# HP OpenView Patch Manager Using Radia

for the HP-UX, Linux, Solaris and Windows operating systems

Radia Release Version: 4.2i

Software Version: 3.0

## Installation and Configuration Guide

Document Release Date: February 2006

# Legal Notices

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## Documentation Updates

This manual's title page contains the following identifying information:

- Version number, which indicates the software version.
- Print date, which changes each time the document is updated.

To check for recent updates or to verify that you are using the most recent edition, visit the following URL:

**http://ovweb.external.hp.com/lpe/doc_serv/**

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

Table 1 indicates changes made to this document since the last released edition.

**Table 1 Document Changes**

| Chapter | Version | Changes |
|---|---|---|
| All | 3.0 | Tables that were throughout the book showing the configurable parameters in patch.cfg have all been moved to Appendix D, Patch.cfg Parameters. |
| 2 | 3.0 | Page 31, Patch Manager section has been renamed OpenView Patch Manager Update Site in the Patch Manager Administrator. |
| 2 | 3.0 | Page 31, Reporting section has been renamed Reporting Server in the Patch Manager Administrator. |
| 2 | 3.0 | Page 32, HTTP Settings section has been renamed HTTP Proxy Settings in the Patch Manager Administrator. |
| 2 | 3.0 | Page 32, FTP Proxy Settings is a new section in the Patch Manager Administrator. |
| 2 | 3.0 | Page 34, A new section, Preferences, has been added to the Patch Administrator. Settings that were formerly part of Acquisition History and Default are now in this section. |

| Chapter | Version | Changes |
|---|---|---|
| 2 | 3.0 | Page 34, **Patch Data Repository Path**, **Retired Bulletins**, **Excluded Products**, and **Default Patch Acquisition Download Language** have been added to the Patch Administrator, Preference section. These settings were previously only configurable through a command line. |
| 2 | 3.0 | Page 36, Support for HP-UX 11.23, Version 2 for the for PA-RISC architecture has been added. |
| 2 | 3.0 | Page 38, Support for Solaris 8 for the SPARC architecture has been added. |
| 3 | 3.0 | Page 49, About Microsoft Patch Acquisition section has been added to describe changes in Patch Manager as a result of the new Microsoft Update technology. |
| 3 | 3.0 | Page 55, **Command Line Overrides** has been added to Acquisition Settings. |
| 3 | 3.0 | Page 55, All vendor settings regarding acquisition are now found in the Configuration Settings, Vendor section. |
| 3 | 3.0 | Page 69, Support for Solaris 8 has been added. |
| All | 3.0 | Screen captures have been updated to show the new Reporting Server interface. |

# Support

Visit the HP OpenView support web site at:

**http://www.hp.com/managementsoftware/support**

This web site provides contact information and details about the products, services, and support that HP OpenView offers.

HP OpenView online software support provides customer self-solve capabilities. It provides a fast and efficient way to access interactive technical support tools needed to manage your business. As a valuable support customer, you can benefit by using the support site to:

- Search for knowledge documents of interest
- Submit enhancement requests online
- Download software patches
- Submit and track progress on support cases
- Manage a support contract
- Look up HP support contacts
- Review information about available services
- Enter discussions with other software customers
- Research and register for software training

Most of the support areas require that you register as an HP Passport user and log in. Many also require a support contract.

To find more information about access levels, go to:

**http://www.hp.com/managementsoftware/access_level**

To register for an HP Passport ID, go to:

**http://www.managementsoftware.hp.com/passport-registration.html**

# Contents

# 1 Introduction

At the end of this chapter, you will:

- Know the capabilities of HP OpenView Patch Manager Using Radia (Patch Manager).

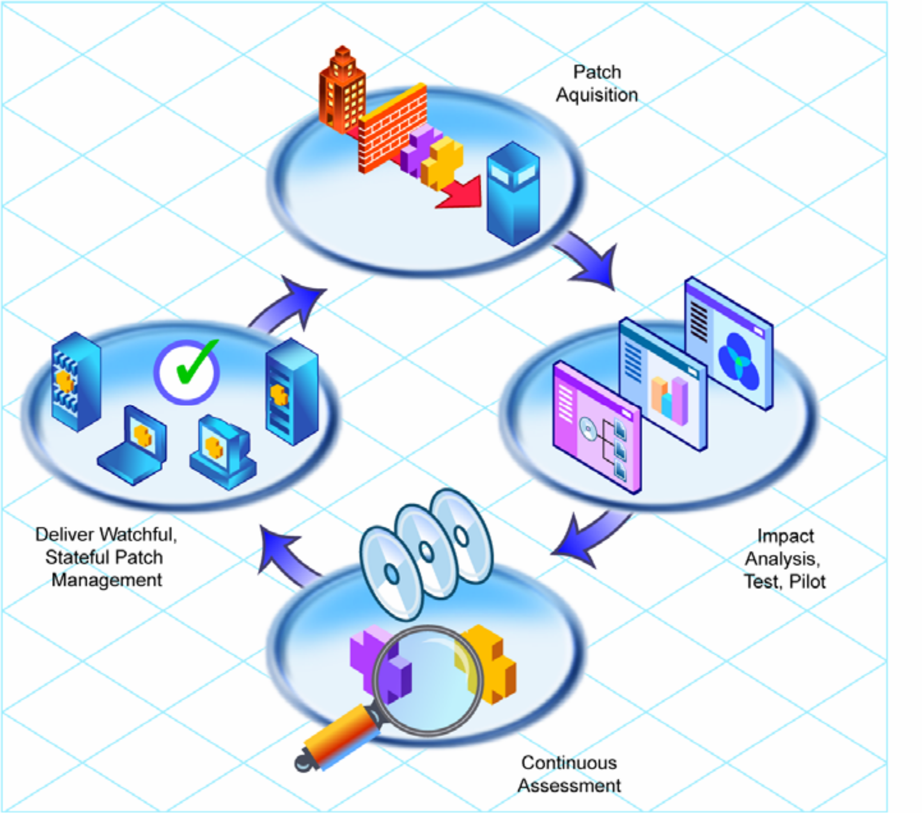
# HP OpenView Patch Manager Using Radia

The Patch Manager provides value for business continuity and security initiatives. The Patch Manager is offered as a complete stand-alone solution and can be used as a fully integrated component of the HP OpenView Using Radia Management Suite, which provides automated and ongoing configuration management for all software across the enterprise, ensuring that the entire software infrastructure is always in its desired state—up-to-date, reliable, and secure. Key capabilities for patch management activities include:

- **Acquisition:**
  configurable tools to enable automatic collection of security patches and service packs directly from Microsoft, HP-UX, Red Hat, Solaris, and SuSE web-based depositories.
- **Impact Analysis and Pilot Testing**:
  identification of affected applications, devices, and users to determine configuration impact before security patches are deployed. Patch Manager also allows IT administrators to select target pilot groups based on usage or critical need. HP OpenView Using Radia is the only solution with these unique impact analysis and pilot testing capabilities that help ensure the stability of business critical systems.
- **Compliance and Vulnerability Assessment**:
  automatic and continuous discovery of devices on the network, software products that are installed on each device, the collected security patches that are already applied to each software product, and identification of software products that the device actually executes. Through this complete discovery and assessment process, the IT administrator can understand the full scope of security vulnerability and system compliance at all times.
- **Deployment**:
  policy-based deployment capabilities that interface directly with a variety of existing policy sources such as Active Directory, LDAP, or SQL databases to enable automatic, rapid, and precise targeting of patches for deployment to servers, desktops, and laptops. HP OpenView Using Radia patented differencing, bandwidth optimization, multicast, and checkpoint-restart capabilities and multi-tiered infrastructure ensure that security patches are deployed with minimal impact on network resources, and allow patches to be managed across an enterprise of any size.

- **Compliance and Assurance**:
  unique desired-state management that automatically and continuously ensures that security patches remain applied in their proper state as prescribed by policy. Devices and users are monitored and checked against policy and, if found to be out of compliance, are automatically adjusted to appropriate patch levels. In addition, if patches are corrupted in any way Patch Manager provides self-healing for connected and disconnected users.

**Figure 1 Patch Management life cycle**



# Terminology

The following terms are often used throughout this publication, and it may be helpful to become familiar with them before using this guide.

### bulletin or security advisory

A bulletin is a security vulnerability reported by a vendor on one of its products. This term is used interchangeably with Red Hat and SuSE Security Advisories.

### patch

The patch is the actual file to be deployed and executed to fix the vulnerability. A bulletin can have multiple patches depending on affected products, platforms, architectures, and languages.

# Patch Manager Components

Patch Manager uses existing components of the HP OpenView Using Radia Infrastructure in addition to the Patch Manager Server. The following components are required:

- **HP OpenView Configuration Server Using Radia**
  Applications and information about the subscribers and client computers are stored in the Configuration Server Database on the HP OpenView Configuration Server Using Radia (Configuration Server). The PATCHMGR domain in the Configuration Server Database contains instances for patch management. The Configuration Server processes information received from the Patch Manager client. The Configuration Server manages vulnerabilities based on policies established by the Radia administrator using the System Explorer for the HP OpenView Administrator Workstation Using Radia (System Explorer). For more information, see the *User's Guide for the HP OpenView Configuration Server Using Radia (Configuration Server Guide).*
- **HP OpenView Management Portal Using Radia**
  Use the Management Portal to configure the Patch Manager Server and deploy the Patch Manager client. The Management Portal is a module of the Radia Integration Server, and runs under the Radia Integration Server service. See the *Installation and Configuration Guide for the HP*

*OpenView Management Portal Using Radia (Management Portal Guide)* for more information.

- **HP OpenView Patch Manager Server Using Radia**
  The Patch Manager Server acquires security patches from the Internet, loads them into the Configuration Server Database, and then synchronizes them with an SQL or Oracle Database. The information on the patches and the vulnerabilities in your environment can be analyzed using Patch Manager reports. Patch Manager is a module of the Radia Integration Server, and runs under the Radia Integration Server service.
- **HP OpenView Patch Manager client Agent Using Radia**
  Install the Patch Manager client on devices for which you want to manage vulnerabilities. The client discovers products and patches on managed devices.
- **HP OpenView Reporting Server Using Radia**
  As part of the Radia extended infrastructure, the web-based Reporting Server allows you to query the combined data in existing HP OpenView Inventory Manager Using Radia (Inventory Manager) , Patch Manager, HP OpenView Usage Manager Using Radia (Usage Manager), and HP OpenView Server Configuration Management 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 Reporting Server interface provides a dynamic and intuitive way to use SQL data for reporting and overall environmental assessment.
- **System Explorer for the HP OpenView Administrator Workstation**
  The administrator uses the System Explorer to view and manage vulnerabilities stored in the Radia Database. For more information, see the *System Explorer Guide for the HP OpenView Administrator Workstation Using Radia (System Explorer Guide).*

You also have the option of using the HP Openview Configuration Analyzer Using Radia and HP OpenView Knowledge Base Manager Using Radia for the analysis and importing of state files. State files represent the current state of an application or a patch. Patch Manager provides a utility to create state files for Microsoft patches.

- **Configuration Analyzer**
  The Configuration Analyzer allows you to view, store, and compare Microsoft patches and application data. Application or Patch data are imported into the Configuration Analyzer in the form of state files. State files represent the current state of an application or a patch. The Patch Manager can automatically generate state files for Microsoft patches. In

addition, it allows you to not only analyze the contents of a patch, but also perform some cross analysis to verify how a patch may impact your environment or how a patch may intersect with another patch. See the *Installation and Configuration Guide for the HP OpenView Configuration Analyzer Using Radia* (*Configuration Analyzer Guide)* for more information.

- **Knowledge Base Manager**
  The Knowledge Base Manager performs automated import processing of Radia state files into a database allowing you to compare state files. See the *Installation and Configuration Guide for the HP OpenView Knowledge Base Manager Using Radia (Knowledge Base Manager Guide)* for more information.

## Summary

- Use the Patch Manager to manage security vulnerabilities of applications in your enterprise.
- To use all of the features described in this guide, you must be using Patch Manager software version 3.0 or above.

# 2 Creating the Patch Manager Environment

At the end of this chapter, you will:

- Be familiar with the tasks needed to set up the Patch Manager environment.
- Know how to modify the Radia Database and Configuration Server.
- Be able to install the Patch Manager.

# Patch Manager Implementation Tasks

Before setting up your environment for the Patch Manager, you must have already installed the latest version of the Configuration Server and Microsoft SQL Server 2000 Service Pack 3a or greater. If using Oracle, the minimum database and driver version is Oracle 9i Release 2, patch set 2 (9.2.0.3). Unless otherwise noted, all components that are added to the Radia infrastructure are contained on the Patch Manager main CD-ROM.

To use the Patch Manager, you will need to complete the following tasks:

- ❑ Create the SQL or Oracle Patch Database and an ODBC DSN.
- ❑ Install the Configuration Server. See the *Getting Started Guide for HP OpenView Using Radia.*
- ❑ Install the Messaging Server. See the *Messaging Server Guide*.
- ❑ Install the System Explorer. See the *System Explorer Guide.*
- ❑ Run the Patch Manager installation. This installation includes:
    - Modifying the Radia Database.
    - Modifying the Configuration Server executables.
    - Installing the Patch Manager Server.
    - Configuring Patch Manager to use your DSN.
    - Synchronizing the Radia Database with the SQL or Oracle Database.
- ❑ Add a Method Connection to your Radia Database.
- ❑ Install the Management Portal. See the *Management Portal Guide*.
- ❑ Install the Reporting Server. See the *Reporting Server Guide*.
- ❑ Optional: Install and configure the Configuration Analyzer.
- ❑ Optional: Install and configure the Knowledge Base Manager.

⚠ If you are using the Management Portal (Integration Server) component installed from the release 4.0, 4.1, or 4.2 media sets, you must use the Infrastructure Metakit conversion utility before installing Patch Manager Server. You will also need to apply the updates to Management Portal 2.1 See the *Migration Guide for HP Open View Patch Manager Using Radia* for version 3.0 for instructions on using the utility and applying the updates. If you are using Infrastructure components installed from the 4.2i release, you do not need to use the conversion utility.

## Creating the ODBC Patch Database

Before installing Patch Manager, create a Microsoft SQL Server or Oracle database. If you do not have security rights to create the database, contact your SQL database administrator.

➤ The required size will vary based on the number of patches and managed devices in your environment. The procedures below merely reflect recommendations.

### To create a Microsoft SQL Patch database

1 Create a database on your Microsoft SQL Server, with the following recommendations:

| | |
|---|---|
| General tab | Name: PATCH (or name of your choice with no blanks or underscores) |
| Data Files tab | Initial Size: 500 MB<br>Select Autogrow by 20%. |
| Transaction Log tab | Change initial size: 100 MB |

2 Use appropriate Microsoft SQL security recommendations for your enterprise.

3 On the computer that will be your Patch Manager Server, create an ODBC DSN called PATCHMGR, or name of your choice, pointing to the new PATCH database on your SQL Server. If you do not know how to create an ODBC DSN, contact your SQL database administrator.

➤ Install Microsoft Data Access Components (MDAC) on your Patch Manager Server. Download it from the Microsoft web site. The minimum version required is MDAC 2.8.

### To create the Oracle database

1 Create a tablespace for patchdata on your Oracle Server with the following recommendations:

| | |
|---|---|
| Tablespace Name | PATCHDATA |
| Status | Online |
| Type | Permanent |
| Datafile | Fully qualified path and name of the datafile such as `patchdata.dbf` |
| Storage | Minimum Size 200 M and Max size unlimited |
| Extent Management | Locally managed with automatic allocation |
| Segment Space Management | Automatic |
| Logging | No |

2 Create a tablespace for patchtemp with the following recommendations:

| | |
|---|---|
| Tablespace Name | PATCHTEMP |
| Status | Online |
| Type | Temporary |
| Datafile | Fully qualified path and name of the datafile, such as `patchtemp.dbf` |
| Storage | Size 1000 M |
| Extent Management | Locally managed with automatic allocation |
| Segment Space Management | Automatic |
| Logging | No |

3 Create a user and associate the data and temporary tablespaces to the user with a default profile.

| | |
|---|---|
| Username | radiapatch |
| Password | Create one based on your enterprise's security recommendations. |
| Default tablespace | PATCHDATA |

| | |
|---|---|
| Temporary tablespace | PATCHTEMP |
| Profile | DEFAULT or a PROFILE NAME used for this schema) |

4 On the computer that will be your Patch Manager Server, create an ODBC DSN called PATCHMGR, or name of your choice, pointing to the new PATCH database on your Oracle Server. If you do not know how to create an ODBC DSN, contact your Oracle database administrator.

