

HP OpenView Reporting Server Using Radia

Radia Reporting Server Guide

Software Version: 4.0

for the Windows operating system



Manufacturing Part Number: T3424-90057

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[<http://www.hp.com/managementsoftware/services>](http://www.hp.com/managementsoftware/services)

There you will find contact information and details about the products, services, and support that HP OpenView offers.

The support site includes:

- Downloadable documentation
- Troubleshooting information
- Patches and updates
- Problem reporting
- Training information
- Support program information

About this Guide

Who this Guide is for

This guide is for customers using the Radia Reporting Server version 4.0 as an interface to the reportable data captured by the Radia extended infrastructure product suite.

What this Guide is about

This guide introduces the features and capabilities of the Radia Reporting Server. It defines the components used in creating a Radia Reporting environment, including the prerequisites and procedures for installing and configuring the Radia Reporting Server to access your existing SQL databases for Radia, such as inventory, patch, and usage databases, as well as an optional LDAP directory.

You will be instructed how to create, filter, and export reports, and shown how to browse for specific entries.

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
↵	Arial Unicode MS	When displaying lines of code that extend beyond the defined margins of the manuscript, this symbol indicates that the code continues uninterrupted and indented on the next line. Radskman ip=<RadiaConfigurationServerIPAddress>,↵ port=<RadiaConfigurationServerport>
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: The NOVADIGM domain existed in the Radia Database versions prior to the 4.0 release. As of the 4.0 release, the NOVADIGM domain is being renamed the PRDMAINT domain.
Radia Configuration Server	Manager, Active Component Server
Radia Database	Radia Configuration Server Database

Contents

Preface	5
About this Guide	5
Who this Guide is for	5
What this Guide is about	5
 1 Introduction	 13
Overview	14
The Radia Reporting Server Environment.....	15
Terminology.....	16
Summary.....	17
 2 Creating the Radia Reporting Server Environment	 19
Radia Reporting Server Requirements.....	20
Radia Infrastructure Prerequisites.....	22
Radia Infrastructure Updates.....	22
Radia Integration Server Update for pre-Radia 4.0 users	22
Radia Configuration Server Update.....	22
Radia Inventory Manager Server Update for pre-Radia 4.0 users	23
Radia Database Prerequisites	24
Radia SQL Server Database Prerequisites	24
Radia Inventory Manager Database Updates for SQL Server	24
Radia Usage Manager Database Update for SQL Server.....	25
Radia Patch Manager Database Update for SQL Server.....	25
Radia Oracle Database Prerequisites	25
Radia Inventory Manager Database Updates for Oracle	26
Radia Usage Manager Database Update for Oracle.....	26
Radia Patch Manager Database Update for Oracle.....	27
Radia Inventory Reporting Auditing Requirements	27

Radia Reporting Server System Implementation Tasks	29
Reviewing your SQL Server Access and Database DSNs.....	29
Installing the Radia Reporting Server	29
Configuring Microsoft Internet Information Services for Radia Reporting	34
Windows Server 2003 Additional Configuration for IIS.....	35
Modifying the Radia Reporting Server Configuration File.....	39
Using a Text Editor to Modify config.tcl.....	39
Using a Web Browser to Modify config.tcl	41
Configuring the Radia Reporting Server for Notify	43
Enabling the Radia Reporting Server Cache Feature	44
Accessing the Radia Reporting Server Web Site	45
Adding Components to Radia Inventory Audits	46
 3 Radia Reporting Server Features	53
Accessing the Radia Reporting Server	54
About the Radia Reporting Server Interface	54
About the Banner Area	56
Using Search Controls to Select Filters.....	56
The LDAP Filters Area	57
The Data Filters Area.....	58
Using Display Controls to Select Reporting Views	60
Applying a View from the Reporting View Area.....	61
About Reporting Windows	62
Using the Windows Action Bar Icons.....	62
 4 Customizing Reports	71
Backing up Your Reporting Object Files.....	73
Understanding the Reporting Object Files.....	74
Reporting Object File Construction	74
Reporting Object File Types.....	74
View Group Objects and View Objects	75
Filter Group Objects and Filter Objects.....	77
Window Objects	79
Datasource Objects	80
Modifying Reporting Object Files.....	82
Modifying View Group Objects	82
View Group Object Global Section	82
View Group Object Views Section	83

Modifying View Objects.....	83
View Object Global Section	83
View Object Header Section.....	84
View Object Windows Section	85
Modifying Filter Group Objects.....	86
Filter Group Object Global Section.....	86
Filter Group Object Filters Section	87
Modifying Filter Objects.....	87
Filter Object Global Section.....	87
Modifying Window Objects	89
Window Object Global Section	89
Window Object Detail Section	90
Window Object Graph Section.....	93
5 Troubleshooting	95
About the Radia Reporting Server Log	96
Common Radia Reporting Server Problems and Solutions	97
Modifying the CGI Timeout Value in IIS	97
A Sample Reporting Scenario	101
Scenario: Report for Sales Department on Devices Needing Service Pack Updates.....	101
Step 1: Access Radia Reporting.....	101
Step 2: Search for Sales Department Devices Only.....	102
Step 3: Limit Search to Targeted Operating System	103
Step 4: Search for Operating Systems without Service Pack 4.....	104
Step 5: Save or Print the Report	105
Lists	107
Figures	107
Tables	109
Procedures.....	110
Index	111



Introduction

At the end of this chapter, you will:

- Be familiar with the Radia Reporting Server reports.
- Be able to create a Radia Reporting environment.
- Understand the contents of this guide.

Overview

As part of the Radia extended infrastructure, the web-based Radia Reporting Server allows you to query the combined data in existing Radia Inventory Manager, Radia Patch Manager, and Radia Usage Manager databases and create detailed reports. In addition, you have the option of mounting an existing LDAP directory, which allows you to filter your data using your LDAP directory levels.

The Radia Reporting Server interface provides a dynamic and intuitive way to use Radia SQL data for reporting and overall environmental assessment.

Radia Management Portal Radia Reporting

Search Controls

LDAP Filters

- dc=com
- *dc=nvddemo*
- cn=Manager
- ou=Finance
- ou=Sales
- ou=Human Resources
- ou=Research and Development

Data Filters

- Operational Related
- Inventory Manager Related
- Patch Manager Related
- Usage Manager Related

Display Controls

Reporting Views

- Executive Summaries
- Hardware Reports
 - Default
 - Hardware Details
 - Hardware Summary
- Operational Reports
- Patch Manager Reports
- Usage Manager Reports
- Software Reports

Search Criteria:

DEVICELIST FILTERS

LDAPSQL LDAP Navigation (dc=nvddemo,dc=com)

Radia Managed Devices

10 items | 1 - 10 of 25 items

Details	Last Connect	Radia ID	Device	IP Address	Vendor	Model	Class	Operating System	OS Level
	2004-08-14 09:41:38	SBERUBE	SBERUBED600	208.244.225.186	Dell Computer Corporation	Latitude D600	Portable	Microsoft Windows XP Professional Version 5.1.2600 [Build 2600]	Service Pack 1
	2004-08-14 09:41:26	SBERUBE-HOME	SBERUBE-HOME	192.168.50.120	System Manufacturer	System Name	Tower	Microsoft Windows XP Professional Version 5.1.2600 [Build 2600]	Service Pack 1
	2004-05-12 11:30:25	JB	JB	192.168.1.103	Dell Computer Corporation	Precision WorkStation 360	Mini Tower	Microsoft Windows XP Professional Version 5.1.2600 [Build 2600]	Service Pack 1
	2004-04-23 11:16:57	SERVER	SERVER	192.168.50.125	Dell Computer Corporation	OptiPlex GX270	Mini Tower	Microsoft Windows 2000 Server Version 5.0.2195 [Build 2195]	Service Pack 4

Figure 1.1 ~ Radia Reporting Server Web interface.

The Radia Reporting Server Environment

A Radia Reporting environment is illustrated in *Figure 1.2 ~ Radia Reporting Environment* below.

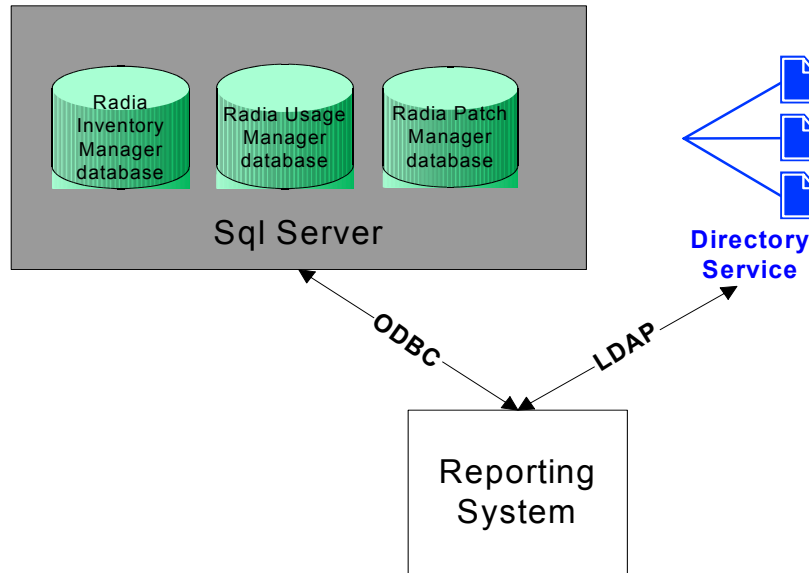


Figure 1.2 ~ Radia Reporting Environment.

The Radia Reporting environment includes the following required and optional components:

■ Reporting System Modules

The Reporting System modules do not require the Radia Management Portal. They can be installed on any Win32 machine, which includes the required Web server, discussed below.

Note

The Radia Management Portal is only required if you intend to use the Radia Reporting Server to notify devices.

■ Web Server

The Radia Reporting Server requires the Microsoft Internet Information Service (IIS) component for Web services, which is available as a component of all Win32 platforms and Windows Server 2003. For more information on IIS, refer to your Windows Operating System documentation.

- **Connections to Radia SQL Databases**

Radia Reporting can access any Radia SQL database, such as those for Radia Inventory Manager, Radia Patch Manager, and Radia Usage Manager. **However, all SQL databases accessed by the Radia Reporting Server must exist on a single SQL Server.**

- **Connections to LDAP Directory** (optional)

The Radia Reporting Server supports optional access to an existing LDAP directory in your enterprise. Access to an LDAP directory allows you to filter report data according to the directory entries.

Terminology

Become familiar with the following terms used throughout this guide.

bulletin

A bulletin is a vulnerability reported by Microsoft about one of their products.

patch

The patch is the actual file to be deployed and executed to fix a vulnerability. A bulletin may have multiple patches depending on platform, number of bits, and language.

qnumber

A qnumber is equivalent to the ticket opened by Microsoft Support. One bulletin can have multiple qnumbers.

Summary

- The Radia Reporting Environment requires access to Radia SQL Databases, such as inventory, patch, and usage. All databases accessed by the Radia Reporting Server must exist in the same SQL Server.
- Optionally, the Radia Reporting Environment can access an existing LDAP Directory in your enterprise.
- The Radia Reporting Server must be installed on a Win32 platform with the Microsoft IIS component (for HTTP Web services).

Creating the Radia Reporting Server Environment

At the end of this chapter, you will:

- Know the prerequisites for obtaining reports with the Radia Reporting Server.
- Be able to apply the prerequisites required for using the Radia Reporting Server.
- Be able to add all WBEM components needed for the Radia Reporting Server to your Radia Inventory Manager Reporting audit package.
- Be able to configure the Radia Reporting Server to connect to your databases.
- Optionally, be able to configure the Radia Reporting Server to connect to an existing LDAP directory.
- Be able to access the Radia Reporting Server Web site.

Radia Reporting Server Requirements

Note

As always, be sure to test any recommended or required environment changes before they are implemented into production.

The Radia Reporting Server provides unified access to your existing SQL Server or Oracle databases including the following Radia products:

- Radia Inventory Manager
- Radia Patch Manager
- Radia Usage Manager - For usage reporting, a usage database created with the Radia Usage Manager version 1.9.2 or higher is required (version 2.0 is recommended).

The Radia Reporting Server software is located on the Radia Infrastructure CD-ROM in the extended infrastructure directory.

The Radia Reporting Server can be installed on any Windows computer system that includes the following:

- An Internet Information Services (IIS) Web server. IIS is provided as a component of Win32 Operating Systems.
- Access to either a SQL Server (version 7 or above) or Oracle server (version 8i or 9i) where your Radia extended infrastructure databases are defined for existing inventory, patch, and usage data.

Note

All databases accessed from a configured Radia Reporting Server must exist on the same SQL Server or Oracle server.

- If desired, access to your enterprise's LDAP directory, such as Active Directory. LDAP access allows you to filter Radia Reporting Server queries according to the directory information.
- If you will be notifying devices selected from the Radia Reporting Server, the Radia Management Portal is required. The Radia Reporting Server sends the notify requests to the Radia Management Portal. Monitor the status of notify jobs using the Radia Management Portal.

Note to Windows Server 2003 Users

In order to view the Radia Reporting Server graphical reports using Windows Server 2003, Java Runtime or Virtual Java Machine is required. For more information, go to <http://java.com/en/index.jsp>

Radia Infrastructure Prerequisites

The list below displays the Radia Infrastructure modifications required to support the Radia Reporting Server. Detailed instructions follow the list.

Note

The following update procedures for the Radia Integration Server and the Radia Inventory Manager apply only to Radia Integration Servers and Radia Inventory Managers prior to version 4.0. The Radia Configuration Server update applies to all versions of the Radia Configuration Server.

Radia Infrastructure Updates

- Apply the Radia Integration Server Update for **taskend.tcl** for pre-Radia 4.0 versions of the Radia Integration Server.
- Apply the Radia Configuration Server Update for **taskend.tcl**.
- Apply the Radia Inventory Manager Server Update for **device.config.sql** to pre-Radia 4.0 versions of the Radia Inventory Manager..

Radia Integration Server Update for pre-Radia 4.0 users

The `extended_infrastructure\reporting_server\win32\PreReq\RCS\LIB` directory contains a new **taskend.tcl** file to support Radia Reporting.

To apply the **taskend.tcl** file to your Radia Integration Server

1. Stop the Radia Integration Server Service.
2. Make a backup copy of your existing **taskend.tcl** (located, by default, in `SystemDrive:\Novadigm\IntegrationServer\etc\rim\lib`).
3. Copy the **taskend.tcl** file from the `extended_infrastructure\reporting_server\win32\PreReq\RCS\LIB` directory to your Radia Integration Server `etc\rim\lib` folder (by default, `SystemDrive:\Novadigm\IntegrationServer\etc\rim\lib`).
4. Start the Radia Integration Server Service.

Radia Configuration Server Update

The `extended_infrastructure\reporting_server\win32\PreReq\RCS\LIB` directory contains a new **taskend.tcl** file to support Radia Reporting.

To apply the taskend.tcl file to your Radia Configuration Server

1. Stop the Radia Configuration Server Service.
2. Make a backup copy of your existing **taskend.tcl** (located, by default, in `SystemDrive:\Novadigm\ConfigurationServer\Lib`).
3. Copy the **taskend.tcl** file from the `\extended_infrastructure\reporting_server\win32\PreReq\RCS\LIB` directory to your Radia Configuration Server `\Lib` folder (by default, `SystemDrive:\Novadigm\ConfigurationServer\Lib`).
4. Start the Radia Configuration Server Service.

Radia Inventory Manager Server Update for pre-Radia 4.0 users

The `\extended_infrastructure\reporting_server\win32\PreReq\RIM\ETC\SQL` directory contains a new **device.config.sql** file to support Radia Reporting.

To apply device.config.sql to your Radia Inventory Server

1. Stop the Radia Integration Server Service running the Radia Inventory Server.
2. Make a backup copy of your existing **device.config.sql** (located, by default, in `SystemDrive:\Novadigm\IntegrationServer\etc\sql`).
3. Copy the **device.config.sql** file from the `\extended_infrastructure\reporting_server\win32\PreReq\RIM\ETC\SQL` directory to your Radia Inventory Manager Sever `\etc\sql` directory (by default, `SystemDrive:\Novadigm\IntegrationServer\etc\sql`).
4. Start the Radia Integration Server Service.

Radia Database Prerequisites

Modifications must be made to your Radia Databases to accommodate the Radia Reporting Server. The following sections describe which modifications must be made whether you are using Oracle or SQL Server to store your databases.

Radia SQL Server Database Prerequisites

The following modifications must be applied to each SQL Server database the Radia Reporting Server accesses.

A set of SQL scripts was supplied with your Radia Reporting Server media, located in the \Prereq\SQL\ directory. The scripts are located within the RIM, RUM, and RPM, subdirectories. Depending on the Radia databases you will be using, run the appropriate script using the Microsoft SQL Server Enterprise Manager Query Analyzer tool. If you need assistance running these scripts, see your database administrator.

SQL Creation Scripts are as follows:

- Prereq\SQL\RIM\RIM PreReq Creation Script.sql
- Prereq\SQL\RUM\RUM PreReq Creation Script.sql
- Prereq\SQL\RPM\RPM PreReq Creation Script.sql

Before running these scripts, first review them using a text editor and make sure the default table owner names are correct. Make any changes and save the files.

Radia Inventory Manager Database Updates for SQL Server

Make the following changes to an existing Radia Inventory Manager SQL database to support Radia Reporting.

To update your Radia Inventory Manager SQL Server database

A new field is required for the **DeviceConfig** table. Modify the Table definition of **DeviceConfig** by inserting the **devicename** column below the **protocol** column with the following attributes.

1. Using the SQL Enterprise Manager, select **Tables** for the database containing RIM data.
2. Right-click the DeviceConfig table in the right-hand pane and select **Design Table** from the context menu.
3. Right-click the protocol column and select **Insert Column** from the context menu. Add the new column with the following information:

Column Name	Data Type	Length	Allow Nulls
devicename	varchar	128	✓

4. Use the Microsoft SQL Server Enterprise Manager Query Analyzer and run the script **RIM PreReq Creation Script.sql** against your Radia Inventory Manager database. In the SQL

Server Enterprise Manager, select the **Tools** menu, and then select **SQL Server Query Analyzer**.

5. From within the Query Analyzer, open the file `\Prereq\SQL\RIM\RIM PreReq Creation Script.sql`.
6. Use **Query Execute** or press **F5** to run execute the script.
7. Verify that the script completes without error. Consult your SQL DB administrator if changes to the script are required regarding table ownership.
8. Close the SQL Query Analyzer.

Three views are created: **DevicesPrimaryWBEM**, **DevicesPrimaryCIM**, and **DevicesPrimary**. In addition, a **DataAlias** table is created and populated.

Note

If you are using machine connects only to populate your Radia Inventory Database, a database administrator can update the devicename column using the following syntax:

update deviceconfig set devicename = device_id

This will allow the devicename column to be populated with the value in device_id.

Radia Usage Manager Database Update for SQL Server

A Database Administrator needs to make the following change to an existing Radia Usage Manager SQL database to support Radia Reporting.

- Use the Microsoft SQL Server Enterprise Manager Query Analyzer and run the script **RUM PreReq Creation Script.sql** against your Radia Usage Manager database. This will add a User Defined Function object called **fn_USAGESTATUS**, to calculate usage status.

Radia Patch Manager Database Update for SQL Server

A Database Administrator needs to make the following change to an existing Radia Patch Manager SQL database to support Radia Reporting.

- Use the Microsoft SQL Server Enterprise Manager Query Analyzer and run the script **RPM PreReq Creation Script.sql** against your Radia Patch Manager database. This will add a User Defined Function object called **fn_PATCHSTATUS**.

Radia Oracle Database Prerequisites

The following modifications must be applied to each Oracle database the Radia Reporting Server accesses.

