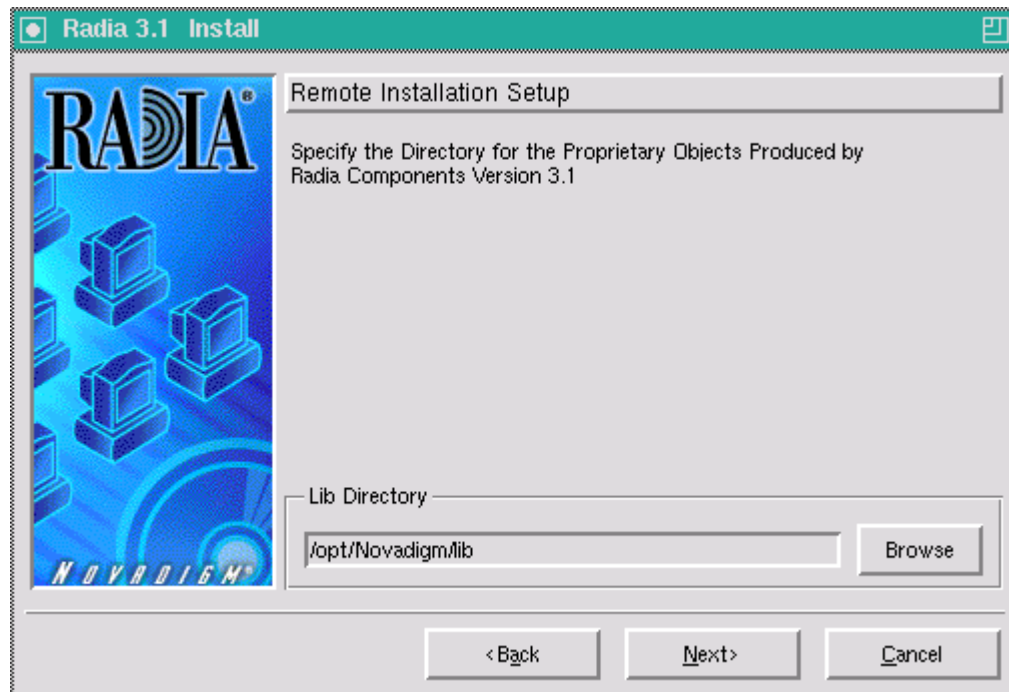


Figure 2.16 ~ Lib Directory window.

10. Type the name of the directory where you would like to store proprietary information created by Radia for a silent installation, or click **Browse** to navigate to it.
11. Click **Next**.

The **Log Directory** window opens.



Figure 2.17 ~ Log Directory window.

12. Type the name of the directory where you would like to store log files generated by Radia for a silent installation, or click **Browse** to navigate to it.
13. Click **Next**.

The **Radia Configuration Server IP Address** window opens.

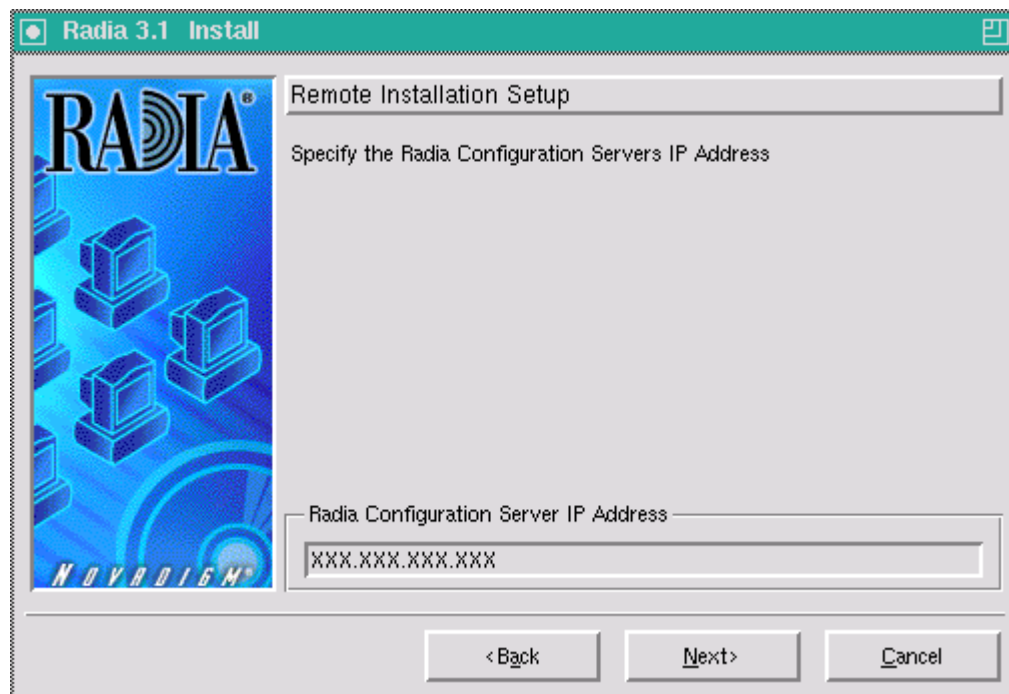


Figure 2.18 ~ Radia Configuration Server IP Address window.

14. Type the IP address (format: xxx.xxx.xxx.xxx) of the Radia Configuration Server that the Radia Client will connect to. Specify a valid IP address or hostname recognized by the client workstation.
15. Click **Next**.

The **Radia Configuration Server Port Number** window opens.

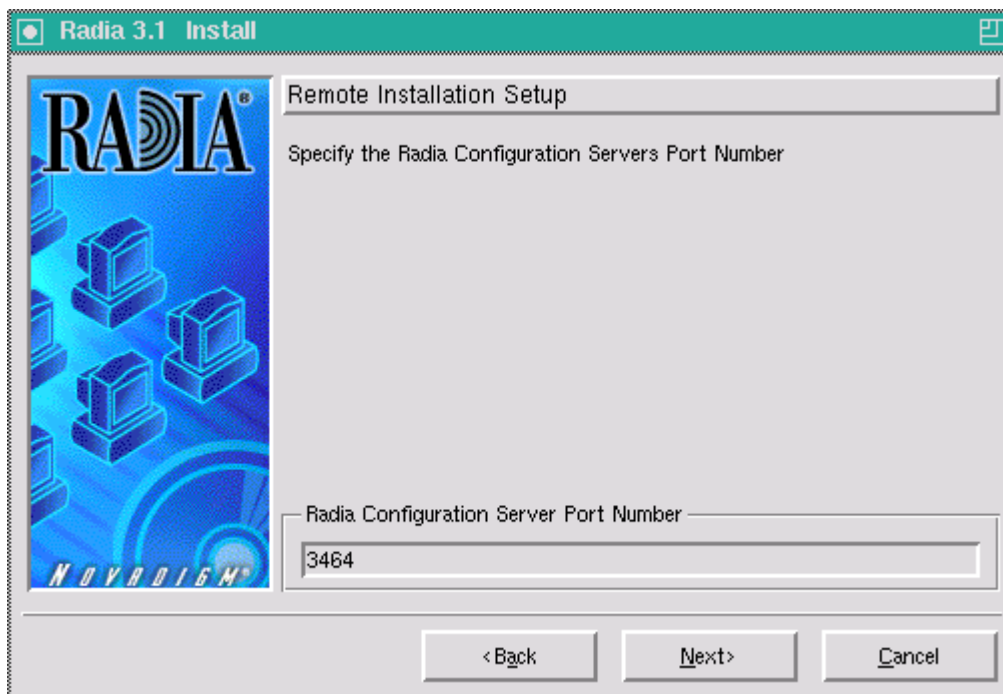


Figure 2.19 ~ Radia Configuration Server Port Number window.

16. Type the port number of the Radia Configuration Server (default is 3464).
17. Click **Next**.

The **Package Location** window opens.

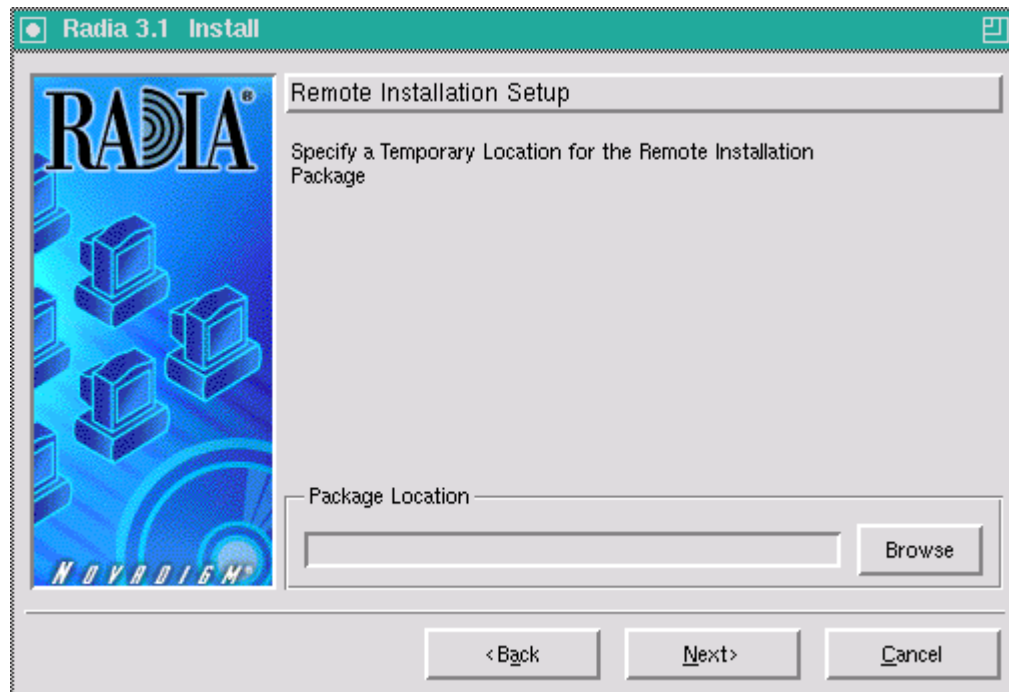


Figure 2.20 ~ Package Location window.

18. Type the fully qualified path to a directory where you would like to store the Radia Client installation media for future client installations, or click **Browse** to navigate to it.
19. Click **Next**.

The **Package Configuration Name** window opens.

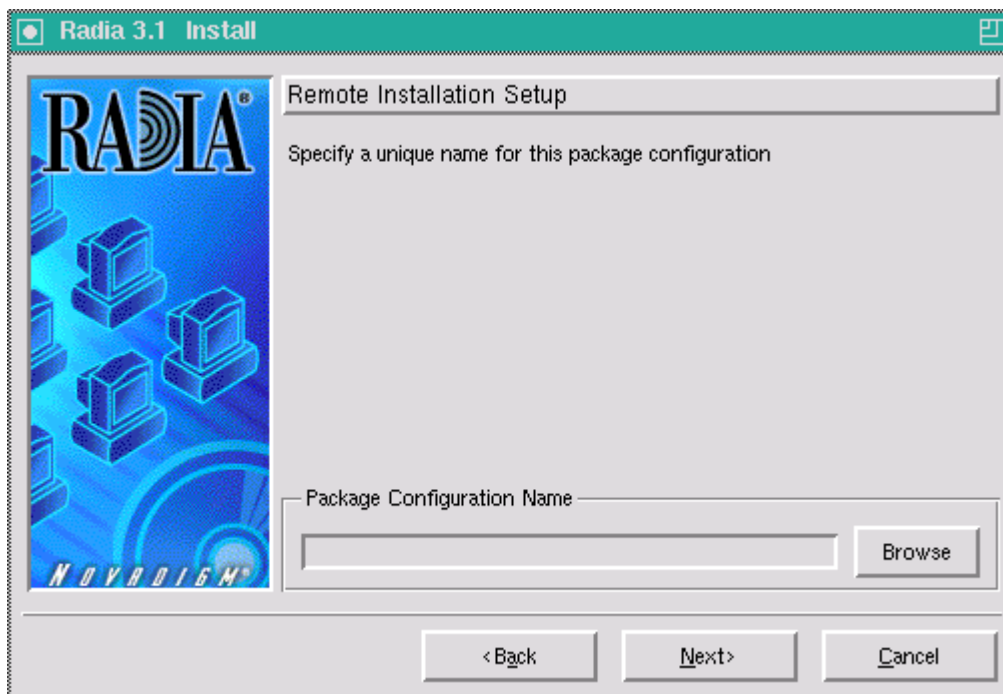


Figure 2.21 ~ Package Configuration Name window.

20. Type the fully qualified path to a configuration file that you would like to use for silent installations, or click **Browse** to navigate to it. The configuration file you specify will contain the installation information you chose during the Remote Installation Setup.
21. Click **Next**.

The **Package Settings** window opens.

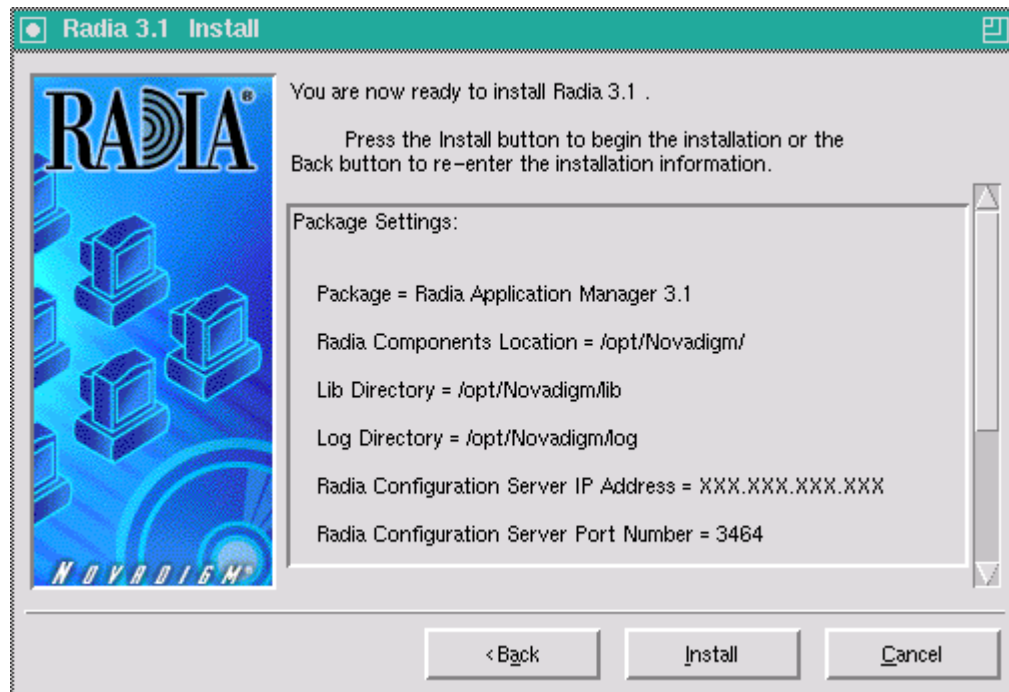


Figure 2.22 ~ Package Settings window.

22. Review the settings displayed in the **Package Settings** window.
23. Click **Continue** to build the Remote Installation Package.

The **Installation Progress** window opens.

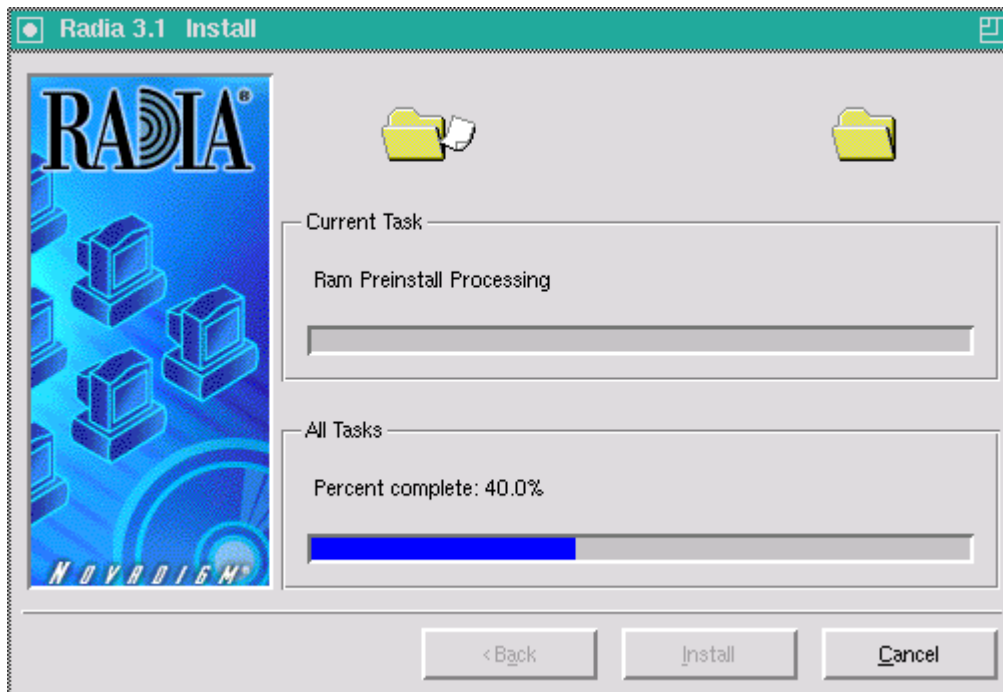


Figure 2.23 ~ Installation Progress window.

24. Click **Finish** to exit the installation.

The Radia Client installation media has been successfully stored on disk for future installations. Once the media has been stored for other computers to use for remote installations, you should become familiar with the variables in the configuration file.

Customizing the Installation Configuration File

A configuration file supplies the default responses for silent Radia Client installations. These responses would normally be provided during an interactive Radia Client installation. When performing silent installations, additional installation options are also available in the configuration file.

The variables available in the configuration file are described in Table 2.4 below.

Table 2.4 ~ Configuration File Variables		
Variable	Sample Value	Description
REMOTE	0	0 designates a local installation. 1 designates a Remote Installation Setup.
INSTDIR	/opt/Novadigm	The default installation directory.
IDMLOG	/opt/Novadigm/log	This can be defined to designate a directory for IDMLOG other than the default INSTDIR/log.
IDMLIB	/opt/Novadigm/lib	This can be defined to designate a directory or IDMLIB other than the default INSTDIR/lib.
PREPROC		The fully qualified name of a script or executable to run pre-installation.
PREPARAM		Any parameters that may be required by the pre-installation method specified in the variable PREPROC.
POSTPROC		The fully qualified name of a script or executable to be run post-installation.
POSTPARAM		Any parameters required by the post-installation method specified in the variable POSTPROC.
MGRIP	1.1.1.98	The default IP address for connection to the Radia Configuration Server.
MGRPORT	3464	The default port number for connection to the Radia Configuration Server.
NTFYPORT	3465	The default Notify port used.
CONNECT	Y	Connects to the Radia Configuration Server immediately after the installation. Default behavior is N. Set to Y if you want your Radia Client to connect to the Radia Configuration Server automatically after the installation.
OBJECTS	./object.txt	The file that is used to create or update Radia attributes after the installation.
DUAL	1	0 designates RAM only selected. 1 designates more than one component selected.

Using a Pre- or Post-Installation Script

You can create and run custom executables or shell scripts prior to or after the silent installation of a Radia Client. For example, your post-installation script can initiate a connection to the Radia Configuration Server in order to process mandatory applications. Figure 2.24 below is part of a shell script that initiates the connection to the Radia Configuration Server and processes mandatory applications.

```
#!/bin/sh
#
cd /opt/Novadigm

# ZIPADDR is the IP address or hostname of the manager
ZIPADDR="xxx.xxx.xxx.xxx"
# ZDSTSOCK is the TCP port the manager is running on
ZDSTSOCK="3464"

# To manage the machine
# 1. .edmprof must exist in root's home directory
# 2. The connect must be run as root

/opt/Novadigm/radskman mname=NVDM,dname=SOFTWARE,ip=$ZIPADDR,port=$ZDSTSOCK,cat=prompt,ind=y,uid=¥$MACHINE,startdir=SYSTEM,ulogon=n
```

Figure 2.24 ~ Sample shell script that runs a Client Connect.

Customizing Installed Object Variable Content

The configuration file option OBJECTS allows you to specify the fully qualified path to a filename that contains data in the form:

```
OBJECT_NAME VARIABLE_NAME VARIABLE_VALUE
```

An example of a valid object file is:

```
ZMASTER ZTRACE N
ZMASTER ZTRACEL 000
```

When creating an object text file:

- A pound sign (#) at the beginning of a line indicates a comment.
- A pound sign (#) on any other part of a line will be considered data.
- The format is OBJECT_NAME followed by VARIABLE_NAME. Everything after the VARIABLE_NAME is considered VARIABLE_VALUE.
- The VARIABLE_VALUE text should not be enclosed by any special characters.

Performing a Silent Installation of a Radia Client

Note

We recommend the client be installed as root.

Performing a silent installation of the Radia Client using stored Radia Client installation media requires that:

- your Radia system administrator has already run the Remote Installation Setup installation method.
- the workstation running the silent installation is able to access the directory path where the installation media was stored.

Several parameters can be used on the command line when performing a silent installation of the Radia Client. Table 2.5 below describes these.

Table 2.5 ~ Silent Installation Command Line Parameters

Parameter	Example	Description
-cfg	./install -cfg Radia.cfg	The filename specified after -cfg is the name of the configuration file to be used during the installation. For information about configuration files, see <i>Customizing the Installation Configuration File</i> on page 64.

Table 2.5 ~ Silent Installation Command Line Parameters

Parameter	Example	Description
<code>-mode silent</code>	<code>./install -mode silent -cfg /common/Radia.cfg</code>	Installs the Radia Client in silent mode based on the parameters set in the configuration file specified after the -cfg parameter. For information about configuration files, see <i>Customizing the Installation Configuration File</i> on page 64.

Non-graphical Installation

This section describes a non-graphical (using a command line) installation of the Radia Client for UNIX.

To install the Radia Client for UNIX using a command line

Note

These instructions guide you through the local non-graphical installation of the Radia Client for UNIX. For the graphical installation, see *Graphical Installation* on page 41.

Note to Reliant Users

The Radia Application Manager installation for Reliant is available in text mode only. Refer to the non-graphical installation section, *To install the Radia Client for Unix using a command line* on page 51 for installation instructions.

1. Depending on your version of UNIX, change your current working directory to the correct subdirectory on the installation media.

Example:

For Solaris, type: `cd /cdrom/solaris`

2. Type `./install -mode text`, and then press ENTER.
The Radia Client installation begins.

Installing Radia 3.1 Products
Welcome to Radia 3.1 Products Setup program.
This program will install Radia 3.1 Products on your computer.

It is strongly recommended that you exit all desktop programs
before running this Setup Program

Type Q to quit Setup, then close any programs you have
running. Type C to continue with the Setup program.
(To exit install at any prompt, type <cancel>)

WARNING: This program is protected by copyright law and international treaties.

Unauthorized reproduction or distribution of this program, or any
portion of it, may result in severe civil and criminal penalties,
and will be prosecuted to the maximum extent possible under the law.

Enter C to Continue with the installation or Q to Quit the setup program:

Figure 2.25 ~ Radia Client non-graphical installation.

- 3.** Type **C**, and press ENTER.

Select Components to Install

Radia Application Manager 3.1
Install? Y|N (Y):

Figure 2.26 ~ Select Components to install: Radia Application Manager.

- 4.** Press ENTER to accept the default component, the Radia Application Manager.

Radia Inventory Manager 3.1
Install? Y|N (N):

Figure 2.27 ~ Select Components to install: Radia Inventory Manager.

- 5.** Press ENTER to skip the installation of the Radia Inventory Manager.

OR

Type **Y** to install the Radia Inventory Manager.

```
Radia Software Manager 3.1
Install? Y|N (N):
```

Figure 2.28 ~ Select Components to install: Radia Software Manager.

- 6.** Press ENTER to skip the installation of the Radia Software Manager.

OR

Type **Y** to install the Radia Software Manager.

```
Select Installation Type
1) Local_Install
2) Remote_Installation_Setup
Enter Type index (1 - 2) (1):
```

Figure 2.29 ~ Select the installation type.

- 7.** Select the type of installation. The default is 1, a local installation.

- Type **1**, and then press ENTER to install the Radia Client locally.

OR

- Type **2**, and then press ENTER to set up remote installation media.

For this example, we accepted the default.

```
Specify the Radia Installation Location
Radia Components Location
Default value: /opt/Novadigm/
```

Figure 2.30 ~ Specify the location for the Radia Client.

- 8.** Specify the installation location for the Radia Client, and then press ENTER.
-

```
Specify the Directory for the Proprietary Objects Produced by Radia Components Version 3.1
Lib Directory
Default value: /opt/Novadigm/lib/
```

Figure 2.31 ~ Specify the location of the lib directory.

- 9.** Specify the location for the Radia proprietary objects (IDMLIB), and then press ENTER.

Specify the Directory for the Log Files Produced by the Radia Components Version 3.1
Log Directory
Default value: /opt/Novadigm/log/

Figure 2.32 ~ Specify the location for the log directory.

- 10.** Specify the location for the log files created by Radia (IDMLOG), and then press ENTER.

Specify the Radia Configuration Servers IP Address
Radia Configuration Server IP Address
Default value: XXX.XXX.XXX.XXX

Figure 2.33 ~ Specify the Radia Configuration Server's IP address.

- 11.** Specify the IP address of the Radia Configuration Server, and then press ENTER.

Specify the Radia Configuration Servers Port Number
Radia Configuration Server Port Number
Default value: 3464

Figure 2.34 ~ Specify the Radia Configuration Server's port number.

- 12.** Specify the port number for the Radia Configuration Server, and then press ENTER.

```
Installation Settings:
Install Radia Application Manager 3.1
Package Settings:

  Radia Components Location = /opt/Novadigm/
  Lib Directory = /opt/Novadigm/lib/
  Log Directory = /opt/Novadigm/log/
  Radia Configuration Server IP Address = 1.1.1.98
  Radia Configuration Server Port Number = 3464

Install Radia Inventory Manager 3.1
Package Settings:

  Radia Components Location = /opt/Novadigm/

Enter Y to begin the installation
Enter N to re-enter the installation information.
Please enter your choice (Y):
```

Figure 2.35 ~ Installation Settings.

- 13.** Review the installation settings you've chosen.
- 14.** If you would like to install the Radia Client with these parameters, press ENTER to accept the default answer of **Y**.
If you want to change any of these settings, type **N** to re-enter the installation information.

```
Starting Install . . .
Complete the configured install process? Y|N (Y):
```

Figure 2.36 ~ Complete the Radia Client installation.

- 15.** When you're satisfied with the settings, press ENTER to install the Radia Client.
The Radia Client is installed.

Summary

- We strongly recommend that you install and run the Radia Clients as root.
- Install the Radia Clients using either the graphical or non-graphical modes.

Installing the Radia Administrator Workstation for UNIX

At the end of this chapter, you will:

- Understand the system requirements and permissions necessary to install the Radia Administrator Workstation for UNIX.
- Be able to install the Radia Administrator Workstation using either the graphical or non-graphical mode.

This guide covers the *suggested* implementation for the Radia Application Manager. Although you will tailor this strategy to meet your organization's needs, it is recommended that you review this guide for a comprehensive understanding of the Radia Application Manager. This chapter focuses on installing the Radia Administrator Workstation for UNIX.

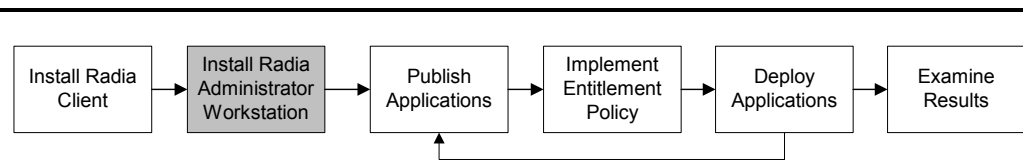


Figure 3.1 ~ Overview of the Radia Application Manager Guide.

If you are responsible for packaging applications or configuring them for distribution, install the Radia Administrator Workstation on your administrator computer.

Use the Radia Publisher to create software or data packages, and then promote them to the Radia Database.

Note to Reliant Users

Currently, the Radia Administrator Workstation is not available for Reliant operating systems.

System Requirements

- Solaris operating system version 2.5.1 or above, SPARC CPU, Motif 1.2 libraries.
- HP-UX operating system version 10.20 or above, PA Risc CPU, Motif 1.2 libraries.
- AIX operating system version 4.3.1, Motif 1.2 libraries.
- RedHat Linux Version 6.2 or above, Intel Pentium processor or compatible CPU.
- RadHat Enterprise Linux Version 2.1 and 3.0, Intel Pentium processor or compatible CPU.
- Siemens Reliant operating system Version 5.43 or 5.45 Reliant UNIX, R400, R4000 Risc.
- SUSE Linux versions 8 and 9.
- TCP/IP connection to a computer running the Radia Configuration Server.
- Radia Administrator Workstation requires 20 MB free disk space.

Prerequisites

- We strongly recommend installing the Radia Clients as root.
- Install the Radia Client on a local file system.
- If you intend to run any of the graphical components of the Radia Administrator Workstation software, make sure the UNIX environment variable DISPLAY is set in your environment. If it is not, you will need to set this variable to indicate the hostname or IP address to which you would like to redirect the graphical display.

Table 3.1 ~ Setting the DISPLAY Variable

In a.....	Type....
C shell	setenv DISPLAY IP address or hostname:0.0
Bourne, Bash, or Korn shell	DISPLAY=IP address or hostname:0.0 export DISPLAY

Note

If the DISPLAY environment variable is not set in your environment, the installation will default to a non-graphical installation.

Troubleshooting

Should you encounter any problems while installing the Radia UNIX Client, please perform the following steps before contacting technical support:

1. Enable diagnostic tracing by appending the text **-loglevel 9** to the installation command line and re-run the installation.
2. Have this log file (tmp/setup/setup.log) located in the home directory of the UNIX user ID who ran the install.

Note

The install option **-loglevel 9** should only be used to diagnose installation problems.

Recommendations

- We strongly recommend that you install and run the Radia Administrator Workstation as root.

Note

Root authority is required to apply owner and group designators to managed resources.

Installation Methods

You can install the Radia Administrator Workstation by:

- Executing the installation procedure directly from the CD-ROM.
- Copying the files from the CD-ROM into a temporary directory and executing the installation procedure.

Several parameters can be used on the command line when installing the Radia Administrator Workstation. Table 3.2 below describes these.

Table 3.2 ~ Command Line Parameters

Parameter	Example	Description
-mode plain	./install -mode plain	Installs the Radia Administrator Workstation in plain mode. The installation graphics are displayed in plain mode (no moving graphics). This is useful for remote installations where network bandwidth may be an issue.
-mode text	./install -mode text	Installs the Radia Administrator Workstation in text mode using the non-graphical installation. The installation takes place completely on the command line. The installation will default to text mode if the DISPLAY environment variable is not set.

Installing the Radia Administrator Workstation for UNIX

This section describes both the graphical (using a GUI) and non-graphical (using a command line) installations of the Radia Administrator Workstation for UNIX.

Graphical Installation

This section describes how to install the Radia Administrator Workstation for UNIX using a graphical user interface (GUI).

To install the Radia Administrator Workstation for UNIX using a GUI

Note

These instructions will guide you through the graphical installation of the Radia Administrator Workstation. For non-graphical instructions, see *Non-graphical Installation* on page 85.

If the UNIX user ID of the person performing the Radia Administrator Workstation installation has previously installed a Radia Client, the location of the Radia Administrator Workstation will default to the location of the Radia Client executables.

1. Depending on your version of UNIX, change your current working directory to the correct subdirectory on the installation media.

Example:

For Solaris, type: `cd /cdrom/management infrastructure/administrator workstation/solaris/`

2. Type `./install`, and then press ENTER.

The **Welcome** window opens.

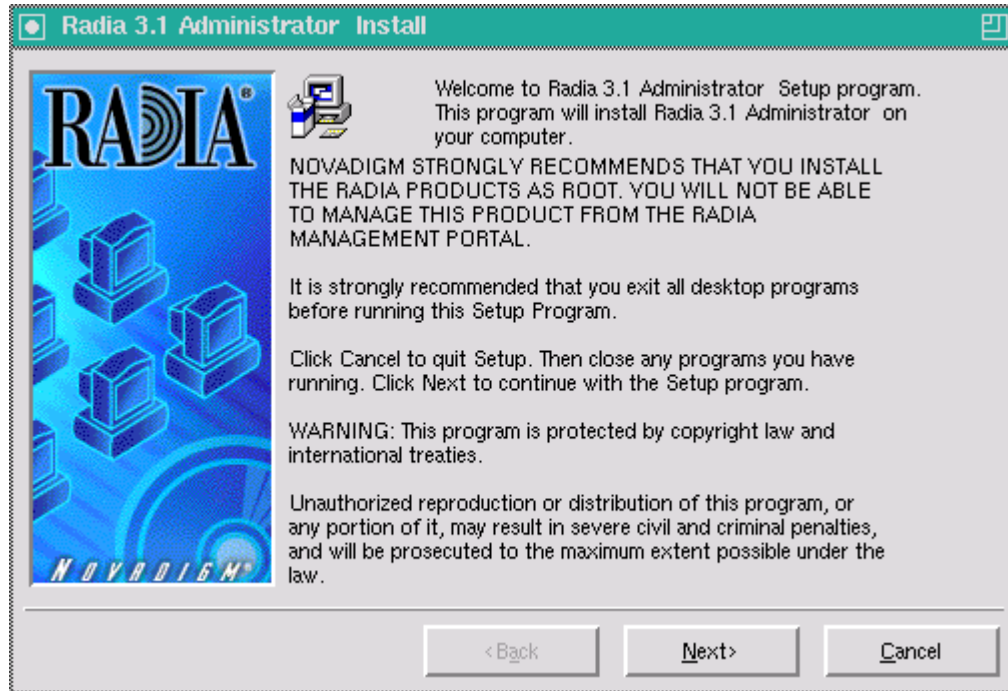


Figure 3.2 ~ Radia Administrator Workstation Welcome window.

3. Click Next.

Note

If you are installing the Radia Administrator Workstation to a computer with the same UNIX user ID that had previously installed a Radia Client, the installation program will prompt you for the Radia Configuration Server's IP address next. The next three windows: Radia Administrator Location, Lib directory, and Log directory, are only needed if you are installing the Radia Administrator Workstation to a computer that does not have a Radia Client already installed.

The **Radia Administrator Location** window opens.

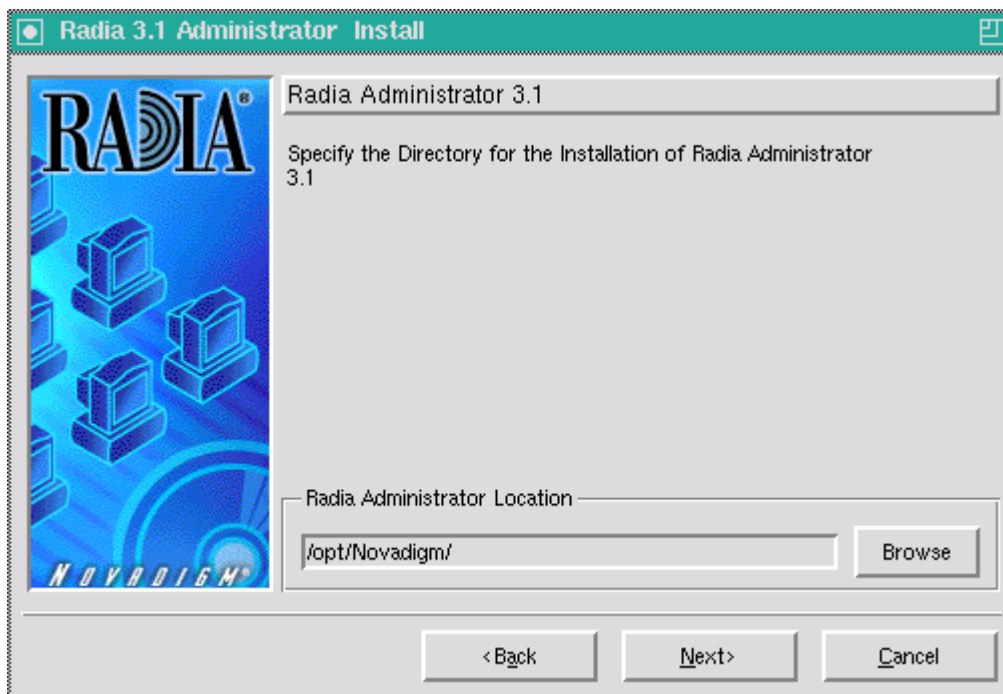


Figure 3.3 ~ Radia Administrator Location window.

4. Type the name of the directory where you are installing the Radia Administrator Workstation, or click **Browse** to navigate to it.
5. Click **Next**.
If the specified directory already exists you will be prompted to verify this location.
 - If you would like to update the existing directory, click **OK**.
 - If you would like to change the directory location, click **Cancel**.

The **Lib Directory** window opens.

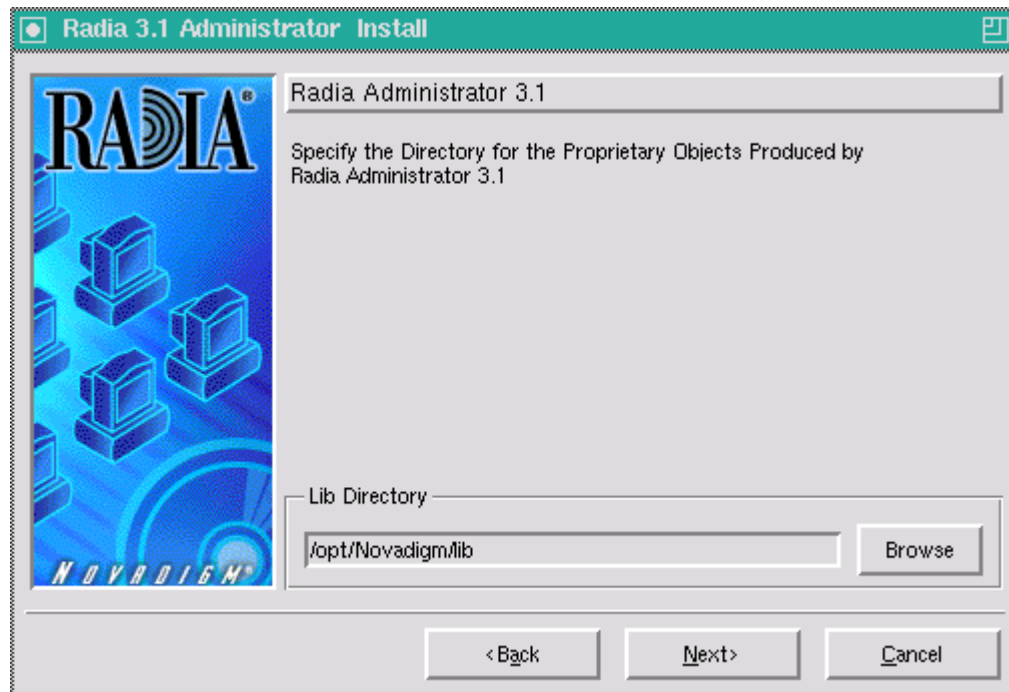


Figure 3.4 ~ Lib Directory window.

6. Type the name of the directory where you would like to store proprietary information created by Radia (the lib directory), or click **Browse** to navigate to it.
7. Click **Next**.

The **Log Directory** window opens.



Figure 3.5 ~ Log Directory window.

8. Type the name of the directory where you would like to store the log files generated by Radia, or click **Browse** to navigate to it.
9. Click **Next**.

The **Radia Configuration Server IP Address** window opens.

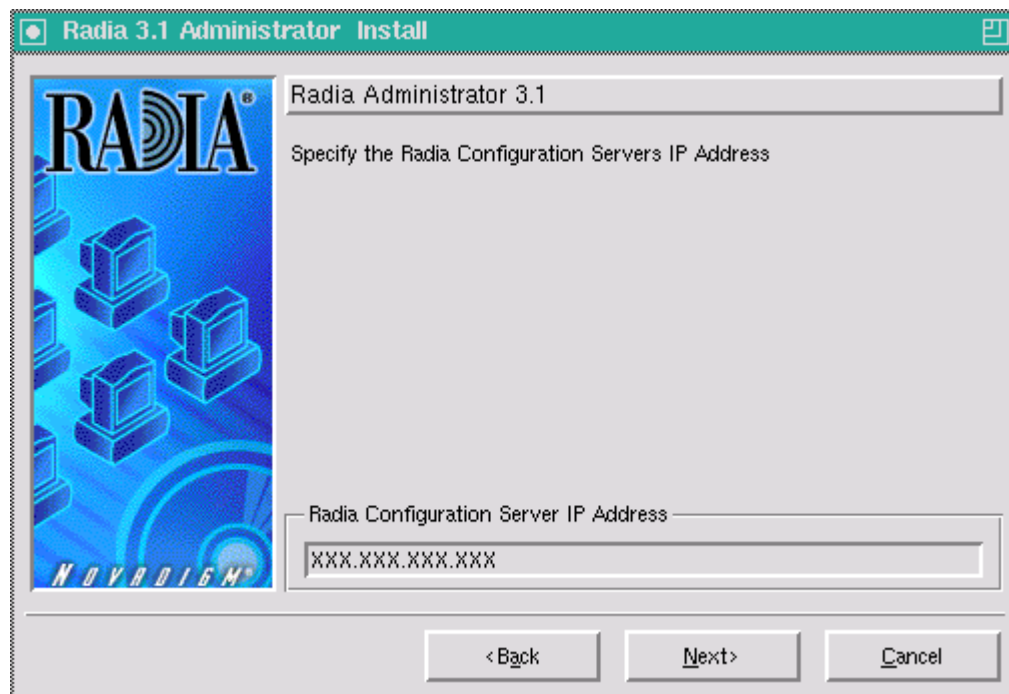


Figure 3.6 ~ Radia Configuration Server IP Address window.

- 10.** Type the IP address (format: xxx.xxx.xxx.xxx) or hostname of the Radia Configuration Server you will be publishing to.
- 11.** Click **Next**.

The **Radia Configuration Server Port Number** window opens.

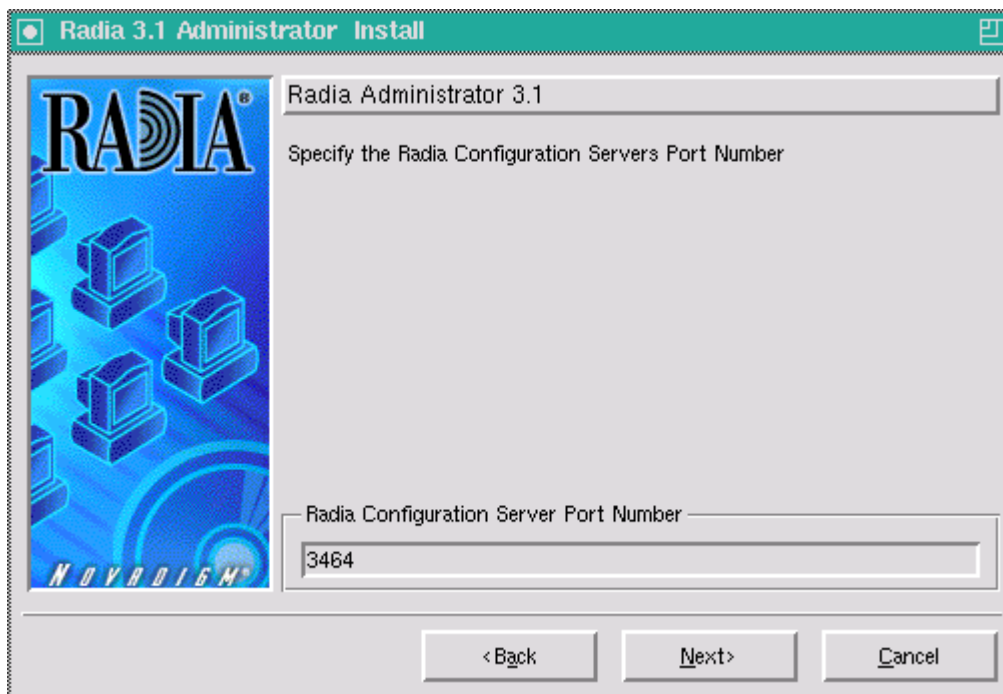


Figure 3.7 ~ Radia Configuration Server Port Number window.

12. Type the port number of your Radia Configuration Server (default is 3464).
13. Click **Next**.

The **Package Settings** window opens.

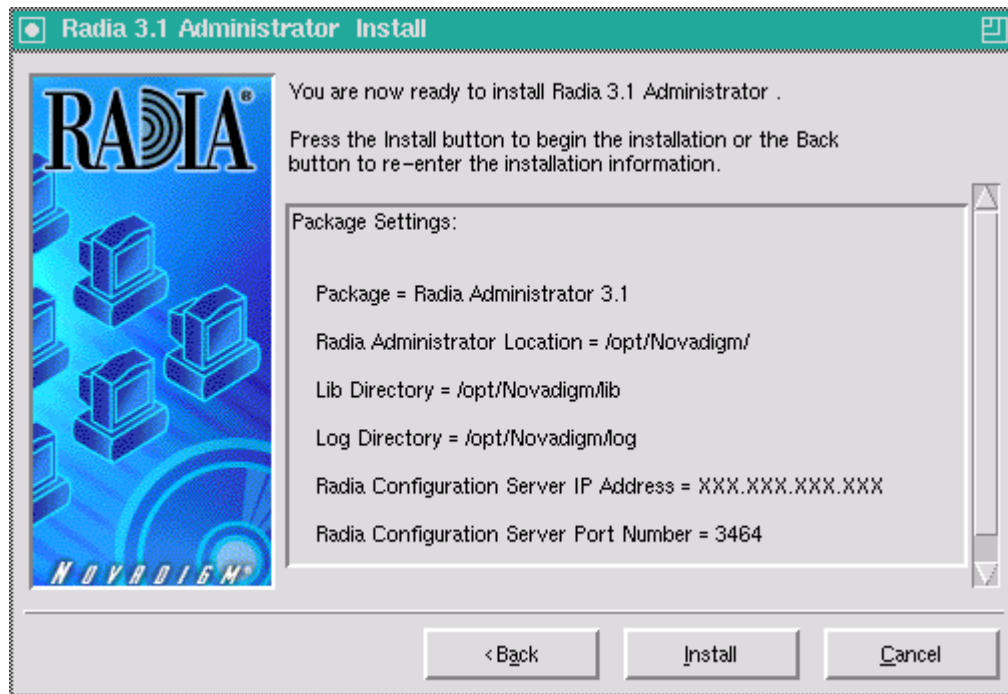


Figure 3.8 ~ Package Settings window.

14. Review the settings displayed in the **Package Settings** window. If you would like to change any of the settings, click **Back** until you get to the appropriate window.
15. When you are satisfied with the Package Settings, click **Install**.
The Radia Administrator Workstation is installed.

Non-graphical Installation

This section describes a non-graphical (using a command line) installation of the Radia Administrator Workstation for UNIX.

To install the Radia Administrator Workstation for UNIX using a command line

Note

These instructions guide you through the non-graphical installation of the Radia Administrator Workstation. For the graphical installation, see *Graphical Installation* on page 77.

1. Depending on your version of UNIX, change your current working directory to the correct subdirectory on the installation media.

Example:

For Solaris, type: **cd /cdrom/management infrastructure/administrator workstation/solaris/**

2. Type **./install –mode text**, and then press ENTER.

The Radia Administrator Workstation installation begins.

```
Installing Radia 3.1 Administrator
Welcome to Radia 3.1 Administrator Setup program.
This program will install Radia 3.1 Administrator on your computer.
```

```
It is strongly recommended that you exit all desktop programs
before running this Setup Program
```

```
Type Q to quit Setup then close any programs you have
running. Type C to continue with the Setup program.
(To exit install at any prompt, type <cancel>)
```

```
WARNING: This program is protected by copyright law and
international treaties.
```

```
Unauthorized reproduction or distribution of this program, or any
portion of it, may result in severe civil and criminal penalties,
and will be prosecuted to the maximum extent possible under the law.
```

```
Enter C to Continue with the installation or Q to Quit the setup program:
```

Figure 3.9 ~ Radia Administrator Workstation non-graphical installation.

3. Type **C**, and then press **ENTER**.

Note

If you are installing the Radia Administrator Workstation to a computer with the same UNIX user ID that had previously installed a Radia Client, the installation program will prompt you for the Radia Configuration Server's IP address next. The next three sections: Radia Administrator Location, Lib directory, and Log directory, are only needed if you are installing the Radia Administrator Workstation to a computer that does not have a Radia Client already installed.

```
Radia Administrator 3.1
Specify the Radia Installation Location
Radia Administrator Location
Default value: /opt/Novadigm/
```

Figure 3.10 ~ Specify the Radia Administrator Workstation installation location.

4. Specify the installation location for the Radia Administrator Workstation, and then press **ENTER**.

```
Radia Administrator 3.1
Specify the Directory for the Proprietary Objects Produced by Radia Administrator 3.1
Lib Directory
Default value: /opt/Novadigm/lib/
```

Figure 3.11 ~ Specify the location for the lib directory.

5. Specify the location for the Radia proprietary objects (IDMLIB), and then press **ENTER**.

```
Radia Administrator 3.1
Specify the Directory for the Log Files Produced by the Radia Administrator 3.1
Log Directory
Default value: /opt/Novadigm/log/
```

Figure 3.12 ~ Specify the location for the log directory.

6. Specify the location for the log files created by Radia (IDMLOG), and then press **ENTER**.

```
Radia Administrator 3.1
Specify the Radia Configuration Servers IP Address
Radia Configuration Server IP Address
Default value: XXX.XXX.XXX.XXX
```

Figure 3.13 ~ Specify the Radia Configuration Server's IP address.

7. Specify the IP address of the Radia Configuration Server, and then press ENTER.

```
Radia Administrator 3.1
Specify the Radia Configuration Servers Port Number
Radia Configuration Server Port Number
Default value: 3464
```

Figure 3.14 ~ Specify the Radia Configuration Server's port number.

8. Specify the port number of the Radia Configuration Server, and then press ENTER.

```
You are now ready to install the Radia 3.1 Administrator.
Installation Settings:
```

```
Install Radia Administrator 3.1
```

```
Package Settings:
```

```
Radia Administrator Location = /opt/Novadigm/
Lib Directory = /opt/Novadigm/lib/
Log Directory = /opt/Novadigm/log/
Radia Configuration Server IP Address = xxx.xxx.xxx.xxx
Radia Configuration Server Port Number = 3464
```

```
Enter Y to begin the installation
Enter N to re-enter the installation information.
Please enter your choice (Y):
```

Figure 3.15 ~ Installation Settings.

9. Review the installation settings you've chosen.
10. If you would like to install the Radia Administrator Workstation with these settings, press ENTER to accept the default (**Y**) and begin the installation or type **N**, to re-enter your installation information.

```
Starting Install . . .  
Complete the configured install process? Y|N (Y):
```

Figure 3.16 ~ Complete the Radia Administrator Workstation installation.

- 11.** To complete the configured installation process, press ENTER.
The Radia Administrator Workstation is installed.

Summary

- We strongly recommend that you install and run the Radia Administrator Workstation as root.
- Install the Radia Administrator Workstation for UNIX using the graphical or non-graphical mode.

Installing the Radia Administrator Workstation for Windows

At the end of this chapter, you will:

- Be able to install the Radia Administrator Workstation for Windows.

This guide covers the *suggested* implementation for the Radia Application Manager. Although you will tailor this strategy to meet your organization's needs, it is recommended that you review this guide for a comprehensive understanding of the Radia Application Manager. This chapter focuses on installing the Radia Administrator Workstation for Windows.

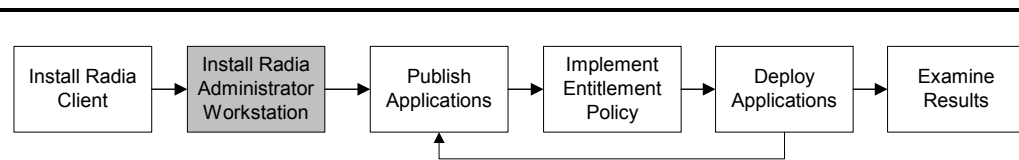


Figure 4.1 ~ Overview of the Radia Application Manager Guide.

The Radia Administrator Workstation for Windows includes the Radia System Explorer, which is required for manipulating the Radia Database. You will need the Radia System Explorer if you will be updating, adding to, or changing the Radia Database.

Install the Radia Administrator Workstation for Windows onto a 32-bit Windows platform.

The Radia Administrator Workstation installation program uses the Microsoft MSI format for Windows Installer. The program consists of one MSI package with four feature sets—Radia Publisher, Radia System Explorer, Radia Client Explorer, and Radia Screen Painter.

System Requirements

- Clean computer. (A *clean computer* is a computer with only the target subscriber's operating system installed.)

Note

We recommend that you use a third-party disk-imaging tool, such as Symantec Ghost™, to create an image of your clean computer. This allows you to quickly restore it to its *clean* state.

- Windows 95, 98, NT 4.0, 2000, or XP.
- TCP/IP connection to the Radia Configuration Server.
- Minimum resolution of 800 x 600.
- MS Windows Installer Version 2.0 or higher.
The MSI 2.0 installation program is available in the **managementinfrastructure\administratorworkstation\win32\msi** folder on the Radia Infrastructure CD-ROM. If Windows Installer does not exist, or if an earlier version is detected on the computer, the MSI 2.0 installation program runs automatically.

- For Windows NT, 2000 or XP, you must have administrator rights to the computer to install the Radia Administrator Workstation.

About the Installation Files

SETUP.EXE

SETUP.EXE is stored on the Radia Infrastructure CD-ROM in the **managementinfrastructure\administratorworkstation\win32** folder. It accepts any command line parameters and passes them to Windows Installer.

You can also create a Windows Installer Administrative Installation Point (AIP) for network installations.

Note

A Windows Installer Administrative Installation Point (AIP) is also known as an Administrative Control Point (ACP).

The AIP starts Windows Installer and passes any command line parameters to it. To create the Windows Installer Administrative Installation Point (AIP) in a specified target directory, type:

```
setup.exe /a TARGETDIR=drive:targetdirectory /qb
```

The target directory contains RADADMIN30.MSI, the installation folders, and SETUP.EXE.

RADADMIN30.MSI

RADADMIN30.MSI is the MSI database file, which contains the default configuration information for the installation. This file is stored on the Radia Infrastructure CD-ROM in the **managementinfrastructure\administratorworkstation\win32** folder.

Installing the Radia Administrator Workstation for Windows

This section describes how to install the Radia Administrator Workstation using the Installation Wizard and using a command line.

Using the Installation Wizard to Install the Radia Administrator Workstation

This section describes how to install the Radia Administrator Workstation for Windows using the Installation Wizard.

To install the Radia Administrator Workstation for Windows using the Installation Wizard

- 1.** From the folder containing the Radia Administrator Workstation installation files, run **setup.exe**.

The **Radia Administrator Workstation 3.x Installation Wizard** opens.

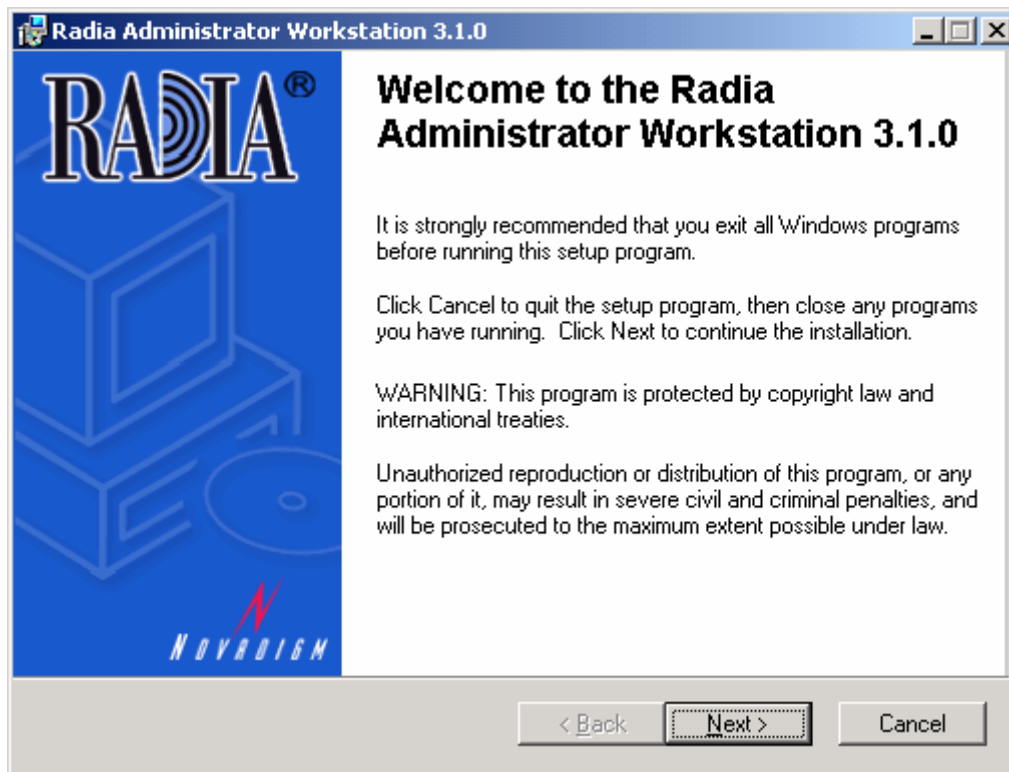


Figure 4.2 ~ Welcome window.

2. Click Next.

If the Radia Client is not installed on the computer, the **Destination Folder** window opens.

Note

If the Radia Client is already installed on the computer, this window will not open and the Radia Administrator Workstation is installed in the same location as the Radia Client.

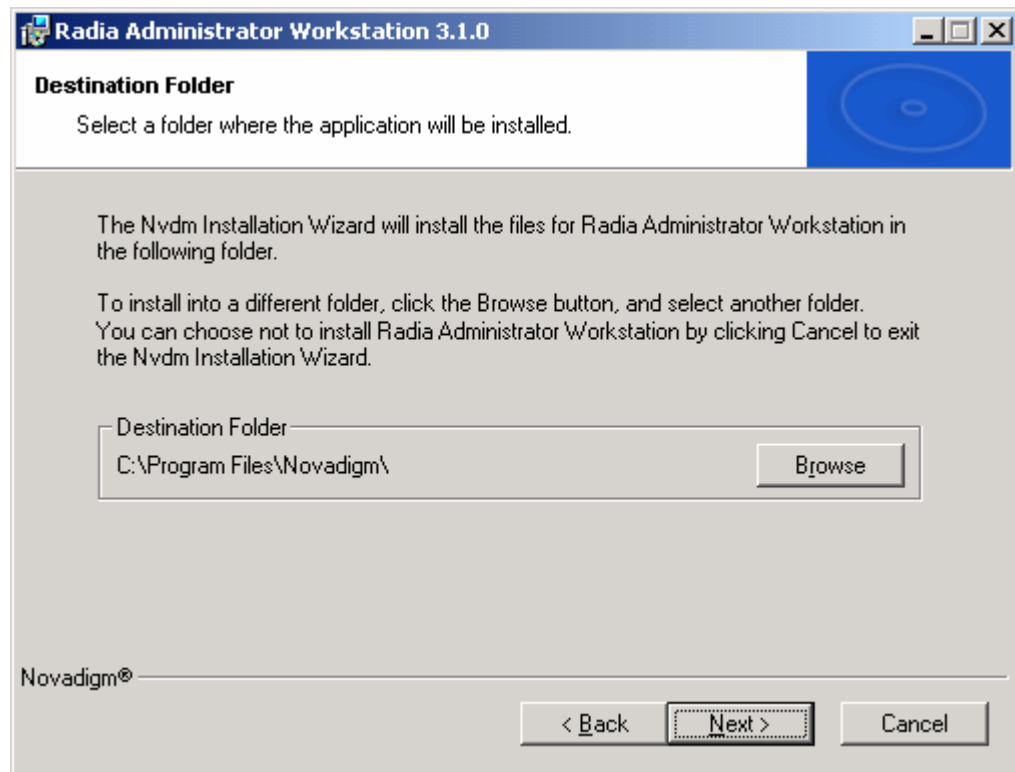


Figure 4.3 ~ Destination Folder window.

If you want to select a different destination for the Radia Administrator Workstation, click **Browse**, and then navigate to the appropriate destination folder.

Click **OK** to continue.

3. Click **Next**.

The **Radia Configuration Server** window opens.

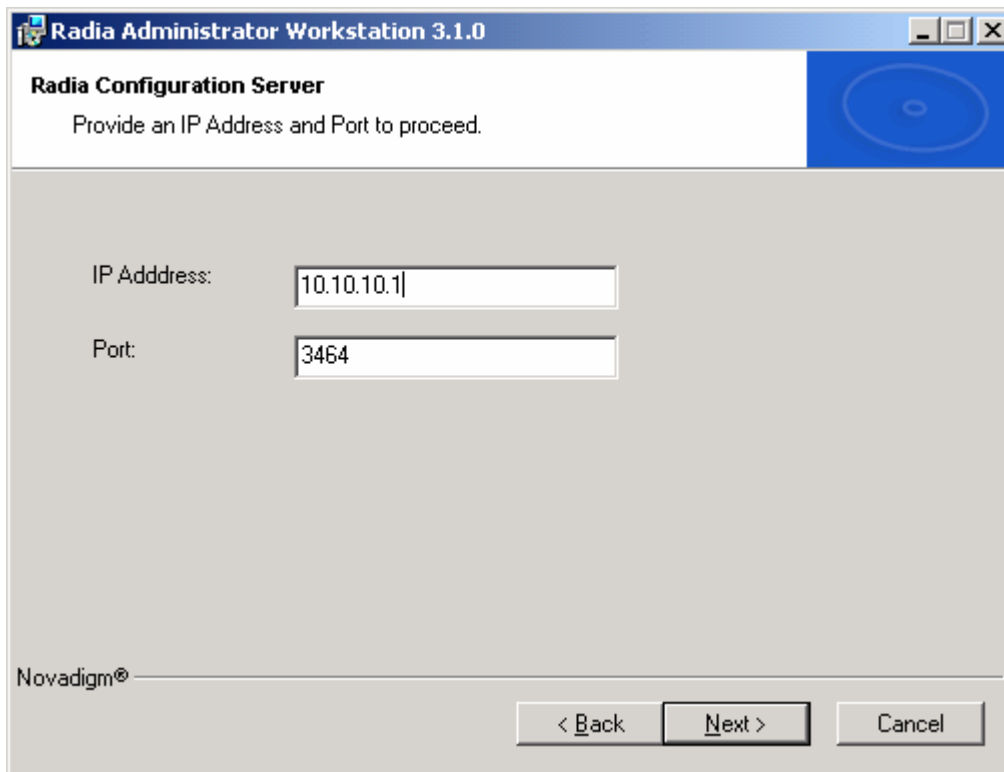


Figure 4.4 ~ Radia Configuration Server window. .

4. In the **IP Address** text box, type the IP address for the Radia Configuration Server.
5. In the **Port** text box, type the port number (default is 3464).
6. Click **Next**.

The **Select Features** window opens.