## Installing the Administrator Workstation

The Radia v4 Configuration Server CD-ROM contains a Radia Administrator installation. See the *Application Manager Guide* or the *Software Manager Guide* for more information on installation. Instructions for using the System Explorer can be found in the *System Explorer Guide*.

## Installing the Patch Manager Server

Identify a computer to act as your Patch Manager Server. It must be able to communicate with your Configuration Server, your ODBC Server, and the Internet. Patch Manager may be installed on Windows 2000, Windows XP, or Windows 2003 Server. See the operating system's documentation for system requirements.

The Configuration Server Components and Radia Database Updates portions of the Patch Manager installation can only be run on the Configuration Server computer. These pieces cannot be installed over a network connection.

The minimum version of Microsoft Data Access Components (MDAC) required is 2.8 on the Patch Manager Server. If you are using Oracle for your Patch Database, you must use the Oracle Corporation's ODBC drivers, minimum version 9.2.0.3, not those supplied by Microsoft.

If you are migrating from a previous version of Patch Manager, your old values in patch.cfg will be retained. Be aware that you will not get the new available parameters in your old patch.cfg nor will you get the new default values for old parameters.

If you are using the Management Portal (Integration Server) component installed from the release 4.0, 4.1, or 4.2 media sets, you must use the Infrastructure Metakit conversion utility before installing Patch Manager Server. See the *Migration Guide for HP Open View Patch Manager Using Radia* for version 3.0 for instructions on using the utility. If you are using Infrastructure components installed from the 4.2i release, you do not need to use the conversion utility.

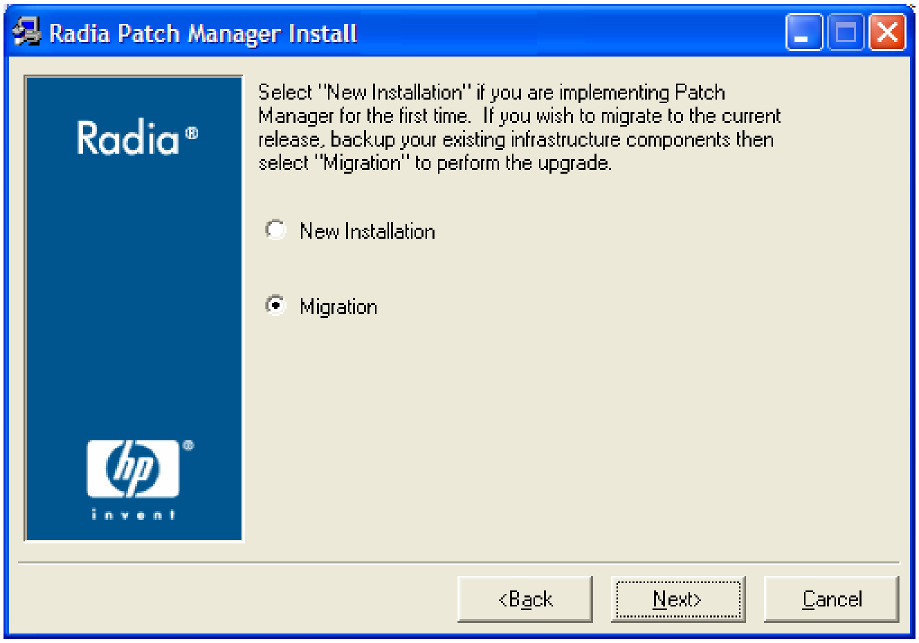
### To install the Patch Manager Server Components

1 From the `extended_infrastructure\patch_manager_server\win32` directory on the Patch Manager installation media, double-click **setup.exe**.

The Welcome window opens.

2 Click **Next**.

3 Click **Accept** for the HP Software License Terms. The following window opens.



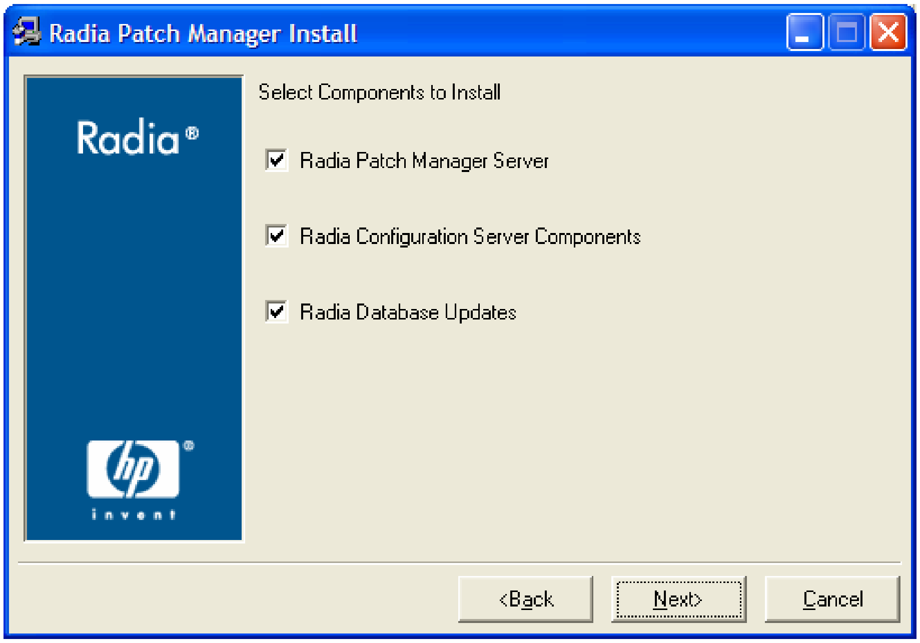
Select "New Installation" if you are implementing Patch Manager for the first time. If you wish to migrate to the current release, backup your existing infrastructure components then select "Migration" to perform the upgrade.

○ New Installation

● Migration

4 Select **New Installation** if this is a new installation of the Patch Manager. If you want to migrate from Patch Manager Version 1.2, Release 1.2.2 or Version 2.X, select **Migration.** Migration instructions can be found in the Patch Manager media's Migration directory.

> If you are migrating, be sure to read the migration instructions before proceeding.


Radia Patch Manager Install

Select Components to Install

☑ Radia Patch Manager Server

☑ Radia Configuration Server Components

☑ Radia Database Updates

5 Select the components to install. If you are running the Patch Manager installation for the first time, you should check all the options.

— **Patch Manager Server**
Installs the Patch Manager Server including the Radia Integration Server.

— **Configuration Server Components**
Installs updated executables and scripts for the Configuration Server to work with Patch Manager.

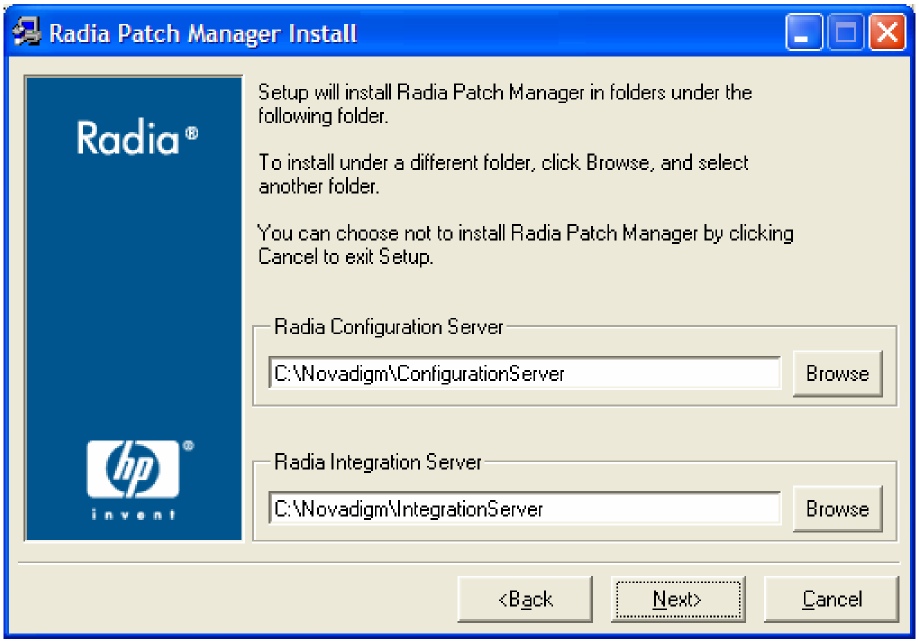
> To use the features of Patch Manager Version 3.0, you must select **Radia Database Updates**. The PATCHMGR domain, and only the PATCHMGR domain, will be replaced, and all data in that domain removed.

— **Radia Database Updates**
Creates the PATCHMGR domain in the Radia Database.

The Configuration Server Components and Radia Database Updates portions of the Patch Manager installation can only be run on the Configuration Server computer. These pieces cannot be installed over a network connection.

After making your selections, click **Next**. The Warning window opens.

6 Click **Next** in the warning window.



Setup will install Radia Patch Manager in folders under the following folder.

To install under a different folder, click Browse, and select another folder.

You can choose not to install Radia Patch Manager by clicking Cancel to exit Setup.

Radia Configuration Server: C:\Novadigm\ConfigurationServer

Radia Integration Server: C:\Novadigm\IntegrationServer

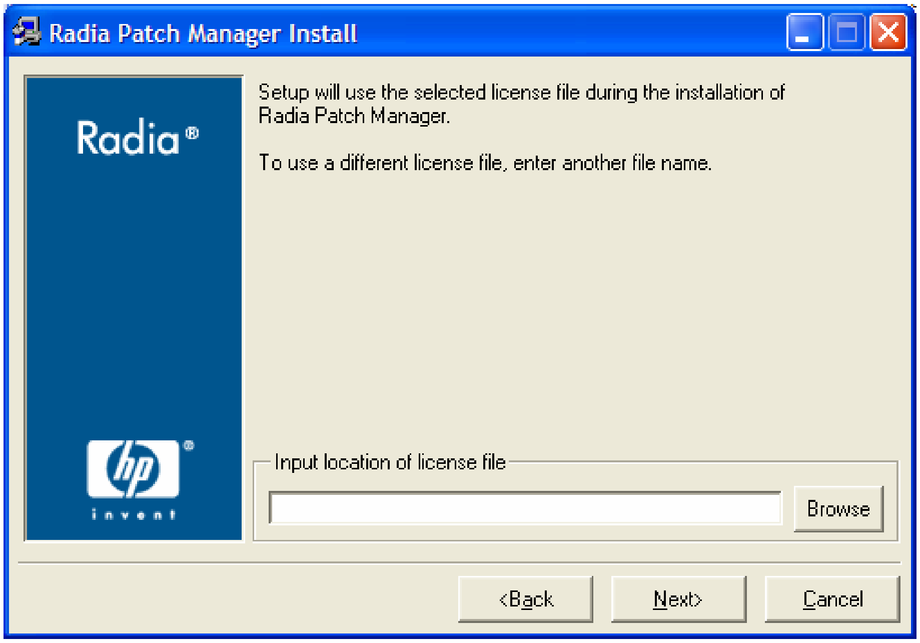
7 Type the location where the Configuration Server is installed, or click **Browse** to navigate to the location.

Type the location where you would like to install the Patch Manager Server (Radia Integration Server), or click **Browse** to navigate to the location.

Where possible, accept the defaults for these directories.

8 Click **Next**.

9 Click **OK** to update the directory contents if you would like to continue.



Radia Patch Manager Install

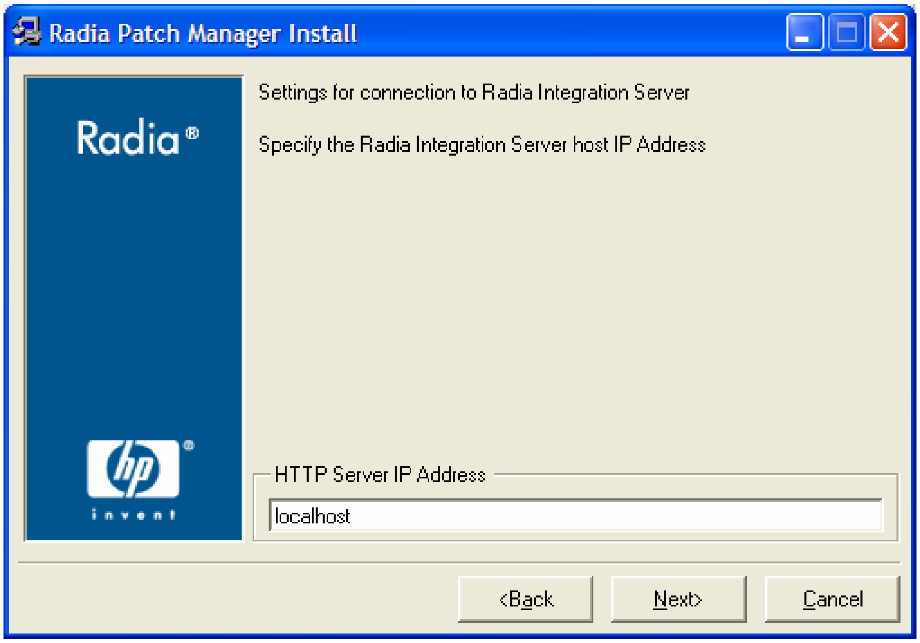
Setup will use the selected license file during the installation of Radia Patch Manager.

To use a different license file, enter another file name.

Input location of license file

10 Type the location of your license file or click **Browse** to navigate to it.

11 Click **Next**.



Radia Patch Manager Install

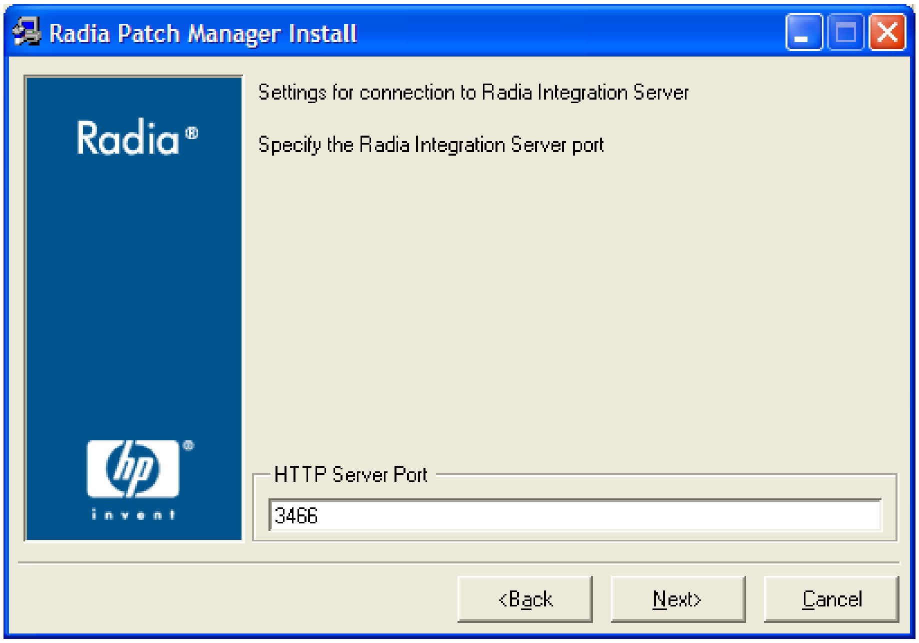
Settings for connection to Radia Integration Server

Specify the Radia Integration Server host IP Address

HTTP Server IP Address

localhost

12 Type the IP address of the Radia Integration Server, and click **Next**. The Radia Integration Server is the service that hosts the Patch Manager module.