A set of scripts was supplied with your Radia Reporting Server media, located in the \Prereq\Oracle\ directory. The scripts are located within the RIM, RUM, and RPM, subdirectories. Depending on the Radia databases you will be using, run the appropriate script. If you need assistance running these scripts, see your database administrator.

SQL Creation Scripts are as follows:

- Prereq\Oracle\RIM\RIM PreReq Creation Script.oracle
- Prereq\Oracle\RUM\RUM PreReq Creation Script.oracle
- Prereq\Oracle\RPM\RPM PreReq Creation Script.oracle

Before running these scripts, first review them using a text editor and make sure the default schema names are correct. Make any changes and save the files. When finished, verify that the scripts completes without error. Consult your Oracle DB administrator if changes to the script are required regarding table ownership.

Radia Inventory Manager Database Updates for Oracle

Make the following changes to an existing Radia Inventory Manager Oracle database to support Radia Reporting.

To update your Radia Inventory Manager Oracle database

1. Use the Oracle DBA Studio application (for Oracle version 8i and below) or the SQL Plus Worksheet application (for Oracle version 9i and above) and execute the script **RIM PreReq Creation Script.oracle**, making sure to include the correct path to the script locations.

Three views are created: **DevicesPrimaryWBEM**, **DevicesPrimaryCIM**, and **DevicesPrimary**. In addition, a **DataAlias** table is created and populated.

2. A new field is required for the **DeviceConfig** table. Modify the Table definition of **DeviceConfig** by inserting the **devicename** column below the **protocol** column with the following attribute:

Column Name	Data Type	Length	Allow Nulls
devicename	varchar	128	✓

Note

If you are using machine connects only to populate your Radia Inventory Database, a database administrator can update the devicename column using the following syntax:

update deviceconfig set devicename = device_id

This will allow the devicename column to be populated with the value in device_id.

Radia Usage Manager Database Update for Oracle

A Database Administrator needs to make the following change to an existing Radia Usage Manager Oracle database to support Radia Reporting.

- Use the Oracle DBA Studio application (for Oracle version 8i and below) or the SQL Plus Worksheet application (for Oracle version 9i and above) and execute the script **RUM PreReq Creation Script.oracle**, making sure to include the correct path to the script locations. This will add a User Defined Function object called **fn_USAGESTATUS**, to calculate usage status.

Radia Patch Manager Database Update for Oracle

A Database Administrator needs to make the following change to an existing Radia Patch Manager Oracle database to support Radia Reporting.

- Use the Oracle DBA Studio application (for Oracle version 8i and below) or the SQL Plus Worksheet application (for Oracle version 9i and above) and execute the script **RPM PreReq Creation Script.oracle**, making sure to include the correct path to the script locations. This will add a User Defined Function object called **fn_PATCHSTATUS**.

Radia Inventory Reporting Auditing Requirements

When using the Radia Reporting Server to view a Radia Inventory Manager database, the WBEM instances listed in *Table 2.1 ~ Radia Inventory Manager Reporting WBEM Instances to Enable Radia Reporting* on page 28 should be enabled for the Radia Inventory Manager Reporting Package in the Audit class of your Radia Database. These fields are relied upon to produce the primary reporting table or detailed reports shown in later chapters.

For details on how to enable these options, see *Adding Components to Radia Inventory Audits* on page 46.

Table 2.1 ~ Radia Inventory Manager Reporting WBEM Instances to Enable Radia Reporting

WBEM Class Instance	WBEM Class Instance
Win32_Bios	Win32_PointingDevice
Win32_ComputerSystem	Win32_Printer
Win32_ComputerSystemProduct	Win32_Processor
Win32_DesktopMonitor	Win32_Product
Win32_DiskDrive	Win32_SerialPort
Win32_DiskPartition	Win32_Service
Win32_Environment	Win32_Share
Win32_Group*	Win32_SoundDevice
Win32_Keyboard	Win32_TimeZone
Win32_LogicalDisk	Win32_USBController
Win32_LogicalMemoryConfiguration	Win32_UserAccount*
Win32_MotherboardDevice	Win32_VideoController
Win32_NetworkAdapter	Win32_CDROMDrive
Win32_NetworkAdapterConfiguration	Win32_Process
Win32_OperatingSystem	Win32_SystemEnclosure

* Queries may require additional changes. See caution below.

Caution

When auditing for **Win32_UserAccount** or **Win32_Group**, large amounts of data may be returned. Failure to limit the scan may result in **high network traffic**. In order to limit the amount of data returned by these queries, modify the class.

In order to restrict the results to LOCAL user accounts and LOCAL groups only, modify the CNDITION field of the **Win32_UserAccount** and **Win32_Group** classes by adding the following syntax:

CNDITION Domain = "&(zconfig.zhdwcomp)"

Be sure to check the HP OpenView support web site for the most recent information on this topic.

Radia Reporting Server System Implementation Tasks

The Radia Reporting Server software and components is located on the Radia Infrastructure CD-ROM in the Extended Infrastructure directory (\extended_infrastructure\reporting_server\win32\).

To use Radia Reporting, complete the following system implementation tasks:

- ☐ Review the SQL Server ODBC connections and DSNs for each Radia Database.
- ☐ Install the Radia Reporting Server.
- ☐ Configure Internet Information Services for a Radia Reporting *.tcl Extension and Web Sharing.
- ☐ Modify the Radia Reporting Server Configuration File.

Reviewing your SQL Server Access and Database DSNs

All SQL databases accessed by the Radia Reporting Server must exist on the same SQL Server. In order to complete the Radia Reporting Server configuration in the tasks that follow, you will need to know the DSNs and access credentials assigned to each database in the SQL Server.

Installing the Radia Reporting Server

Identify a Win32 computer with the Internet Information Services (IIS) component installed to act as your Reporting Web server. This computer must be able to communicate with your SQL Server where the Radia Databases are defined, the Internet, and your LDAP Directory, if desired.

Note

The Radia Reporting Server runs independently of the Radia Management Portal. It may be installed on any Win32 machine whether or not that machine is running the Radia Management Portal.

To install the Radia Reporting Server

1. Double-click the Radia Reporting Server installation executable, **setup.exe**. This file is located on your Radia infrastructure CD-ROM in the \extended_infrastructure\reporting_server\win32\ directory. The Radia Reporting Server Welcome window opens.



Figure 2.1 ~ Radia Reporting Server Welcome window.

2. Click Next.

The HP Software License Terms window opens.

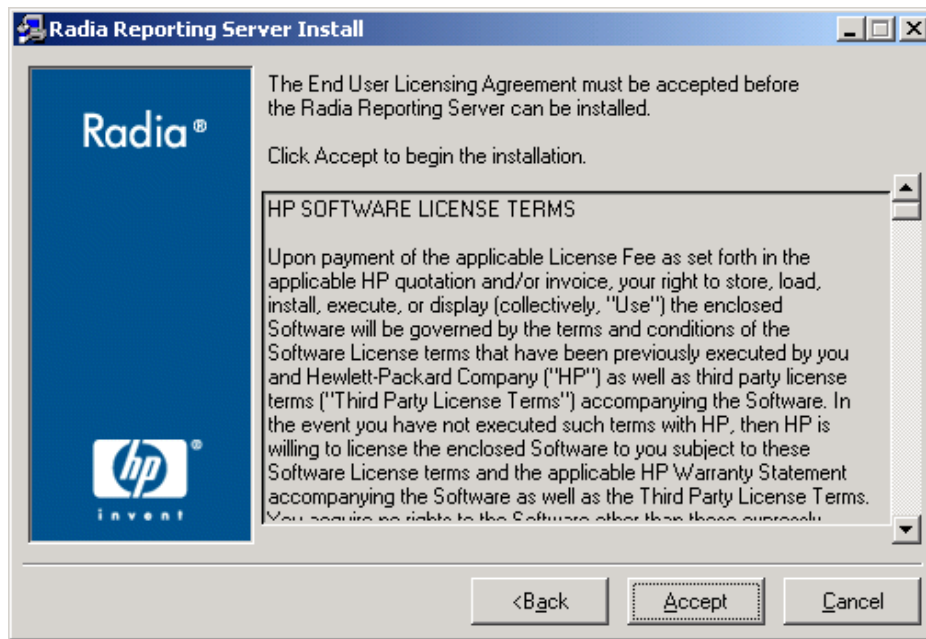


Figure 2.2 ~ HP Software License Terms window.

3. Read the end-user licensing agreement and click **Accept**.
The Radia Reporting Server installation location window opens.



Figure 2.3 ~ Radia Reporting Server installation location.

4. Type a location to which to install the Radia Reporting Server or click **Browse** to manually select a location.
5. Click **Next**.
The installation settings window opens.

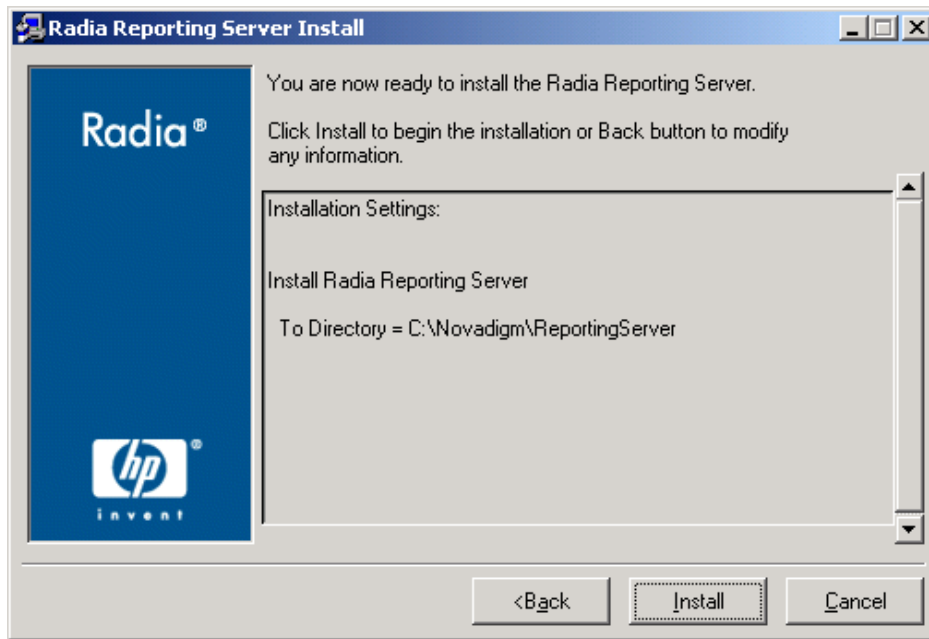


Figure 2.4 ~ Radia Reporting Server installation settings window.

6. Click Install.

The Radia Reporting Server is installed.

The Radia Reporting Server must now be configured for access to your SQL Server databases, and, optionally, an LDAP directory. Prior to completing this task, however, configure IIS for Radia Reporting.

Configuring Microsoft Internet Information Services for Radia Reporting

The Microsoft IIS Web server hosts the Radia Reporting Server. Use these procedures to configure a tcl extension in IIS for Radia Reporting, as well as create a Web share for easy access to the Radia Reporting Server Web pages.

For additional details, refer to your Windows operating system documentation or help.

To configure IIS for the Radia Reporting Server .tcl extension and web sharing

1. The Web Site for Reporting requires a tcl extension configured in Internet Information Services to point to the **nvdkit.exe** executable.

For example, to add an application extension mapping in Windows XP, complete the following steps:

- a. Select **Start, Administrative Tools, Computer Management**.
- b. Browse to **Services and Applications, Internet Information Services, Web Sites, Default Web Site**.
- c. Display the Default Web Site **Properties** page and click the **Home Directory** tab.
- d. Click the **Configuration** button to open the Application Configuration window.
- e. Click **Add** to add the Application Mapping for the .tcl extension. Complete the entries for the **Add/Edit Application Extension Mapping** dialog box as follows:

Executable	C:\novadigm\reportingServer\bin\nvdkit.exe "%s" %s
Extension	.tcl
Verbs	Limit to GET,HEAD,POST
Script Engine	Selected
Check that File Exists	Selected

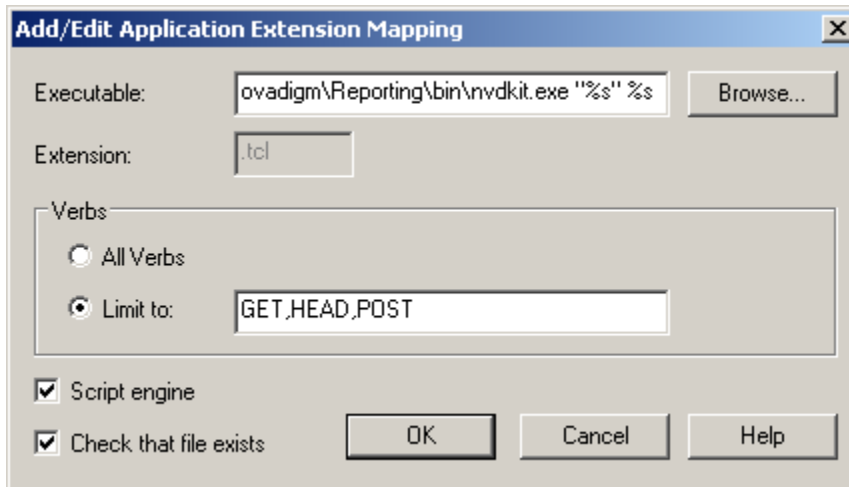


Figure 2.5 ~ Sample IIS Extension Mapping for nvdkit.exe and *.tcl extension.

- f. Click **OK** when finished.
2. Enable web sharing from the root directory for Reporting, such as C:\Novadigm\ReportingServer, to the Internet Information Services web site. To do this:
 - a. Use Windows Explorer to browse to your Reporting folder, such as: C:\Novadigm\ReportingServer.
 - b. Right-click and select **Properties** from the shortcut menu. This displays the **Reporting Properties dialog** for your root Reporting folder.
 - c. Select the **Web Sharing** tab, and complete the entries to Share the folder and add an Alias for **Reporting**. You can use the defaults for Access and Application permissions.
 - d. Click **OK** to save the Reporting Alias for IIS web sharing.

The Internet Information Services component is now configured to support Radia Reporting for compatible Windows platforms with the exception of Windows Server 2003.

If you are using Windows Server 2003, an additional configuration step is required. See below.

Windows Server 2003 Additional Configuration for IIS

Some additional IIS configuration steps are required if you are using Windows Server 2003. Each step is configured within the IIS Manager.

First, create the TCL CGI Extension.

To create the TCL CGI Extension

1. Within your IIS server, in the right-hand pane, click **Add a new Web server extension....**
The **New Web Service Extension** dialog window opens.

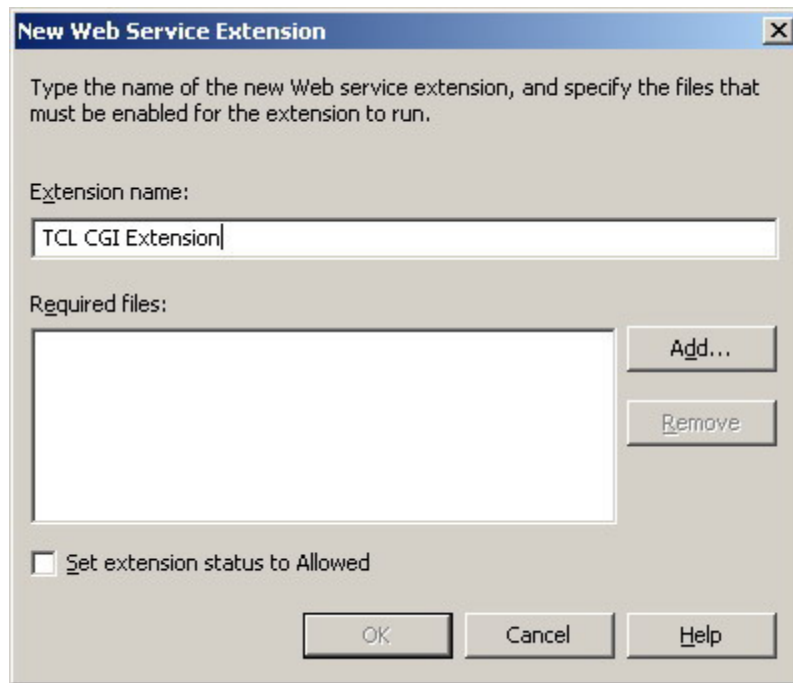


Figure 2.6 ~ Name the new Web service extension..

2. Enter the extension name and click **Add....**
The **Add file** dialog box opens.

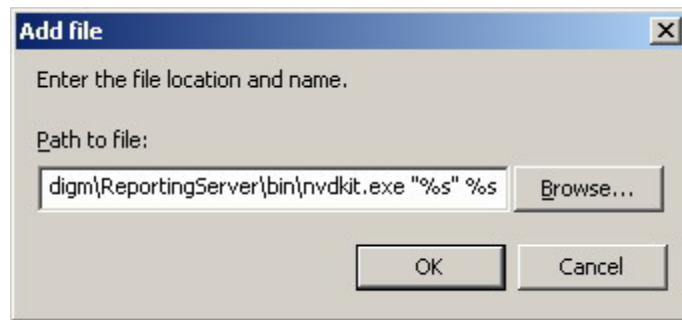


Figure 2.7 ~ Add file dialog box.

3. Enter the path information for **nvdkit.exe** and click **OK**.
 4. Select the check box **Set extension status to Allowed**.
-

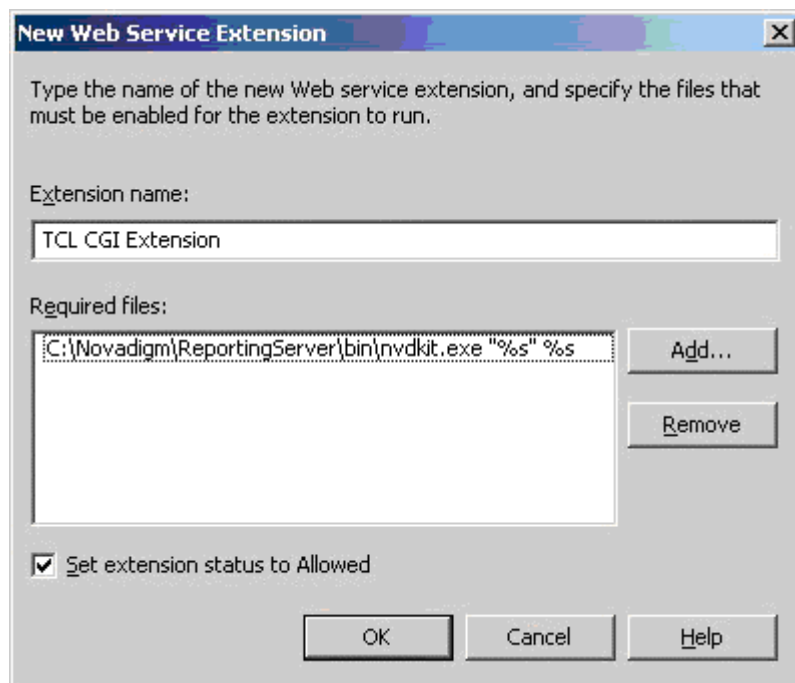


Figure 2.8 ~ Set extension status to Allowed check box selected.

5. Click **OK**.

The TCL CGI Extension is created.

When the TCL CGI Extension is created, add a new MIME type to allow IIS to serve the .tcl extension.

To add a new MIME type for Windows Server 2003

1. Right-click your IIS server and from the shortcut menu that opens, select **Properties**.
2. Click **MIME Types**.
3. Click **New** to add a new extension.
4. In the MIME Type window, add the following:
Extension .tcl
MIME Type application/x-tcl
5. Click **OK**.