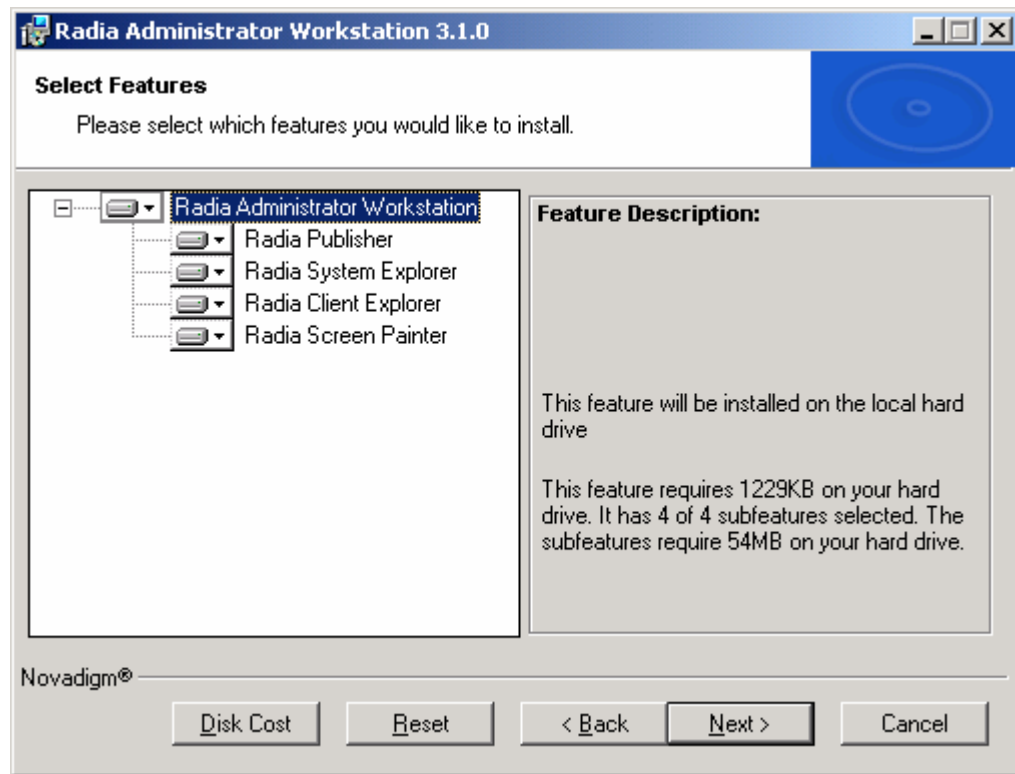




Figure 4.5 ~ Select Features window.

7. Click  to select the features that you would like to install.

Tips

- If you want to set the same options for all of the features, you can click  next to **Radia Administrator Workstation** and select the appropriate option to apply the setting to all features.
- Click **Disk Cost** to see an overview of the disk space needed for the installation.

Each time you click  a shortcut menu for that feature opens.

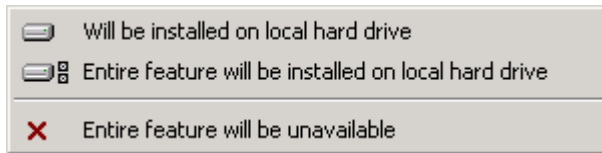


Figure 4.6 ~ Feature set installation options.

8. From the shortcut menu, select an installation option. These options are described in Table 4.1 below.

Table 4.1 ~ Feature Settings for the Radia Administrator Workstation

Option	Description
Will be installed on local hard drive	Installs the top-level feature on the local hard drive, but not any sub-features listed below.
Entire feature will be installed on local hard drive	Installs the entire feature, including any sub-features listed below. Note: In this installation program, selecting this option or the "Will be installed on local hard drive" option for any of the features results in the same installation because these features do not contain sub-features.
Entire feature will be unavailable	The feature will not be installed. If previously installed, this feature will be removed.

9. Click **Next**.

The **Ready to Install the Application** window opens.

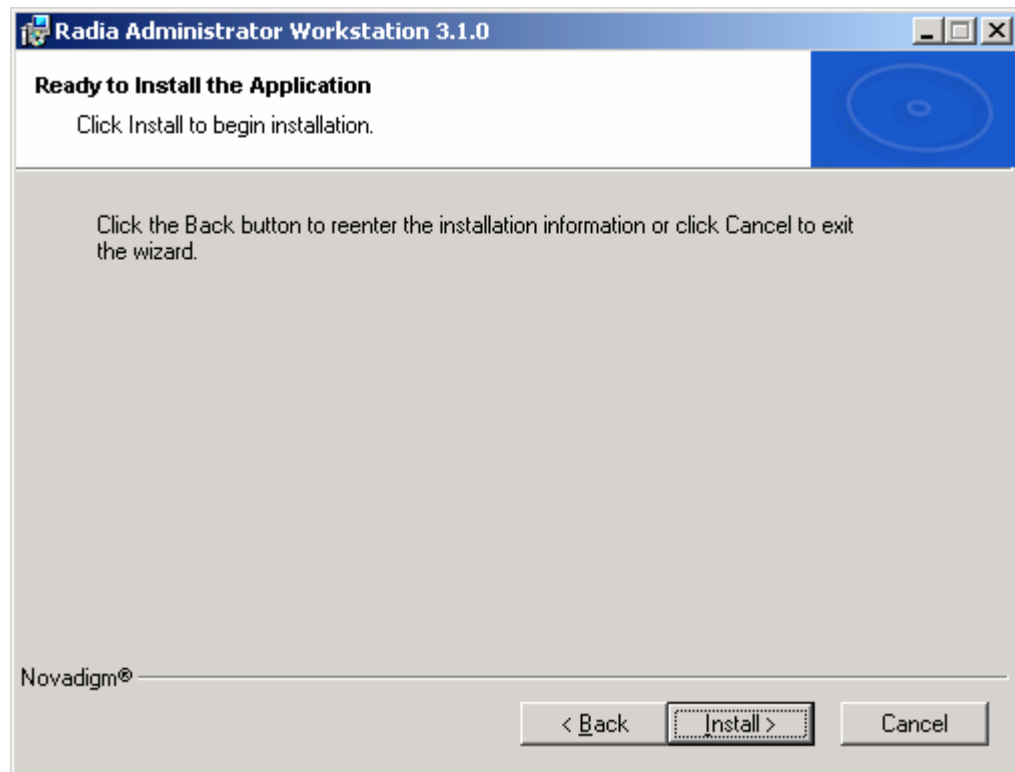


Figure 4.7 ~ Ready to Install the Application window.

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

When the installation is done, the Successful Installation window opens.

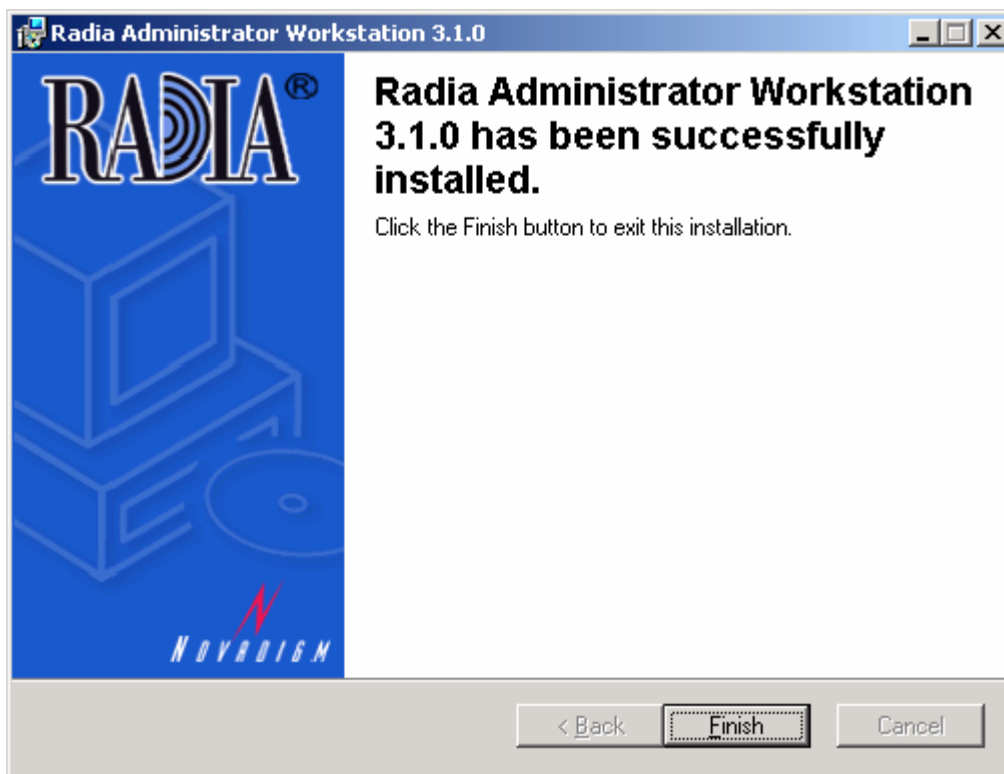


Figure 4.8 ~ Successful installation window.

-
11. Click **Finish** to exit the installation.

Using a Command Line to Install the Radia Administrator Workstation for Windows

You can also use the command line to run the Radia Administrator Workstation installation program. For example, if you want to install only the Radia Publisher on a computer, the command line that you run from the directory containing the Radia Administrator Workstation installation files might be:

```
setup.exe ADDLOCAL=NVDINSTALLPUBLISHER
```

Specifying the Features to Install

To specify the features that you want to install, use the appropriate feature state argument, such as ADDLOCAL, and specify the features that you want to install.

Table 4.2 ~ Radia Administrator Workstation Feature State Arguments

Specify the following arguments	To set the feature state
ADDLOCAL	Type a comma-delimited list of features that you want set to "Will be installed on local hard drive".
ADDSOURCE	Type a comma-delimited list of features that you want set to "Will be installed to run from network".
ADVERTISE	Type a comma-delimited list of features that you want set to "Feature will be installed when required".
REMOVE	Type a comma-delimited list of features that you want set to "Entire feature will be unavailable". This only removes the features—not the entire product. Therefore, if you use the REMOVE property and type each of the feature names, the core product will still be stored on your computer. If you want to remove the entire product, type REMOVE=ALL.

When specifying features on the command line, reference the Radia Administrator Workstation features as follows:

- NVDINSTALLPUBLISHER = Radia Publisher
- NVDINSTALLSYSTEMEXPLORER = Radia System Explorer
- NVDINSTALLCLIENTEXPLORER = Radia Client Explorer
- NVDINSTALLSCREENPAINTER = Radia Screen Painter

For example, if you want to install the Radia System Explorer and the Radia Client Explorer to the computer, the command line might be:

```
setup.exe ADDLOCAL= NVDINSTALLSYSTEMEXPLORER, NVDINSTALLCLIENTEXPLORER
```

Caution

If you run the installation from a command line, be sure to pass the IP address for the Radia Configuration Server to the installation. For example:

```
setup.exe NVDOBJZMASTER_ZIPADDR=10.10.10.1
```

Additional Command Line Arguments

Some additional arguments that you can pass to the installation program on the command line are described in Table 4.3 below.

Table 4.3 ~ Command Line Arguments

Argument	Description
/qn	Performs a silent installation.
/qb	Displays the progress bar only during the installation.
/l*v <i>drive:\install.log</i>	Creates a detailed Windows Installer log. Note: Using this option may impact the performance of the installation.
/a TARGETDIR= <i>drive:\targetdirectory</i>	Creates a Windows Installer AIP in the specified target directory. Note: A Windows Installer Administrative Installation Point (AIP) is also known as an Administrative Control Point (ACP). The target directory contains RADADMIN30.MSI, the installation folders, and SETUP.EXE. Once you have created the AIP, you can run SETUP.EXE and pass the appropriate command line parameters. This starts the Windows Installer and passes the specified parameters to it.

Removing the Radia Administrator Workstation

The Windows Installer installation program offers the ability to remove the Radia 3.x Administrator. This section describes how to remove the Radia Administrator Workstation using the Installation Wizard and using a command line.

Using the Installation Wizard to Remove the Radia Administrator Workstation

This section describes how to remove (uninstall) the Radia Administrator Workstation using the Installation Wizard.

Note

To remove specific features of the Radia Administrator Workstation, use the Modify option on the Application Maintenance window. This is discussed in *Modifying the Radia Administrator Workstation Installation* on page 114.

To remove the Radia Administrator Workstation for Windows using the Installation Wizard

1. From the folder containing the Radia Administrator Workstation installation files, double-click **setup.exe**.

The **Application Maintenance** window opens.

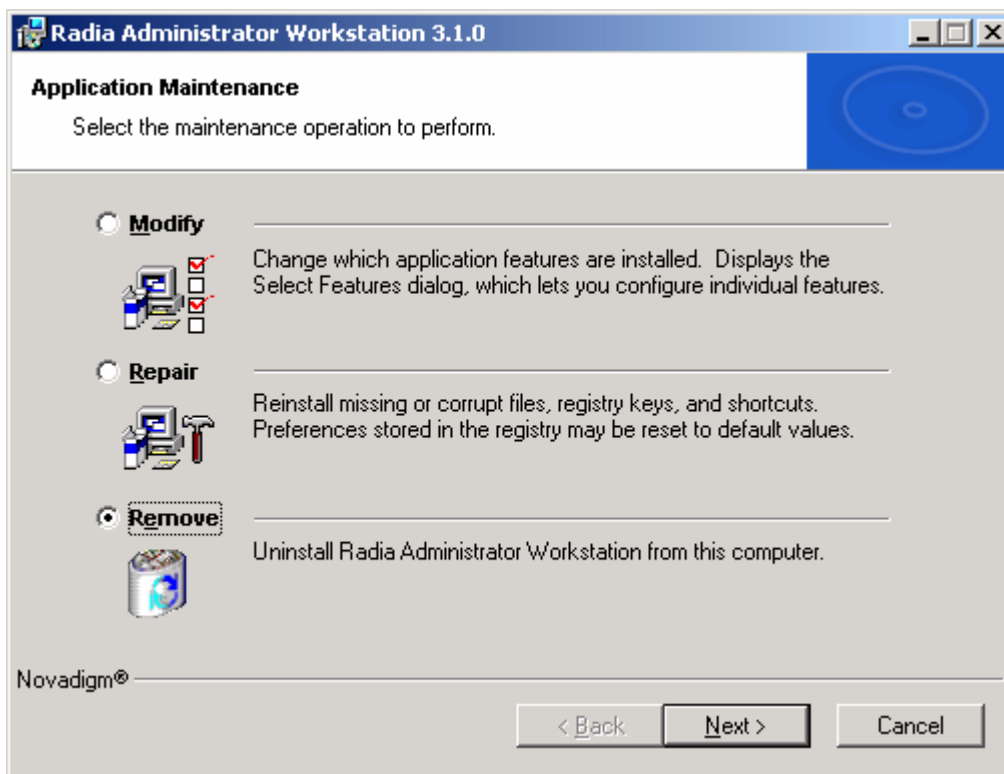


Figure 4.9 ~ Application Maintenance window.

2. Select the **Remove** option.
3. Click **Next**.

The **Radia Administrator Workstation 3.x Uninstall** window opens.

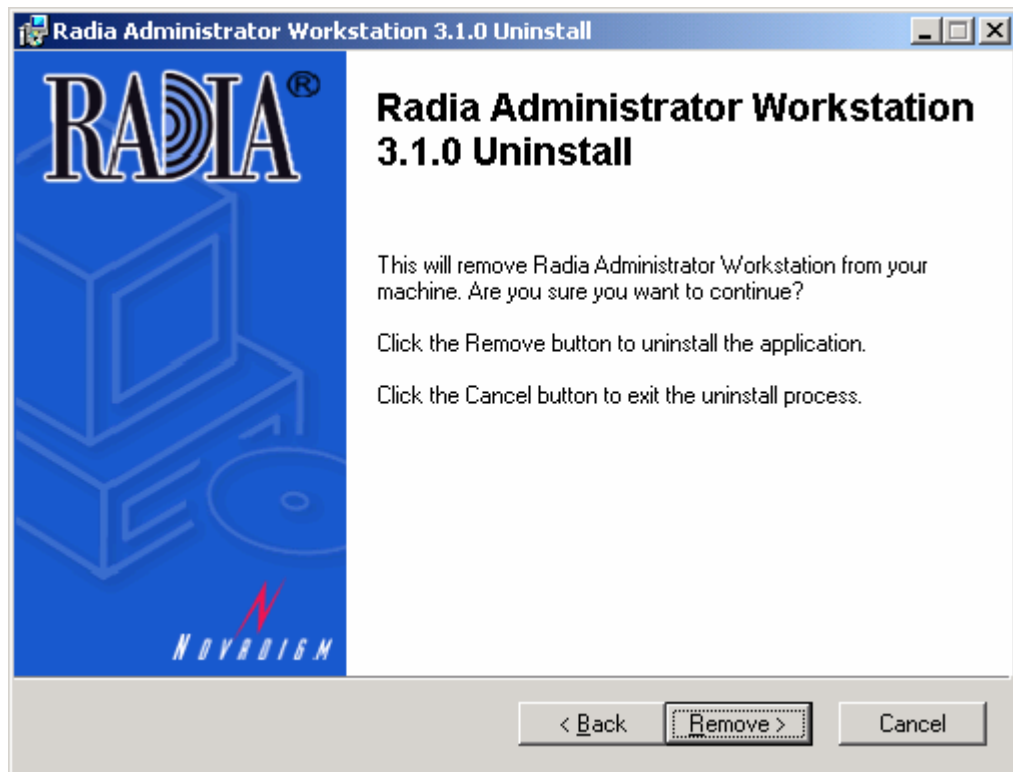


Figure 4.10 ~ Radia Administrator Workstation Uninstall window.

4. Click Next.

The files for the Radia Administrator Workstation are removed from the computer.

The Successful Uninstallation window opens.

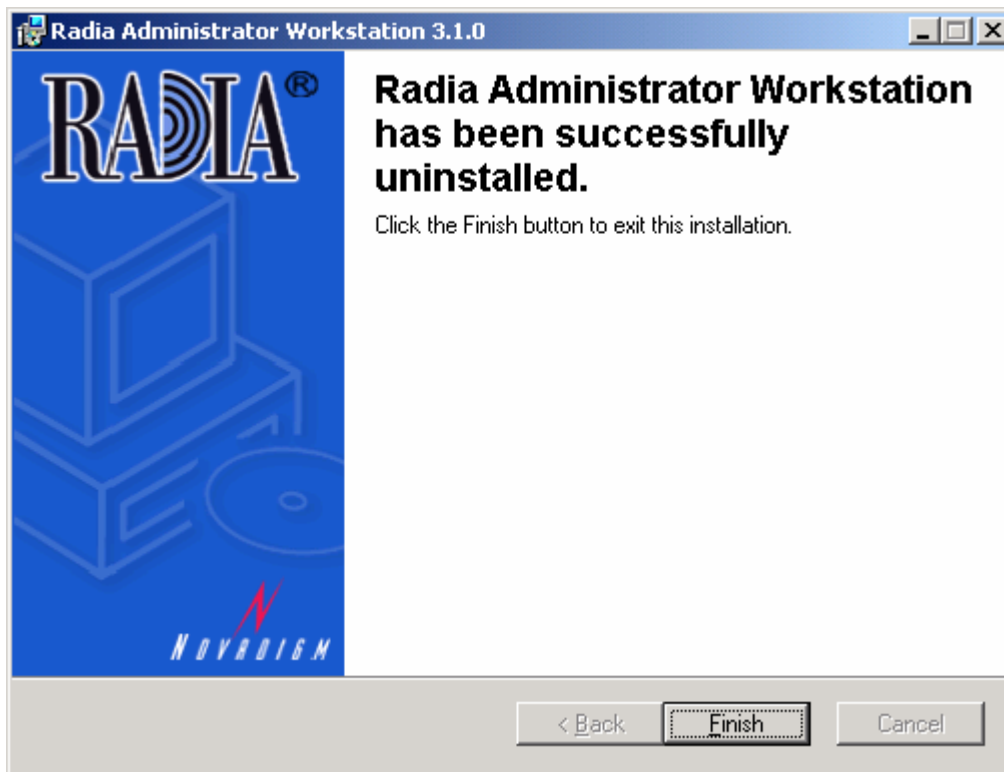


Figure 4.11 ~ Successful Uninstallation window.

5. Click **Finish**.

Using a Command Line to Remove the Radia Administrator Workstation

This section describes how to remove (uninstall) the Radia Administrator Workstation using a command line.

To remove the Radia Administrator Workstation using a command line

- From the folder containing the Radia Administrator Workstation installation files, type the following command line:

```
setup.exe REMOVE=ALL
```

OR

If you would like to remove a single Radia Administrator Workstation feature, type a comma-delimited list of the features that you want to remove on the command line.

EXAMPLE

If you want to silently remove the Radia System Explorer and Radia Client Explorer, type:

```
SETUP.EXE REMOVE=NVDINSTALLSYSTEMEXPLORER,NVDINSTALLCLIENTEXPLORER /qn
```

Note

Reference the features for the Radia Administrator Workstations as follows:

- Radia Publisher = NVDINSTALLPUBLISHER
- Radia System Explorer = NVDINSTALLSYSTEMEXPLORER
- Radia Client Explorer = NVDINSTALLCLIENTEXPLORER
- Radia Screen Painter = NVDINSTALLSCREENPAINTER

Caution

This only removes the features—not the entire product. Therefore, if you use the REMOVE property and type each of the feature names, the core product will still be stored on your computer.

Repairing the Radia Administrator Workstation

The Windows Installer installation program offers the ability to repair the Radia Administrator Workstation. For example, if you have a missing Radia Administrator Workstation module, you can use this tool to repair the installation. This tool will not overwrite modules that exist on the computer if they are newer than the ones provided with the installation.

This section describes how to repair the Radia Administrator Workstation using the Installation Wizard and using a command line.

Using the Installation Wizard to Repair the Radia Administrator Workstation

This section describes how to repair the Radia Administrator Workstation using the Installation Wizard.

To repair the Radia Administrator Workstation using the Installation Wizard

1. From the folder containing the Radia Administrator Workstation installation files, double-click **setup.exe**.

The **Application Maintenance** window opens.

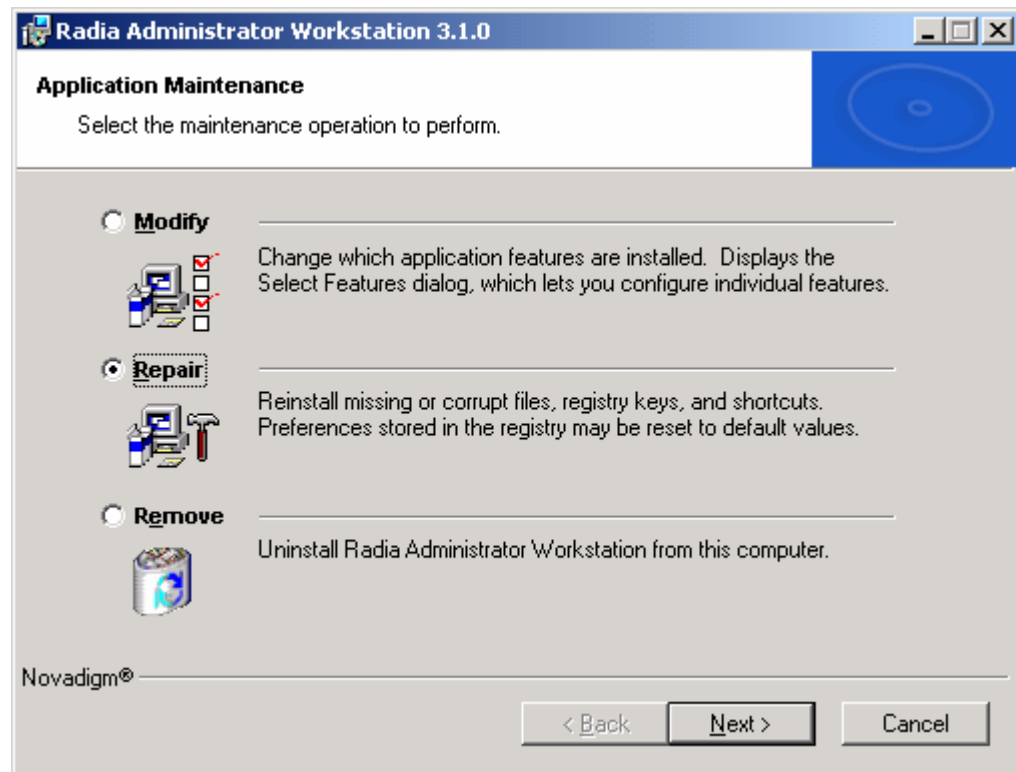


Figure 4.12 ~ Application Maintenance window.

2. Select the **Repair** option.
3. Click **Next**.

The **Ready to Repair the Application** window opens.

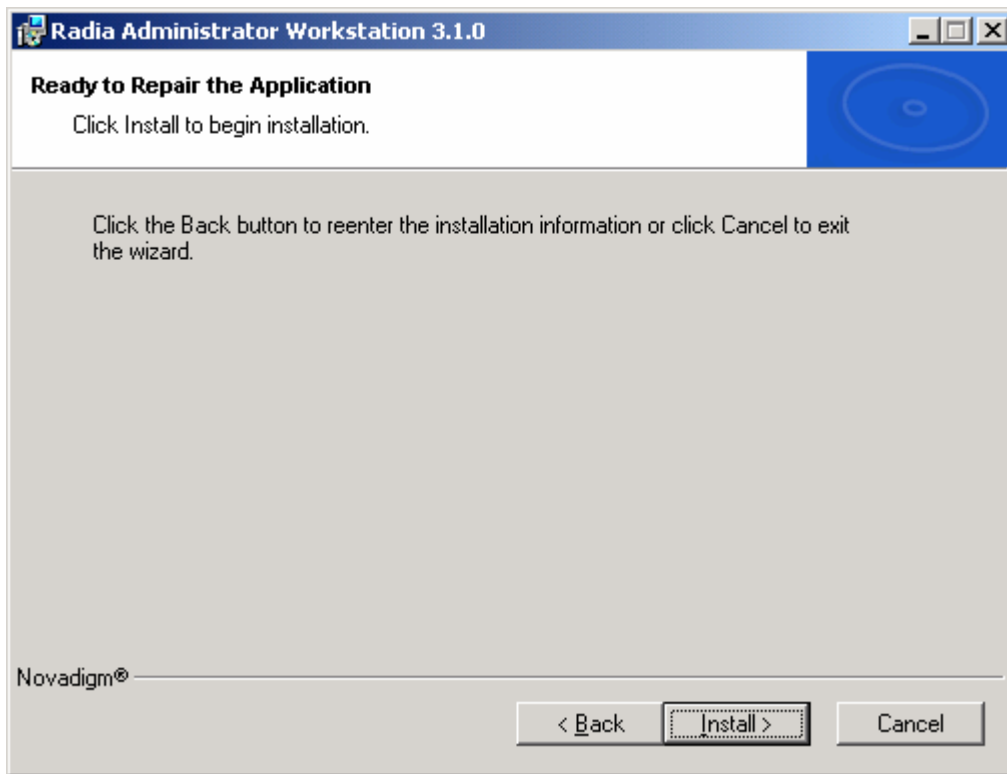


Figure 4.13 ~ Ready to Repair the Application window.

4. Click Next.

When the repair is done, the Successful Installation window opens.

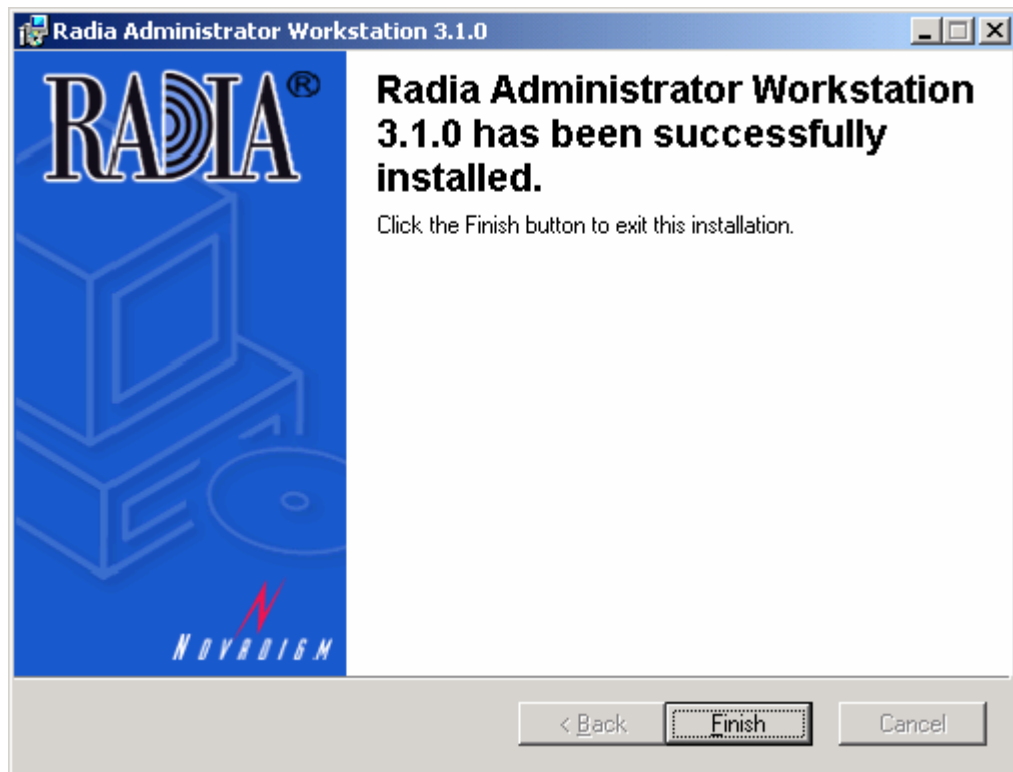


Figure 4.14 ~ Successful installation window.

-
5. Click **Finish**.

Using a Command Line to Repair the Radia Administrator Workstation

This section describes how to repair the Radia Administrator Workstation using a command line.

To repair the Radia Administrator Workstation for Windows using a command line

- From the folder containing the Radia Administrator Workstation installation files, type the following command line:

```
msiexec /f radiadmin30.msi
```

Note

Additional parameters can be used with this command line. For more information, see your Windows Installer documentation.

Modifying the Radia Administrator Workstation Installation

The Windows Installer installation program offers the ability to modify the Radia 3.x Administrator Workstation installation by adding or removing individual features. This section describes how to modify the installation of the Radia Administrator Workstation using the Installation Wizard and using a command line.

Using the Installation Wizard to Modify the Radia Administrator Workstation

This section describes how to modify the installation of the Radia Administrator Workstation using the Installation Wizard.

To modify the Radia Administrator Workstation installation for Windows using the Installation Wizard

1. From the folder containing the Radia Administrator Workstation installation files, double-click **setup.exe**.

The **Application Maintenance** window opens.

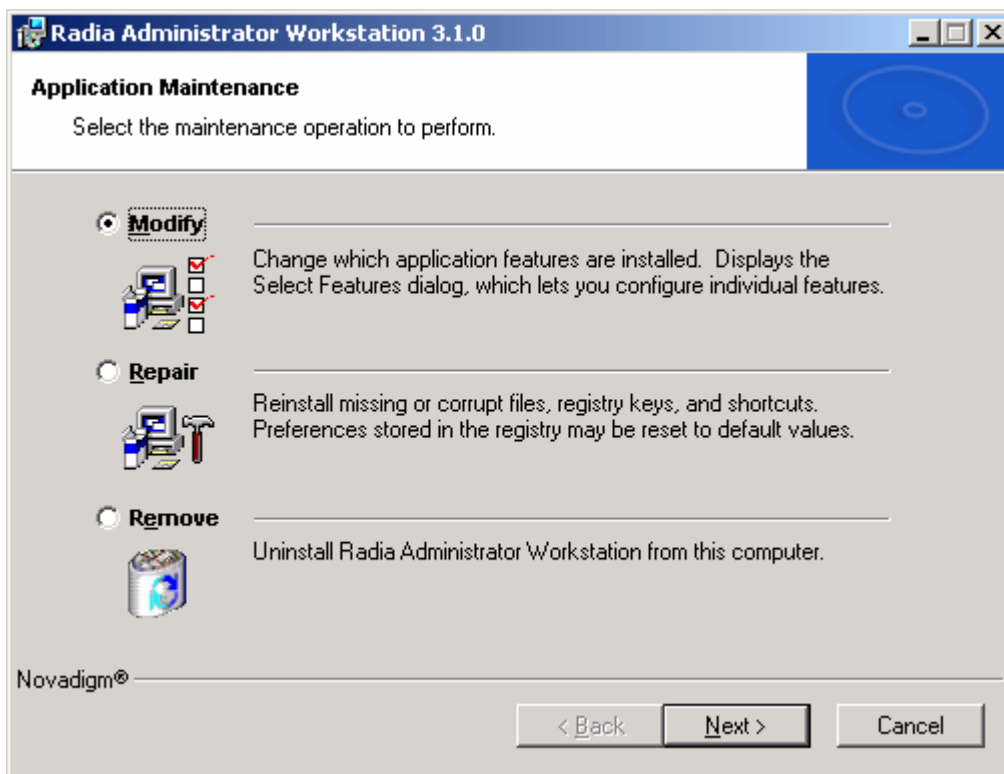


Figure 4.15 ~ Application Maintenance window.

2. Select the **Modify** option.
3. Click **Next**.

The **Select Features** window opens. See *Installing the Radia Administrator Workstation for Windows* on page 94 for information about how to use this window.

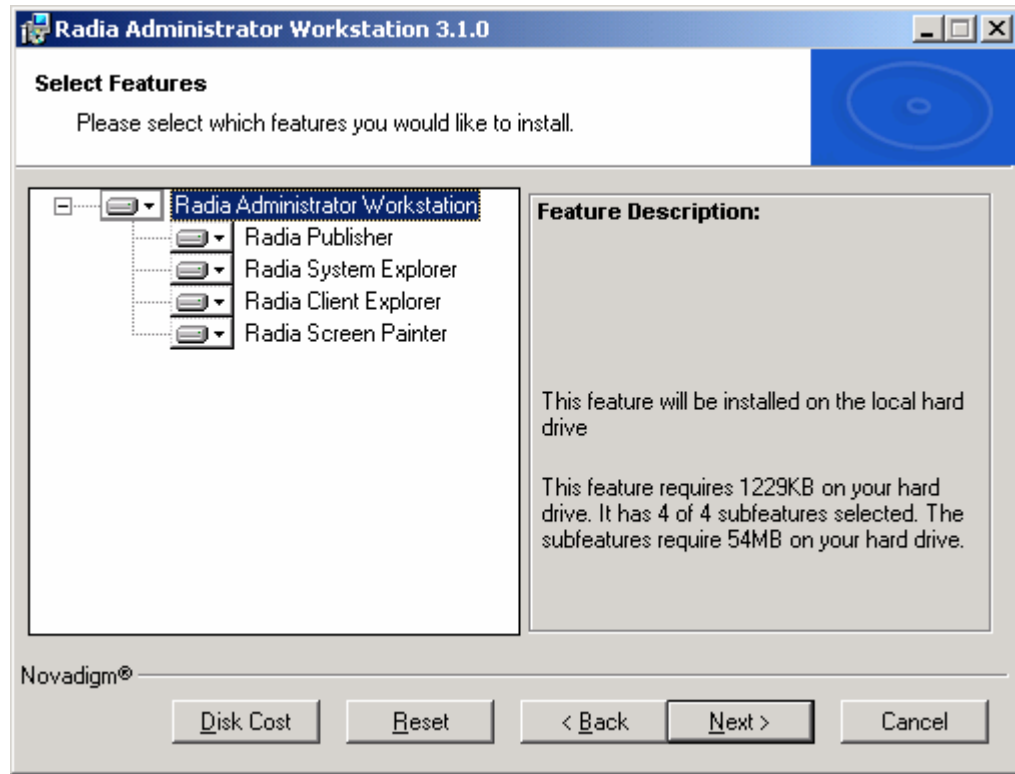


Figure 4.16 ~ Select Features window.

4. Click Next.

The **Ready to Modify the Application** window opens.

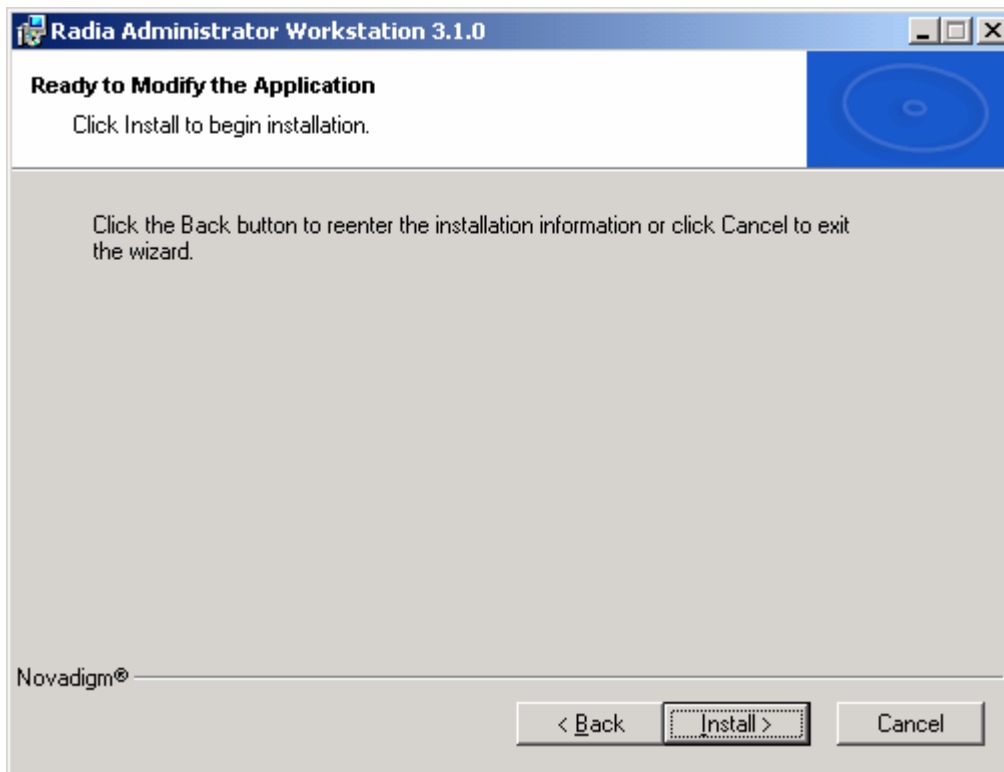


Figure 4.17 ~ Ready to Modify the Application window.

-
5. Click Next.

The Successful Installation window opens.

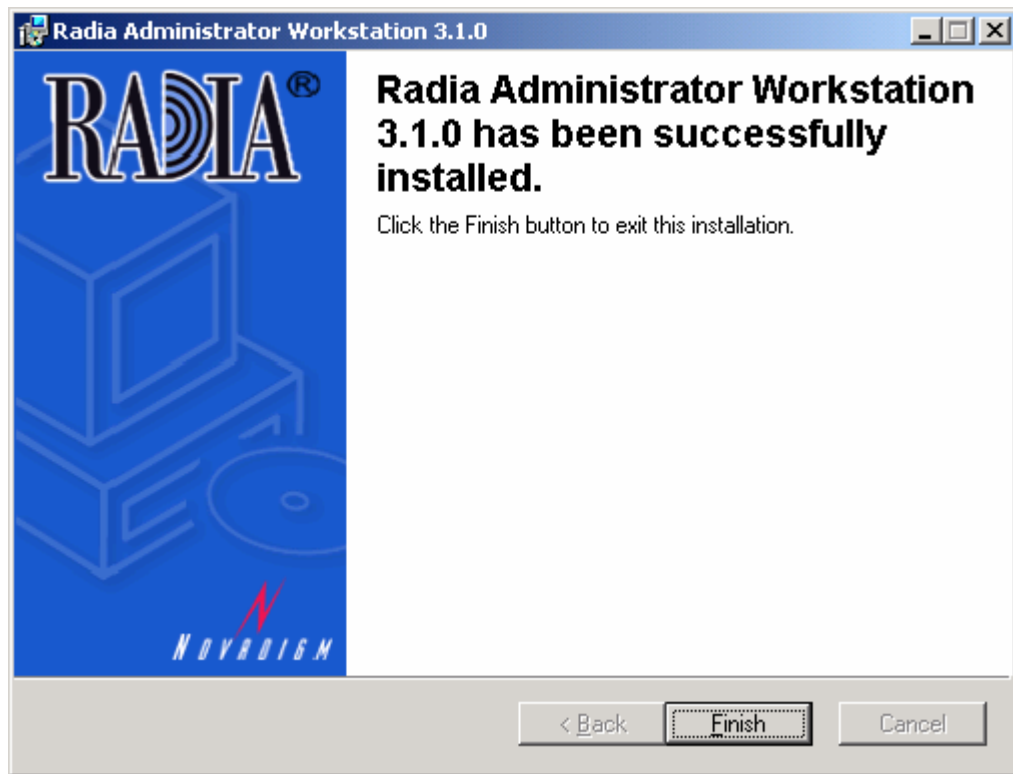


Figure 4.18 ~ Successful installation window.

-
6. Click **Finish** to close the installation program.

Using a Command Line to Modify the Radia Administrator Workstation Installation

To modify the Radia Administrator Workstation installation using a command line

- From the folder containing the Radia Administrator Workstation installation files, type the following command line:

```
setup.exe FeatureStateArgument=feature1, feature2
```

See Table 4.2 on page 102 for more information.

EXAMPLE

If you want to install the Radia Publisher to the local hard drive, and to make the Radia System Explorer and Radia Client Explorer unavailable, use the following command line:

```
setup.exe ADDLOCAL=NVDINSTALLPUBLISHER REMOVE=NVDINSTALLSYSTEMEXPLORER,NVDINSTALLCLIENTEXPLORER
```

See *Additional Command Line Arguments* on page 103 for additional arguments.

Summary

- The Radia Administrator Workstation consists of one MSI package with four feature sets—Radia Publisher, Radia System Explorer, Radia Client Explorer, and Radia Screen Painter.
- Install the Radia Administrator Workstation on a clean computer.
- You can install the Radia Administrator Workstation using a command line or using the Installation Wizard.

Publishing Applications and Content

At the end of this chapter, you will:

- Understand the publishing process.
- Understand the requirements for publishing software or content.
- Be able to publish an application using Component Selection Mode
- Be aware of the Radia Publishing Adapter.
- Use the New Application Wizard in the Radia System Explorer to create a service.
- Be able to prepare and distribute maintenance packages to the Radia Application Manager.

This guide covers the *suggested* implementation for the Radia Application Manager. Although you will tailor this strategy to meet your organization's needs, it is recommended that you review this guide for a comprehensive understanding of the Radia Application Manager. This chapter focuses on *publishing*.

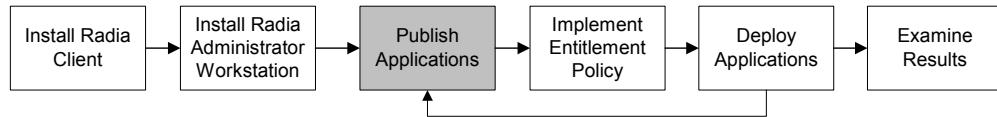


Figure 5.1 ~ Overview of the Radia Application Manager Guide.

About Publishing

Publishing is the process of identifying the components of the software and organizing them into *packages*. Packages contain the files and links that make up the software. The software that you distribute can vary greatly—from a single data file, such as a company telephone list, to an entire application suite.

For the UNIX version of the Radia Publisher, there is one publishing mode available, **Component Selection Mode**. In Component Selection Mode, you select the individual components that make up the application, such as files, directories, and links.

After you create a package, you *promote* it to the Radia Database. The package is copied to the Radia Database and several instances are created, as described below.

- An **Application Packages (PACKAGE)** instance that represents the promoted package.
- One **UNIX File Resources (UNIXFILE)** instance for each file in the package.
- One **Path (PATH)** instance for each unique path to one or more components on the computer where the software is installed.

Note

Above are some of the default classes available in the SOFTWARE domain. You can also add your own classes to the Radia Database. See the *Radia System Explorer Help* for information on how to add a class.

Then, you will use the Radia System Explorer to create a service, assign policies, and prepare the package for deployment. See the *Implementing Entitlement Policy* and *Deploying Applications* chapters in this book for more information.

Note

The Radia System Explorer is currently available for 32-bit Windows platforms. For more information, refer to the *Radia System Explorer Guide*.

Note to Reliant Users

Currently, the Radia Publisher (a component of the Radia Administrator Workstation) is not available for Reliant operating systems.

Publishing Considerations Checklist

Before publishing your data, there are several items that you need to consider.

General

- What is the name of the package going to be? Follow your naming conventions.
- Do you have a unique session ID? Follow your conventions.

System Configuration

See *Setting the Required System Configuration* on page 149 for more information.

- What operating systems are your target computers (workstations or servers) using?

Activation Options

- When do you want to activate the application—immediately on distribution or at a later time?
See *Setting Date and Time Constraints* on page 151 for more information.
- Which version of the application do you want to distribute, and when do you want to activate it?
See the *Deploying Applications* chapter in this book for more information.
- Do you want to build and maintain versions?
See the *Deploying Applications* chapter in this book for more information.

Data Options

See *Data Options Tab* on page 162 for more information.

- What type of compression do you want to use?
- Are you distributing maintenance to the Radia Application Manager client?
- How do you want to promote the resources?
- Are you sending out an update and only want to deploy the changes?

Verify Options

See *Client Management Tab* on page 157 for more information.

- Do you want to use the standard, default verification options?
- Is this a first time installation? Is there anything that you need to verify?
- When deploying files, what types of statistics do you want to check – date, time, size?
- Do you want to update all files, or only newer files?
- If a file already exists, do you want to deploy it again to overwrite any changes that may have been made?

Delivery Options

See *Client Management Tab* on page 157 for more information.

- Do your files or methods need to be deployed in a particular order?
- Is the data mandatory or optional?
Note: You can only deliver mandatory files with the Radia Application Manager.
- Do you want the data deployed under the user or machine context?

Client Behaviors

See *Client Behaviors Tab* on page 164 for more information.

- After the file is deployed, do you want to run any methods? If so, what are they?
- Does anything need to happen to enable the file once it's deployed? If so, what method will you run to enable it?
- If the subscriber is no longer subscribed to the software, do you want to delete the file?
- Do you want to compare the old and new version of the file that you are deploying? If so, what method do you want to use?

Setting Default Properties

Soon, you will learn how to create packages using the Radia Publisher. However, before creating a package, you may want to set default properties (such as compression settings and verification options) for the files and directories that will be included in the package. Changes made to the default properties also apply to new publisher sessions. If necessary, you can modify the properties later for any file or directory from the **Set Properties and Locations** window. See *Using Component Selection Mode* on page 143 for more information.

You can also use the Radia System Explorer to modify the default properties in the base instance. Or, after you promote the package to the Radia Database, you can modify the properties for an individual instance in the UNIXFILE or PATH classes.

Note

The Radia System Explorer is currently available for 32-bit Windows platforms. For more information, refer to the *Radia System Explorer Guide*.

To log on to the Radia Publisher

1. Log in as root.
2. Change your current working directory to the location of the **publishr** executable, and type **./publishr**.
3. In the **Radia Publisher Security Information** dialog box, type your **User ID** and **Password** in the appropriate fields.

Note

The **User ID**, as shipped from HP, is **RAD_MAST**. No password is necessary. This may have been changed during installation. You can also change this by selecting the **Change Password** check box and typing the new password in the **New Password** and **Verify New Password** fields.

4. Click **OK**.

To access the Global Default Properties dialog box

- From the **Edit** menu, select **Change Global Defaults**. The **Radia Publisher – Global Default Properties** dialog box has four tabs: Client Management, Data Options, Database Information, and Client Behaviors.

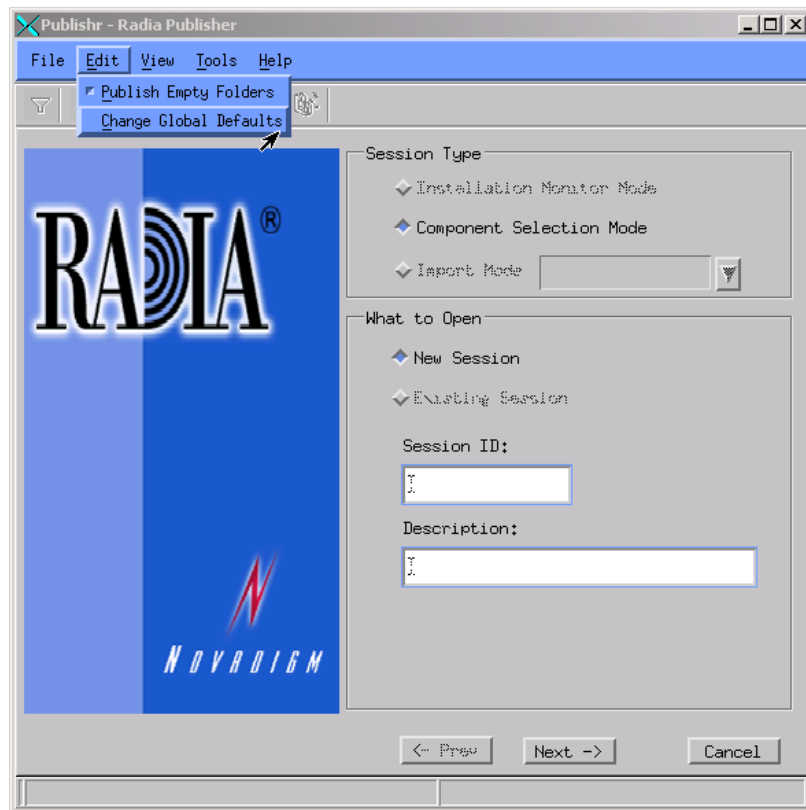


Figure 5.2 ~ Edit menu, Change Global Defaults option.

Client Management Tab

Use the **Client Management** tab to set verification and delivery options for the files or directories in the package.

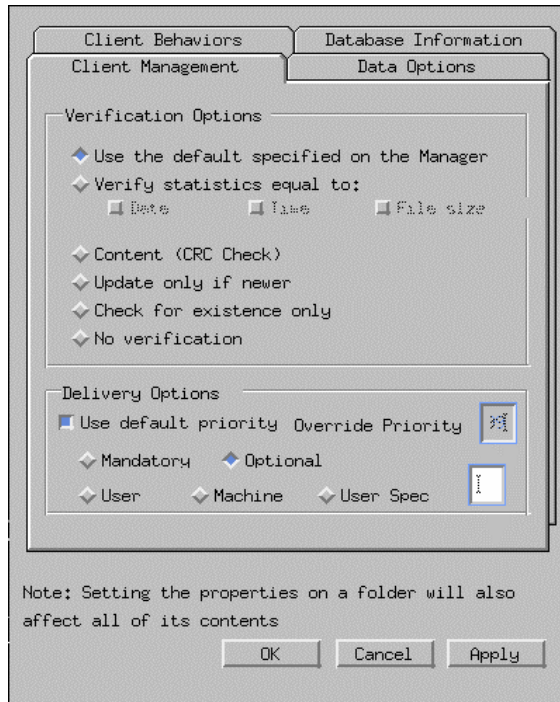


Figure 5.3 ~ Global Default Properties dialog box, Client Management tab.

Verification Options

Use **Verification Options** to specify the default actions that the Radia Application Manager will take for the file or directories.

Your selections in this dialog box set the variable ZRSCVRFY in the base instance of the UNIXFILE class. Use the Radia System Explorer to view, or modify, this variable.

Note

The Radia System Explorer is currently available for 32-bit Windows platforms. For more information, refer to the *Radia System Explorer Guide*.

Table 5.1 ~ Verification Options

Verification Option	Usage	ZRSCVRFY Settings
Use the default specified on the Manager	Select this option to inherit verification options for the files from the UNIXFILE class' base instance in the Radia Database.	ZRSCVRFY=Y
Verify statistics equal to	Select this option so that the Radia Application Manager checks the selected statistics [Date (D), Time (T) or File Size (S)] for the files on the computer. The files are deployed from the Radia Database (or Radia Staging Server) if the statistics of the file on the computer are different from the statistics for this file.	ZRSCVRFY=D ZRSCVRFY=T ZRSCVRFY=S ZRSCVRFY=Y (to check date, time and size)
Content (CRC Check)	Select this option to perform content CRC checking for the resource. This populates the ZRSCCRC attribute of the resources UNIXFILE class. Note: Use of Content CRC checking is a time consuming process and should be used sparingly.	ZRSCVRFY=Y
Update only if newer	Select this option so that the files are deployed if the files in the Radia Database (or Radia Staging Server) have a later date/time stamp than the ones on the subscriber's computer.	ZRSCVRFY=U
Check for existence only	Select this option so that the files are deployed if they are not on the subscriber's computer. No action is taken if the files already exist on the subscriber's computer, even if the files' statistics differ from those in the Radia Database.	ZRSCVRFY=E
No verification	Select this option so that the files are deployed the first time the software is deployed. No subsequent action is taken.	ZRSCVRFY=N

Delivery Options

Use **Delivery Options** to specify the default delivery options, such as the order in which files are deployed.

Your selections in this dialog box set the corresponding variables in the base instance of the UNIXFILE class. Use the Radia System Explorer to view, or modify, the appropriate variables.

Note

The Radia System Explorer is currently available for 32-bit Windows platforms. For more information, refer to the *Radia System Explorer Guide*.

Table 5.2 ~ Delivery Options

Delivery Option	Usage	Variable Settings
Use default priority	Select this check box to use the default priority of 50 . Priority determines the order of deployment, from highest priority to lowest priority.	ZRSCPRI=50
Override Priority	Type a number from 1 to 99 to override the default priority of 50 . 1 is the highest priority,99 the lowest.	ZRSCPRI=1
The following options apply <i>only</i> if there is not enough space on the subscriber's computer to install the entire application.		
Mandatory	Select this option to indicate that the files are critical to the software. If there is not enough space on the subscriber's computer for the entire application, Radia will only deploy mandatory files. If there is not enough space for the mandatory files, then the software is not deployed at all.	ZRSCMO=M
Optional (default)	Select this option to indicate that the files are not critical to the software. If there is not enough space on the subscriber's computer for the entire application, Radia will not deploy optional files.	ZRSCMO=O
The following options apply only to operating systems supporting multiple users with a required sign on.		
User	Select User if you want to indicate that the file will be deployed only to the subscriber logged on when the application is initially deployed.	ZCONTEXT=U
Machine	Select Machine to indicate that the file will be deployed to all users of the computer.	ZCONTEXT=M
User Spec	<i>This option is for future use.</i>	<i>This option is for future use.</i>

Data Options Tab

Use the **Data Options** tab to specify the default data compression and other details about the files you will be distributing.

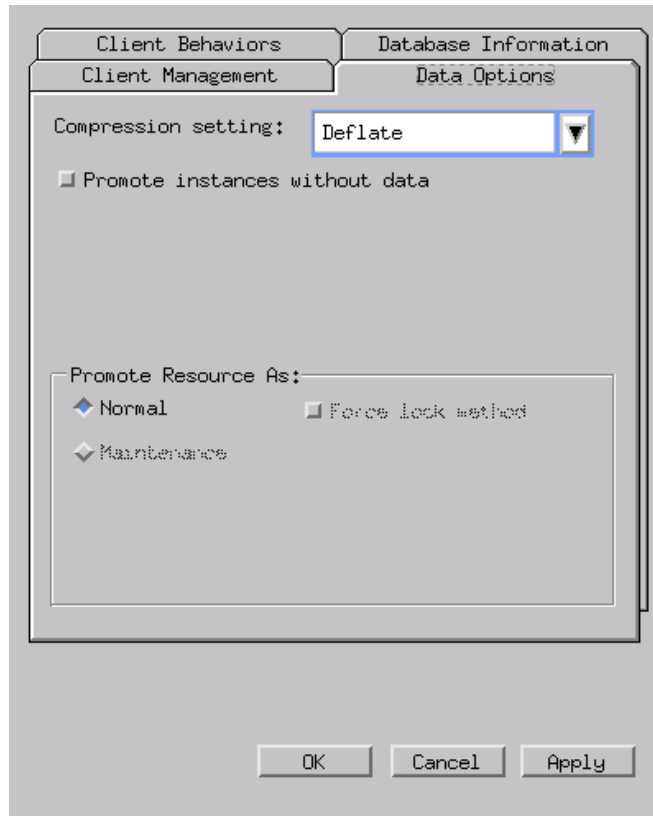


Figure 5.4 ~ Global Default Properties dialog box, Data Options tab.

Table 5.3 ~ Data Options

Data Option	Usage
Compression setting	<p>If necessary, select the compression setting for storing files in the Radia Database. Compression minimizes the time required to transmit the files and the amount of disk space required to store them.</p> <ul style="list-style-type: none"> • Select Deflate for the most efficient compression, which produces smaller compressed images. This is the default setting. • Select None if the files are already compressed. If you are packaging an application that contains one or more compressed files, do <i>not</i> have Radia Publisher compress them as well. The files may actually grow in size if they are compressed again.
Promote instances without data	<p>Select this check box to indicate that the files should not be transferred to the Radia Database as part of the package. Only the instances representing the files are included in the package. The data remains in compressed format in the IDMDATA location on your computer. See the <i>Installing the Radia Application Manager</i> chapter in this book for more information.</p> <p>You can manually place files on Radia Staging Servers if you have connectivity to the Radia Staging Server and do not want copies of the files in the Radia Database.</p>
Promote Resource As	<ul style="list-style-type: none"> • Normal Select this option to indicate that the files are to be deployed as part of an application. This is the default selection. • Maintenance Select this option to indicate that the files are maintenance components for the Radia Application Manager software. • Force lock method Select this check box to force the use of the <i>locked file method</i> for deploying the files. <p>If files are in use on the subscriber's computer when Radia attempts to deploy new copies of the files, the locked file method is normally used to deploy the files.</p> <p>If necessary, the files are decompressed and stored locally in a directory. The Client Connect process forces a restart when it ends and the files are deployed to their correct locations during startup.</p>

Client Behaviors Tab

Use the **Client Behaviors** tab to specify default methods (or programs) that Radia executes on the subscriber's computer.

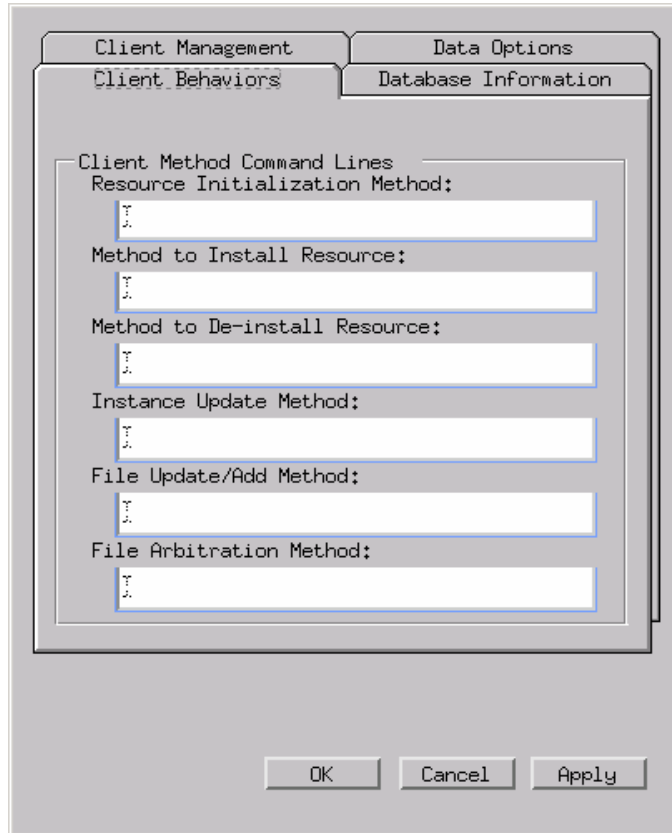


Figure 5.5 ~ Global Default Properties dialog box, Client Behaviors tab.

The command lines that you type in this dialog box are stored in variables in the UNIXFILE class instances in the SOFTWARE domain. In Figure 5.5 above, you can see the command line, stored in a FILE class instance that was typed into the **Method to De-install Resource** text box.

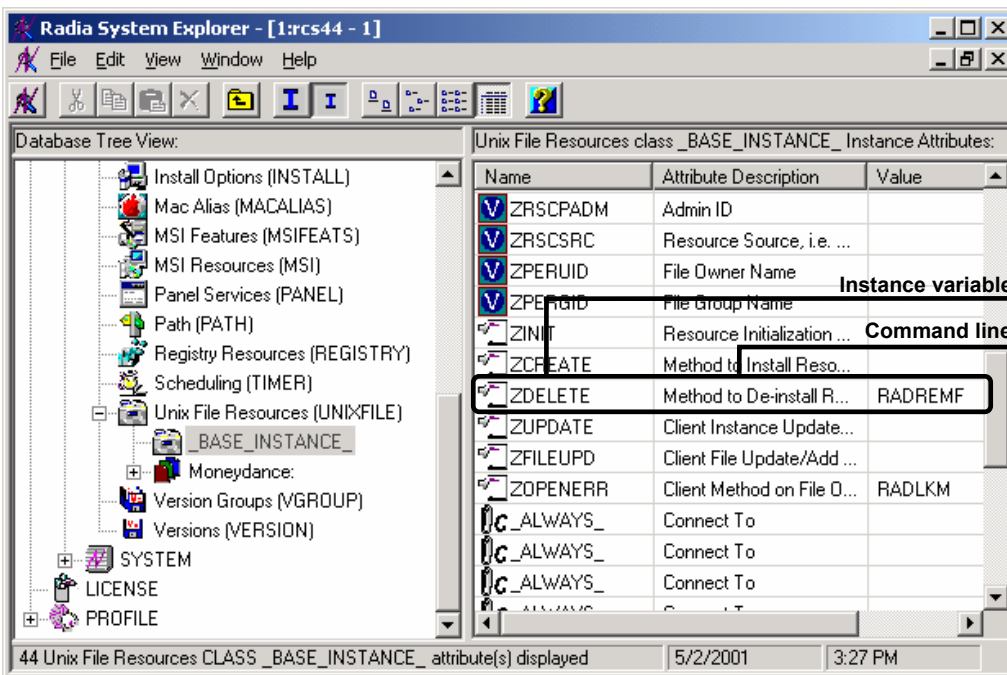


Figure 5.6 ~ Command line stored in the FILE class instance.

Note

Figure 5.6 above depicts the Radia System Explorer, which is currently available for 32-bit Windows platforms. For more information, refer to the *Radia System Explorer Guide*.

Table 5.4 on page 136 describes the fields available on the Client Behaviors tab.

Table 5.4 ~ Client Behaviors

Client Behaviors	Usage
Resource Initialization Method (Variable in database: ZINIT)	Type the method to run when the files are stored on the subscriber's computer.
Method to Install Resource (Variable in database: ZCREATE)	Type the method to run after the file is stored on the computer. This is used if some processing is required to enable the file to be used on the computer.
Method to De-install Resource (Variable in database: ZDELETE)	Normally, files are removed if the subscription to the software is cancelled. If a file, such as shared objects, is not supposed to be deleted from the subscriber's computer, even if the subscription to the software is cancelled, type <u>NONE</u> (with the underscores) as the value for Method to De-install Resource .
Instance Update Method (Variable in database: ZUPDATE)	Type the method to run when the instance is modified on the computer, after the file has been deployed.
File Update/Add Method (Variable in database: ZFILEUPD)	Type the method to run when the file is new or has been updated. The method executes just before the file is deployed to the computer.
File Arbitration Method (Variable in database: ARBITRAT)	Type the method to run if a file is about to be replaced. This method compares the version information of the file that exists and the file that is going to replace it, and then determines which file to keep.

Database Information Tab

Use the **Database Information** tab to specify where the instances for the selected files or directories will be stored in the Radia Database.

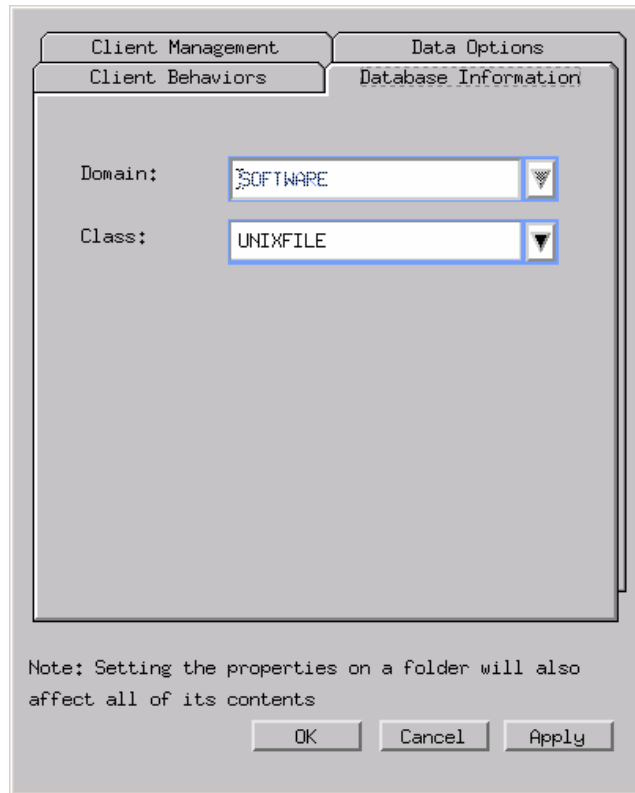


Figure 5.7 ~ Global Default Properties dialog box, Database Information tab.