Settings for connection to Radia Integration Server

Specify the Radia Integration Server port

HTTP Server Port: 3466

13 Type the port of the Radia Integration Server, and click **Next**.

The summary window opens.

14 Verify the summary screen and click **Install**.

Read and answer any warning dialog boxes that appear. Which dialog boxes appear will depend on your configuration.

15 Click **Finish**.

The Configuration Server and the Radia Database have been updated. The Messaging Service and the Patch Manager have been installed.

You should be directed to the Radia Patch Administrator page for final configuration and database synchronization. If you are not, go to **http://<*patchserveripaddress*>:<*port*>/patch/manage/admin.tsp**, set your configuration, and run a database synchronization.

## Configuring the Patch Manager Server

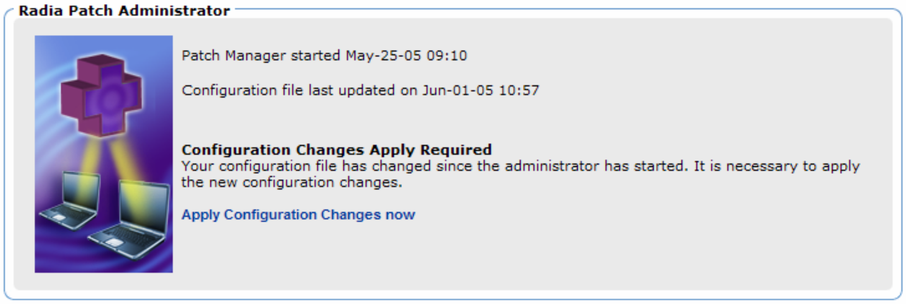
The Patch Manager Administrator is divided into five areas described in this section. They are OpenView Infrastructure, Network and Proxy, Patch Agent Updates, Vendor Settings, and Preferences. Use the Patch Manager Administrator to modify these settings. The Radia Patch Administrator page provides an interface to the Patch Manager settings file, `patch.cfg`.

### To use the Patch Manager Administrator

1 From your web browser, go to **http://***`patchserveripaddress`***:***`port`* **/patch/manage/admin.tsp**.

2 Type the values for the parameter you want to set. Any setting that ends with an asterisk (*) is *required*. For detailed information on the available settings, see the information following this procedure.

3 Click **Save** to apply changes. You will be prompted to restart for the changes to take effect.



Radia Patch Administrator

Patch Manager started May-25-05 09:10

Configuration file last updated on Jun-01-05 10:57

**Configuration Changes Apply Required**
Your configuration file has changed since the administrator has started. It is necessary to apply the new configuration changes.

Apply Configuration Changes now

4 Click **Apply Configuration Changes now** to restart the Patch Manager Server.

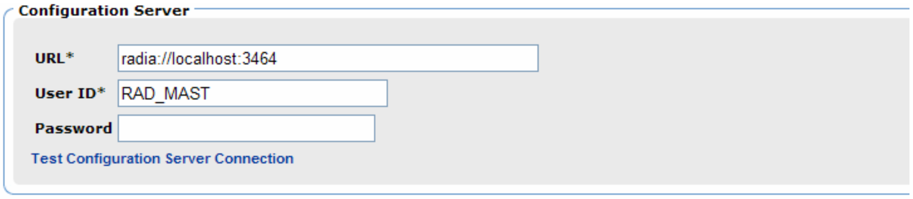
## OpenView Infrastructure Settings

Use the OpenView Infrastructure settings to configure parameters for the HP OpenView Using Radia products and components. This includes the Configuration Server, Data Source Name (DSN), Patch Manager Update Site, and the Reporting Server.

### Configuration Server Settings

The following settings are configured in the Configuration Server section:

- **URL**: Specify the location of your Configuration Server using the format: radia://*ipaddress* or *hostname*:*port*.
- **User ID**: If authentication has been enabled on your Configuration Server, specify the user.
- **Password**: If authentication has been enabled on your Configuration Server, specify the password for the rcs_user.
- **Test Configuration Server Connection**: You can test your Configuration Server connection from the Patch Administrator. To do this, click **Test Configuration Server** Connection. When prompted, click **Test Connection**. Wait for the results. If the values specified on the test page are different than the original values, and your test is successful, click **Apply Changes** to copy the new values back to the Configuration page. The new settings can then be saved and applied to the Patch Manager Server.



Configuration Server

URL* radia://localhost:3464

User ID* RAD_MAST

Password

### ODBC DSN Settings

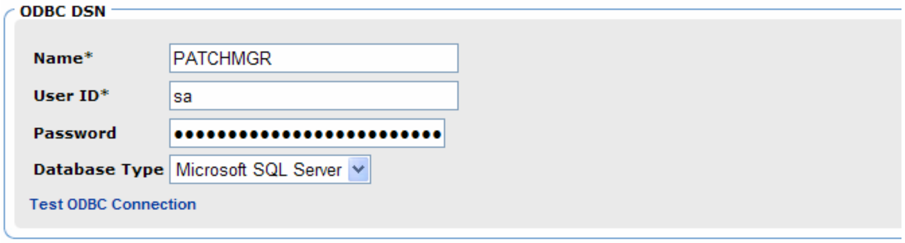
The following settings are configured in the ODBC DSN section:

- **Name***: Specify the Data Source Name (DSN) for the Patch SQL or Oracle database.
- **User ID***: Specify the user for the dsn for the Patch ODBC database.
- **Password**: Specify the password for the user of the Patch ODBC database.
- **Database Type**: Specify the database type. This is the same as the db_type parameter in `patch.cfg`. The two possible values are mssql for Microsoft SQL Server and oracle for Oracle. Mssql is the default value.

> If you are using Oracle, change this value to oracle before doing a patch acquisition or a database synchronization.

- **Test ODBC Connection**: You can test your ODBC connection in the Patch Administrator. To do this, click **Test ODBC Connection**. When prompted, click **Test Connection**. Wait for the results. If the values specified on the test page are different than the original values, and your test is successful, click **Apply Changes** to copy the new values back to the

Configuration page. The new settings can then be saved and applied to the Patch Manager Server.



ODBC DSN

Name* PATCHMGR

User ID* sa

Password ••••••••••••••••••••••••

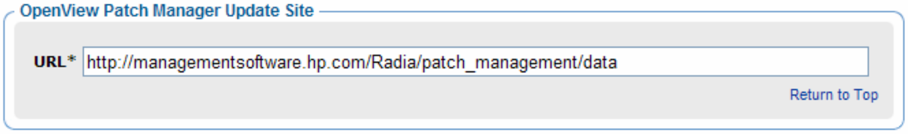
Database Type Microsoft SQL Server

## OpenView Patch Manager Update Site

The following setting is configured in the OpenView Patch Manager Update Site section:

- **URL***: Specifies the URL to connect to the Radia Patch Update web site provided by HP. The default is: **http://managementsoftware.hp.com/Radia/patch_ management/data**

> This is a new location as of Version 2.0. The nvdm_user and nvdm_password parameters are no longer used.



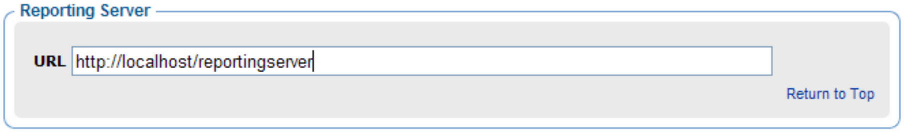
OpenView Patch Manager Update Site

URL* http://managementsoftware.hp.com/Radia/patch_management/data

## Reporting Server Settings

This setting is for the location of the Reporting Server. Click the Reporting icon in the Patch Manager Administrator to view Patch Reports.

- **URL**: Specify the location of the Reporting Server you are using for your Patch Manager.



Reporting Server

URL http://localhost/reportingserver

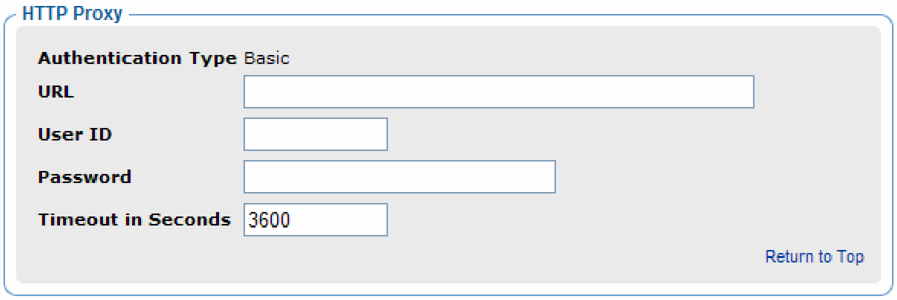
## Network and Proxy Settings

Use the Network and Proxy Settings section to configure your HTTP and FTP proxies for your enterprise.

### HTTP Proxy Settings

The following settings are configured in the HTTP Proxy Settings section:

- **Authentication Type**: Basic. This parameter is not configurable.
- **URL**: If you use a proxy server for http traffic, specify its URL in the format **http://ip:port**.
- **User ID**: If you use a proxy server for http traffic, specify your user ID.
- **Password**: If you use a proxy server for http traffic, specify your password.
- **Timeout in Seconds**: Set the total amount of time to wait for the file to be completely downloaded. If an acquisition session is unable to download the file in this time, then the acquisition will abort the current http location, and will continue the acquisition with the next http location. Increase the http_timeout if you need to allow additional time for a bulletin to download. Http_timeout is displayed in administrator interface in seconds, but stored in `patch.cfg` in milliseconds.



HTTP Proxy

Authentication Type Basic

URL

User ID

Password

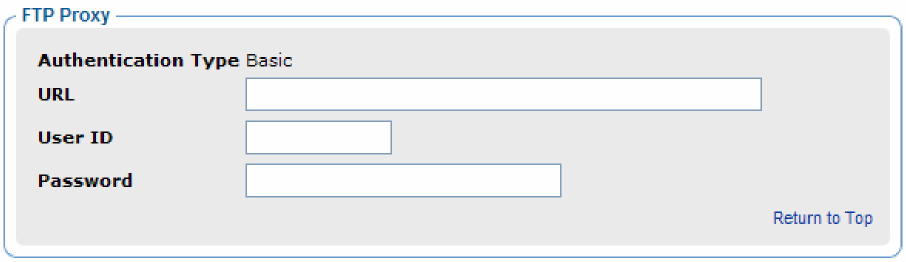
Timeout in Seconds 3600

### FTP Proxy Settings

The following settings are configured in the FTP Proxy Settings section:

- **Authentication Type**: Basic. This parameter is not configurable.
- **URL**: If you use a proxy server for ftp traffic, specify its URL in the format **ftp://ip:port.**
- **User ID**: If you use a proxy server for ftp traffic, specify your user ID.

- **Password**: If you use a proxy server for ftp traffic, specify your password.



FTP Proxy

**Authentication Type** Basic

**URL**

**User ID**

**Password**

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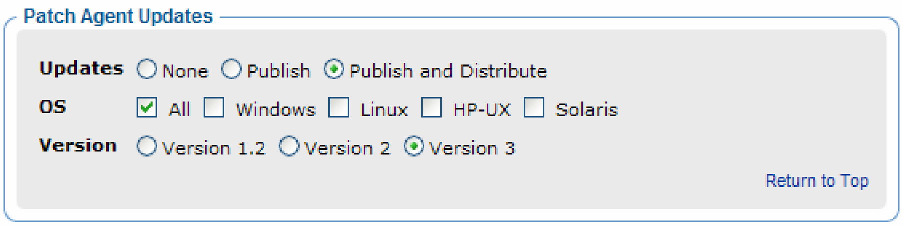
## Patch Agent Updates Settings

Use Patch Agent Update settings to configure the client agent updates.

### Patch Agent Updates Settings

These settings are for the maintenance of the Patch Manager client agent files. For more information on this, see Updating the Patch Manager Client Agent on page 71. The following settings are configured in the Patch Agent section:

- **Updates**: If you select Publish, the updates will be published to the PATCHMGR domain, but will not be connected for distribution (deployment) to Patch Manager client computers. You will need to create these connections. If you select Publish and Distribute, the updates will be published to the PATCHMGR domain and connected to the Discover Patch instance. This option will distribute the updates to your Patch Manager client computers.
- **OS**: Specify for which operating systems to acquire the agent updates.
- **Version**: Select which Patch Manager versions you would like to acquire the agent updates for. You can only publish one version to one Configuration Server.



Patch Agent Updates

**Updates** ○ None ○ Publish ● Publish and Distribute

**OS** ☑ All □ Windows □ Linux □ HP-UX □ Solaris

**Version** ○ Version 1.2 ○ Version 2 ● Version 3

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## Preferences

Under Preferences, configure vendors and acquisition settings. These settings will be reflected in the Vendor Settings and Acquisition Settings.

- **Enable Patch Management For**: Specify the vendor you will be acquiring patches for. These vendors will be represented in Vendor Settings and Acquisition Settings. If you decide at a later date to acquire for additional vendors, they must be enabled here, first.
- **Save History Summary**: Specify how long in days to keep the Patch Auth Store (PASTORE) instances. This class contains one instance for each patch acquisition session. HP recommends specifying this here, and not on the command line. If history has a smaller value than Save History Detail, then Save History Detail will be set to the value for Save History Summary. 0 means never to delete any history of Patch Acquisition.
- **Save History Detail**: Specify how long in days to keep the Publisher Error (PUBERROR) instances. This class contains one instance for each patch acquisition error. HP recommends specifying this here, and not on the command line.
- **Patch Data Repository Path**: The directory where patches are downloaded to before they are sent to the Configuration Server. If you choose to perform an acquisition using a directory that is pre-populated with data from a previous acquisition, specify a different directory in this parameter.
- **Retired Bulletins**: Shows the bulletins to retire separated by commas. This parameter works on the bulletin level, not at the product or release level.

  The retire function performs these functions.

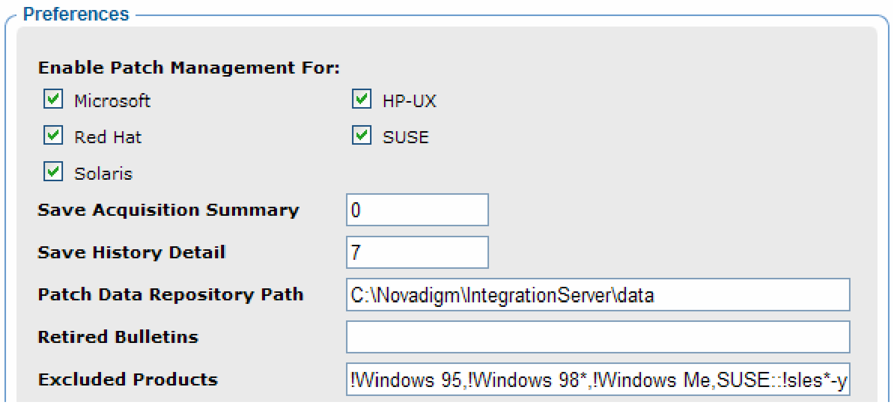
  — Deletes specified bulletins if they exist in the Radia Database during the current publishing session.

  — Does not publish the bulletins specified in the retire parameter to the Radia Database during the current publishing session. The use of the Retire option supersedes the Bulletins option.
- **Excluded Products**: Precede any products you want excluded with an exclamation point (!) in the format of `vendor`::`product` in a comma separated list. If an include filter is not set, all products are assumed. If you provide any included filters, then the excluded filters will be a subset of the included products. Be sure to conform to the vendor's naming standards. For example, Microsoft refers to Internet Explorer using its

full name, rather than a common abbreviation such as IE. For example,to include all Windows products except Windows 95, type `{Microsoft::Windows*,Microsoft::!Windows 95}`.

By default, Microsoft Office, Windows 95, Windows 98, Window Me, Microsoft Office products, and SuSE specific products *-yast2, *-yast2-*, and *-liby2 are excluded since these SuSE OS specific products are not supported by Patch Manager. Microsoft Office products were excluded starting with version 3.0 of Patch Manager.