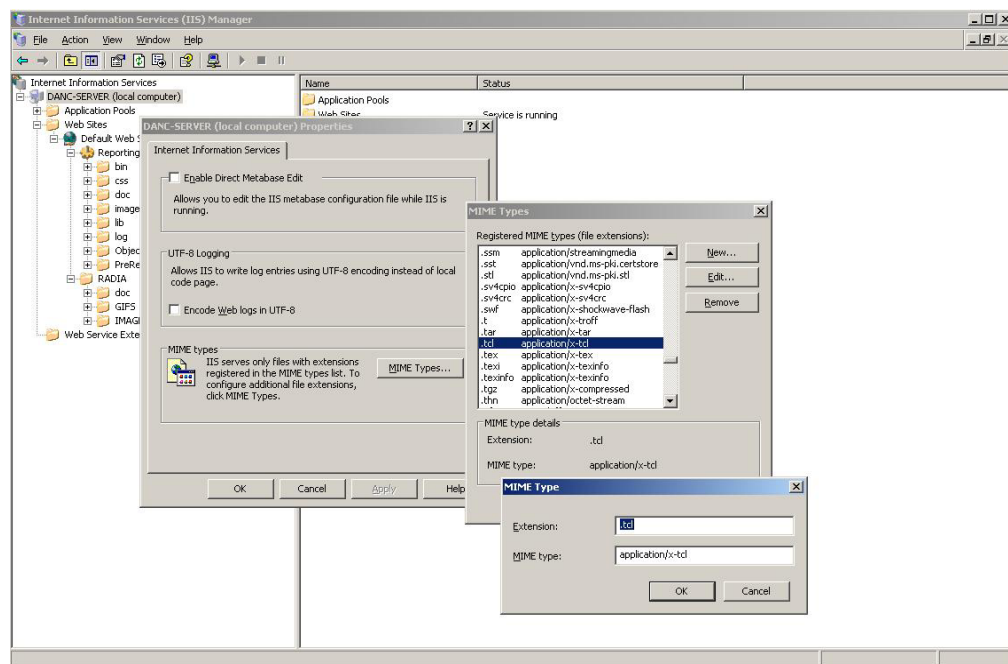


Figure 2.9 ~ MIME Type window – IIS server properties.

The additional IIS configuration for Windows Server 2003 is complete.

Modifying the Radia Reporting Server Configuration File

The Radia Reporting Server Configuration file, `config.tcl`, is located in the directory where you installed the Reporting component, such as `C:\HP\ReportingServer`. This file includes settings such as the path where you installed Reporting components, the ODBC DSN information and access credentials for each SQL database you are using, as well as LDAP Directory access root and credentials. Use the configuration file to enable or disable specific report types, including usage and patch and also to enable or disable individual features, such as caching.

You can edit this file manually using any text editor or you can edit this file using a web browser. We recommend that you make a backup copy of the `config.tcl` before you make any changes.

Note on Password Encryption

If you require encrypted passwords, use the web browser to edit the configuration file. Passwords are automatically encrypted when the configuration file is generated. Using a text editor to edit the file does not allow for creating encrypted passwords.

Using a Text Editor to Modify `config.tcl`

To set parameters for `config.tcl` using a text file

1. Open the `config.tcl` file with any text editor. It is located in the folder location where you installed Reporting, such as: `C:\HP\ReportingServer`.
2. Modify the values of the following entries near the top of the `config.tcl` file. Values must be enclosed in quotation marks and *all path values must use forward slashes*.

{HOMEPATH} The exact path of your Reporting folder. Use forward slashes only.
 `set value "c:/hp/reportingserver"`

{DATABASE} Requires SQL.
 `set value "sql"`

3. By default, the reporting `config.tcl` file is delivered with access to all of the following data or directories enabled: Radia Application Manager, Radia Inventory Manager, and LDAP. If you are not accessing one of these databases, or an LDAP directory, change the appropriate {xxxENABLE} value from 1 to 0.

For example, to disable access to a Radia Inventory Manager database, set the value for RIMENABLE to 0, as shown below:

```
{RIMENABLE} {
    # Enable Inventory Manager Support 1/0
    set value 0
}
```

4. For each SQL database you are accessing (inventory, patch, or usage), set the values for any tablename PREFIX for synonyms, as well as the ODBC DSN, username and password required to access the database. All parameters for a given database follow the *ENABLE parameter which enables that data type. If necessary, contact your database administrator to obtain the required credentials.

For example, here are the parameters to fully configure access to the Radia Inventory Manager database.

{RIMENABLE}	Enables access to Radia Inventory Manager SQL database. set value 1
{RIMPREFIX}	#Tablename Prefix for Synonyms. Modify this value to the Tablename Prefix for synonyms used to access your RIM database. Enclose in quotation marks. set value "dbo."
{RIMDSN}	#ODBC DSN for Radia Inventory Manager. Default is RIMDB. Set this value to the ODBC DSN for your RIM database. Enclose in quotation marks. set value "RIMDB"
{RIMDSN_USER}	# ODBC USER for Radia Inventory Manager. Default is "sa". Set this value to the ODBC USER needed to access your RIM database. Enclose in quotations marks. set value "sa"
{RIMDSN_PASSWORD}	# ODBC PASSWORD for Radia Inventory Manager. Default is null. Set this value to the ODBC PASSWORD for the ODBC USER for your Radia Inventory Manager database. Enclose in quotation marks. set value ""

5. If you are accessing an existing LDAP directory, also set the values for the following parameters in config.tcl.

{LDAPENABLE}	Enables access to an LDAP directory. set value 1
{LDAPSERVER}	Enables access to an LDAP directory. Defaults to the local machine. Specify the IP address for a directory located on a remote machine. Enclose in quotation marks. set value "127.0.0.1"
{LDAPPORT}	# LDAP port number. Default port is 389. Enclose in quotation marks. set value "389"
{LDAPBASE}	# LDAP Base OU. The base organization unit to be mounted as the root of the LDAP directory. This becomes the highest level for filtering reports. Enclose in quotation marks. set value "dc=nvddemo,dc=com"


```

{LDAPUSER}      # LDAP User to Authenticate. Default is has to be qualified such
                  as: administrator@nvddemo.comvalue. Enclose in quotations marks.
                  set value ""
                  Note: value must be qualified, such as: administrator@hpreportdemo.com
{LDAPPASS}      # LDAP User Password. Default is null value. Enclose in quotation
                  marks.
                  set value ""

```

6. Save and exit the file. Use a web browser to update your config.tcl file. Once you click **Apply**, a new file, **config.new.tcl**, is created.

Using a Web Browser to Modify config.tcl

To modify the config.tcl file using a web browser, open the setup.tcl file located in your Radia Reporting Server directory with any web browser. The setup.tcl file allows you to create a new file, **config.new.tcl**, which then must be renamed to **config.tcl** in order to apply any configuration changes.

Note

Using the web interface to update your configuration file allows for encrypted passwords.

To set parameters for config.tcl using a web browser

1. Open a web browser and type:

```
http://localhost/reporting/setup.tcl
```

where *reporting* is the Alias specified in Step 2 c of *Configuring Microsoft Internet Information Services for Radia Reporting* on page 34.

The configuration file page opens.

The screenshot displays a web-based configuration interface for the Radia Reporting Server. It is organized into four distinct sections, each with a title bar and a list of configuration parameters with corresponding input fields.

- General Configuration:**
 - Home Path:
 - Log Level (1-5):
 - Language (english):
 - Database Type (sql/oracle):
 - Enable Cached Results (0/1):
 - Cache Lifetime (seconds):
 - Default View:
 - Show Device Data Without Filters (0/1):
 - Enable Default Reports (0/1):
- RIM/RAM Configuration:**
 - Enable RAM Reports (0/1):
 - RAM Table Prefix:
 - Enable RIM Reports (0/1):
 - RIM Table Prefix:
 - RIM DSN:
 - RIM DSN User:
 - RIM DSN Password:
- Patch Manager Configuration:**
 - Enable Patch Manager Reports (0/1):
 - Patch Table Prefix:
 - Patch DSN:
 - Patch DSN User:
 - Patch DSN Password:
- Usage Manager Configuration:**
 - Enable Usage Manager Reports (0/1):

Figure 2.10 ~ Radia Reporting Server configuration file page.

2. To modify each configuration file section, follow the directions in the section above, *Using a Text Editor to Modify config.tcl*. The similarly named text boxes in the web interface represent the config.tcl file parameters.
3. After you are finished making modifications, click **Apply**.
4. A new file is created, **config.new.tcl**, and stored in your Radia Reporting Server directory. In order to apply any changes, first backup your existing config.tcl file and rename **config.new.tcl** to **config.tcl**.

The Radia Reporting Server is now fully configured.

Note about Notify Configuration

The Radia Reporting Server is set up to allow for Radia Notify by default. If you will not be using the Radia Reporting Server to notify devices, you can turn off the notify-related options and icons by setting the {NOTIFYENABLE} value to 0.

Notify requires the Radia Management Portal.

Configuring the Radia Reporting Server for Notify

By default, the Radia Reporting Server is configured for Radia Notify. Since the Radia Management Portal is required to complete the notify process, the config.tcl file must be configured with your Radia Management Portal settings.

Note

The Radia Management Portal version 2.0 or higher is required for Notify.

Before you define your Radia Management Portal settings, ensure that the notify function is enabled by checking the config.tcl file, parameter value {NOTIFYENABLE} is set to value 1 if you are using a text editor. Alternatively, if you are using a web browser, make sure the **Radia Management Portal Configuration** section parameter **Notify Enabler**, has a value of 1.

To configure a Radia Management Portal for Notify

1. Open the config.new.tcl file with a text editor or use the setup.tcl web interface to create a new config.new.tcl file.
2. To define your Radia Management Portal settings, modify the values of the following parameters.

If using a text editor:

(Values must be enclosed in quotation marks and all path values must use forward slashes.)

```
{RMPIP}    #TCP/IP Address or Host Name for Radia Management Portal
           set value "127.0.0.1"
```

```
{RMPPORT} #TCP/IP Port for Radia Management Portal
           set value "3466"
```

If using a web browser:

RMP Address 127.0.0.1

RMP Port 3466

3. Enter your Radia Management Portal IP address and port number.

4. Save and close the config.tcl file, or click **Apply** if using the web browser interface.

Note

If you used a web browser to enable Notify, make sure to rename the newly created **config.new.tcl** file to **config.tcl**

The Radia Reporting Server has been configured for Notify.

Enabling the Radia Reporting Server Cache Feature

Similar to an HTTP proxy, the Radia Reporting Server has the ability to save report data in a cache file. When a user requests a report, that report data is saved in a file on the Radia Reporting Server. Then, if any subsequent users request the same reports, the data is readily available in the cache, returning the report much faster by avoiding the processing time used to retrieve the data from the Oracle or SQL database. The cache file is saved in a folder within the Radia Reporting Server installation directory, such as **C:\HP\ReportingServer\cache**. Use the configuration file to enable caching and to determine how long a cache is available.

To configure caching

1. Open the config.new.tcl file with a text editor or use the setup.tcl web interface to create a new config.new.tcl file.
2. To enable and define your cache settings, modify the values of the following General Configuration section parameters.

If using a text editor:

(Values must be enclosed in quotation marks and all path values must use forward slashes.)

```
{CACHEENABLE} {  
    # 0 Disabled, 1 enabled  
    set value "1"  
}  
{CACHELIFE} {  
    # Cache Lifetime in seconds  
    set value "1200"  
}
```

If using a web browser:

```
Enable Cached Results (0/1)    0  
Cache Lifetime (seconds)      1200
```

3. Caching is disabled by default. Enable caching by setting **CACHEENABLE** or **Enable Cached Results (0/1)** to 1.
4. Define how long in seconds the cache will be available using **CACHELIFE** or **Cache Lifetime (seconds)**.
5. Save and close the config.tcl file, or click **Apply** if using the web browser interface.
Report caching has been enabled and configured.

Accessing the Radia Reporting Server Web Site

After setting values in the config.tcl file, you are ready to access the Radia Reporting Server web page.

To access the Radia Reporting Server locally

- From the Win32 machine running IIS, open a Web browser and type:

http://localhost/reporting

Where *reporting* is the Alias specified in Step 2 c of *Configuring Microsoft Internet Information Services for Radia Reporting* on page 34.

The Radia Management Portal banner page opens to the Radia Reporting Server home page, as shown in *Figure 2.11 ~ Sample Radia Reporting home page with LDAP access enabled* below.

The screenshot displays the Radia Management Portal interface. The top navigation bar includes the HP logo, the title "Radia Management Portal", and the "Radia Reporting" link. The left sidebar contains sections for "Search Controls" (LDAP Filters, Data Filters), "Display Controls" (Reporting Views), and "Current Reporting View: Default". The main content area shows "Search Criteria" with "DEVCESLIST FILTERS" and "LDAPSQL LDAP Navigation (dc=rwddemo,dc=com)". Below this is a table titled "Radia Managed Devices" with 10 items. The table columns are: Details, Last Connect, Radia ID, Device, IP Address, Vendor, Model, Class, Operating System, and OS Level.

Details	Last Connect	Radia ID	Device	IP Address	Vendor	Model	Class	Operating System	OS Level
2004-08-14 09:41:38	SBERUBE	SBERUBED600	208.244.225.186	Dell Computer Corporation	Latitude D600	Portable	Microsoft Windows XP Professional Version 5.1.2600 [Build 2600]	Service Pack 1	
2004-08-14 09:41:26	SBERUBE-HOME	SBERUBE-HOME	192.168.50.120	System Manufacturer	System Name	Tower	Microsoft Windows XP Professional Version 5.1.2600 [Build 2600]	Service Pack 1	
2004-05-12 11:30:25	JB	JB	192.168.1.103	Dell Computer Corporation	Precision WorkStation 360	Mini Tower	Microsoft Windows XP Professional Version 5.1.2600 [Build 2600]	Service Pack 1	
2004-04-23 11:16:57	SERVER	SERVER	192.168.50.125	Dell Computer Corporation	OptiPlex GX270	Mini Tower	Microsoft Windows 2000 Server Version 5.0.2195 [Build 2195]	Service Pack 4	

Figure 2.11 ~ Sample Radia Reporting home page with LDAP access enabled.

Chapter 4: Customizing Reports starting on page 71 explains how to use the Radia Reporting Server interface, and Appendix A: Sample Reporting Scenario starting on page 101 illustrates a sample reporting session in detail.

Adding Components to Radia Inventory Audits

To obtain the reports available through the Radia Reporting Server features, it is highly recommended you audit your Radia Clients for the Win32 components previously listed in *Table 2.1 ~ Radia Inventory Manager Reporting WBEM Instances to Enable Radia Reporting* on page 28. If you're missing some of the components, you can use these procedures to add them to your Radia Inventory Manager Reporting audit package.

For additional information, see the *Radia Inventory Manager Guide for Windows*.

The following example adds the Win32_MemoryDevice component to the Radia Inventory Manager Reporting Package. Use the same procedure to add any component to the Radia Inventory Manager Reporting Package or to another audit package that is used to collect Radia Inventory Manager data at your site.

Caution

Before adding any components, make sure they do not already exist within the reporting audit package. Adding duplicate components will cause errors.

To add components to Radia Inventory Manager reporting audit packages

1. Use Radia System Explorer and browse to the PRIMARY.AUDIT.PACKAGE class.
2. Locate the Radia Inventory Manager Reporting package and expand all connections to show all component instances.
3. Right-click on the Radia Inventory Manager Reporting Package instance, and select **Add Components** from the shortcut menu.

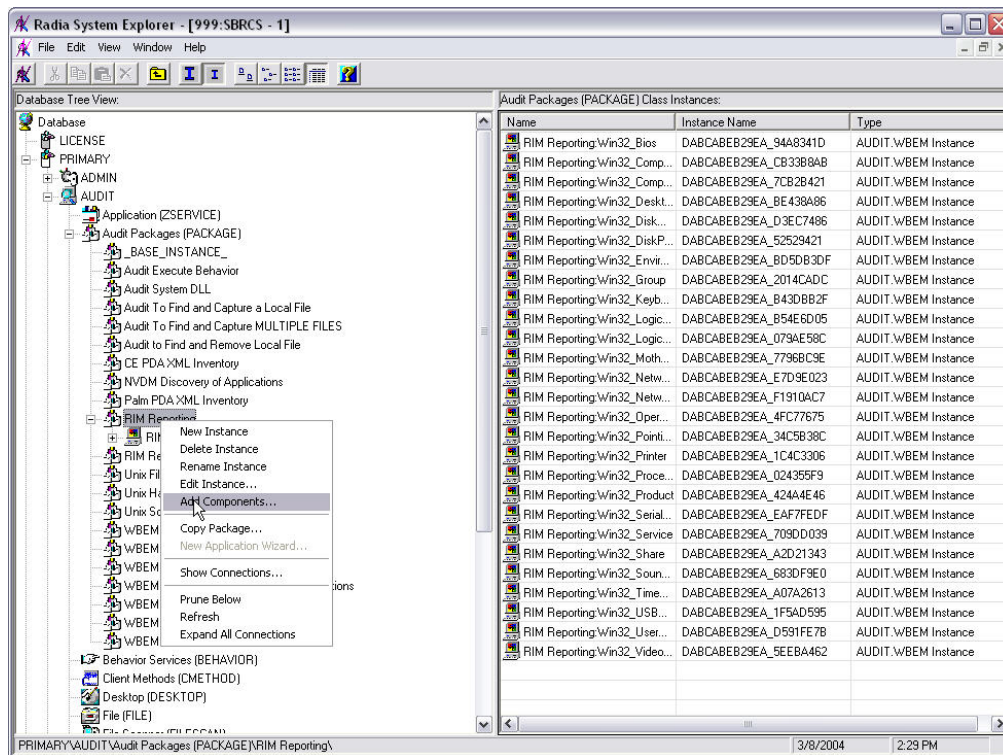


Figure 2.12 ~ Adding a Component to Radia Inventory Manager Reporting Audit Package.

4. The Add Components dialog box opens. Select WBEM from the **Available Components** drop-down list, and type the component name in the New Component Name text box. For this example, we will add **Win32_MemoryDevice**.
5. Click Add+Edit.



Figure 2.13 ~ Radia Knowledge Base Manager Control Panel icon.

6. The **Edit Instance** dialog box opens. Click the **CLASS** entry, and type the value of the WBEM class. Use the same name as the component name: **Win32_MemoryDevice**.
7. Click **OK** to save your changes.

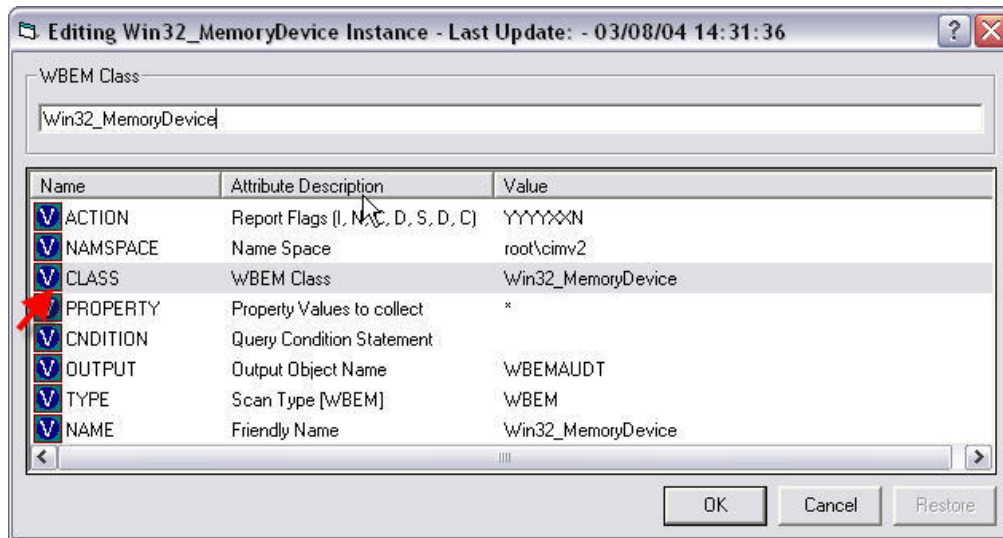


Figure 2.14 ~ Defining the WBEM class Win32_MemoryDevice instance.