Table 5.5 on page 138 describes the fields available on the Database Information tab, as shown in Figure 5.7 above.

Table 5.5 ~ Database Information

Database Information	Usage
Domain	Domain that stores the instance. This is normally the SOFTWARE domain unless you have customized the Radia Database with proprietary domains. As shipped from HP, the default domains are ADMIN,AUDIT, NOVADIGM, PATCH, POLICY, SOFTWARE, and SYSTEM. See the <i>Introduction</i> chapter in this book for more information about the domains.
Class	Component class that stores the instance for this file or directory.

UNIX File Resources (UNIXFILE)

During the publication process, the UNIXFILE attributes are defined. These attributes define the owner and group associations and permissions of each published resource. Each package published has a corresponding UNIXFILE instance within the PRIMARY domain. Use the Radia System Explorer to view and modify these attributes.

Note

The following instructions use the Radia System Explorer. The Radia System Explorer is currently available for 32-bit Windows platforms. For more information, see the *Radia System Explorer Guide*.

To view the UNIXFILE class instances using the Radia System Explorer

1. From the **Start** menu, select **Programs, Radia Administrator Workstation, Radia System Explorer**. The **Radia System Explorer Security Information** dialog box opens.

Note

The **User ID**, as shipped from HP, is **RAD_MAST**. No password is necessary. This may have been changed in your installation. Check with your Radia security administrator to obtain your own **User ID** and **Password**, if necessary.

2. If necessary, type a **User ID** and **Password**, and then click **OK**.
The **Radia System Explorer** window opens.
3. Double-click **PRIMARY**.
4. Double-click **SOFTWARE**.
5. Double-click **Unix File Resources (UNIXFILE)**.

6. Double-click the appropriate application. The attributes for the UNIXFILE instances for that application appear in the list view.

To change any instance attribute, double-click the attribute name in the list view. Make your desired changes in the box that opens, and click **OK** when finished.

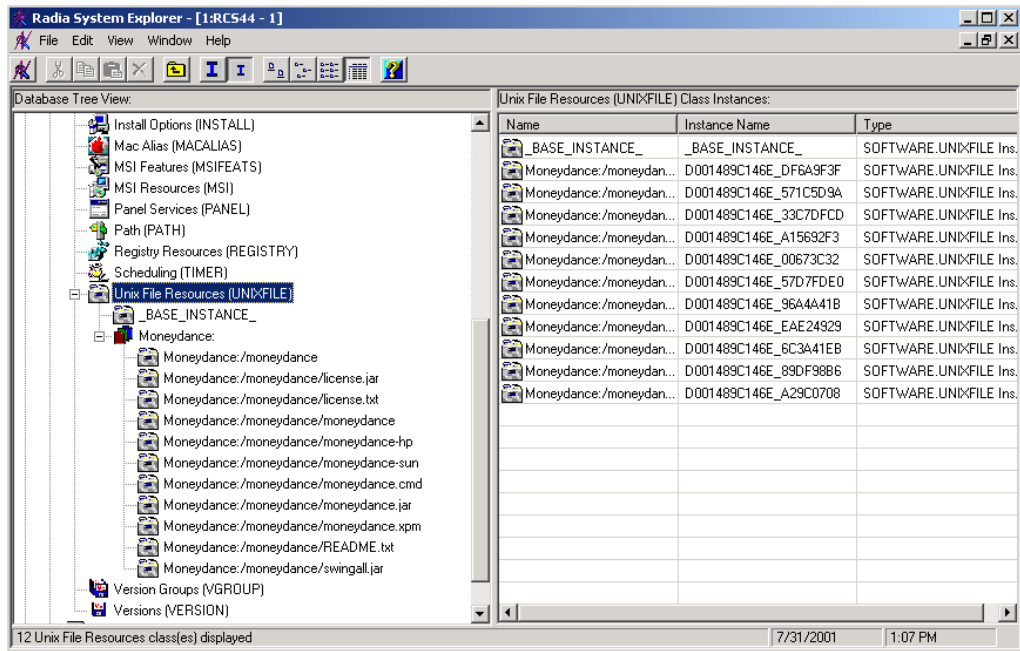


Figure 5.8 ~ Example of a UNIXFILE class instance.

Published Owner, Group, and Permission Considerations

The UNIXFILE class contains the attributes ZPERUID and ZPERGID. They define the user ID and group association of the promoted resource. These attributes are populated during the publishing session and reflect the user ID and group association of the resources being promoted. In addition, permission characteristics are captured during publishing and stored in the UNIXFILE.ZRSCRASH attribute. These attributes can be changed using the Radia System Explorer.

Table 5.6 ~ Attributes Exclusive to the UNIXFILE Class

Attribute	Description
ZPERUID	UNIX user ID associated with the promoted resource. The resource will be owned by this user ID when deployed, providing the Radia Application Manager is run by root and the user ID exists on the client workstation.
ZPERGID	UNIX group ID associated with the promoted resource. The resource will be associated with this group when deployed, providing the Radia Application Manager is run by root and the group exists on the client workstation.
ZRSCRASH	This should be a four-digit octal notation of the managed resources permissions (example: 7555). This is populated during the publishing session based on the characteristics of the published resources.

If the Radia Application Manager is run as a non-root user ID:

- All deployed resources will be associated with the user ID and group of the user ID who is running the Radia Application Manager.
- During publishing, the owner and group of the publisher resource is stored in the UNIXFILE instance data. The owner and group attributes within the instance are only applied if the Radia Client is run as root for only root has the ability to perform changes in owner and group characteristics.
- Radia Client capabilities are limited to the permission constraints of the current user ID and group membership for the Unix user ID running the connect.
- Radia will be unable to deploy to directories where the directory permissions prohibit the non-root user and or group membership to write.
- Radia may be unable to set permissions on resources placed under Radia management that are already on the client workstation though owned by a different UID and/or GID.
- Radia will be unable to launch client methods requiring root authority.

If the Radia Application Manager is run as root and:

- If the owner name of the resource, as defined in ZPERUID, and the user ID exist on the client workstation, the resource will be owned by the UNIX user ID specified.
- If the group name of the resource, as defined in ZPERGID, and the group exist on the client workstation, the resource will be associated with the UNIX group specified.

Important Note

To prevent security breaches please note the following:

If the owner of a resource, as defined in ZPERUID, does not exist on the client workstation, the owner designation of the managed resource will be set to "nobody" (uid 60001).

If the group of a resource, as defined in ZPERGID, does not exist on the client workstation, the group designation of the managed resource will be set to "nobody" (gid 60001).

The Radia Publisher Toolbar

The Radia Publisher toolbar, as seen in Figure 5.9 below, is used to navigate among the various completed publishing sections during Installation Monitor Mode, which is available for the Windows version of the Radia Publisher. The buttons available for use with the UNIX version of the Radia Publisher platform will be highlighted.

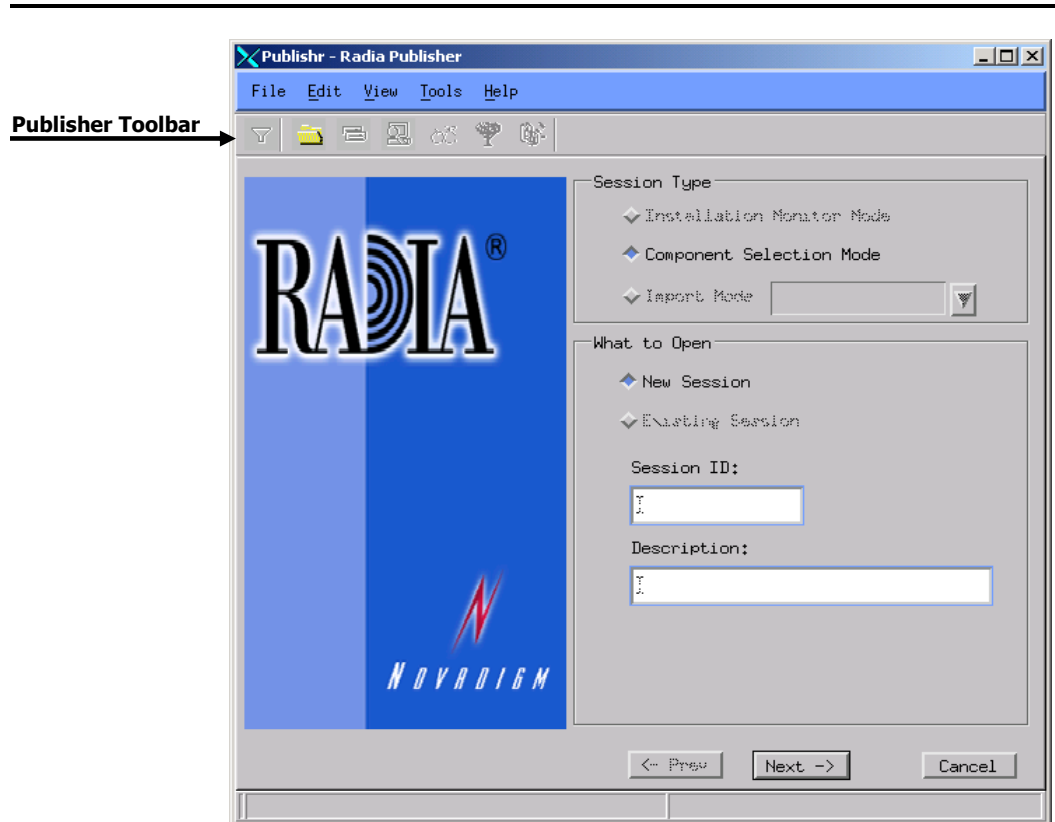


Figure 5.9 ~ Radia Publisher toolbar.

Using Component Selection Mode

In Component Selection Mode, you select the individual components that make up the application, such as files, directories, and links to create a package.

Publishing in Component Selection Mode involves three phases:

1. **Defining** the application's operating system requirements.
2. **Selecting** the individual files to be published.
3. **Promoting** the files to the Radia Database.

Prerequisites

Before publishing your application in Component Selection Mode:

- Install the target application on your packaging machine. This ensures that the files you need to select reside on the computer.

Publishing

This section guides you through publishing a sample application using the Component Selection Mode and provides detailed information about each screen that you encounter.

In this example, we publish the shareware application, Moneydance. You can substitute another application or file in its place.

Use this example to become familiar with Component Selection Mode. However, please remember that there are many variables when publishing applications.

Reminder

For the following example to work as shown, be sure to download and install Moneydance on your administrator computer. Moneydance is available at www.moneydance.com.

1. Step 1: Logging On to Radia Publisher
2. Log in as root.
3. Change your current working directory to the location of the **publishr** executable, and type **./publishr**.
4. In the **Radia Publisher Security Information** dialog box, type your **User ID** and **Password** in the appropriate fields.

Note

The **User ID**, as shipped from HP, is **RAD_MAST**. No password is necessary. This may have been changed during installation. You can also change this by selecting the **Change Password** check box and typing the new password in the **New Password** and **Verify New Password** fields.

5. Click **OK**.
The **Open Publishing Session** window opens.

Step 2: Completing the Open Publishing Session Window

Use the **Open Publishing Session** window to select the publishing mode and enter information to identify the publishing session.

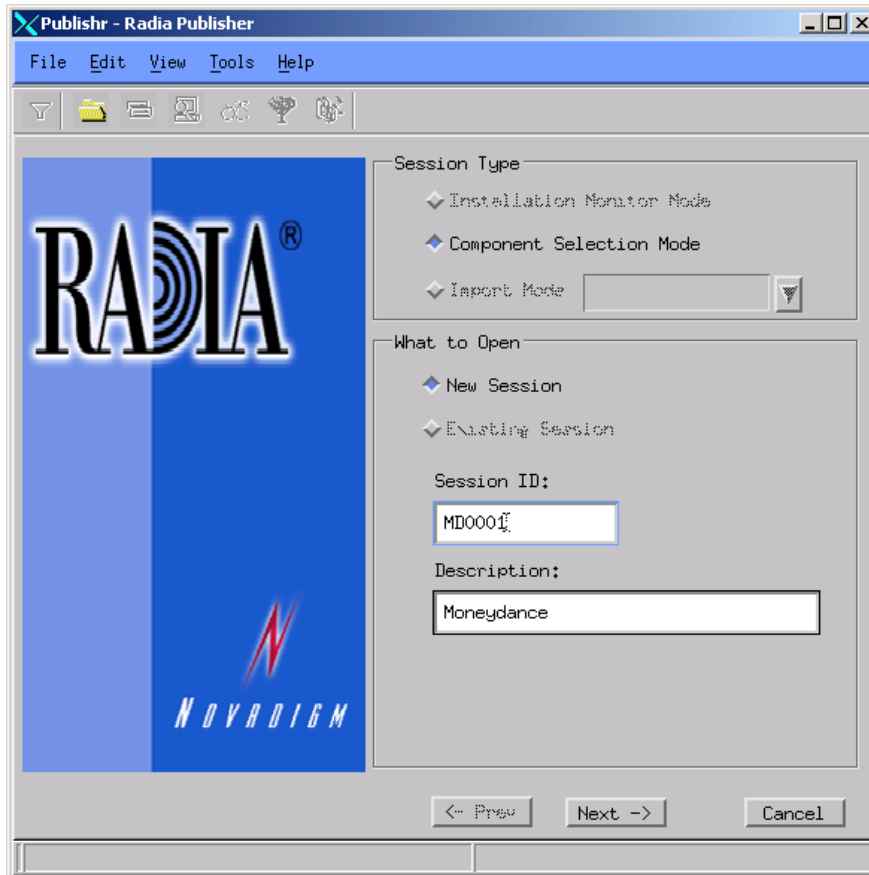


Figure 5.10 ~ Open Publishing Session window (Component Selection Mode).

At the end of a *publishing session*, you will have a Radia package – a unit of distributable software and/or data – that you will connect to a service. You will set up policies to distribute the software or data to the targeted subscribers.

The following section describes the options on the **Open Publishing Session** window, as shown in Figure 5.10 above.

Note

We recommend that you review the Global Defaults prior to beginning any Publishing Session. See *Setting Default Properties* beginning on page 127.

Session Type Area

- **Installation Monitor Mode**
Not available at this time.
- **Component Selection Mode**
Use this mode to create Radia packages when you know which files need to be distributed and what impact the installation will have on the subscriber's computer. In this mode, you identify the files that are packaged and then promoted to the Radia Database.
- **Import Mode**
Not available at this time.

What to Open Area

- **New Session**
Select **New Session** to begin a new publishing session. You must complete the **Session ID** and **Description** fields.
- **Existing Session**
Select **Existing Session** to resume the previous session.
- **Session ID**
Type a *unique* identifier that is one to six characters long.
- **Description**
Type a description of the session.

In the Moneydance example, as shown in Figure 5.10 on page 145, we are using **Component Selection Mode** to begin a **New Session**. The **Session ID** is **MD0001** and we've described the session as Moneydance.

Click **Next** to go to the **Package Properties** window.

Step 3: Entering Package Properties

Use the **Package Properties** window to name the package and include additional descriptive information.



Figure 5.11 ~ Package Properties window (Component Selection Mode).

■ Package Name

Type a name for the package. This is the name for the PACKAGE class instance in the Radia Database and should conform to your naming conventions. Note that the name cannot contain any spaces.

Note

You may want to establish a naming convention to ensure that identifiers are unique. Radia Publisher uses this identifier to construct data objects and filenames.

See *Appendix A: Naming Conventions* for more information.

- **Domain**

Select the domain to store the instance in. This is normally the SOFTWARE domain unless you customized the Radia Database with proprietary domains. As shipped from HP, the default domains are ADMIN, AUDIT, NOVADIGM, PATCH, POLICY, SOFTWARE, and SYSTEM.

See the *Introduction* chapter in this book for more information about the domains.

- **Description**

Type a description for the package.

- **Release**

Type the release number of the software.

In the Moneydance example, as shown in Figure 5.11 on page 147, we named the package **Moneydance_3** and gave it a description and release number: Moneydance, and 3.0, respectively.

Click **Next** to go to the **System Configuration** window.

Step 4: Setting the Required System Configuration

Use the **System Configuration** window to limit the distribution of the package to computers that meet specific requirements. Distribution is based on the computer's operating system. If none of the options is selected, the package will be available to all eligible subscribers.

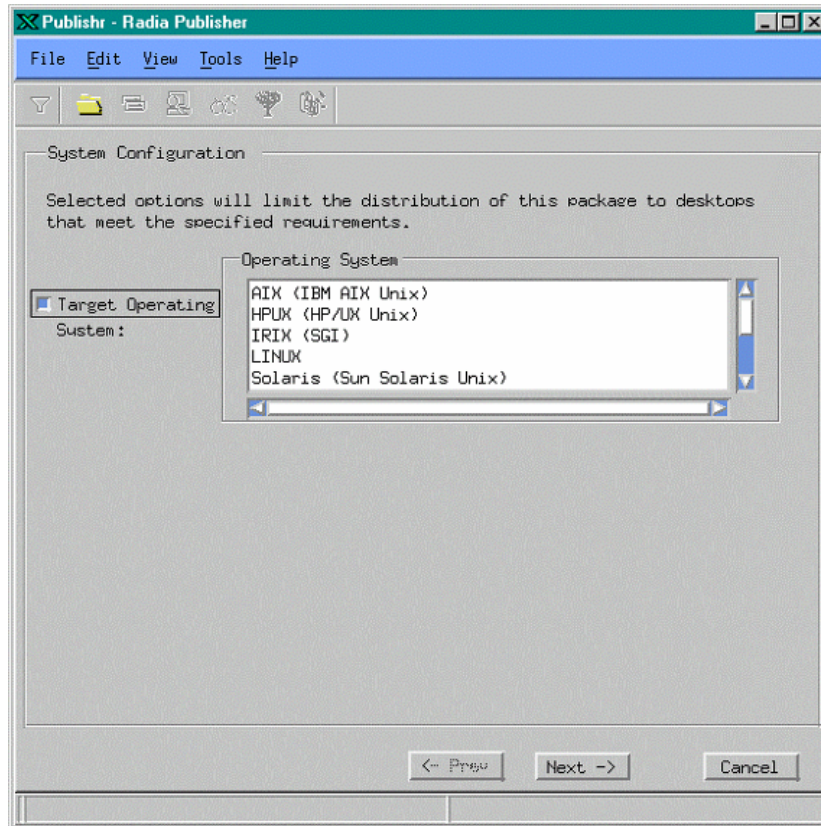


Figure 5.12 ~ System Configuration window (Component Selection Mode).

■ Target Operating System

Select this check box to make the **Operating System** options available. Then, select the operating systems for which this package applies.

- To select multiple, consecutive operating systems, hold down the SHIFT key on your keyboard and click the appropriate items.
- To select multiple, non-consecutive operating systems, hold down the CTRL key on your keyboard and click the appropriate items.

In the Moneydance example, we set the target operating system to Solaris.
Click **Next** to go to the **Availability** window.

Step 5: Setting Date and Time Constraints

Use the **Availability** window to specify the date and time when the package will be available for deployment. The date and time are based on the system clock of the computer running the Radia Configuration Server. If no date and time constraints are specified, the package is available as soon as it is promoted to the Radia Database and configured for distribution. After promoting this package to the Radia Database, you can still modify these settings using the Radia System Explorer.

Note

The Radia System Explorer is currently available for 32-bit Windows platforms. For more information, refer to the *Radia System Explorer Guide*.

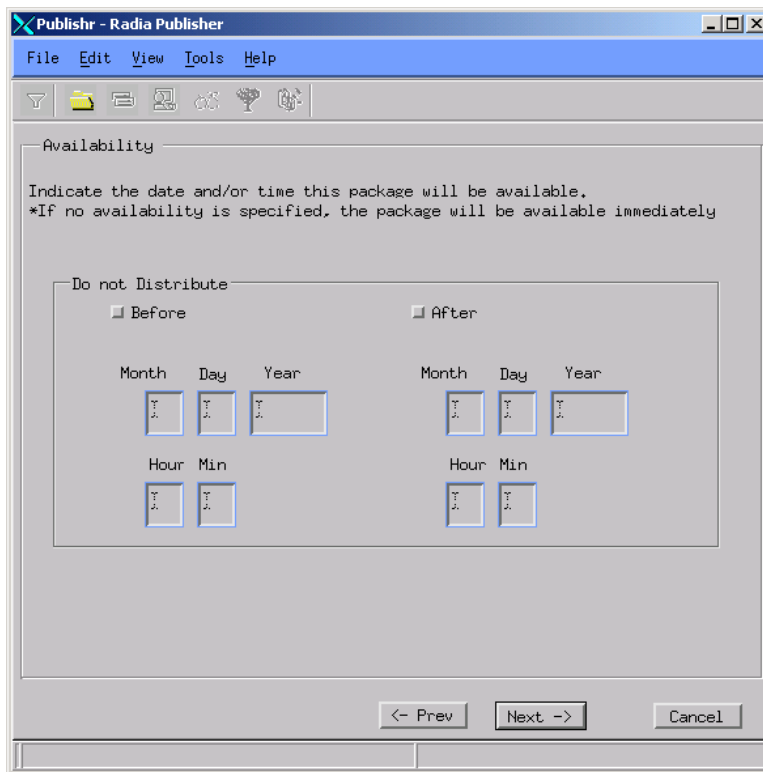


Figure 5.13 ~ Availability window (Component Selection Mode).

- **Before**
Select this check box to prevent distribution of the package *before* the specified date and time.
Use the **Month**, **Day**, **Year**, **Hour**, and **Min** fields to specify the date and time.
- **After**
Select this check box to prevent distribution of the package *after* the specified date and time.
Use the **Month**, **Day**, **Year**, **Hour**, and **Min** fields to specify the date and time.

In the Moneydance example, as shown in Figure 5.13 on page 151, we accepted the default settings so that the package will be available for distribution as soon as we promote it to the Radia Database.

Click **Next** to go to the **Select Files to Be Published** window.

Step 6: Selecting the Files to Publish

Use the **Select Files to be Published** window to select all files that need to be included in the package.

To select the files to publish

- Navigate through your file system (shown in the tree view in Figure 5.14 below) and select the files or directories to be included in the package. Click a check box again to clear a selection.

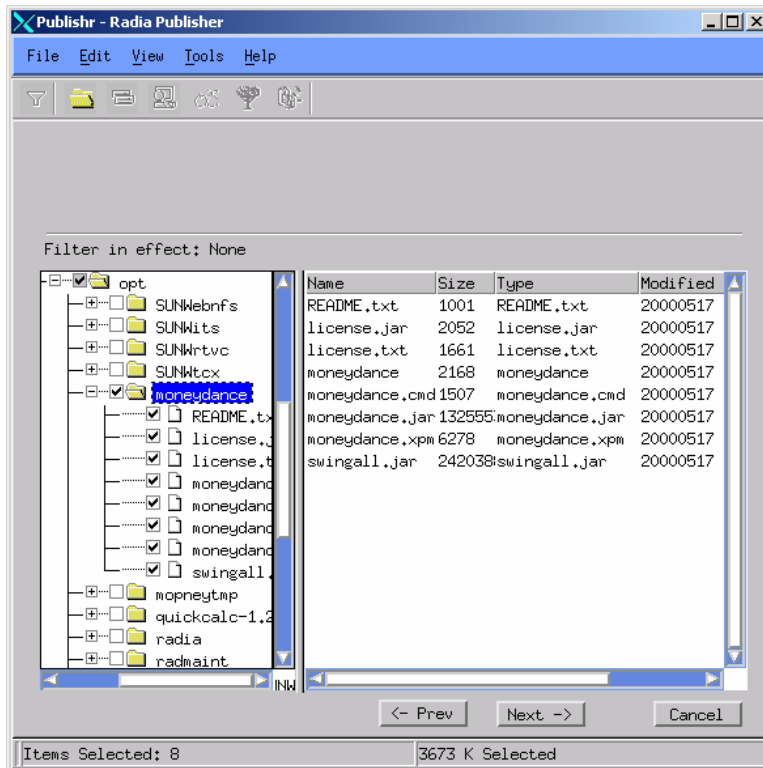


Figure 5.14 ~ Select Files to be Published window.

In the Moneydance example, we selected the directory `/opt/moneydance` that contains the program files, as shown in Figure 5.14 above.

The file selection window displays the files available in order by:

- An alphabetized listing of directories.
- Then, an alphabetized listing of files.
- An alphabetized listing of UNIX links.

Re-size the file selection window by positioning your mouse over the vertical bar separating the two windows, clicking and dragging to the left or right.

Click **Next** to go to the **Set Properties and Locations** window.

Step 7: Viewing File Properties and Locations

Use the **Files** tab on the **Set Properties and Locations** window to see the selected files and directories in the package.

To view the selected files and directories

1. Right-click **Selected Files** and select **Expand All**. Check marks indicate that the properties for the file have been specified and the Radia Publisher is ready to promote them.
2. Select a file in the tree view to see its properties in the list view.

Some of the properties in Figure 5.15 below, such as Verify, Priority, and Mandatory/Optional, are initially set according to the selections in the **Radia Publisher – Global Default Properties** dialog box, as described starting on page 127. In *Step 8: Setting Properties and Locations* on page 157, you will learn how to modify these settings, if necessary.

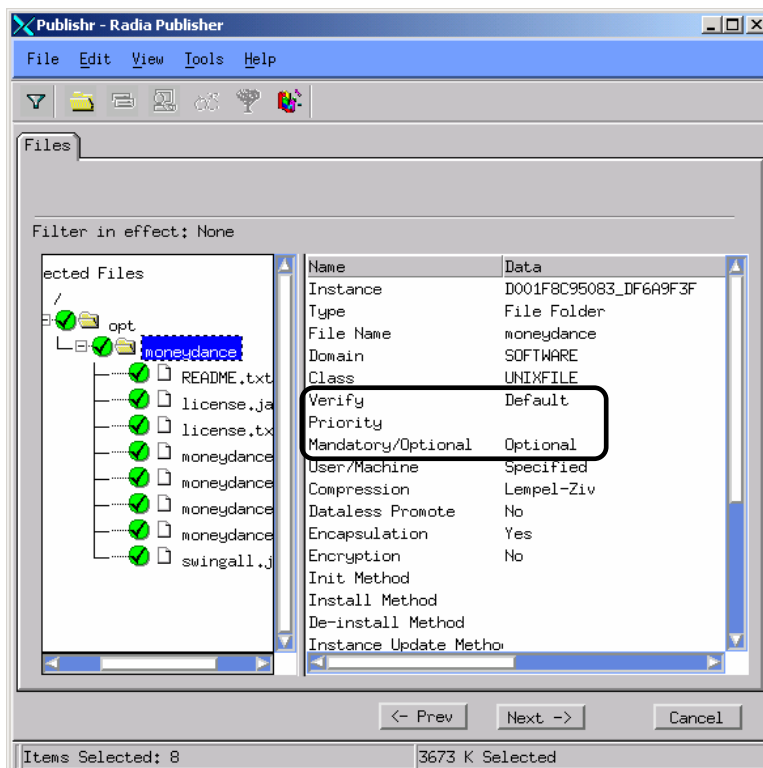




Figure 5.15 ~ View selected files window.

To filter the displayed files and directories

If the package contains many files, you can use filtering to limit the type of files that you want to see in the window.

1. Click the filter button  to filter the files in the tree view.
2. In the **Set Filter** dialog box, type the file type as a string. If the filter string is found anywhere in the file or directory name, it is considered a match.
3. Click **OK**.

To remove a filter

1. Click the filter button  to open the **Set Filter** dialog box.
2. Click **Clear**.
3. Click **OK**.

Click **Next** to continue.

In the Moneydance example, we expanded the selected files to confirm that the necessary components are selected. No filters have been applied.

Step 8: Setting Properties and Locations

Use the **Instance Properties** dialog box to modify the properties of the files and directories in the package. A file's properties are stored in its instance in the Radia Database.

Use the **Radia Publisher – Global Default Properties** dialog box to set the default values of these properties. For more information see *Setting Default Properties* on page 127.

To access the Instance Properties dialog box

1. Right-click the file or directory whose attributes you want to set.
2. From the shortcut menu, select **Set Properties**. If you selected a directory, you must also choose to select **Directory Only** or **Directory and Files**. The **Instance Properties** dialog box opens. It has four tabs: Client Management, Data Options, Database Information, and Client Behaviors.

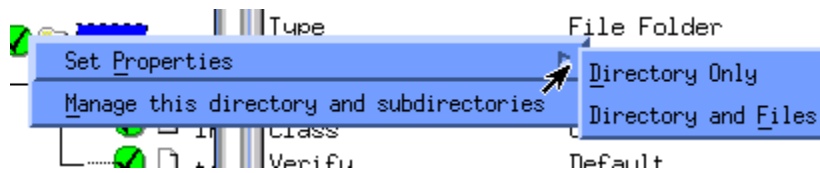


Figure 5.16 ~ Set Properties menu.

Client Management Tab

Use the **Client Management** tab to set verification and delivery options for the selected files or directories in the package. After promoting this package to the Radia Database, you can still modify these settings using the Radia System Explorer.

Note

The Radia System Explorer is currently available for 32-bit Windows platforms. For more information, refer to the *Radia System Explorer Guide*.

- Use the **verification options** to specify the actions that the Radia Application Manager will take for this file or directory.
- Use the **delivery options** to specify delivery options, such as the order in which files are deployed.

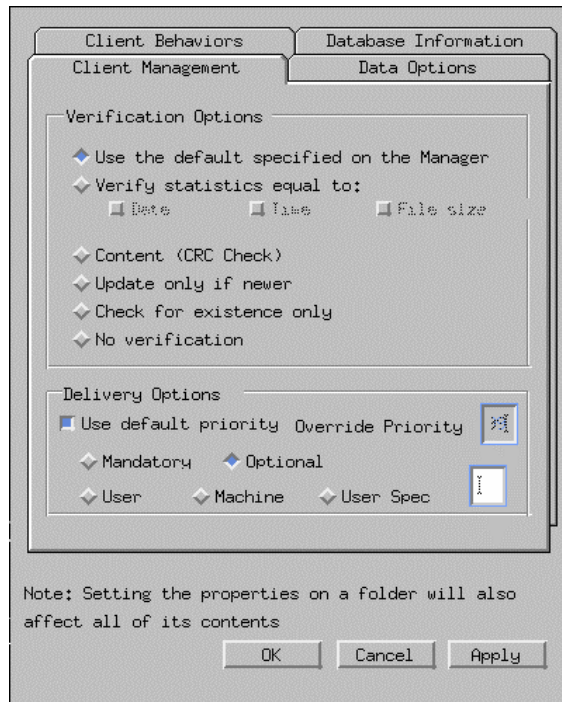


Figure 5.17 ~ Instance Properties dialog box, Client Management tab.

VERIFICATION OPTIONS

- **Use the default specified on the Manager** (default)

Select this option so that verification options for these files or directories are inherited from the base instance of the UNIXFILE class.

Use the Radia System Explorer to look at the ZRSCVRFY attribute of the base instance of the FILE class to determine what verification options apply, by default. For example, in Figure 5.18 on page 159, ZRSCVRFY=Y.

Note

The following figure and bullet points refer to the Radia System Explorer. The Radia System Explorer is currently available for 32-bit Windows platforms. For more information, refer to the *Radia System Explorer Guide*.

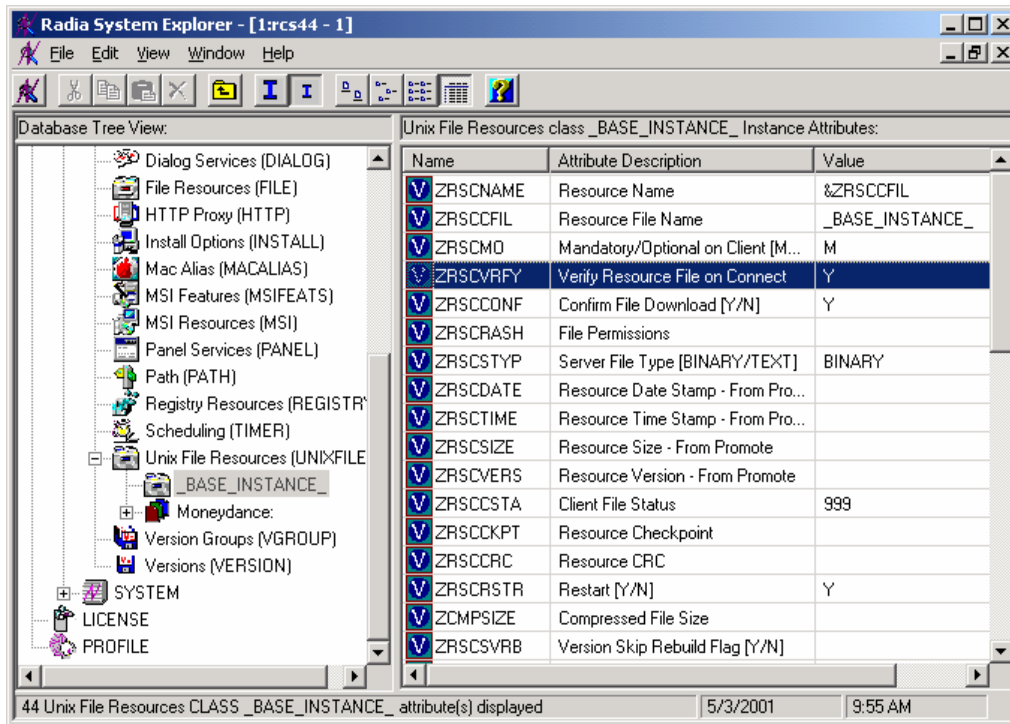


Figure 5.18 ~ ZRSCVRFY attribute.

- **Verify statistics equal to**

Select this option so that the Radia Application Manager checks the selected statistics (Date, Time, or File Size) for the files or directories on the computer. The files or directories are deployed from the Radia Database or Radia Staging Server if the statistics of the files or directories on the computer are different from the statistics for these files or directories. You can also use Radia System Explorer to set this option: ZRSCVRFY=D, ZRSCVRFY=S, ZRSCVRFY=T, or ZRSCVRFY=Y.

- **Content (CRC Check)**

Select this option to perform content CRC checking for the resource. This populates the ZRSCCRC attribute of the resource's UNIXFILE class. ZRSCVRFY is set to Y.

Note

Use of Content CRC checking is a time consuming process and should be used sparingly.

- **Update only if newer**
Select this option so that these files or directories are deployed if the files or directories in the Radia Database (or Radia Staging Server) have a later date/time stamp than those on the subscriber's computer. You can also use the Radia System Explorer to set this option: ZRSCVRFY=U.
- **Check for existence only**
Select this option so that these files or directories are deployed if they are not on the subscriber's computer. No action is taken if the files or directories already exist on the subscriber's computer, even if the statistics differ from those in the Radia Database. You can also use the Radia System Explorer to set this option: ZRSCVRFY=E.
- **No verification**
Select this option so that the files are deployed the first time the application is deployed. No subsequent action is taken. You can also use the Radia System Explorer to set this option: ZRSCVRFY=N.

DELIVERY OPTIONS

- **Use default priority**
Select this check box to use the default priority of **50**. Priority determines the order of deployment, from highest priority to lowest priority. You can also use the Radia System Explorer to set this option: ZRSCPRI=50.
- **Override Priority**
Type a number from **1** to **99** to override the default priority of **50**. **1** is the highest priority and **99** is the lowest. You can also use the Radia System Explorer to set this option: ZRSCPRI=1.

The following options apply *only* if there is not enough space on the subscriber's computer to install the entire application.

- **Mandatory**
Select this option to indicate that these files or directories are critical to the application. If there is not enough space on the subscriber's computer for the entire application, Radia will deploy *only* mandatory files. If there is not enough space for the mandatory files, then the application is not deployed at all. You can also use the Radia System Explorer to set this option: ZRSCMO=M.
- **Optional (default)**
Select this option to indicate that files or directories are not critical to the application. If there is not enough space on the subscriber's computer for the entire application, Radia will *not* deploy optional files. You can also use the Radia System Explorer to set this option: ZRSCMO=O.

The following options apply only to operating systems supporting multiple users with a required sign on, such as Windows NT 4.0 or 2000.

- **User**
Select **User** if you want to indicate that the file will be deployed only to the subscriber logged on when the application is initially deployed. You can also use the Radia System Explorer to set this option: ZCONTEXT=U.

- **Machine**
Select **Machine** to indicate that the file will be deployed to all users of the computer. You can also use the Radia System Explorer to set this option: ZCONTEXT=M.
- **User Spec**
This option is reserved for future use.

In the Moneydance example, we accepted the default verification and delivery settings.

Data Options Tab

Use the **Data Options** tab to specify data compression and other details about the files or directories that you will be distributing.

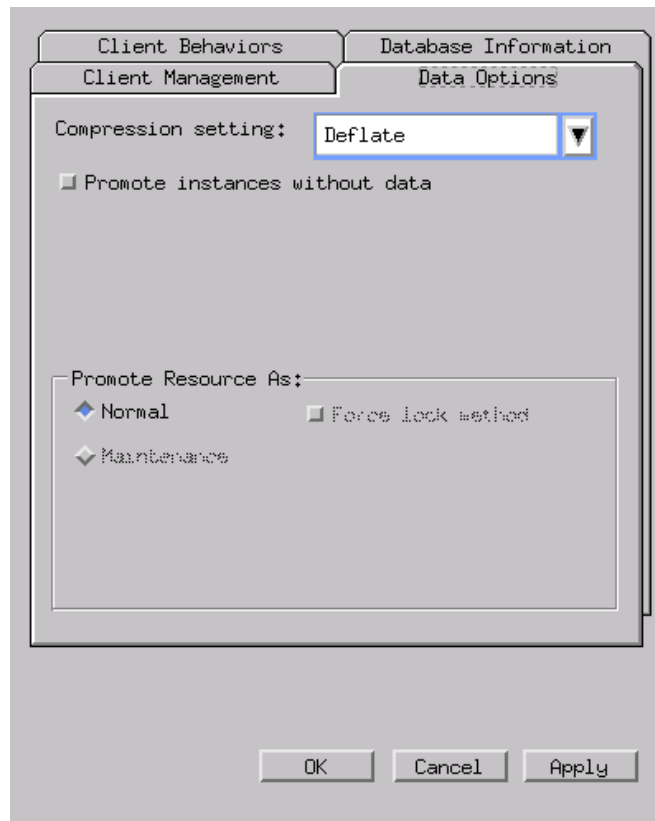


Figure 5.19 ~ Instance Properties dialog box, Data Options tab.

■ Compression setting

If necessary, select the compression setting for storing these files or directories in the Radia Database. Compression minimizes the time required to transmit it and the amount of disk space required to store it.

- Select **Deflate** for the most efficient compression, which produces smaller compressed images. This is the default setting.
- Select **None** if the files or directories are already compressed. If you are packaging an application that contains one or more compressed files, do *not* have the Radia Publisher compress the file as well. The file may actually grow in size if it is compressed again.

- **Promote instances without data**

Select this check box to indicate that these files or directories should not be transferred to the Radia Database as part of the package. Only the instance representing the file is included in the package. The data remain in compressed form in the IDMDATA location on your computer. See the *Installing the Radia Application Manager* chapter in this book for more information. You can manually place files on a Radia Staging Server if you have connectivity to it and do not want a copy of the file in the Radia Database.

PROMOTE RESOURCE AS

- **Normal**

Select this option to indicate that these files or directories are to be deployed as part of an application.

- **Maintenance**

Select this option to indicate that these files or directories are a maintenance component for the Radia Application Manager software.

- **Force lock method**

Select this check box to force the use of the *locked file method* for deploying these files or directories. If the files or directories are in use on the client computer when Radia attempts to deploy new copies of the files or directories, the locked file method is normally used to deploy the files or directories. If necessary, these files or directories are decompressed and stored locally in a directory. The Client Connect process forces a restart when it ends and the files or directories are deployed to their correct location during the startup.

Client Behaviors Tab

Use the **Client Behaviors** tab to specify methods (or programs) that Radia executes on the subscriber's computer.

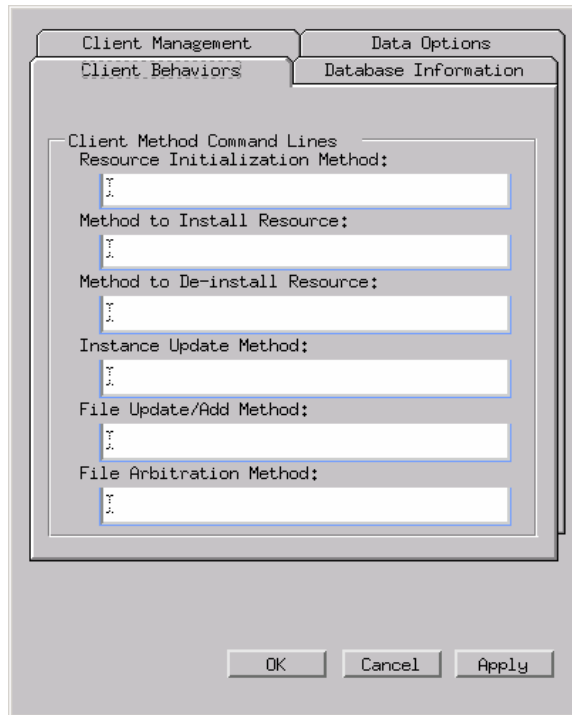


Figure 5.20 ~ Instance Properties dialog box, Client Behaviors tab.

The command lines that you type in this dialog box are stored in variables in the UNIXFILE class instances in the SOFTWARE domain.

CLIENT METHOD COMMAND LINES

- **Resource Initialization Method** (Variable in Database: ZINIT)
Type the method to run when the files or directories are stored on the subscriber's computer.
- **Method to Install Resource** (Variable in Database: ZCREATE)
Type the method to run after the file is stored on the computer. This is used if some processing is required to enable the file to be used on the computer.
- **Method to De-install Resource** (Variable in Database: ZDELETE)
Normally, files are removed if the subscription to the software is cancelled. If a file, such as a shared object file, should not be deleted from the subscriber's computer, even if the

subscription to the software is cancelled, type **`_NONE_`** (with the underscores) as the value for **Method to De-install Resource**.

- **Instance Update Method** (Variable in Database: ZUPDATE)
Type the method to run when the instance is modified on the computer, after the file has been deployed.
- **File Update/Add Method** (Variable in Database: ZFILEUPD)
Type the method to run when the file is new or has been updated. The method executes just before the file is deployed to the computer.
- **File Arbitration Method** (Variable in Database: ARBITRAT)
Type the method to run if files or directories are about to be replaced. This method examines the version information of the files or directories that exist and the files or directories that are going to replace it, and then determines which to keep.

In the Moneydance example, we did not specify any methods.

Database Information Tab

Use the **Database Information** tab to specify where the instance for the selected files or directories will be stored in the Radia Database.

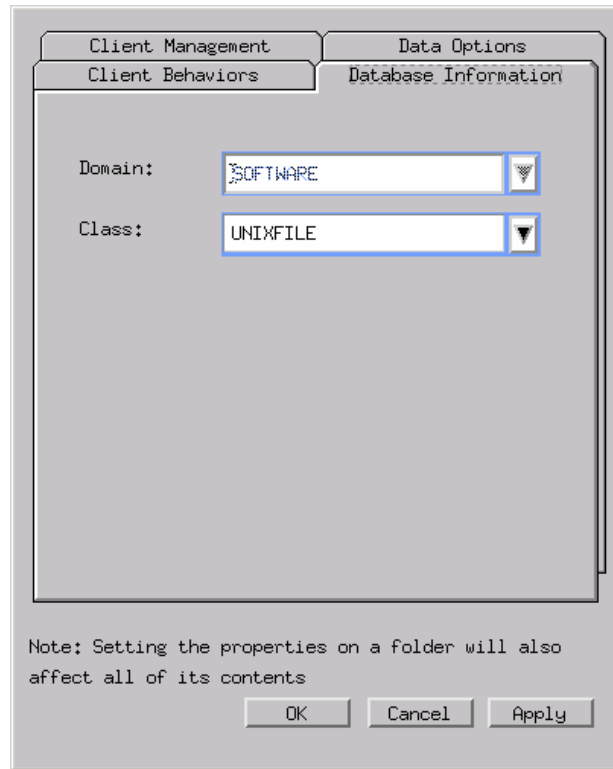


Figure 5.21 ~ Instance Properties dialog box, Database Information tab.

- **Domain**

Select the domain in which to store the instance. This is normally the SOFTWARE domain unless you added proprietary domains to the Radia Database. The default domains are ADMIN, AUDIT, NOVADIGM, PATCH, POLICY, SOFTWARE, and SYSTEM. See the *Introduction* for more information about the domains.

- **Class**

Select the component class to store the instances for these files or directories in.

In the Moneydance example, we accepted the default settings for the domain and class.

Click **OK** to return to the **Set Properties and Locations** window.

Step 9: Directory Management

From the shortcut menu in Figure 5.22 below, select **Manage this directory and subdirectories** to control the level of directory management desired.

To establish management of specific directories

1. Expand the directory tree until the directory from where you would like to begin management is shown.
2. Right-click this directory and select **Manage this directory and subdirectories**. The directory and files will become highlighted, indicating Radia will now manage each directory and file beneath this directory.

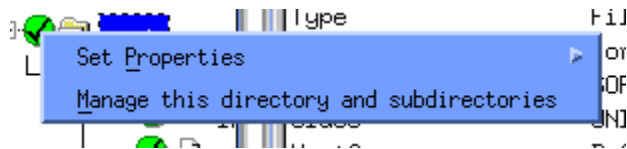


Figure 5.22 ~ Manage directory and subdirectories

If you selected a directory you would not like managed, right-click the managed directory and select **UnManage this directory and subdirectories** from the shortcut menu.

The default behavior is UnManage directories and subdirectories.

Note

You will not be able to turn this selection on for the root directory (the / directory).

If you decide to leave this option turned off, you will be prompted to confirm your decision not to explicitly manage any directories within the current package as seen in Figure 5.23 on page 168.

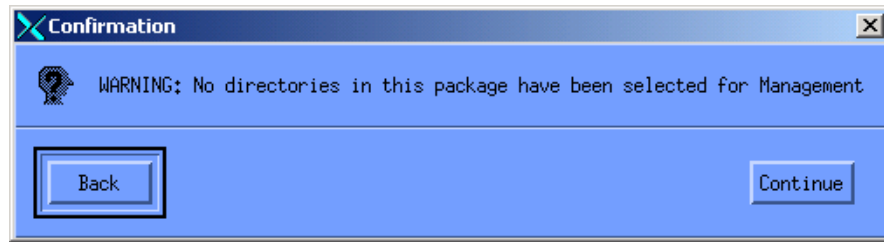


Figure 5.23 ~ Confirm no management of directories.

At this dialog box, you may click **Back** to choose directories for explicit management, or click **Continue** to proceed with the publishing of the package.

Step 10: Promoting Packages

Use the **Promote Files** window to create instances for the package in the Radia Database.

To view the files to be promoted

- Right-click **Files to be Promoted**, and select **Expand All**.

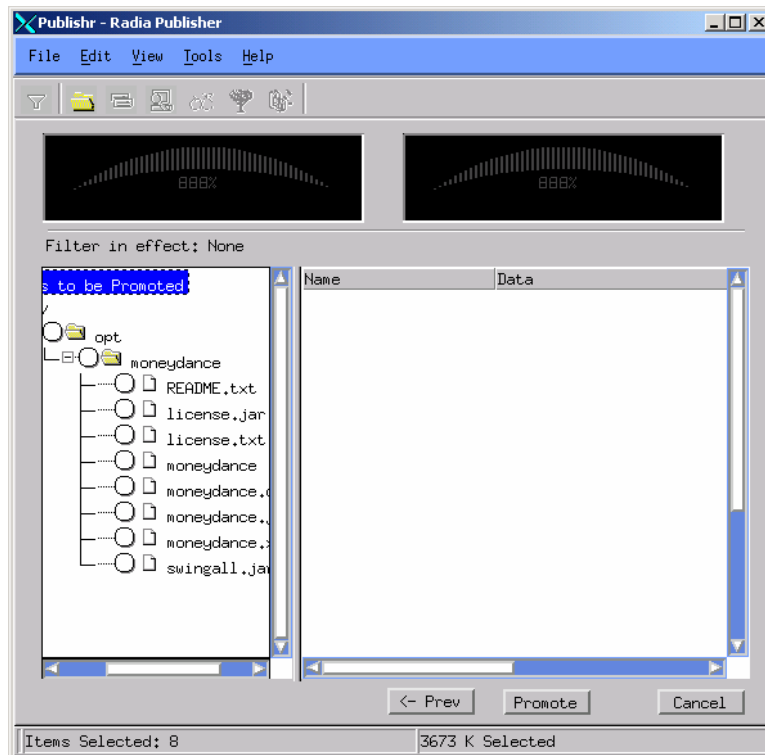


Figure 5.24 ~ Promote Files window.

Note

If you need to change or modify your selections, click **Prev** until you reach the appropriate window. When you are satisfied with the package, click **Next** until you arrive back at this window.

You can also use the buttons in the toolbar to return to a previous screen.

To promote the package

1. Click **Promote**.
2. Click **OK** when you receive the message that the package has been promoted successfully.
3. Click **Finish** to close Radia Publisher.
4. Click **Yes** to confirm that you want to close the Radia Publisher.

In this example, Moneydance was promoted to the Radia Database. Next, use the Radia System Explorer to create a service. For more information, see *Creating a Service* on page on page 172.

Note

The Radia System Explorer is currently available for 32-bit Windows platforms. For more information, refer to the *Radia System Explorer Guide*.

Radia Publishing Adapter

The Radia Publishing Adapter (RPA) is a command-line alternative to using Component Selection Mode, which offers an automated, repeatable command-line process to create Radia packages and store them in the Radia Database for distribution.

The Radia Publishing Adapter can:

- Search for files on multiple drives/file systems.
- Search for, and publish files, from any mapped file/drive system.
- Be configured to limit the subdirectories that are searched.
- Include or exclude at the file level.
- Select files by type.

The Radia Publishing Adapter can also accommodate frequent patching of internal applications. Its capacity to revise content material is reliable, and can be designed to perform continuously, at designated times, and in predetermined intervals. RPA can be easily executed from within any script or code capable of calling a command prompt.

Radia Native Packaging

Radia Native Packaging, is a feature of the Radia Publishing Adapter specifically designed for UNIX environments. Radia Native Packaging is a command-line driven content-publishing tool supporting native HP-UX and Solaris software. Radia Native Packaging is installed during the regular installation of the RPA on a UNIX system.

Radia Native Packaging explores UNIX native software depots, searches for available native packages and publishes wrapped native packages to the Radia Configuration Server. Radia Native Packaging will publish all necessary information that will allow you immediate installation of native software to end clients. When the Radia Application Manager client is installed, a Tel script is included in the IDMSYS directory that is required when packages published using Radia Native Packaging are deployed. For more information, see the *Radia Publishing Adapter Guide*.

Note

The Radia Publishing Adapter is an optional feature available from HP. Please contact your sales representative for more details.

Creating a Service

Once you have created a package with the Radia Publisher, use the New Application Wizard in the Radia System Explorer to create a service. A *service* is the fundamental unit of content managed by Radia. Use the Radia System Explorer to see services listed in the Application (ZSERVICE) class.

In this example, you will create a service using the Moneydance package that you created in Component Selection Mode, beginning on page 143.

Using the New Application Wizard to Create a Service

Note

The following instructions use the Radia System Explorer. The Radia System Explorer is currently available for 32-bit Windows platforms. For more information, refer to the *Radia System Explorer Guide*.

Step 1: Accessing the Radia System Explorer

1. Go to **Start, Programs, Radia Administrator Workstation**, and select **Radia System Explorer**.
2. In the **Radia System Explorer Security Information** dialog box, type your **User ID** and **Password** in the appropriate fields.

Note

The **User ID**, as shipped from HP, is **RAD_MAST**. No password is necessary. This may have been changed during installation. You can also change this by selecting the **Change Password** check box and typing the new password in the **New Password** and **Verify New Password** fields.

3. Click **OK**.

Step 2: Navigating to the PACKAGE class of the SOFTWARE domain

1. Double-click **PRIMARY**. The domains of the PRIMARY file appear beneath its icon in the tree view and in the list view.
2. Double-click **SOFTWARE**. The classes of the SOFTWARE domain appear beneath its icon in the tree view and in the list view.
3. Double-click **Application Packages (PACKAGE)** to open the **PACKAGE** class. The instances of the PACKAGE class appear beneath its icon in the tree view and in the list view.

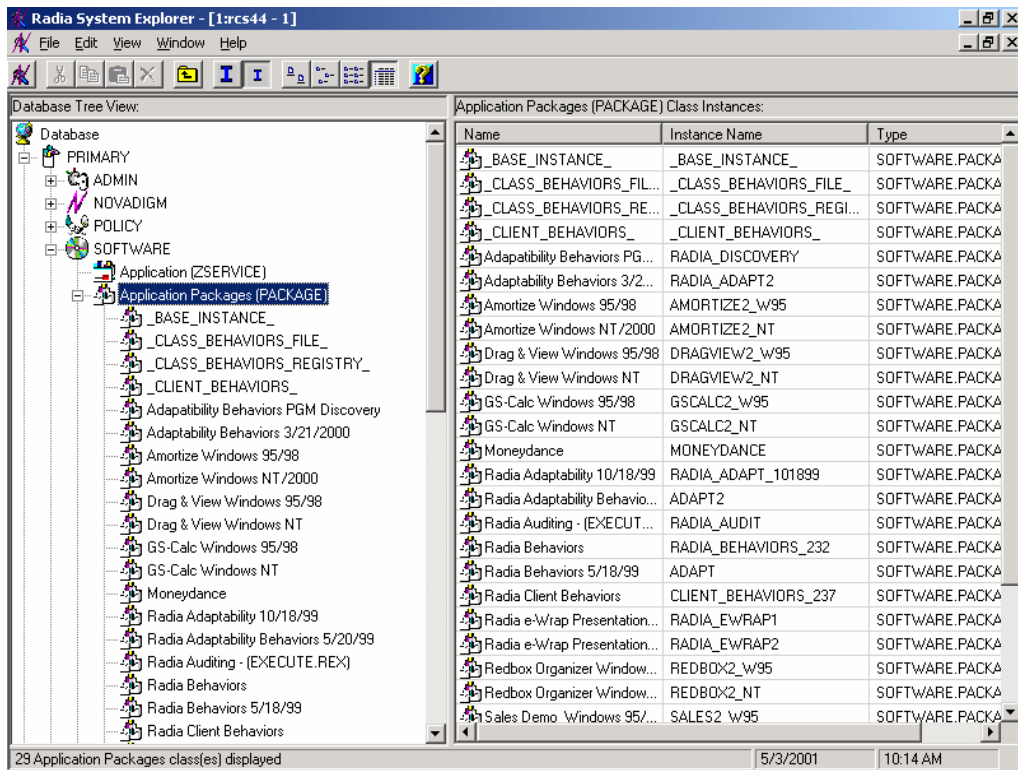


Figure 5.25 ~ Application Packages (PACKAGE) class.

Step 3: Using the New Application Wizard to Create a Service

1. In the **PACKAGE** class of the **SOFTWARE** domain, right-click the **Moneydance** instance. A shortcut menu opens.

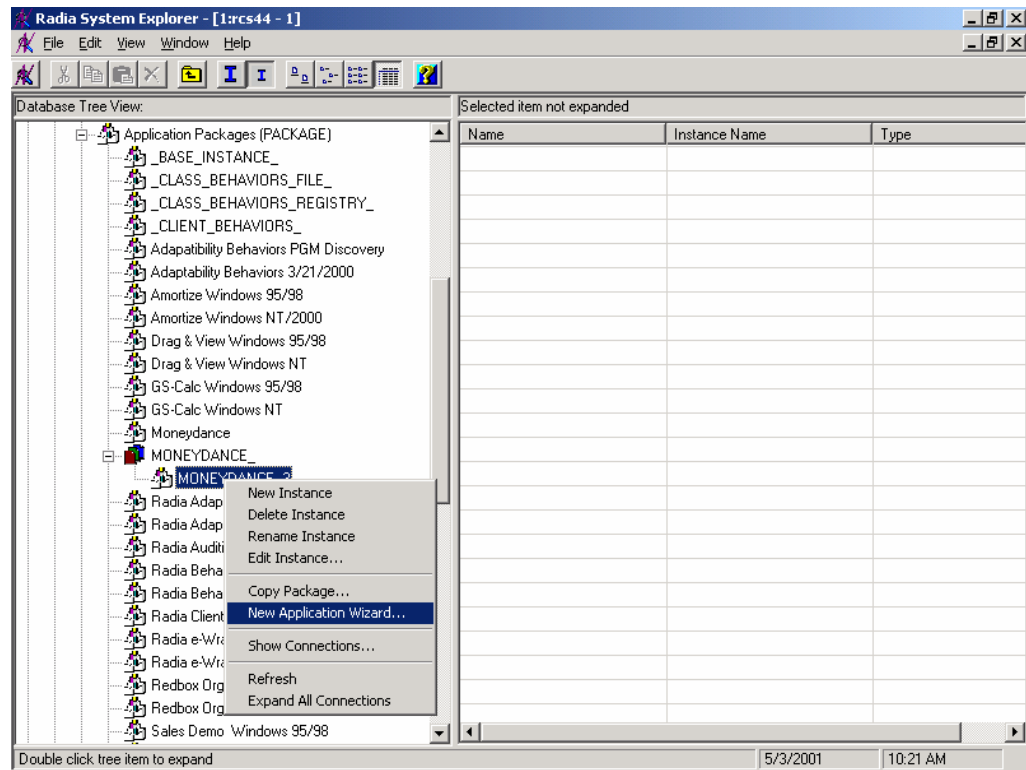


Figure 5.26 ~ Selecting New Application Wizard.

2. Click New Application Wizard.

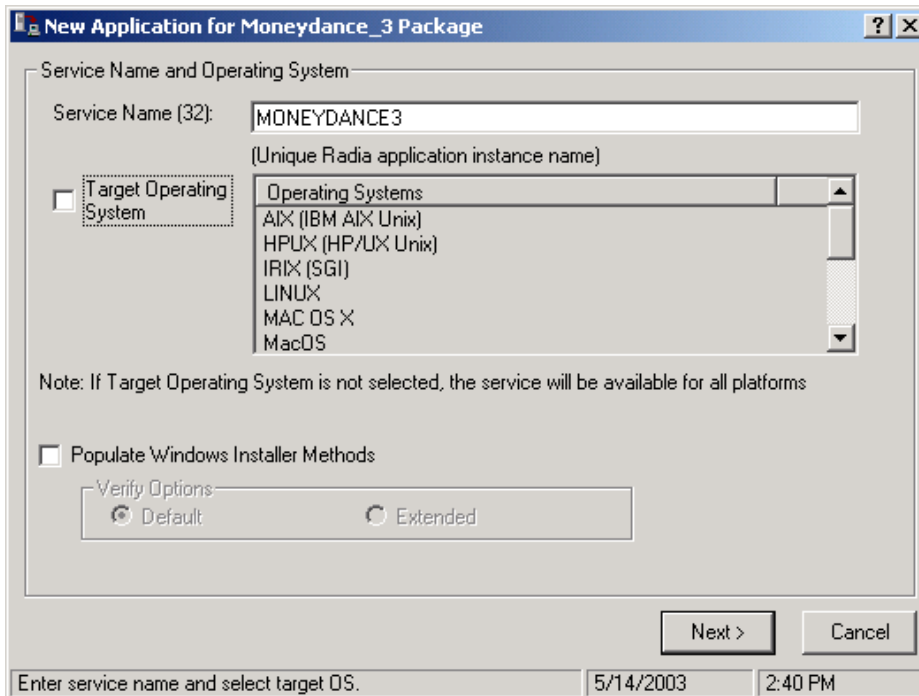


Figure 5.27 ~ Enter service name and select target OS dialog box.

3. In the **Service Name (32)** text box, type a name, such as **MONEYDANCE3**, for the Application (ZSERVICE) instance.
4. Select the **Target Operating System** check box only if your intended target operating system appears in the list, and the specific operating system for which the package applies is selected.
5. If you are creating a service for a Windows Installer-enabled application, you must select the **Populate Windows Installer Methods** check box. Do not select this check box for this exercise. This option is not applicable to UNIX-specific packages.
6. Click **Next** to select the application target type.

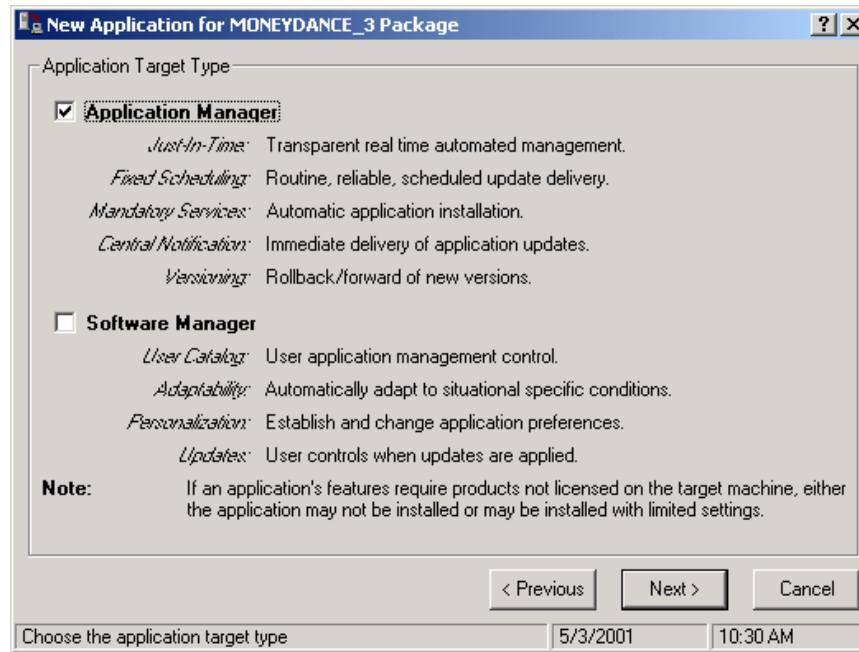


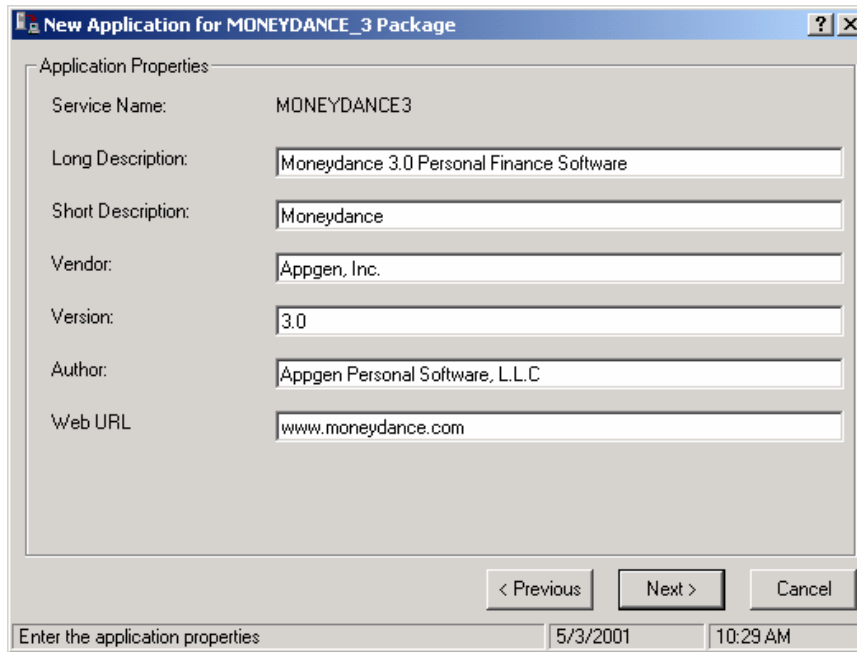
Figure 5.28 ~ Select the Application Target Type dialog box.

7. Select the **Application Manager** check box. This designates the service as a mandatory application for your subscribers.

Note

When using the Radia Application Manager, applications *must* be mandatory in order to deploy them to your subscribers.

8. Click **Next** to enter the application properties.



New Application for MONEYDANCE_3 Package

Application Properties

Service Name: MONEYDANCE3

Long Description: Moneydance 3.0 Personal Finance Software

Short Description: Moneydance

Vendor: Appgen, Inc.