> If you are migrating from a previous version of Patch Manager and did not remove your patch.cfg before migration, you will need to add !*Office* to the excluded products list.



**Enable Patch Management For:**

☑ Microsoft ☑ HP-UX

☑ Red Hat ☑ SUSE

☑ Solaris

| | |
|---|---|
| **Save Acquisition Summary** | 0 |
| **Save History Detail** | 7 |
| **Patch Data Repository Path** | C:\Novadigm\IntegrationServer\data |
| **Retired Bulletins** | |
| **Excluded Products** | !Windows 95,!Windows 98*,!Windows Me,SUSE::!sles*-y |

- **Default Patch Acquisition Download Language**: Specify the abbreviation of the languages for which you want to acquire patches. The default is en (English).

## Vendor Settings

Use Vendor Settings to specify urls and other required information to download from vendor patch repositories. You must enable the appropriate vendors in the Preferences section to see the vendor listed here.

### Microsoft Feed Settings

The following settings are configured in the Vendor Feeds section:

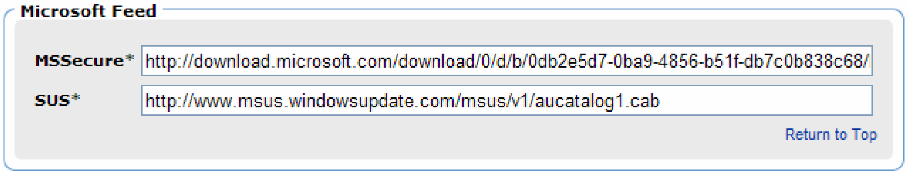
- **MSSecure***: Specifies the URL for the Microsoft `MSSECURE.XML` file.

  Default: **http://download.microsoft.com/download/0/d/b/0db2e5d7-0ba9-4856-b51f-db7c0b838c68/MSSecure_1033.CAB**

Note that Microsoft will be discontinuing MSSECURE.XML sometime in the future. See About Microsoft Patch Acquisition on page 49.

- **SUS***: Specifies the URL for the Microsoft SUS data feed.

  Default: **http://www.msus.windowsupdate.com/msus/v1/aucatalog1.cab**



Microsoft Feed

MSSecure* http://download.microsoft.com/download/0/d/b/0db2e5d7-0ba9-4856-b51f-db7c0b838c68/

SUS* http://www.msus.windowsupdate.com/msus/v1/aucatalog1.cab

Windows support is provided for 32 bit Intel architecture only.

### HP-UX Feed Settings

The following settings are configured in the HP-UX Feed section:

- **Security Catalog**: Specifies the url for the data source used to assess HP-UX security vulnerabilities.

  Default: **http://itrc.hp.com/service/patch/securityPatchCatalog .do?item=security_catalog2.gz**

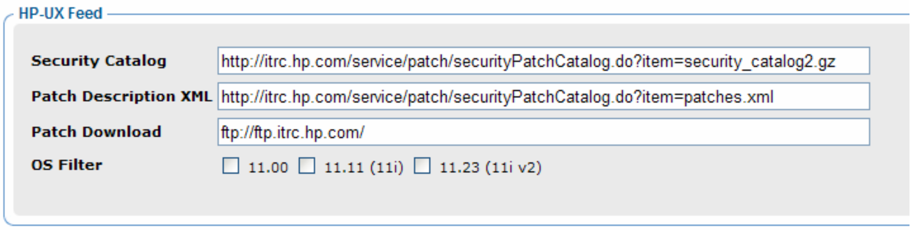
- **Patch Description XML**: Specifies the url for the file containing data on every HP-UX patch.

  Default: **http://itrc.hp.com/service/patch/securityPatchCatalog .do?item=patches.xml**

- **Patch Download**: Specifies the HP-UX url for downloading the patches.

  Default: **ftp://ftp.itrc.hp.com/**.

- **OS Filter**: Select operating systems for the acquisition of HP-UX security bulletins. These are the only operating systems that will be available for acquisition for this vendor. Valid values for HP-UX are HPUX::11.00, HPUX::11.11, and HPUX::11.23 version 2 for the PA-RISC architecture.



HP-UX Feed

| | |
|---|---|
| Security Catalog | http://itrc.hp.com/service/patch/securityPatchCatalog.do?item=security_catalog2.gz |
| Patch Description XML | http://itrc.hp.com/service/patch/securityPatchCatalog.do?item=patches.xml |
| Patch Download | ftp://ftp.itrc.hp.com/ |
| OS Filter | □ 11.00 □ 11.11 (11i) □ 11.23 (11i v2) |

## Red Hat Feed Settings

The following settings are configured in the Red Hat Feed section:

- **Red Hat**: Specifies the URL for the Red Hat Network data feed.

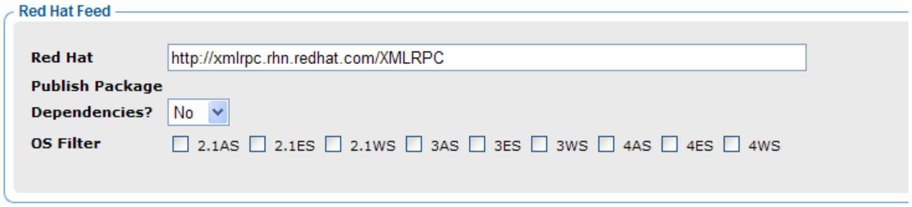
  Default: **http://xmlrpc.rhn.redhat.com/XMLRPC**

- **Publish Package Dependencies**: Specify **yes** if you want to publish additional Red Hat packages that downloaded security advisories may depend on. The default is No.

  Prerequisite, or dependent, Red Hat packages required to install Red Hat Security Advisories can be acquired from two places. They can either be downloaded from the Red Hat Network during acquisition or they can be found locally if copied from the Red Hat Linux installation media. During an acquisition, Patch Manager will first look for the .rpm packages in the appropriate directory. For example, for Red Hat Enterprise Linux 3ES, the baseline operating system rpm files supplied on Red Hat installation media should be placed in data/patch/redhat/packages/3es. If a patch's prerequisite software is not found locally, then the package will be downloaded from the Red Hat Network. To decrease the time needed for acquisition, HP recommends copying the dependency packages to the appropriate packages directory from your Linux installation media. The Red Hat RPM packages can be found on the installation media under the RedHat/RPMS directory.

- **OS Filter**: Select operating systems for the acquisition of Red Hat patches. Possible values for Red Hat are REDHAT::2.1es, REDHAT::3es, and REDHAT::4es. Support is provided for 32 bit Intel architecture only.

  If you remove one operating system from one acquisition to the next, all patches from the operating system that you removed will be erased from the patch repository. This applies to all *vendors*.



Red Hat Feed

Red Hat http://xmlrpc.rhn.redhat.com/XMLRPC

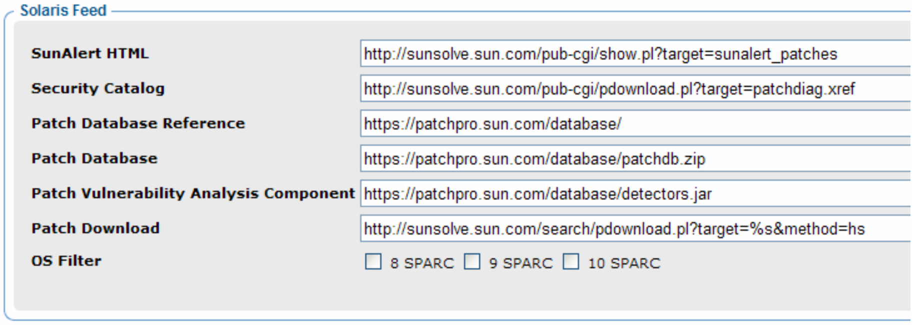
Publish Package Dependencies? No

OS Filter □ 2.1AS □ 2.1ES □ 2.1WS □ 3AS □ 3ES □ 3WS □ 4AS □ 4ES □ 4WS

## Solaris Settings

The following settings are configured in the Solaris Feed section.

- **SunAlert HTML**: This url provides a list of all available Sun Alerts and the patch ids associated with each Sun Alert. The default is **http://sunsolve.sun.com/pub-cgi/show.pl?target=sunalert_patches.**
- **Security Catalog**: This file includes information on all patches, both security and non-security related. The default is **http://sunsolve.sun.com/pub-cgi/pdownload.pl?target=patchdiag.xref.** This url provides a list of all Sun Solaris patches as well as meta data concerning Sun Solaris version applicability and the type of patch (recommended or security).
- **Patch Database Reference**: This parameter defines the directory repository for Sun Solaris meta data files. The default is **https://patchpro.sun.com/database/.**
- **Patch Database**: This Sun Microsystems url provides meta data concerning Sun Solaris "available" patches. The default is **https://patchpro.sun.com/database/patchdb.zip**.
- **Patch Vulnerability Analysis Component**: This auxiliary file is used by Sun Patch Manager Version 2.0 to perform patch applicability and vulnerability assessment. The default is **ttps://patchpro.sun.com/database/detectors.jar**.
- **Patch Download**: This URL provides a reference to the download locations of signed Sun Solaris patches. The default is**http://sunsolve.sun.com/search/pdownload.pl?target=%s&method=hs**.
- **OS Filter**: Select operating systems for the acquisition of Solaris patches. Valid values for Solaris are SOLARIS::8, SOLARIS::9, SOLARIS::10 to acquire patches for Solaris versions 8, 9, and 10 for the SPARC architecture *only*.



Solaris Feed

| | |
|---|---|
| SunAlert HTML | http://sunsolve.sun.com/pub-cgi/show.pl?target=sunalert_patches |
| Security Catalog | http://sunsolve.sun.com/pub-cgi/pdownload.pl?target=patchdiag.xref |
| Patch Database Reference | https://patchpro.sun.com/database/ |
| Patch Database | https://patchpro.sun.com/database/patchdb.zip |
| Patch Vulnerability Analysis Component | https://patchpro.sun.com/database/detectors.jar |
| Patch Download | http://sunsolve.sun.com/search/pdownload.pl?target=%s&method=hs |
| OS Filter | □ 8 SPARC □ 9 SPARC □ 10 SPARC |

### SuSE Feed Settings

The following settings are configured in the SuSE Feed section.

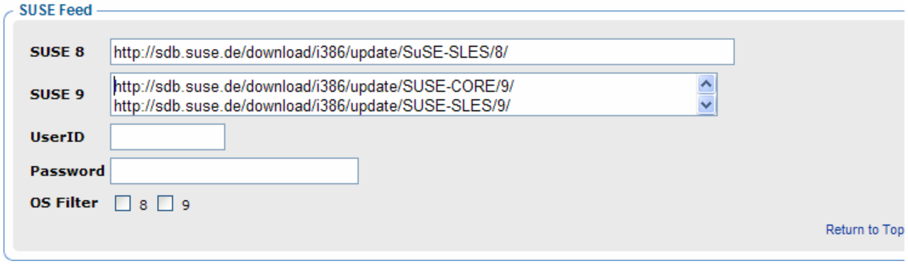
- **SuSE 8**: Specifies the url for acquiring updates for SuSE 8.

  Default: **http://sdb.suse.de/download/i386/update/SUSE-SLES/8/**

- **SuSE 9**: Specifies the url for acquiring updates for SuSE 9.

  Defaults: **http://sdb.suse.de/download/i386/update/SUSE-CORE/9/ http://sdb.suse.de/download/i386/update/SUSE-SLES/9/**

- **UserID**: Specifies your SuSE user ID. Obtain a user id from the vendor.
- **Password**: Specify the password for the SuSE UserID.
- **OS Filter**: Select operating systems for the acquisition of SuSE Linux Enterprise Server patches. Support is provided for 32 bit Intel architecture only.



SUSE Feed

| | |
|---|---|
| SUSE 8 | http://sdb.suse.de/download/i386/update/SuSE-SLES/8/ |
| SUSE 9 | http://sdb.suse.de/download/i386/update/SUSE-CORE/9/<br>http://sdb.suse.de/download/i386/update/SUSE-SLES/9/ |
| UserID | |
| Password | |
| OS Filter | □ 8 □ 9 |

## Patch Configuration Settings File

If you are unable to use the Patch Manager Administrator, you can make changes directly in the `patch.cfg` file. The default location is *`System Drive`*`:\Novadigm\IntegrationServer\etc`. See Appendix D, Patch.cfg Parameters for more information.

## Database Synchronization

The patch information that has been sent to the Radia Database on the Configuration Server must be synchronized with your ODBC Patch Database for assessment and analysis of the patch. The Radia Database and the ODBC Patch database house identical information.

- Each class in the PATCHMGR domain becomes a table in the ODBC database. The corresponding table is named nvd_classname.
- Each attribute in each class becomes a column in its table. The corresponding column name is nvd_attributename. Expressions and connection variables are *not* replicated.
- Each instance in the class becomes a record in the corresponding table.

Usually, this synchronization occurs automatically. There may be circumstances where you may want to run the synchronization manually. For example, you may want to identify what differences may exist between the two databases without committing the changes or only update one class. You can synchronize using either the Radia Patch Administrator or a command line.

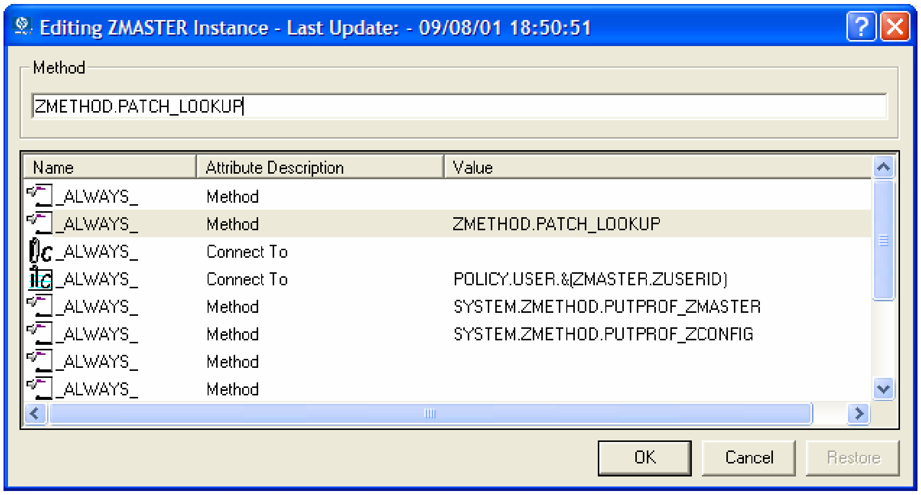
### To synchronize the databases using the Radia Patch Administrator

1. From your web browser, go to **http://<***patchserveripaddress***>:<***port***>/patch/manage/admin.tsp**
2. From Operations, click **Perform a Synchronization**.
3. Click **Submit**.

## Adding a Method Connection

Use the System Explorer to add an _ALWAYS_ Method connection to the PRIMARY.SYSTEM.PROCESS.ZMASTER instance as shown in the figure below.

**Figure 2 Edit the ZMASTER instance.c**



Editing ZMASTER Instance - Last Update: - 09/08/01 18:50:51

Method: ZMETHOD.PATCH_LOOKUP

| Name | Attribute Description | Value |
|---|---|---|
| _ALWAYS_ | Method | |
| _ALWAYS_ | Method | ZMETHOD.PATCH_LOOKUP |
| _ALWAYS_ | Connect To | |
| _ALWAYS_ | Connect To | POLICY.USER.&(ZMASTER.ZUSERID) |
| _ALWAYS_ | Method | SYSTEM.ZMETHOD.PUTPROF_ZMASTER |
| _ALWAYS_ | Method | SYSTEM.ZMETHOD.PUTPROF_ZCONFIG |
| _ALWAYS_ | Method | |
| _ALWAYS_ | Method | |

This method entry must precede the resolution of any services for a user.