8. As shown in Figure 2.15 ~ Win32_memorydevice added to RIM Reporting Audit Package on page 50, the **Win32_MemoryDevice** instance is added to the Radia Inventory Manager Reporting Package.

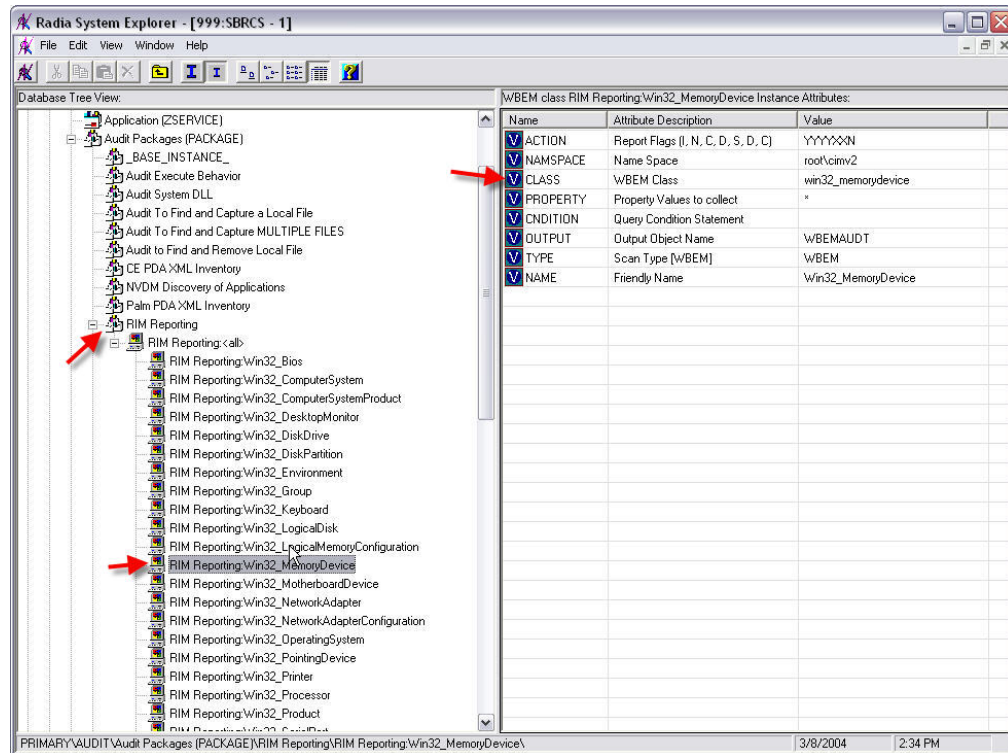


Figure 2.15 ~ Win32_memorydevice added to RIM Reporting Audit Package.

- Repeat this Add Component procedure for each entry in Table 2.1 ~ Radia Inventory Manager Reporting WBEM Instances to Enable Radia Reporting on page 28 that is missing from your inventory auditing package.

Caution

When auditing for **Win32_UserAccount** or **Win32_Group**, large amounts of data may be returned. Failure to limit the scan may result in **high network traffic**. In order to limit the amount of data returned by these queries, modify the class.

In order to restrict the results to LOCAL user accounts and LOCAL groups only, modify the CNDITION field of the **Win32_UserAccount** and **Win32_Group** classes by adding the following syntax:

CNDITION Domain = "&(zconfig.zhdwcomp)"

Be sure to check the HP Openview support web site for the most recent information on this topic.

Summary

- The Radia Reporting Server must be installed onto a Win32 machine with the Microsoft Internet Information Services component.
- Create or locate Radia SQL databases so they are defined on a single SQL Server for access by the Radia Reporting Server.
- Modify your Radia Configuration Server and Radia Inventory Manger Server to support Radia Reporting.
- Modify the SQL database definitions for Radia Inventory Manager, Radia Patch Manager, and Radia Usage Manager to support Radia Reporting.
- If necessary, modify your Radia Inventory Manager audits to include the set of Win32 components needed to take advantage of Radia Reporting.
- Install the Radia Reporting folders and files on the Win32 Web server machine.
- Configure IIS to point to NVDKIT for .tcl extensions, and enable an IIS web share to your Reporting folder.
- Modify the config.tcl file to point to all DSNs and any LDAP directory you are accessing for Reporting.

Radia Reporting Server Features

At the end of this chapter, you will:

- Be familiar with the Radia Reporting Server user interface.
- Know how to use the features of the Radia Reporting Server.
- Know how to customize the Radia Reporting Server interface.

Accessing the Radia Reporting Server

The Radia Reporting Server runs as an independent application hosted by a Microsoft Internet Information Services (ISS) Web service. Once installed and configured, users have access to the reports from any Web browser connected to the Internet.

To access the Radia Reporting Server

- Open any Web browser and type the following address:

`http://<hostname>/reporting`

Where *<hostname>* is the host name for the IIS web server on which the Radia Reporting Server was installed and where *reporting* is the Alias assigned to Radia Reporting during installation and configuration.

Note

Reporting is optimized for display screen area setting 1024 x 768 or greater.

About the Radia Reporting Server Interface

The Radia Reporting Server user interface contains several distinct areas, as shown in *Figure 3.1 ~ Radia Reporting Server user interface* on page 55.


- The **Radia Management Portal banner** runs across the top of the page. The current version of the Radia Reporting Server and its components are available by using the help icon.
- **Search Controls.** Use the LDAP Filter or Data Filter area to apply one or more filters to the dataset being accessed by the Radia Reporting Server for the current View. Any filters you apply are listed as Search Criteria above the reports.
 - **LDAP Filters.** The LDAP Filters are available if Radia Reporting was configured to access your LDAP Directory. Click on an LDAP entry to filter the current dataset to that level. The LDAP area is discussed on page 56.
 - **Data Filters.** Use this area to generate or select a filter to be applied to the current dataset. See the topic *Using Search Controls to Select Filters* on page 56 for details on how to use this area.
- **Display Controls.** Use the Reporting Views area to control your current session and display.
 - **Reporting Views.** A Reporting View defines the set of reporting windows to display for the current dataset and initial settings related to each window (such as minimized or maximized, and the number of items per window). When you first access the Radia Reporting Server, the Default View is applied. The current view is listed on the right of the Global Toolbar.


Use the Reporting Views area to change or customize your Reporting View. For details, see the topic *Using Display Controls to Select Reporting Views* on page 60.

- **The Search Criteria** above the report windows list the filters that have been applied to the dataset using one of the Search Controls.

To remove a filter, click the **X** to the left of a filter name.

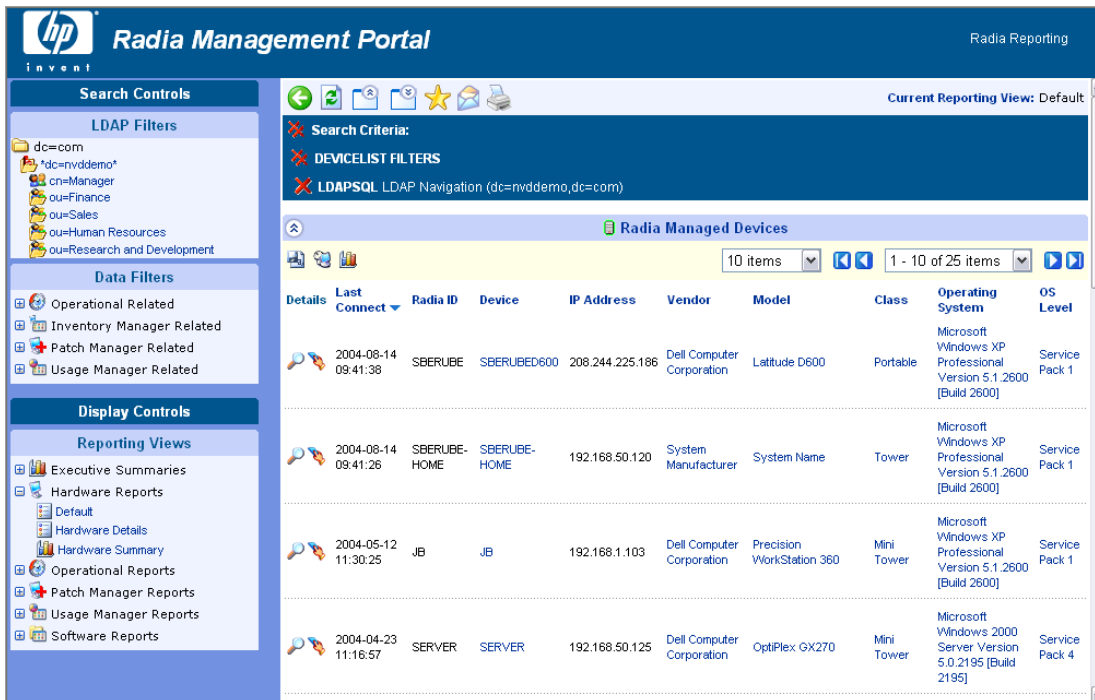
- **Report Windows** display the current View.

Click minimize  on the Window title bar to collapse a report window.

Click maximize  on the Window title bar to expand a report window.

See *About Reporting Windows* on page 62 for details about using the Report Window Action Bar icons, as well as browsing, sorting, and viewing details for the items in a report.

- Each window contains an **Action Bar** that includes icons allowing you to create CSV files from current datasets, switch to graphical views, or to notify devices.



The screenshot displays the Radia Management Portal interface. The top navigation bar includes the HP logo, the title "Radia Management Portal", and the text "Radia Reporting". Below the navigation bar, the interface is divided into several sections:

- Search Controls:** Includes LDAP Filters (dc=com, *dc=nvddemo*, cn=Manager, ou=Finance, ou=Sales, ou=Human Resources, ou=Research and Development) and Data Filters (Operational Related, Inventory Manager Related, Patch Manager Related, Usage Manager Related).
- Display Controls:** Includes Reporting Views (Executive Summaries, Hardware Reports, Operational Reports, Usage Manager Reports, Software Reports).
- Search Criteria:** Shows DEVCILIST FILTERS and LDAPSQL LDAP Navigation (dc=nvddemo,dc=com).
- Radia Managed Devices:** A table listing devices with columns: Details, Last Connect, Radia ID, Device, IP Address, Vendor, Model, Class, Operating System, and OS Level.





Details	Last Connect	Radia ID	Device	IP Address	Vendor	Model	Class	Operating System	OS Level
	2004-08-14 09:41:38	SBERUBE	SBERUBED600	208.244.225.186	Dell Computer Corporation	Latitude D600	Portable	Microsoft Windows XP Professional Version 5.1.2600 [Build 2600]	Service Pack 1
	2004-08-14 09:41:26	SBERUBE-HOME	SBERUBE-HOME	192.168.50.120	System Manufacturer	System Name	Tower	Microsoft Windows XP Professional Version 5.1.2600 [Build 2600]	Service Pack 1
	2004-05-12 11:30:25	JB	JB	192.168.1.103	Dell Computer Corporation	Precision WorkStation 360	Mini Tower	Microsoft Windows XP Professional Version 5.1.2600 [Build 2600]	Service Pack 1
	2004-04-23 11:16:57	SERVER	SERVER	192.168.50.125	Dell Computer Corporation	OptiPlex GX270	Mini Tower	Microsoft Windows 2000 Server Version 5.0.2195 [Build 2195]	Service Pack 4

Figure 3.1 ~ Radia Reporting Server user interface.

About the Banner Area

The banner area displays across the top of the Radia Reporting Server Web page and contains descriptive information.



Figure 3.2 ~ Banner area.

- To display the current version number of the Radia Reporting Server and its components, mouse over the help icon in the upper right-hand corner of the banner section.

Using Search Controls to Select Filters

The Search Control areas give you two ways to filter datasets within the Radia Reporting Server. You can:

- Select an LDAP directory entry from the LDAP Filter area. This limits the results to the LDAP entry level.
- Use the Data Filter area to create or apply a filter. This limits the results to the specific filter you applied.



Figure 3.3 ~ Search Controls area.

When you select an LDAP Filter or apply a Data Filter, your filter is automatically listed as a Search Criteria entry.

The LDAP Filters Area

The **LDAP Filter** appears as a Search Control if the Radia Reporting Server is configured to access an LDAP directory.

Use the LDAP Filter to browse to an entry in your directory. As you click a directory entry, the Radia Reporting Server automatically filters the reporting data displayed for that entry. For example, if you click the **Sales** department entry, the reporting area limits the display to only the devices that are associated with the Sales department.

Navigating Within the LDAP Filters Area

Clicking any image within the LDAP Filters area allows you to drill down further into the LDAP tree. Clicking any text will apply the associated filter to your data.



Figure 3.4 ~ LDAP Filters Area.

Once you expand the tree view in the LDAP Filters area, the expanded branch becomes the root branch.

The Data Filters Area

The **Data Filters Area** is always available as a Search Control (along the left side of the Radia Reporting Server page). Use it to select a filter to apply to the current dataset. Once a filter is applied, you will see it added to the Search Criteria list above the report windows.

To select and apply a filter using the Data Filter area

1. From the Data Filter area, use the **Filter Group** tree-view and select a group. The example shown in *Figure 3.5 ~ Applying a Search Criteria to limit report to Notebook Devices* on page 59, selected **Hardware Related Filters**.
2. Open the **Filter** tree-view and select a filter. The example shown in *Figure 3.5 ~ Applying a Search Criteria to limit report to Notebook Devices* on page 59, selected **Device Classification**.
3. In the **Filter Value** text box, type a specific value. For example, ***Notebook***. You can use wildcards, including * for multiple characters, or ? or _ (underscore) for single characters.
4. Click **Apply** to add this filter to the report. After applying the filter, you will see it added to the Search Criteria list above the report windows.

Note

The **Reset** button clears the Filter Value field and resets the Filter Group and Filter selections to their default values.

Figure 3.5 ~ Applying a Search Criteria to limit report to Notebook Devices on page 59 displays an example of the Data Filter entries used to limit the report to only Notebook devices.

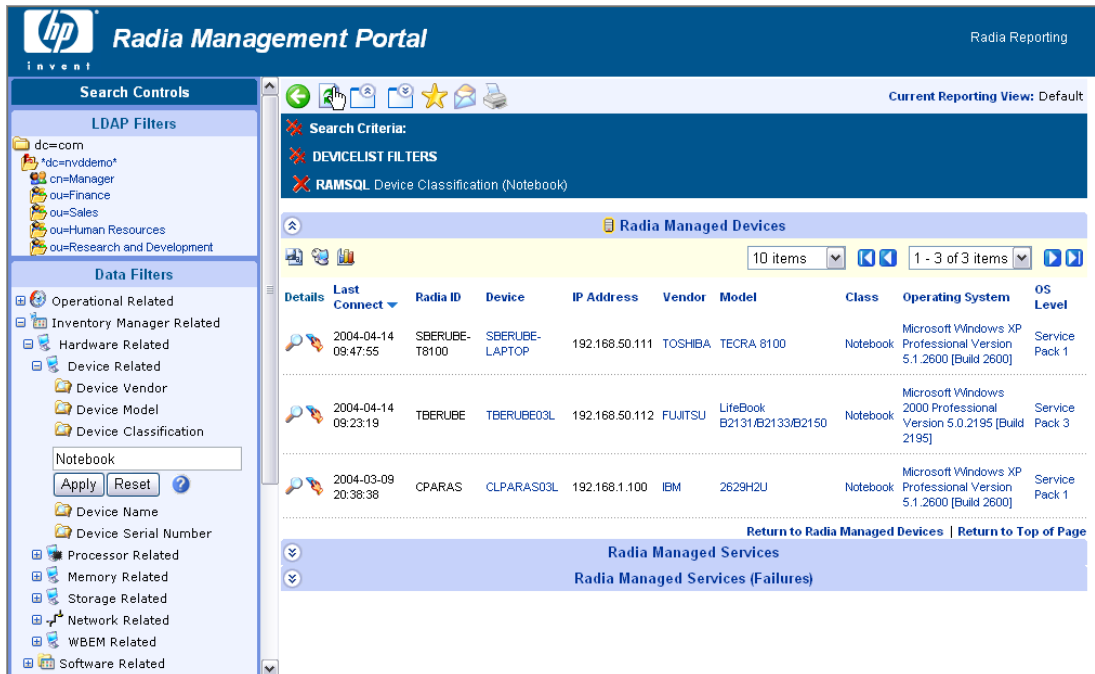


Figure 3.5 ~ Applying a Search Criteria to limit report to Notebook Devices.

Special Filter Value Characters and Wildcards

Finding the right records can be made easier by using special characters and wildcards within your search strings. Use these special characters in conjunction with the text you enter into the **Filter Value** text box. Table 3.1 ~ *Special Characters and Wildcards* below explains each special character.

Table 3.1 ~ Special Characters and Wildcards

Character	Description
* or %	Return all records of specific text string. Example: Device Vendor Filter HP* returns all HP records. %HP% returns all records including HP.

Table 3.1 ~ Special Characters and Wildcards

Character	Description
? or _	Return any single character Example: Device Classification Filter Not?book returns all records beginning with 'Not' and ending with 'book'. Note_ook returns all records beginning with 'Note' and ending with 'ook'.
!	Negates filter. The ! must be placed before the text string. Example: Device Vendor Filter !HP* will return all non-HP records.

Using Display Controls to Select Reporting Views

Within the Display Controls area, Reporting Views specify which windows are to be displayed on the report page, as well as their initial state (maximized or minimized).

View Groups and **Views** are stored as objects.



Figure 3.6 ~ Display Controls area.

Applying a View from the Reporting View Area

To apply a View

1. From the Reporting View area, open the **View Group** drop-down list and select a group. The example shown in *Figure 3.7 ~ Sample Selections for Software Reports and associated Reports* below, has **Software Reports** views selected.
2. Next, select a view for that group. The example shown in *Figure 3.7 ~ Sample Selections for Software Reports and associated Reports* below, has **Service Details** selected.
3. Click **Apply** to apply this View to the dataset. After applying the view, you will see the appropriate report windows displayed for the selected View.


Note

The **Reset** button resets the View Group and view selections to their default values.

Figure 3.7 ~ Sample Selections for Software Reports and associated Reports below shows the Reporting View selections to apply a Licensing View to the current dataset.



Figure 3.7 ~ Sample Selections for Software Reports and associated Reports.

Use the **Back button**  to return to any of the previous reporting windows. When you reach the top of the history, the back button disappears.

About Reporting Windows

The Report Page displays the Windows specified in the applied view. *Figure 3.8 ~ Sample Device and Services on a Reporting Page* on page 63, below, shows an example of three Windows displayed on the Report Page. The **Radia Managed Devices** and **Radia Managed Services** Windows are maximized, while the **Application Usage** window is minimized.

Using the Windows Action Bar Icons

Each Window contains an **Action Bar** with the following possible icons:



Notify Devices - From the Radia Managed Devices window, click the Notify icon to notify all devices in the window. The Radia Management Portal is required for notifying. The Radia Reporting Server sends the notify request to the Radia Management Portal.



Switch to Graphical View - Click this icon to switch to a graphical view of the data.