Version: 3.0

Author: Appgen Personal Software, L.L.C

Web URL: www.moneydance.com

< Previous Next > Cancel

Enter the application properties 5/3/2001 10:29 AM

Figure 5.29 ~ Enter the application properties.

9. Type the appropriate information in the fields as shown in Figure 5.29 above.
10. Click **Next** to select the events that the Radia Application Manager will report on.

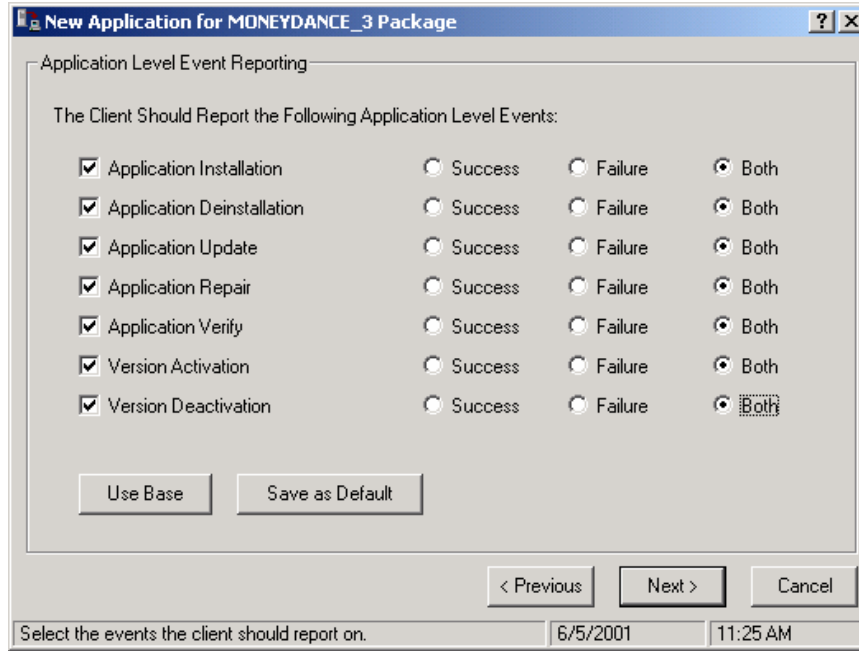


Figure 5.30 ~ Selecting the events that the Radia Application Manager will report on.

11. Click the check box for each event that you want to report on. Then, select the appropriate option button to indicate whether to report on the event's success, failure, or both.

OR

Click **Use Base** if you want to inherit the values for the ERTYPE and EVENTS variables from the base instance of the Application (ZSERVICE) instance. These variables control event reporting.

For this example, we selected every Application Event to be reported in the event of a success or failure.

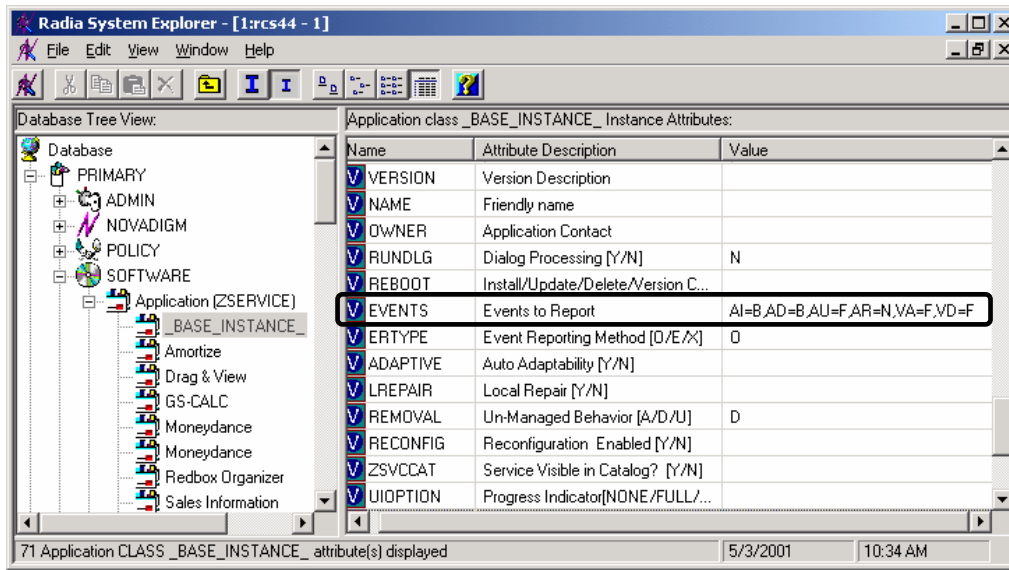


Figure 5.31 ~ Application (ZSERVICE) base instance.

For more information about these variables and the APPEVENT object, see the *Radia Client Objects* chapter in this book.

12. If you want to save the current settings as the default settings for the Application Event Panel, click **Save as Default**.
13. Click **Next** to review your selections.

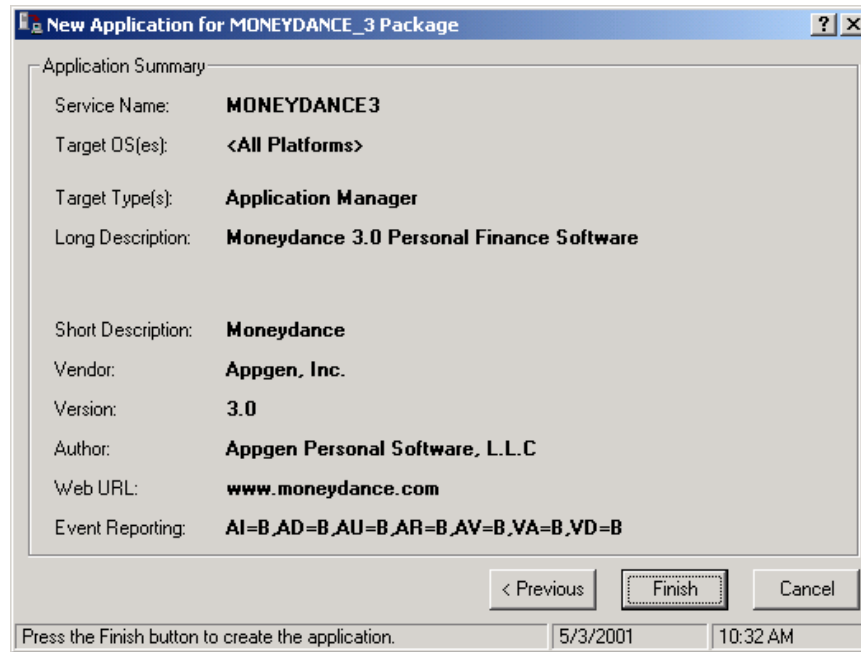


Figure 5.32 ~ Summary of the application settings.

14. Click **Finish** to create the application instance.
15. Click **OK** when you are prompted with a message indicating that the application has been added. The instance appears in the ZSERVICE class.

Note

If you want to modify any of the information that you entered in the New Application Wizard, locate the corresponding variable and change its value.

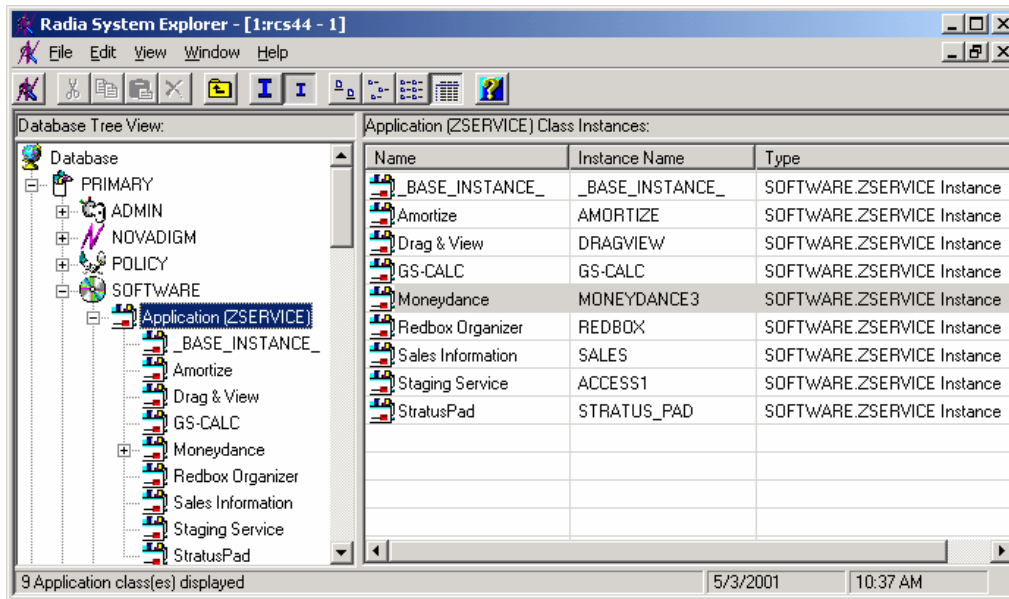


Figure 5.33 ~ New ZSERVICE instance.

Now, you are ready to set up policies identifying *which* subscriber receives *what* software. See the *Implementing Entitlement Policy* chapter in this book for more information.

Radia Service Groups

Radia manages products that require more than one service-package to establish full product installation or operation. You can use Radia Service Groups when a product requires other service packages or has dependencies on other services.

This includes MSI packaged products where:

- A product may utilize more than one MSI service-package.
- A large product may need to be split into smaller sub-services to install only specific parts of the product suite.

For detailed information on creating Radia Service Groups, refer to the *Radia System Explorer Guide*.

Radia Application Manager Self-Maintenance

Occasionally, we provide updates to the Radia Application Manager client. You can use Radia to distribute these updates to your subscribers. This is called *self-maintenance* because you are using the Radia product to distribute updates to itself.

This section provides an overall description of the process used to maintain the Radia Application Manager, as well as a guided example.

Important Note

Self-maintenance does *not* manage objects (.EDM files) and does *not* replace anything in IDMLIB.

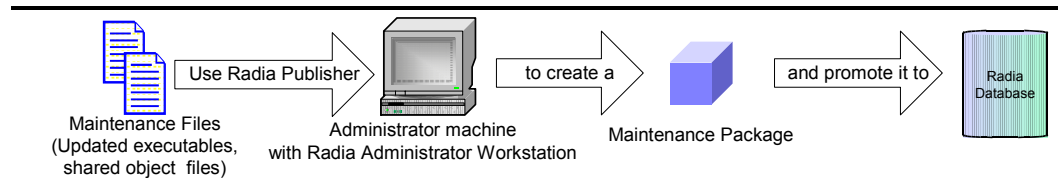


Figure 5.34 ~ Publishing maintenance files.

1. Use the Radia Publisher to package the updated files as maintenance files and promote them to the Radia Database.
2. Use the Radia System Explorer to connect the maintenance package to the **Client Self Maintenance** application instance, located in NOVADIGM.ZSERVICE.

Note

The Radia System Explorer is currently available for 32-bit Windows platforms. For more information, refer to the *Radia System Explorer Guide*.

See the *Implementing Entitlement Policy* and *Deploying Applications* chapters in this book for more information on making connections.

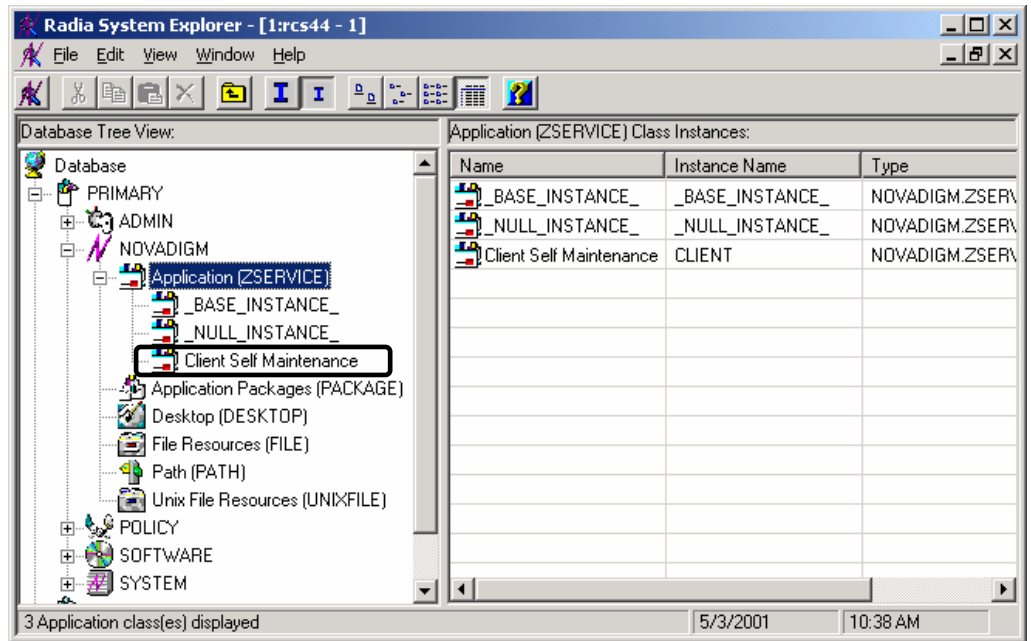


Figure 5.35 ~ Client Self Maintenance application instance.

3. Connect the Client Self Maintenance application instance to the appropriate POLICY class instance.

Note

If you are delivering the maintenance files to all of your subscribers, connect the Client Self Maintenance application instance to the `_BASE_INSTANCE_` of the `USERS` class in the `POLICY` domain.

At the next Client Connect, the maintenance files are downloaded from the server into a subdirectory called `NEW` located under the installed Radia Client.

The maintenance files are copied into `IDMSYS`. If there are existing files that are older than these files, they are replaced.

Example of Client Self-Maintenance

The following example walks you through the steps above based on the scenario below.

Scenario

Imagine that you have 2500 Radia Application Manager clients and need to update the **radtimeq** and **radrexx** Radia executables. Use Radia Notify to push this update out to all 2500 Radia Application Manager clients immediately. The Radia Administrator Workstation is installed on your computer and you have a TCP/IP connection to the Radia Configuration Server.

Step 1: Publishing Maintenance Files

Use Radia Publisher to package the updated files as maintenance files and promote them to the Radia Database. The following procedures show you how to publish the maintenance files that you need to distribute, as specified in the scenario above.

For more information about Component Selection Mode, see *Using Component Selection Mode* beginning on page 143.

To prepare the maintenance files to be published

1. Create a new directory on your local drive. In this example, we named the new directory **/opt/radmaint**.

Important Note

To maintain the cyclic redundancy check (CRC) value for the directory, it *must* have the same path and directory name each time you prepare to deploy self-maintenance to the Radia Application Manager.

2. Copy the files intended for distribution to the client as self-maintenance into your new directory, **/opt/radmaint**.

In this example we copied the files **radtimeq** and **radrexx** into **/opt/radmaint**.

Note

When promoting resources for the purpose of self-maintenance, be sure the owner and group characteristics of the file match those of the installed Radia Client. If the client was installed as root and the primary group associated with root is **sys**, then the files published as maintenance should be owned by root with and belong to the 's' group.

To publish maintenance files using the Radia Publisher

This section walks you through the steps used to publish maintenance files. You will use Component Select Mode to prepare the files for distribution. There are some slight, yet important,

differences between the way that you package your normal applications and the way that you package files for self-maintenance. These differences are discussed in this section. For a detailed description of all the fields that you will encounter in this exercise, see *Using Component Selection Mode* beginning on page 143.

1. Log in as root.
2. Change your current working directory to the location of the **publishr** executable, and type **./publishr**.
3. In the **Radia Publisher Security Information** dialog box, type your **User ID** and **Password** in the appropriate fields.

Note

The **User ID**, as shipped from HP, is **RAD_MAST**. No password is necessary. This may have been changed during installation. You can also change this by selecting the **Change Password** check box and typing the new password in the **New Password** and **Verify New Password** fields.

4. Click **OK**.
5. Complete the text boxes as shown in Figure 5.36 on page 187.
 - In the **Session Type** area, select **Component Selection Mode**.
 - In the **What to Open** area, leave **New Session** selected.
 - In the **Session ID** text box, type your session ID, such as **M00001**.
 - In the **Description** text box, type a description of the session, such as **Maintenance for Fix # 000001**.

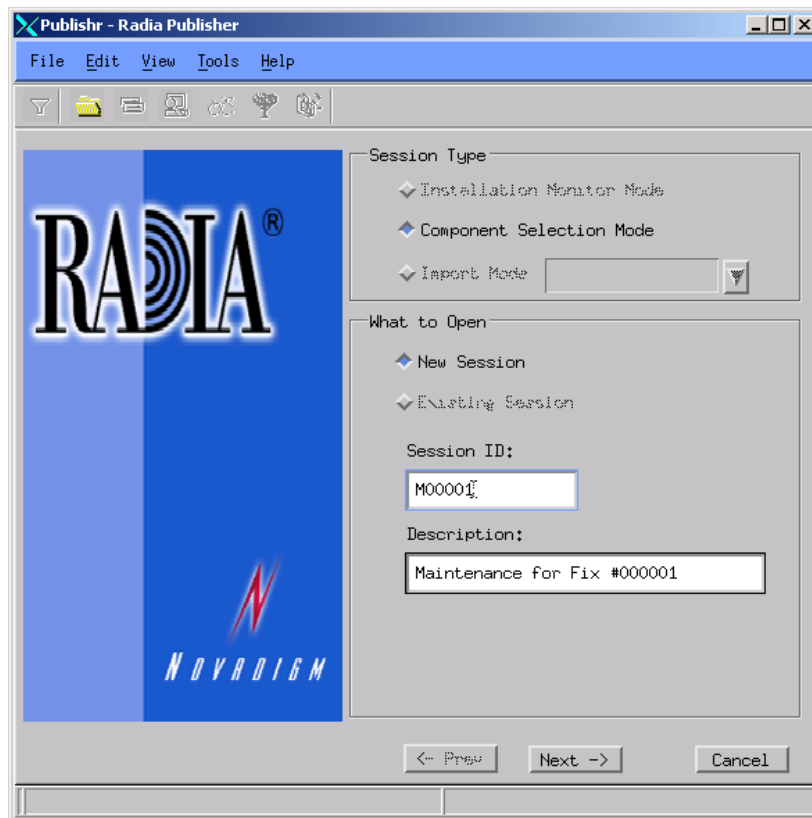


Figure 5.36 ~ Open Publishing Session window (Self Maintenance).

Click **Next** to continue.

6. Complete the text boxes as shown in Figure 5.37 on page 188.
 - In the **Package Name** text box, type a name for the package, such as **Maint_00001**.
 - In the **Domain** drop-down list, select **NOVADIGM**.

Caution

The **Domain** is normally set to **SOFTWARE**. However, the **NOVADIGM** domain stores self-maintenance packages for the Radia Application Manager.

Therefore, when creating a self-maintenance package, be sure to change the domain to **NOVADIGM**.

- In the **Describe** text box, type a description of the session, such as **Maintenance for Fix # M000001**.
- In the **Release** text box, type a release number, such as **1.0**.



Figure 5.37 ~ Package Properties window (Self Maintenance).

Click **Next** to continue.

7. In the **System Configuration** window, be sure to select the specific operating systems to which the Radia self-maintenance applies.

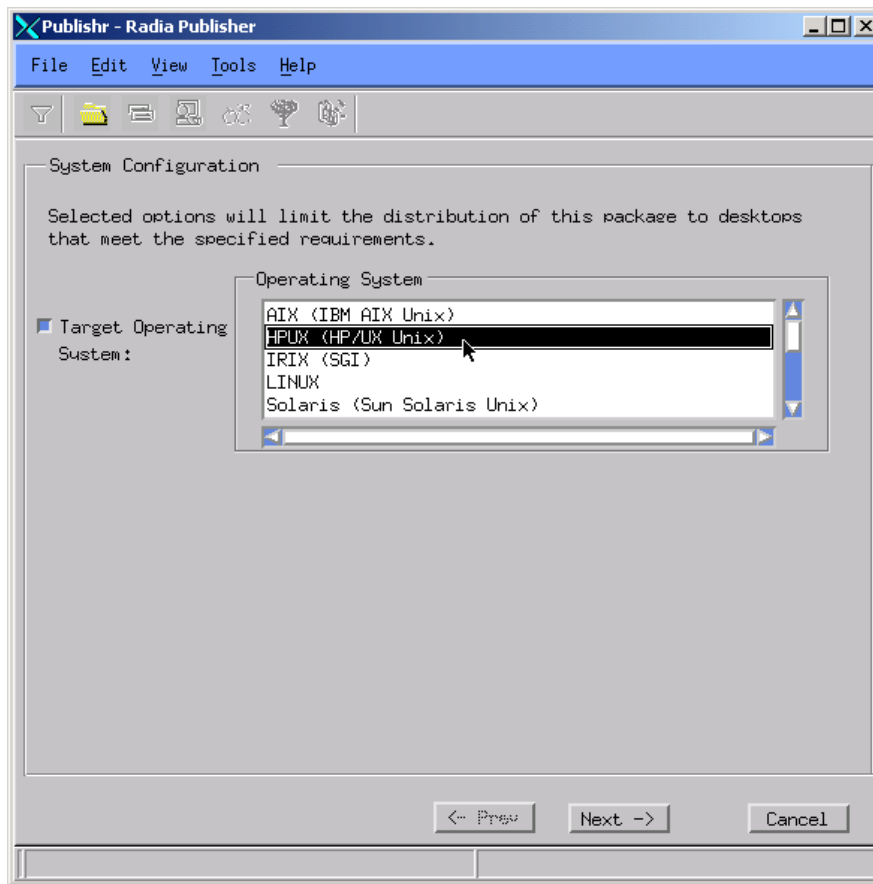


Figure 5.38 ~ System Configuration window (Self Maintenance).

Click **Next** to continue.

8. In the **Availability** window, accept the default settings.

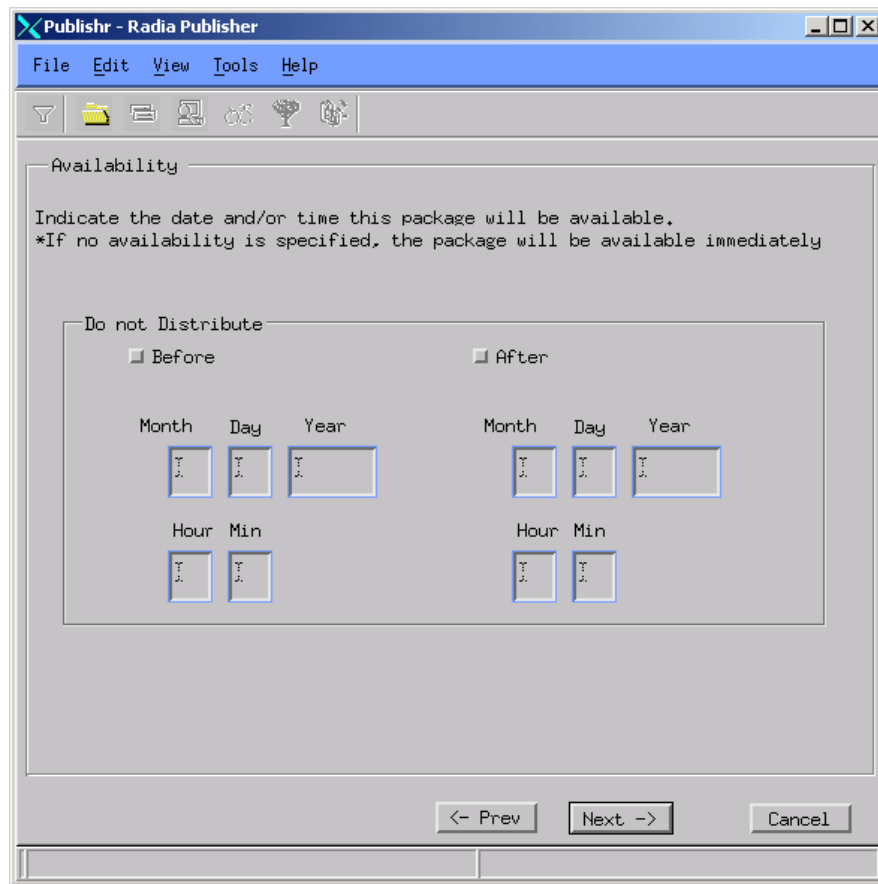


Figure 5.39 ~ Availability window (Self Maintenance).

Click **Next**.

9. In the **Select Files to be Published** window, navigate to the directory (/opt/radmaint) that you created and select its check box.

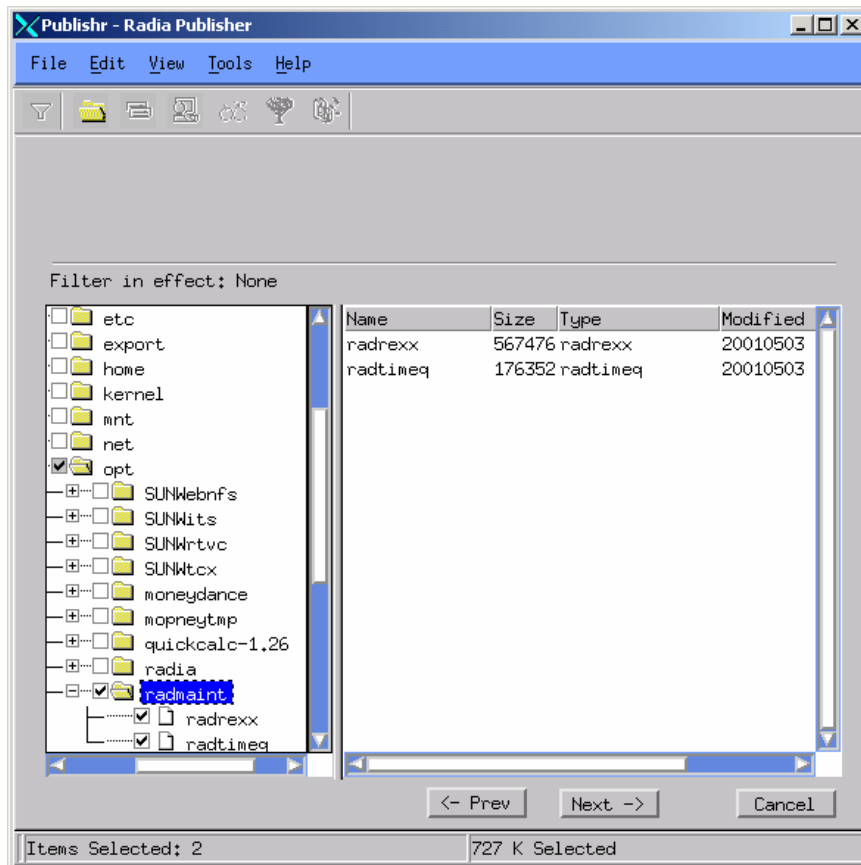


Figure 5.40 ~ Select files to be published window (Self Maintenance).

Then, click **Next**.

10. When the next window opens, right-click **Selected Files**, and then select **Expand All**.
11. Right-click the directory **radmaint** and from the shortcut menu, select **Set Properties**, then **Directory and Files**.

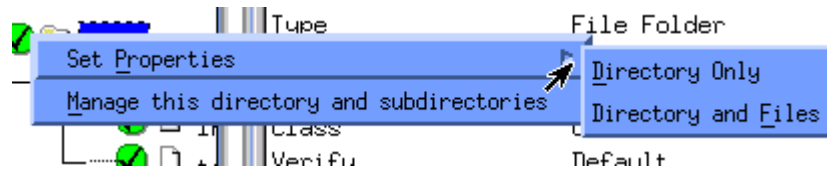


Figure 5.41 ~ Set properties for directory and files.

Note

When implementing Radia Client self-maintenance, make sure **Manage this directory and subdirectories**, is not selected.

The **Instance Properties** dialog box opens.

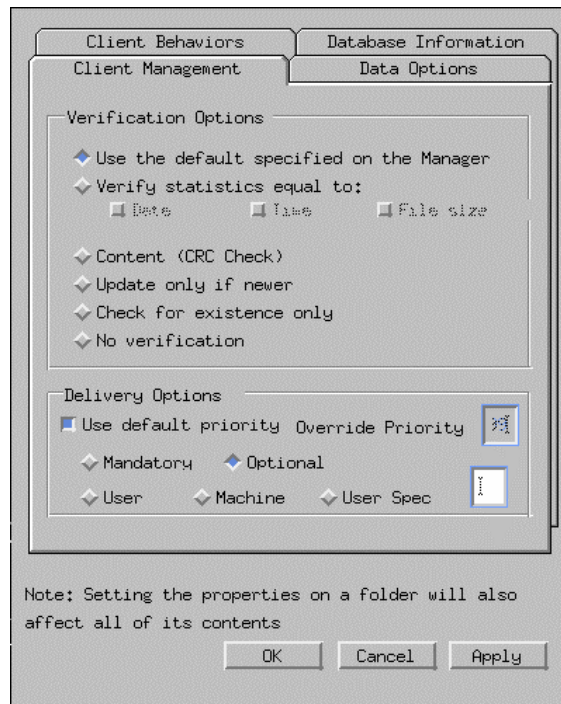


Figure 5.42 ~ Instance Properties dialog box, Client Management tab.

12. On the **Client Management** tab, select **No Verification**. All verification flags are ignored when publishing maintenance files.
13. Click the **Data Options** tab.

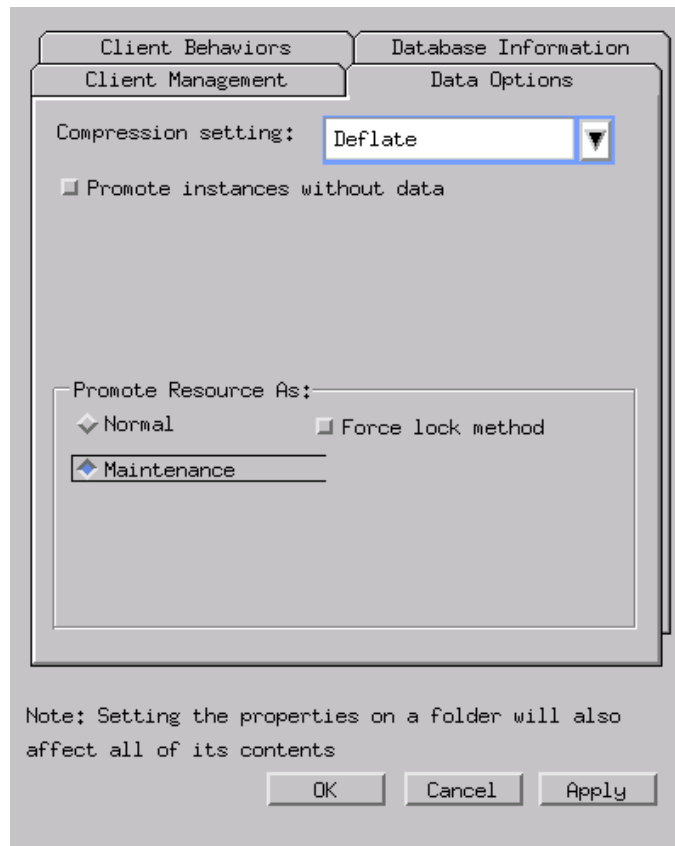


Figure 5.43 ~ Instance Properties dialog box, Data Options tab.

14. In the **Promote Resource As** area, select **Maintenance** to indicate that the files to be deployed are part of a maintenance component of the Radia Application Manager software.

Note

If the **Maintenance** option button is not available, return to the **Client Management tab** and be sure to select **No Verification** in the **Verification Options** area.

15. Click **OK** to close the **Data Options** dialog box. Then, click **Next**.

You should receive a warning message, as displayed in Figure 5.44 , below.

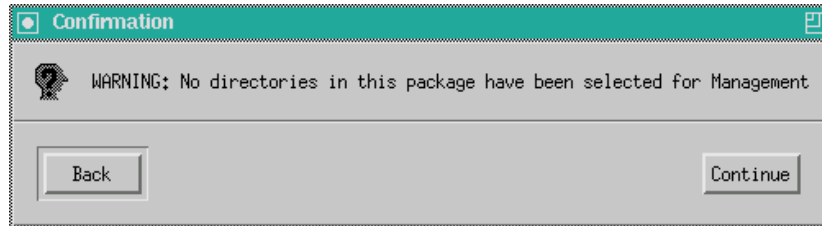
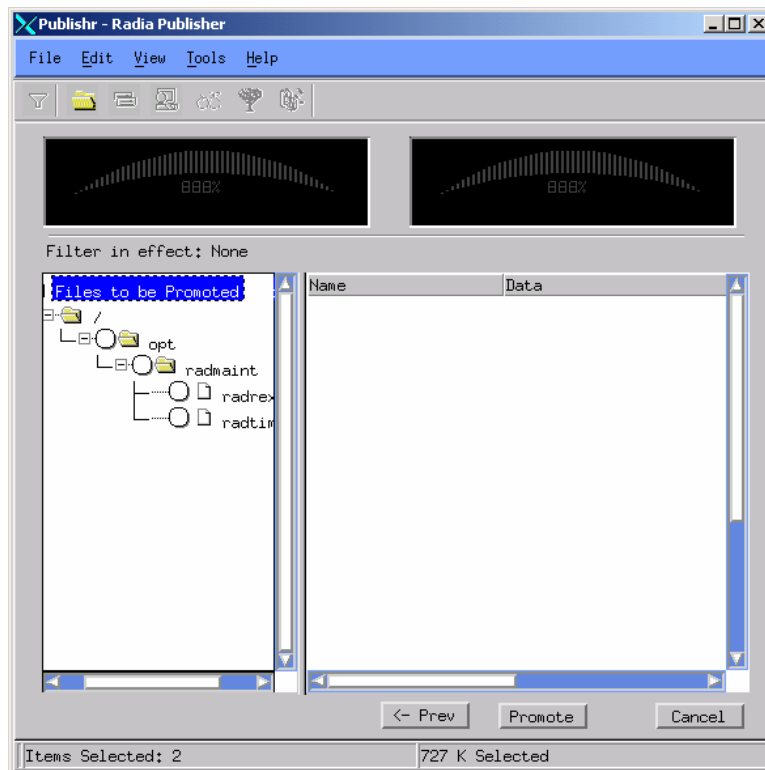


Figure 5.44 ~ Warning message confirmation dialog box.

16. Click **Continue**.

17. Click **Promote** to compress and transfer the files to the Radia Database.



18. When the promote is done, click **OK**. Then, click **Finish** to close the Radia Publisher.
19. Click **Yes** to confirm that you are ready to close the Radia Publisher. You are now ready to prepare the package for distribution.

Step 2: Connecting the Maintenance Package to a Service

Use the Radia System Explorer to connect the maintenance package to the Client Self Maintenance service, located in NOVADIGM.ZSERVICE. After the package is connected, you will need to modify the maintenance PATH instance so that the maintenance files are distributed to the appropriate place on the subscriber's computer.

To connect the maintenance package to the application

Note

The following instructions use the Radia System Explorer. The Radia System Explorer is currently available for 32-bit Windows platforms. For more information, refer to the *Radia System Explorer Guide*.

1. Go to **Start, Programs, Radia Administrator Workstation**, and select **Radia System Explorer**.

Note

The **User ID**, as shipped from HP, is **RAD_MAST**. No password is necessary. This may have been changed during installation. You can also change this by selecting the **Change Password** check box and typing the new password in the **New Password** and **Verify New Password** fields.

2. In the **Radia System Explorer Security Information** dialog box, type your **User ID** and **Password** in the appropriate fields.
3. Click **OK**.
4. Navigate to **PRIMARY.NOVADIGM.ZSERVICE** and double-click **Application (ZSERVICE)**.

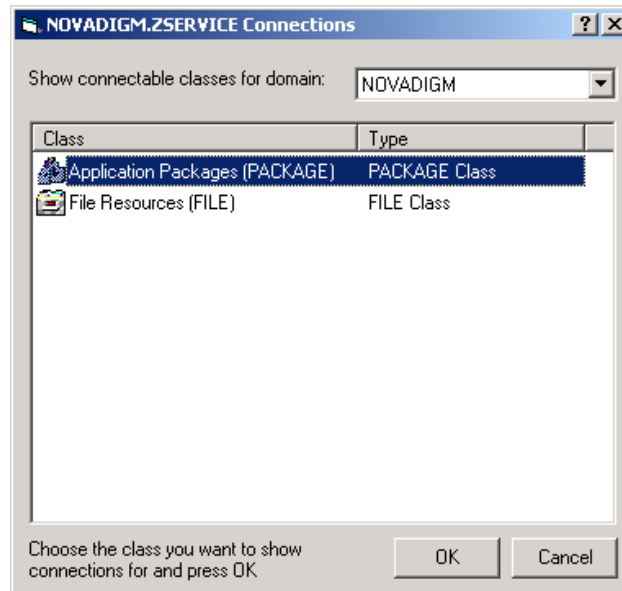


Figure 5.47 ~ NOVADIGM.ZSERVICE Connections dialog box.

6. Double-click **Application Packages (PACKAGE)**. The dialog box closes.

In the Radia System Explorer, a list of the Application Packages appears in the list view. You can connect any of these packages to the Client Self Maintenance application. Notice the package that you published earlier, **Maintenance for Fix #000001**.

The **Select Connection Attribute** dialog box opens.

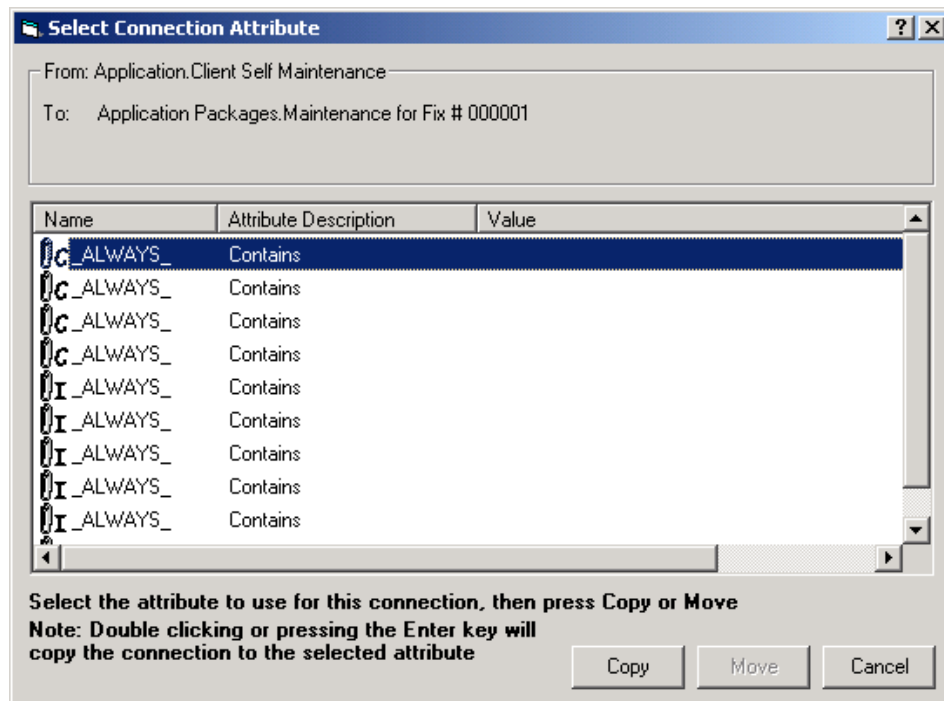


Figure 5.49 ~ Select Connection Attribute dialog box.

9. Click **Copy**.
10. Click **Yes** to confirm that you want to connect **Client Self Maintenance** to **Maintenance Fix # 000001**.
11. Click **OK** to close the confirmation message.

The connection appears under the **Client Self Maintenance** instance.

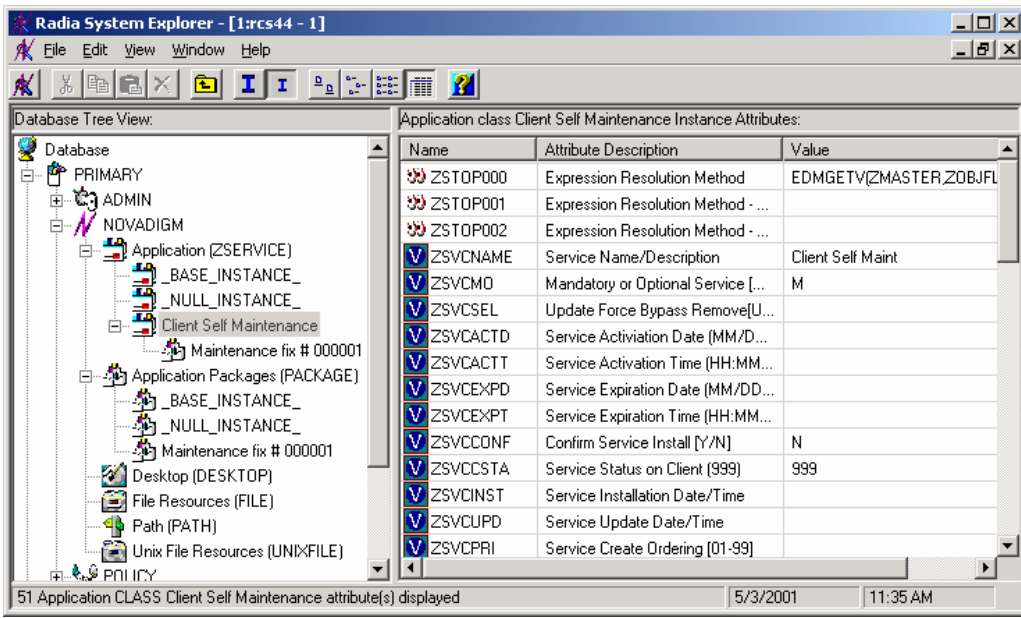



Figure 5.50 ~ Package connected to the Client Self Maintenance application.

To modify the location for the maintenance files

Modify the maintenance PATH instance so that the maintenance files are distributed to the appropriate place on the subscriber's computer.

1. Double-click the **Maintenance fix # 000001** instance located under the **Client Self Maintenance** instance (in NOVADIGM.ZSERVICE).
2. Double-click the Path icon . The tree expands to display the Maintenance path instance.
3. Double-click the Maintenance path instance to display the instance's variables, as shown in Figure 5.51 on page 202.

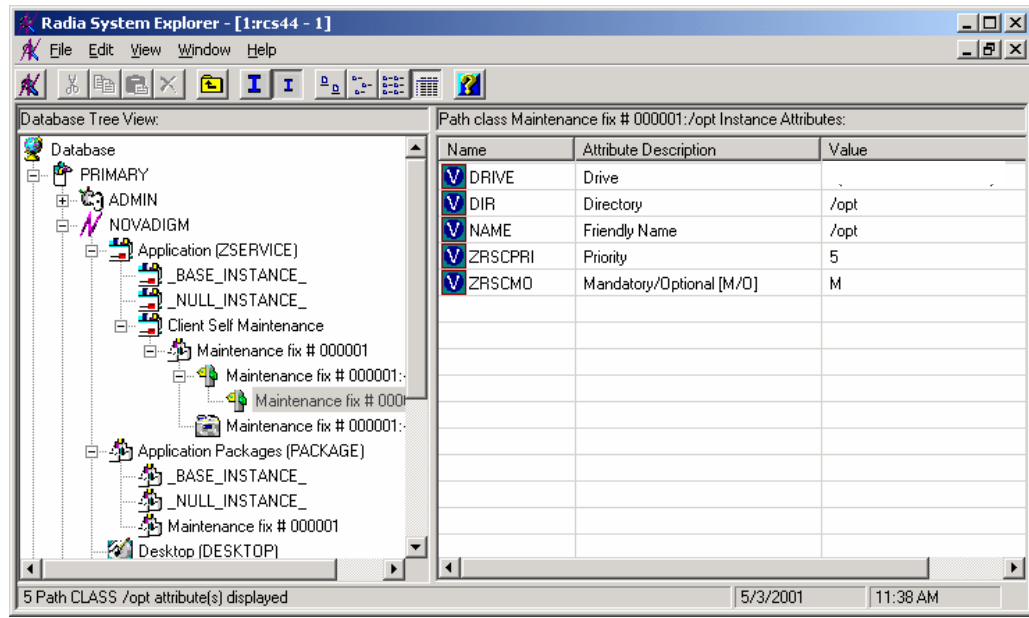


Figure 5.51 ~ Client Self Maintenance path instance variables.

4. In the list view, double-click the **DIR** variable. The **Editing Instance** dialog box opens.

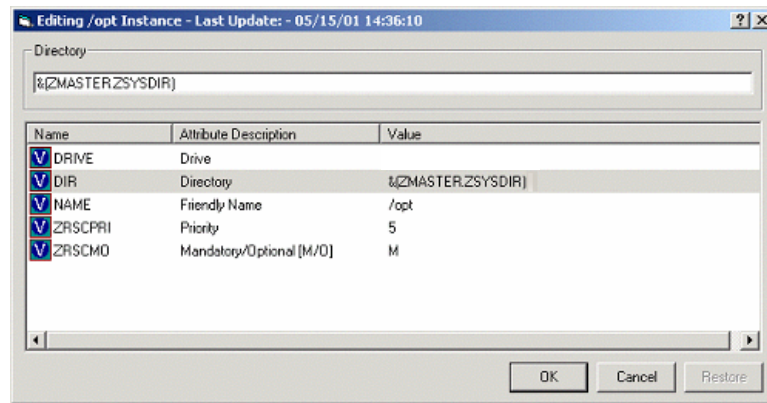


Figure 5.52 ~ Editing Instance dialog box.

Note

The initial ampersand indicates references to be processed with symbolic substitution. See the *Radia System Explorer Help* for more information about symbolic substitution.

- In the **Directory** text box, change the value to **&(ZMASTER.ZSYSDIR)** to ensure that the maintenance files are delivered to the appropriate directory.
- Select the **NAME** variable. In the **Friendly Name** text box, modify the friendly name that will appear in the Radia System Explorer.

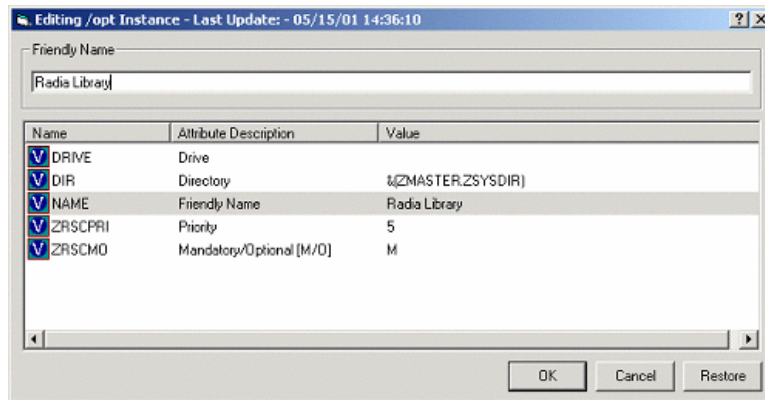


Figure 5.53 ~ Editing Instance dialog box with new values.

5. Click **OK** to save your changes and return to the Radia System Explorer.

Step 3: Connecting the Client Self Maintenance Application to a Policy

Use the Radia System Explorer to connect the Client Self Maintenance application to a POLICY class instance. This distributes the maintenance files for the Radia Application Manager to the appropriate subscribers. In this example, the maintenance files are to be delivered to all 2500 subscribers. Therefore, the Client Self Maintenance instance can be connected to the `_BASE_INSTANCE_` of the USER class in the POLICY domain.

For more information about setting up policies, see the *Implementing Entitlement Policy* chapter in this book.

To connect the Client Self Maintenance application to the `_BASE_INSTANCE_`

Note

The following instructions use the Radia System Explorer. The Radia System Explorer is currently available for 32-bit Windows platforms. For more information, refer to the *Radia System Explorer Guide*.

1. Navigate to `PRIMARY.POLICY.USER`.

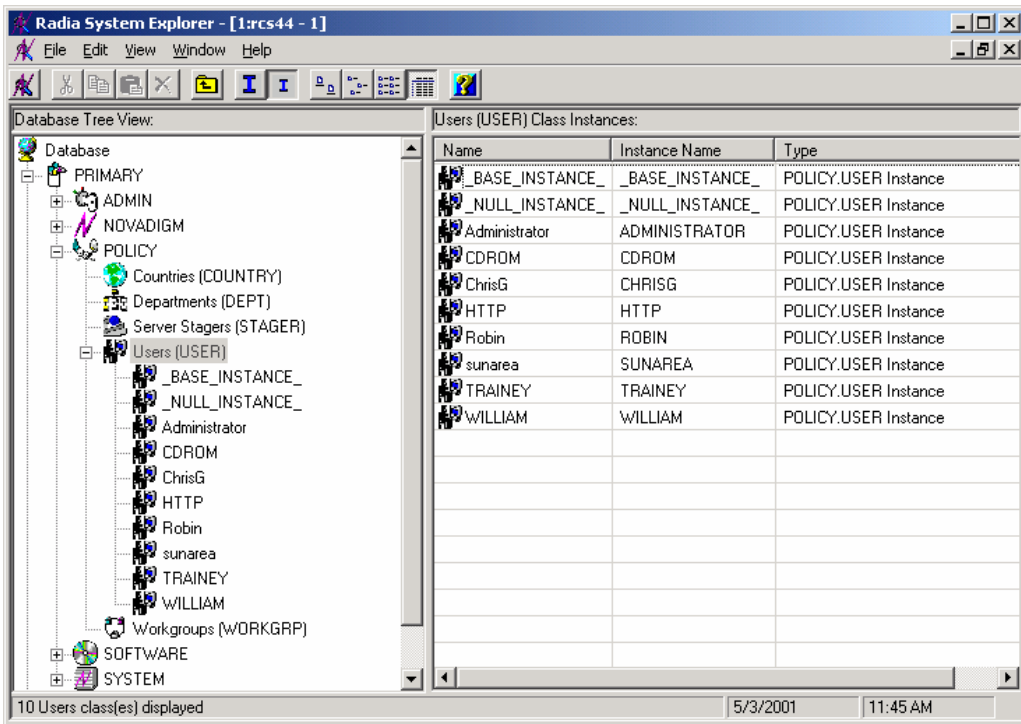


Figure 5.54 ~ Base instance of the USER class.

2. Right-click **_BASE_INSTANCE_**, and then from the shortcut menu select **Show Connections**. The **POLICY.USER Connections** dialog box opens.
3. In the **Show connectable classes for domain** drop-down list, select NOVADIGM.
4. Double-click **Application (ZSERVICE)**. The **POLICY.USER Connections** dialog box closes and the applications appear in the list view.

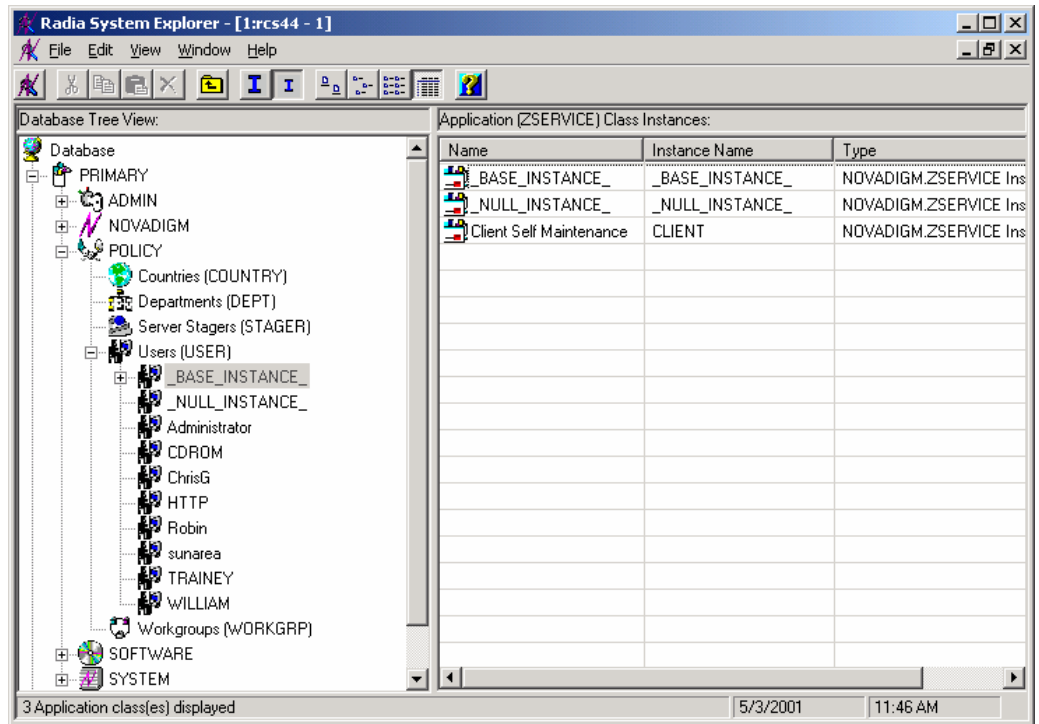


Figure 5.55 ~ ZSERVICE applications displayed.

5. In the list view, drag the **Client Self Maintenance** application instance to the tree view and drop it on the **_BASE_INSTANCE_** in the **Users (USER)** class.
6. When your cursor turns into a paper clip, release the mouse button. The **Select Connection Attribute** dialog box opens.
7. Click **Copy**.
8. Click **Yes** to confirm that you want to connect the Client Self Maintenance application to the **_BASE_INSTANCE_**.
9. Click **OK** when the message appears indicating that the connection has been made.

Step 4: Initiate a Client Connect to Distribute the Maintenance Files

The maintenance files are ready to be distributed to your subscribers at the next Client Connect. In this example, we will use Radia Notify to initiate a Client Connect and update the target computers.

For more information about Radia Notify, see the *Deploying Applications* chapter in this book.

To initiate a Client Connect using Radia Notify

Note

The following instructions use the Radia System Explorer. The Radia System Explorer is currently available for 32-bit Windows platforms. For more information, refer to the *Radia System Explorer Guide*.

1. Navigate to PRIMARY.NOVADIGM.ZSERVICE.
2. Right-click **Client Self Maintenance**.

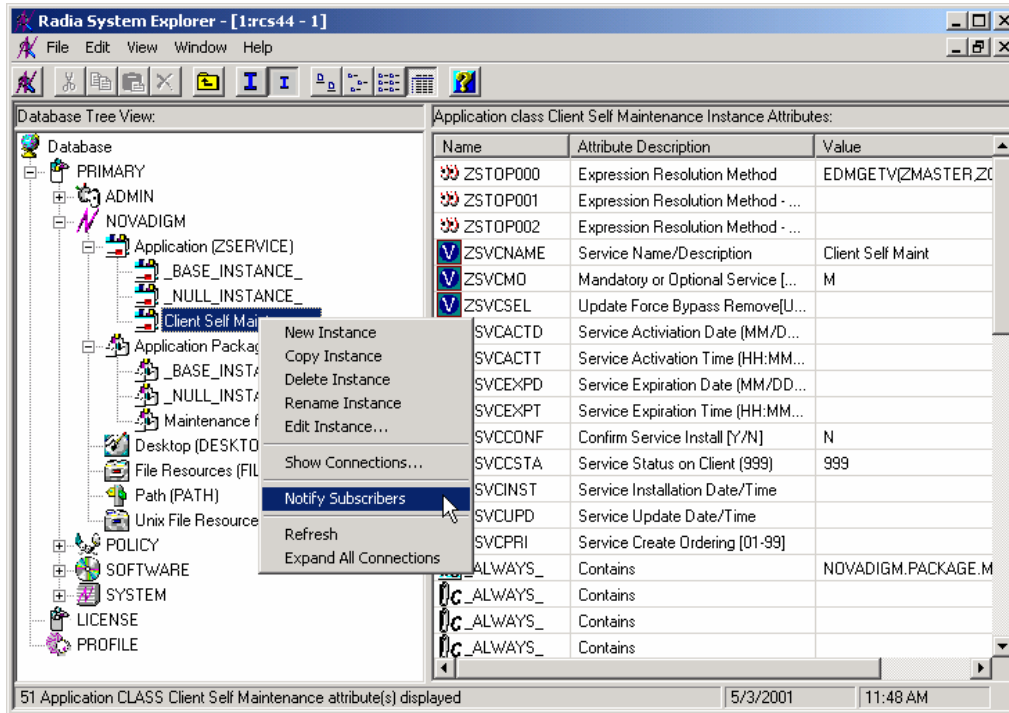


Figure 5.56 ~ Notify Subscribers of Client Self Maintenance.

3. Select **Notify Subscribers**. A message asks if you would like to build an audience list. Click **Yes**.

Note

If you want to send a Notify to subscribers of a particular application, that application must be installed on their computers in order for them to be eligible for notification.

The **Radia Notify Manager** dialog box opens.

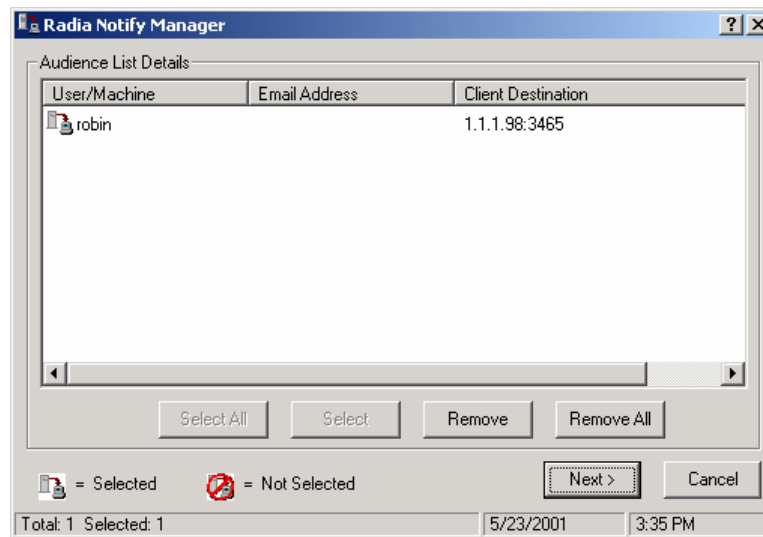


Figure 5.57 ~ Radia Notify Manager dialog box.

4. Select all of the users that you want to notify. By default, all users in the audience list are selected. If you want to select individual subscribers, you can:
 - Click **Remove All**, and then select the appropriate subscribers.
 - Select individual subscribers that you want to remove, and then click **Remove**.
5. Then, click **Next** to select the notification type.

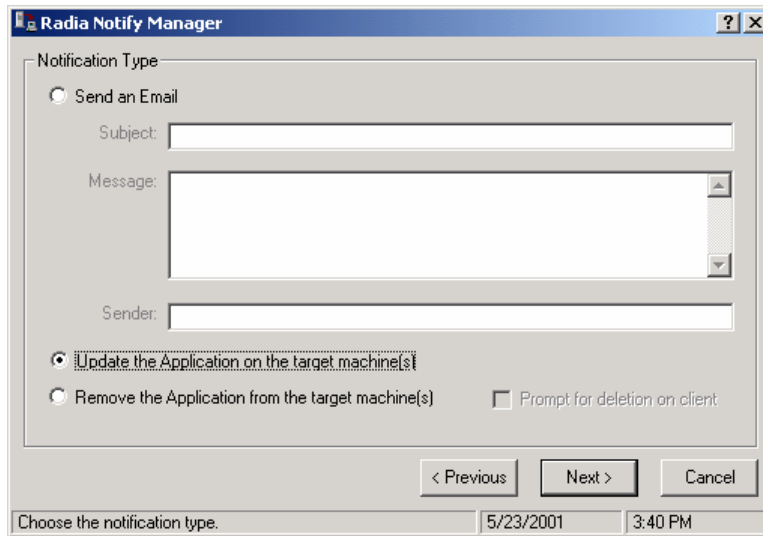


Figure 5.58 ~ Select notification type.

6. Select a notification type (in this example, **Update the Application on the target machines**), and then click **Next**.
7. In the **Notification Details** window, do not select either check box, and then click **Next**. The **Notification Summary** window appears.

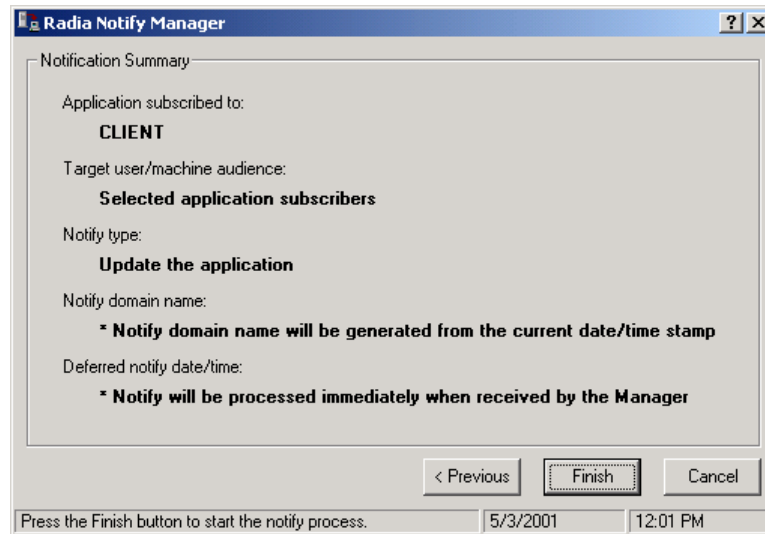


Figure 5.59 ~ Notification Summary dialog box.

8. Review the **Notification Summary** and then click **Finish**. A notification initialization message opens.
If you need to modify your selection, click **Previous**.
-

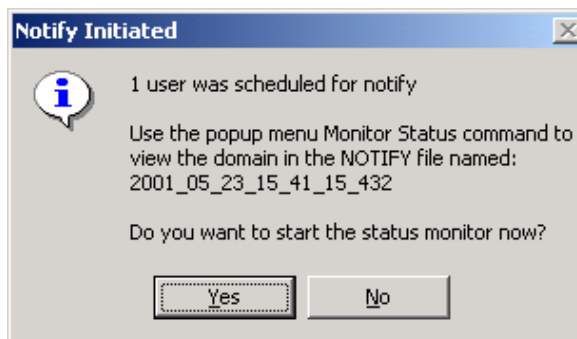


Figure 5.60 ~ Notification initialization message.

9. Click **Yes**. The status monitor opens.
-

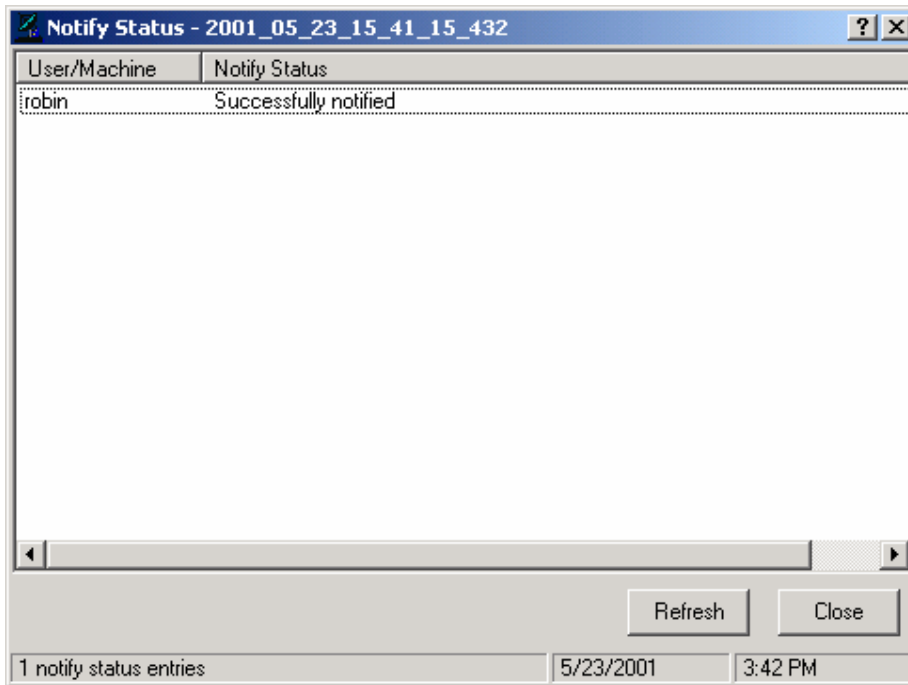


Figure 5.61 ~ Status Monitor (Self Maintenance).

The Radia Application Manager is automatically updated on your subscribers' computers. Below you can see the directory structure as it appears on the subscriber's computer. The NEW directory stores the maintenance files that you deployed using the Notify function.