## Messaging Server

Install Messaging Server Version 3.2. This includes updates to the Messaging Server for use with Patch Manager. When the Messaging Server is installed the Patch Manager Data Delivery Agent must be enabled.

If you are using the Management Portal (Integration Server) component installed from the release 4.0, 4.1, or 4.2 media sets, you must use the Infrastructure Metakit conversion utility before installing Patch Manager Server. Refer to the *Migration Guide for HP Open View Patch Manager Using Radia* for version 3.0 for instructions on using the utility. If you are using Infrastructure components installed from the 4.2i release, you do not need to use the conversion utility.

## Reporting Server

The Reporting Server version 4.2 is required to view enhanced reports for Radia Patch Manager. Review the Reporting Server release notes prior to installing. The Reporting Server Guide also includes instructions on how to use the Reporting Server.

## Configuration Analyzer Installation Tasks (Optional)

The Configuration Analyzer provides a powerful console for viewing, storing, and comparing application data. Backed by an SQL database, the Configuration Analyzer allows you to import state files. A state file is a highly tuned file format that is used to store information about an application or workstation at a particular point in time.

➤ If you are using Oracle with the Configuration Analyzer, you must use Oracle version 8i or 9i with SQL Loader (part of the Oracle client/admin toolset) on computers that will be performing imports. This includes the Configuration Analyzer and Knowledge Base Manager computers. It is recommended that you use the same version of driver and database to prevent any version mismatch issues.

For information regarding the Configuration Analyzer, see the *Configuration Analyzer Guide*.

## Installing and Configuring the Knowledge Base Manager (Optional)

The Knowledge Base Manager performs automated import processing of Radia state files into the Radia Application Knowledge Base allowing you to compare state files. The Knowledge Base Manager automated import server runs independent of the Configuration Server to import files found in the AutoImport directories that you specify. The Knowledge Base Manager can be controlled as a Windows service. The service name is RadKBMgr and it may be stopped and started through Administrative Tools\Services of the Control Panel.

For information regarding the Knowledge Base Manager, refer to the *Knowledge Base Manager Guide* available on the HP OpenView web site.

➤ If you are using Oracle with the Knowledge Base Manager, you must use Oracle version 8i or 9i with SQL Loader (part of the Oracle client/admin toolset) on computers that will be performing imports. This includes the Configuration Analyzer and Knowledge Base Manager computers. We recommend that you use the same version of driver and database to prevent any version mismatch issues.

## Summary

- Install and modify the Configuration Server and the Radia Database.
- Patch Manager requires an SQL or Oracle database.
- Install the Patch Manager on a computer that can access the Configuration Server and your ODBC Data Source.
- Install the Configuration Analyzer and the Knowledge Base Manager if you want to create and analyze state files.

# 3 Patch Acquisition

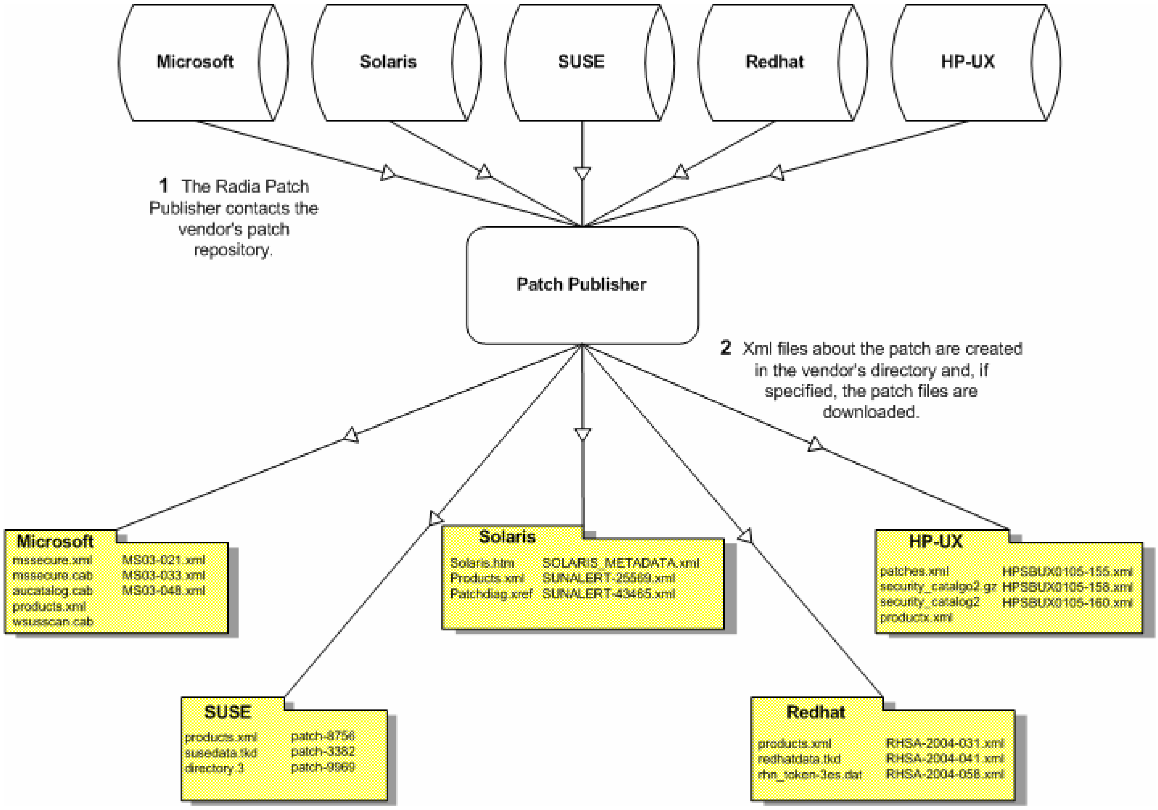
At the end of the chapter, you will:

- Be able to acquire patches.
- Know the parameters available for patch acquisition and database synchronization.

# Radia Patch Acquisition

Patch Manager provides a tool that connects to the selected vendor's web site, downloads the information regarding security patches including the files, and publishes this information to the Radia Database. The acquisition process fetches security patches from the vendor *and* publishes this information to the Radia Database.

**Figure 3 Vendor's patch repository is contacted**



## Patch Acquisition Overview

Patch Manager is used to acquire security patches and to synchronize the patch information in the Radia Database the Configuration Server with the Patch database on the SQL or Oracle Server. If you have already performed an acquisition, only instances that are different are updated.

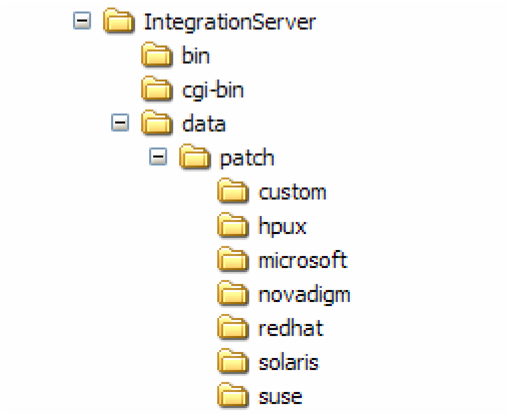
During the acquisition, the following things occur:

- The vendor's web site is contacted to prepare for the acquisition.
- Either the information about the Bulletins, Security Advisories, and Service Packs and the actual patch files or only the information about the patches is downloaded. The information downloaded contains, but is not limited to, detailed data about each security patch, such as supercedence, reboot requirements, and probe information.
- An xml file is created for each bulletin acquired and is put in the vendor's folder in the Integration Server's directory. These files are called patch descriptor files.
- The Configuration Server Database's PATCHMGR domain is populated with this information.
- Services are created in the PATCHMGR domain for each of the bulletins acquired.
- The PATCHMGR domain is synchronized with the ODBC database you created.

## About Patch Descriptor (XML) Files

When security patches are acquired an xml, or patch descriptor file, with information about the patch is created and placed in the vendor's directory. The vendor directories are located by default in `\\Novadigm\IntegrationServer\Data\Patch`. For example, patch descriptor files for Microsoft bulletins would be in `\\Novadigm\IntegrationServer\Data\Patch\Microsoft` while those for Red Hat are located in `\\Novadigm\IntegrationServer\Data\Patch\Redhat`. The bulletin number is the file name with an `.xml` extension. If the bulletin is identified by MS03-051, then the patch descriptor will be named `MS03-051.xml`. If you also acquired the actual files associated with the bulletin, a folder is created with the name of the bulletin that contains the patch files.

**Figure 4 Acquired Patch Descriptor file directory structure**



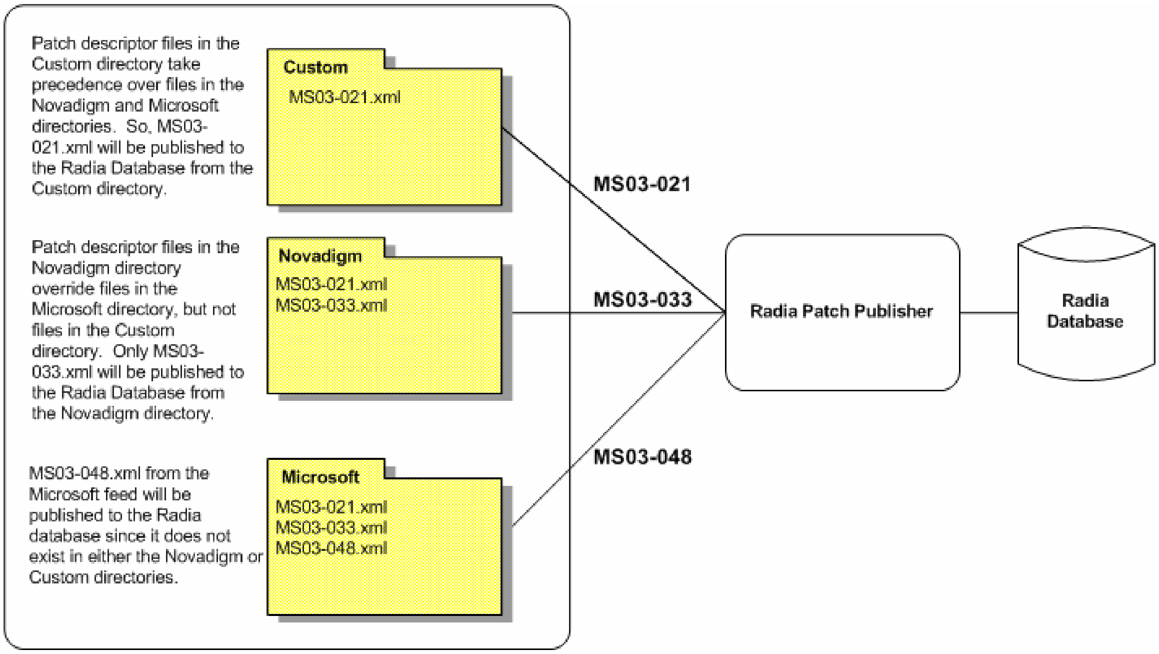
```
IntegrationServer
    bin
    cgi-bin
    data
        patch
            custom
            hpux
            microsoft
            novadigm
            redhat
            solaris
            suse
```

Some of the information acquired from the vendor may need to be altered before the patch can be managed. Therefore, there are two other subdirectories in `\\Novadigm\IntegrationServer\Data\Patch`. HP provides you with some additional patch descriptor files that are located in the Novadigm subdirectory. Patch descriptor files located in the Novadigm directory override patch descriptor files in the relevant vendor's directory. You can also create or modify your own patch descriptors that will override files in the Novadigm, Microsoft, SuSE, HPUX, Solaris, and RedHat directories. Use a text editor to make the changes, name the file *exactly* as it is named in the vendor's directory, and place these xml files in the Custom subdirectory. The figure below illustrates an example of this hierarchy using Microsoft bulletins.

HP provides two *sample* descriptor files for Windows Operating System service packs, `MSSP-WIN2k_4.xml` and `MSSP-WINXP_1.xml`. To deploy other Microsoft Operating System service packs, you must create your own patch descriptor files and save them in the Custom subdirectory. You are responsible for deploying the service pack in a test environment before automating the deployment.

The figure below illustrates the patch descriptor override for Microsoft security bulletins. Note that the same hierarchy applies to all vendors, HP-UX, SuSE, SUN, and RedHat.

**Figure 5 Patch descriptor files**


Patch descriptor files in the Custom directory take precedence over files in the Novadigm and Microsoft directories. So, MS03-021.xml will be published to the Radia Database from the Custom directory.
Custom
MS03-021.xml
Patch descriptor files in the Novadigm directory override files in the Microsoft directory, but not files in the Custom directory. Only MS03-033.xml will be published to the Radia Database from the Novadigm directory.
Novadigm
MS03-021.xml
MS03-033.xml
MS03-048.xml from the Microsoft feed will be published to the Radia database since it does not exist in either the Novadigm or Custom directories.
Microsoft
MS03-021.xml
MS03-033.xml
MS03-048.xml
MS03-021
MS03-033
MS03-048
Radia Patch Publisher
Radia Database

## About HP-UX Patch Acquisition

At the time of this writing, keep the following in mind for HP-UX security patches:

- Acquisition and deployment of HP-UX patch bundles is not supported.
- Acquisition does not acquire HP-UX security patch pre-requisites, nor will the deployment of a HP-UX security patch install pre-requisite patches if they are missing on the agent.
- Roll back of HP-UX security patches is not supported.

## About Microsoft Patch Acquisition

Microsoft is replacing MSSECURE with Microsoft Update for newer operating system versions and their prerequisite service packs. This affects HP OpenView Patch Manager Using Radia as well as Microsoft Update technologies. See the Microsoft Web site for a complete list of supported operating systems and products. At the time of this release of Patch Manager, Microsoft has stated that support for MSSECURE components will terminate in March 2006. As a result of this change, Microsoft will stop making updates to MSSECURE. On the date of termination, only patches hosted by Microsoft Update Catalog will be updated and maintained on an ongoing basis by Microsoft.

Patch Manager 3.0 provides support for the new Microsoft Update technology with no additional configuration. During the time that MSSECURE and Microsoft Update technologies are both actively updated by Microsoft, Patch Manager 3.0 supports the use of both MSSECURE and Microsoft Update technologies to download, process, and publish the data needed to manage patches. Furthermore, Patch Manager supports the transition from MSSECURE to Microsoft Update Catalog since both patch repositories may be used for the patch management for an interim period. HP will continue to support patching for operating systems supported by the MSSECURE technologies for the present time. However, when MSSECURE is no longer updated by Microsoft, HP will no longer provide data correction services for MSSECURE. This data will remain static until it is no longer supported by HP. The date of termination of MSSECURE data correction support by HP will be dependent on Microsoft's termination date. As a result of this change, all *new* installations of Patch Manager 3.0 will exclude Microsoft Office products during the acquisition process. If you migrate from a previous version of Patch Manager and do not remove or rename your `patch.cfg` file, you will continue to acquire Microsoft Office security bulletins. Be sure to add "!Office*" to the product exclusion list.

If the same bulletin and its respective patches are downloaded and published from both repositories, the MSSECURE data will be used for patch management functions. The MSSECURE data contains more granular product-release level information for reporting purposes.

Microsoft Update Catalog repository data is processed and used in its original format by HP solutions. Unlike the MSSECURE data, no data correction will be required or performed by HP in addressing incompatibilities in the vendor provided data.

## About Red Hat Patch Acquisition

To acquire security patches for Red Hat:

- Establish a Red Hat Network account using the Red Hat web site. At the time of this writing, the location is **http://redhat.com**.
- You will need a Red Hat Network account with one entitlement for each of the Red Hat Enterprise Server OS versions for which you want to acquire and manage patches.

➤ To perform patch acquisitions for Red Hat Enterprise Server Versions 2.1, 3 and 4, you will need a Red Hat Network account with at least three Red Hat Network system entitlements, one for each Enterprise Server version.