Radia Managed Devices

10 items

1 - 3 of 3 items

Details	Last Connect	Radia ID	Device	IP Address	Vendor	Model	Class	Operating System	OS Level
	2004-04-14 09:47:55	SBERUBE-T8100	SBERUBE-LAPTOP	192.168.50.111	TOSHIBA	TECRA 8100	Notebook	Microsoft Windows XP Professional Version 5.1.2600 [Build 2600]	Service Pack 1
	2004-04-14 09:23:19	TBERUBE	TBERUBE03L	192.168.50.112	FUJITSU	LifeBook B2131/B2133/B2150	Notebook	Microsoft Windows 2000 Professional Version 5.0.2195 [Build 2195]	Service Pack 3
	2004-03-09 20:38:38	CPARAS	CLPARAS03L	192.168.1.100	IBM	2629H2U	Notebook	Microsoft Windows XP Professional Version 5.1.2600 [Build 2600]	Service Pack 1

Return to Radia Managed Devices

Return to Top of Page

Radia Managed Services

15 items

1 - 5 of 5 items

Service ID	Description	Subscribers	Install	Verify	Update	Repair	Uninstall	Successes	Failures	Total
CLIENT_INSTALL_ENTERPRISE	Radia Usage Manager	3	2	0	1	0	0	3	0	3
DISCOVER_PATCH	Discover Patches	2	0	0	2	0	0	2	0	2
MS03-021	MS03-021	0	0	0	0	0	2	2	0	2
RIM_REPORTING	RIM Reporting	3	1	0	2	0	0	3	0	3
STRATUS_PAD	StratusPad	1	1	0	0	0	0	1	0	1

Return to Radia Managed Services

Return to Top of Page

Radia Managed Services (Failures)

Figure 3.8 ~ Sample Device and Services on a Reporting Page.

Browsing Items in a Report

There may be very large numbers of items in any report. The Action Bar lets you customize how many items to view in a given window area. To browse to records outside your current window area, use the Browse buttons or drop-down list, as illustrated in *Figure 3.9 ~ Report Display Settings: 15 Items per Window, Sort by Class in ascending order* on page 64.

Maximum items per window. Use this drop-down list box to limit how many items to display in the current window. For example, if you select a maximum of 30 items, you will be able to scroll 30 items in the current window.

Browse Back and Forward Buttons. If you set the maximum items per window smaller than the total items in the report, you will have the ability to browse through multiple windows. Use the browse buttons to go to the **First**, **Previous**, **Next**, or **Last** window for the current report.

Browse to a specific window. Alternatively, select which set of items to view from the list of available windows. For example, select **16 - 30 of 46** items from drop-down list box to view that set of items.

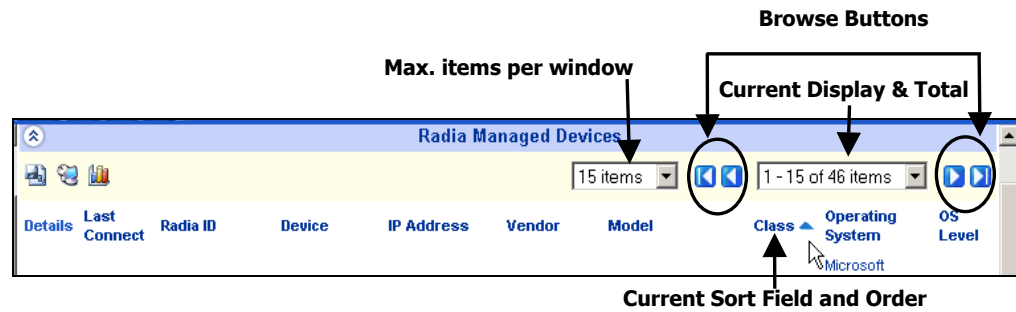


Figure 3.9 ~ Report Display Settings: 15 Items per Window, Sort by Class in ascending order.

Sorting Columns

Sort items in any report by any column either in ascending or descending order by clicking the column-heading name.

Clicking a column-heading name selects the column for the sort and displays the items in ascending order. An up arrow indicates the active sort column and ascending order.


To toggle between ascending and descending sorts, click a currently selected sort field. A down arrow indicates the items are displayed in descending order.

For example, *Figure 3.9 ~ Report Display Settings: 15 Items per Window, Sort by Class in ascending order* above shows a report sorted on the **Class** column in ascending order. Notice the up-arrow to the right of the **Class** column heading.


Notifying Devices

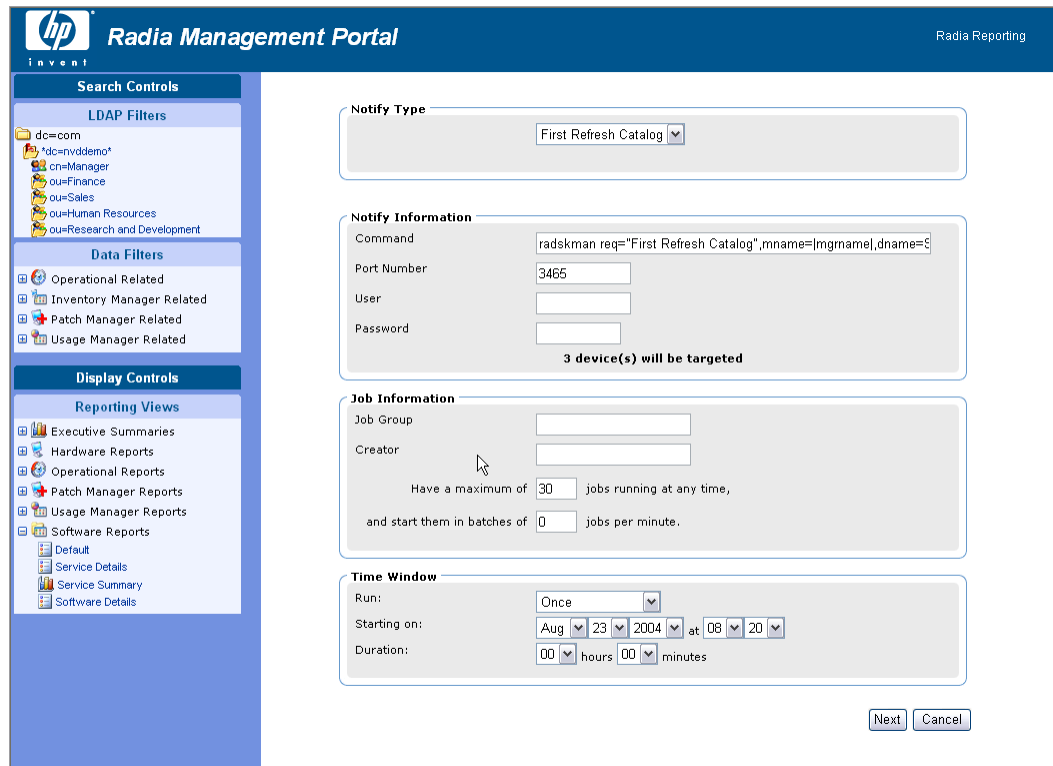
Note

The Radia Management Portal is required in order to use the Notify function.

If you would like to notify the devices displayed in the **Radia Managed Devices** window, click the **Notify**  icon located in the action bar.

To Notify devices

1. After you've selected which devices you would like to notify, click **Notify** . The Notify window opens.



Radia Management Portal Radia Reporting

Search Controls

LDAP Filters

- dc=com
- *dc=rvdemo*
- cn=Manager
- ou=Finance
- ou=Sales
- ou=Human Resources
- ou=Research and Development

Data Filters

- Operational Related
- Inventory Manager Related
- Patch Manager Related
- Usage Manager Related

Display Controls

Reporting Views

- Executive Summaries
- Hardware Reports
- Operational Reports
- Patch Manager Reports
- Usage Manager Reports
- Software Reports
- Default
- Service Details
- Service Summary
- Software Details

Notify Type

First Refresh Catalog

Notify Information

Command: radskman req="First Refresh Catalog",mname=[mgmname],dname=§

Port Number: 3465

User:

Password:

3 device(s) will be targeted

Job Information

Job Group:

Creator:

Have a maximum of 30 jobs running at any time,
and start them in batches of 0 jobs per minute.

Time Window

Run: Once

Starting on: Aug 23 2004 at 08 20

Duration: 00 hours 00 minutes

Next Cancel


Figure 3.10 ~ Notify window.

2. Define your notify settings and click **Next**.

A request is sent to the Radia Management Portal and the notify process is started. To view the status of the notify job, use the Radia Management Portal.

For more information about using Radia Notify and the Radia Management Portal, see the *Radia Application Manager Guide* and the *Radia Management Portal Guide*, respectively.

Switching to a Graphical View of Reporting Data

Click **Switch to Graphical View**  in the action bar area of any report window to switch to a graphical view of the report data. *Figure 3.11 ~ Sample Report in Graphical View* below shows a sample graphical view.

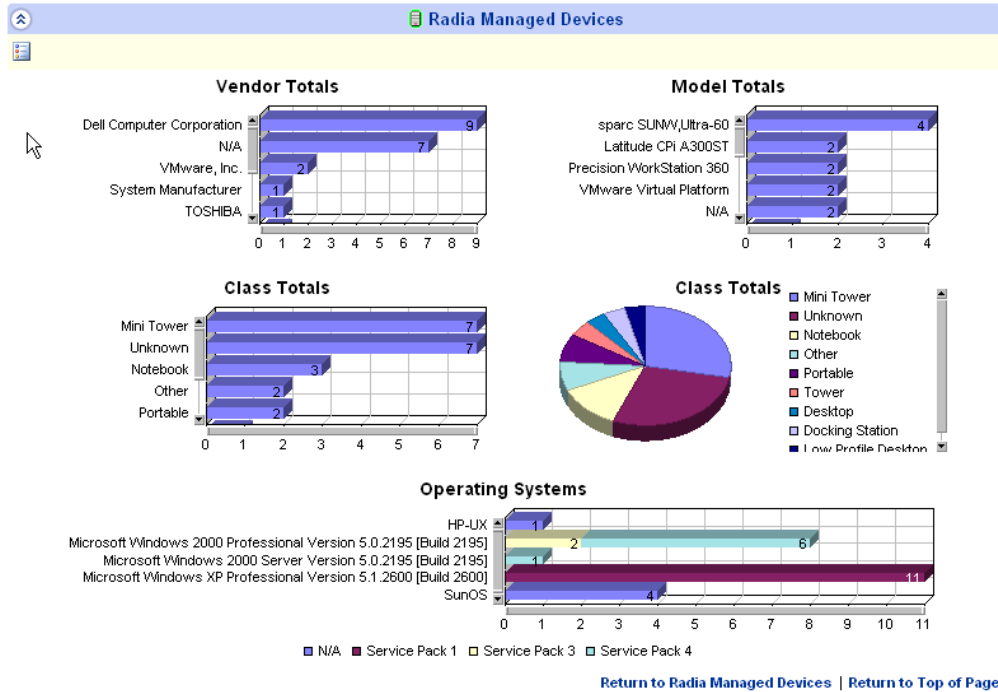



Figure 3.11 ~ Sample Report in Graphical View.

Double-click any individual graph object to add a new Search Criteria. A new set of graphs is displayed based on the specific information you selected.

To return to the detailed view at any time, click **Switch to Detailed View**  in the action bar.

Displaying Device Details

From the Radia Managed Devices report window, click **Show Details**  next to any item to display the details for that device.

The Device Summary window opens, as shown in the following figure. Notice that in addition to the standard global icons, the green arrow icon allows you to return to the previous window.

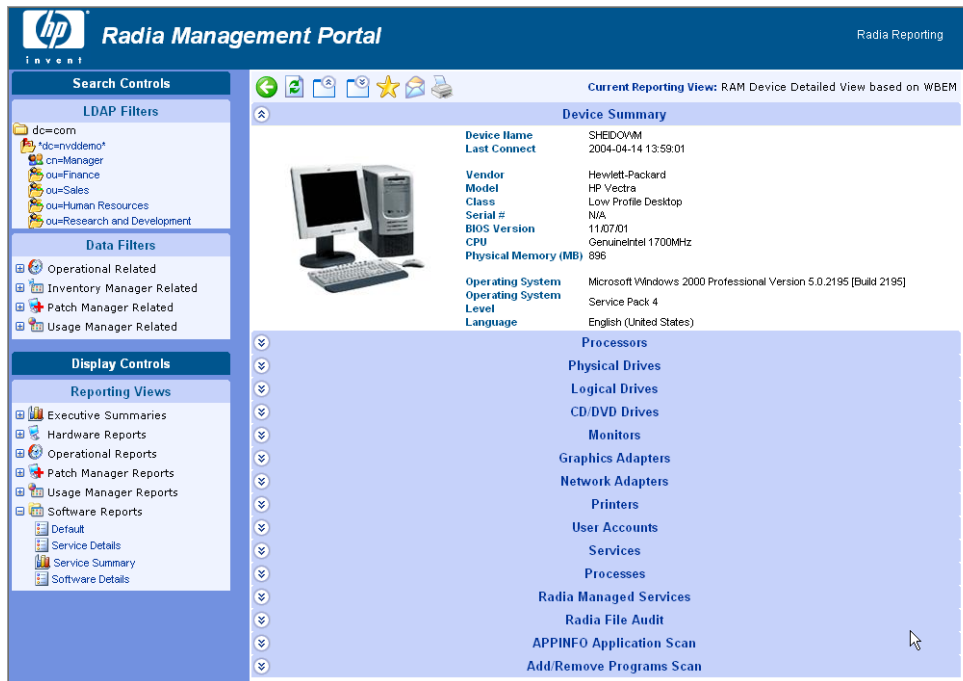



Figure 3.12 ~ Click Show Details to access the Device Summary Window.

Click any heading at the bottom of the page to expand its listing. For example, if you click **Services**, you'll see the list of Windows Services installed on the system.

The Device Summary contents will vary according to the starting Report Window. For example, the following figure displays the Device Summary for another device accessed from a **Radia Patch Manager Devices** window.

The screenshot displays the Radia Management Portal interface. The top navigation bar includes the HP logo, the title "Radia Management Portal", and the text "Radia Reporting". The left sidebar contains three main sections: "Search Controls" with "LDAP Filters" (listing dc=com, *dc=invdemo*, cn=Manager, ou=Finance, ou=Sales, ou=Human Resources, and ou=Research and Development), "Data Filters" (listing Operational Related, Inventory Manager Related, Patch Manager Related, and Usage Manager Related), and "Display Controls" with "Reporting Views" (listing Executive Summaries, Hardware Reports, Operational Reports, Patch Manager Reports, Usage Manager Reports, Software Reports, Default, Service Details, Service Summary, and Software Details). The main content area is titled "Current Reporting View: RPH Device Detailed" and "Device Summary". It shows a desktop computer icon and a table of device details: Device Name (SHEDOM), Last Connect (2004-04-14 13:59:01), Vendor (Hewlett-Packard), Model (HP Vectra), Class (Low Profile Desktop), Serial # (N/A), BIOS Version (11.67A1), CPU (GenuIntel 1700MHz), Physical Memory (MB) (256), Operating System (Microsoft Windows 2000 Professional Version 5.0.2195 [Build 2195]), Operating System Service Pack (Service Pack 4), and Language (English (United States)). Below this is a "Bulletin" section with a table listing 15 items. The first item is MS04-012, a Cumulative Update for Microsoft RPCSS (526741), with a status of "Failed" (red X) and a last scanned date of 2004-04-14 17:52:23. The second item is MS04-013, a Cumulative Security Update for Outlook Express (837909), with a status of "Unknown" (yellow question mark) and a last scanned date of 2004-04-14 17:52:23. The third item is MS04-007, a ASN.1 Vulnerability Could Allow Code Execution (828026), with a status of "Success" (green checkmark) and a last scanned date of 2004-04-14 17:52:23. The fourth item is MS04-007, a ASN.1 Vulnerability Could Allow Code Execution (828026), with a status of "Success" (green checkmark) and a last scanned date of 2004-04-14 17:52:23. The fifth item is MS04-003, a Buffer Overrun in MDAC Function Could Allow code execution (832483), with a status of "Success" (green checkmark) and a last scanned date of 2004-04-14 17:52:23. The sixth item is MS04-003, a Buffer Overrun in MDAC Function Could Allow code execution (832483), with a status of "Success" (green checkmark) and a last scanned date of 2004-04-14 17:52:23.

Figure 3.13 ~ Sample Device Summary from Radia Patch Manager Devices window.

Continue to view details of the Bulletin for the first item, MS04-012. Click **Show Details**  in the Details column and the Microsoft page listing this patch is opened, as shown in the following figure.

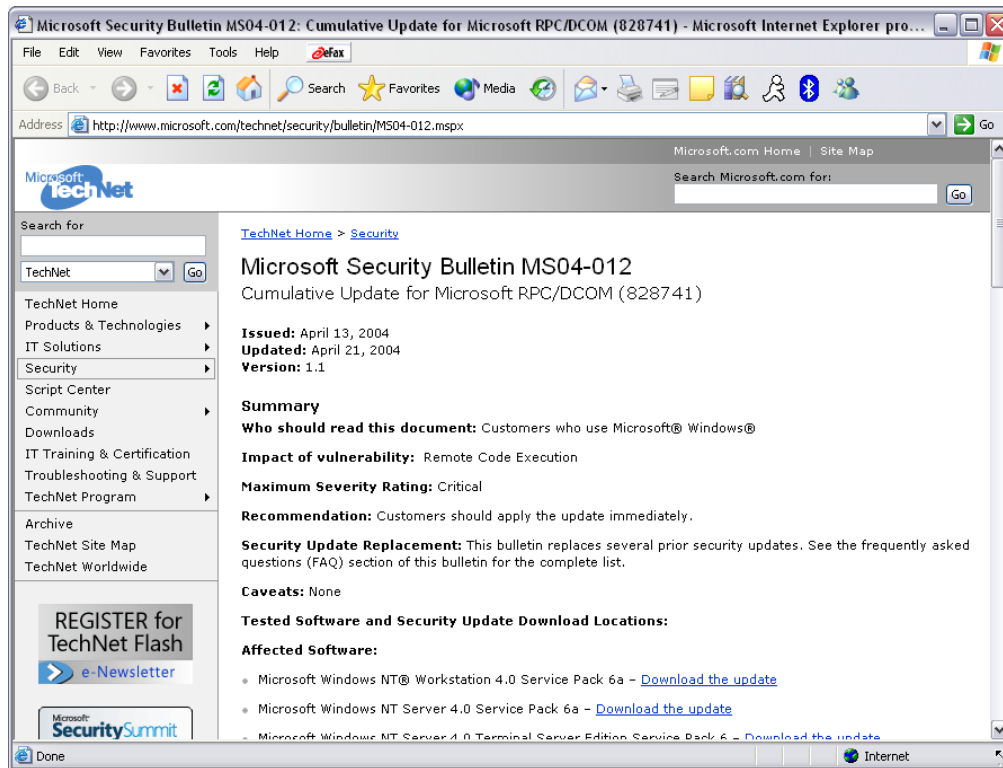



Figure 3.14 ~ Details for a Bulletin Item links to the Microsoft Security page for it.

Using Remote Control (VNC)

If you'd like to begin a VNC session for an individual device, click **Remote Control (VNC)**  next to the appropriate device row.

Summary

- The Radia Reporting Server user interface contains several distinct areas. Use these to generate reports based on criteria you supply.
- Use the Search Controls to apply one or more filters.
- Reporting Views define the set of reporting windows to display.
- The Search Criteria lists the filters that have been applied to the current dataset.
- Use the Action Bar to navigate throughout your report, generate a CSV file, switch to a graphical view or notify devices.

Customizing Reports

At the end of this chapter, you will:

- Understand the different reporting object types, including views, view groups, filters, filter groups, and windows.
- Understand how to modify the reporting object files to create custom reports.
- Be presented with an example scenario showing how to customize reporting objects.

The Radia Reporting Server allows for extensive report customization by modifying any of the reporting object files. These files are located, by default, in the **Objects** directory after installing the Radia Reporting Server. These reporting object files determine what data you will see and in what format it is presented on the Radia Reporting Server Web page.

There are multiple reporting object file types that you can modify. Each type is located within a separate sub-directory within the appropriate language folder, as seen in *Figure 4.1 ~ Reporting object file directories* below.