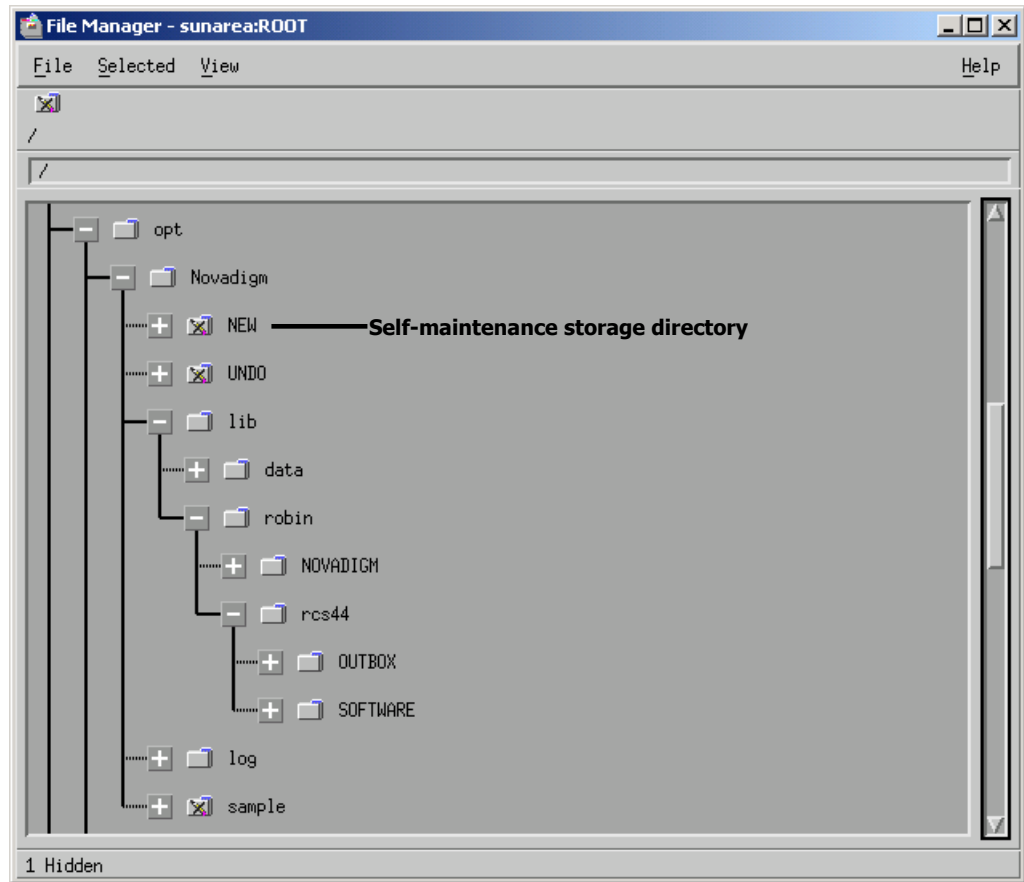


Figure 5.62 ~ Radia Application Manager - self maintenance directory.

Optimizing Services

Service Optimization uses byte level differencing and its ability to generate *patches* to recreate original data. A *patch* allows administrators to upgrade data to reflect bug fixes, feature additions, and added information. These patches contain the minimum number of bytes required to fix a flawed program and/or complete software upgrades. These patches are smaller than the data, thus conserving network bandwidth at the expense of CPU overhead.

Note to Reliant Users

Currently, Radia does not support Byte-level differencing for Reliant operating systems.

The Radia Publisher automatically creates components that are eligible for byte-level differencing patching, assuming the component class contains the proper signature attributes as specified in the Radia Configuration Server specifications.

Note

Initially, to allow for the functionality of byte level differencing, the following limitations are set:

- Patches will be managed at the SOFTWARE.ZSERVICE level between PACKAGES instances that are hierarchically connected together.
- Patches can only be created between components with the same fully qualified names.
- Patches can only be created for components that contain a signature. Initially, only MD5 is supported.
- Components being used for patching must be published from the same location, or computer, to qualify for byte-level differencing patching. This will populate the eight-byte CRC found in the suffix of the instance names.

For detailed information, see the *Radia System Explorer Guide*.

Summary

- Publishing is the process of identifying the components of the software or content and organizing them into packages.
- Radia publishing mode: Component Selection Mode.
- To publish packages, install the Radia Publisher onto a clean computer. To configure applications you must use the Radia System Explorer.
- Install the Radia Publisher onto a machine you will be using for publishing applications.
- You can use Component Selection Mode for packaging simple applications by selecting the individual components that make up the software.
- Use the Radia Publishing Adapter as an alternative to Component Selection Mode.
- After publishing applications, use the New Application Wizard in the Radia System Explorer to create a service—the fundamental unit of content managed by Radia.
- You can use Radia to prepare and distribute maintenance to the Radia Application Manager.

Implementing Entitlement Policy

At the end of this chapter, you will:

- Understand how Radia can integrate with your existing policy information.
- Understand the Radia POLICY domain.
- Be able to create new users and assign them to groups for use in simple environments.
- Be able to connect services to groups.

This guide covers the *suggested* implementation for the Radia Application Manager. Although you will tailor this strategy to meet your organization's needs, it is recommended that you review this guide for a comprehensive understanding of the Radia Application Manager. This chapter covers Implementing Entitlement Policy, assigning users to groups, and connecting applications to users.

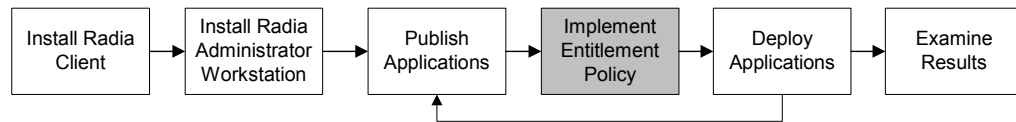


Figure 6.1 ~ Overview of the Radia Application Manager Guide.

About Policy Management and Radia

As your organization grows and changes, it is your job to manage *who* has access to *what* software. You've invested time and money to determine the best way to handle policy information for your organization. Now, you want to use Radia to manage your digital assets. With Radia, you have the advantage of using your *existing* policy information, while using Radia to manage your digital assets.

Radia can use real-time policy information from:

- NT Domains
- Active Directory
- NDS
- iPlanet
- ISOCOR
- SQL Server, Oracle, or Sybase
- SQL 92-compliant (ODBC) data sources
- Any LDAP-compliant directory

You can continue to use the tools that you are already familiar with to administer policies. And, as you modify group assignments, subscriptions to digital assets are kept up-to-date.

Accessing Existing External Policy Information

When a Radia Client connects to the Radia Configuration Server, Radia retrieves policy information in real-time from the appropriate data stores. In the simplest environment, such as a lab used for testing, you might want Radia to search the Radia Database for this information. However, typically, you will want Radia to search your existing policy stores. This information is

sent back to the Radia Configuration Server, which determines which digital assets are to be managed for the user, group, or computer.

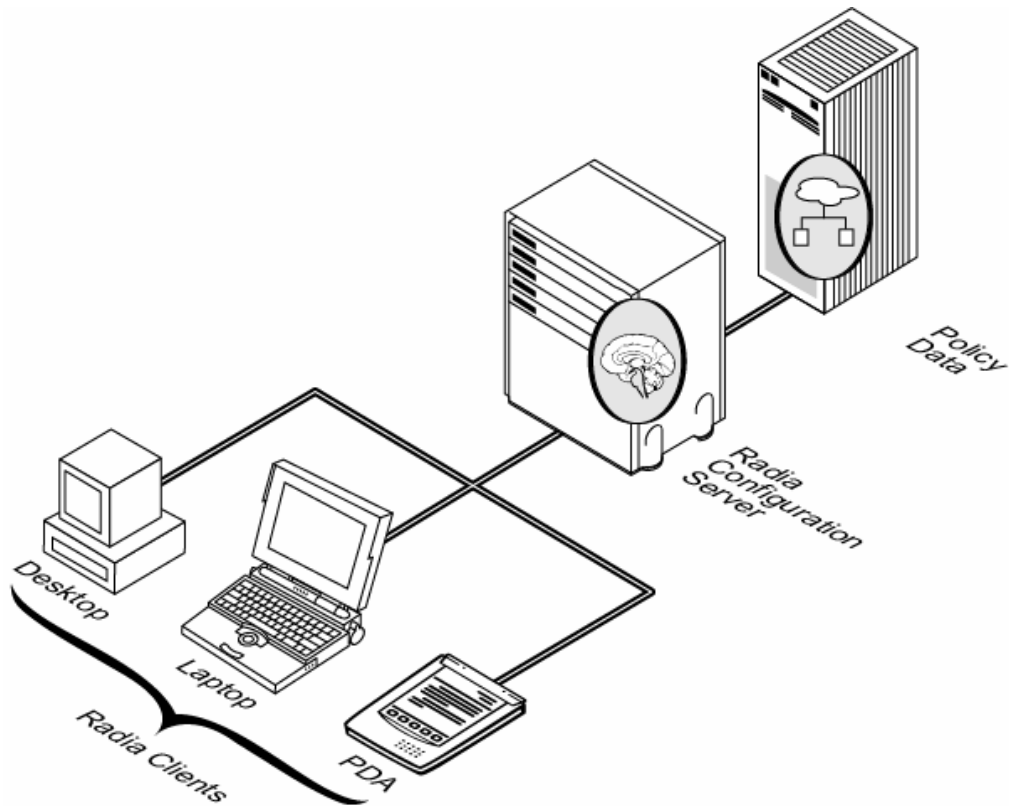


Figure 6.2 ~ Retrieving policy information from an external source.

Radia also supports using multiple Radia Configuration Servers with multiple types of external policy stores. This is especially useful in migration scenarios where you may be consolidating multiple external policy stores over a period of time. During this time, you can continue to use as many existing policy stores as necessary.

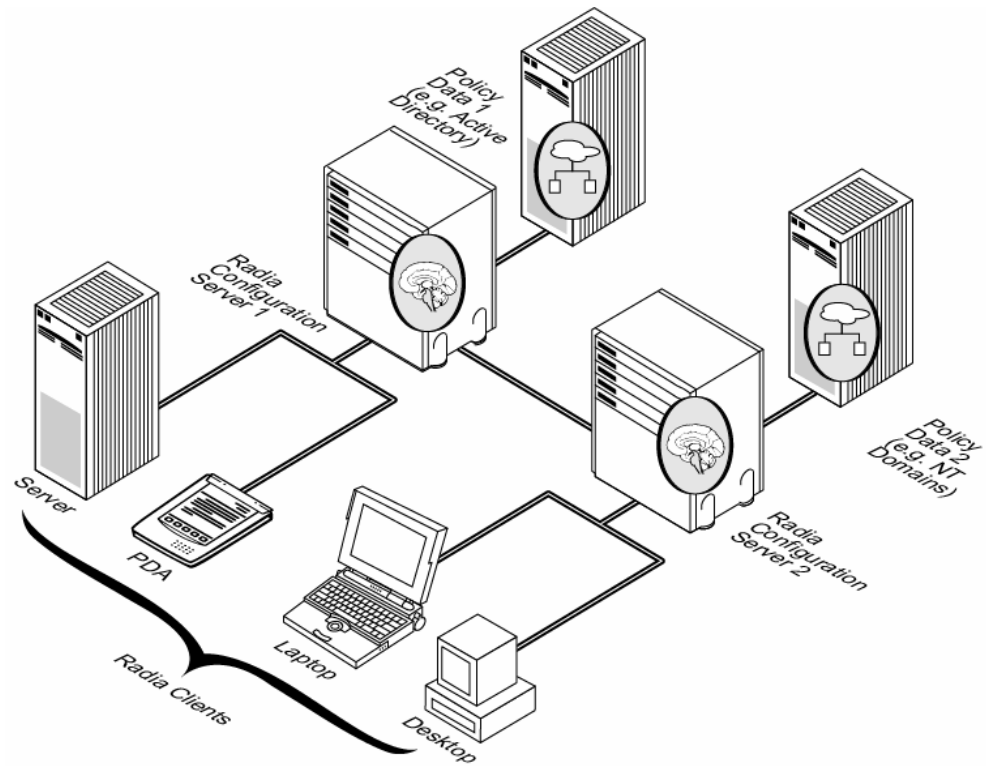


Figure 6.3 ~ Retrieving policy information from multiple external sources.

Integrating with Existing External Policy

In order to use real-time policy information from an external source to manage your digital assets, Radia must communicate with your policy system. Each policy system has its own interface; some are proprietary, some are standardized.

Note

For technical details about integrating your existing policy with Radia, see the HP OpenView web site.

Directories-Based Entitlement

(such as Active Directory and NDS)

If you want to leverage your investment in LDAP-based directory services or SQL-based databases, we offer the Radia Policy Manager. The Radia Policy Manager is a plug-in to the Radia Integration Server (RIS) used for administration purposes such as mapping services to users in the directory tree. The Radia Configuration Server can be configured to query the Radia Policy Manager to determine what services should be distributed and managed for the client that is currently logged on.

Important Note

The Radia Policy Manager is an optional feature available from HP. Contact your HP sales representative for details.

See the *Radia Policy Manager Guide* for more information.

Radia's integration with existing policy greatly reduces the total cost of ownership of your environment by allowing you to continue to manage policies from your existing repository while Radia manages your digital assets.

About the Radia POLICY Domain

If you are using real-time policy information from an external source to manage your digital assets, you may need to configure a connection from your external policy store to the POLICY domain in the Radia Database. The configuration may vary based on the policy store.

This section is intended to provide you with an overview of the POLICY domain. Most medium to large organizations will use their existing policy information and will have limited use for this domain. However, in the simplest environment, you can use the POLICY domain in the Radia Database to organize subscribers into logical groups in preparation for distributing software.

In this section, you will learn:

- About the classes in the POLICY domain.
- How to create users and groups.
- How to assign users to groups.

Once you are familiar with the POLICY domain and understand the basics of managing policy information within Radia, you can extend that knowledge to learn how to integrate your existing policy information with Radia. This information may also be useful if you want to create a simple lab environment to test the management of your digital assets.

Note

The following section uses the Radia System Explorer, which is available for 32-bit Windows platforms. For more information, refer to the *Radia System Explorer Guide*.

To access the POLICY domain

1. From the **Start** menu, select **Programs, Radia Administrator Workstation, Radia System Explorer**. The **Radia System Explorer Security Information** dialog box opens.

Note

The **User ID**, as shipped from HP, **RAD_MAST** works with no password required. This may have been changed in your installation. Check with your Radia security administrator to obtain your own **User ID** and **Password**, if necessary.

2. If necessary, type a **User ID** and **Password**, and then click **OK**. The **Radia System Explorer** window opens.
3. Double-click **PRIMARY**.
4. Double-click **POLICY**.

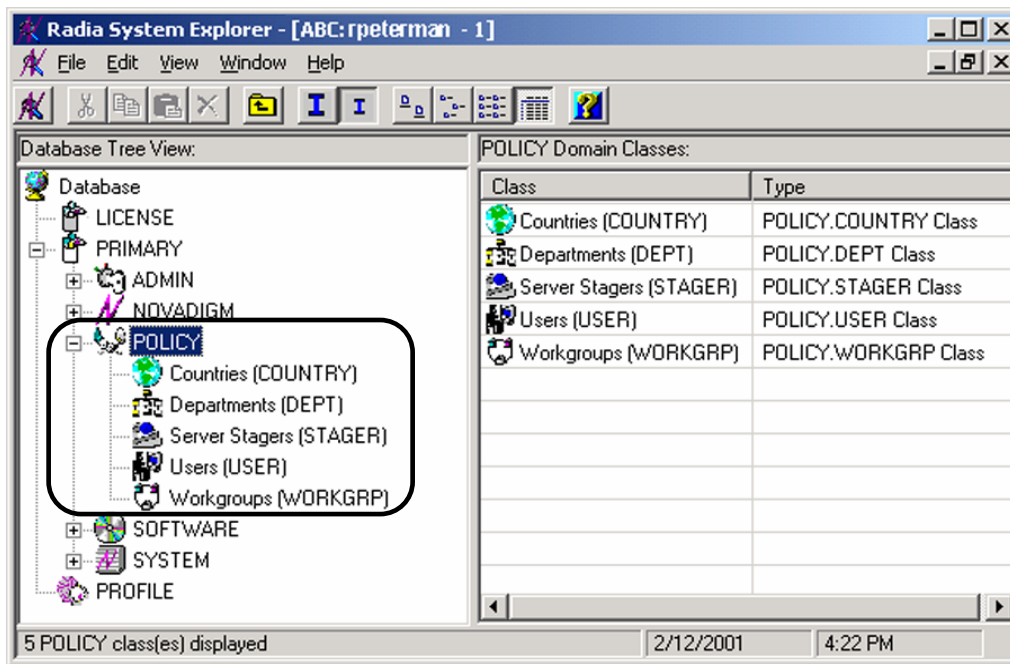


Figure 6.4 ~ The POLICY domain.

Classes in the POLICY Domain

The POLICY domain has five default classes, Countries (COUNTRY), Departments (DEPT), Server Stagers (STAGER), Users (USER), and Workgroups (WORKGRP), as described below.

Table 6.1 ~ Classes in the POLICY Domain

Class	Description	Instance Examples
Countries (COUNTRY)	Use for clock synchronizations with the Radia Configuration Server. Do not assign services to this class.	France, Japan, Italy
Departments (DEPT)	Use to group subscribers into departments.	Finance, Customer Service, Manufacturing
Server Stagers (STAGER)	Use to define Radia Staging Servers within your distribution network. Also, use to define storage locations on a Radia Staging Server computer.	CDROM, Stager, Server001
Users (USER)	Use to define individual subscribers.	William, John Doe, SSampson
Workgroups (WORKGRP)	Use to group subscribers into functional groups. For example, a project team may be made up of subscribers from several different departments.	Project Planning, Managers, ABC Project Team

You can also add other classes to the POLICY domain, as per your organization's needs. For example, if your organization is an insurance company, you may add an AGENTS or OFFICES class. Or, if your organization is a bank, you might add classes such as BRANCHES or TELLERS to organize your subscribers.

Note

See the *Radia System Explorer Guide* for information about creating new classes.

Creating Users or Groups in Radia

There may be times when you need to create individual users or groups in Radia. For example, you might want to create a lab environment used to test the distribution and management of your digital assets. To create a simple environment, you may want to create several users, assign them to groups, and then assign services to the groups.

In this section, you will learn how to create a user in the Users (USER) class in the POLICY domain of the Radia Database. You can follow the same steps to create a new Workgroups (WORKGRP) instance or Departments (DEPT) instance by substituting the appropriate class name.

In the following example, you will use the Radia System Explorer to create a new user (Robin) in the USER class.

Note

The following instructions use the Radia System Explorer. The Radia System Explorer is currently available for 32-bit Windows platforms. For more information, see the *Radia System Explorer Guide*.

To create a new user

1. From the **Start** menu, select **Programs, Radia Administrator Workstation, Radia System Explorer**. The **Radia System Explorer Security Information** dialog box opens.

Note

The **User ID**, as shipped from HP, is **RAD_MAST**. No password is necessary. This may have been changed in your installation. Check with your Radia security administrator to obtain your own **User ID** and **Password**, if necessary.

2. If necessary, type a **User ID** and **Password**, and then click **OK**. The **Radia System Explorer** window opens.
3. Double-click **PRIMARY**.
4. Double-click **POLICY**.
5. Right-click **Users (USER)**.

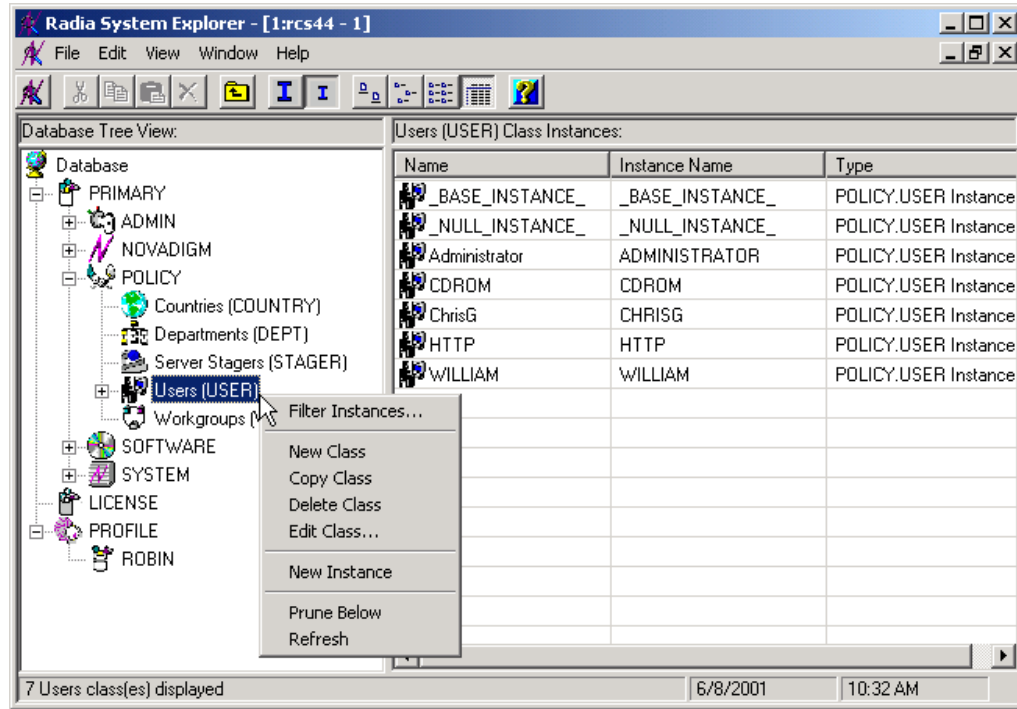


Figure 6.5 ~ Shortcut menu for the USER class.

6. Select **New Instance**.
7. In the **Create Instance** dialog box, type a display name (up to 25 characters) and instance name (up to 25 characters).

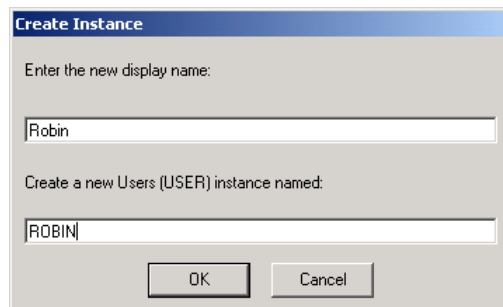


Figure 6.6 ~ Create Instance dialog box.

8. Click **OK**.

The user instance, Robin, is created.

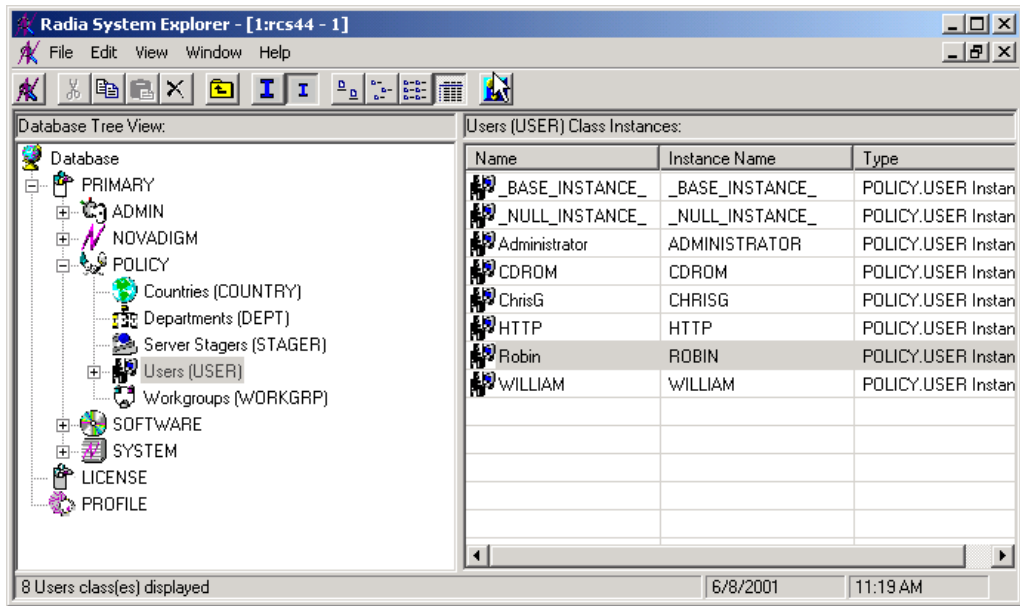


Figure 6.7 ~ The Robin USER instance.

Assigning Users to Groups

If you have created several users, you might want to assign them to one or more groups. In the following example, we will use the Radia System Explorer to assign the user Robin to the Sales department.

Note

The Sales instance, shown in the Departments (DEPT) class in Figure 6.13 on page 233, may not appear in your Radia Database. To add this instance (or instances that are appropriate to your organization), follow the procedure *To create a new user* on page 223. However, instead of right-clicking USER, you would right-click the appropriate class, such as Departments (DEPT).

Note

The following instructions use the Radia System Explorer. The Radia System Explorer is currently available for 32-bit Windows platforms. For more information, see the *Radia System Explorer Guide*.

To assign a user to a department

1. From the **Start** menu, select **Programs, Radia Administrator Workstation, Radia System Explorer**. The **Radia System Explorer Security Information** dialog box opens.

Note

The **User ID**, as shipped from HP, is **RAD_MAST**. No password is necessary. This may have been changed in your installation. Check with your Radia security administrator to obtain your own **User ID** and **Password**, if necessary.

2. If necessary, type a **User ID** and **Password**, and then click **OK**. The **Radia System Explorer** window opens.
3. Double-click **PRIMARY**.
4. Double-click **POLICY**.
5. Double-click **Users (USER)** to open the list of all user instances.
6. Right-click the user instance (in this example, Robin) and select **Show Connections**.

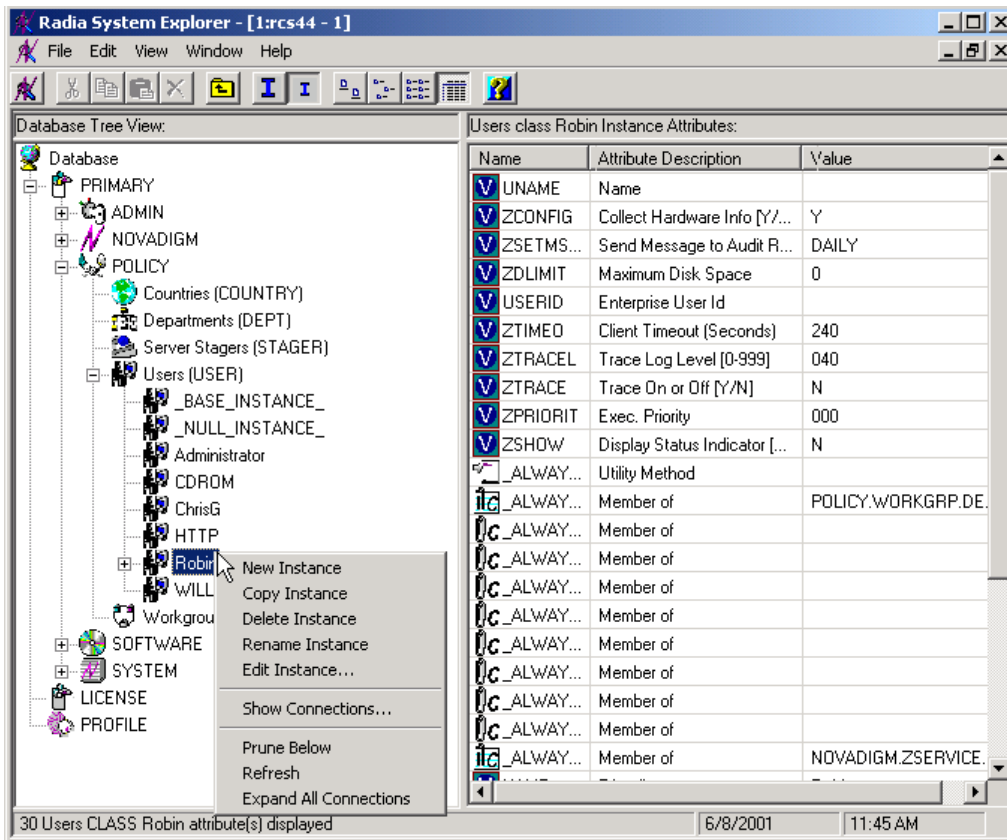


Figure 6.8 ~ Show the connectable classes for Robin.

The **POLICY.USER Connections** dialog box opens. This dialog box displays a list of classes that you can connect the selected instance to.

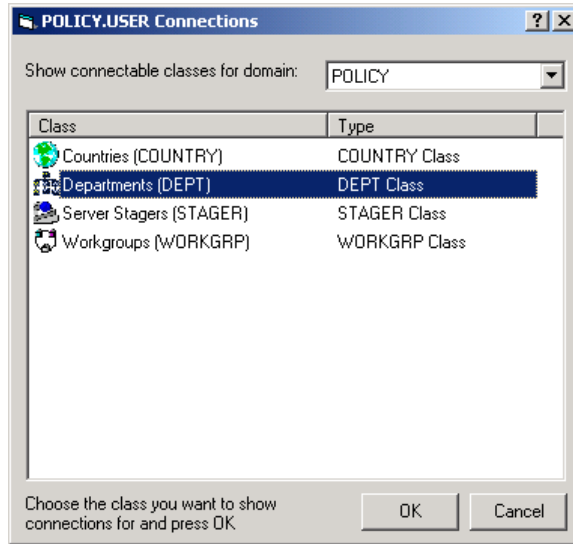


Figure 6.9 ~ The POLICY.USER Connections dialog box.

7. Select **Departments (DEPT)** and then click **OK**. The DEPT class instances appear in the list view of the Radia System Explorer. This allows you to easily make a connection between an instance in the DEPT class and an instance in the USER class.
8. Select the **Sales** instance from the list view and drag it to the appropriate Users instance (in this example, Robin). When your cursor turns into a paper clip, release the mouse button.

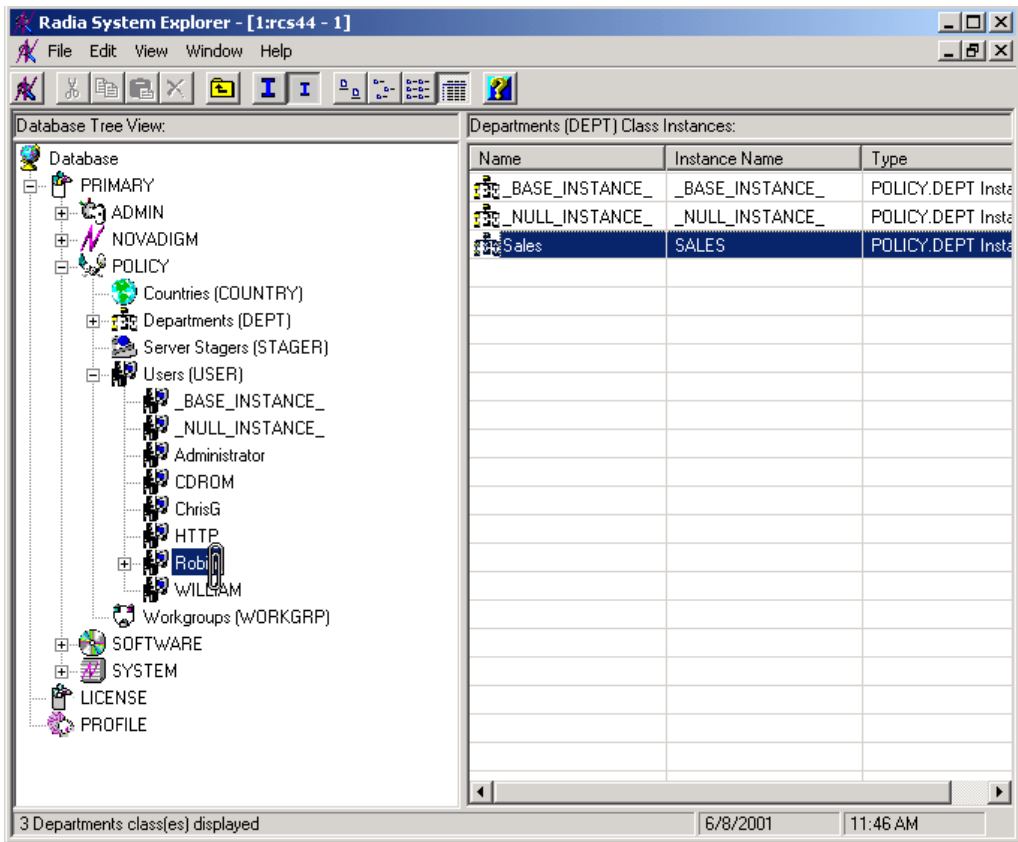


Figure 6.10 ~ Connect USERS.Robin to DEPT.Sales.

The **Select Connection Attribute** dialog box opens.

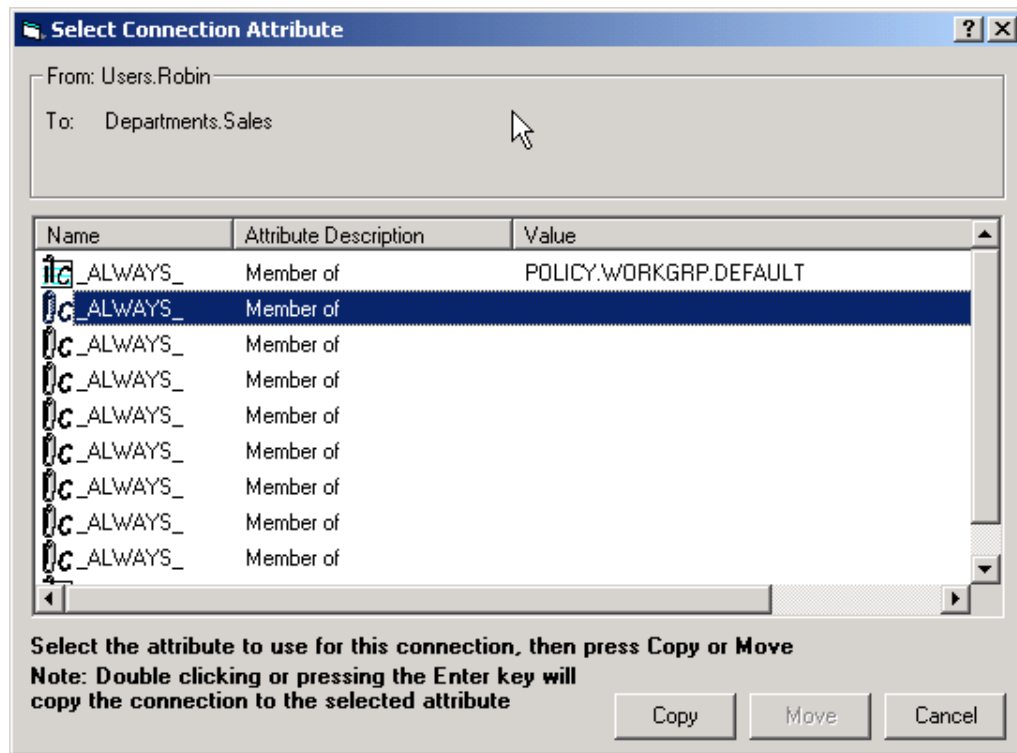


Figure 6.11 ~ Select the attribute for the connection.

9. Click **Copy** to create the connection from **Users.Robin** to **Department.Sales**.
10. Click **Yes** to confirm the connection.
11. Click **OK** when you receive the confirmation that "Robin has been connected to Sales."

In the Radia System Explorer tree view (Figure 6.12 on page 231), notice that **Sales** is now listed under the **Robin** user instance, which indicates that Robin is part of the Sales department.

The screenshot shows the Radia System Explorer interface. On the left, the Database Tree View is expanded to show the 'Users (USER)' folder, with 'Robin' selected. The right pane displays the 'Users class Robin Instance Attributes' table.

Name	Attribute Description	Value
UNAME	Name	
ZCONFIG	Collect Hardware Info [Y/...	Y
ZSETMS...	Send Message to Audit R...	DAILY
ZDLIMIT	Maximum Disk Space	0
USERID	Enterprise User Id	
ZTIMEO	Client Timeout (Seconds)	240
ZTRACEL	Trace Log Level [0-999]	040
ZTRACE	Trace On or Off [Y/N]	N
ZPRIORIT	Exec. Priority	000
ZSHOW	Display Status Indicator [...]	N
_ALWAY...	Utility Method	
itg_ALWAY...	Member of	POLICY.WORKGRP.DE.
itg_ALWAY...	Member of	POLICY.DEPT.SALES
itg_ALWAY...	Member of	
itg_ALWAY...	Member of	
itg_ALWAY...	Member of	
itg_ALWAY...	Member of	
itg_ALWAY...	Member of	
itg_ALWAY...	Member of	
itg_ALWAY...	Member of	
itg_ALWAY...	Member of	NOVADIGM.ZSERVICE.
NAME	Friendly name	Robin

At the bottom of the window, a status bar indicates '30 Users CLASS Robin attribute(s) displayed' and the date/time '6/8/2001 11:52 AM'.

Figure 6.12 ~ Robin is connected to the Sales department instance.

Connecting Services to Groups

Whether you are using an external policy source, or you are managing policy within Radia, you will need to define the services that your subscribers will receive.

Note

If you are using the Radia Policy Manager, see the *Radia Policy Manager Guide* for more information.

In this section, you will learn how to connect users and groups to the services that Radia will manage. In the following example, we will use the Radia System Explorer to authorize all subscribers in the **Sales** department for the **Moneydance** application.

Note

The following instructions use the Radia System Explorer. The Radia System Explorer is currently available for 32-bit Windows platforms. For more information, see the *Radia System Explorer Guide*.

To connect the Moneydance application to the Sales Department

1. From the **Start** menu, select **Programs, Radia Administrator Workstation, Radia System Explorer**. The **Radia System Explorer Security Information** dialog box opens.

Note

The **User ID**, as shipped from HP, is **RAD_MAST**. No password is necessary. This may have been changed in your installation. Check with your Radia security administrator to obtain your own **User ID** and **Password**, if necessary.

2. If necessary, type a **User ID** and **Password**, and then click **OK**. The **Radia System Explorer** window opens.
3. Double-click **PRIMARY**.
4. Double-click **POLICY**.
5. Double-click **Departments (DEPT)** to open the Departments class.

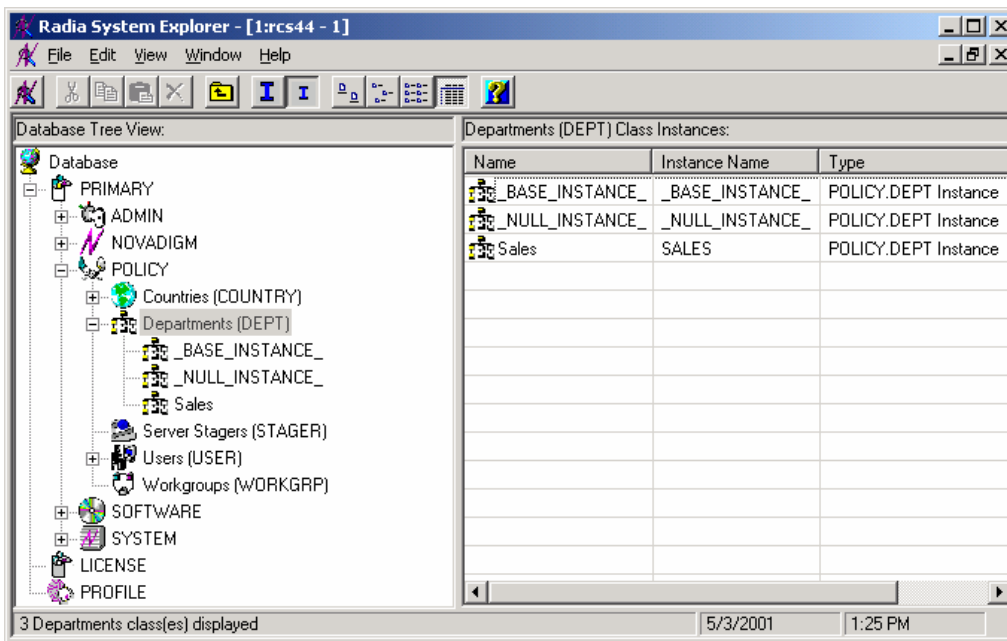


Figure 6.13 ~ The Departments (DEPT) class.

6. Right-click the **Sales** instance (in the tree view), and from the shortcut menu select **Show Connections**. The **POLICY.DEPT Connections** dialog box opens. This dialog box displays a list of classes that you can connect the selected instance to.
7. From the **Show connectable classes for domain** drop-down list, select **SOFTWARE**.

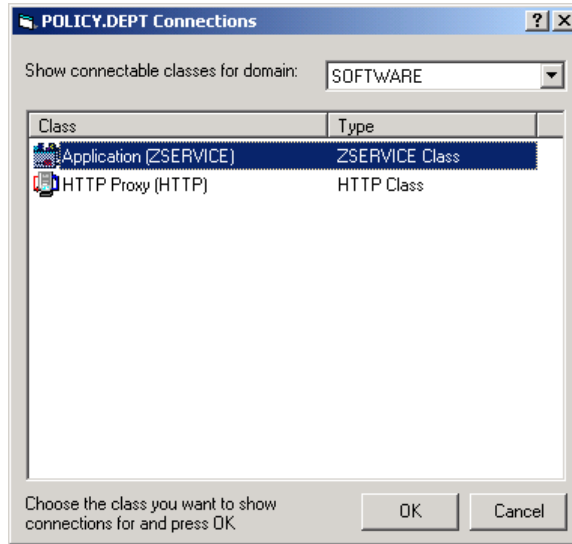


Figure 6.14 ~ The POLICY.DEPT Connections dialog box.

8. Click **Application (ZSERVICE)**, and then click **OK**. The instances in the ZSERVICE class appear in the list view.

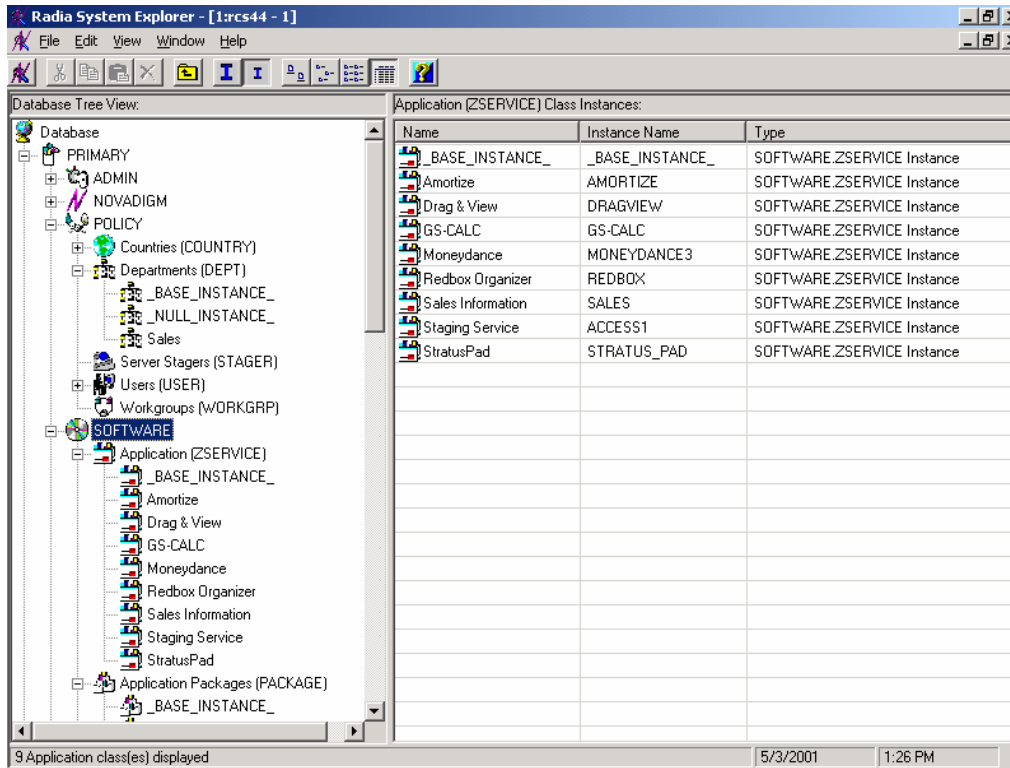


Figure 6.15 ~ ZSERVICE class instances in the list view.

9. Select the **Moneydance** instance from the list view and then drag it to the appropriate Departments instance (in this example, **Sales**). When your cursor turns into a paper clip (see Figure 6.16 on page 236), release the mouse button.

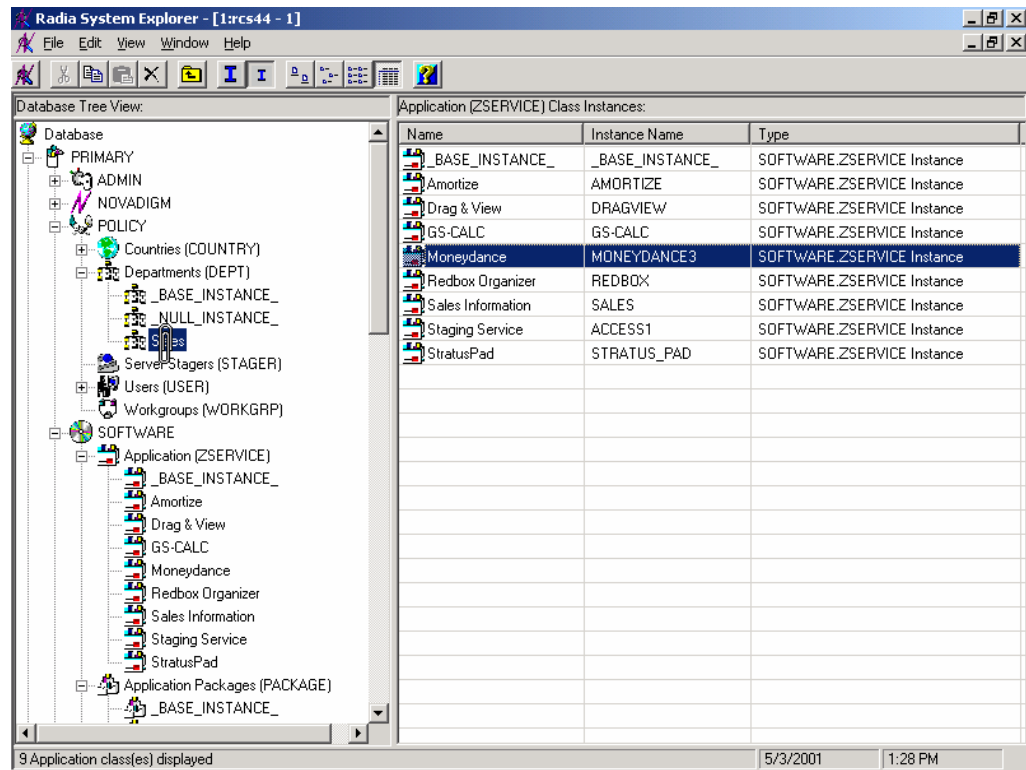


Figure 6.16 ~ Connect Moneydance to Sales.

10. The Select Connection Attribute dialog box opens.

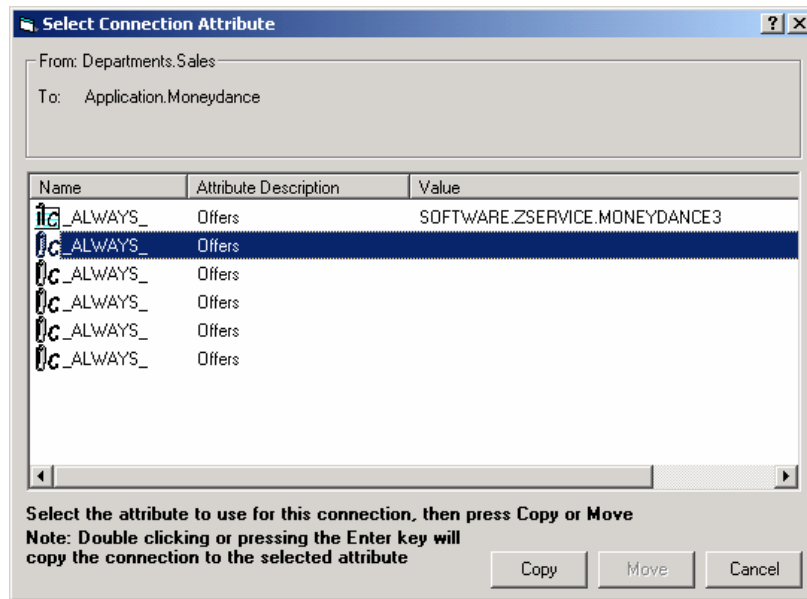


Figure 6.17 ~ Select Connection Attribute dialog box.

11. Click **Copy** to create the connection from **Departments.Sales** to **Application.Moneydance**.
12. Click **Yes** to confirm the connection.
13. Click **OK** when you receive the confirmation that "Sales has been connected to the Moneydance."

In the Radia System Explorer tree view (see Figure 6.18 on page 238), notice that Moneydance is listed under the Sales department instance, which indicates that the entire Sales department is now authorized to receive the Moneydance application.

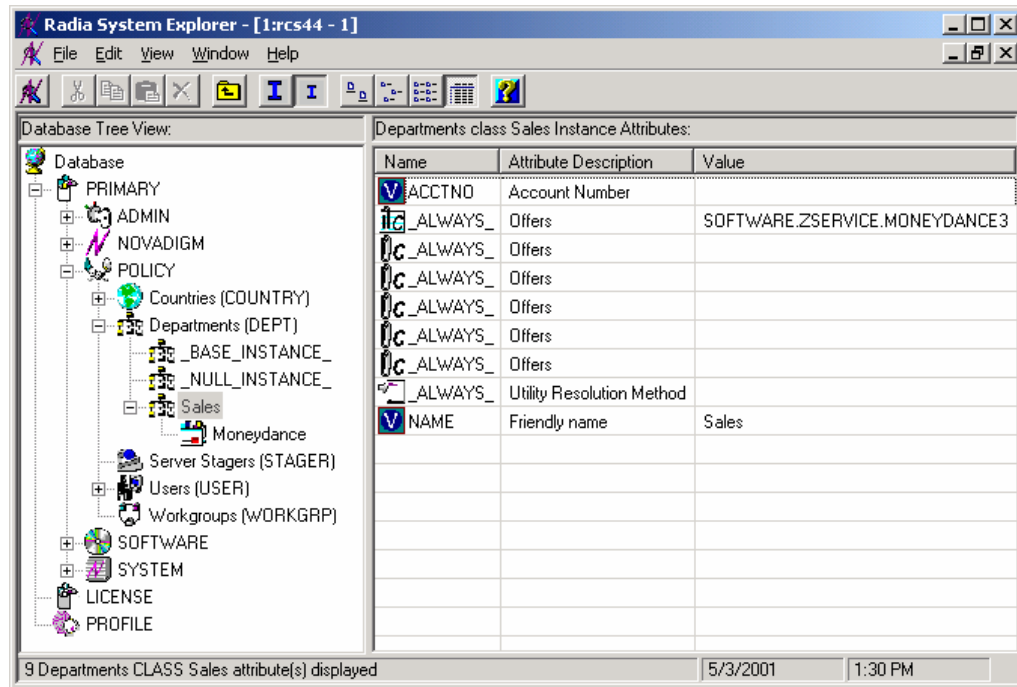


Figure 6.18 ~ The Moneydance application is authorized for the Sales department.

In Figure 6.19 on page 239, notice that Robin, listed in the Users (USER) class, is part of the Sales department. You can also see that the Moneydance application has been authorized for the entire Sales department. Therefore, as long as Robin is part of the Sales department, Radia will manage the Moneydance application on his computer.

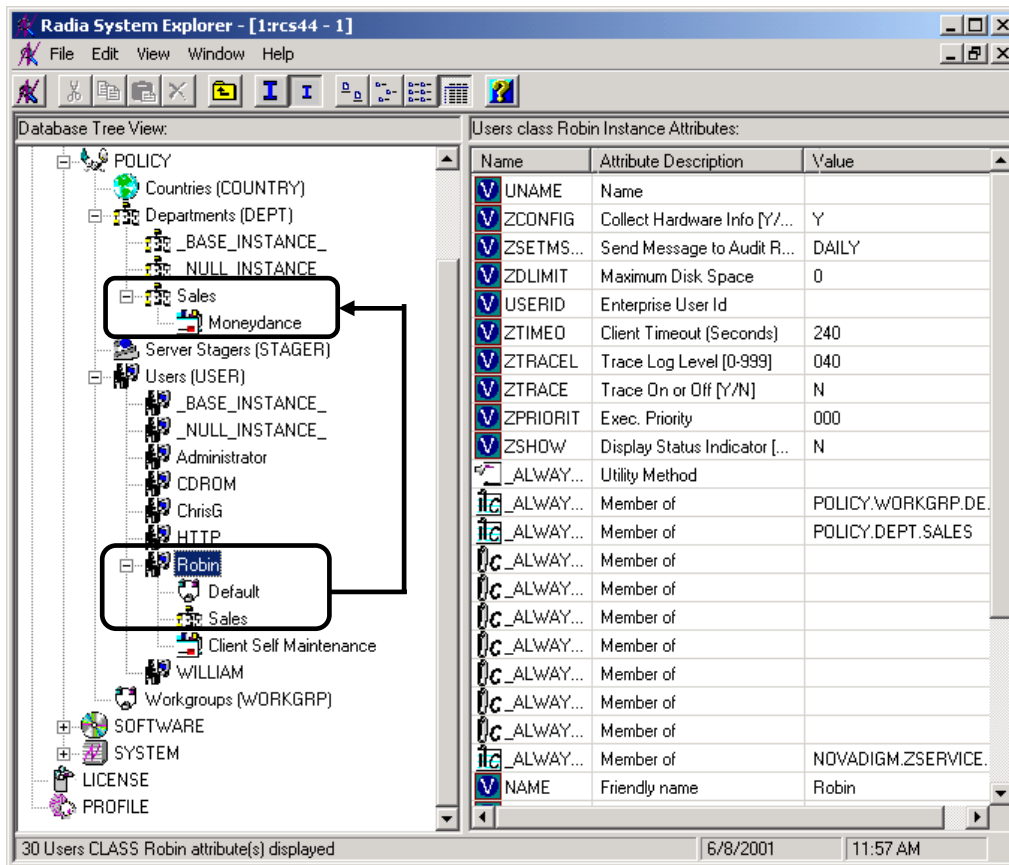


Figure 6.19 ~ Radia manages Moneydance for the Sales department.

You can see how using groups simplifies assigning applications to users. You can modify the applications that the individuals in the Sales department are authorized for, simply by manipulating the connections between the applications and the Sales department group. And, you can add users to the Sales department, quickly authorizing them for a series of applications. Or, you can remove users from the Sales department, taking away their authorization to applications.

Summary

- Radia can integrate with your existing policy information.
- The Radia POLICY domain organizes subscribers into logical groups.
- You can create new users and assign them to groups.
- Assign the services to be managed by Radia to the appropriate groups.



Deploying Applications

At the end of this chapter, you will:

- Understand the different deployment methods available in Radia and when to use each one.
- Be able to deploy a service at a predetermined time using the Scheduler.
- Know how to use the Notify function to update an application, remove an application, or send an e-mail message to a subscriber.
- Be familiar with key special case deployments.
- Be able to create and implement a Version Group.

This guide covers the *suggested* implementation for the Radia Application Manager. Although you will tailor this strategy to meet your organization's needs, it is recommended that you review this guide for a comprehensive understanding of the Radia Application Manager. This chapter covers the process of deploying applications.

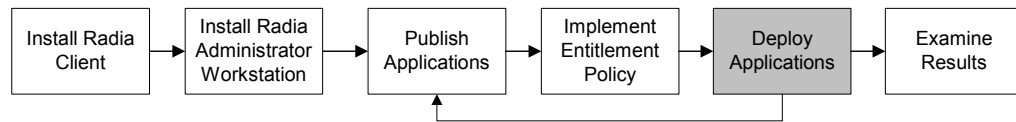


Figure 7.1 ~ Tasks completed in this guide.

Deploying Applications

After creating a service using the Radia System Explorer, and deciding which users or groups will receive the application, you are now ready to deploy the package to subscribers' computers. Refer to the *Publishing Applications and Content* chapter for information on creating a service, and refer to the *Implementing Entitlement Policy* chapter for information on assigning subscribers. Before deploying the service, choose a deployment method.

- **Scheduler**
Installs the service at a specific time or sets any command line to run at an interval.
- **Notify**
Forces one or more client computers to connect to the Radia Configuration Server to update or remove an application, or send an e-mail to subscribers of a particular service.
- **Version Groups**
Roll out a new version of an application to the subscribers who need it, and activate it upon delivery or at a predetermined time.

Note

The term *computer* is used to refer to a workstation or server.

In other systems management software, the definition of a *job* includes a set of instructions to be performed, a package consisting of the files or software, a target (or targets) for the job, and a schedule for carrying out the job. In Radia you publish a package of files or software, create a service from the package, assign the users to the service, and then choose your deployment method. This allows flexibility in creating your deployment schema for various needs in your enterprise.

Methods of Deployment

With the service created and the policies assigned, you are now ready to send the application to your subscribers. Decide which method to use by asking the following questions:

- Does the application need to be deployed at a certain time? If so, use the Radia Scheduler.
- Do you want to notify the users via e-mail when you are deploying the application? If so, use Notify.
- Do the users need to be notified of an application installation, update, or removal? If so, use Notify.
- Are there multiple versions of the application? If so, use Version Groups.

Normally, you deploy and activate an application at the same time. When you use the Radia Scheduler or Notify, both deployment and activation occur together. When you use version groups, you deploy the application and can set the activation for later.

Scheduling (TIMER)

The Radia Scheduler service, **radsched**, is installed with the Radia Application Manager. The Radia Scheduler allows you to deploy a service at a specific time. It wakes up once a minute to see if there are any scheduled items to execute.

Note

The **radsched** daemon may be started as a service on UNIX workstations. We recommend running the **radsched** daemon as root. Please consult your company's Radia system administrator for more information.

The information about when to deploy the service is stored in two places. First, the time and date are configured in the Scheduler (TIMER) instance in the SOFTWARE domain in the Radia Database on the Radia Configuration Server. The next time the client computer connects to the Radia Configuration Server, the ZTIMEQ object is created on the client computer, and the timer variables are transferred to the ZTIMEQ object. ZTIMEQ is explored in *Troubleshooting Timers* on page 267.

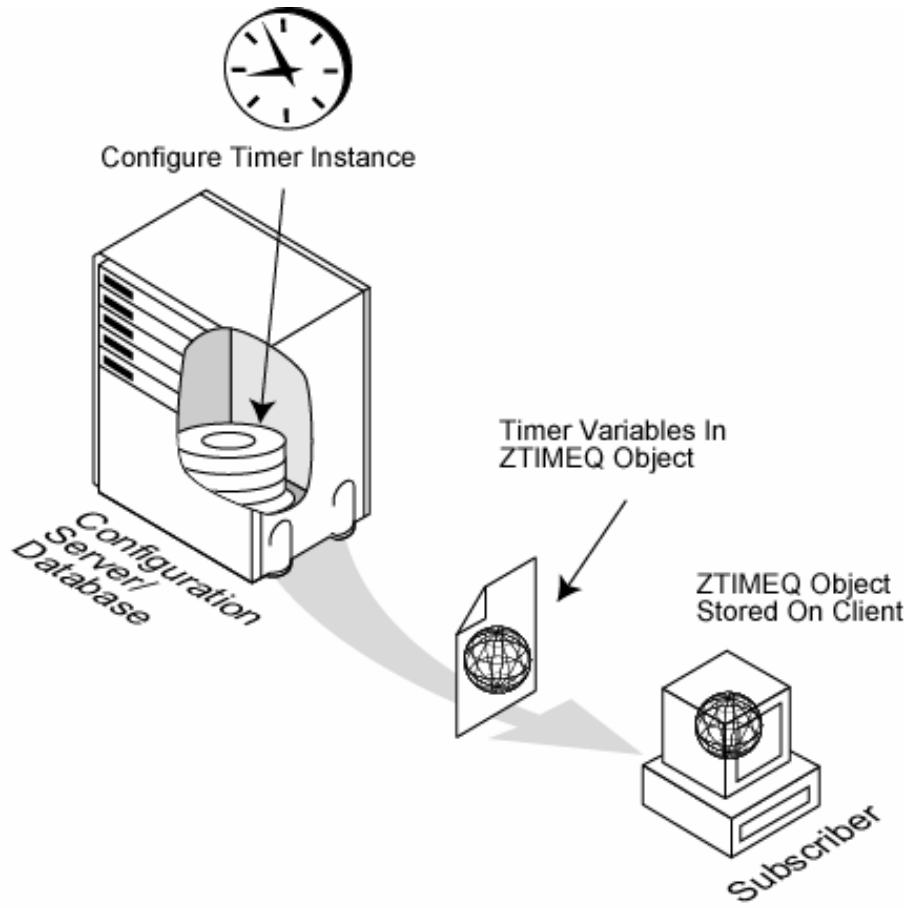


Figure 7.2 ~ Transferring the timer instance.

Configuring Timers in the Radia Database

Below is a summary of the steps needed to create a timer. Detailed procedures for creating a timer follow.

1. Create a Scheduling (TIMER) instance in the SOFTWARE domain.
2. Modify the Scheduling (TIMER) instance.
3. Connect the Scheduling (TIMER) instance to the appropriate Application (ZSERVICE) instance or Application Packages (PACKAGE) instance.

Note

The following instructions use the Radia System Explorer. The Radia System Explorer is currently available for 32-bit Windows platforms. For more information, see the *Radia System Explorer Guide*.

To create a new timer in the SOFTWARE domain

1. From the **Start** menu, select **Programs, Radia Administrator Workstation, Radia System Explorer**. The **Radia System Explorer Security Information** dialog box opens.

Note

The **User ID**, as shipped from HP, is **RAD_MAST**. No password is necessary. This may have been changed in your installation. Check with your Radia security administrator to obtain your own **User ID** and **Password**, if necessary.

2. If necessary, type a **User ID** and **Password**, and then click **OK**. The **Radia System Explorer** window opens.
3. Double-click **PRIMARY**.
4. Double-click **SOFTWARE**.
5. Right-click the **Scheduling (TIMER) class**.

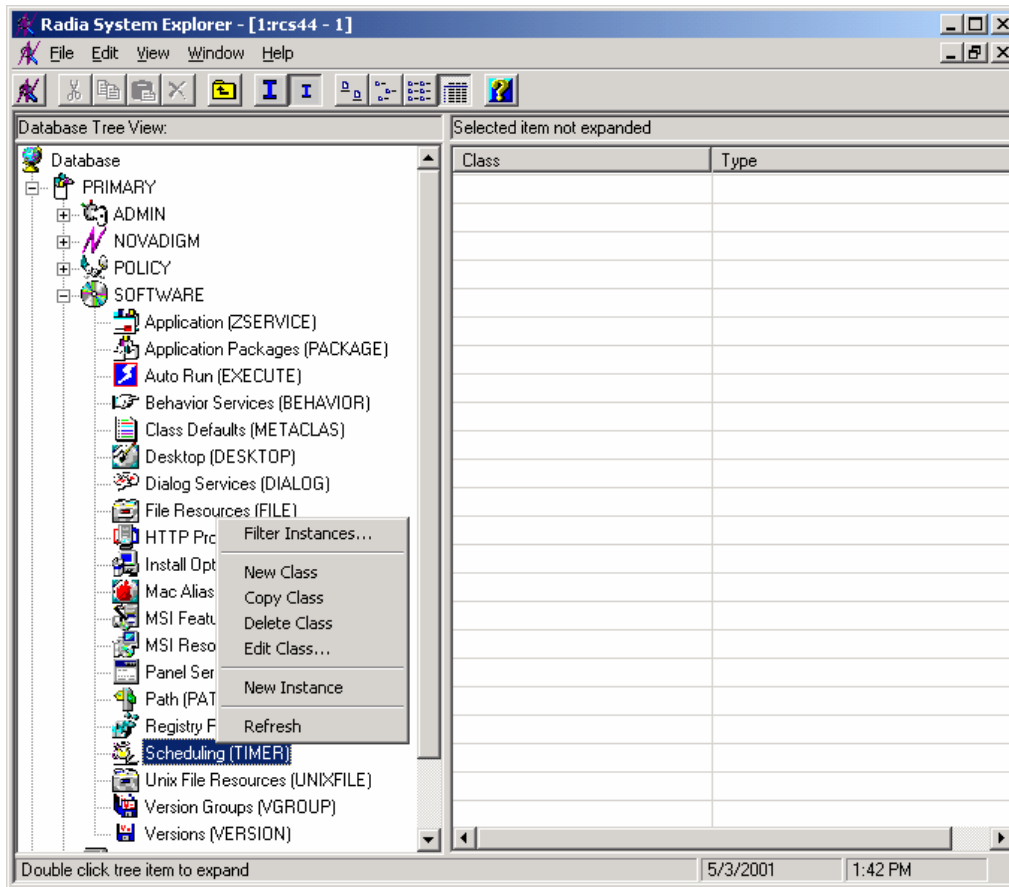


Figure 7.3 ~ Timer shortcut menu.