- Prerequisite, or dependent, Red Hat packages required to install Red Hat Security Advisories can be acquired from two places. They can either be downloaded from the Red Hat Network during acquisition or they can be found locally if copied from the Red Hat Linux installation media. During an acquisition, Patch Manager will first look for the .rpm packages in the appropriate directory. For example, for Red Hat Enterprise Linux 3ES, the baseline operating system rpm files supplied on Red Hat installation media should be placed in `data/patch/redhat/packages/3es`. If a patch's prerequisite software is not found locally, then the package will be downloaded from the Red Hat Network. To decrease the time needed for acquisition, HP recommends copying the dependency packages to the appropriate packages directory from your Linux installation media. The Red Hat RPM packages can be found on the installation media under the RedHat/RPMS directory.
- Use the rhn_register tool to create a Red Hat Network (RHN) `systemid` file. This file will be used to pass RHN credentials during acquisition. See the procedure below for details.

### To create a Red Hat systemid file

1. Perform a root login to a Linux Server running the Red Hat OS for which you would like to automatically acquire security patches.
2. Execute the command rhn_register on the command line when logged into the system as root.
3. When prompted by the rhn_register tool to use an existing or new account, select existing and supply the Red Hat Network username and password you created on the Red Hat web site.
4. Enter a unique profile name for this computer such as the IP address or hostname, and exit the rhn_register tool without applying any patches to the system where you ran rhn_register. A file called `systemid` is created.
5. Copy the file `/etc/sysconfig/rhn/systemid` produced by the rhn_register tool to the `\IntegrationServer\etc` directory on your Patch Manager Server
6. Rename the file from `systemid` to `redhat-3es.sid` for Red Hat Enterprise Server Version 3. If the computer was running Red Hat

Enterprise Server V 2.1, then rename the systemid file to redhat-2.1es.sid.

Access to the Red Hat network might be disabled if the network determines that patches have been acquired too frequently. An error will show in the patch-acquire.log including the text Abuse of Service detected for server linux. To resolve this issue, delete the registered system from the Red Hat network web interface at **https://rhn.redhat.com**. Recreate the Red Hat credentials file (systemid) using the procedure above.

Now, you can run Red Hat Enterprise Server patch acquisition. Be sure that the proper Configuration Server and ODBC parameters are configured.

## About Solaris Patch Acquisition

The HP OpenView Adapter for SSL Using Radia (SSL Adapter) must be installed on the Patch Manager Server that you are using for Solaris Patch Acquisition. The minimum version required for the SSL Adapter is version 2.1, including tls.tkd build 8. The SSL Adapter is included in the HP OpenView Using Radia media. The need for a secure connection within Patch Manager is only required on the Integration Server that is used to perform secure patch downloads from the Sun Microsystems website.

Acquisition and deployment of Sun Solaris patch clusters is not supported.

Roll back of Solaris patches is supported if roll back of the patch is supported by the patch vendor, and the roll back of the patch does not conflict with another patch's pre-requisite requirements. By default, patch roll back capabilities are disabled.

On November 29, 2005 Sun Microsystems instituted a new policy pertaining to patches for Sun Solaris Release 10. The intent of this new, evolving policy is to require a Sun Solaris 10 customer to obtain a valid Sun Contract to download non-security related *recommended* patches. These patches were freely available before the imposition of this new policy. Because of this new patch policy from Sun, customers may notice HTTP download errors of the type 4XX during acquisition. These errors cause no known problems with the functionality of the Patch Manager for Solaris product.  Sun Microsystems has published information on their Web site indicating that their new policy may be extended to other Sun Solaris operating systems.

## About SuSE Patch Acquisition Prerequisites

For SuSE security patch acquisition, you must establish a User ID and password through your SuSE Linux vendor to access SuSE Internet resources. Specify these credentials using the Patch Manager Administrator Interface.

## Performing a Patch Acquisition

The Radia Patch Administrator provides a user friendly interface that allows you to create acquisition profiles that can be saved and used repeatedly. You will need to first create the acquisition file, and then use the Radia Patch Administrator to run the file. Parameters specified in an acquisition profile or on an acquisition command line override parameters set in the Patch Configuration file, `patch.cfg`. Be sure to use quotes around values containing spaces. See Configuring the Patch Manager Server on page 29 for more information.

➤ HP recommends acquiring from only one vendor at a time. In addition, some SuSE Security Advisories and Microsoft Office Security Bulletins may take an extended period of time to download. To account for this, consider increasing the HTTP Timeout parameter to value greater than 1200 seconds.

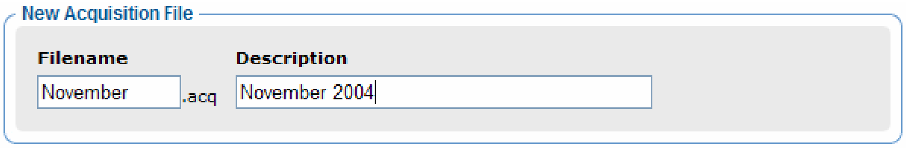
The parameters that are required depend on your environment.

### To create or edit an acquisition profile using the Radia Patch Administrator

1 From your web browser, go to **http://***patchserveripaddress***:***port* **/patch/manage/admin.tsp.**

2 From Configuration, click **Acquisition Settings**.

3 Either select an existing file to edit, or click **New** to create a new file. Click the trashcan icon to delete an acquisition file. In this example, we click **New**.

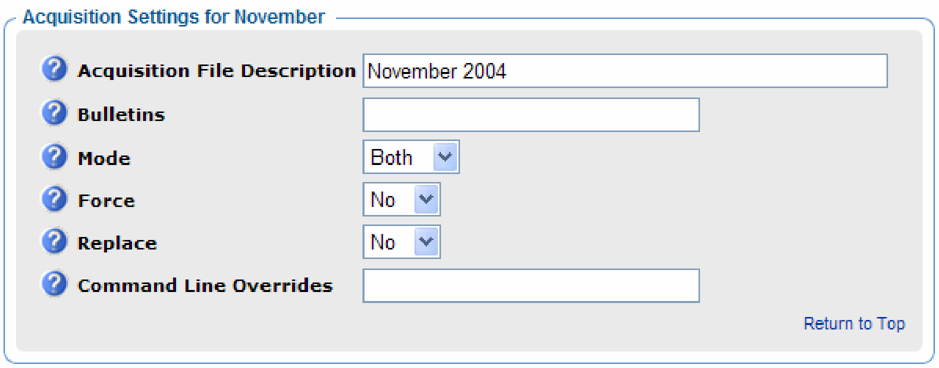


New Acquisition File

| Filename | Description |
|---|---|
| November .acq | November 2004 |

4 If you are creating a new file, type a Filename and Description, then click **Next**.

5 You will be taken to Step 2, where you can set Acquisition Settings.



Acquisition Settings for November

|  |  |
|---|---|
| Acquisition File Description | November 2004 |
| Bulletins |  |
| Mode | Both |
| Force | No |
| Replace | No |
| Command Line Overrides |  |

- **Acquisition File Description**: Create a description for the acquisition file.
- **Bulletins**: Specify the bulletins for acquisition separated by commas. The asterisk (*) wildcard character is recognized. For Red Hat Security advisories, use a hyphen (-) in place of an asterisk (*) for filtering.
  - Microsoft Security bulletins use the naming convention `MSYY-###`, where `YY` is the last two digits of the year that the bulletin was issued and `###` is a sequential number of the bulletin number being released for this the year specified. Microsoft service packs are listed in the format `MSSP_operatingsystem_spnumber`. To acquire *sample* Microsoft Operating System service packs, specify MSSP*. This will download sample service packs using information in the Novadigm or Custom folders.
  - HP-UX Security bulletins use the naming convention `HPSBUX######`, where `HP` indicates HP hardware, `SB` indicates security bulletin, and `UX` indicates the HP-UX operating system. At times the HP-UX security bulletin may contain an embedded hyphen
  - Red Hat Security advisories use the naming convention `RHSA-CCYY-###`, where `CC` indicates the century and `YY` the last to digits of the year when the advisory was issued, and `###` the Red Hat patch number. Red Hat Security advisories, use a hyphen (-) in place of an asterisk (*) for filtering.
  - SuSE Security patches use the naming convention `SUSE-PATCH-####`,where `###`  represents a numbering scheme provided by SuSE.
  - Sun Solaris Sun Alerts use the naming convention `SUNALERT-patchid-revision`, where patch-id represents the specific Sun Microsystems patch number, and revision is the revision identifier of the patch.

➤ If you do not want to download any bulletins, use –bulletins NONE.

- **Mode**: Specify BOTH to download the patches and the information about the patches. Specify MODEL to acquire only the metadata for patches. Only the Bulletins and Numbers for the patches are downloaded, but not the actual patch files. Use this mode so that you can use the reports to expose vulnerabilities on client devices.
- **Force**: Use force in the following situations.
  - You previously ran an acquisition using the mode MODEL, and now you want to use BOTH.
  - You previously ran an acquisition filtering for one language (lang), and now, you need to acquire bulletins for another.
  - You previously ran an acquisition specifying one product, and, now, you need to acquire for another.

    For example, suppose that originally you only had Windows 2000 computers in your enterprise, so you used -product {Windows 2000*}. A month later, you roll out Windows XP. If you want to acquire the same bulletins, you will need to run the acquisition with -product {Windows XP*,Windows 2000*} and -force y.

    ➤ If replace is set to Y, the bulletins will be removed and reacquired, regardless of the value of force.

- **Replace**: Set replace to Y to delete old bulletins, specified in the bulletins parameter, and then re-acquire them. This will supersede the value for force. In other words, if you set replace to Y, then any bulletin specified for that acquisition will be deleted and reacquired, whether force is set to N or Y.
- **Command Line Overrides**: Use this parameter only when it is necessary to override your regular acquisition parameters. If used incorrectly, the acquisition will fail. Use the format of –parameter value. See Appendix D, Patch.cfg Parameters for a full list of parameters.

### Microsoft Settings

- **Acquire Microsoft Patches?**: Select **Yes** if you want to acquire Microsoft Patches. For additional settings, go to the Vendor Settings page in the Patch Administrator.

### RedHat Settings

- **Acquire RedHat Patches?**: Select **Yes** if you want to acquire RedHat Patches. For additional settings, go to the Vendor Settings page in the Patch Administrator.

### SuSE Settings

- **Acquire SUSE Patches?**: Select **Yes** if you want to acquire SuSE Patches. For additional settings, go to the Vendor Settings page in the Patch Administrator.

### HP-UX Settings

- **Acquire HP-UX Patches?**: Select **Yes** if you want to acquire HP-UX Patches. For additional settings, go to the Vendor Settings page in the Patch Administrator.

### Solaris Settings

- **Acquire Solaris Patches?**: Select **Yes** if you want to acquire Solaris Patches. For additional settings, go to the Vendor Settings page in the Patch Administrator.

> If you remove one operating system in your OS Filter from one acquisition to the next, all patches from the operating system that you removed from the OS Filter will be erased from the patch repository. OS Filters are specified either in the Configuration Settings page.

6. Click **Next** to go to Step 3 where you will select products.
7. Expand the appropriate vendor's products and check the products you want to exclude from the acquisition. Uncheck the products you want to include.
8. Click **Finish** to save the acquisition file you created.

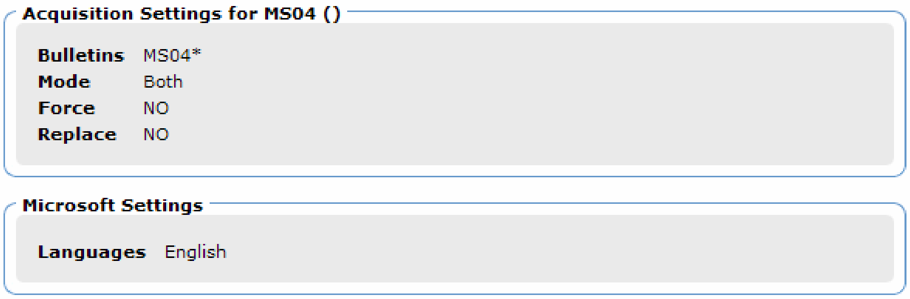
Now, you can use the Radia Patch Administrator to run the acquisition using your saved settings.

### To run an acquisition from the Radia Patch Administrator

1. From your web browser, go to **http://***patchserveripaddress***:***port* **/patch/manage/admin.tsp**.
2. From Operations, click **Start an Acquisition**.

3 Select a file by clicking on its name.

4 Confirm the settings for this acquisition.



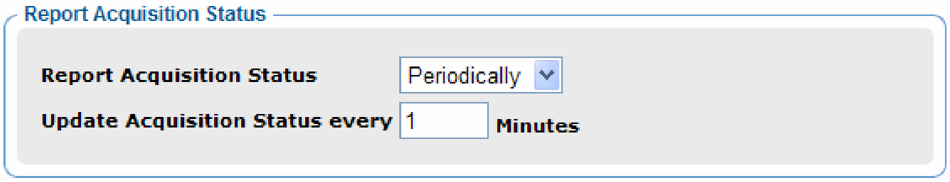
Acquisition Settings for MS04 ()

| | |
|---|---|
| Bulletins | MS04* |
| Mode | Both |
| Force | NO |
| Replace | NO |

Microsoft Settings

| | |
|---|---|
| Languages | English |

### Report Acquisition Status



Report Acquisition Status

| | |
|---|---|
| Report Acquisition Status | Periodically |
| Update Acquisition Status every | 1 Minutes |

**Report Acquisition Status**: In addition to the acquisition log, you can specify how frequently you want to update the current acquisition status, viewable in the Patch Manager Administrator.

— **Update Status Information every**: If you specified Periodically in the Report Acquisition Status field, select how frequently you want to update the status file.

5 Read the notice on your agent update settings, and click **Submit** to begin your acquisition.

Look at the Patch Acquisition Reports on the Patch Manager web site to check the success of the acquisition. In addition, a log file is created in the Radia Integration Server's log directory called `patch-acquire.log`. The patch acquisition log includes the version and build number of `patch.tkd`.

## Creating Custom Patch Descriptor Files

The patch descriptor files that are created using the **acquire** command use the information from the vendor data feeds. These files may be missing information or contain incorrect information regarding the patch. A **probe** defines what is needed to be in compliance with the security issue that the patch fixes. You can create a custom patch descriptor files using supported

XML tags. The custom descriptor file must be placed in the Custom directory and be named identically to the file it will be overriding in the Microsoft, RedHat, SuSE, or Novadigm directories. Below is an example of creating a custom descriptor file for a Microsoft bulletin.

### To create a custom descriptor file

1. Copy the Microsoft version of the XML file located in `C:\Novadigm\IntegrationServer\data\patch\microsoft` directory generated during an acquisition into the `C:\Novadigm\IntegrationServer\data\patch\custom` directory.

2. Use a text or xml editor to view the patch descriptor file. Validate the data with the releases itemized in the URL located at the top of the xml. Change `Source` to `Custom`.

   ```
   <!-- XML file built using Novadigms Page Scraper -->
   ```

   ```
   <Bulletin PopularitySeverityID="0"
   URL="http://www.microsoft.com/technet/security/bulletin"
   FAQURL="http://www.microsoft.com/technet/security/bulletin"
   MitigationSeverityID="0" Supported="Yes" ImpactSeverityID="0"
   SchemaVersion="1.0" PreReqSeverityID="0"
   DateRevised="20021119" Source="NOVADIGM" Name="MS02-065"
   Title="Buffer Overrun in Microsoft Data Access Components
   Could Lead to Code Execution (Q329414)" DatePosted="20021119"
   >
   ```

   When generating a custom xml, HP recommends including all Product releases. This allows a client running any available releases of the product to be discovered.

3. Make any changes required to adjust the data, and save the custom patch descriptor file. Change the `Source` tag to `Custom`. This value is reflected in the BULLETIN instance's SOURCE attribute.