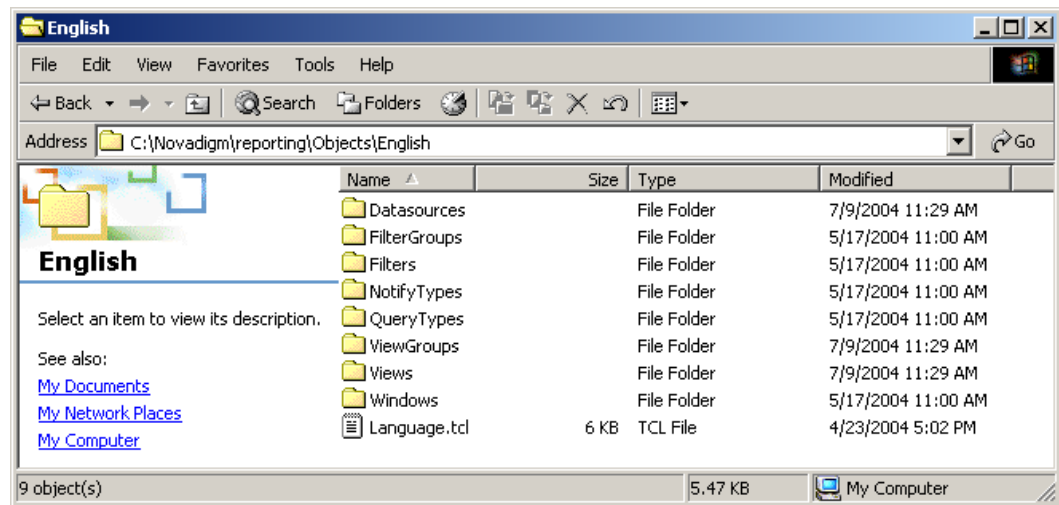


Figure 4.1 ~ Reporting object file directories.

Note

Customizing Radia Reporting Server reporting object files requires a basic knowledge of XML. Familiarity with TCL and HTML is also beneficial.

When generating a reporting page, the Radia Reporting Server looks for all files of a specific extension type, ***.views**, for example, within the directories mentioned above.

Backing up Your Reporting Object Files

Before you begin modifying any reporting object files, make sure to backup the original files. It is recommended that you rename any of the files you will modify with an easily identifiable designator, your company name or initials, for example. If your company initials were ABC, then you could copy and rename the View Group object, **Hardware Reports.viewgroup** to **ABC_HardwareReports.viewgroup**.

Since the Radia Reporting Server only looks for specific extensions, renaming your modified files allows easy incorporation into your reporting environment. Also, any updates to the Radia Reporting Server files will be easily incorporated into your existing configuration without undoing any of your report customizations.

Understanding the Reporting Object Files

Before you customize any reporting object files, become familiar with the purpose of each file and how they are constructed.

Reporting Object File Construction

Each reporting object file is designed using XML (Extendable Markup Language) as well as TCL (Tool-Command Language) and HTML. You should have a basic understanding of each of these programming languages before you attempt to make any modifications to your reporting object files. Use any text editor to modify and save new reporting object files.

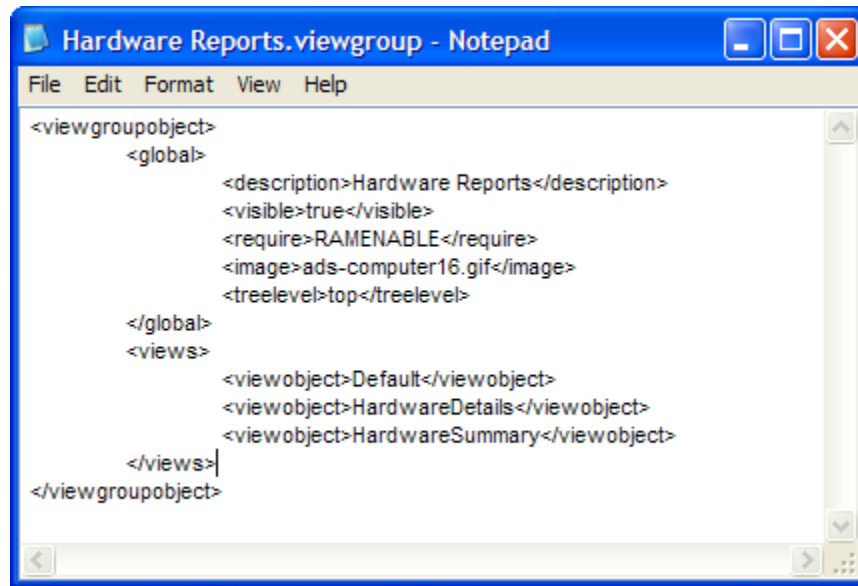


Figure 4.2 ~ A sample View Group object file viewed using Notepad.

Reporting Object File Types

Several reporting object file types can be modified to generate custom report pages. These include:

- View Groups
- Views
- Filter Groups

- Filters
- Windows
- Datasources

View Group Objects and View Objects

View Group (*.viewgroup) objects contain a selectable list of View objects available for that category. Each View Group contains a specific set of available Views. A view group can include another view group in its list to allow for multiple levels in the tree view.

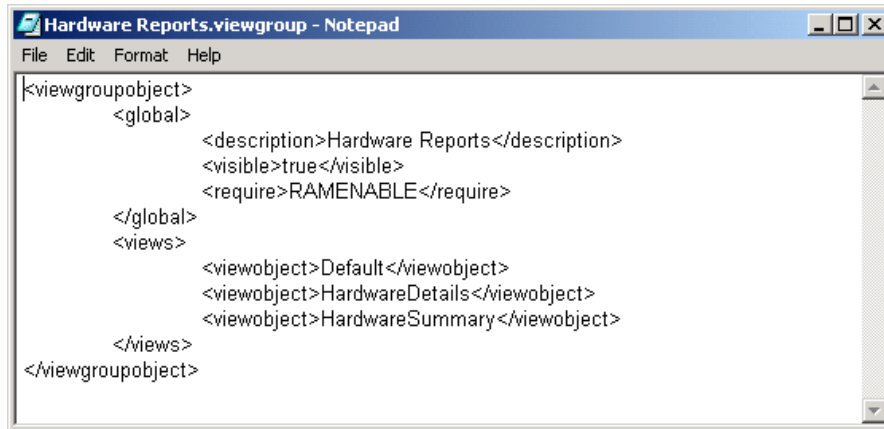


Figure 4.3 ~ Sample View Group object file.

View (*.view) objects determine the currently active window object displayed on the right side of the Radia Reporting Server web page.

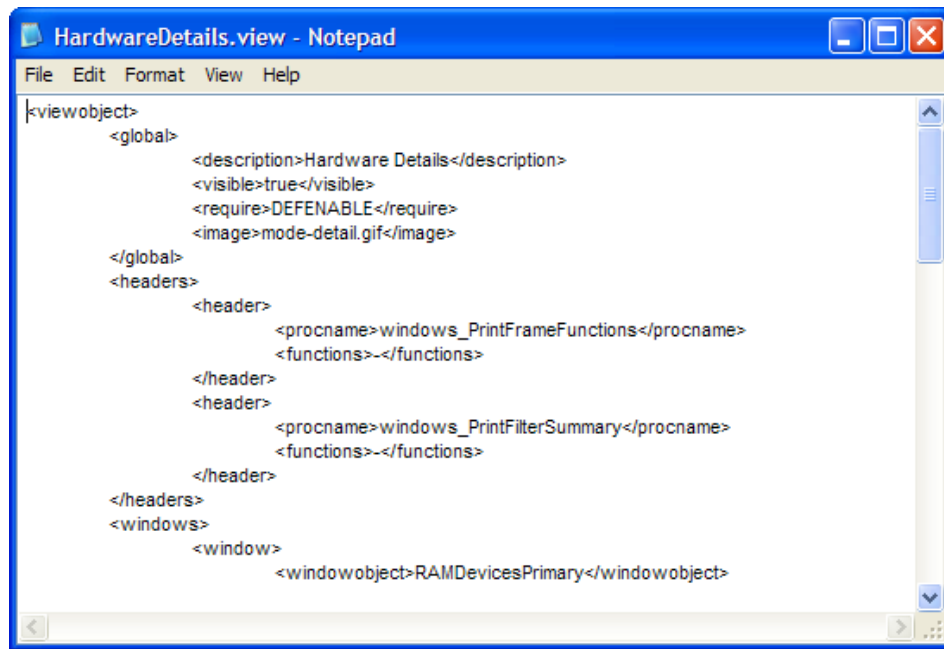


Figure 4.4 ~ Part of a sample View object file.

Modifying View Group objects and View object files will determine what is displayed on the left-hand side of the Radia Reporting Server Web page in the two drop-down list boxes within the Display Controls/Reporting Views section.

The currently active View object is displayed in the top-right corner of the page after **Current Reporting View**.

The screenshot displays the Radia Management Portal interface. The left sidebar contains several sections: Search Controls, LDAP Filters, Data Filters, and Display Controls. The Display Controls section is expanded, showing a list of Reporting Views. The 'Reporting Views' section is highlighted with a red box, and the 'Default' view is selected. The main content area shows a table of Radia Managed Devices with columns for Details, Last Connect, Radia ID, Device, IP Address, Vendor, Model, Class, Operating System, and OS Level. The table lists four devices, including a Dell Latitude D600 and a Dell OptiPlex GX270.

Details	Last Connect	Radia ID	Device	IP Address	Vendor	Model	Class	Operating System	OS Level
2004-08-14 09:41:38	SBERUBE	SBERUBED600	208.244.225.186	Dell Computer Corporation	Latitude D600	Portable	Microsoft Windows XP Professional Version 5.1.2600 [Build 2600]	Service Pack 1	
2004-08-14 09:41:26	SBERUBE-HOME	SBERUBE-HOME	192.168.50.120	System Manufacturer	System Name	Tower	Microsoft Windows XP Professional Version 5.1.2600 [Build 2600]	Service Pack 1	
2004-05-12 11:30:25	JB	JB	192.168.1.103	Dell Computer Corporation	Precision WorkStation 360	Mini Tower	Microsoft Windows XP Professional Version 5.1.2600 [Build 2600]	Service Pack 1	
2004-04-23 11:16:57	SERVER	SERVER	192.168.50.125	Dell Computer Corporation	OptiPlex GX270	Mini Tower	Microsoft Windows 2000 Server Version 5.0.2195 [Build 2195]	Service Pack 4	

Figure 4.5 ~ View Groups, Views and the Current Reporting View displayed on the Radia Reporting Server Web page.

In addition to adding or altering Display Controls, View object files are used to determine which window objects are present. View objects can also determine specific Window object settings using the **Window Object Overrides** section. The parameter values within this section take precedence over any parameter values within a Window object file.

Filter Group Objects and Filter Objects

Filter Group (*.filtergroup) objects determine a selectable list of Filter objects. Like View Groups and Views, Filter Groups contain a specific set of available Filters. Depending on the Filter Groups selected, different Filter objects can be made available. Filter group objects can contain other Filter Group objects to allow for multiple levels in the tree view.

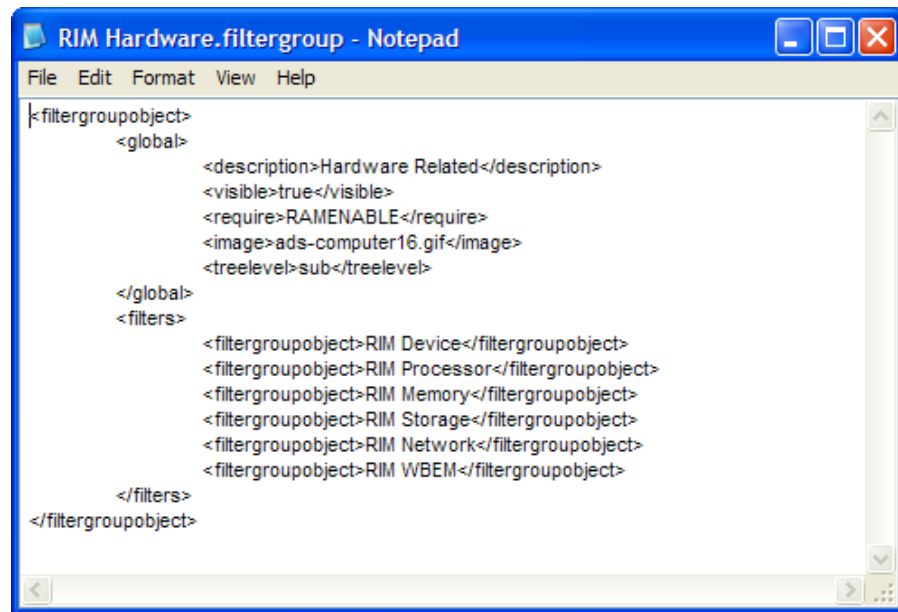


Figure 4.6 ~ Sample Filter Group object file.

Filter (*.filter) object files define which data is displayed within each reporting page.

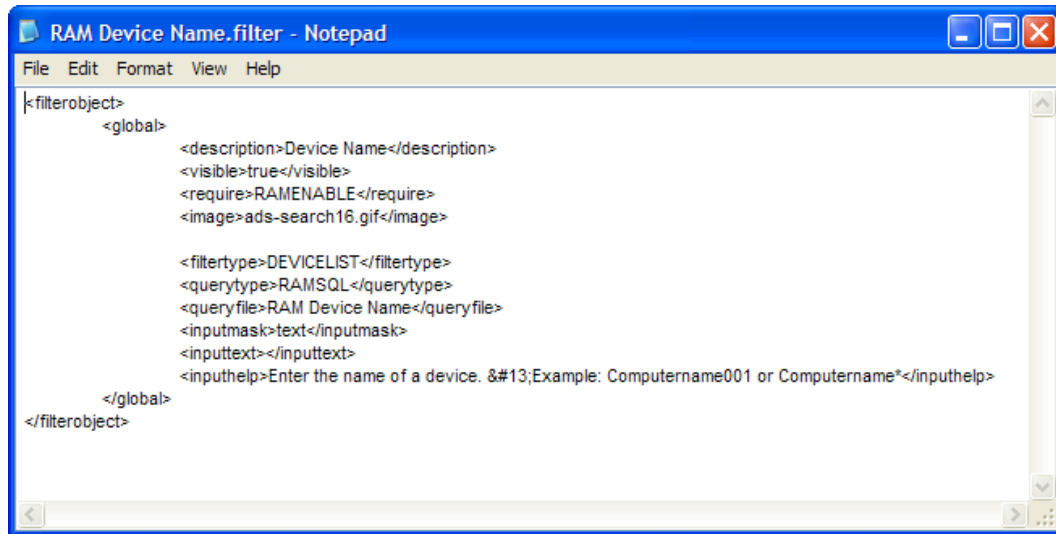


Figure 4.7 ~ Sample Filter object file.

Window Objects

Window object files (*.window) define the data layout, including column headings, icons, sort fields, default window mode, default window state, drill down elements and column data appearances.

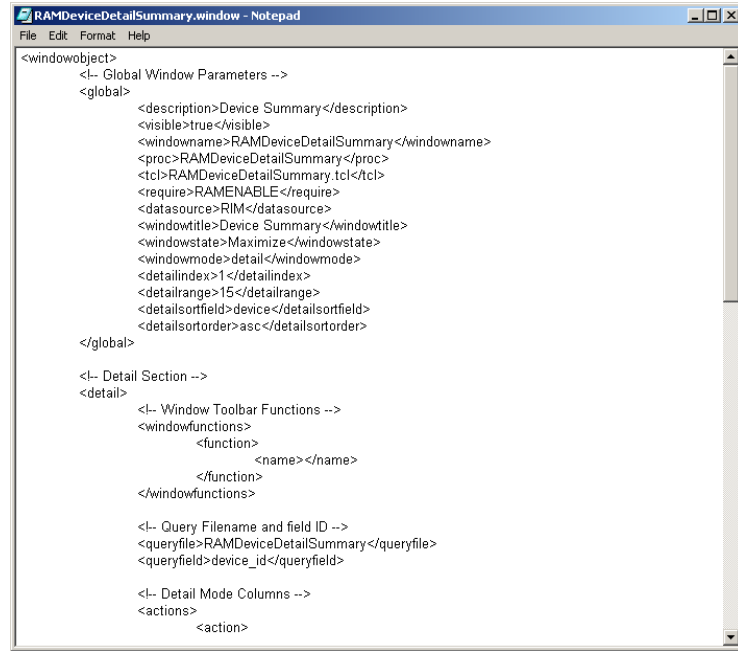


Figure 4.8 ~ Part of a sample Window object file.

Each existing reporting object file type can be modified or copied to create new reporting pages.

Datasource Objects

Datasource object files (*.datasource) allow you to add multiple data sources for reporting. For example, you may want to add more SQL data sources or future DSML/LDAP data sources.

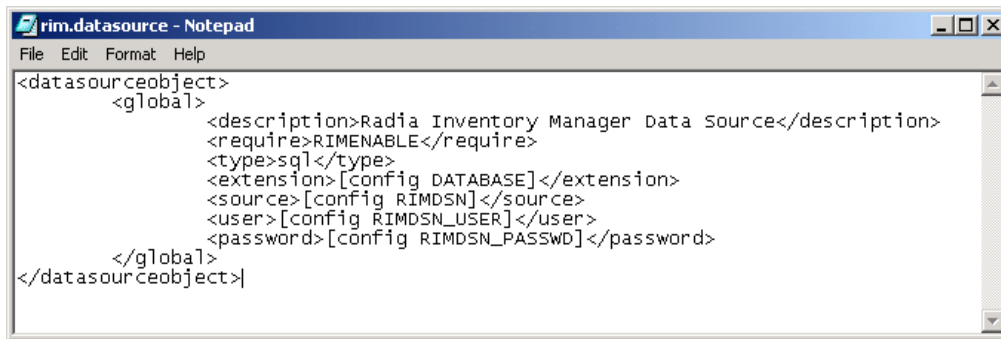


Figure 4.9 ~ Sample Datasource object file.

Modifying Reporting Object Files

Use a text editor, like Notepad.exe, to modify your reporting object files. Each file is built using XML, TCL and HTML. Make sure you are familiar with these programming languages before you begin to modify these files.

Parameters within the reporting object files are defined using XML. For example, the global section **description** parameter within the **HardwareDetails.view** object file is defined as:

```
<description>Hardware Details</description>
```

Note the leading and trailing XML descriptor tags.

If you wanted to change the HardwareDetails.view object, global description to **Hardware Specifics**, you would need to change the text between the XML tags to:

```
<description>Hardware Specifics</description>
```

After the file is saved, the next time you view or refresh your Radia Reporting Server Web page, the selectable entry within the Views drop-down list box, **Hardware Details**, will have been replaced with **Hardware Specifics**.

The following paragraphs and tables explain each object file section and their associated parameters and values. Modify any of these values to change or create reporting objects.

Modifying View Group Objects

View Group object files (*.viewgroup) contain two configurable sections: global and views. View groups can contain other View Groups to allow for multiple tree-view levels.

View Group Object Global Section

The global section is used to define the View Group name within the Display Controls drop-down list box, whether or not this View Group is visible and what settings are required for this View Group to be enabled. A sample <global> section follows:

```
<global>
  <description>Hardware Reports</description>
  <visible>true</visible>
  <require>RAMENABLE</require>
  <image>ads-computer16.gif</image>
  <treelevel>top</treelevel>
</global>
```

Table 4.1 ~ View Group Object Global Section Parameters

Parameter	Description
<description>	What is displayed within the View Group drop-down list.
<visible>	True = This view group will be present in the View Group drop-down list. False = Hide this view group selection.
<require>	Prerequisite files or configuration file settings required for this View Group to be available.
<image>	Image used for tree view icon.
<treelevel>	top = load and show at top level. sub = load and show at sub level.

View Group Object Views Section

The views section determines which view objects are available when the view group is selected. A sample <views> section follows:

```
<views>
  <viewobject>Default</viewobject>
  <viewobject>HardwareDetails</viewobject>
  <viewobject>HardwareSummary</viewobject>
</views>
```

Table 4.2 ~ View Group Object Views Section Parameters

Parameter	Description
<viewobject>	View object name. Define more than one view objects by adding additional viewobject lines.