6. Select New Instance.

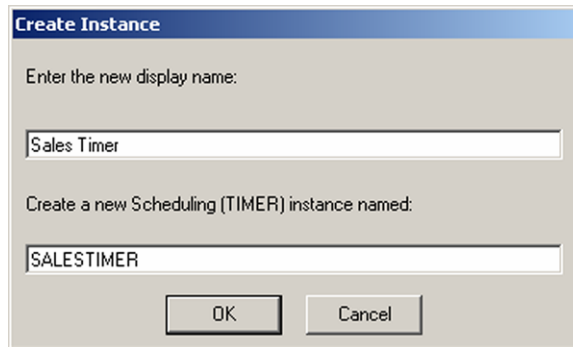


Figure 7.4 ~ Create Instance dialog box.

7. Type the name of the new timer instance. In this example, we created a timer instance for the Sales application called **Sales Timer**.
8. Click **OK**. The timer instance is created.

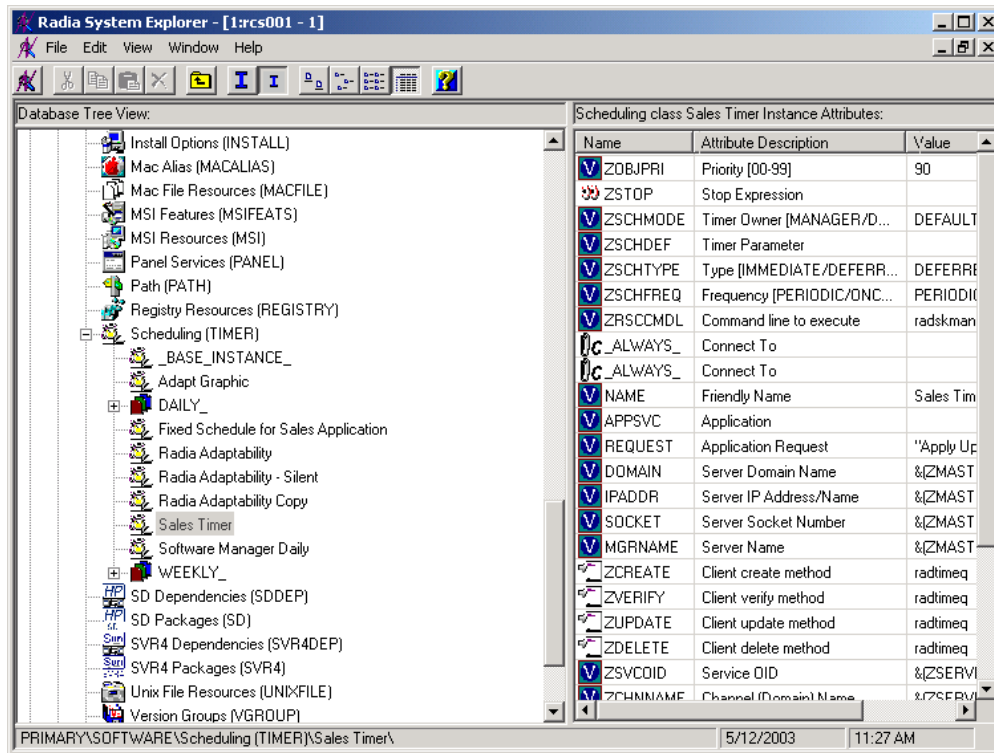


Figure 7.5 ~ Sales Timer created.

Modify the Timer

The Scheduling (TIMER) instance contains the information needed to execute the timer on the client computer. This information includes the date, time, frequency of expiration (ZSCHFREQ), as well as the command line to execute on the client computer when the timer expires (ZRSCCMDL). Modify the timer based on your enterprise's needs.

Note

The following instructions use the Radia System Explorer. The Radia System Explorer is currently available for 32-bit Windows platforms. For more information, see the *Radia System Explorer Guide*.

To view the timer instance

1. From the **Start** menu, select **Programs, Radia Administrator Workstation, Radia System Explorer**. The **Radia System Explorer Security Information** dialog box opens.

Note

The **User ID**, as shipped from HP, is **RAD_MAST**. No password is necessary. This may have been changed in your installation. Check with your Radia security administrator to obtain your own **User ID** and **Password**, if necessary.

2. If necessary, type a **User ID** and **Password**, and then click **OK**. The **Radia System Explorer** window opens.
3. Double-click **PRIMARY**.
4. Double-click **SOFTWARE**.
5. Double-click **Scheduling (TIMER)**.
6. Double-click the appropriate timer instance. In this example, we are viewing the **Sales Timer** instance.

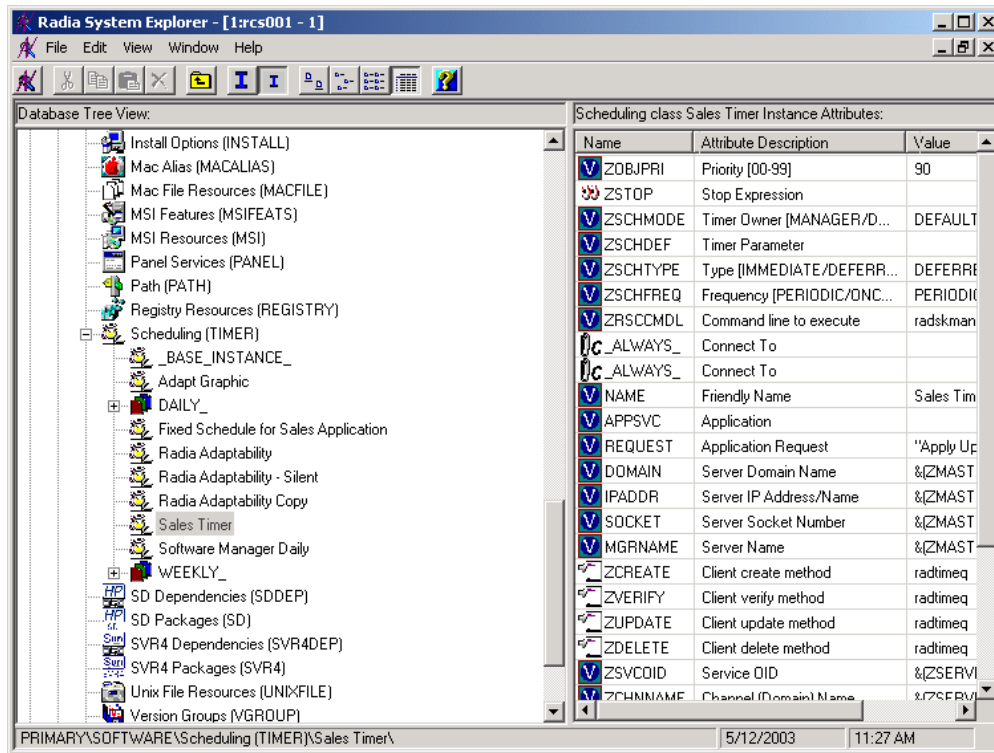


Figure 7.6 ~ Sales Timer instance.

7. Double-click the variable (in the list view) that you want to edit and modify as described in the following sections. See the procedure, *To edit a variable* on page 260 for information about how to modify the variables.

Table 7.1 below describes the variables of the Scheduling (TIMER) class. At a minimum, review or change the ZSCHDEF, ZSCHTYPE, ZSCHFREQ, and ZRSCCMDL variables.

Table 7.1 ~ Scheduling (TIMER) Variables to Modify

Variable	Usage
<code>_ALWAYS_</code>	Variable used to store connections to other instances.
NAME	The friendly name for this instance. The friendly name, typed into the Create Instance dialog box, appears in the tree view of Radia System Explorer.
ZNOPING	This variable controls automatic sensing of a network connection between the client computer and the Radia Configuration Server. If the ZNOPING variable's value is N , the Scheduler service will ping the Radia Configuration Server. If the ZNOPING variable value is Y , the Scheduler service does not ping the Radia Configuration Server. If a ping command is successful, the command in ZRSCCMDL will be executed, and the value of the PENDING variable in the client's ZTIMEQ object will be set to N . If the ping is not successful, no further processing of the timer's ZTIMEQ object instance is done during the current Scheduler service pop, and the PENDING variable value remains Y . In other words, an expired timer will continually evaluate whether communications with the Radia Configuration Server can be established, and only when communication can be established will the command line associated with the timer be executed. Once the command line is executed, the Scheduler service resumes normal evaluation of whether the timer has again expired, on the next Scheduler service pop. You will find this variable especially valuable for mobile users. TIMER variables PINGDLAY and PINGCNT can be used to adjust the settings at which pingging occurs.
PINGDLAY	Variable used to store the time (in milliseconds) between pings. The default is 2000.
PINGCNT	Variable used to store the number of ping attempts. The default is 3.
ZRSCCMDL	The command line that is executed on the subscriber's computer when the timer expires. To verify and update Radia-managed mandatory applications, use radskman . See <i>Specifying the Command Line (ZRSCCMDL)</i> on page 255 for more information.
ZSCHDEF	Indicates when and how often the timer expires. The syntax for this variable differs for each type of frequency. The value for <i>freq</i> can be DAILY, HOURLY, INTERVAL, NUMDAY, WEEKDAY, WEEKLY. See <i>Specifying When the Timer Expires (ZSCHDEF)</i> on page 254 for instructions on how to set ZSCHDEF.
ZSCHFREQ	Indicates whether the timer should expire once (ONCE), or repeatedly (PERIODIC) according to the frequency specified in ZSCHDEF. You can also specify a random interval for deployment (RANDOM). See <i>Randomizing Timer Deployments (ZSCHFREQ)</i> on page 254 for more information.

Table 7.1 ~ Scheduling (TIMER) Variables to Modify

Variable	Usage
ZSCHTYPE	<p><i>Used only when ZSCHFREQ = PERIODIC.</i></p> <p>Set ZSCHTYPE to DEFERRED to indicate that the first time an event is attempted to be launched, it will be deferred until the <i>next</i> scheduled time, no matter when the timer instance is evaluated. This was designed to handle the case of a daily 4am (non-peak) scheduled event that is sent to the client computer during the day. If it was not deferred, it would launch during the day instead of "waiting" until the next morning.</p> <p>Example 1:</p> <p>Suppose you create and deploy a timer with the ZSCHDEF = DAILY(&ZSYSDATE,4:00:00)</p> <p>If ZSCHTYPE = IMMEDIATE and it is:</p> <ul style="list-style-type: none"> • Before 4:00:00, the command in the instance will be executed the same day at 4:00:00 • After 4:00:00, the command in the instance will be executed immediately <p>If ZSCHTYPE = DEFERRED and it is:</p> <ul style="list-style-type: none"> • Before 4:00:00, the command in the instance will be executed the <i>next</i> day at 4:00:00 • After 4:00:00, the command in the instance will be executed the <i>next</i> day at 4:00:00 <p>Example 2:</p> <p>Suppose you create and deploy a timer with the ZSCHDEF = WEEKDAY(FRIDAY,4:00:00)</p> <p>If ZSCHTYPE = IMMEDIATE and it is:</p> <ul style="list-style-type: none"> • Not Friday or Friday and before 4:00:00, the command in the instance will be executed on Friday at 4:00:00 • Friday and after 4:00:00, the command in the instance will be executed immediately <p>If ZSCHTYPE = DEFERRED and it is:</p> <ul style="list-style-type: none"> • Not Friday or Friday and before 4:00:00, the command in the instance will be executed a week later on Friday at 4:00:00 • Friday and after 4:00:00, the command in the instance will be executed a week later on Friday at 4:00:00
ZSTOP	<p>Expressions evaluating to "true" in ZSTOP variables cause resolution of the instance to be skipped. If left blank, the instance is accepted, and resolution continues. This is useful if you want to set conditions on which of your subscribers receive the timer.</p>

Table 7.2 below describes variables whose values are determined in the base instance of TIMER and *should not be edited*.

Table 7.2 ~ Other Scheduling (TIMER) Variables

Variable	Usage
ZOBJPRI	<p>Indicates deployment priority of the ZTIMEQ object, relative to the other elements deployed during the Client Connect. Elements with numbers lower than the value of ZOBJPRI are deployed before this ZTIMEQ object. A value of 90 is inherited from the base instance.</p>
ZSCHMODE	<p>Specifies the timer owner. Leave as DEFAULT.</p>

Table 7.2 ~ Other Scheduling (TIMER) Variables

Variable	Usage
ZSVCOID	Specifies the object ID of the Application instance that this Scheduling instance is connected to. The value is inherited from the base instance.
ZCHNNAME	Specifies the name of the domain in the Radia Database where the Application instance to which this Scheduling instance is connected. The value is inherited from the base instance.
ZPRVNAME	The name of the Radia Configuration Server that the subscriber receiving this timer instance is connected to. The value is inherited from the base instance.
ZCREATE	The Scheduler Create method that runs on the client computer. The value is inherited from the base instance.
ZVERIFY	The Scheduler Verify method that runs on the client computer. The value is inherited from the base instance.
ZUPDATE	The Scheduler Update method that runs on the client computer. The value is inherited from the base instance.
ZDELETE	The Scheduler Delete method that runs on the client computer. The value is inherited from the base instance.
RUNSYNC	Specifies if synchronous timer execution will take place. The default value is Y.

Specifying When the Timer Expires (ZSCHDEF)

Decide when the timer needs to expire for the application. Table 7.3 below and the procedure *To edit a variable* on page 260 describe how to configure your timer to expire at the appropriate time or interval.

Table 7.3 ~ Syntax of ZSCHDEF Variable

Type	Syntax	Timer Expires
DAILY	DAILY (&ZSYSDATE, 24:00:00)	Daily at midnight on system's date
WEEKLY	WEEKLY (&ZSYSDATE, 01:00:00)	Every 7 days at 1:00 AM
WEEKDAY	WEEKDAY (<i>Name of Weekday*</i> , 01:00:00)	Every <i>Name of Weekday*</i> at 1:00 AM.
HOURLY	HOURLY (&ZSYSDATE, 08:41:00)	Hourly starting at 8:41 AM on system's date
INTERVAL	INTERVAL (&ZSYSDATE, 08:41:00, , 30)	Every 30 minutes starting at 8:41 AM based on system's date
NUMDAYS	NUMDAYS (20020803, 08:00:00, , 14)	Every 14 days starting on August 3, 2002 at 8:00 AM

* *Name of Weekday* is the name of a specific weekday, e.g. Monday.

Randomizing Timer Deployments (ZSCHFREQ)

Use the RANDOM value of the ZSCHFREQ variable to alleviate network congestion by spreading out the deployment of an application. RANDOM spreads out the deployment over a *period* of time. To indicate that a random time should be generated, set ZSCHFREQ to RANDOM. For

instructions, see the procedure *To edit a variable* on page 260. Randomization is based on a range of time set in ZSCHDEF. The time for expiration is generated based on this information and sent to the ZTIMEQ object on the client computer.

If you set ZSCHFREQ to RANDOM, then ZSCHDEF should take the following format:

```
ZSCHDEF =<frequency>(<date>, <from_time>, <to_time>, <limit>)
```

The syntax and parameters are described in Table 7.4 below and Table 7.5 below.

Table 7.4 ~ Syntax of ZSCHDEF when Using RANDOM

Example	Explanation
DAILY (20020229, 00:00:00, 05:00:00)	Runs daily any time between 12:00 AM and 5:00 AM
DAILY (20020228, 00:00:00, 05:00:00, 09:00:00)	Runs daily any time between 12:00 AM and 5:00 AM, and prevents this initiation after 9:00 AM.

Table 7.5 ~ ZSCHDEF Parameters when ZSCHFREQ is Set to RANDOM

Parameter	Description
<frequency>	Any of the supported frequency values, including DAILY, HOURLY, INTERVAL, NUMDAY, WEEKLY, and WEEKDAY.
<date>	Date when the event should be initiated.
<from_time>	Beginning time for randomization.
<to_time>	Ending time for randomization.
<limit>	The optional parameter that prevents initiation after this time (HH:MM:SS).

Specifying the Command Line (ZRSCMDL)

The Radia Desktop Manager, **radskman**, is designed to process mandatory applications. By checking the status of all services, **radskman** can see what actions need to take place. Applications may need to be updated, installed, or deleted. Use the **radskman** command line to:

- Check the status of all existing mandatory applications.
- Add new mandatory applications.
- Remove any mandatory applications that are no longer assigned to the subscriber.

Note

You may want to set up a timer associated with a dummy service that expires weekly to check for new mandatory applications and deletes any applications that the subscriber is no longer assigned to.

Below is an example of a command line that will update *all* mandatory services and perform client self-maintenance:

```
radskman cat=prompt,ulogon=n,mname=manager name,dname=SOFTWARE,ip=manager ip,port=manager port,uid=user ID,ind=n
```

Note

Consider creating a shell script that contains this command line so that you can try the different parameters. Save the file in the IDMSYS directory on the client computer. The executable **radskman** resides in IDMSYS.

Table 7.6 ~ radskman Parameters

Parameter	Required?	Default	Explanation
ask	No	N	Set ask = y to prompt the subscriber before restarting the computer. This allows subscribers to save their work and close applications before the computer restarts. Set ask = n to restart the computer without prompting the subscriber. This is useful for unattended computers.
autofix	No	Y	Set autofix = y to automatically repair any broken applications. Set autofix = n to prevent broken applications from being fixed.
cat	No	Y	Set cat = prompt to run self-maintenance, display the logon panel, and check the status of other services. Set cat = Y to simply check the status of services. Set cat = n to use the local machine catalog for resolving the user's service list.
context	No	N/A	Set context = m when installing an application in the machine context. If context = m then the following defaults are assumed: uid=\$MACHINE startdir=SYSTEM cat=prompt ulogon=n Set context = u when installing an application in the user context. If context = u then the following defaults are assumed: startdir=\$USER uid=\$USER cat=prompt ulogon=y Where \$USER and \$MACHINE represent the user running Radia and the machine name where Radia is run

Table 7.6 ~ radskman Parameters

Parameter	Required?	Default	Explanation
			respectively.
dname	Yes	N/A	The Radia Database domain name for the services. For example, dname=SOFTWARE.
hreboot	No	Y	Set hreboot = y to allow radskman to handle a computer restart, if it is required by the service. Note: This parameter replaces handle_reboot.
ind	No	N	Set ind=n to hide the status indicator for each service. Set ind=y to show the status indicator for each service.
IP	Yes	N/A	IP address of the Radia Configuration Server. For example, IP = 10.10.10.1 Note: If you do not specify the IP address, Radia uses the IP address specified in the ZMASTER object stored in IDMLIB.
local	No		Set this to Y to install resources for the user's services from the local client computer. Use this only with context = u. Usually, this is used with cat = m.
merge	No	N/A	Set the merge parameter equal to an object name to have all variables in that object included in the ZMASTER object. This will, in turn, send the variables to the Radia Database.
mname	Yes	N/A	Name of the Radia Configuration Server. For example, mname=RADSVR01.
port	No	N/A	Radia Configuration Server port. The default for this is 3464. Note: If you do not specify the port, Radia uses the port specified in the ZMASTER object stored in IDMLIB.
preload	No	N/A	Use this for staging server preload. See the <i>Radia Staging Server Guide</i> for more information. Specify the location of directory to copy the files to. If you do not need or want to specify a different data directory, setting preload= Y uses the IDMDATA directory specified in NVD.INI.
rtimeout	No	N/A	Specify number of seconds to wait if a reboot panel is requested for a service before rebooting the client computer. This will allow a subscriber time to save and close applications before a reboot.
sname	No	N/A	Specifies the service that you want to process. If you do not specify a service, then <i>all</i> mandatory services are processed.
sslmgr	No	N/A	Specifies the hostname or IP address of the Radia Configuration Server for secure socket layer. Note: To perform client self-maintenance over a secure channel (SSL), add the flag, ::sm , to the end of the SSL Manager IP address.
sslport	No	N/A	Specifies the port for SSL communications (normally, 443).
startdir	No	N/A	Specifies the IDMLIB starting directory.

Table 7.6 ~ radskman Parameters

Parameter	Required?	Default	Explanation
			<ul style="list-style-type: none"> Set startdir = \$MACHINE to use the computer name. Set startdir = \$USER to use the currently logged on subscriber. Set startdir = xxx to specify a custom starting directory. If xxx contains embedded spaces, enclose the entire name in double quotes. <p>Note: When installing an application in the machine context (context=m), the default value for startdir=SYSTEM.</p>
uid	No	N/A	<p>Identification used to identify the current session.</p> <ul style="list-style-type: none"> uid = \$MACHINE identifies the current session by the name of the computer. uid = \$USER identifies the current session by the name of the user currently logged on. uid = custom is used to identify the current session by a custom value that you specify. <p>Note: If you do not specify the user ID, Radia uses the LOCALUID specified in the ZMASTER object stored in IDMLIB.</p>
ulogon	No	Y	<p><i>Only used if cat = prompt.</i></p> <p>Set ulogon = n to hide the logon panel.</p>

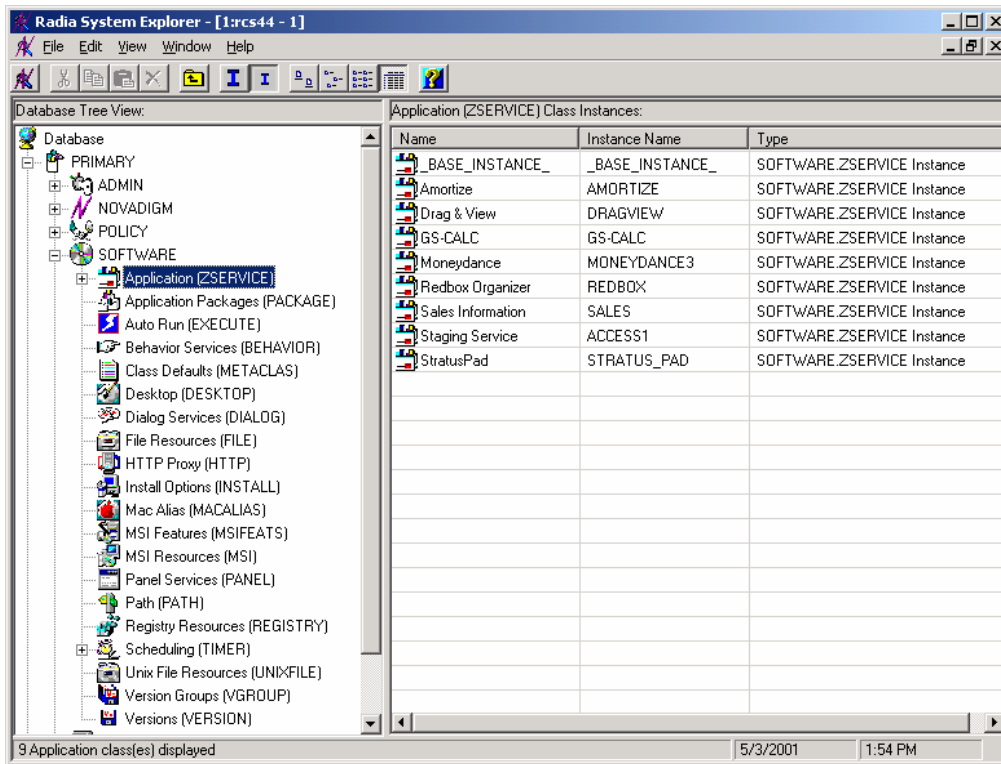


Figure 7.7 ~ Application instance names.

For information about other parameters for **radskman**, see the HP OpenView web site.

Editing Timer Variables

Once you have decided on your schedule, and determined the appropriate syntax, use the following procedure to edit the variables.

To edit a variable

1. Double-click the appropriate instance in the tree view; in this case, the Timer instance that you want to modify.
2. Double-click the variable in the list view. In this example, we are modifying ZSCHDEF.
3. Modify the variable that you want to change. In this example, we edited the ZSCHDEF variable for the Sales Timer instance to expire once a week at 11:00 PM.
4. Select the next variable to modify, and type or select the new value.

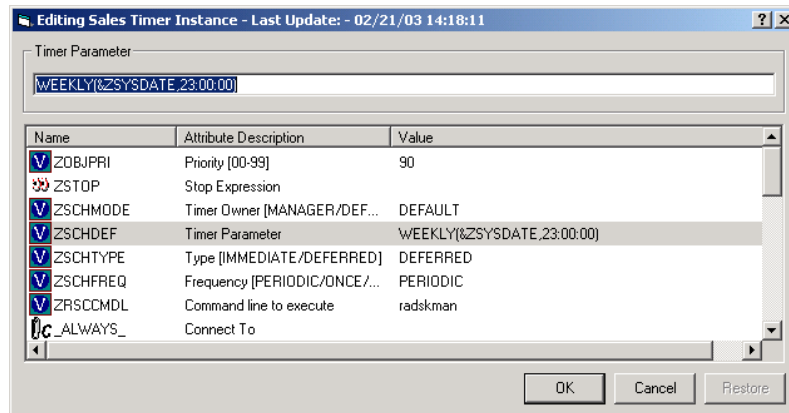


Figure 7.8 ~ Editing instance dialog box.

5. Click **OK** when you are finished editing all variables.
6. Click **Yes** to confirm the changes.

Once you have completed editing the timer instance, the next step is to connect the timer to an appropriate service.

Connecting the Timer to a Service

To deploy a timer to a subscriber, the Scheduling (TIMER) instance must be connected to an instance of the Application (ZSERVICE) class. To do this, you can use the Radia System Explorer to drag the Scheduling instance to the Application instance, use the **Connections** dialog box, or type the connection information manually. To avoid error, we recommend that you either drag the instance or use the **Show Connections** dialog box. Each subscriber that receives the service, to which the timer is connected, will receive the Scheduling (TIMER) instance the next time his Radia Client connects to the Radia Configuration Server.

Note

The following instructions use the Radia System Explorer. The Radia System Explorer is currently available for 32-bit Windows platforms. For more information, see the *Radia System Explorer Guide*.

To drag a connection

1. From the **Start** menu, select **Programs, Radia Administrator Workstation, Radia System Explorer**. The **Radia System Explorer Security Information** dialog box opens.

Note

The **User ID**, as shipped from HP, is **RAD_MAST**. No password is necessary. This may have been changed in your installation. Check with your Radia security administrator to obtain your own **User ID** and **Password**, if necessary.

2. If necessary, type a **User ID** and **Password**, and then click **OK**. The **Radia System Explorer** window opens.
3. Double-click **PRIMARY**.
4. Double-click **SOFTWARE**.
5. Double-click **Application (ZSERVICE)**.
6. Double-click **Scheduler (TIMER)**.
7. Click on the appropriate Scheduling (TIMER) instance in the tree view, such as Sales Timer, to select it.
8. Drag the Sales Timer Scheduling (TIMER) instance to the Sales Information Application (ZSERVICE) instance in the tree view.

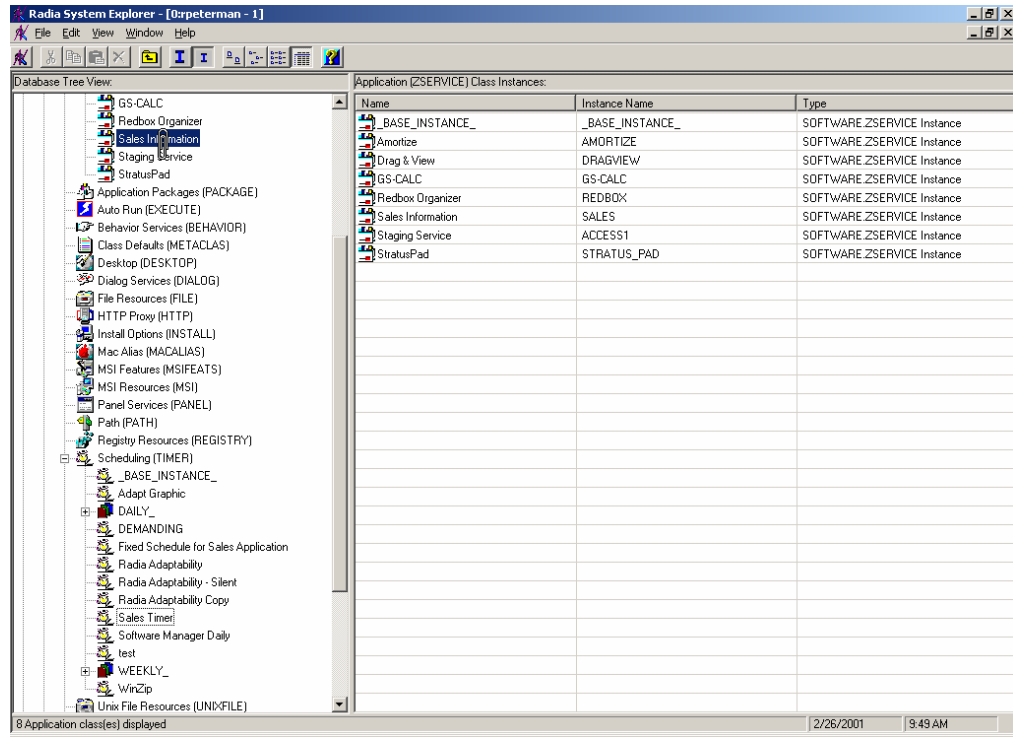


Figure 7.9 ~ Connecting a timer to an application instance.

9. Release the mouse button.

The **Select Connection Attribute** dialog box opens.

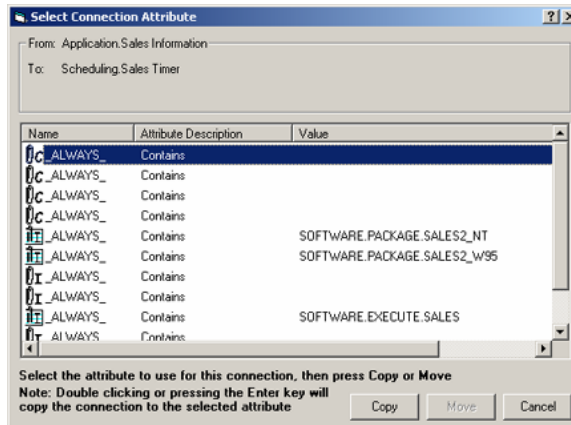


Figure 7.10 ~ Select Connection Attribute for Sales Information.

The first available connection attribute in the selected instance is highlighted.

10. Click **Copy** to accept this connection attribute.
11. Click **Yes** if you are asked to confirm the connection.
12. Click **OK** when the **Instance Connection** message box appears telling you that Radia has created the connection. Connected instances are listed below the instance containing the connections.

To make a connection using Show Connections

1. In the tree view of the Radia System Explorer, right-click the Application instance that you want to connect a timer to. A shortcut menu opens.

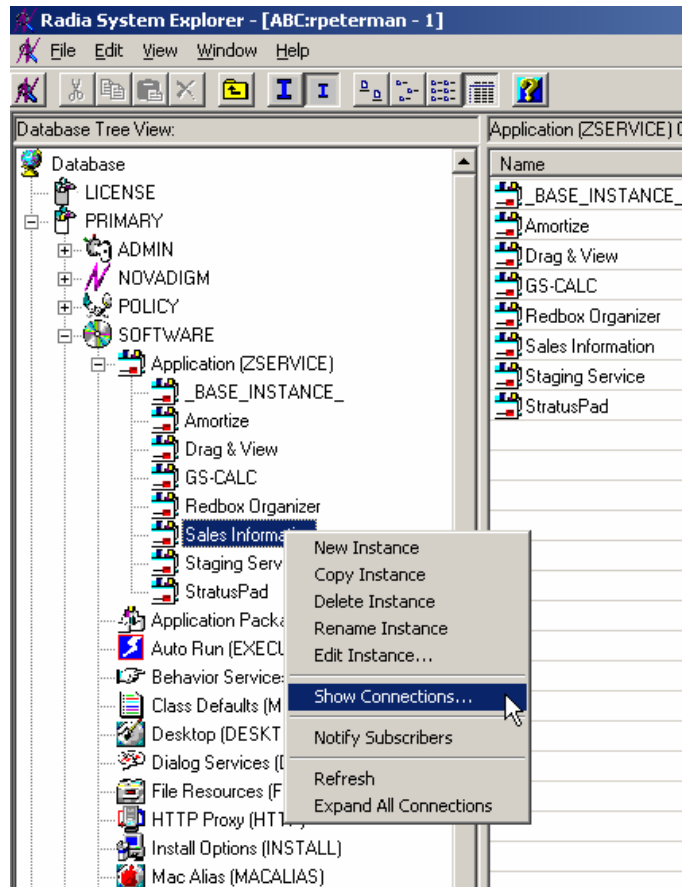


Figure 7.11 ~ Application (ZSERVICE) shortcut menu.

2. Select **Show Connections**. The **Connections** dialog box opens, listing the classes that the instance can connect to.

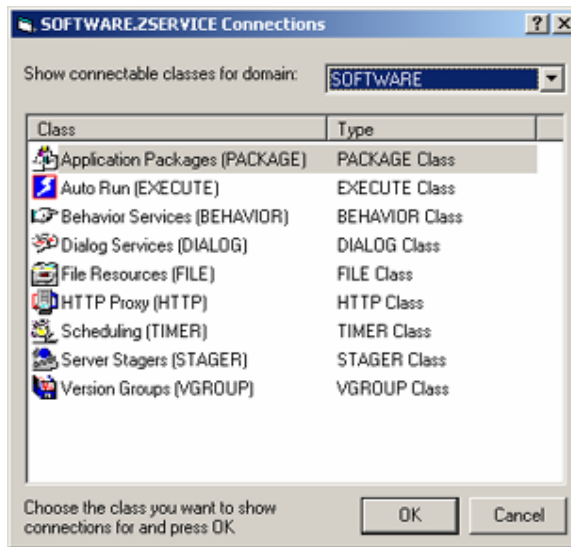


Figure 7.12 ~ Show Connections dialog box.

The dialog box defaults to listing classes in the same domain as the selected instance. To connect to a class in a different domain, use the **Show connectable classes for domain** drop-down list to select from the available domains. The list of classes that you are allowed to connect to from that domain appears. If there are no connectable classes in the selected domain, a message appears. Click **OK** to close the message.

The Radia Database contains rules for which classes can be connected. See *Maintaining Connection Rules* in the *Radia System Explorer Help* for more information.

3. Double-click the **Scheduling (TIMER)** class. The instances of the selected class appear in the list view.
4. Click on the appropriate Scheduling (TIMER) instance in the list view, such as Sales Timer, to select it.
5. Drag the **Sales Timer** Scheduling (TIMER) instance to the only Application (ZSERVICE) instance in the tree view.

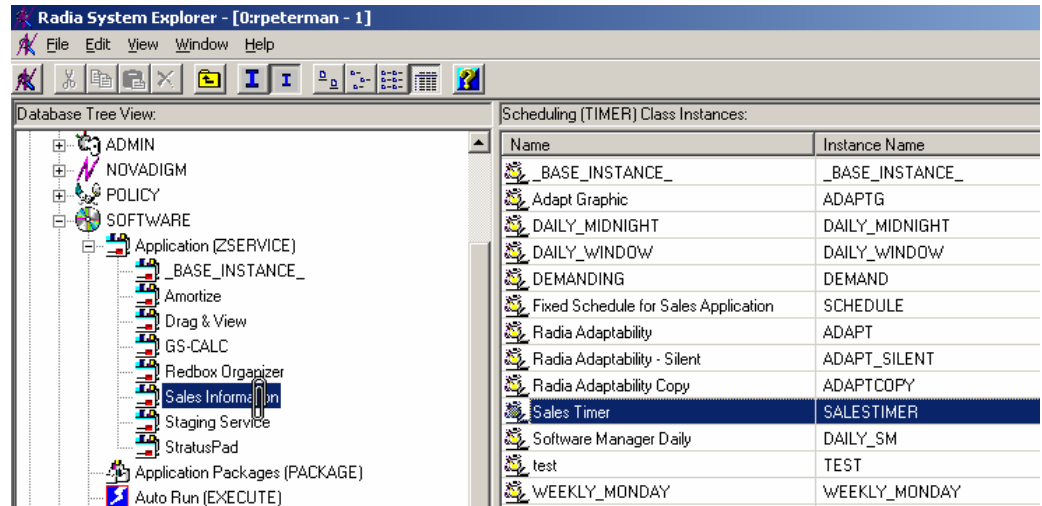


Figure 7.13 ~ Connect timer to Application instance using Connection dialog box.

6. Release the mouse button. The **Select Connection Attribute** dialog box opens. The first available connection attribute is selected.
7. Click **Copy** to accept this connection attribute.
8. Click **Yes** to confirm that you want to create this connection.
9. Click **OK** when the **Instance Connection** message box appears telling you that Radia has created the connection. Connected instances are listed below the instance containing the connections.

Troubleshooting Timers

The first time a client computer connects to the Radia Configuration Server after the timer is created, the timer is transferred to the client computer in the ZTIMEQ object. Each Scheduling (TIMER) instance is represented by one *instance* in the ZTIMEQ object located in the IDMR00T directory on the client computer. If two services have timer instances associated with them, then there will be two instances in the ZTIMEQ object. The IDMR00T directory is the directory identified by the IDMR00T=*path* statement in the [NOVAEDM] section of the **.edmprof** file located in the home directory of the UNIX user ID who installed the Radia Application Manager. The path of IDMR00T defaults to **/opt/Novadigm/lib**.

Examine the ZTIMEQ object on the client computer to see how changing different variables affects the timer. Use the Radia Client Explorer to view or modify the ZTIMEQ object.

To view the ZTIMEQ object on the client computer

Note to Reliant Users

Currently, the Radia Client Explorer is not available for Reliant operating systems.

1. Change your current working directory to the directory containing the file **radobjed** (located in the **/opt/Novadigm** directory by default) and type **./radobjed**.
2. Double-click the **ZTIMEQ** object.

Object	Paths
Objects	Date Time Size
data	[DIR]
root	[DIR]
SYSTEM	[DIR]
CONNECT	05/09/2003 09:56:21AM 4624
DMSYNC	05/09/2003 09:56:21AM 4624
LEXICON	05/09/2003 09:56:41AM 5136
LICENSE	05/12/2003 11:08:40AM 5136
PACKAGE	05/09/2003 10:39:15AM 5136
PATH	05/09/2003 10:39:10AM 5136
PCLSIGNO	05/09/2003 09:56:21AM 8208
PREFACE	05/12/2003 11:08:24AM 5136
RADPARMS	05/12/2003 11:08:24AM 10256
RADSETUP	05/12/2003 11:08:41AM 8208
RADUSERS	05/12/2003 11:08:41AM 5136
SYNOPSIS	05/12/2003 11:08:39AM 8208
ZADMIN	05/09/2003 10:10:12AM 4624
ZERROLD	05/12/2003 11:08:24AM 5136
ZLOCAL	05/12/2003 11:08:41AM 5136
ZMASTER	05/12/2003 11:08:41AM 4624
ZOSYVALUE	05/09/2003 10:10:13AM 10256
ZPAKSESS	05/09/2003 10:41:45AM 5136
ZPROMOTE	05/09/2003 10:41:11AM 73744
ZPUBDEF	05/09/2003 10:36:40AM 5136
ZPUBNEH	05/09/2003 10:39:09AM 77840
ZTIMEQ	05/12/2003 11:08:32AM 6160

Figure 7.14 ~ Radia Client Explorer objects.

The following is an example of an instance of the ZTIMEQ object.

The screenshot shows a window titled "radobjed - ZTIMEQ" with tabs for "Object", "Variable", "Heap", and "Options". The "Variable" tab is active, displaying a table of variables. Below the table is a "Heap Information" section with a page indicator showing "1 of 1".

Variable	Length	Value
MGRNAME	005	RADIA
NAME	000	
PINGCNT	001	3
PINGCLAY	004	2000
REQUEST	015	"Apply Updates"
RUNSYNC	001	Y
SOCKET	004	3464
ZCHNNAME	008	SOFTWARE
ZCREATE	008	radtimeq
ZDELETE	008	radtimeq
ZMODE	006	UPDATE
ZNOPING	001	Y
ZOBJCID	012	D0017C0C9251
ZOBJCLAS	005	TIMER
ZOBJCNUM	008	00000000
ZOBJCRC	008	00000000
ZOBJDATE	008	20030512
ZOBJDOHN	008	SOFTWARE

Heap Information

1 of 1

Figure 7.15 ~ An instance of the ZTIMEQ object.

Testing Timers

Modify the ZRSCCMDL, ZSCHDEF, ZSCHFREQ, and ZSCHTYPE fields, and see what happens to test different timers. To edit a field, double-click it, and then change the field's value.

In a testing situation aimed at determining whether the timer expires, you can change ZRSCCMDL to run any executable. When the timer expires, the program executes, confirming that the Scheduler did expire.

Timer Logs

Timer events can be tracked in three logs, stored in the IDMLOG directory. The IDMLOG directory is identified by the IDMLOG=*path* line in the [NOVAEDM] section of the **.edmprof** file, located in the home directory of the UNIX user ID who installed the Radia Application Manager. Table 7.7 on page 270 identifies and describes these logs.

Table 7.7 ~ Logs Used to Troubleshoot Scheduled Applications

Log File	Usage
connect.log	Lists the activities performed by the client, including any invocation of the client method <code>radtimeq</code> used to create, update and remove scheduled events.
radshed.log	Lists the results of the most recent Scheduler expiration. The executable radshed runs in the background. Once a minute it wakes up and examines the ZTIMEQ client object to see if a timer has expired. This log only retains information from the most recent expiration.
radshist.log	Lists all of the programs dispatched as a result of a timer instance expiring. It reflects all activity since radshed was started last.

Notify

Use Radia Notify to force one or more client computers to connect to the Radia Configuration Server, and update or remove an application. Each client computer runs the Radia Notify service in the background. This service waits to receive a Notify message from the Radia Configuration Server. When a notification is received, Radia Notify causes the client computer to connect to the Radia Configuration Server and perform the action initiated by the Notify operation. Radia Notify can also send e-mail notification to client computers, based upon the applications Radia manages for them.

Notify communicates with client computers that are members of an *audience list*. A client computer is added to the audience list when Radia installs an application to that computer.

Requirements to Use Notify

There are five prerequisites to use Notify:

- The subscriber must have connected to the Radia Configuration Server prior to the notification. In order for Notify to work, all the necessary information must have been written to the PROFILE file during the last connection to the Radia Configuration Server, because the network address is searched for in the PROFILE file.

Caution

Notify is designed to notify only subscribers whose information is in the PROFILE file in the Radia Database.

- The subscriber must already have installed the application using Radia in order to appear in the audience list *for the specified application*.
- The Radia Notify Service, **radexecd**, must be running on the client computer.

- If you choose to use e-mail to notify subscribers, then be sure that the e-mail address for the subscriber is in the EMAIL variable of the USER instance in the POLICY domain, USER class.
- The Radia Configuration Server must be properly configured for Notify. The relevant lines are written to the Radia Configuration Server Settings file during the Radia Configuration Server installation. Figure 7.16 below shows the appropriate values for the settings in the Radia Configuration Server Settings file, **.edmprof** (EDMPROF.DAT for Windows NT, 2000, 9x).

Note

We recommend running **radexecd** as root.

```
[MGR_ATTACH_LIST]
ATTACH_LIST_SLOTS = 15
RESTART_LIMIT = 7
VERIFY_INTERVAL = 5
CMD_LINE=(zutilmgr) RESTART=YES
CMD_LINE=(zrexmgr) RESTART=YES
CMD_LINE=(ztcpmgr PORT=3464, NAME=tcpmgr_3464) RESTART=YES
CMD_LINE=(znfytmgr NAME=NotifyManager) RESTART=YES
CMD_LINE=(zrtrymgr) RESTART=YES
```

Line needed for Notify Manager ←

Figure 7.16 ~ Radia Configuration Server Settings file for Notify.

Using Notify

Note

The following instructions use the Radia System Explorer. The Radia System Explorer is currently available for 32-bit Windows platforms. For more information, see the *Radia System Explorer Guide*.

The Radia System Explorer offers two ways to initiate a Notify action:

- Drag a POLICY (USER, DEPT, WORKGRP) class instance to an Application (ZSERVICE) instance.
- Select **Notify Subscribers** from the shortcut menu.

Once the Notify is initiated, the Radia System Explorer follows the same notification process, regardless of which method you choose.

To initiate a Notify by dragging the policy instance

1. Select a Policy instance (Workgroup, Department, or User).
2. Drag it to an Application (ZSERVICE) instance.

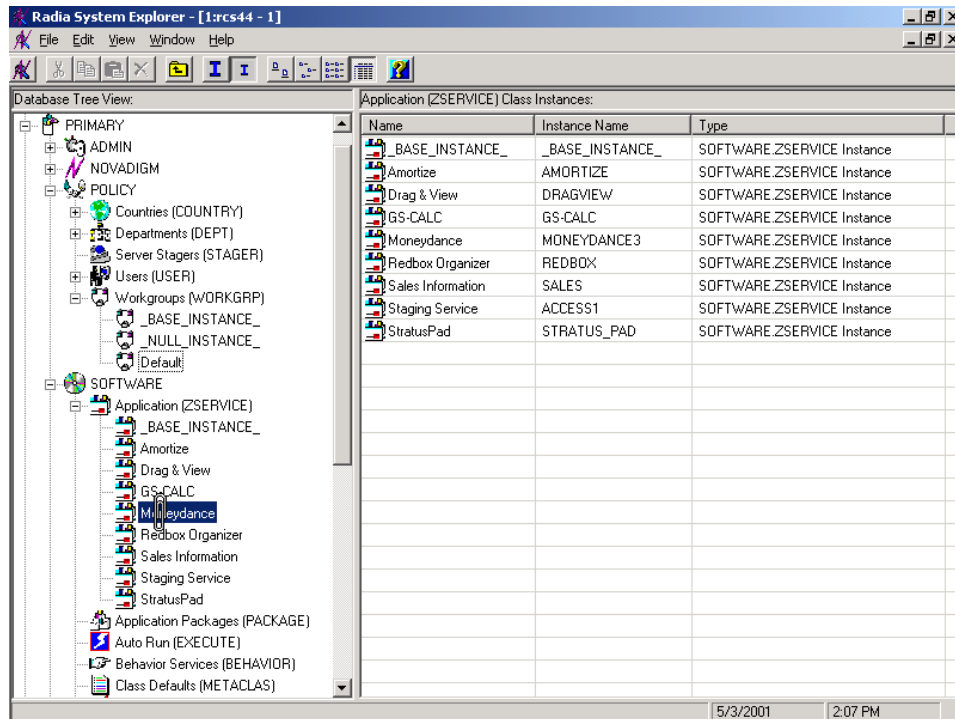


Figure 7.17 ~ Connecting a Policy to a ZSERVICE for Notify.

3. Release the mouse button. The Radia Notify Manager opens with an audience list.

To initiate a menu-based Notify

1. Right-click the Application (ZSERVICE) instance. A shortcut menu opens.

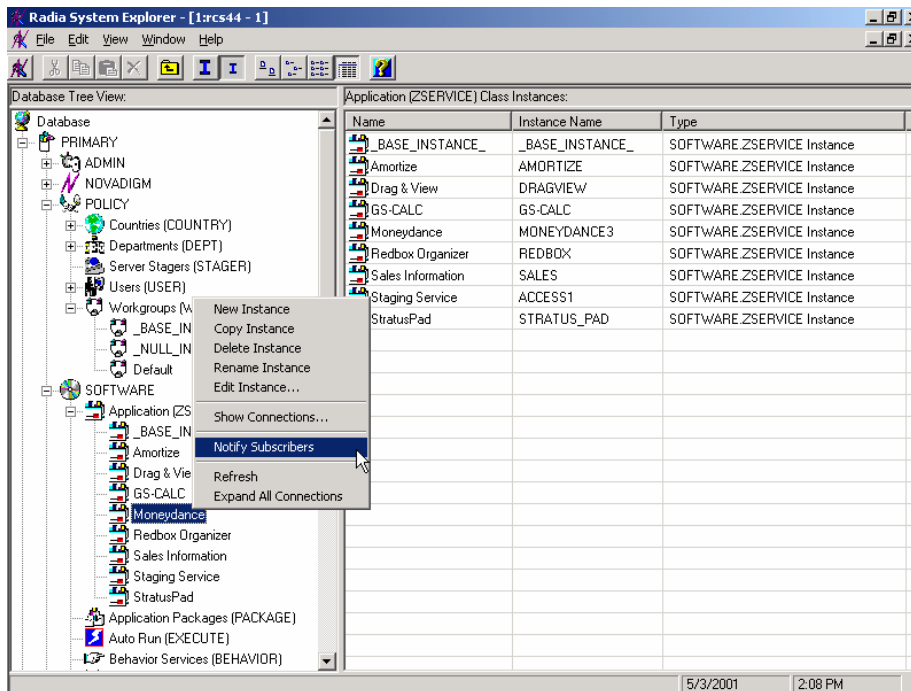


Figure 7.18 ~ Application (ZSERVICE) instance shortcut menu.

2. Select **Notify Subscribers**. The **Notify Start** message box opens.
3. Click **Yes** to create an audience list.

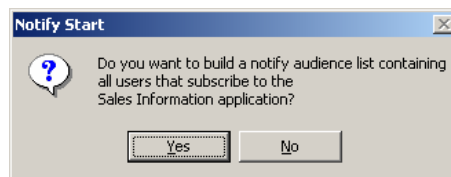


Figure 7.19 ~ Notify Start message box.

4. The **Radia Notify Manager** opens.

Notifying Subscribers

Whichever method you used to access the Radia Notify Manager, the remainder of the steps are the same. When using a menu-based Notify, you will be prompted to confirm that you want to create an audience list.

To notify subscribers

1. Click **Yes** to continue.

OR

Click **No** to cancel the Notify.

The Notify action retrieves the set of the subscribers from the POLICY domain. If the selected application does not have any subscribers, the following message opens.

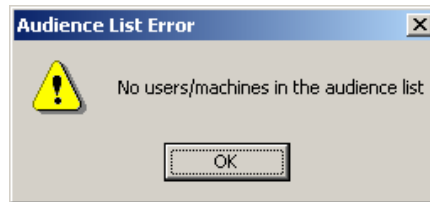


Figure 7.20 ~ Alert message when no users are in the audience list.

2. When the Radia Notify Manager opens, it contains an audience list with the subscribers currently subscribed to the application. A dialog box similar to the following opens.

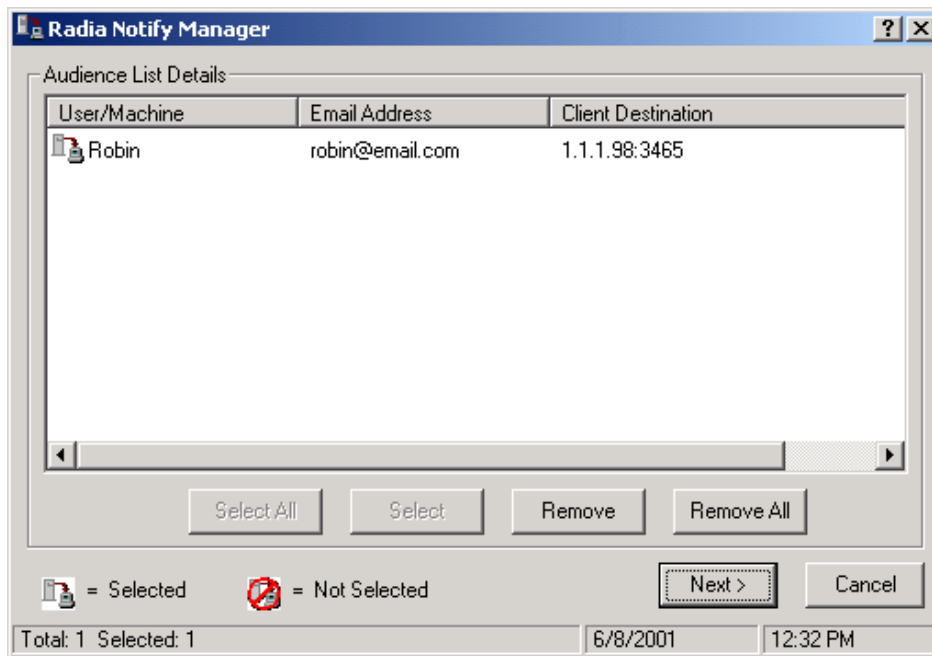


Figure 7.21 ~ Notify audience list.

To notify the *entire* audience, click **Select All**. This is the default when the audience list first opens.

To *modify* the Notify audience, select the rows associated with the clients and click **Select** or **Remove**. You may want to click the **Remove All** button to clear all client computers in the audience list before using the **Select** button.

The symbols to the left of the subscriber indicate who has been selected. The total number of client computers in the audience list and the number of client computers selected are displayed at the bottom left of the dialog box.

3. Click **Next** when you have finished selecting client computers in the Notify audience list.
4. Select the type of Notify action you want. The selected action will be taken for all of the selected members of the audience list.

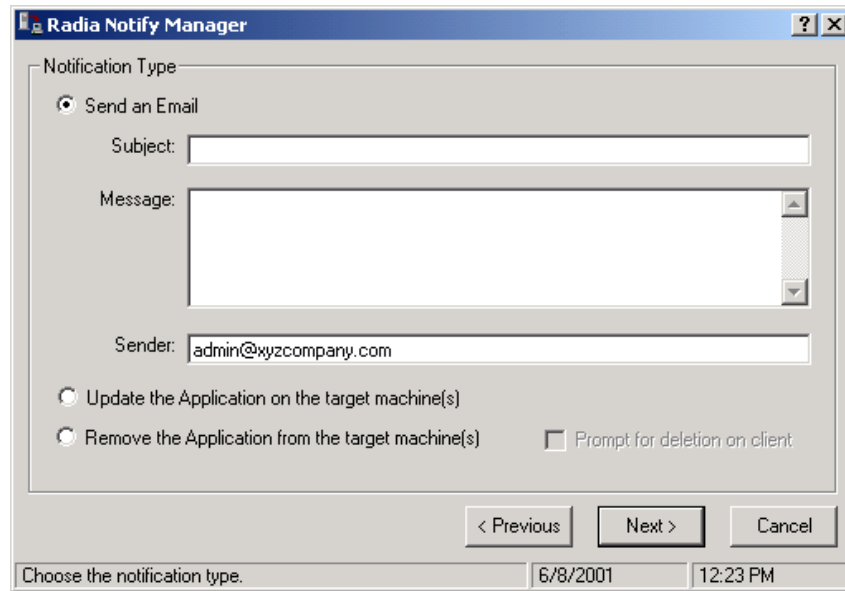


Figure 7.22 ~ Radia Notify Manager Notification Types.

- **Send an Email**
Select this option to inform subscribers of an application's status or optional availability. The subscriber's e-mail attribute in the user instance *must* contain a valid entry. If you select **Send an Email**, fill in the fields, as shown in Figure 7.23 on page 277.

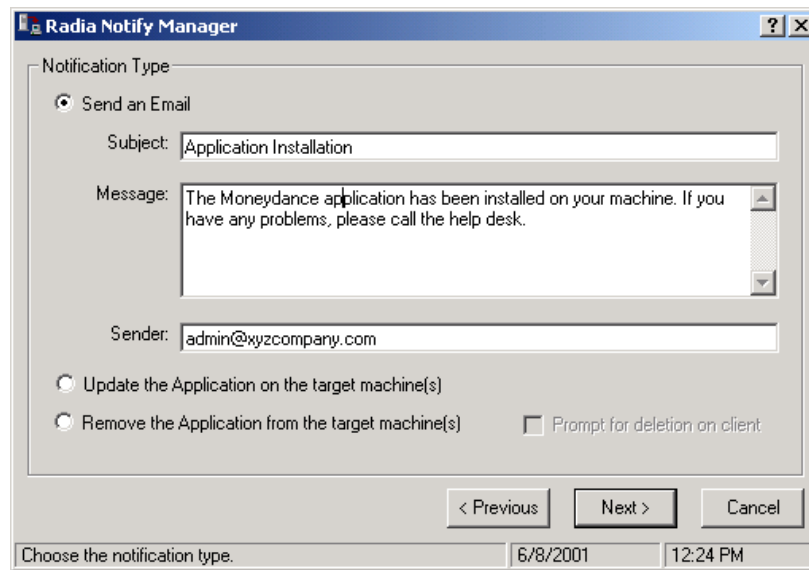


Figure 7.23 ~ Notification e-mail.

- Update the Application on the target machine(s)**
 Select this option to install updates or new versions of an application. To update the application on selected client computers in the audience list, click **Update the Application on the target machine(s)**.
- Remove the Application on the target machine(s)**
 Select this option to remove an application from the specified subscribers. To remove the application from the selected client computers in the audience list, click **Remove the Application from the target machine(s)**. When you select this option, the **Prompt for deletion on client** check box becomes enabled. Normally, Notify will remove the application from the selected client computers in the audience list without requesting permission from the client. This allows unattended application removal from client computers.

To require the subscriber to give permission to remove an application, select the **Prompt for deletion on client** check box. When the notification is received on the client computer, a dialog box will open on the client computer requesting permission to remove the application. If the subscriber agrees, Radia removes the application. If the subscriber denies permission, the application is left intact on the subscriber's computer.

- When you have finished selecting the notification type, click **Next** to continue. The **Notification Details** dialog box opens.

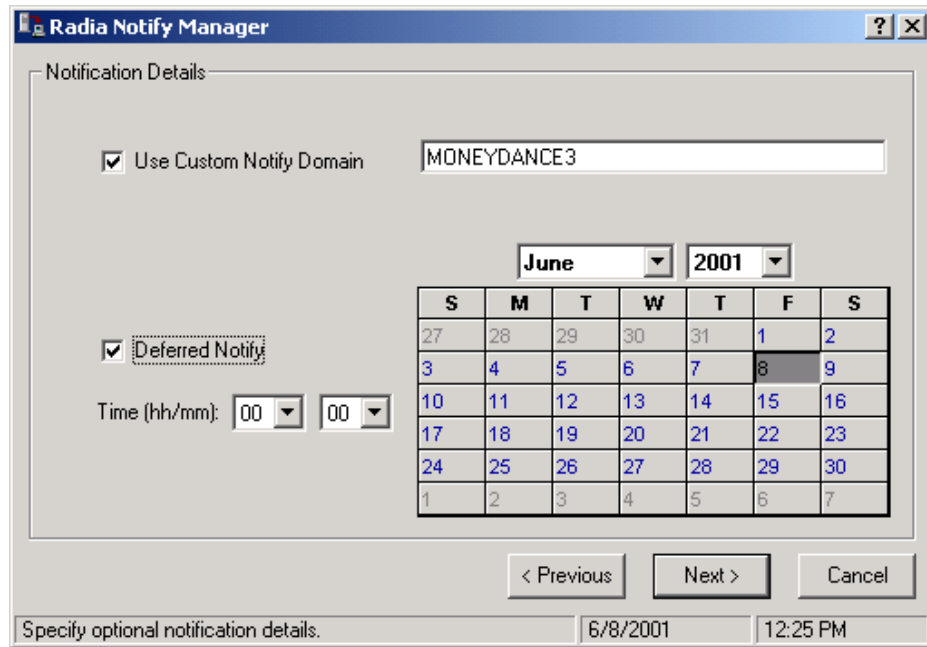


Figure 7.24 ~ Notification Details dialog box.

The **Notification Details** dialog box allows you to create a name for your NOTIFY domain, and schedule the Notify function. By default, the Radia Configuration Server schedules the Notify to occur immediately, and generates an object in the NOTIFY file using the date and time of the Notify action. The format of the object name is YYYY_MM_DD_HH_MM_SS.

6. Click **Next**.

The **Notification Summary** dialog box opens.

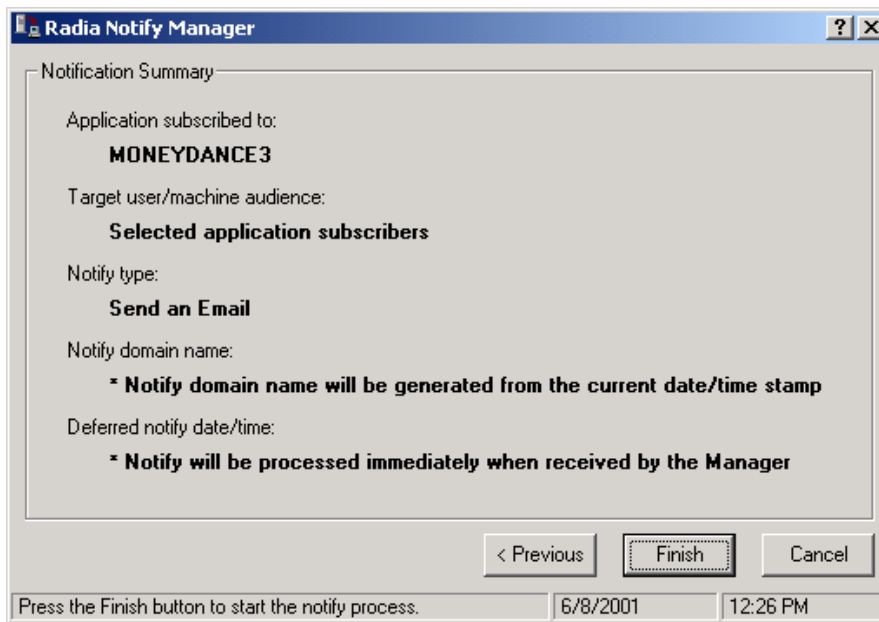


Figure 7.25 ~ Notification Summary dialog box.

7. Click **Finish** to begin the Notify. A message indicates that Notify has been initiated.

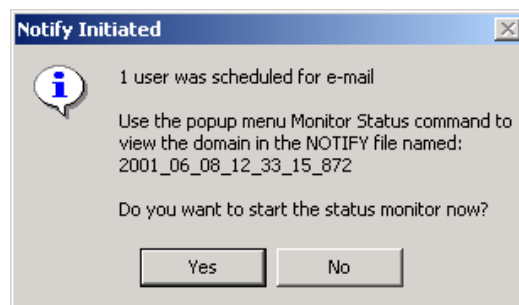


Figure 7.26 ~ E-mail Notify initiated.

8. To view the status of the Notify, click **Yes**. A dialog box similar to the following opens.

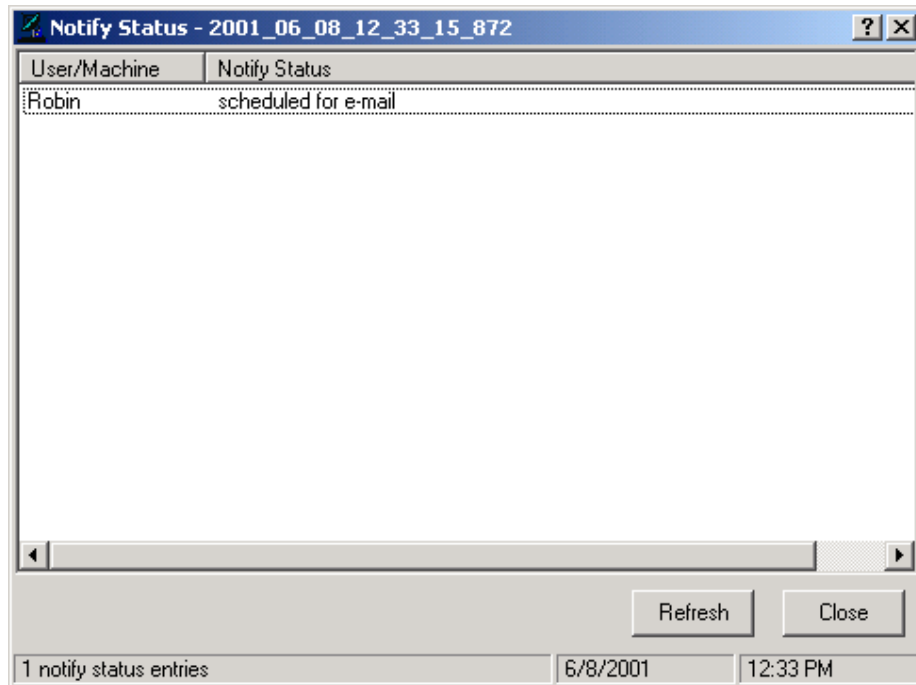


Figure 7.27 ~ Notify status monitor dialog box.