4. Use the following command line to publish the custom patch descriptor file. If the bulletin were MS02-065, the command line would be:

   ```
   nvdkit ./modules/patch.tkd acquire -rcs_url radia:
   //localhost:3464
   ```

   ```
      -mode BOTH -dsn patch -bulletins MS02-065 -sync rcs -
   replace y
   ```

5. View the `patch-acquire.log` to see where the publishing process obtained the xml from:

   ```
   20040116 15:11:24 Info: Publishing MS02-065 1 of 1
   ```

```
20040116 15:11:24 Info: Using bulletin from custom
C:/Novadigm/IntegrationServer/data/patch/custom/MS02-065.xml

20040116 15:11:24 Info: Loading XML file
C:/Novadigm/IntegrationServer/data/patch/custom/MS02-065.xml

20040116 15:11:24 Info: Loading bulletin MS02-065 from RCS
```

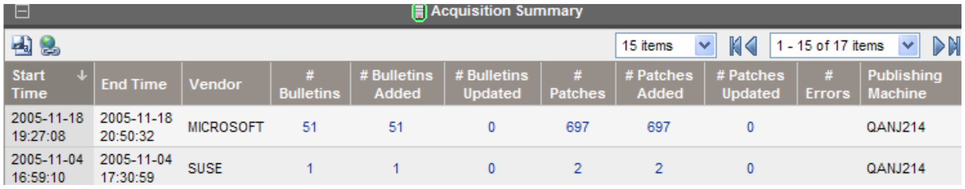
## Patch Acquisition Reports

Acquisition based reports show the success and failures of the patch acquisition process from the vendor's web site. To view the reports, access the Reporting Server. Installation and configuration information can be found in the *Reporting Server Guide*. Under **Reporting Views**, click **Patch Manager Reports** to expand the list of reports.

- **Acquisition Summary**

  The Acquisition Summary report shows the number of bulletins, patches, and errors for each acquisition session. In addition, it provides links to the acquisition reports for all bulletins and patches. The date and time of the publishing session is also listed.

**Figure 6 View the Acquisition summary report**



Acquisition Summary

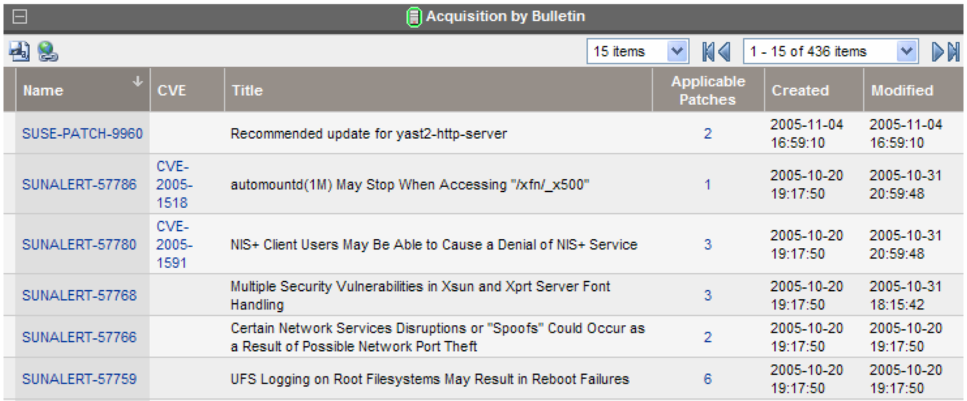
| Start Time | End Time | Vendor | # Bulletins | # Bulletins Added | # Bulletins Updated | # Patches | # Patches Added | # Patches Updated | # Errors | Publishing Machine |
|---|---|---|---|---|---|---|---|---|---|---|
| 2005-11-18 19:27:08 | 2005-11-18 20:50:32 | MICROSOFT | 51 | 51 | 0 | 697 | 697 | 0 | | QANJ214 |
| 2005-11-04 16:59:10 | 2005-11-04 17:30:59 | SUSE | 1 | 1 | 0 | 2 | 2 | 0 | | QANJ214 |

  - Click **# Bulletins Added** or **# Bulletins Updated** to see the acquisition summary sorted by bulletin.
  - Click **# Patches Added** or **# Patches Updated** to see the acquisition summary sorted by patch files.
  - Click **# Errors** to see further explanations of why the acquisition failed. Numeric error codes displayed in the error reports are standard http status codes. For additional details on these codes, search for "HTTP Status Codes" on the World Wide Web.

- **Acquisition by Bulletin**

  Use the Acquisition by Bulletin report to see a summary of the bulletin's acquisition.

Figure 7 View the acquisition summary by bulletin



Acquisition by Bulletin

15 items · 1 - 15 of 436 items

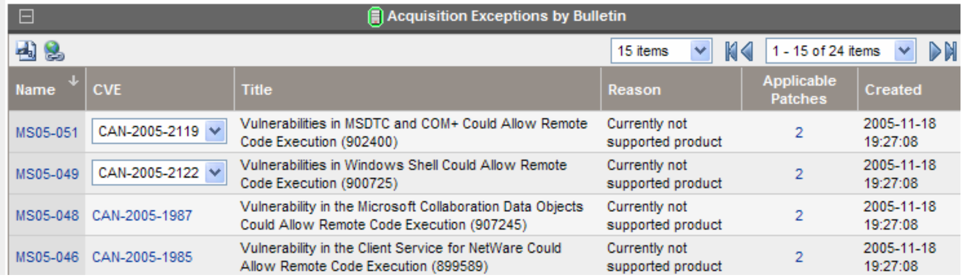
| Name | CVE | Title | Applicable Patches | Created | Modified |
|---|---|---|---|---|---|
| SUSE-PATCH-9960 | | Recommended update for yast2-http-server | 2 | 2005-11-04 16:59:10 | 2005-11-04 16:59:10 |
| SUNALERT-57786 | CVE-2005-1518 | automountd(1M) May Stop When Accessing "/xfn/_x500" | 1 | 2005-10-20 19:17:50 | 2005-10-31 20:59:48 |
| SUNALERT-57780 | CVE-2005-1591 | NIS+ Client Users May Be Able to Cause a Denial of NIS+ Service | 3 | 2005-10-20 19:17:50 | 2005-10-31 20:59:48 |
| SUNALERT-57768 | | Multiple Security Vulnerabilities in Xsun and Xprt Server Font Handling | 3 | 2005-10-20 19:17:50 | 2005-10-31 18:15:42 |
| SUNALERT-57766 | | Certain Network Services Disruptions or "Spoofs" Could Occur as a Result of Possible Network Port Theft | 2 | 2005-10-20 19:17:50 | 2005-10-20 19:17:50 |
| SUNALERT-57759 | | UFS Logging on Root Filesystems May Result in Reboot Failures | 6 | 2005-10-20 19:17:50 | 2005-10-20 19:17:50 |

From this report click on the number for Applicable Patches to see the files associated with the bulletin. Remember that one bulletin may have multiple patches based on platform.

— If a bulletin has a patch that applies to a product that Patch Manager does not support, an asterisk (*) will be displayed preceding the bulletin number. In Figure 7 above, one of the files associated with MS04-001 is not currently supported by Patch Manager.

— At the bottom of this report, there is a second section that includes bulletins that apply to products that are not supported by Patch Manager. These bulletins will not appear in the Research reports.

Figure 8 View the acquisition exceptions by bulletin



Acquisition Exceptions by Bulletin

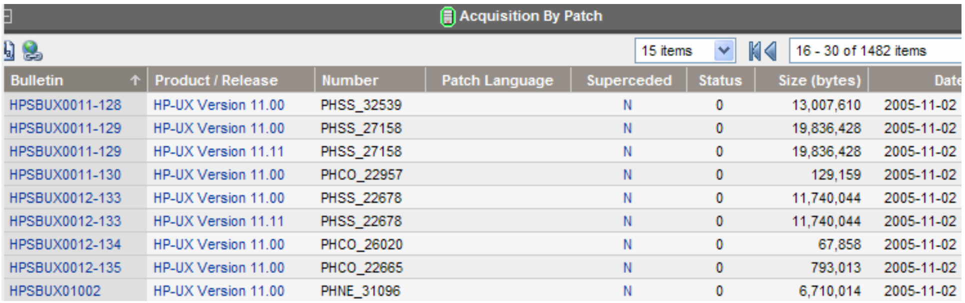
15 items · 1 - 15 of 24 items

| Name | CVE | Title | Reason | Applicable Patches | Created |
|---|---|---|---|---|---|
| MS05-051 | CAN-2005-2119 | Vulnerabilities in MSDTC and COM+ Could Allow Remote Code Execution (902400) | Currently not supported product | 2 | 2005-11-18 19:27:08 |
| MS05-049 | CAN-2005-2122 | Vulnerabilities in Windows Shell Could Allow Remote Code Execution (900725) | Currently not supported product | 2 | 2005-11-18 19:27:08 |
| MS05-048 | CAN-2005-1987 | Vulnerability in the Microsoft Collaboration Data Objects Could Allow Remote Code Execution (907245) | Currently not supported product | 2 | 2005-11-18 19:27:08 |
| MS05-046 | CAN-2005-1985 | Vulnerability in the Client Service for NetWare Could Allow Remote Code Execution (899589) | Currently not supported product | 2 | 2005-11-18 19:27:08 |

- **Acquisition by Patch**

  Use the Acquisition by Patch report to see a summary of each patch's acquisition.

**Figure 9 View the acquisition by patch**



Acquisition By Patch

15 items | 16 - 30 of 1482 items

| Bulletin | Product / Release | Number | Patch Language | Superceded | Status | Size (bytes) | Date |
|---|---|---|---|---|---|---|---|
| HPSBUX0011-128 | HP-UX Version 11.00 | PHSS_32539 | | N | 0 | 13,007,610 | 2005-11-02 |
| HPSBUX0011-129 | HP-UX Version 11.00 | PHSS_27158 | | N | 0 | 19,836,428 | 2005-11-02 |
| HPSBUX0011-129 | HP-UX Version 11.11 | PHSS_27158 | | N | 0 | 19,836,428 | 2005-11-02 |
| HPSBUX0011-130 | HP-UX Version 11.00 | PHCO_22957 | | N | 0 | 129,159 | 2005-11-02 |
| HPSBUX0012-133 | HP-UX Version 11.00 | PHSS_22678 | | N | 0 | 11,740,044 | 2005-11-02 |
| HPSBUX0012-133 | HP-UX Version 11.11 | PHSS_22678 | | N | 0 | 11,740,044 | 2005-11-02 |
| HPSBUX0012-134 | HP-UX Version 11.00 | PHCO_26020 | | N | 0 | 67,858 | 2005-11-02 |
| HPSBUX0012-135 | HP-UX Version 11.00 | PHCO_22665 | | N | 0 | 793,013 | 2005-11-02 |
| HPSBUX01002 | HP-UX Version 11.00 | PHNE_31096 | | N | 0 | 6,710,014 | 2005-11-02 |

Click on an item in the Product/Release column for a specific bulletin to drill down for full details on the patch.

## Analyzing Microsoft Patch Files

If you are using the Configuration Analyzer to compare Microsoft patches, you will need to create patch state files. A state file is a highly tuned file format that is used to store information about an application or workstation at a particular point in time. Patch Manager allows you to generate state files only for Microsoft patches that have already been acquired in the Radia Database. Each parameter should be preceded by a hyphen with the value for the parameter following it. The State File Creation parameters are described below. Parameters set on the command line will override those from the `patch.cfg` file.

- **bulletins**: Specify specific bulletins for acquisition separated by commas. The asterisk (*) wildcard character is recognized. The default is all bulletins. An example would be, -bulletins MS00-001,MS00-029.
- **rcs_pass**: If authentication has been enabled on your Configuration Server, specify the password for the rcs_user.
- **rcs_url**: Specify the location of your Configuration Server in URL format. This parameter is required. Use the format `radia://`*`ipaddress`*`:`*`port`* where:
  - `radia` indicates the session type to be opened to the Configuration Server.

- — *ipaddress* is the hostname or IP address of the computer hosting the Configuration Server.
  - — *port* is the port number of the Configuration Server.
- **rcs_user**: If authentication has been enabled on your Configuration Server, specify the rcs_user.
- **state_dir**: Specify the location to place the state files. The default is `C:\Novadigm\IntegrationServer\states`.

### To create state files

1. From a command prompt on your Patch Manager computer, navigate to the Radia Integration Server's directory. The default location is

   ```
   System Drive:\Novadigm\IntegrationServer
   ```

2. Using the parameters listed in the bulleted list above, create a command line similar to the following:

   ```
   nvdkit ./modules/patch.tkd state -bulletins MS04-003
   ```

   This will create a state file for Microsoft Bulletin MS04-003.

Log files called `patch2state.log` and `advmnfst.log` are created in the current folder.

Refer to the *Configuration Analyzer Guide* for instructions on how to use the state files.

## Summary

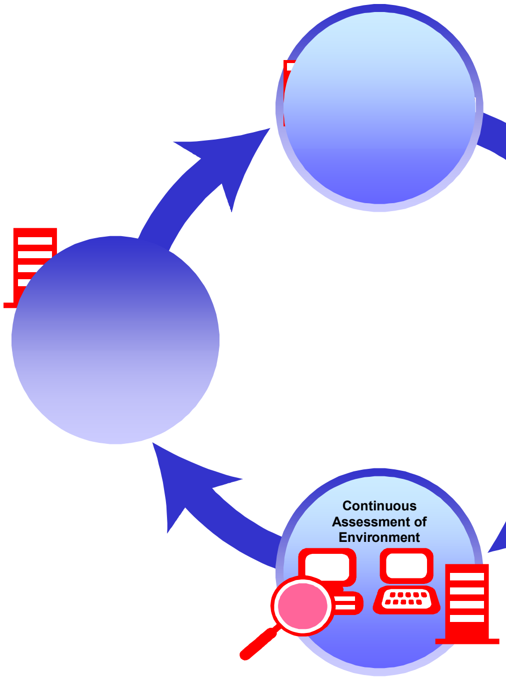
- Run Radia Patch Acquisition to acquire the patches and publish them to the Radia Database.
- The Patch information from the Radia Database automatically synchronizes with the Patch SQL Database.
- Use the Patch Acquisition reports to see the status of your acquisition.

# 4 Patch Assessment and Analysis

At the end of this chapter, you will:

- Know how to install the Patch Manager client agent.
- Know how to manage patches on client devices.
- Be familiar with reports that you can generate for patch files.

**Figure 10 Product discovery and analysis**



## Installing the Patch Manager Client

The Patch Manager client must be installed on any client computer that you want to manage vulnerabilities for. You can do this using the Management Portal or using the installation from the CD-ROM provided.

⚠ For release 4.2, you will need to import HP OpenView Application Manager Maintenance decks. Use these decks to distribute required updates to your Patch Manager clients. These decks will be imported into your HP OpenView Using Radia Configuration Server. Refer to the *Migration Guide for HP OpenView Patch Manager Using Radia* for Patch Manager version 3.0.

To accommodate Microsoft Update, the client computers must have the Windows Update Agent installed. This is part of the Client Agent Updates downloadable from the HP OpenView Patch Update Site. The HP acquisition process automatically acquires the latest Windows Update Agent required for the Patch Manager Client Agent. The Discover Patch Service will automatically apply the current Windows Update Agent to the client computer on the next client connection.

For detailed installation instructions, refer to either the *Management Portal Guide* or the *Application Manager Guide*. For minimum system requirements, refer to the *Application Manager Guide* for the appropriate operating system.

➤ The minimum required version of nvdkit is 427 for the Patch Manager clients. If your client computers do not meet this requirement, see the technical support web site.

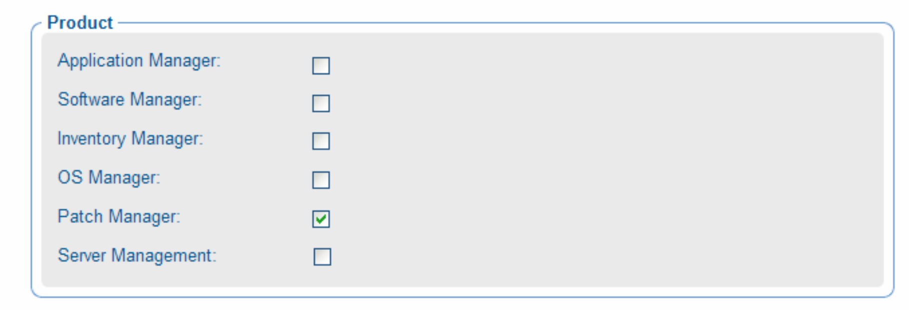
The directions shown below for installation through the Management Portal version 2.0. These screens and instructions may change in future versions. Refer to the *Management Portal Guide* for additional information.