Modifying View Objects

View object files (*.view) contain the following configurable sections: Global, Header and Windows.

View Object Global Section

The global section is used to define the View name within the Display Controls drop-down list box, whether or not this View is visible and what settings are required for this View to be enabled. A sample <global> section follows:

```

<global>
  <description>Hardware Details</description>
  <visible>true</visible>
  <require>DEFENABLE</require>
  <image>mode-detail.gif</image>
</global>

```

Table 4.3 ~ View Object Global Section Parameters

Parameter	Description
<description>	What is displayed within the Views drop-down list.
<visible>	True = This view will be present in the Views drop-down list. False = Hide this view selection.
<require>	Prerequisite files or configuration file settings required for this View to be available.
<image>	Image used for tree-view icon.

View Object Header Section

The View object header section contains parameters used to define what items are available within each window heading. A sample <header> section follows:

```

<headers>
  <header>
    <procname>windows_PrintFrameFunctions</procname>
    <functions>-</functions>
  </header>
  <header>
    <procname>PrintFilterSummary</procname>
    <functions>-</functions>
  </header>
</headers>

```

Table 4.4 ~ View Object Header Parameters

Parameter	Description
<procname>	Tcl procedure name to call for the header. The defaults are windows_printframefunctions and windows_printfiltersummary. The default functions draw the respective data displayed.

Table 4.4 ~ View Object Header Parameters

Parameter	Description
<functions>	List of parameters to pass to the function. Currently, most values are set to – (dash) as this is reserved for future use (with the exception of the sub-views, which have the value back to enable the back button).

View Object Windows Section

The windows section determines which window objects are available when the view is selected. The Window Object Overrides section allows you to alter the appearance of any window object by overriding parameter values set within the window object with new values. This allows for conformity between window objects available with a certain view object. A sample <windows> section follows:

```
<windows>
  <window>
    <windowobject>RAMDevicesPrimary</windowobject>

    <!-- Window Object Overrides -->
    <windowstate>Maximize</windowstate>
    <windowmode>detail</windowmode>
    <detailindex>1</detailindex>
    <detailrange>15</detailrange>
    <detailsortfield>-</detailsortfield>
    <detailsortorder>-</detailsortorder>
  </window>
</windows>
```

Table 4.5 ~ View Object Windows Parameters

Parameter	Description
<windowobject>	Determines the window object to load.
Window Object Overrides	
<windowstate>	Determines the window object state.
<windowmode>	Determines window object mode.
<detailindex>	Starting record number. Usually will be 1 (to start at record number 1).
<detailrange>	Number of records to display at one time.
<detailsortfield>	Default SQL field name by which to sort data results.

Table 4.5 ~ View Object Windows Parameters

Parameter	Description
<detailsortorder>	Sort order. asc = sort ascending. des = sort descending.

Modifying Filter Group Objects

Filter Group objects (*filtergroup) contain two configurable sections, global and filters. Filter Groups can contain other Filter Groups to allow for multiple levels in the tree view.

Filter Group Object Global Section

The global section is used to define the Filter Group name within the Filter Group drop-down list box, whether or not this Filter Group is visible and what settings are required for this Filter Group to be enabled. A sample <global> section follows:

```
<global>
    <description>Hardware Related Filters</description>
    <visible>true</visible>
    <require>RAMENABLE</require>
    <image>ads-computer16.gif</image>
    <treelevel>sub</treelevel>
</global>
```

Table 4.6 ~ Filter Group Object Global Parameters

Parameter	Description
<description>	What is displayed within the Filter Group drop-down list.
<visible>	True = This filter group will be present in the Filter Group drop-down list. False = Hide this filter group selection.
<require>	Prerequisite files or configuration file settings required for this filter group to be available.
<image>	Image used for tree view icon.
<treelevel>	top = load and show at top level. sub = object is a sub-level branch.

Filter Group Object Filters Section

The filters section determines which filter objects are available when the filter group is selected. A sample <filters> section follows:

```
<filters>
  <filterobject>RIM Device Vendor</filterobject>
  <filterobject>RIM Device Model</filterobject>
  <filterobject>RAM Device Name</filterobject>
  <filterobject>RIM Device Class</filterobject>
  <filterobject>RIM Device Serial Number</filterobject>
  <filterobject>RAM Device Memory</filterobject>
  <filterobject>RIM Device CPU Count</filterobject>
  <filterobject>RIM Device CPU Speed Less</filterobject>
  <filterobject>RIM Device CPU Speed More</filterobject>
  <filterobject>RAM Drive Space Free</filterobject>
</filters>
```

Table 4.7 ~ Filter Group Object Filters Section Parameters

Parameter	Description
<filterobject>	Filter object name. Define more than one filter objects by adding additional filterobject lines.

Modifying Filter Objects

Filter object files (*.filter) contain a global configurable section.

Filter Object Global Section

The global section determines the filter name displayed, filter type, query type and parameters as well as any required input configurations. A sample <global> section follows:

```
<global>
  <description>Device ID</description>
  <visible>true</visible>
  <require>RAMENABLE</require>
  <image>ads-search16.gif</image>

  <querytype>RAMSQL</querytype>
```

```

<queryfile>RAM Device ID</queryfile>
<inputmask>text</inputmask>
<inputtext></inputtext>
<inputhelp>Enter the device_id of a device.</inputhelp>
</global>

```

Table 4.8 ~ Filter Object Global Section Parameters

Parameter	Description
<description>	What is displayed within the Filter drop-down list.
<visible>	True = This view will be present in the Filter drop-down list. False = Hide this view selection.
<require>	Prerequisite files or configuration file settings required for this Filter to be available.
<image>	Image used for tree view icon.
<querytype>	Determines from where the data is be retrieved. Either, RAMSQL (for Radia Application Manager database), RIMSQL (for Radia Inventory Manager database), RUMSQL (for Radia Usage Manager database) or RPMSQL (for Radia Patch Manager database).
<queryfile>	The SQL command used to obtain the data.
<inputmask>	date – inserts a calendar icon allowing the user to select a date. text – simple text input. dropdown - create a selectable dropdown list with predefined filters. Edit inputtext to enter values for the drop-down list. none - disables input field. Requires the filter to be hard coded (for example, Device last connect > 30 days).
<inputtext>	Input mask values. For text input mask, whatever is entered here will display as the default text input box value. For date input mask, will display default date. Must be a valid date format. For dropdown input mask value, use a space-delimited list to create the list values. For example: <inputtext>a b c</inputtext> Creates a dropdown list with the elements a b and c. Alternatively, a SQL query can be used to populate the dropdown list. For example: <inputtext>[sql execute RIMDSN "select distinct os from deviceconfig"]</inputtext> Creates a dropdown list of OS values.
<inputhelp>	Help icon text displayed on mouse-over.

Modifying Window Objects

Window object files (*.window) contain three main configurable sections, global, details and graph.

Window Object Global Section

The global section determines the window object description and initial settings. A view object may override some window object settings. A sample <global> section follows:

```
<global>
    <description>Device Summary</description>
    <visible>true</visible>
    <windowname>RAMDeviceDetailSummary</windowname>
    <proc>RAMDeviceDetailSummary</proc>
    <tcl>RAMDeviceDetailSummary.tcl</tcl>
    <require>RAMENABLE</require>
    <datasource>RIM</datasource>
    <windowtitle>Device Summary</windowtitle>
    <windowstate>Maximize</windowstate>
    <windowmode>detail</windowmode>
    <detailindex>1</detailindex>
    <detailrange>15</detailrange>
    <detailsortfield>device</detailsortfield>
    <detailsortorder>asc</detailsortorder>
</global>
```

Table 4.9 ~ Window Object Global Section Parameters

Parameter	Description
<description>	Window object description.
<vsible>	True = This window will be visible. False = Hide this window object.
<windowname>	A unique descriptive name, same as the filename without the extension.
<proc>	For internal use only.
<tcl>	TCL script file to be used.
<require>	Prerequisite files or configuration file settings required for this Filter to be available.
<datasource>	Prerequisite data source setting required within the configuration file.
<windowtitle>	Window object title displayed.
<windowstate>	Window object state.

Table 4.9 ~ Window Object Global Section Parameters

Parameter	Description
<windowmode>	Window object mode.
<detailindex>	Starting record number. Usually will be 1 (to start at record number 1).
<detailrange>	Number of records to display at one time.
<detailsortfield>	Default SQL field name by which to sort data results.
<detailsortorder>	asc = ascending sort order. des = descending sort order.

Window Object Detail Section

The detail section determines the window toolbar functions, query files and detail column settings. Within the details section are three sub-sections: Windows Toolbar Functions, Query Filename and Field ID and Detail Mode Columns. A sample <detail> section follows:

```
<detail>
  <!-- Window Toolbar Functions -->
  <windowfunctions>
    <function>
      <name></name>
    </function>
  </windowfunctions>

  <!-- Query Filename and field ID -->
  <queryfile>RAMDeviceDetailSummary</queryfile>
  <queryfield>device_id</queryfield>

  <!-- Detail Mode Columns -->
  <actions>
    <action>
      <enabled>0</enabled>
      <image></image>
      <columnname></columnname>
      <url></url>
      <urlalt></urlalt>
      <urltarget></urltarget>
    </action>
  </actions>
```

```

<columns>
  <column>
    <fieldname></fieldname>
    <fieldtype></fieldtype>
    <fieldsettings></fieldsettings>
    <columnname></columnname>
    <columnsettings></columnsettings>
    <url></url>
    <urlalt></urlalt>
    <urltarget></urltarget>
  </column>
</columns>
</detail>

```

Windows Toolbar Functions Sub-Section

This section allows for icons to be added to the window toolbar. In order to be useful, the icon must match the window mode (a graph cannot be exported, for example).

- **ExportCSV** adds the export to CSV Icon (Detail mode only).
- **ViewMode** adds the icon to change to graphical mode or when in graphical mode, adds the icon to change to detail mode. A corresponding mode must exist in the object.
- **Notify** adds notify support (used for the RAMDevicesPrimary window only).
- **NavBar** adds the right side navigation options (detail mode only).

Query Filename and Field ID Sub-Section

This section determines which query file should be used as well as which query field is required. The query filename used automatically appends an extension of .sql or .oracle.

Radia Inventory Manager and Radia Application Manager data requires a queryfield of **device_id**. The Radia Patch Manager and Radia Usage Manager data requires a queryfield of **device_name**.

Detail Mode Columns Sub-Section

The Detail Mode Columns sub-section determines the default layout for each detail column (the first two columns to the left displayed for each window object). Two additional sub-sections, **<actions>** and **<columns>** are included within this section.

Table 4.10 ~ Detail Mode Columns Section – Action Sub-Section Parameters

Parameter	Description
<enabled>	1 = Show detail column. 0 = Hide detail column.
<image>	Determines whether an image file is used to portray the data. Image files are stored within the Images folder.
<columnname>	The name displayed for the column.
<url>	Hyperlink value. Can be an internal reporting function or an external url. For example, <code>http://[index/ \$row 2]:5800</code> , will add a link using the value from row 2 from the SQL query as a symbolic.
<urlalt>	Mouse-over text.
<urltarget>	Determines whether or not a new window is opened. For example, clicking the Remote Control (VNC) icon opens a new window.

Table 4.11 ~ Detail Mode Columns Section – Columns Sub-Section Parameters

Parameter	Description
<fieldname>	Must match SQL field name in the query 1 for 1 match.
<fieldtype>	text date numeric image dropdown - create a dropdown list based on space separated values.
<fieldsetting>	Manipulate output of data.
<columnname>	Friendly name to display on report. If column name is blank, no column will be displayed for that data.
<columnsetting>	Manipulate entire column.
<url>	Hyperlink value. Can be an internal reporting function or an external url. For example, <code>http://[index/ \$row 2]:5800</code> , will add a link using the value from row 2 from the SQL query as a symbolic.
<ulalt>	Mouse-over text.
<ultarget>	Determines whether a new window is opened. Set to <code>_new</code> to open a new window. For example, clicking the Remote Control (VNC) icon opens a new window.

Window Object Graph Section

The graph section determines the settings for the graphical representation of your data. This includes two sub-sections, one for incorporating functions (Window Toolbar Functions) and another for manipulating the graphical representation of the data (Chart Objects For Graphical Mode). A sample <graph> section follows:

```
<graph>
  <!-- Window Toolbar Functions -->
  <windowfunctions>
    <function>
      <name>ViewMode</name>
    </function>
  </windowfunctions>

  <!-- Chart Objects for Graphical Mode -->
  <charts>
    <chart>
<queryfile>RUMCoreProductSummary_Graph_UsageTotals</queryfile>
      <queryfield>devicename</queryfield>
      <charttype>chart_drawBarChartStacked</charttype>
      <chartwidth>700</chartwidth>
      <chartheight>400</chartheight>
      <charttitle>Usage Totals</charttitle>
      <charturl></charturl>
      <params>
      </params>
    </chart>
  </charts>
</graph>
```

Summary

- Reporting objects are designed using the Extendable Markup Language (XML).
- Before you modify any reporting objects, make sure you are familiar with XML as well as TCL and HTML.
- Reporting object files are located within the Objects directory.
- Rename any reporting objects files you modify in order to allow for seamless product updates.

Troubleshooting

At the end of this chapter, you will:

- Be able to access the Radia Reporting Server log file.
- Be able to resolve typical problems, such as Reporting toolbars not loading properly.
- Be able to adjust the CTI timeout value of IIS, if necessary.

About the Radia Reporting Server Log

A **reporting.log** file is located in the **log** directory of the base Radia Reporting Server directory. By default, the log file is located:

<SystemDrive>\Novadigm\ReportingServer\log\reporting.log

Use the log file to review or troubleshoot Radia Reporting Server session activity. The most recent entries are located at the bottom of the log.

- **SQLLOGIN** entries identify all SQL databases that have been configured for reporting access.
- **SESSION START** entries also give the specific session identifier, such as "radia9061259".
- **SESSION END** entries mark the end of the session.

```
. . . SQLLOGIN: RIMDSN
. . . SQLLOGIN: RUMDSN
. . . SQLLOGIN: RPMSDN
. . . SESSION START: radia9061259
. . . RAMSQL: select device_id from dbo.DeviceConfig where device_id in
. . . ('sberube','server','sberube-home','sberubed600','sberube-d600',
. . . 'tberube','sberube-vm2k','administrator','device100','device101',
. . . 'device102','device103','device105','device104','device714',
. . . 'device435','device998','device200','device201','device202',
. . . 'device203','sberube-t8100','sberubevmvp','device300',
. . . 'device301','device302','device400','device401','device402',
. . . 'device403','device404','device405','device406','device407',
. . . 'device408','device409','device410','device411',
. . . 'device412','device413','device414','UNIXPPLMHRURBZTU',
. . . 'UNIXEIQTUUEAOWZ','UNIXHYWMOADCOVZL',
. . . 'UNIXTXBIRZQFVPHI','UNIXPMKAKGRGAJBN','device1000')
. . . RUMSQL:
. . . RPMSQL:
. . . TEMPTABLE CREATE BEGIN: Temptable ##radia9061259dn has been
. . . created.
. . . SQL FILTERS: 1 SQL filters type(s) used.
. . . WINDOW RAMDevicesPrimary DETAILDATA BEGIN: Processing
. . . query on RIMDSN.
. . . WINDOW RAMDevicesPrimary DETAILDATA END: Query processing
. . . complete on RIMDSN.
. . . SESSION END: radia9061259
```

Figure 5.1 ~ Select reporting.log entries for a typical session.

Common Radia Reporting Server Problems and Solutions

■ Problem: Left Toolbar not loading.

The left-side navigation toolbar of the Radia Reporting page isn't loading properly.

Solution: This has been resolved on Compaq machines by disabling TEAMING.

■ Problem: CGI Timeout.

The report window shows a "CGI timeout" when I run reports against the entire dataset. How do I change the CGI timeout?

Solution: The default IIS value for CGI timeout is 5 minutes, or 200 seconds. Radia Reporting Server queries against a large dataset can take longer. We recommend changing the CGI timeout to 1200 seconds, or 20 minutes. For details on how to do this, see *Modifying the CGI Timeout Value in IIS*.

■ Problem: Browser hangs when opening Reporting Page – navigation bar or reports are not displayed.

When browsing to the Reporting page, the page hangs when trying to display the navigation bar (navigate.tcl) or reports (results.tcl).

Solution: Change the file permissions of C:\WINNT\Temp to allow everyone full control, including subfolders.

Modifying the CGI Timeout Value in IIS

The CGI timeout is documented by Microsoft at:

<http://www.microsoft.com/windows2000/en/server/iis/htm/asp/apro6e9g.htm>.

If you receive a CGI Timeout error, you can use one of the following procedures to modify the CGI timeout value in IIS.

To change the CGI timeout value in IIS using a script

From a command prompt, access the <SystemDrive>\inetpub\adminscripts directory, and type:

```
cscript adsutil.vbs set w3svc/CGITimeout "1200" <enter>
```

To change the CGI timeout value in IIS using Windows tools

1. On your Windows desktop, right-click **My Computer** and select **Manage**.
2. Browse to **Services and Applications, Internet Information Services, Web Sites**.
3. Display the **Web Sites Properties** page and select the **Home Directory** tab.
4. Click the **Configuration** button at the bottom of the page to open the Application Configuration window.
5. Select the **Process Options** tab.

- 6.** In the **CGI script timeout** text box, type the desired value in seconds. We recommend **1200** seconds. Click **OK** to save the Process Option.
- 7.** Click **OK** to save the Application Configuration entry.

Summary

- A reporting.log file is saved in the log directory of your Radia Reporting Server base directory.
- Refer to the log entries to obtain Radia Reporting Server session activity details.
- Modify the CTI timeout value for IIS, if necessary.



Sample Reporting Scenario

This appendix presents a sample reporting scenario that will help you become familiar with the Radia Reporting Server's features. The scenario demonstrates the use of filter options and view options as well as some of the functions available after a report is generated.

Scenario: Report for Sales Department on Devices Needing Service Pack Updates

The following scenario instructs how to use the Radia Reporting Server to obtain a list of all Radia Managed Devices in the Sales Department that have the desired operating system for rolling out a new application, but which do not have the latest service pack level. The final report itemizes those devices that need a service pack update prior to installing the application.

The scenario assumes that the Radia Reporting Server has been configured to access the Active Directory for your enterprise as well as your Radia Inventory Manager SQL database. It has been installed on the IIS server with the hostname: myHostIIS.

Step 1: Access Radia Reporting

To access the Radia Reporting Server, open a browser window and type:

`http://myhostIIS/reporting`

Where *myhostIIS* is the host name for the IIS web server on which Radia Reporting Server was installed and where *reporting* is the Alias assigned to Radia Reporting Server during installation and configuration.

The Radia Reporting Server Web page opens with the default toolbars and windows.

At the top-left of the page, the **LDAP Filters** area includes the enterprise's Active Directory tree.