9. Click **Refresh** to update the Status Monitor.

To view the status of a Notify

1. Right-click a domain in the NOTIFY file. A shortcut menu opens.

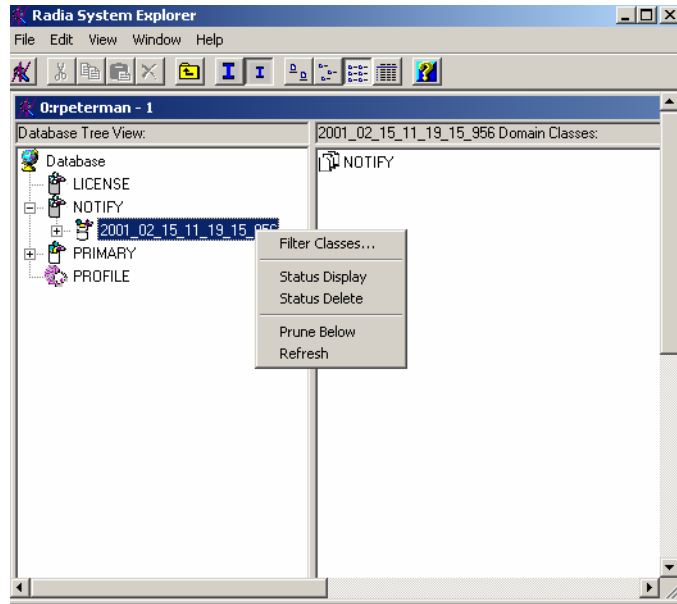


Figure 7.28 ~ NOTIFY domain shortcut menu.

2. Select **Status Display** to view the status of the Notify operation.
3. Select **Status Delete** to remove the status from the Radia Database.

NOTIFY File Structure

The NOTIFY file is divided into domains, where each domain represents one Notify operation. The name of the domain is in the form YYYY_MM_DD_HH_MM_SS, representing the date and time when the Notify operation was initiated. Each NOTIFY file domain has one NOTIFY class. Each NOTIFY class contains an instance for each subscriber that was notified. The instances are named with eight-digit numbers starting with 00000001 and running sequentially up to the total number of notified subscribers.

Each instance contains attributes that identify the subscriber, the kind of Notify operation (see the req= parameter of the command line in the NTFYCMDL attribute), and the results of the Notify operation for that subscriber (see the NTFYMSG and NTFYRC attributes).

Use the Radia System Explorer to examine the domains, classes, and instances of the NOTIFY file.

Note

The Radia System Explorer is currently available for 32-bit Windows platforms. For more information, refer to the *Radia System Explorer Guide*.

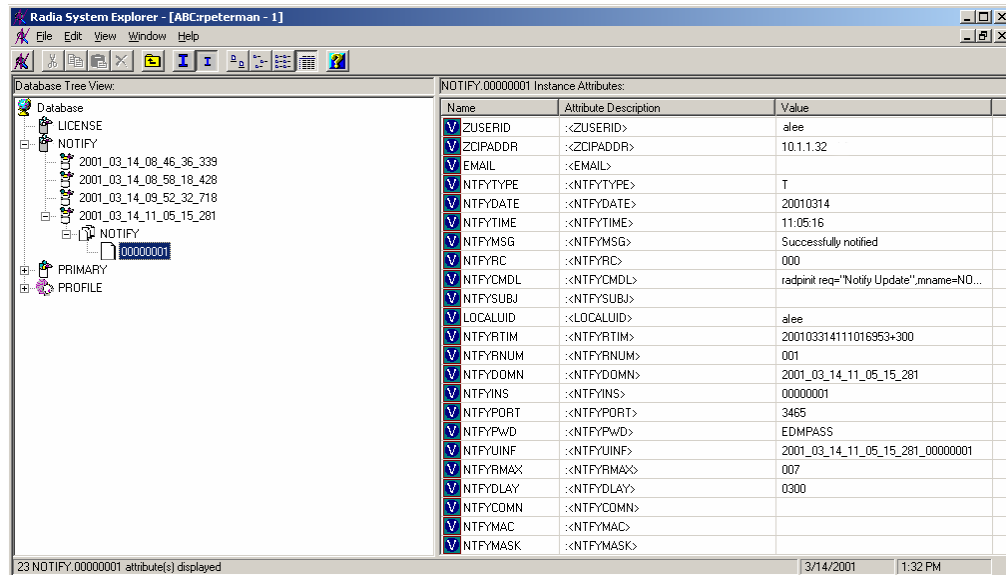


Figure 7.29 ~ Notify instance example.

Retrying a Notify Operation

Occasionally, some subscribers cannot be notified successfully. This may occur for one of the following reasons:

- The client computers may be turned off.
- The subscriber does not have a valid e-mail address listed in the Radia Database.
- The client computers may not be running the Radia Notify module.
- The client computers may not be accessible via the normal communication channel.

An unsuccessful Notify attempt creates an instance in the RETRY domain of the NOTIFY file. The RETRY domain is created the first time a Notify fails.

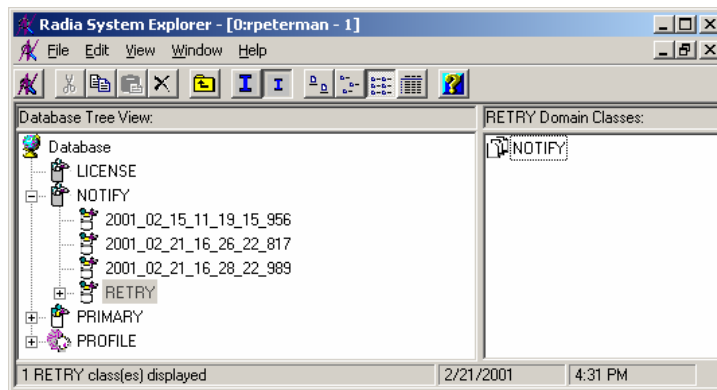


Figure 7.30 ~ RETRY domain.

Radia can automatically retry the Notify operation for failed attempts. To do so, the Radia Configuration Server must be started with the Notify Retry Manager (ZRTRYMGR module), as indicated in the following excerpt from the Radia Configuration Server Settings file, **.edmprof**, located in the home directory of the UNIX user ID who maintains a UNIX Radia Configuration Server install (EDMPROF.DAT, in the bin directory of a Windows NT Radia Configuration Server's install directory).

```
[MGR_ATTACH_LIST]
ATTACH_LIST_SLOTS = 15
RESTART_LIMIT = 7
VERIFY_INTERVAL = 5
CMD_LINE=(zutilmgr) RESTART=YES
CMD_LINE=(zrexxmgr) RESTART=YES
CMD_LINE=(ztcpmgr PORT=3464,NAME=tcpmgr_3464) RESTART=YES
CMD_LINE=(znfytmgr NAME=NotifyManager) RESTART=YES
CMD_LINE=(zrtrymgr) RESTART=YES
```

Line needed for Retry Manager ←

Figure 7.31 ~ Line to add to the Radia Configuration Server Settings file to enable Notify Retry.

The Notify Retry Manager periodically examines the NOTIFY file's RETRY domain based on the VERIFY_INTERVAL in EDMPROF.DAT, and re-attempts the Notify operation for each instance it finds there. The default is every five minutes.

Status Monitor information can be used to correct, reconfigure, or regenerate the Notify request so that all recipients receive the notification. Notify information is also written to the Radia Configuration Server log and can be viewed there. The log file is stored on the Radia Configuration Server in the **log** directory.

Note

When the Radia Configuration Server is first installed, the NOTIFY file is absent. It is created only after the first Notify action is initiated.

Caution

In order for any changes to the Radia Configuration Server Settings file to take effect, you must restart the Radia Configuration Server service.

For more information on editing the Radia Configuration Server Settings file, see the *Radia Configuration Server Guide*.

Note

The following instructions use the Radia System Explorer. The Radia System Explorer is currently available for 32-bit Windows platforms. For more information, see the *Radia System Explorer Guide*.

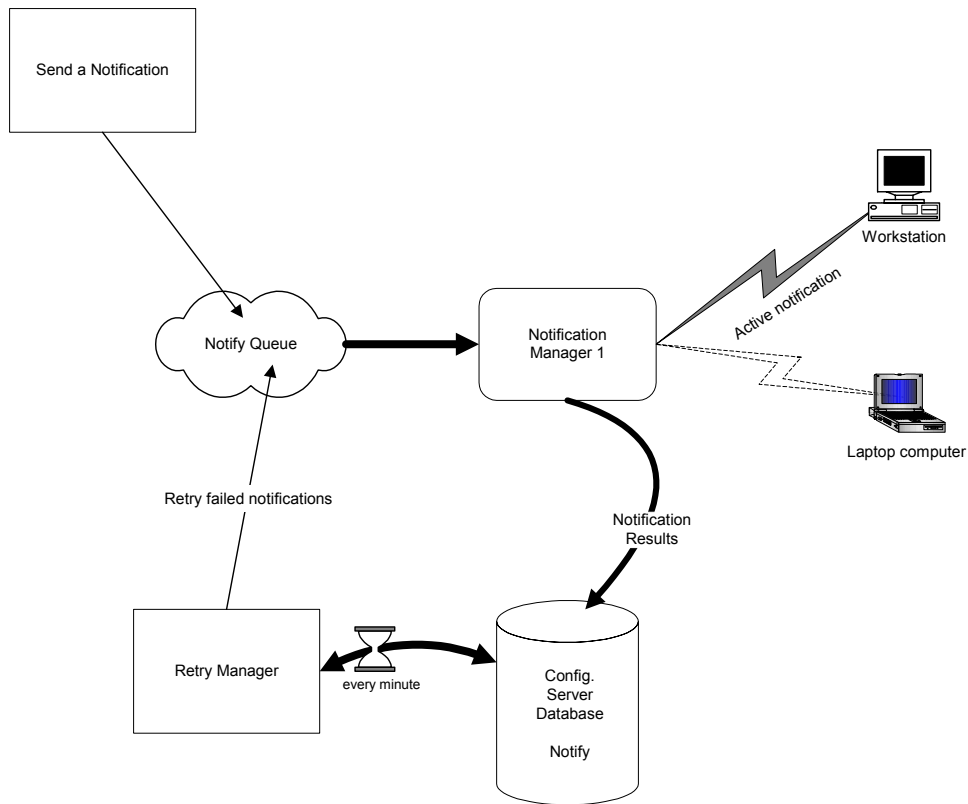


Figure 7.32 ~ Retry process.

To see the status of retry attempts

1. From the **Start** menu, select **Programs, Radia Administrator Workstation, Radia System Explorer**. The **Radia System Explorer Security Information** dialog box opens.

Note

The **User ID**, as shipped from HP, is **RAD_MAST**. No password is necessary. This may have been changed in your installation. Check with your Radia security administrator to obtain your own **User ID** and **Password**, if necessary.

2. If necessary, enter a **User ID** and **Password**, and then click **OK**. The **Radia System Explorer** window opens.

- 3.** Double-click **NOTIFY** to see the **RETRY** domain.
- 4.** Right-click the **RETRY** domain, and select **Status Display** from the shortcut menu.

Special Case Deployments

If you need to change service permissions for a particular service, you need to make changes to the Application (ZSERVICE) instance. These special circumstances apply whichever deployment method you use. In addition, you may want to create a mandatory timer instance or be able to notify users by dragging a user or group of users to a Notify command.

Creating a Mandatory Timer Update

If you want to create a timer that will update all mandatory services on a regular interval follow the steps below. You will need to refer to different sections in the *Radia Application Manager Guide* to complete the process.

Note

The following instructions use the Radia System Explorer. The Radia System Explorer is currently available for 32-bit Windows platforms. For more information, see the *Radia System Explorer Guide*.

1. Use the Radia System Explorer to create a timer instance using the command line shown in *Specifying the Command Line (ZRSCMDL)* on page 255. Modify the other timer variables to accommodate whatever update interval you need.
2. Connect the timer instance to the Client Self Maintenance service in the NOVADIGM domain, Application (ZSERVICE) class. For more information, see *Connecting the Timer to a Service* on page 261.

All users receive the Client Self Maintenance service by default. If you create a timer and connect it to the Client Self Maintenance service before installing the Radia Application Manager client, all mandatory applications, new and old, will be updated whenever the timer expires.

Creating a Drag-and-Drop Notify Command

You may want to install a service immediately to any group of users or re-install an application after you have made changes. The following procedure describes how to create a command, and then connect the command to a subscriber or group of subscribers by dragging them onto it using the Radia System Explorer.

To create a drag-and-drop Notify command

Note

The following instructions use the Radia System Explorer. The Radia System Explorer is currently available for 32-bit Windows platforms. For more information, see the *Radia System Explorer Guide*.

1. From the **Start** menu, select **Programs, Radia Administrator Workstation, Radia System Explorer**. The **Radia System Explorer Security Information** dialog box opens.

Note

The **User ID**, as shipped from HP, is **RAD_MAST**. No password is necessary. This may have been changed in your installation. Check with your Radia security administrator to obtain your own **User ID** and **Password**, if necessary.

2. If necessary, enter a **User ID** and **Password**, and then click **OK**. The Radia System Explorer window opens.
3. Double-click **PRIMARY**.
4. Double-click **SYSTEM**.
5. Double-click **Application Manager (ZCOMMAND)**.
6. Right-click the **Clock** instance, and select **Copy Instance**.

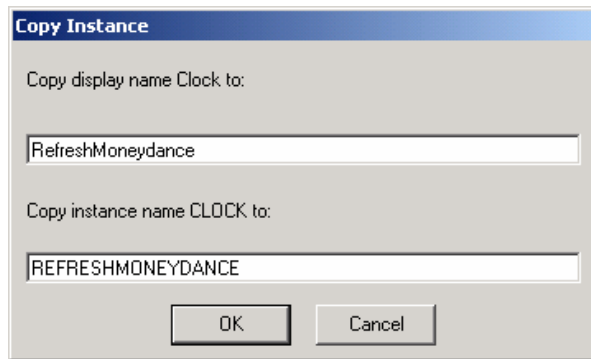


Figure 7.33 ~ Copy Clock instance to RefreshMoneydance instance.

7. Type **RefreshMoneydance** in the display name and instance name boxes.
8. Click **OK**.
9. Double-click **RefreshMoneydance** in the tree view to see the instance variables in the list view.
10. Double-click the **ZCMDPRMS** variable. The **Edit Instance** dialog box opens with ZCMDPRMS selected.

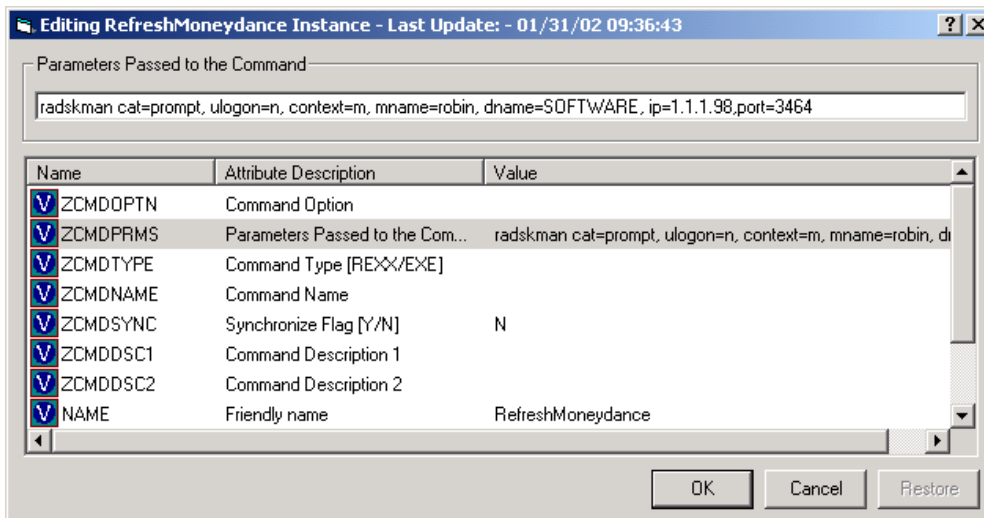


Figure 7.34 ~ Editing the ZCMDPRMS variable in the RefreshMoneydance instance.

11. Type the command line:

```
radskman cat=prompt, ulogon=n, context=m, mname=robin, dname=SOFTWARE, ip=IPAddress, port=Port
```

Replace *IPAddress* and *Port* with the IP address and port number of your Radia Configuration Server. This command line updates or installs *all* new and old mandatory applications.

12. Click **OK**.

13. Click **Yes** to confirm that you want to save the new instance attributes.

14. Drag a User, Workgroup, or Department instance to the RefreshMoneydance command. A notify is sent immediately to the specified subscribers and the command line in ZCMDPRMS is executed.

Use the Radia System Explorer to see the results of the Notify in the NOTIFY file.

Versioned Deployments

Radia Application Manager can deploy *versioned* applications. You can roll out a new version of an application to subscribers, and activate it upon delivery or at a pre-determined time. If the installation of the new version fails, Radia will automatically roll back to the previous version. If problems appear in the new version after installation, you can deactivate the new version and roll back to the previous version for some, or all, users.

After versioning is configured, the compressed files are stored on the client machine, and the versioning action takes place on the client machine. The roll forward/roll backward activity can be entirely local, not requiring any data to be transferred at the version change time. It can also be configured to be partially local, with a minimum of data transmitted.

The Version Groups (VGROUP) Class

Each instance of the VGROUP class defines a set of versions of a software application. It contains connections to instances of the VERSION class.

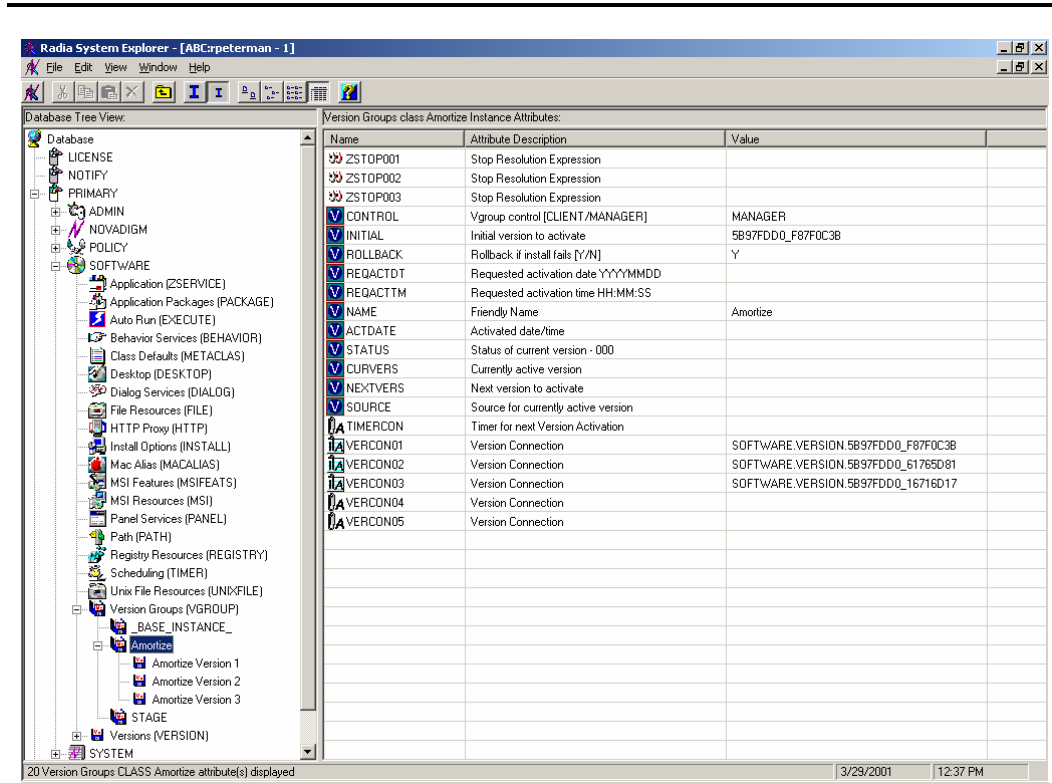


Figure 7.35 ~ Version Group example.

The Version (VERSION) Class

Each instance of the VERSION class defines one *version* of a software application that Radia deploys and manages.

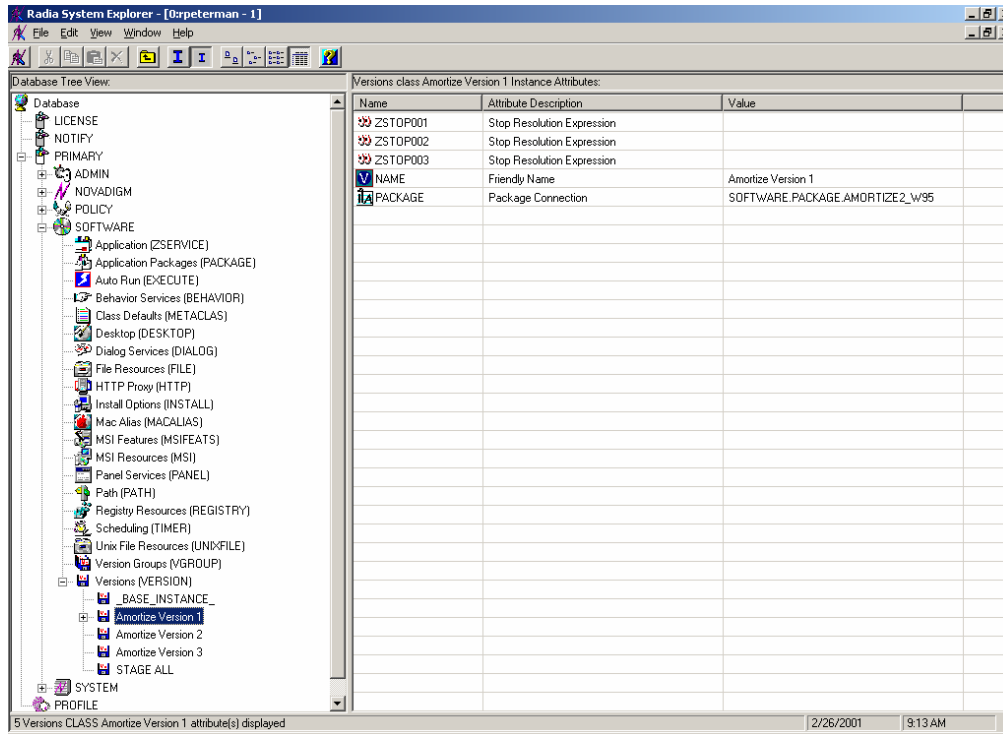


Figure 7.36 ~ Version (VERSION) class instance example.

Table 7.8 below summarizes the variables that make up an instance of the VERSION class.

Table 7.8 ~ VERSION Class Variables	
Variable	Usage
ZSTOP00 <i>n</i>	Expressions evaluating to true in ZSTOP variables cause resolution of the instance to be skipped. If left blank, the instance is not skipped, and resolution continues. This is useful for assigning a version to a particular set of users.
NAME	The friendly name for this instance entered when you create the VERSION instance.
PACKAGE	A connection to an instance of the PACKAGE class, which represents the packaged software application for this version.

Modeling Versioned Applications

Versioned and non-versioned applications adhere to different connection models within the Radia Database. For non-versioned applications, one application instance connects to one or more package instances.

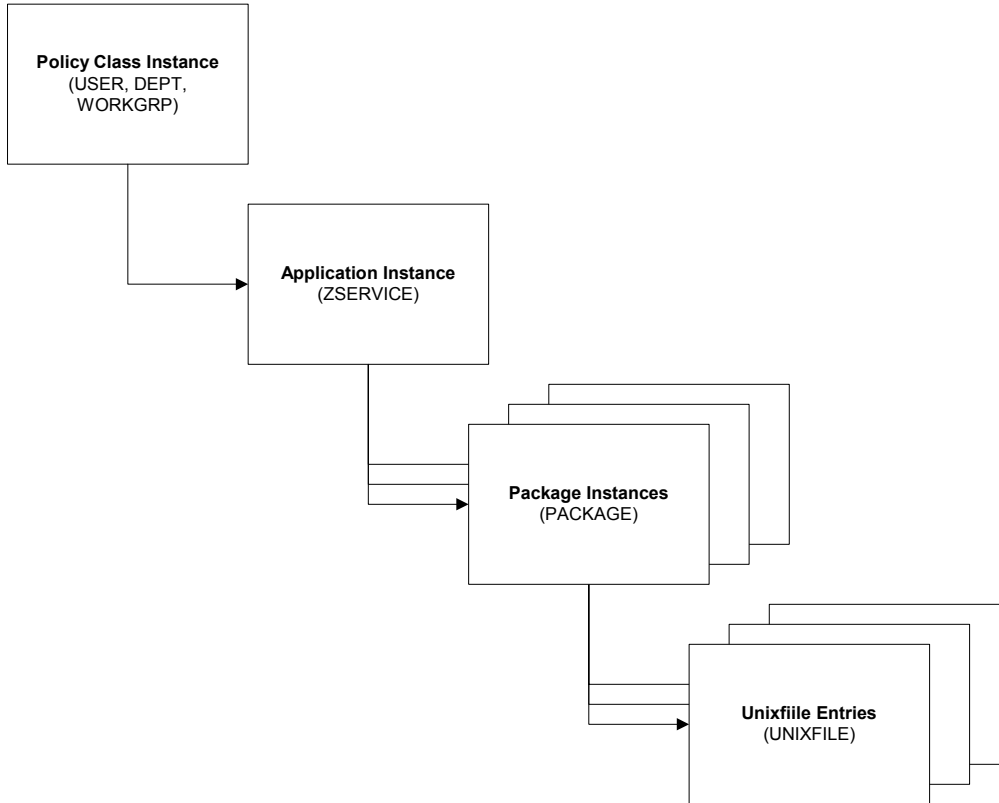


Figure 7.37 ~ Model for non-versioned deployments.

Versioned applications adhere to a different connection model than non-versioned applications. For versioned applications, an Application instance (ZSERVICE) connects to a single Version Group (VGROUP) instance.

Note

If you want to use multiple Version Groups, you must create one Service for each Version Group.

The Version Group instance connects to one or more Version instances that connect to one or more Package instances. A Version instance (which represents one version of a software application) contains one Radia package. Each Radia package is represented in the Radia Database by an instance of the PACKAGE class.

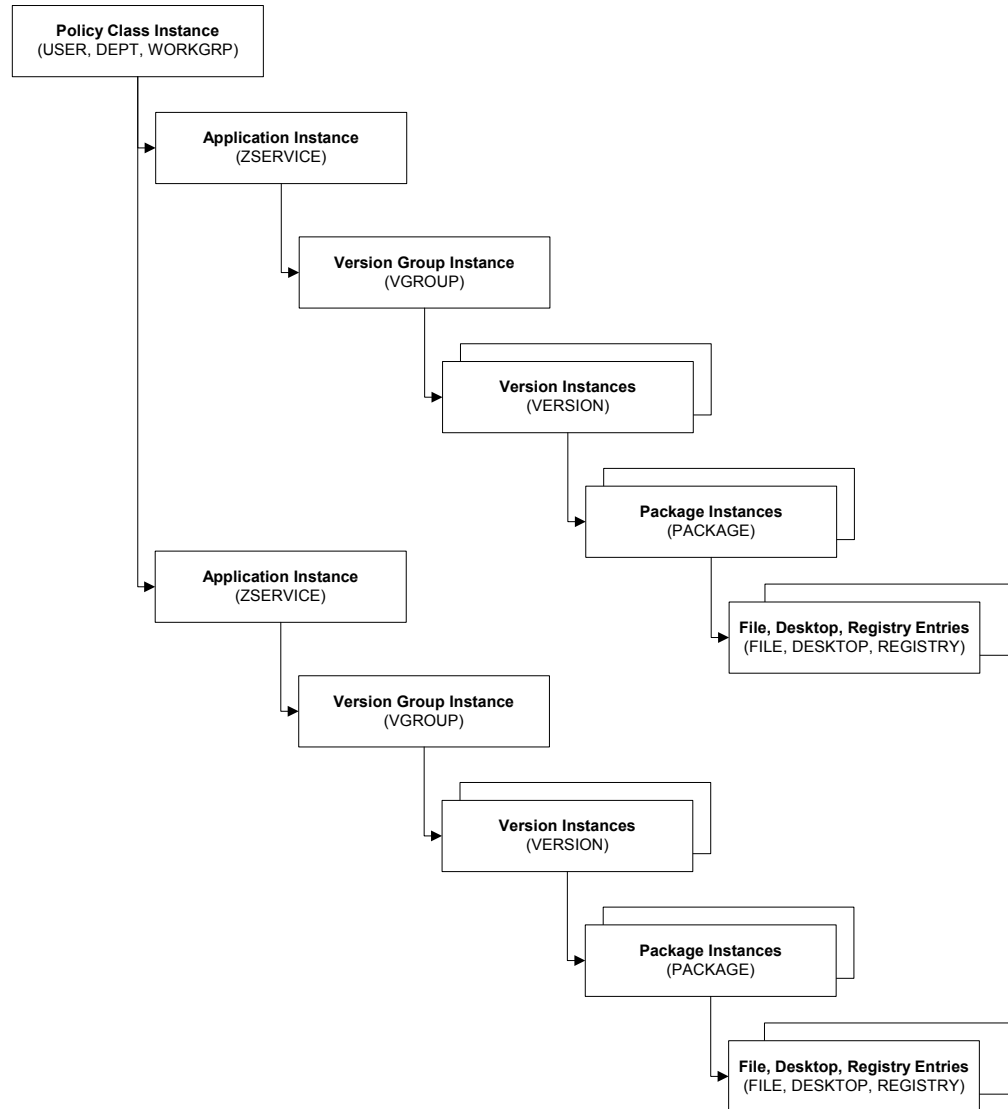


Figure 7.38 ~ Model for versioned deployment.

Initially, prepare versioned applications the same way that you prepare non-versioned applications. Use the Radia Publisher to package the application, and use the New Application Wizard in the Radia System Explorer to create an Application (ZSERVICE) class instance to represent the software application. In the Radia Database, a newly published and promoted application is represented by its Application (ZSERVICE) instance, which contains a connection to the Application Packages (PACKAGE) instances created by Radia Publisher.

Caution

When packaging subsequent versions of an application, do not run the New Application Wizard. All versions of an application connect to the *same* Application (ZSERVICE) instance in the Radia Database.

Version Group Editor

The Version Group Editor in the Radia System Explorer contains all of the controls you need to manage the content and the deployment of a *version group*. A version group connects to all of the versions of an application. Use the Version Group Editor to create, edit, or delete version instances associated with the version group, as well as control the version group's deployment.

Create an instance of the Version Group class to represent a set of versions for the application. One Version Group instance connects to each of the Version instances for a particular application.

Creating a Version Group Instance

Use the Version Group Editor to create and to maintain instances in the VGROUP class. Using the Radia System Explorer, create a new instance in the VGROUP class for the package you will be versioning.

Note

The following instructions use the Radia System Explorer. The Radia System Explorer is currently available for 32-bit Windows platforms. For more information, see the *Radia System Explorer Guide*.

To create a Version Group instance

1. From the **Start** menu, select **Programs, Radia Administrator Workstation, Radia System Explorer**. The **Radia System Explorer Security Information** dialog box opens.

Note

The **User ID**, as shipped from HP, is **RAD_MAST**. No password is necessary. This may have been changed in your installation. Check with your Radia security administrator to obtain your own **User ID** and **Password**, if necessary.

2. If necessary, enter a **User ID** and **Password**, and then click **OK**. The **Radia System Explorer** window opens.
3. Double-click **PRIMARY**.
4. Double-click **SOFTWARE**.
5. Right-click **Version Group (VGROUP)**.
6. Select **New Instance** from the shortcut menu. The **Create Instance** dialog box opens.

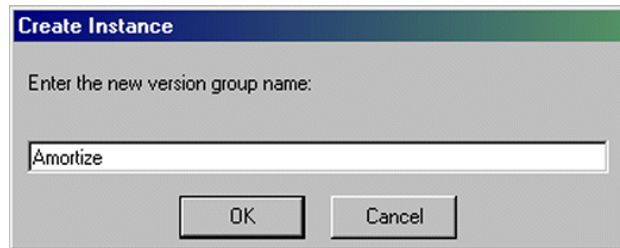


Figure 7.39 ~ Creating the Amortize instance in the Create Instance dialog box.

7. In the **Create Instance** dialog box type a name for the Version Group.
8. Click **OK**.

The **Editing Version Group** dialog box opens.

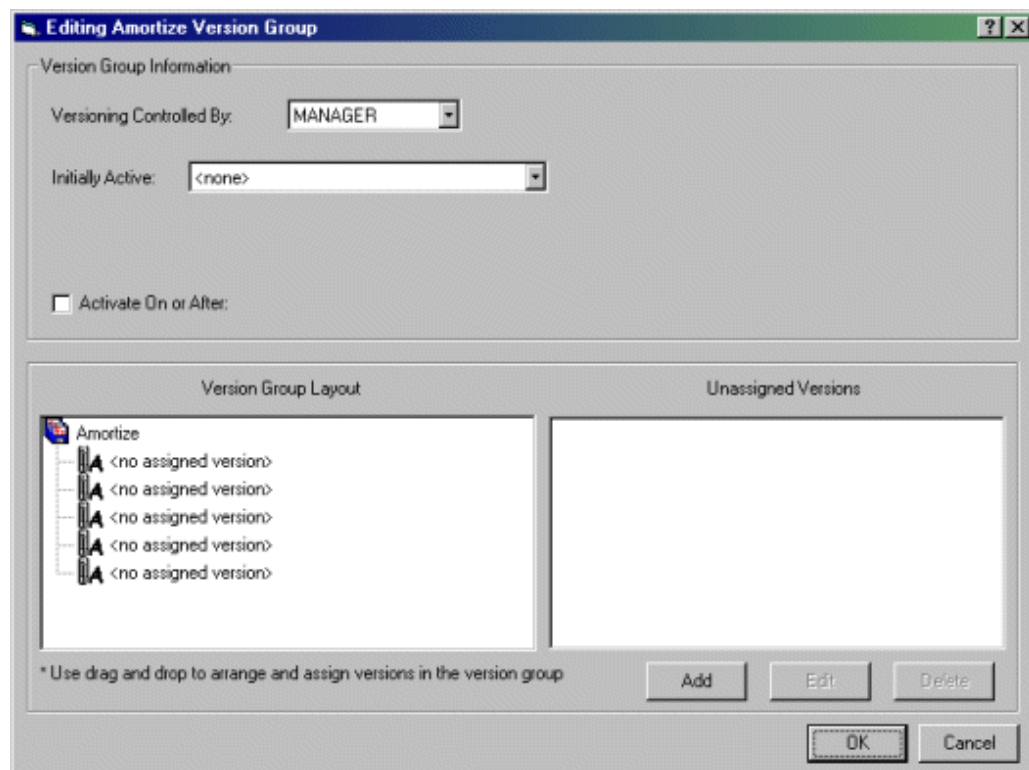


Figure 7.40 ~ The Editing Version Group dialog box before making selections.

9. Complete the selections in this dialog box, based upon the following.
 - **Versioning Controlled By**
determines whether the Radia administrator or the subscriber chooses the version to deploy.
 - **Initially Active**
selects which version to activate on the client computer the next time the subscriber's Radia Client connects to the Radia Configuration Server. The available versions are those that appear in the **Version Group Layout** section of the **Editing Version Group** dialog box.
 - **Activate On or After**
provides access to additional controls to prevent version activation prior to a specific date and time. When this is enabled, the controls appear as follows.

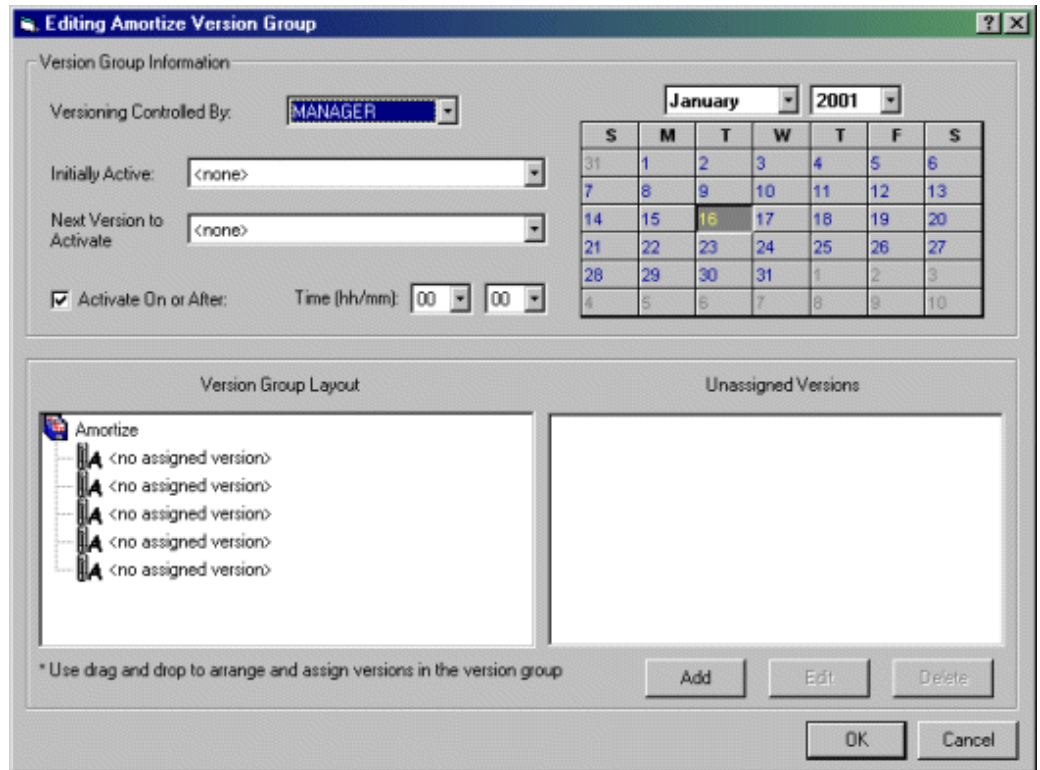


Figure 7.41 ~ The Editing Version Group dialog box with calendar displayed.

When the **Activate On or After** check box is selected, additional features are available.

- **Next Version to Activate**
allows you to select from a drop-down list to select which version of the application to activate at the date and time set using the calendar controls.
- **Time (hh/mm)**
sets the time of deployment.
- **Calendar**
sets the date of deployment.

If you will be scheduling the deployment of a version, there are a few things to consider:

- Timers are only created and connected to a VGROU if the Radia Configuration Server controls the versions. Do this by selecting **MANAGER** on the **Versioning Controlled By** drop-down list in the Version Group Editor.

- With **MANAGER** selected, the **Activate On or After** check box must be selected. Select this check box to activate the Calendar, Hour, and Minute controls to deploy the next version.
- When the VGROUP instance is deleted, the associated timer instance is deleted as well.
- A timer instance will be automatically disconnected, but not deleted, if the **Versioning Controlled By** drop-down list is set to **CLIENT** in the Version Group Editor. By selecting **MANAGER** again after having **CLIENT** selected, the **TIMER** will be reconnected and will update the package accordingly.
- At startup, the Version Group Editor will check to see if the activation date has passed and recommend removing the **TIMER** instance connection and replacing **INITIAL** with **NEXTVERS**.

Note

The Calendar will not allow the administrator to select a date earlier than the current day.

10. To add a version, click **Add** in the Editing Version Group dialog box. The **Create Version** dialog box opens.

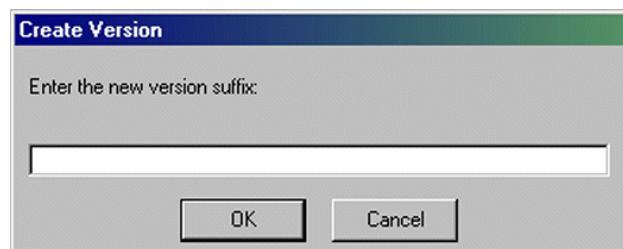


Figure 7.42 ~ The Create Version dialog box.

11. Type the appropriate version number to identify the revision of the application.
12. Click **OK**.
The **Version Editor** dialog box opens.

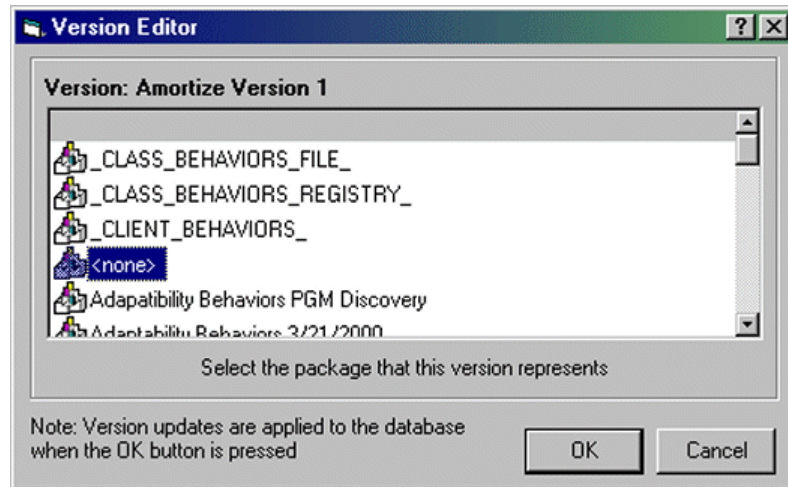


Figure 7.43 ~ The Version Editor dialog box.

The **Version Editor** dialog box contains a list of Application Packages (PACKAGE) instances currently stored in the Radia Database. Use this dialog box to connect the new Version (VERSION) instance to an Application Packages (PACKAGE) instance. There is a one-to-one correspondence between these two instances.

13. Select the appropriate Application Package (PACKAGE) instance.
14. Click **OK**. The Version instance of the package appears in the **Unassigned Version** list.

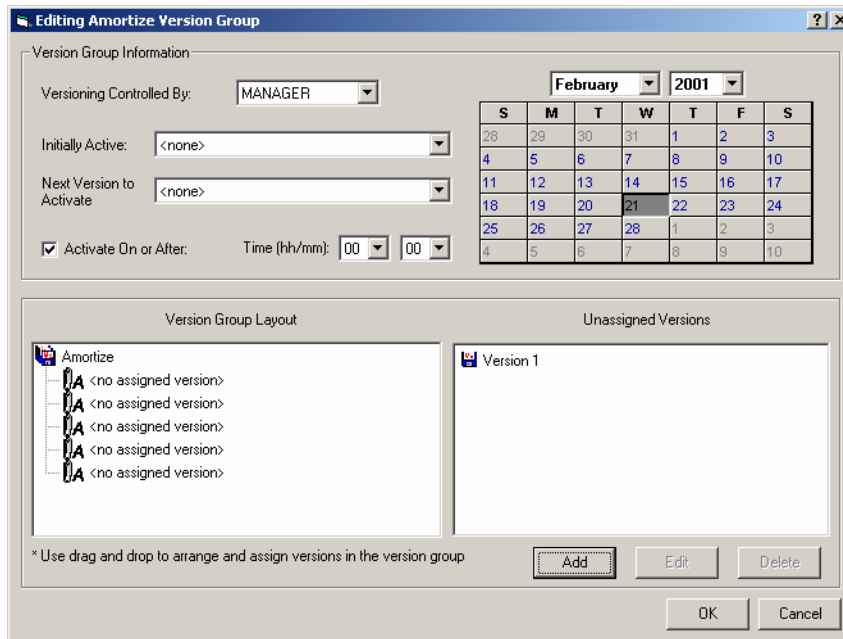


Figure 7.44 ~ The Editing Version Group dialog box with a Version Group instance.

Add Version instances for each version of the application software that will be available to subscribers through this Version Group.

To assign a Version instance to a Version Group, drag a Version instance from the **Unassigned Versions** list to one of the connections labeled **<no assigned version>** in the **Version Group Layout** list.

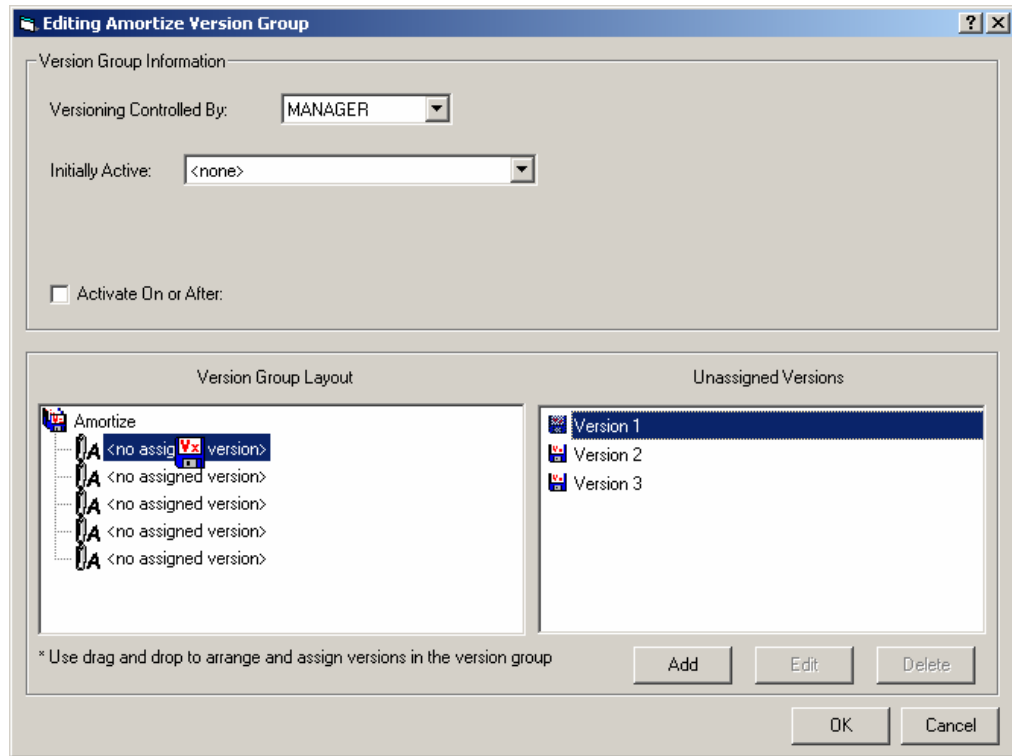


Figure 7.45 ~ Assigning a version.

Now, you can deploy any of the assigned versions by using the **Initially Active** and **Next Version to Activate** lists.

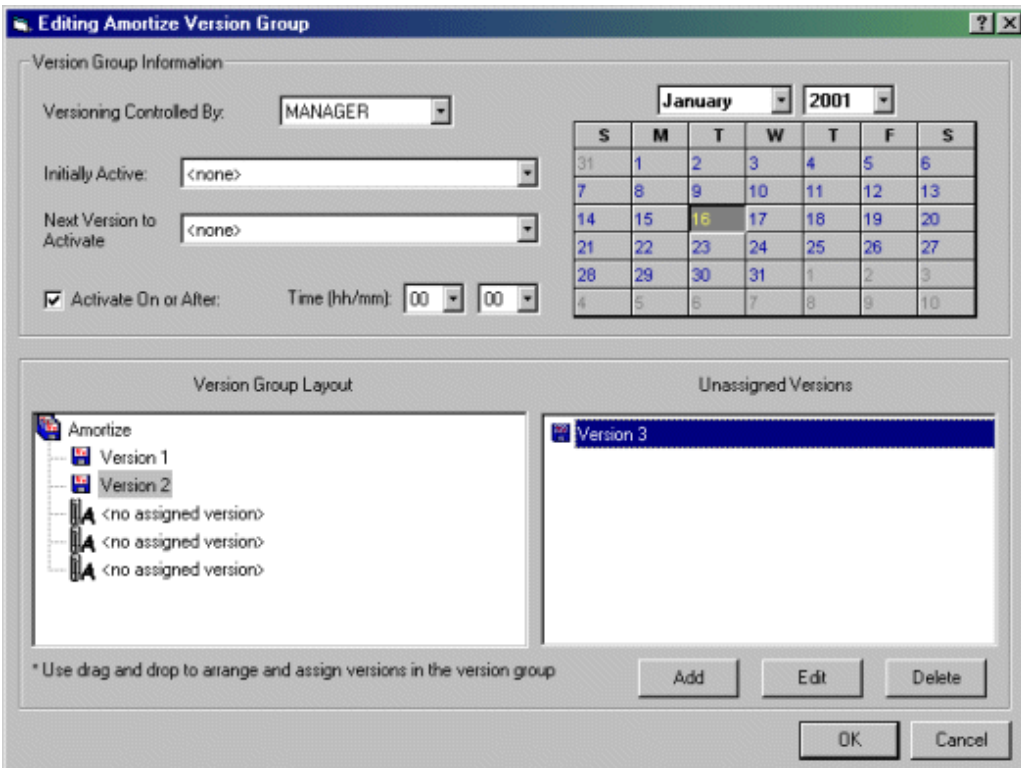


Figure 7.46 ~ Deploying assigned versions.

15. Use the **Initially Active** drop-down menu to select which version to activate when the application is first deployed. Use the **Next Version to Activate** to select the version that will be deployed at the date and time after the initial deployment. Recall that if the new version fails to deploy properly, the client will automatically revert to the previous version.

The **Initially Active** version appears in bold text, and the **Next Version to Activate** appears in red text.

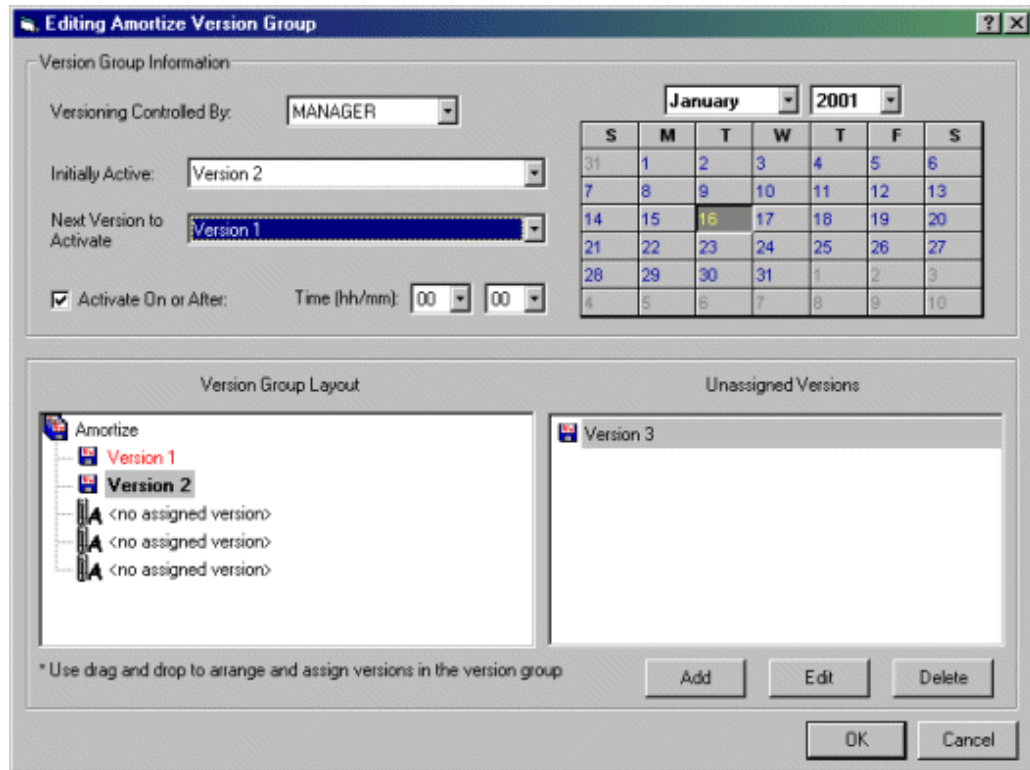


Figure 7.47 ~ Activating versions in the Version Group dialog box.

16. Click **OK** to save the information added to the Version Group Editor.

Note

For additional information concerning editing and deleting versions using the Version Group Editor, see the *Radia System Explorer Guide*

17. In the Radia System Explorer, drag the Version Groups (VGROUP) instance to the Application (ZSERVICE) instance to connect the Version Group to the Application.

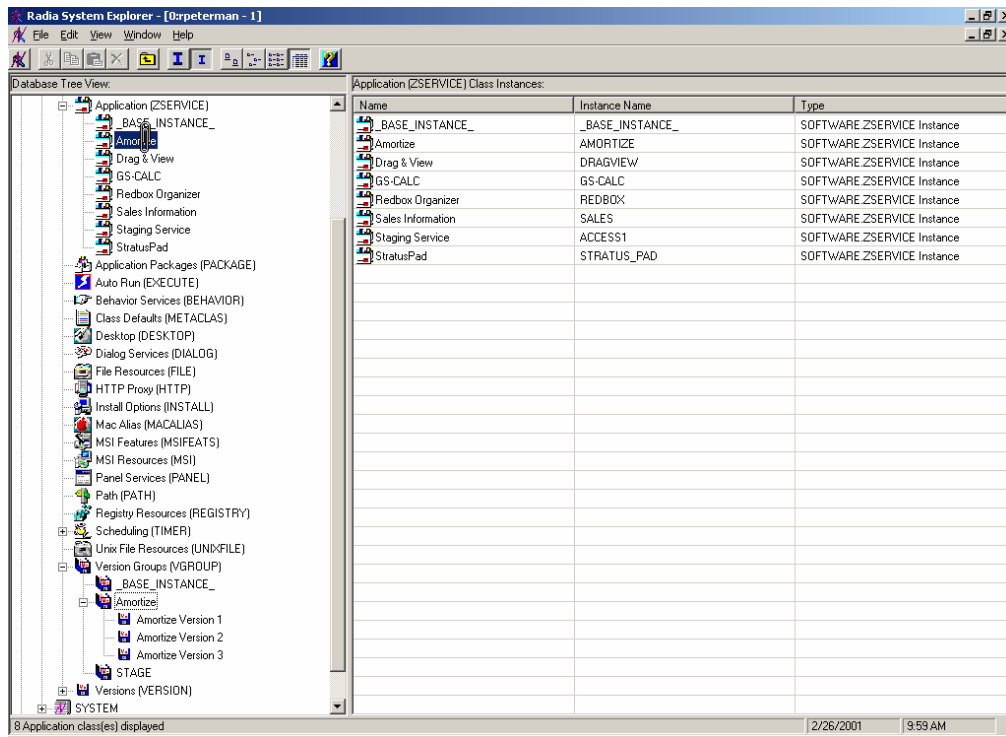


Figure 7.48 ~ Connect version to application.

18. Release the mouse button.
19. Click **OK**.

Caching and Local Repair

Radia caches files delivered to the client computer during an installation. Caching provides the following advantages:

- Prevents redundant file activity. If the installation fails, the files that have already been transferred remain on the computer.
- Reduces network traffic. When a file is requested, Radia checks for the file in the local cache first. If the file is found, it is picked up from the cache rather than being transferred through the network.
- Allows for local repair of broken applications. If an application is broken because of missing files, the files (stored locally) can be used to repair the application.

Caution

There must be enough disk space available to store the compressed data.

By default, the directories are cached in IDMDATA. The default location for IDMDATA is `/opt/Novadigm/lib/data`. See the *Installing the Radia Application Manager* chapter in this book for more information.

Use the variables in Table 7.9 below for caching and local repair.

Table 7.9 ~ Caching Variables

Variable	Class	Description	Default or Syntax
LREPAIR	ZSERVICE	Enables local repair.	Default is N. Type Y or N.
PRODGUID	MSI	<i>For Windows Installer applications only.</i> Unique product identifier, created by the manufacturer or vendor. Radia Publisher records this identifier in the PRODGUID field in the MSI instance.	Default is _UNDEF_.

Split Client Connect

We recommend setting ZDISCONN to Y in the ZSERVICE instance when it is known you will be running lengthy client methods for an extended period of time. This allows the client to disconnect from the Radia Configuration Server if there is an open session with the Radia Configuration Server (ZCREATE or ZDELETE methods). After the method has terminated, the client restores the connection to the Radia Configuration Server.

Recommendations for Trouble-Free Deployments

To assure trouble-free deployments, rigorously test your implementation.

- Publish and deploy application software in a test environment before making the software available for live deployment.
- Include deployments to all of the target operating systems for which the published application software is intended.
- Test all major capabilities of the deployment. Include updates, removal of the application software from the subscriber's desktop, customized installation options, and variations in hardware configurations that might affect deployment, such as shortage of disk space, physical memory, and similar constraints.

Radia Staging Servers and Deployment

Server staging allows you to load a portion of the work required to deploy applications from the Radia Configuration Server computer to another server computer. This computer is called a *Staging Server*. You may want to do this for the following reasons:

- The Radia Staging Server may be closer to the clients on the network.
- You may want to reduce the load on the Radia Configuration Server computer.

When server staging is employed, the application software to be distributed is copied to the Radia Staging Server. The Radia Staging Server then provides the software to those Radia Clients that are not required to obtain their application software from the Radia Configuration Server. The potential benefit of server staging must be evaluated individually for each server and its attached Radia subscriber computers.

For more information, refer to the *Radia Server Stager Guide*.

Summary

- Carefully plan and test your application deployment strategy to determine the best distribution method for your subscribers.
- Use the Scheduler service to deploy an application at a specific time or interval.
- Use the Notify function to update or remove an application that has already been deployed, or to notify users via e-mail of an update.
- Consider if you have any special cases for deployment that may need further configuration.
- Use the Version Group Editor when you have multiple versions of the same application. You can use the Version Group Editor to schedule deployments, and set versions to activate.
- Consider using Radia Staging Servers to minimize network traffic or to minimize work on the Radia Configuration Server.

Radia Client Objects

At the end of this chapter, you will:

- Be familiar with key Radia Client objects.
- Know the hardware attributes that the Radia Application Manager for UNIX client collects.
- Understand the APPEVENT object.
- Know how Open Database Connectivity (ODBC) can help you generate reports with information from the objects.

This guide covers the *suggested* implementation for the Radia Application Manager. Although you will tailor this strategy to meet your organization's needs, it is recommended that you review this guide for a comprehensive understanding of the Radia Application Manager. This chapter covers Radia client objects.

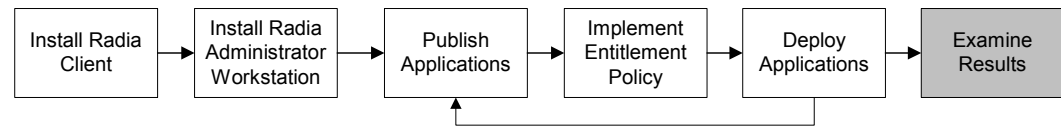


Figure 8.1 ~ Tasks completed in this guide.

Radia Objects

After installing the Radia Application Manager client, and installing a service, you may want answers to the following questions:

- What is the hardware configuration of the client computer?
- Was the service successfully installed?
- When was the service installed?

Note

The term *computer* is used to refer to a workstation or server.

Use Radia Client objects to answer these questions. When a client computer connects to the Radia Configuration Server, information is exchanged between the client and the Radia Configuration Server. This exchange is called the *resolution process*. During resolution, Radia checks the status of services, and objects from the client computer are updated on the Radia Configuration Server. Use the Radia System Explorer or the Radia Client Explorer to view these objects.

Note

The Radia System Explorer is currently available for 32-bit Windows platforms. For more information, see the *Radia System Explorer Guide*.

The PROFILE File

The objects that are received during a Client Connect are stored in the PROFILE file. This information is for viewing and reporting only. Each client computer or user ID is stored as a domain within the file, and each object is stored as a class within that domain. Each class is identified by the computer name, the user ID, or by a customized variable.

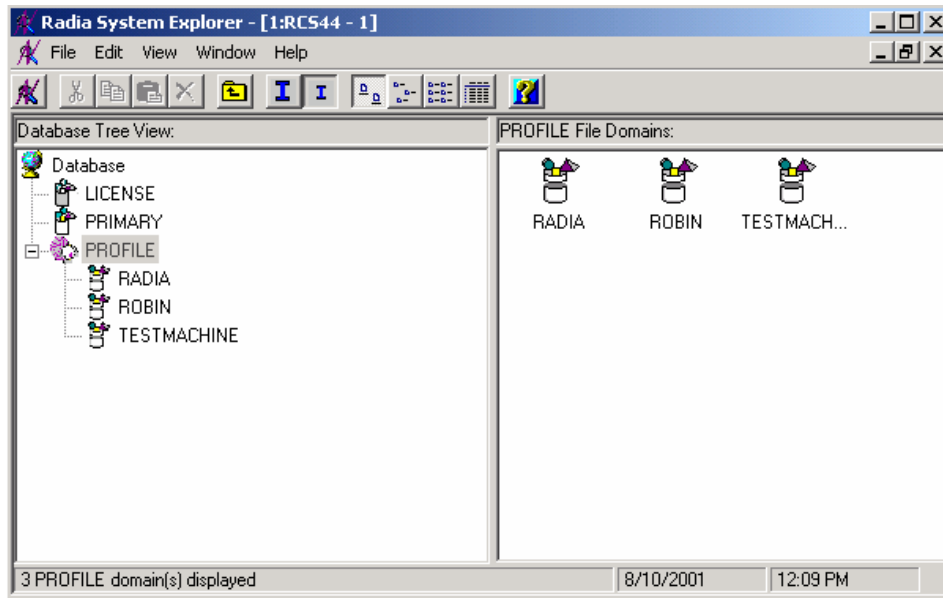


Figure 8.2 ~ PROFILE file.

Under each domain or client computer, there are at least two instances created, ZCONFIG and ZMASTER.

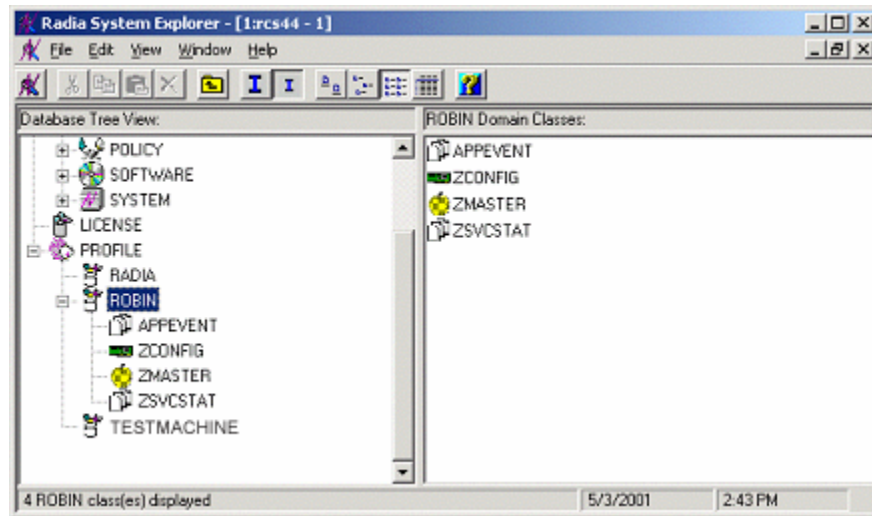


Figure 8.3 ~ Client computer in the PROFILE file.

After a service is installed, the APPEVENT and ZSVCSTAT objects are created. These provide information about the configuration of the client computer. Other objects may appear based on your configuration.

Table 8.1 ~ Objects in the PROFILE File	
Instance	Information Recorded
APPEVENT	Provides information about an event such as success or failure on installation.
ZCONFIG	Contains basic hardware information for the client computer. Includes practical hardware information such as processor, operating system, and drives.
ZDELSVC	Displays only when you remove a service. Contains one instance per service. Each instance includes information such as time of removal, Radia Configuration Server name, and service name.
ZMASTER	Contains information that identifies the subscriber, and other information necessary to run the Radia Application Manager.
ZSVCSTAT	Contains one instance per service. Each instance includes information such as time of installation, Radia Configuration Server name, and service name.

ZCONFIG and APPEVENT are primarily used to describe the current configuration on the client computer, and are described in depth in this chapter. For more information on ZMASTER and ZSVCSTAT, see the HP OpenView web site.

Basic Hardware Inventory - ZCONFIG

The ZCONFIG object stores hardware configuration information from the client computer. Use the Radia System Explorer or the Radia Client Explorer to view the ZCONFIG object. To view the ZCONFIG object that was most recently collected from the client computer, use the Radia System Explorer. If the ZCONFIG object is not current because the client computer has not recently connected to the Radia Configuration Server, or cannot be viewed using the Radia System Explorer, then use the Radia Client Explorer. You may need to use the Radia Client Explorer to examine the hardware inventory if the client computer is unable to connect to the Radia Configuration Server. The Radia Client Explorer can be used to view only the local client computer (the machine where the Radia Client Explorer has been installed).

Note

The following instructions use the Radia System Explorer. The Radia System Explorer is currently available for 32-bit Windows platforms. For more information, see the *Radia System Explorer Guide*.

To view the ZCONFIG object using the Radia System Explorer

1. From the **Start** menu, select **Programs, Radia Administrator Workstation, Radia System Explorer**. The **Radia System Explorer Security Information** dialog box opens.

Note

The **User ID**, as shipped from HP, is **RAD_MAST**. No password is necessary. This may have been changed in your installation. Check with your Radia security administrator to obtain your own **User ID** and **Password**, if necessary.

2. If necessary, type a **User ID** and **Password**, and then click **OK**. The **Radia System Explorer** window opens.
3. Double-click **PROFILE**.
4. Double-click the user ID or client computer name.
5. Double-click **ZCONFIG**.
6. Double-click **HARDWARE_**.
7. Double-click **HARDWARE_SCAN**.

The ZCONFIG object is displayed in the list view.

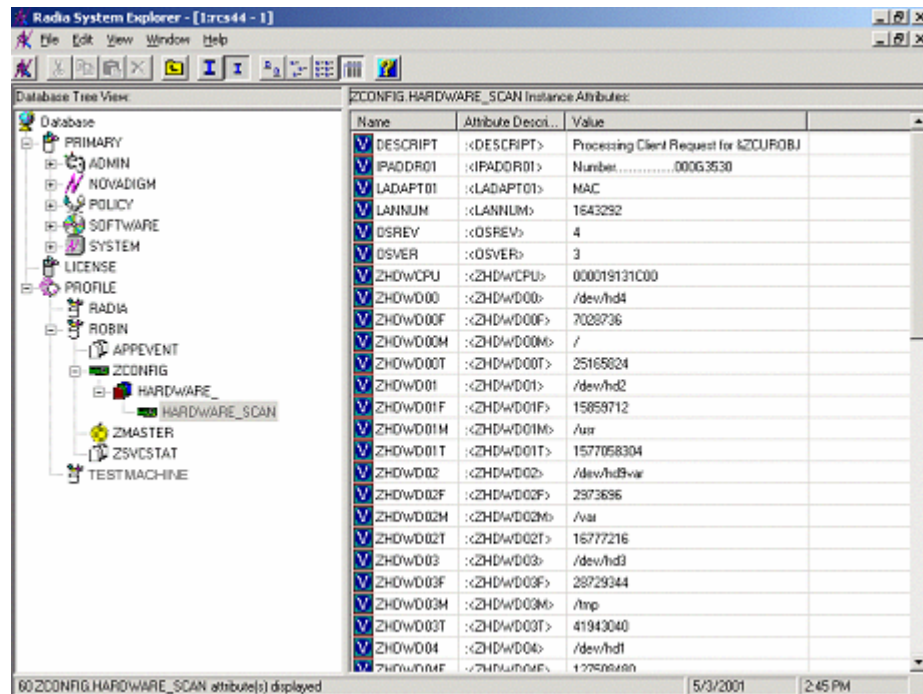


Figure 8.4 ~ Viewing the ZCONFIG object in Radia System Explorer.

Note

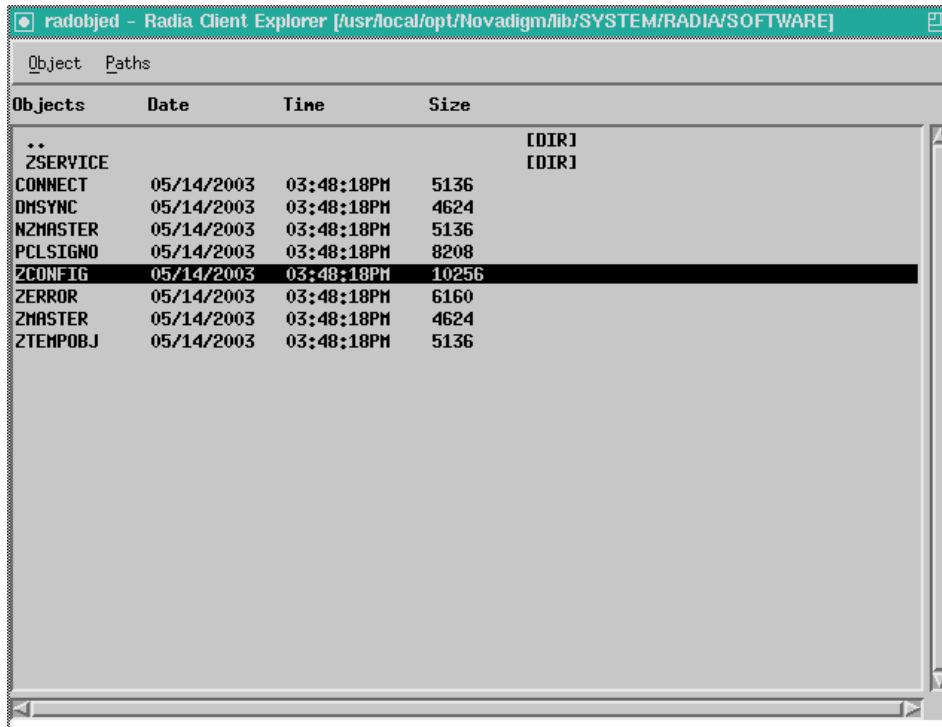
To view the attributes in alphabetical order, click **Name** at the top of the column in the list view.

To view the ZCONFIG object using Radia Client Explorer

Note to Reliant Users

Currently, the Radia Client Explorer is not available for Reliant operating systems.

1. View the **ZCONFIG.EDM** file in the client computer's IDMLIB directory. IDMLIB defaults to **/opt/Novadigm/lib/STARTDIR/RADIA/SOFTWARE**.
2. Change your current working directory to the directory containing **radobjed** (default directory is **/opt/Novadigm**) and type **./radobjed**.



The screenshot shows a window titled "radobjed - Radia Client Explorer [usr/local/opt/Novadigm/lib/SYSTEM/RADIA/SOFTWARE]". The window contains a table with the following columns: Object, Paths, Objects, Date, Time, and Size. The table lists several files and folders, with "ZCONFIG" highlighted in black.

Object	Paths	Objects	Date	Time	Size
**					
ZSERVICE					
CONNECT			05/14/2003	03:48:18PM	5136
DMSYNC			05/14/2003	03:48:18PM	4624
NZMASTER			05/14/2003	03:48:18PM	5136
PCLSIGNO			05/14/2003	03:48:18PM	8208
ZCONFIG			05/14/2003	03:48:18PM	10256
ZERROR			05/14/2003	03:48:18PM	6160
ZMASTER			05/14/2003	03:48:18PM	4624
ZTEMPOBJ			05/14/2003	03:48:18PM	5136

Figure 8.5 ~ Radia Client Explorer.

3. Double-click **ZCONFIG**. The ZCONFIG dialog box displays the hardware inventory for the client computer.

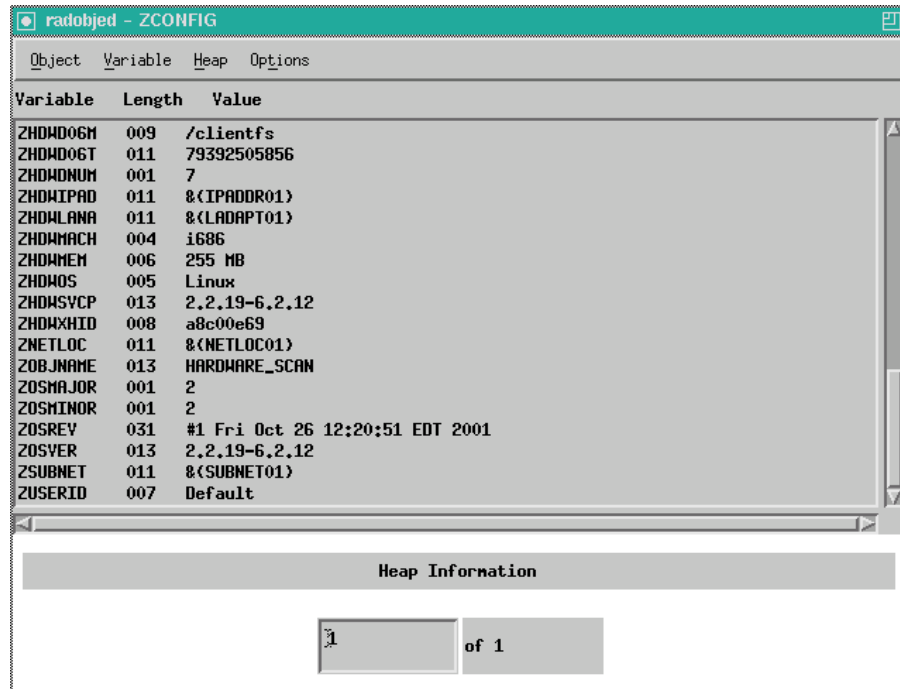


Figure 8.6 ~ ZCONFIG object on client computer.

- From the **Object** menu, select **Close** when you are finished viewing ZCONFIG. Table 8.2 ~ Variables in ZCONFIG below, describes the attributes of ZCONFIG arranged in alphabetical order.

Note

The attributes that appear in the ZCONFIG object may vary depending on the client computer configuration.

Table 8.2 ~ Variables in ZCONFIG

Variable	Description	Example
GATEWY01	Gateway address of first Ethernet adapter	xxx.xxx.xxx.xxx
IPADDR01	IP address of first network adapter	xxx.xxx.xxx.xxx
LADAPT01	Hardware (Ethernet MAC) address of first Ethernet adapter	000502AB3A63
LANDEV01	Device name of first Ethernet adapter	en0
NETLOC01	Network (subnet) location of first Ethernet adapter	xxx_xxx_xxx_x
SUBNET01	Subnet mask of first Ethernet adapter	255.255.255.0
ZGATEWAY	Gateway address of primary Ethernet adapter	xxx.xxx.xxx.x
ZHDWCOMP	Computer node name	Linuxdoc
ZHDWCPU	CPU type	i686
ZHDWD00	First hard disk device	/dev/hda5
ZHDWD00F	First hard disk free space	1898426368
ZHDWD00M	First mount point	/
ZHDWD00T	First hard disk total space	6006796288
ZHDWDNUM	Number of drive letters assigned	2
ZHDWIPAD	IP Address of primary Ethernet adapter	xxx.xxx.xxx.xxx
ZHDWLANA	Hardware address of primary Ethernet adapter	003065488F96
ZHDWMACH	Machine type	i686
ZHDWMEM	Total physical memory	201326592
ZHDWSVCP	OS version	2.2.19-6.1.12
ZNETLOC	Network (subnet) location of primary Ethernet adapter	xxx_xxx_xxx_x
ZOBJNAME	Object instance name	HARDWARE_SCAN
ZOSMAJOR	Operating System major version	2
ZOSMINOR	Operating System minor version	2
ZOSREV	Operating System revision	#1 Friday Oct 26
ZOSVER	Operating System version	2.2.19-6.2.12
ZSUBNET	Subnet mask of primary Ethernet adapter	255.255.255.0
ZUSERID	User ID	DEFAULT

Setting Collection of the ZCONFIG Object

By default, the ZCONFIG object is collected for all client computers. Use the ZCONFIG variable located in POLICY domain USER class to specify whether you want to copy the ZCONFIG object from the client computer to the Radia Configuration Server.

To collect the ZCONFIG object

Note

The following instructions use the Radia System Explorer. The Radia System Explorer is currently available for 32-bit Windows platforms. For more information, see the *Radia System Explorer Guide*.

1. From the **Start** menu, select **Programs, Radia Administrator Workstation, Radia System Explorer**. The **Radia System Explorer Security Information** dialog box opens.

Note

The **User ID**, as shipped from HP, is **RAD_MAST**. No password is necessary. This may have been changed in your installation. Check with your Radia security administrator to obtain your own **User ID** and **Password**, if necessary.

2. If necessary, type a **User ID** and **Password**, and then click **OK**. The **Radia System Explorer** window opens.
3. Double-click **PRIMARY**.
4. Double-click **POLICY**.
5. Double-click **USER**.

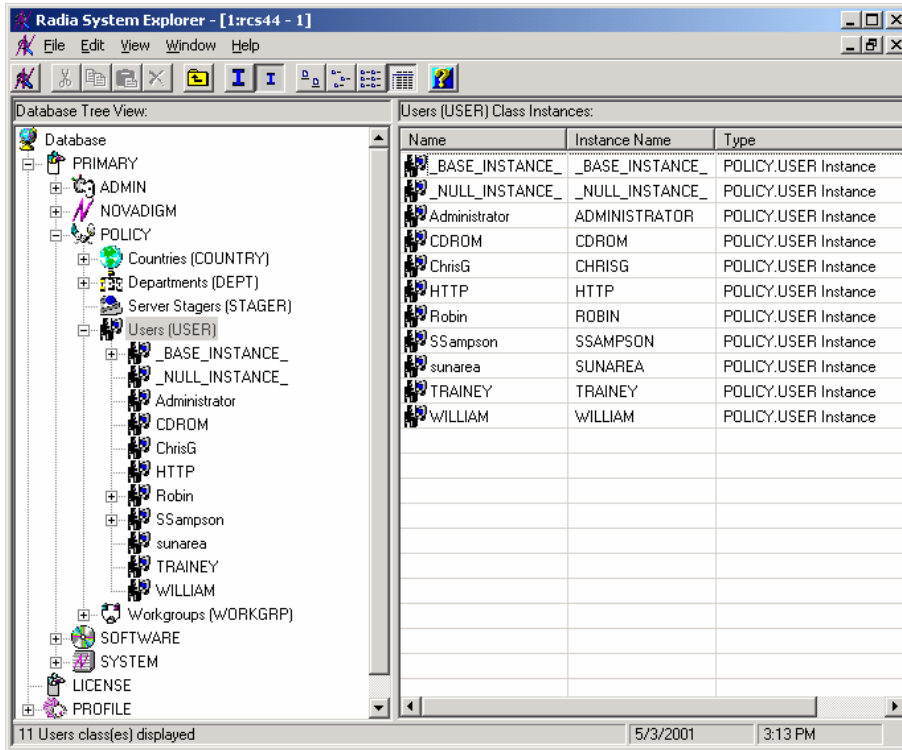


Figure 8.7 ~ USER class in the POLICY domain.

6. Double-click **_BASE_INSTANCE_**.

The attributes of the base instance appear in the list view.

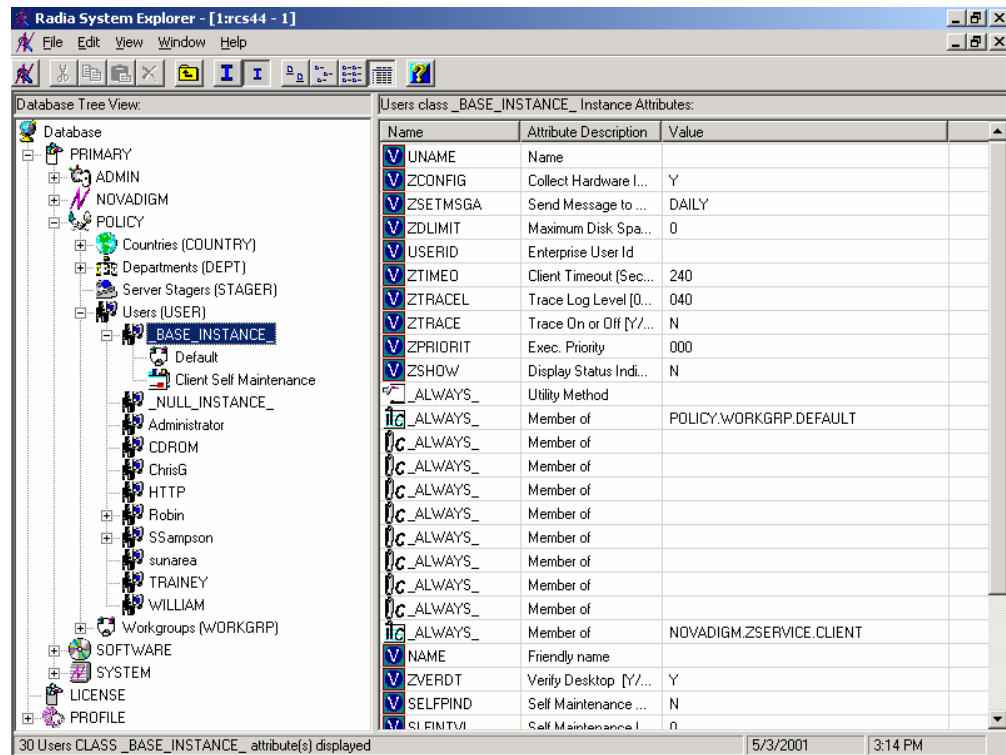


Figure 8.8 ~ Base instance of the USER class.

Note

Variables set in the base instance of the USER class in the POLICY domain apply to all new subscribers. Since ZCONFIG is set to **Y** by default, you should not have to change it to collect information for all users.

If you want to specify whether to collect information for only one subscriber, then double-click that subscriber's USER instance, and continue as follows.

7. Double-click **ZCONFIG** in the list view.

The **Editing Instance** dialog box opens with ZCONFIG already selected.

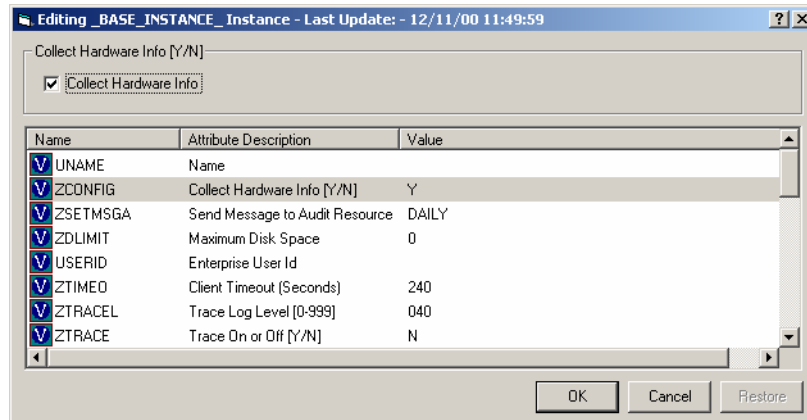


Figure 8.9 ~ Editing Instance dialog box.

8. Select **Collect Hardware Info** to collect the ZCONFIG object, or clear the check box to stop collection of the ZCONFIG object.
9. Click **OK** to close the **Editing Instance** dialog box and return to the Radia System Explorer.

Application Status – The APPEVENT Object

The APPEVENT object reports on the most recent *event* of an Application (ZSERVICE). An event is the action that the service performs, such as installing, updating, or removing an application. For example, use the APPEVENT object to check the status of an installation. If the installation failed, you will want to troubleshoot the issue. By default, all services are configured to send some application event information to the Radia Configuration Server. You can control what information is captured for the application by changing the EVENTS attribute in the Application instance.

Base Instance Behaviors for Application Events

The base instance of the ZSERVICE class, located in the SOFTWARE domain, specifies what information to collect for each application event. The following table describes the base instance values. You can select which events are reported on when you create the service in the New Application Wizard as shown in the *Publishing Applications and Content* chapter, or by directly editing the values in the Radia System Explorer.

Table 8.3 ~ Base Instance Values for ZSERVICE that Apply to the APPEVENT Object

Variable	Default	Explanation
ERTYPE	O	Send an APPEVENT object to the Radia Configuration Server.
EVENTS	AI=B	AI = Report on success or failure of Application Install.
	AD=B	AD = Report on success or failure of Application Deinstall.
	AU=F	AU = Report on failure of Application Update.
	AR=N	AR = Do not report on Application Repair.
	VA=F	VA = Report only on failure for Version Activation.
	VD=F	VD = Report only on failure for Version Deactivation.

Note

The following instructions use the Radia System Explorer. The Radia System Explorer is currently available for 32-bit Windows platforms. For more information, see the *Radia System Explorer Guide*.

To edit the events reported to APPEVENT using Radia System Explorer

1. From the **Start** menu, select **Programs, Radia Administrator Workstation, Radia System Explorer**. The **Radia System Explorer Security Information** dialog box opens.

Note

The **User ID**, as shipped from HP, is **RAD_MAST**. No password is necessary. This may have been changed in your installation. Check with your Radia security administrator to obtain your own **User ID** and **Password**, if necessary.

2. If necessary, type a **User ID** and **Password**, and then click **OK**. The **Radia System Explorer** window opens.
3. Double-click **PRIMARY**.
4. Double-click **SOFTWARE**.
5. Double-click **Application (ZSERVICE)**.

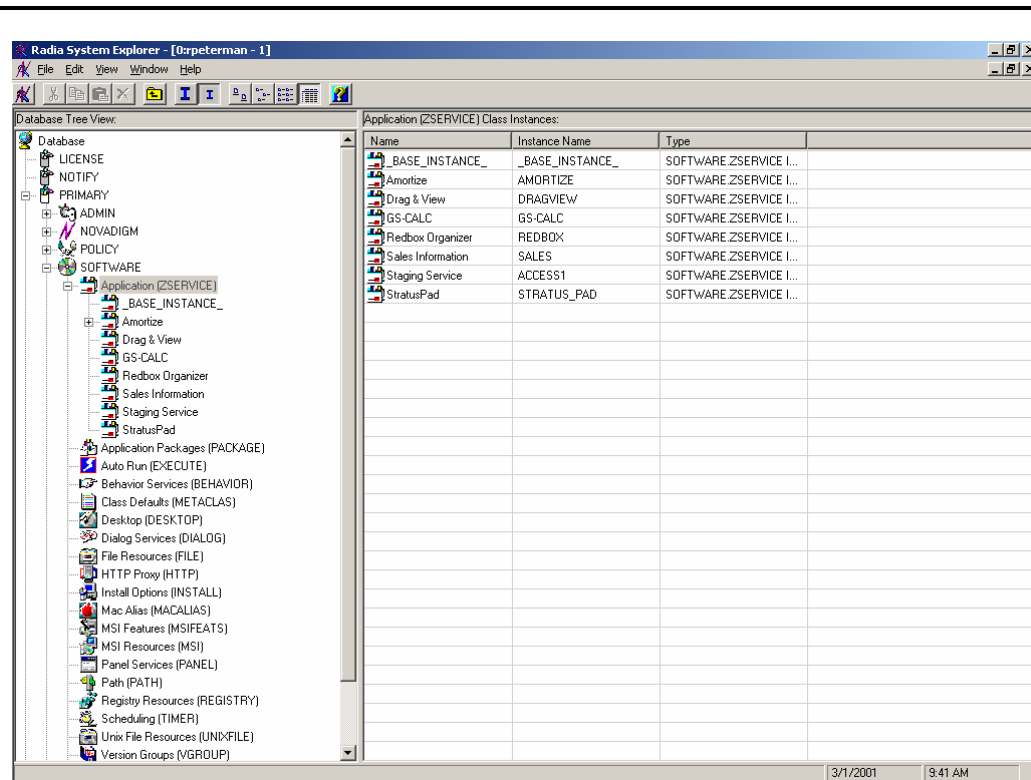


Figure 8.10 ~ Application (ZSERVICE) class.

6. Double-click the appropriate application instance.

Note

If you want to make these changes for all new application instances, double-click the **_BASE_INSTANCE_** and make your modifications there.

7. Double-click the **EVENTS** attribute for the application instance.
The **Editing Instance** dialog box opens.

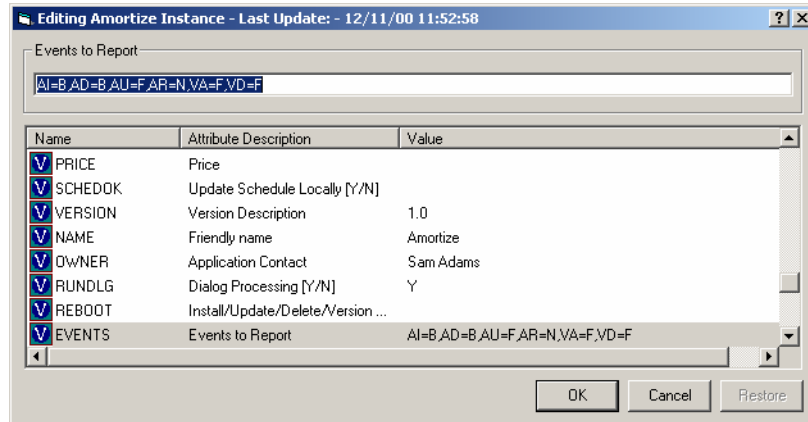


Figure 8.11 ~ Editing **EVENTS** attribute for the application instance.

8. Edit the **EVENTS** attribute using values from the following tables. Create your events to report by equating a keyword from Table 8.4 below with a value from Table 8.5 on page 329. For example, **AI=S, AD=S, AU=S, AR=S, AV=S, VA=S, VD=S** reports on the success of each possible event.

Table 8.4 ~ Events and Keywords

Event to Report	Keyword
Install	AI
Deinstall	AD
Update	AU
Repair	AR
Verify	AV
Version Activation	VA
Version Deactivation	VD

Table 8.5 ~ Event Status to Report

Status	Value
Success	S
Failure	F
Both Success and Failure	B
None (Default)	N

9. Click **OK** to close the **Editing Instance** dialog box and return to Radia System Explorer.

Viewing the APPEVENT Object

Use the Radia System Explorer to confirm successful completion of the application event, or view other information about the application event. Each service stores information from the APPEVENT object as an instance in the APPEVENT class. This instance is located in the client computer's domain in the PROFILE file.

Note

The following instructions use the Radia System Explorer. The Radia System Explorer is currently available for 32-bit Windows platforms. For more information, see the *Radia System Explorer Guide*.

To view the APPEVENT instance using the Radia System Explorer

1. From the **Start** menu, select **Programs, Radia Administrator Workstation, Radia System Explorer**. The **Radia System Explorer Security Information** dialog box opens.

Note

The **User ID**, as shipped from HP, is **RAD_MAST**. No password is necessary. This may have been changed in your installation. Check with your Radia security administrator to obtain your own **User ID** and **Password**, if necessary.

2. If necessary, type a **User ID** and **Password**, and then click **OK**. The **Radia System Explorer** window opens.
3. Double-click **PROFILE**.
4. Double-click the user ID or client computer.
5. Double-click **APPEVENT**.

6. Double-click the appropriate application. The attributes for the APPEVENT instance for that application appear in the list view. See the table at the end of this section for information on the attributes.

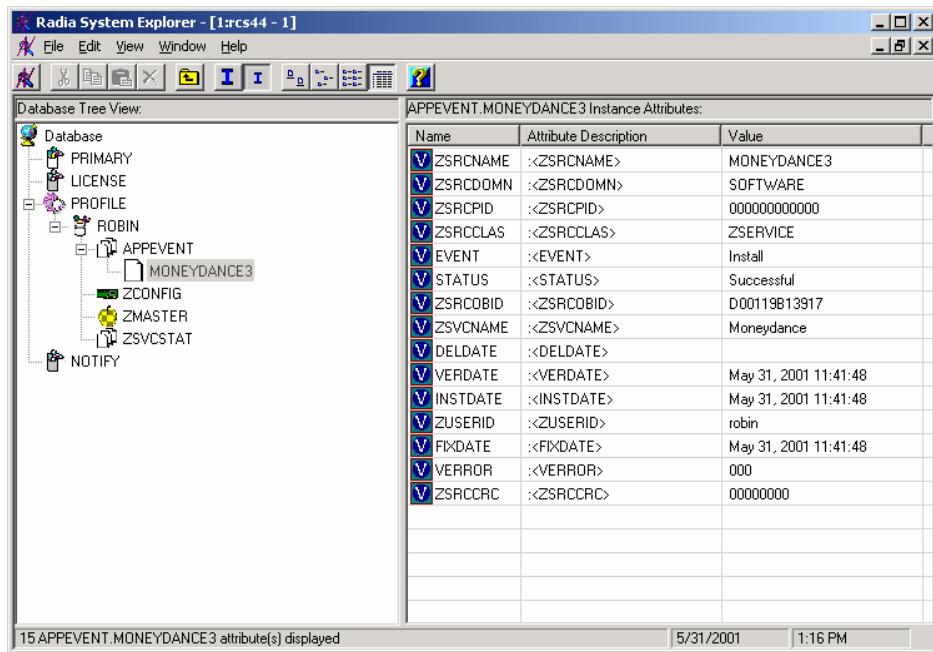


Figure 8.12 ~ Example of the APPEVENT object.

Table 8.6 below describes the attributes for the APPEVENT object.

Table 8.6 ~ Attributes in APPEVENT		
Attribute	Description	Example
DELDATE	Deletion date	Feb 1, 2001 15:14:09
EVENT	Application Event that last occurred for this service. Possible values are: Install Uninstall Update Repair Verify Version Activation Version Deactivation	Uninstall
FIXDATE	Fix date	Feb 1, 2001 15:06:21
INSTDATE	Installation Date	Feb 1, 2001 15:06:21
STATUS	Event status	Successful
VCOMMENT	Text string for error code in VERROR (only used for Versioned Deployments)	
VERDATE	Verification Date	Feb 1, 2001 15:06:21
VEERROR	Error code generated for a version change (only used for Versioned Deployments)	
VERSION	Contains friendly name of the version (only used for Versioned Deployments)	
ZSRCCLAS	Service class	ZSERVICE
ZSRCCRC	Service CRC	00000000
ZSRCDOMN	Service domain	SOFTWARE
ZSRCNAME	Service name	DRAGVIEW
ZSRCOBID	Service object ID	D001FBD32FFE
ZSVCNAME	Service friendly name	Drag & View
ZUSRID	User ID	alee

Creating Custom APPEVENT Objects

You may decide that there is additional information that you want to collect from the client computer. To do this, use a REXX script to create an APPMERGE object that defines your custom variables. Your custom variables can be either static or dynamic.

- **Static variables**

store information that does not change between events. For example, this information might contain a specific key that the customer needs in the Radia Database to report on the APPEVENT object. All static variable names contain the prefix **S_**. For example, if the customer needs a special variable for storing the Application ID, they would create a variable, **S_APPID** that equals **11111111**. Every APPEVENT object sent from the client would include the **S_APPID** variable.

- **Dynamic variables**

store information specific to an event. For example, you can create separate variables for Install Events and Uninstall Events. An *install failed* message would not make sense when you are trying to uninstall an application. Dynamic variables do not have any special naming convention, except that they do not begin with **S_**. Any non-static variable is considered to be a dynamic variable. After the merge, the dynamic variables are deleted from the object.

Figure 8.13 below is an example of a REXX script for APPMERGE. For information on creating REXX scripts, see the *REXX Programming Guide* and the HP OpenView web site.

```

/*****
/* properly set APPMERGE object for specifies criteria          */
/* *****/

RC = EDMGET(' APPMERGE',0);                               /* Get the Client APPMERGE object */

APPMERGE.V001 = 'A'
APPMERGE.V002 = 'B'
APPMERGE.V003 = 'C'
APPMERGE.V004 = 'D'
APPMERGE.V005 = 'E'

APPMERGE.S_V001 = 'KEEPER'
APPMERGE.OBJDATE = DATE('S')
APPMERGE.OBJTIME = TIME()

RC = EDMSET (' APPMERGE')

RETRUN;
```

Figure 8.13 ~ Sample REXX script setting APPMERGE object.

The newly created APPMERGE object with your variables is created in the application directory. If the APPMERGE object does not exist, then the objects merge process is bypassed. In the REXX script, you define the additional variables that will be merged into the APPMERGE object.

For more information on creating custom APPEVENT objects, see the *REXX Programming Guide*.

ODBC

The Radia System Explorer and Radia Client Explorer allow you to view only one object at a time. Therefore, you may wish to store your Radia objects in an Open Database Connectivity (ODBC) data source. Once the data has been transferred to an ODBC-compliant database, use any reporting tool capable of reading that database to generate reports.

Before storing object data in an ODBC-compliant database, the Radia Database must be configured to execute a method that writes the contents of selected fields from a Radia object to the ODBC-compliant database table. The ODBC data source must be defined on the Radia Configuration Server, but the database can reside on any computer that the Radia Configuration Server connects to.

Summary

- Use the Radia System Explorer or Radia Client Explorer to review the information collected from a client computer. This information is stored in the PROFILE file.
- Use the APPEVENT object to see the status of application deployments.
- You can connect to an ODBC database to view Radia objects or generate reports.



Naming Conventions

This appendix discusses the use of naming conventions to help you organize the software stored in the Radia Database.

When publishing applications, subscribers may have varying requirements such as:

- Different operating systems.
- Varying amounts of free space on their hard drives.
- Different processors, memory, and so on.
- Different data or applications, depending upon their job function, or other factors.

Due to these varying requirements, you might need to create several packages for a single application. To keep your digital assets organized in the Radia Database, we recommend that you create a naming convention to be used within your organization.

This section provides some recommendations that you can use as a starting point to create your own standards.

Categorizing Information

In general, consider using unique high-level identifiers with an underscore (`_`) to categorize information in the Radia Database. The Radia System Explorer groups instances based on the identifier that precedes the underscore.

Note

If you decide to use a high-level identifier *without* an underscore (`_`), you can use the Radia System Explorer's filtering capabilities to display only the instances with that identifier.

See the *Radia System Explorer Help* for more information.

For example, if you had a Windows 95/98 version and a Windows NT/2000 version of an application to calculate loan amortizations, you might name the packages **AMORTIZE_95/98** and **AMORTIZE_NT/2000** as shown in Figure A.1 on page 339.

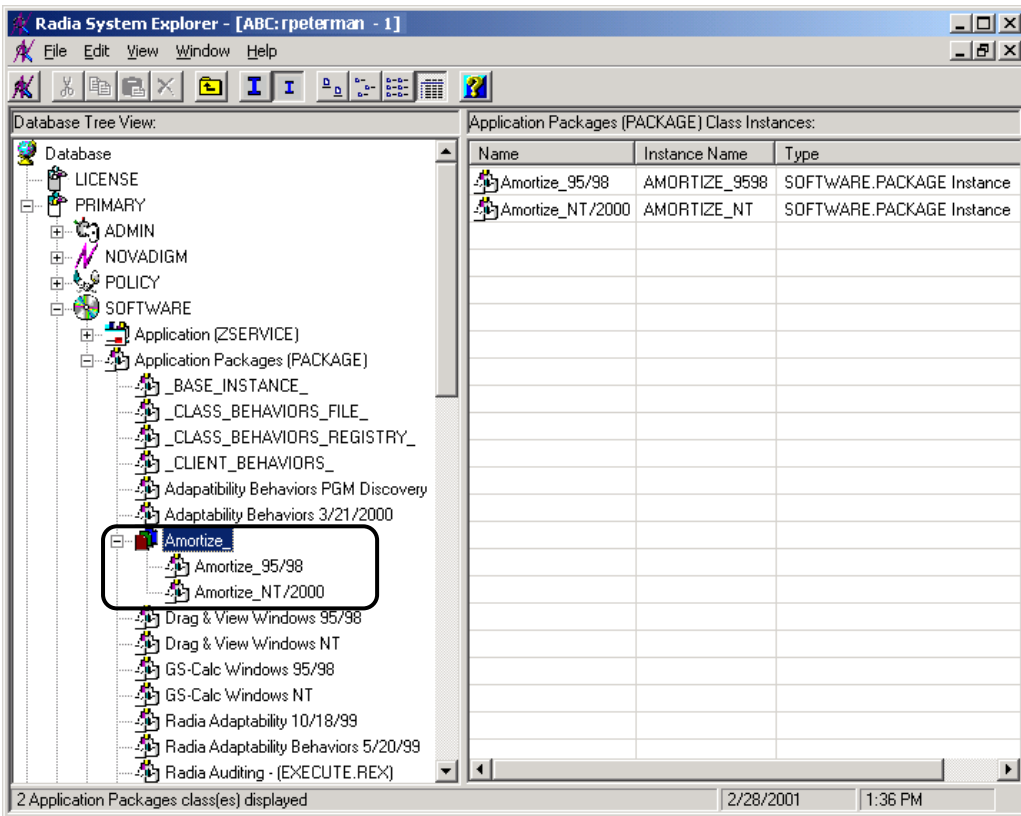


Figure A.1 ~ Instances grouped by identifier.

Naming Conventions for the POLICY Domain

We recommend that you use a variation of the following standards.

Table A.1 ~ Naming Conventions for the USER Class

Format	Description	Example
USERID	Identifies the subscriber.	SJones

When naming instances in a workgroup, use information that groups your subscribers appropriately. For example, if your company is organized by division and location, you might use conventions such as the following:

Table A.2 ~ Naming Conventions for the WORKGRP Class

Format	Description	Example
DIV_LOC_DESC	Defines ownership or assignment.	CTS_CLE_EVERYONE
• DIV	Identifies the division.	CTS (Corporate Technology Services)
• LOC	Identifies the location.	CLE (Cleveland)
• DESC	Provides additional description of the group.	EVERYONE (all users)

Naming Conventions for the SOFTWARE Domain

In a company organized by division and location, you might organize your digital assets using the following standards.

Table A.3 ~ Naming Conventions for the PACKAGE Class

Format	Description	Example
DIV_LOC_APPNAME_VER_OS	Defines the application.	CTS_CLE_WINZIP_80_WNT
• DIV	Identifies the division.	CTS (Corporate Technology Services)
• LOC	Identifies the location.	CLE (Cleveland)
• APPNAME	Identifies the application.	WINZIP
• VER	Identifies the version of the application.	80
• OS	Identifies the operating system that the application runs on.	WNT

Table A.4 ~ Naming Conventions for Delivery and Auditing Classes*

*All other classes in the SOFTWARE domain.

Format	Description	Example
REG_DIV_LOC_APPNAME_VER_OS	Defines the application.	NAM_CTS_CLE_WINZIP
• REG	Identifies the region.	NAM (North America)
• DIV	Identifies the division.	CTS (Corporate Technology Services)
• LOC	Identifies the location.	CLE (Cleveland)
• APPNAME	Identifies the application.	WINZIP

Determining the conventions that make sense for your organization may take some time. However, creating a convention up front and communicating it to all of your Radia administrators will keep you organized in the future.



Application (ZSERVICE) Attributes

This appendix describes the attributes that you will see if you open an Application (ZSERVICE) instance in the Radia System Explorer.

Many of the values for these attributes are set when using the Radia Administrator Workstation, such as the Radia Publisher or the New Application Wizard in the Radia System Explorer. You can also use the Radia System Explorer to modify the values of these attributes in the SOFTWARE.ZSERVICE class.

You may notice that some attributes do not have values, or their values are not displayed in the Radia System Explorer. The Radia Client uses these attributes. For example, an attribute such as INSTDATE is used to record the date the service was installed on the client computer. The value for this attribute is stored in the PROFILE file for the client computer in the Radia Database.

Table B.1 ~ SOFTWARE.ZSERVICE Attributes

Attribute	Description	Parameters	Default or Base Instance Value
ZSTOPnnn	Stops resolution if the expression evaluates to TRUE.	N/A	<blank>
ZSVCNAME	Name of the service used for descriptive purposes only. Value is set initially in the Short Description field in the New Application Wizard (used to create a service).	Maximum length of 24.	Unknown
ZSVCTTYP	Indicates which Radia Client will receive this application. Value is set initially in the New Application Wizard (used to create a service).	A = Application Manager S = Software Manager	<blank>
ZSVCMO	Designates a service as mandatory or optional. When using the Radia Application Manager, services <i>must</i> be marked as mandatory. When using the Radia Software Manager, services <i>must</i> be marked as optional. Value is set initially based on the setting for the application target type (ZSVCTTYP) in the New Application Wizard (used to create a service).	M = Mandatory O = Optional	0
ZSVCSEL	<i>Reserved for future use.</i>	N/A	N/A
ZSVCACTD	<i>Reserved for future use.</i>	N/A	N/A
ZSVCACTT	<i>Reserved for future use.</i>	N/A	N/A
ZSVCEXPD	<i>Reserved for future use.</i>	N/A	N/A
ZSVCEXPT	<i>Reserved for future use.</i>	N/A	N/A
ZSVCCONF	<i>Reserved for future use.</i>	N/A	N/A
ZSVCCSTA	Status code for the service that leads you to the reason why files for a service may not be deployed correctly.	000-999	999
ZSVCINST	N/A	N/A	N/A
ZSVCUPD	N/A	N/A	N/A
ZSVCPRI	Set the priority level for the service.	01 – 99 If disk space is not available on the client computer, services are downloaded based on: 01 = Highest priority 10 = Default value 99 = Lowest priority	<blank>

Table B.1 ~ SOFTWARE.ZSERVICE Attributes

Attribute	Description	Parameters	Default or Base Instance Value
ALWAYS	Any method that you specify for this attribute is unconditionally executed when this object is resolved.	A valid method name such as ZSYSTEM.ZMETHOD .PUTHIST_ZERROR	<blank>
ZCREATE	Name of method to install the service.	N/A	<blank>
ZINIT	Name of method to initialize the service.	N/A	<blank>
ZDELETE	Name of method to delete the service.	N/A	<blank>
ZUPDATE	Name of method to update the service.	N/A	<blank>
ZVERIFY	Name of the method to verify the service.	N/A	<blank>
ZREPAIR	Name of the method to repair the service.	N/A	<blank>
ZAVIS	The Radia Client manages and maintains this attribute to show the different states of the application in the catalog. The four states are: <ul style="list-style-type: none"> • Available indicates whether a service is available from the Radia Configuration Server. • Verified indicates whether a service has been verified. • Installed indicates whether the service has been installed. • Synchronized indicates whether the installed service has all of the latest changes from the Radia Configuration Server. 	Y = Yes N = No X = Unknown	YXNX
PUBDATE	<i>Reserved for future use.</i>	N/A	N/A
VERDATE	Indicates when the application was last verified (in local time) on the client computer. The Radia Client manages and maintains this attribute. Use the Radia System Explorer to access the APPEVENT object, stored in the PROFILE file on the Radia Configuration Server. This attribute is useful for reporting purposes.	MMM DD,YYYY HH:MM:SS For example: Jul 28, 2002 16:10:00	<blank>
UPGDATE	Indicates when the application was last updated (in local time) on the client computer. The Radia Client manages and maintains this attribute. Use the Radia System Explorer to access the APPEVENT object, stored in the PROFILE file on the Radia Configuration Server. This attribute is useful for reporting purposes.	MMM DD,YYYY HH:MM:SS For example: Jul 28, 2002 16:10:00	<blank>
UPDDATE	<i>Reserved for future use.</i>	N/A	N/A

Table B.1 ~ SOFTWARE.ZSERVICE Attributes

Attribute	Description	Parameters	Default or Base Instance Value
INSTDATE	Indicates when the application was installed (in local time) on the client computer. The Radia Client manages and maintains this attribute. Use the Radia System Explorer to access the APPEVENT object, stored in the PROFILE file on the Radia Configuration Server. This attribute is useful for reporting purposes.	MMM DD,YYYY HH:MM:SS For example: Jul 28, 2002 16:10:00	<blank>
DELDATE	Indicates when the application was removed (in local time) from the client computer. The Radia Client manages and maintains this attribute. Use the Radia System Explorer to access the APPEVENT object, stored in the PROFILE file on the Radia Configuration Server. This attribute is useful for reporting purposes.	For example: Jul 28, 2002 16:10:00	<blank>
AUTHOR	Name of the author of the service that appears in the properties for the service in the Service List. Value is set initially in the Author field in the New Application Wizard (used to create a service).	N/A	<blank>
DESCRIPT	Description of the service that appears in the properties for the service in the Service List. Value is set initially in the Long Description field in the New Application Wizard (used to create a service).	N/A	<blank>
VENDOR	Name of the vendor of the service. This appears in the properties for the service in the Service List. Value is set initially in the Vendor field in the New Application Wizard (used to create a service).	N/A	<blank>
URL	Address of a Web page where the subscriber can find additional information about the service. This appears in the properties for the service in the Service List. Value is set initially in the Web URL field in the New Application Wizard (used to create a service).	N/A	<blank>
CATALOG	Type in a name for the catalog to be displayed to subscribers when they click Properties in the Radia Software Manager user interface.	N/A	<blank>
SIZE	The size of the uncompressed application displayed to the subscribers when they click Properties in the Radia Software Manager user interface. Cumulative value of the SIZE defined in the PACKAGE class.	N/A	<blank>

Table B.1 ~ SOFTWARE.ZSERVICE Attributes

Attribute	Description	Parameters	Default or Base Instance Value
COMPsize	The size of the compressed application displayed to the subscribers when they click Properties in the Radia Software Manager user interface. Cumulative value of the COMPsize defined in the PACKAGE class.	N/A	<blank>
PRICE	Type in the price of an application to be displayed to subscribers when they click Properties in the Radia Software Manager user interface.	N/A	<blank>
SCHEDOK	Specifies whether the subscribers are allowed to change the update schedule for the service locally.	Y = Subscriber is allowed to change the schedule. N = Radia Configuration Server controls the update schedule.	<blank>
VERSION	Version of the software. This appears in the properties for the service in the Service List. Value is set initially in the Version field in the New Application Wizard (used to create a service).	N/A	<blank>
NAME	Friendly Name for the service. This appears in the properties for the service in the Software Catalog. Value is set initially in the Short Description field in the New Application Wizard (used to create a service).	N/A	<blank>
OWNER	N/A	N/A	<i>Reserved for future use.</i>
RUNDLG	Specifies whether to enable processing of dialog boxes during the installation of the service. For more information on using dialog boxes, see the technical document <i>Radia Installation Tailoring</i> on HP OpenView web site.	Y = Yes N = No	N

Table B.1 ~ SOFTWARE.ZSERVICE Attributes

Attribute	Description	Parameters	Default or Base Instance Value
REBOOT	<p>Used to restart the client computer based on application event.</p> <p>Note: REBOOT=S (soft boot) is not supported for Unix Radia clients. REBOOT=H (hard boot) is not supported for Macintosh Radia clients. Reboot Panels are not supported for Radia Application Manager Unix clients.</p>	<p>Event to report on: AI = Install AD = Deinstall AU = Update AR = Repair AV = Verify</p> <p>Type of reboot: S = Soft Boot (Default of type Y panel.) H = Hard Boot (Default of type A panel.) N = None</p> <p>Type of panel: Q = No panel. A = OK button only. Y = OK and Cancel button.</p> <p>Type of connect: None specified: Reboot on Machine connect (context = m). U = reboot on user connect only (context = u). MU =reboot when both machine and user parts of the service have been installed.</p> <p>Example: AI=S performs a soft boot on application installation</p>	

Table B.1 ~ SOFTWARE.ZSERVICE Attributes

Attribute	Description	Parameters	Default or Base Instance Value
EVENTS	Indicates which events to report on.	Event to report on: AI = Application Install AD = Application Deinstall AU = Application Update AR = Application Repair AV = Application Verify VA = Version Activation VD = Version Deactivation What (about the event) to report on: S = Success F = Failure B = Both Success and Failure N = None	AI=B,AD=B,A U=F,AR=N,VA=F,VD=F
ERTYPE	Set on the Radia Configuration Server, this sends an APPEVENT object to the Radia Configuration Server. Currently supports object format only.	O = Object <i>Currently supports object format only.</i>	O
ADAPTIVE	Indicates whether the installed package is dependent on client settings that must be monitored periodically. If the settings change, the client must reconnect to the Radia Configuration Server to get new or different components. Useful for "plug and play" services.	Y = Yes N = No	<blank>
LREPAIR	Enables local repair of broken applications. If an application is broken because of missing files, the files (stored locally) can be used to repair the application.	Y = Yes N = No	N

Table B.1 ~ SOFTWARE.ZSERVICE Attributes

Attribute	Description	Parameters	Default or Base Instance Value
REMOVAL	Controls removal of the service.	<p>If ZSVCMO is set to M, set REMOVAL to:</p> <p>A = Abandon (deletes the objects, but not the components)</p> <p>D = Delete (deletes the objects and components)</p> <p>If ZSVCMO is set to O, set REMOVAL to:</p> <p>A = Abandon (deletes the objects, but not the components)</p> <p>D = Delete (deletes the objects and components)</p> <p>U = Unmanage (does not delete the objects or components)</p>	D
RECONFIG	Indicates whether an application can be relocated after it has been installed. For example, this allows you to move an application that was installed on the C drive to the D drive without removing and re-installing the application.	<p>Y = Yes</p> <p>N = No</p>	<blank>
ZSVCCAT	Specifies whether the service is visible in the Service List.	<p>Y = Yes</p> <p>N = No</p> <p><i>Set to N for mandatory applications.</i></p>	<blank>
UIOPTION	Controls whether the status window appears. Radia Software Manager only.	<p>NONE = No interface appears.</p> <p>FULL = Interface appears and Cancel button is available.</p> <p>INFO = Interface appears with no option to cancel.</p>	<blank>
CACHE	Enables caching.	<p>Y = Yes</p> <p>N = No</p>	N

Table B.1 ~ SOFTWARE.ZSERVICE Attributes

Attribute	Description	Parameters	Default or Base Instance Value
CACHELOC	<p><i>For Windows Installer applications only.</i></p> <p>Location of the folder on the client computer that is used to cache the compressed application files needed for the product.</p> <p>Radia support for Windows Installer tags the PRODGUID value to this value to create the folder. For example,</p> <p>If CACHELOC=C:\progra~1\Novadigm and PRODGUID = 12345_XXXX the cache folder would be: c:\progra~1\Novadigm\12345_XXXX\cache</p> <p>Note: The folder \cache is automatically appended to PRODGUID. If you are not deploying a Windows Installer-enabled application, the files will be cached in IDMDATA.</p>	N/A	_UNDEF_
CACHELIM	<p>Cache limit, which is defined as the percentage of used drive space.</p> <p>Note: Used for Windows Installer applications only.</p> <p>If the percentage of used space is greater than the cache limit, then all of the cached files for the product are removed and the cache folder is deleted.</p> <p>This is checked after every file is cached on the disk.</p>	Type a number between 000 and 100.	000
ZDISCONN	Allows the client to disconnect from the Radia Configuration Server if there is an open session with the Radia Configuration Server.	<p>Y = Disconnects the client from the Radia Configuration Server.</p> <p>N = Does not disconnect from the client from the Radia Configuration Server.</p>	N
ZSYSACCT	Specifies whether to install the service under the system account or the user's account. <i>Windows and Macintosh OS/X Radia Clients only.</i>	<p>Y = The application is installed using the system rights.</p> <p>N = The application is installed using the rights of the user who is logged on.</p>	N
MCELIGBL	Indicates if the application is eligible for multi-casting.	<p>Y = Yes</p> <p>N = No</p>	Y

Active Component Server

See *Radia Configuration Server*.

Administrative Installation Point (AIP)

An **AIP** is a server share or local directory structure that contains all of the files needed to run setup for a Windows Installer-enabled application.

APPEVENT

APPEVENT is the client object that provides information about an application event, such as success or failure of the installation.

Application Manager

See *Radia Application Manager*.

applications

Also called software, data, or services.

Applications are one type of content that Radia can manage on subscriber computers. Use the Radia Publisher to create packages of data to be managed on your subscribers' computers.

attribute

Also called *field*, *variable*, or *property*.

An **attribute** is a single, descriptive data item in a class. The class template contains a definition (e.g., the name, data type, description, and length) for each attribute that makes up the class. Class instances contain a set of attributes and each attribute contains a value.

attribute property

An **attribute property** controls some aspect of how an attribute is processed on the Radia Configuration Server and client computer. Each attribute defined in a class template has a set of Radia Configuration Server properties and a set of client properties.

audience list

An **audience list** is a directory of the subscribers for an application used by Radia Notify.

base instance

The **base instance** contains the default values for the attributes that make up a class. When you create a new instance in that class, the attributes in the new instance inherit the default values, as specified in the base instance.

byte level differencing

Byte level differencing is the process of publishing a patch containing updates or corrections to a resource. The patch is calculated by differencing an existing copy of the resources in the Radia Database against the resources currently being published.

class

A **class** defines a category of the distribution model to be managed. It is conceptually similar to a schema in a relational database structure or a file layout in a traditional flat file. Each of the required elements of a distribution model (e.g., users, applications, etc.) is defined in the Radia Database by its class.

class connection variable

A **class connection variable** determines the path of resolution for a client's distribution model during the Client Connect process. It is a branch in the resolution process.

A class connection is resolved and resolution continues using the target instance identified in the class connection variable if the class connection variable attribute's name is `_ALWAYS_`, `INCLUDES`, `REQUIRES`, or if the name of the attribute matches the current value of the system message.

class instance

Also called *instance*.

A **class instance** is an object in the Radia Database that contains a specific occurrence of a class. This is analogous to a row in a relational data table or a record in a traditional flat file.

clean computer

A **clean computer** is a computer on which the operating system has just been installed, and no further changes have been made.

Client

See *Radia Client*.

client computer

A **client computer** is a subscriber's computer that has the Radia Client software installed on it.

Client Explorer

See *Radia Client Explorer*.

client object

A **client object** is a file located on the client computer that contains information about the configuration of services or hardware.

component class

A **component class** is a type of class used to identify the items (files, registry entries, links, icons, and so forth) that make up the content identified by a Radia Configuration Server class instance. Typically, this class' instances have distributable data associated with them such as FILE, REGISTRY, or DESKTOP.

Use the Radia System Explorer's Class Editor to set the class type to "Component".

configuration class

A **configuration class** identifies content to be managed on subscribers' computers by grouping together instances of component classes. Typically, a configuration class' instances do not have distributable data associated with them. They are connected to instances of one or more component classes, perhaps through an instance of another configuration class. Examples: ZSERVICE, PACKAGE, VGROUP, VERSION, and so forth.

Use the Radia System Explorer's Class Editor to set the class type to "Configuration".

Configuration Server

See *Radia Configuration Server*.

Database

See *Radia Database*.

desired state

The **desired state** embodies the content that Radia manages for a specific subscriber's computer. A model representing the desired state for each subscriber's computer is stored in the Radia Database. The desired state model is created and managed using the Radia System Explorer.

domain

A **domain** logically partitions a file in the Radia Database to group "like" classes together.

Examples: POLICY domain; SOFTWARE domain; SYSTEM domain

- The POLICY domain contains the classes that identify users individually and by their association with groups of other users.
- The SOFTWARE domain contains the classes needed to define and deploy applications. Radia administrators will do most of their work in the POLICY and SOFTWARE domains of the PRIMARY file.
- The SYSTEM domain contains the classes that contain administrative and process control definitions.

dual mode

The **dual mode** installation program installs both Radia Clients (the Radia Application Manager and Radia Software Manager) simultaneously.

entitlement

Connection of a user to a service according to policy.

expression variable

An **expression variable** contains a single line REXX command that is executed during resolution. If the expression evaluates to **true** in an attribute named ZSTOP, it causes resolution of the current instance to end. Resolution continues in the calling instance with the variable following the one that called the instance containing the expression variable.

file

A **file** is the highest level in the hierarchy of the Radia Database and it groups similar domains together.

Example: PRIMARY file

The PRIMARY file is used to define and maintain the distribution model. This is one of the pre-configured files distributed with the Radia Configuration Server and installed when you first install Radia. Others are the NOTIFY file and the PROFILE file. Radia administrators will do most of their work in the PRIMARY file.

fractional differencing

The act of calculating the delta between the actual state and the desired state.

instance

Also called *class instance*.

An **instance** is a Radia Database object containing a specific occurrence of a class. This is analogous to a row in a relational data table or a record in a traditional flat file. The attributes of an instance contain the data describing one specific entity of that class.

Manager

See *Radia Configuration Server*.

mandatory service

A **mandatory service** is a service that is required on the subscriber's computer. Services are made mandatory by setting the ZSVCMO variable in the Application instance to **M**.

method

A **method** is a program that performs functions that are meaningful in the context from which they are called.

Methods can be written in REXX or in a language that produces an executable that can validly run on the platform where it is invoked. The HP-supplied REXX run-time environment interprets REXX methods.

Client methods run on the subscriber's computer, while Radia Configuration Server methods run on the Radia Configuration Server computer.

method variable

The **method variable** identifies the method, or program, to be executed as part of the resolution process.

For Radia Configuration Server methods, it contains a reference to an instance of the SYSTEM domain PROCESS class that identifies the method to execute and the parameters to be passed to the method. Radia Configuration Server methods are located in the Radia Configuration Server BIN subdirectory for .exe methods or in the Manager REXX subdirectory for REXX methods.

For Radia Client methods, it contains the name of the method to execute on the subscriber's computer. The name of a method variable that executes a Radia Client method identifies the event (such as installing or removing software) for which the method should be executed. Client methods are located in the IDMSYS location on the subscriber's computer.

Notify

A **notify** forces one or more client computers to connect to the Radia Configuration Server to update or remove an application or send an e-mail to subscribers of a particular service.

null instance

The **null instance** of a class is used when an instance of that class that does not exist. During resolution, if a connection is attempted to a non-existent instance of a class, the Null Instance is used. This provides a resolution path that handles broken connections.

object

An **object** is a data structure containing variables stored in a file with an .EDM suffix on the client computer. An object can consist of one or more instances. Each instance contains the same set of variables. The values held in the variables can vary from instance to instance.

Use the Radia Client Explorer to view, edit, or create objects.

optional service

An **optional service** is a service that is available to subscribers via the Service List of the Radia Software Manager user interface. Services are made optional by setting the ZSVCMO variable in the Application instance to "O".

package

A **package** is the data that is published as an individual unit.

packaging

The act of identifying and gathering the components of an application.

policy

A **policy** determines *which* subscribers (or computers) have access to *what* software. The POLICY domain class instances identify users. Connections to the POLICY class instances identify the content to be managed for those subscribers.

promote

When you **promote** a package that was created with the Radia Publisher, you are storing the package in the Radia Database.

publishing

The act of promoting the result of packaging to the Radia Database.

Publisher

See *Radia Publisher*.

Radia Application Manager

The **Radia Application Manager** radskman is the Radia Client executable that manages mandatory services. The Radia administrator uses the Radia System Explorer to specify the services that the Radia Application Manager manages on the subscriber's computer. No user interface is available.

Radia Client

The **Radia Client** (Radia Application Manager and/or Radia Software Manager) runs on the subscriber's computer. It communicates with the Radia Configuration Server to receive information about the desired state of the subscriber's computer, and compares that information to the actual state of the subscriber's computer. Then, the Radia Client makes any adjustments necessary to make the actual state match the desired state.

Radia Client Explorer

The **Radia Client Explorer** (Object Editor) can be used to view or edit local objects, or create new objects. You can also use the Radia Client Explorer to view objects located on a file server or on other computers to which you are connected via a local area network (LAN).

Radia Configuration Server

Also called *Active Component Server* or *Manager*.

The **Radia Configuration Server** distributes applications to client computers. It runs on the server and maintains the Radia Database, which stores information that the Radia Configuration Server needs to manage digital assets for distribution to client computers.

Radia Database

The **Radia Database** stores all of the information necessary to manage digital assets on a client computer, including:

- The software and/or data that Radia distributes.
- The desired state of each client computer with respect to the Radia-managed content.
- The policies determining which subscribers can subscribe to which packages.
- Security and access rules for Radia administrators.

Use the Radia System Explorer to manipulate the Radia Database.

Radia Inventory Manager

The **Radia Inventory Manager** is a policy-driven, inventory management tool that automatically discovers information about software and hardware, and consolidates the results into Web-based reports. The Radia Inventory Management client is a WBEM (Web-based Enterprise Management) consumer.

Radia Publisher

The **Radia Publisher** is used to create packages of data and store them in (i.e., promote them to) the Radia Database.

Radia Scheduler

The **Radia Scheduler** service (radsched), installed with the Radia Application Manager, allows you to deploy a service at a specific time.

Radia Software Manager

The **Radia Software Manager** `radiaui` is the Radia Client executable used to manage optional services. The Radia administrator uses the Radia System Explorer to specify the services that are available to the subscriber.

The subscriber installs and manages data that is available from the Radia Software Manager user interface (Service List).

Radia Staging Server

The **Radia Staging Server** is used to store data required for deploying applications on a computer other than the computer with the Radia Configuration Server.

Radia System Explorer

The **Radia System Explorer** is used to manipulate the contents of the Radia Database.

resolution

Resolution occurs when the Radia Configuration Server accomplishes a unit of work in response to a service request. The unit of work is defined by the contents of the Radia Database and parameters included in the service request itself.

In other words, what Radia does depends upon what information is stored in the Radia Database and what information accompanies the request for Radia to perform some action.

For example, the Radia Client Connect submits service requests by sending an object to the Radia Configuration Server. The Radia Configuration Server then performs resolution in response to each request. The parameters that control the processing of the service request are in the input object.

resource

Also called *file*.

A **resource** is a single component that is bundled into a package. Examples of resources are files, desktop links, and sets of registry keys.

Scheduler

See *Radia Scheduler*.

service

Also called a software application, application, or software.

A **service** is a group of related packages.

session

A **session** identifies a packaging exercise in Radia Publisher that results in the creation of one Radia package.

Software Manager

See *Radia Software Manager*.

staging server

See *Radia Staging Server*.

subscriber

A **subscriber** is the person who uses Radia-managed applications on a client computer.

symbol

A **symbol** is the name of a variable in global memory, preceded by an ampersand.

symbolic substitution

Database instances and client objects consist of variables that contain values. The value of a variable can contain a specification that refers to the value of another variable. During the resolution process, Radia can substitute the value of the second variable to replace the reference in the first variable.

References to be processed with symbolic substitution are specified using an initial ampersand.

For example, one of the `_ALWAYS_` connection variables in the `SYSTEM.PROCESS.ZMASTER` instance of the Database contains the value `POLICY.USER.&(ZMASTER.ZUSERID)`. The reference `&(ZMASTER.ZUSERID)` refers to the `ZMASTER` object's `ZUSERID` variable, which contains the user ID typed into the Radia logon dialog box on the Radia Client, when the subscriber visits the Radia Software Management Web page. If the user typed in `JDOE` for the user ID, symbolic substitution would render the effective value of the `_ALWAYS_` connection variable as `POLICY.USER.JDOE`.

The substitution is not permanent, i.e., the value in the Radia Database doesn't change. Only the value in the in-storage object derived from the Radia Database instance for the current resolution process contains the substituted value.

The parentheses are required only if the reference is qualified, i.e., contains a period. If the reference is unqualified, the parentheses are optional.

For example, these symbolic substitution specifications are correct:

```
&(ZMASTER.ZUSERID)
&(ZUSERID)
&ZUSERID
```

and this is incorrect:

```
&ZMASTER.ZUSERID
```

System Explorer

See *Radia System Explorer*.

Timer

See *Radia Scheduler*.

variable

A **variable** is a piece of named storage that contains a changing value. The variable's value forms a part of the client's resolved distribution model and can influence the resolution process through messaging or symbolic substitution.

version group

A **version group** is a collection of one or more versions of one application that Radia deploys and manages. Use version groups to roll out a new version of an application to the appropriate subscribers, and activate it upon delivery or at a pre-determined time.

Web-based Enterprise Management (WBEM)

Web-Based Enterprise Management (WBEM) is an initiative from the Distributed Management Task Force (DMTF) to develop standard technologies for accessing management information in an enterprise-computing environment.

Windows Management Instrumentation (WMI)

Windows® Management Instrumentation (WMI) is the Microsoft implementation, for Windows platforms, of Web-Based Enterprise Management (WBEM). WMI provides support for WBEM's Common Information Model (CIM).

ZCONFIG

The **ZCONFIG** object contains basic hardware information for the client computer such as processor, operating system, and drives.

ZMASTER

The **ZMASTER** object contains information about the client computer that is necessary to run the Radia Application Manager such as the identity of the subscriber and the IP address of the client computer.

ZSTOP

A **ZSTOP** expression is used to stop the resolution of an instance based on certain criteria. For example, create a **ZSTOP** expression to deploy a **ZSERVICE** instance only to client computers with a particular operations system.

ZTIMEQ

The **ZTIMEQ** object is created, based on information in the Scheduler (TIMER) instance, when a timer is deployed to the client computer.

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