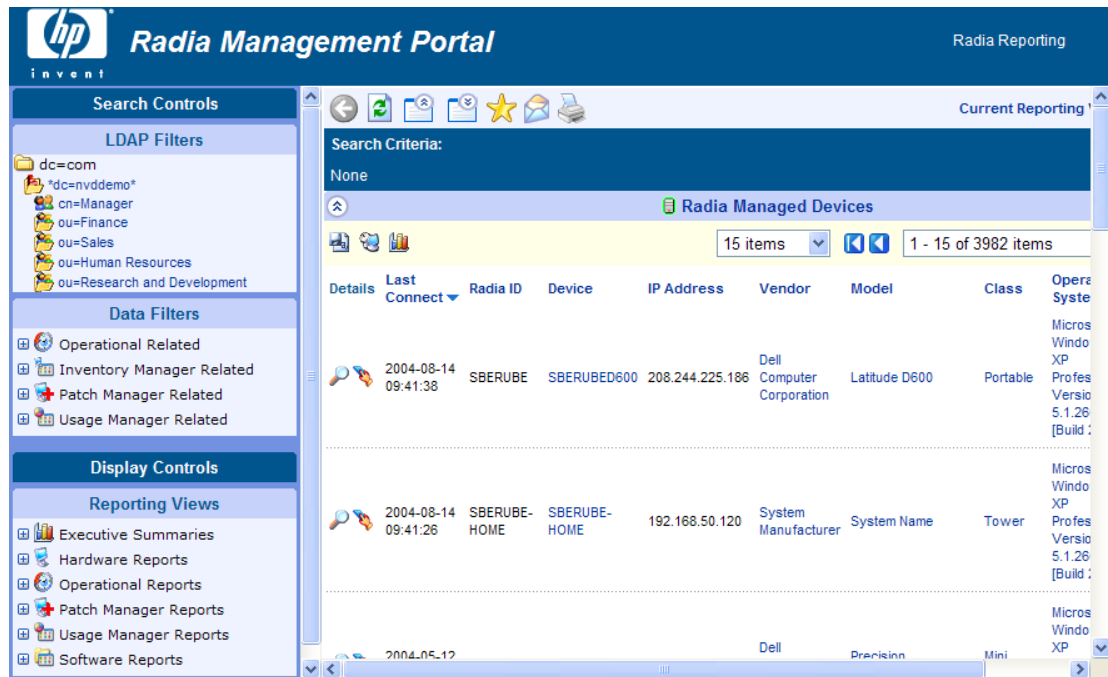


Figure A.1 ~ First Access to the Radia Reporting Server.

We will select various filters from the Radia Reporting Server interface to limit the report to only those Devices in the Sales Department that need service pack updates for our new application.

Step 2: Search for Sales Department Devices Only

Use the LDAP Filters area to select the Sales group from the Active Directory structure. Making a selection in this area adds an LDAP filter of Sales to the Search Criteria, and returns a list of all devices assigned to Sales.

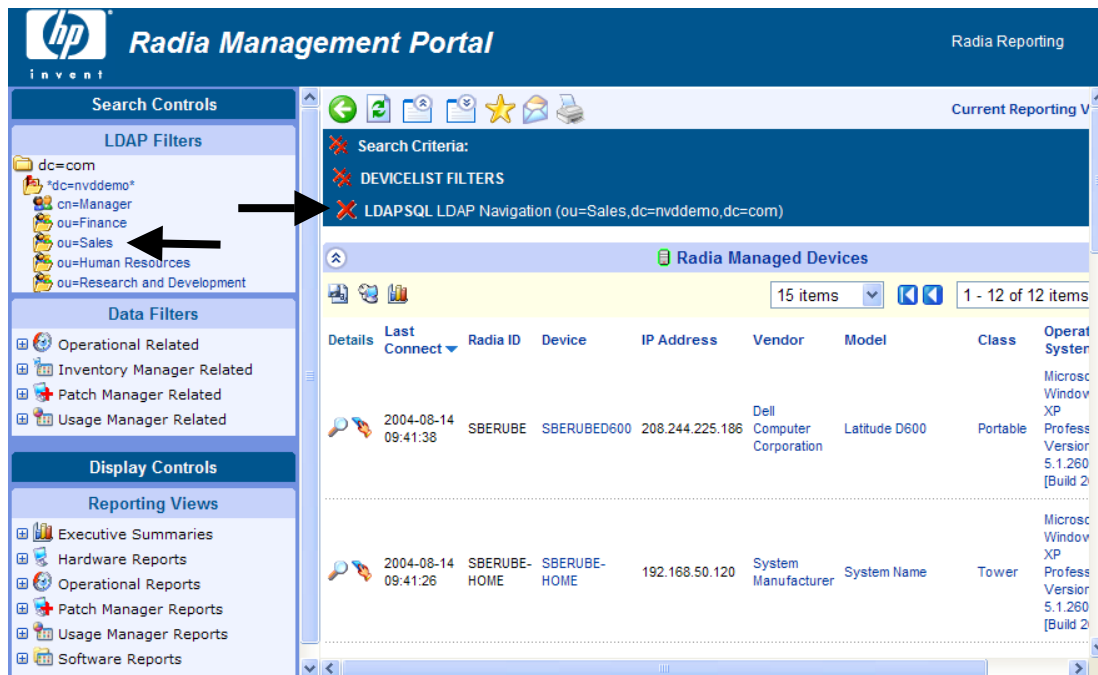


Figure A.2 ~ Devices filtered to the Sales Department.

Step 3: Limit Search to Targeted Operating System

From the list of devices in sales, we will click the following hyperlink entry (found in the Operating System column of the Radia Managed Devices Report) to add another search criteria:

Class	Operating System
	Microsoft Windows 2000 Professional Version 5.0.2195 [Build 2195]

Now our result set shows all devices in Sales that have the Microsoft Windows 2000 Professional Version 5.0.2195 [Build 2195] Operating System.

Search Controls

LDAP Filters

- dc=com
- *dc=invdemo*
- cn=Manager
- ou=Finance
- ou=Sales
- ou=Human Resources
- ou=Research and Development

Data Filters

- Operational Related
- Inventory Manager Related
- Patch Manager Related
- Usage Manager Related

Display Controls

Reporting Views

- Executive Summaries
- Hardware Reports
- Operational Reports
- Patch Manager Reports
- Usage Manager Reports
- Software Reports

Search Criteria:

- DEVICELIST FILTERS
- LDAPSQL LDAP Navigation (ou=Sales,dc=invdemo,dc=com)
- RAMSQL Operating System (Microsoft Windows 2000 Professional Version 5.0.2195 [Build 2195])

Radia Managed Devices

15 items | 1 - 3 of 3 items

Details	Last Connect	Radio ID	Device	IP Address	Vendor	Model	Class	Operating System	OS Level
	2004-04-14 13:59:01	NS-2	SHEIDOWM	192.168.3.7	Hewlett-Packard	HP Vectra	Low Profile Desktop	Microsoft Windows 2000 Professional Version 5.0.2195 [Build 2195]	Service Pack 4
	2004-04-14 09:26:35	SBERUBE-VM2K	SBERUBE-VM2K	192.168.245.129	VMware, Inc.	VMware Virtual Platform	Other	Microsoft Windows 2000 Professional Version 5.0.2195 [Build 2195]	Service Pack 4
	2004-04-14 09:23:19	TBERUBE	TBERUBE03L	192.168.50.112	FUJITSU	LifeBook B2131/B2133/B2150	Notebook	Microsoft Windows 2000 Professional Version 5.0.2195 [Build 2195]	Service Pack 3

Figure A.3 ~ Sales Devices with the Required Operating System.

Step 4: Search for Operating Systems without Service Pack 4

Now we want to drill down further to identify devices from this list that do not have Service Pack 4. To do this, we're going to apply a data filter. **Data Filters** are easily applied from the **Search Controls** toolbar on the left side of the page.

In the Data Filters area, we will select a Filter Group and Filter. First, select the Filter Group **OS Related Filters**. Second, select the Filter **Operating System Level**.

In the Filter Value text box, type the value **!Service Pack 4** and click **Apply** (the ! denotes 'not').

Our report now shows all Devices in Sales, which have an OS of 'Microsoft Windows 2000 Professional Version 5.0.2195 [Build 2195]' but which **do not** have 'Service Pack 4'.

Search Controls

LDAP Filters

- dc=com
- *dc=nvddemo*
- cn=Manager
- ou=Finance
- ou=Sales
- ou=Human Resources
- ou=Research and Development

Data Filters

- Operational Related
- Inventory Manager Related
- Hardware Related
- Software Related
- OS Related
- Operating System
- Operating System Level
- Service Pack 4
- Win2K Less Sp3
- Service Related
- Patch Manager Related
- Usage Manager Related

Search Criteria:

- DEVICELIST FILTERS
- LDAPSQL LDAP Navigation (ou=Sales,dc=nvddemo,dc=com)
- RAMSQL Operating System Level (!Service Pack 4)
- RAMSQL Operating System (Microsoft Windows 2000 Professional Version 5.0.2195 [Build 2195])

Radia Managed Devices

15 items

1 - 1 of 1 items

Details	Last Connect	Radia ID	Device	IP Address	Vendor	Model	Class	Operating System	OS Level
2004-04-14 09:23:19	TBERUBE	TBERUBE03L	192.168.50.112	FUJITSU	LifeBook B2131/B2133/B2150	Notebook	Microsoft Windows 2000 Professional Version 5.0.2195 [Build 2195]	Service Pack 3	

[Return to Radia Managed Devices](#) | [Return to Top of Page](#)

Radia Managed Services


Radia Managed Services (Failures)

Figure A.4 ~ Sales Devices with desired Operating System, but missing required Service Pack Level.

Our report now lists those devices in the Sales department that need to have a Service Pack upgrade applied prior to rolling out the new application.

Step 5: Save or Print the Report

Print any report by clicking the printer icon above the Search Criteria.

Save the report by exporting it to a CSV file. Use the **Export as CSV** icon  in the Action bar within the report to export the data to a CSV file.

Figures

Figure 1.1 ~ Radia Reporting Server Web interface.	14
Figure 1.2 ~ Radia Reporting Environment.	15
Figure 2.1 ~ Radia Reporting Server Welcome window.	30
Figure 2.2 ~ HP Software License Terms window.	31
Figure 2.3 ~ Radia Reporting Server installation location.	32
Figure 2.4 ~ Radia Reporting Server installation settings window.	33
Figure 2.5 ~ Sample IIS Extension Mapping for nvdkit.exe and *.tcl extension.	35
Figure 2.6 ~ Name the new Web service extension.	36
Figure 2.7 ~ Add file dialog box.	37
Figure 2.8 ~ Set extension status to Allowed check box selected.	37
Figure 2.9 ~ MIME Type window – IIS server properties.	38
Figure 2.10 ~ Radia Reporting Server configuration file page.	42
Figure 2.11 ~ Sample Radia Reporting home page with LDAP access enabled.	45
Figure 2.12 ~ Adding a Component to Radia Inventory Manager Reporting Audit Package.	47
Figure 2.13 ~ Radia Knowledge Base Manager Control Panel icon.	48
Figure 2.14 ~ Defining the WBEM class Win32_MemoryDevice instance.	49
Figure 2.15 ~ Win32_memorydevice added to RIM Reporting Audit Package.	50
Figure 3.1 ~ Radia Reporting Server user interface.	55
Figure 3.2 ~ Banner area.	56
Figure 3.3 ~ Search Controls area.	57
Figure 3.4 ~ LDAP Filters Area.	58
Figure 3.5 ~ Applying a Search Criteria to limit report to Notebook Devices.	59
Figure 3.6 ~ Display Controls area.	60
Figure 3.7 ~ Sample Selections for Software Reports and associated Reports.	61
Figure 3.8 ~ Sample Device and Services on a Reporting Page.	63

Figure 3.9 ~ Report Display Settings: 15 Items per Window, Sort by Class in ascending order.	64
Figure 3.10 ~ Notify window.	65
Figure 3.11 ~ Sample Report in Graphical View.....	66
Figure 3.12 ~ Click Show Details to access the Device Summary Window.....	67
Figure 3.13 ~ Sample Device Summary from Radia Patch Manager Devices window.....	68
Figure 3.14 ~ Details for a Bulletin Item links to the Microsoft Security page for it.	69
Figure 4.1 ~ Reporting object file directories.	72
Figure 4.2 ~ A sample View Group object file viewed using Notepad.....	74
Figure 4.3 ~ Sample View Group object file.	75
Figure 4.4 ~ Part of a sample View object file.....	76
Figure 4.5 ~ View Groups, Views and the Current Reporting View displayed on the Radia Reporting Server Web page.	77
Figure 4.6 ~ Sample Filter Group object file.	78
Figure 4.7 ~ Sample Filter object file.....	79
Figure 4.8 ~ Part of a sample Window object file.....	80
Figure 4.9 ~ Sample Datasource object file.	81
Figure 5.1 ~ Select reporting.log entries for a typical session.....	96
Figure A.1 ~ First Access to the Radia Reporting Server.....	102
Figure A.2 ~ Devices filtered to the Sales Department.	103
Figure A.3 ~ Sales Devices with the Required Operating System.....	104
Figure A.4 ~ Sales Devices with desired Operating System, but missing required Service Pack Level.....	105

Tables

Table P.1 ~ Styles	6
Table P.2 ~ Usage.....	6
Table P.3 ~ Terminology*	7
Table 2.1 ~ Radia Inventory Manager Reporting WBEM Instances to Enable Radia Reporting.....	28
Table 3.1 ~ Special Characters and Wildcards	59
Table 4.1 ~ View Group Object Global Section Parameters.....	83
Table 4.2 ~ View Group Object Views Section Parameters	83
Table 4.3 ~ View Object Global Section Parameters	84
Table 4.4 ~ View Object Header Parameters	84
Table 4.5 ~ View Object Windows Parameters.....	85
Table 4.6 ~ Filter Group Object Global Parameters.....	86
Table 4.7 ~ Filter Group Object Filters Section Parameters	87
Table 4.8 ~ Filter Object Global Section Parameters	88
Table 4.9 ~ Window Object Global Section Parameters	89
Table 4.10 ~ Detail Mode Columns Section – Action Sub-Section Parameters	92
Table 4.11 ~ Detail Mode Columns Section – Columns Sub-Section Parameters	92

Procedures

To apply the taskend.tcl file to your Radia Integration Server	22
To apply the taskend.tcl file to your Radia Configuration Server.....	23
To apply device.config.sql to your Radia Inventory Server.....	23
To update your Radia Inventory Manager SQL Server database	24
To update your Radia Inventory Manager Oracle database.....	26
To install the Radia Reporting Server	29
To configure IIS for the Radia Reporting Server .tcl extension and web sharing	34
To create the TCL CGI Extension	36
To add a new MIME type for Windows Server 2003.....	38
To set parameters for config.tcl using a text file	39
To set parameters for config.tcl using a web browser	41
To configure a Radia Management Portal for Notify	43
To configure caching	44
To access the Radia Reporting Server locally.....	45
To add components to Radia Inventory Manager reporting audit packages	46
To access the Radia Reporting Server.....	54
To select and apply a filter using the Data Filter area.....	58
To apply a View	61
To Notify devices	65
To change the CGI timeout value in IIS using a script	97
To change the CGI timeout value in IIS using Windows tools.....	97

Index

A

accessing Radia Reporting Server	54
Action Bar	55
icons.....	62
using.....	62
Active Directory	20, 101, 102
Add/Edit Application Extension Mapping dialog box	34
adding MIME type.....	38

B

Back and Forward Buttons	63
Back button.....	61
banner	56
Browsing	64
Browsing Items in a Report	63
bulletin	16

C

Cache Feature.....	44
Cache Lifetime	44
caching	
configuring	44
enabling.....	44
CGI timeout	97
modifying	97
config.new.tcl	41
config.tcl file	39
setting parameters	39
Current Reporting View	76
customer support	4
Customizing Reports	71

D

Data Filters	54
Data Filters area	58
databases, accessed.....	20
Datasource objects.....	80
Datasources	75
Detail Mode Columns Sub-Section.....	91
Device Details.....	66
device.config.sql.....	22, 23
DeviceConfig.....	24, 26
devices, notifying.....	65
Display Controls.....	54, 60
reporting views section	76
DSN	29

E

Enable Cached Results	44
encrypting passwords.....	39
Export as CSV	105
ExportCSV	91
extended infrastructure directory	20

F

filter group object	77
filters section	87
filters section parameters.....	87
Global Parameters	86
global section	86
modifying.....	86
Filter Groups	74
filter object.....	77
global section.....	87

global section parameters.....	88
modifying.....	87
Filter Value Characters.....	59
filtergroup.....	77
Filters.....	75
filters, applying.....	58
fn_USAGESTATUS.....	25, 27

G

Graphical View.....	66
switching.....	66

H

HTML.....	74
-----------	----

I

IIS <i>See</i> Microsoft Internet Information Services	
installing Radia Reporting Server.....	29
interface banner.....	56

L

LDAP directory.....	14
connections to.....	16
LDAP Filters.....	54
LDAP Filters area.....	57
LDAPBASE.....	40
LDAPENABLE.....	40
LDAPPASS.....	41
LDAPPORT.....	40
LDAPSERVER.....	40
LDAPUSER.....	41
log file.....	96

M

Maximum items per window.....	63
Microsoft Internet Information Services.....	15
additional configuration for Windows 2003 Server.....	35
configuring for Radia Reporting.....	34
MIME type, adding.....	38

N

NavBar.....	91
-------------	----

navigation toolbar, failing to load.....	97
Notify.....	64, 91
Notify Devices.....	62
Notify Enabler parameter.....	43
notify requests.....	20
notifying devices.....	64, 65
nvdkit.exe.....	34

O

Objects directory.....	72
optional components.....	15
Oracle DBA Studio.....	26, 27

P

passwords.....	39
patch.....	16
prerequisites	
Radia infrastructure.....	22
Radia Inventory Reporting auditing.....	27

Q

qnumber.....	16
query filename.....	91

R

Radia Configuration Server, updating.....	22
Radia infrastructure	
CD-ROM.....	20
prerequisites.....	22
updates.....	22
Radia Integration Server, updating.....	22
Radia Inventory Audits, adding components.....	46
Radia Inventory Manager.....	14, 16, 20
database updates.....	24, 26
Radia Inventory Manager Server, updating.....	23
Radia Inventory Reporting auditing requirements.....	27
Radia Managed Devices.....	64
Radia Management Portal.....	15, 29
banner.....	54
Radia Notify.....	43
Radia Patch Manager.....	14, 16, 20
database updates.....	25, 27

Radia Reporting Server	
accessing	54
accessing locally	45
common problems	97
configuration file	39
configuring for notify	43
creating the environment	19
environment	15
installation location	32
installation settings	33
installing	29
interface	54
overview	14
requirements	20
system implementation tasks	29
Radia SQL database	14, 16
prerequisites	24, 25
Radia Usage Manager	14, 16, 20
database updates	25, 27
Remote Control	69
Report	
print	105
save	105
Report Windows	55
Reporting Object Files	
backing up	73
construction	74
modifying	82
types	74
understanding	74
Reporting System modules	15
Reporting Version, banner display	56
Reporting Views	54, 60
Reporting Windows	62
reporting.log	96
required components	15
RIMDSN	40
RIMDSN_PASSWORD	40
RIMDSN_USER	40
RIMENABLE	40
RIMPREFIX	40

S

sample reporting scenario	101
Search Controls	54
filters	56
Search Criteria	55
SESSION END	96
SESSION START	96
Sort Column	64
special characters	59
SQL Server Access	29
SQLLOGIN	96
Switch to Detailed View	66
Switch to Graphical View	62

T

taskend.tcl file	22
TCL	74
technical support	4
terminology	16
Troubleshooting	95

U

updating	
Radia Configuration Server	22
Radia Integration Server	22
Radia Inventory Manager	23
Radia Inventory Manager database	24, 26
Radia Patch Manager database	25, 27
Radia Usage Manager database	25, 27
Usage Managed Products (Used)	61
User Defined Function object	25, 27
user interface	54

V

view group object	75
global section	82
global section parameters	83
modifying	82
views section	83
views section parameters	83
View Groups	60, 74
view object	75

Index

global section	83
global section parameters	84
header parameters	84
header section	84
modifying	83
windows parameters	85
windows section	85
View, applying	61
viewgroup objects	75
ViewMode	91
Views	60, 74
VNC	69

W

WBEM class instances	28
WBEM Instances	28

Web Server	15
wildcards	59
window object	79
detail section	90
global section	89
global section parameters	89
graph section	93
modifying	89
Windows	75
Windows 2003 Server	
additional IIS configuration	35
windows toolbar	91

X

XML	74
-----------	----