### To install the Patch Manager client from the Management Portal

1 Copy the client maintenance files from the Patch Manager CD-ROM to the `\Novadigm\IntegrationServer\media\client\default\win32\maint` directory on the Management Portal computer.

2 Use the Management Portal's Install Radia Client task to begin the installation process.

3 In the Management Portal's Client-opts screen, select **Patch Manager**.



Product

| | |
|---|---|
| Application Manager: | ☐ |
| Software Manager: | ☐ |
| Inventory Manager: | ☐ |
| OS Manager: | ☐ |
| Patch Manager: | ☑ |
| Server Management: | ☐ |

4 Complete the remaining information in the Client-Opts screen.

5 Schedule the installation and submit the job.

> If the Radia Management Agent is not already installed on the client computer, the Agent will be installed as part of the Patch Manager client installation.

### To install from the CD-ROM for Windows clients

- Navigate to the appropriate subdirectory for you operating system on the Radia v4 applications CD-ROM. Double-click **setup.exe**. When prompted, select the Patch Manager client feature.

### To use the install.ini file for Windows Clients

- In the [PROPERTIES} section of the `install.ini` file, add the following line: `ADDLOCAL=NVDINSTALLPATCH`

After installing the client, you will need to assign the appropriate services to the client computers.

### To install from the CD-ROM for RedHat and SuSE Linux and HP-UX clients

- Navigate to the appropriate subdirectory for you operating system on the Radia v41 applications CD-ROM. Select the Patch Manager client feature during client installation.

### To install the Patch Manager Agent on a UNIX operating system

The recommended minimum version of the Radia client that supports Patch Manager Agent Version 3.0 functionality is Radia Application Manager Version **4.1**. The absolute minimum build of `nvdkit` on the client, is build 427. The Patch Manager's maintenance file, `maint.tar`, must be applied to the client in order to enable the Patch Manager Agent. At the time of this writing; The Patch Manager Agent is supported on the following operating systems.

- **Linux**: Red Hat Enterprise Server versions 2.1, 3, and 4; and SuSE Enterprise Server versions 8 and 9.
- **HP-UX**: operating system releases 11.00, 11.11 (11i), and 11.23 (version 2 for the for PA-RISC architecture.
- **Sun Solaris (SPARC)**: operating system releases 8, 9, and 10.

> As of this writing, a conflict exists between HP OpenView OS Manager Using Radia (OS Manager) for Unix and the minimum Tcl 8.4 nvdkit build 427 required by the Patch Manager Version 3.0 client. As a result, OS Manager may not be able to reprovision Unix Operating Systems. If the nvdkit were deployed as part of the OS installation process the system may not report the OS is in desired state. To resolve this issue, a new `romclimth.tkd` and `presetup.tcl` will be made available, as a separate software patch, specifically for OS Manager.

The maintenance file (`maint.tar`) is located on the HP OpenView Patch Manager using Radia CD-ROM in the following operating system-specific directories.

- — `Patch Agent Maintenance\linux\ram`
- — `Patch Agent Maintenance\hpux\ram`
- — `Patch Agent Maintenance\solaris\ram`

The supplied `maint.tar` files provided in the operating system specific folders on the CD-ROM are not interchangeable between client platforms.

### To install the UNIX Patch Manager client from the Management Portal

These instructions are applicable to the UNIX Operating Systems noted in the section above. In these instructions, the operating system-specific directories have been replaced with *XXXX*; in your environment this value will be `linux`, `hpux`, or `solaris`, depending on the operating system.

- Examine the contents of the Management Portal's sub-directory `IntegrationServer/media/client/`*`XXXX`*`/ram`.
  - — If this sub-directory contains the file `client31.tar`, then copy the file `maint.tar` from `Patch Agent Maintenance\`*`XXXX`*`\ram` on the CD-ROM to it and **rename** the file, `maint31.tar`.

— If this sub-directory contains the file `client41.tar`, then copy the file `maint31.tar` from `Patch Agent Maintenance\`*`XXXX`*`\ram` on the CD-ROM to it and **rename** the file, `maint41.tar`.

At minimum, HP OpenView using Radia client version 4.1 is required to enable reboot management capabilities, and resume patch management processing after a reboot. To use this feature, the Radia Scheduler (radsched) must be enabled as a system Service. Installation of the Radia client daemons as system services can be performed as a post installation task during the installation of the Radia Application Manager client. For additional information on UNIX client post installation tasks, see the HP OpenView Radia Application Manager Installation and Configuration Guide.

## Sun Solaris Patch Agent pre-requisites

Sun Patch Manager 2.0 is required to use HP OpenView Using Radia Patch Manager for vulnerability assessment. The Sun Patch Manager 2.0 feature is discussed on Sun's web site. At the time of this writing, the url for this page is **http://www.sun.com/download/products.xml?id=40c8c2ad**. This includes information regarding the installation and requirements for Sun Patch Manager software.

### Sun Solaris 8 client OS pre-requisites

For Sun Solaris 8, navigate to the above web page and click the Download button at the bottom of the web page next to the **Price: Free** statement. Even though the download is free, you must be a registered on Sun's web site to acquire the Sun Patch Manager 2.0 for Solaris 8 SPARC code.

Once downloaded, follow Sun's recommended instructions on how to install Sun Patch Manager 2.0 on your Solaris 8 SPARC system.

### Sun Solaris 9 client OS pre-requisites

For Sun Solaris 9, the Sun Solaris Patch 112945-39 or the latest revision of patch 112945 must be installed. This patch installs Sun Microsystems Patch Manager Version 2.0. HP recommends this patch be applied using the `-d` option of the Sun Solaris `patchadd` system utility, to prevent the unintentional removal or rollback of the pre-requisite patch required by HP OpenView Patch Manager.

In addition, you are required to install a particular Java Runtime Environment package which at the time of this writing is identified by Sun

Microsystems as the package jre-1_5_0_04. This can be downloaded from Sun Microsystems. This requirement results from Sun Solaris Patch binaries being provided in the form of java archive files (.jar extension).

## Sun Solaris 10 client OS pre-requisites

For Sun Solaris 10, the base Operating system install must include the **Developer Software Support Group of Solaris 10,** which provides Sun™ Patch Manager Version 2.0, which is used to perform Sun Alert Vulnerability scans.

## Sun Solaris Single User Patch Installations

Some patches associated with Sun Alerts must be installed in single user mode to apply the patch correctly. It is imperative for installation of those patches that the user applies the supplied shell script `S07radiapm` located in the Patch Agent Maintenance`\solaris\singleuser` folder on the CD-ROM to the appropriate Sun Solaris client directory.

### For Solaris 8 and 9

Install the script in the `/etc/rc2.d` directory. Change the permissions of the shell script to ensure it is executable by the root user. You can install this file on a Sun Solaris client using a post installation task during the installation of the Application Manager client. For additional information on UNIX client post-installation tasks, refer to the *Installation and Configuration Guide for the HP OpenView Radia Application Manager*.

### For Solaris 10

Install the script in the `/etc/init.d` directory. Change the permissions of the shell script to ensure it is executable by the root user. You can install this file on a Sun Solaris client using a post installation task during the installation of the Application Manager client. You must also install the supplied text file `radia-single.xml` located in Patch Agent Maintenance `\solaris\singleuser` on your Sun Solaris 10 client computer. The introduction of the Service Management Facility (SMF) in Solaris 10 requires this system modification on a Solaris 10 based client computer for the Radia Patch Manager single user patch installation facility to function properly. Verify that `radia-single.xml` is placed in the Sun Solaris 10 client computer's `/var/svc/manifest/site` directory, then execute the following command as root or super user:

```
svccfg import /var/svc/manifest/site/radia-single.xml
```

For additional information on UNIX client post-installation tasks, refer to the *Installation and Configuration Guide for the HP OpenView Radia Application Manager*.

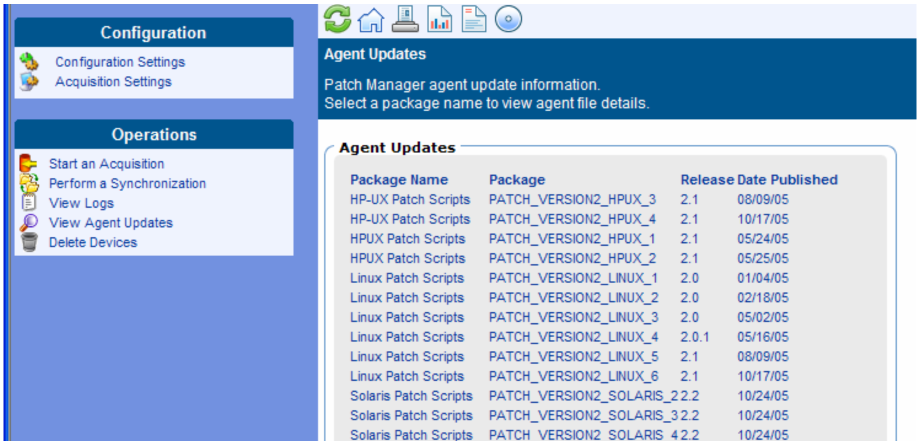
## Updating the Patch Manager Client Agent

When you run a patch acquisition, you can also download updated product discovery scripts. These files are received from the Patch Update web site provided by HP. After download, the files are published to the PATCHMGR domain and connected to the Discover Patch Service instance.

As of Patch Manager, Version 2.0, the auto packaging feature will reapply Patch Manager agent maintenance files if a user deleted them between Radia connects.

Use the View Agent Updates task in the Operations section on the Patch Administrator page to find out the status of updates. To do this, click **View Agent Updates**.

**Figure 11 View agent updates**



Agent Updates

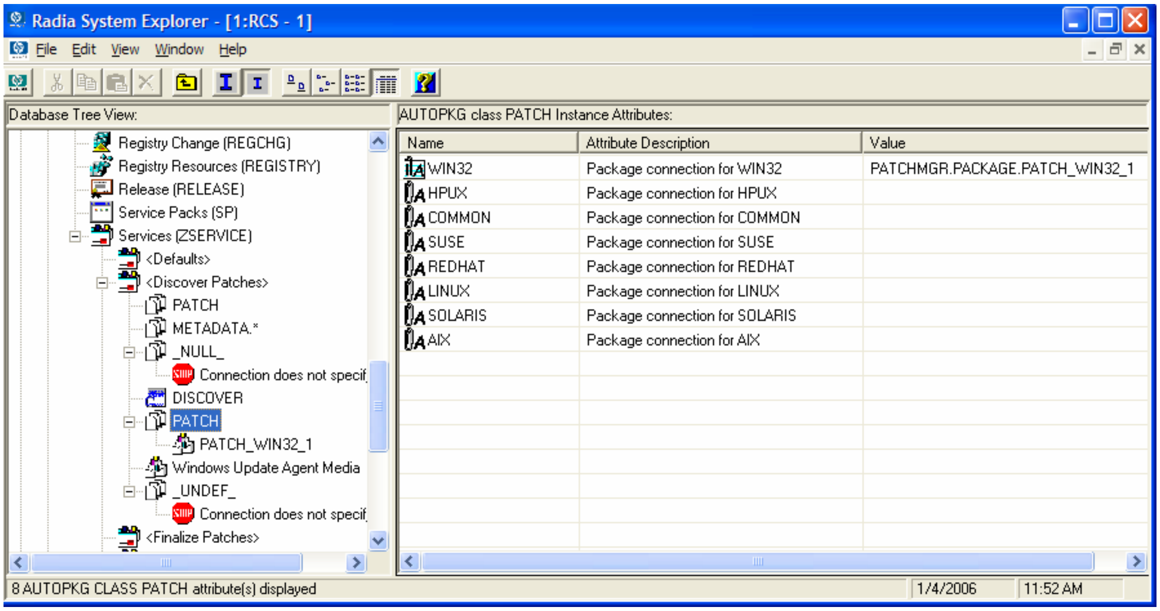
Patch Manager agent update information.
Select a package name to view agent file details.

Agent Updates

| Package Name | Package | Release | Date Published |
|---|---|---|---|
| HP-UX Patch Scripts | PATCH_VERSION2_HPUX_3 | 2.1 | 08/09/05 |
| HP-UX Patch Scripts | PATCH_VERSION2_HPUX_4 | 2.1 | 10/17/05 |
| HPUX Patch Scripts | PATCH_VERSION2_HPUX_1 | 2.1 | 05/24/05 |
| HPUX Patch Scripts | PATCH_VERSION2_HPUX_2 | 2.1 | 05/25/05 |
| Linux Patch Scripts | PATCH_VERSION2_LINUX_1 | 2.0 | 01/04/05 |
| Linux Patch Scripts | PATCH_VERSION2_LINUX_2 | 2.0 | 02/18/05 |
| Linux Patch Scripts | PATCH_VERSION2_LINUX_3 | 2.0 | 05/02/05 |
| Linux Patch Scripts | PATCH_VERSION2_LINUX_4 | 2.0.1 | 05/16/05 |
| Linux Patch Scripts | PATCH_VERSION2_LINUX_5 | 2.1 | 08/09/05 |
| Linux Patch Scripts | PATCH_VERSION2_LINUX_6 | 2.1 | 10/17/05 |
| Solaris Patch Scripts | PATCH_VERSION2_SOLARIS_2 | 2.2 | 10/24/05 |
| Solaris Patch Scripts | PATCH_VERSION2_SOLARIS_3 | 2.2 | 10/24/05 |
| Solaris Patch Scripts | PATCH_VERSION2_SOLARIS_4 | 2.2 | 10/24/05 |

Client agent files are distributed when the Discover Patch Service is processed on the Patch Manager client computer. This is accomplished through a connection in the Discover Patch Service to the PATCH instance in the AUTOPKG class. In turn, the AUTOPKG.PATCH instance connects to the client agent maintenance packages created when you selected Publish or Publish, Distribute. If you have selected only to Publish and not to Distribute, you will need to create connections from the appropriate instance in the PACKAGE class to the AUTOPKG.PATCH instance. Use the System Explorer to do this. An example is shown below.

**Figure 12 Create connections to the published package**



Database Tree View:

- Registry Change (REGCHG)
- Registry Resources (REGISTRY)
- Release (RELEASE)
- Service Packs (SP)
- Services (ZSERVICE)
  - <Defaults>
  - <Discover Patches>
    - PATCH
    - METADATA.*
    - _NULL_
      - Connection does not specif
    - DISCOVER
    - PATCH
      - PATCH_WIN32_1
    - Windows Update Agent Media
    - _UNDEF_
      - Connection does not specif
  - <Finalize Patches>

AUTOPKG class PATCH Instance Attributes:

| Name | Attribute Description | Value |
|---|---|---|
| WIN32 | Package connection for WIN32 | PATCHMGR.PACKAGE.PATCH_WIN32_1 |
| HPUX | Package connection for HPUX | |
| COMMON | Package connection for COMMON | |
| SUSE | Package connection for SUSE | |
| REDHAT | Package connection for REDHAT | |
| LINUX | Package connection for LINUX | |
| SOLARIS | Package connection for SOLARIS | |
| AIX | Package connection for AIX | |

8 AUTOPKG CLASS PATCH attribute(s) displayed 1/4/2006 11:52 AM

AIX is not currently supported.

**Agent Updates** has the following values:

- **None**: The agent updates will not be published to the Radia Database's PATCHMGR domain.
- **Publish,Distribute**: This is the default value. Publish the updates to the PATCHMGR domain and connect them to the Discover Patch instance to distribute the updates to your Patch Manager client computers.
- **Publish**: The updates will be published to the PATCHMGR domain, but will not be connected for distribution to Patch Manager client computers. You will need to create these connections.

There are two parameters that control which agent updates you download.

- **Operating System:** Specify which operating systems to acquire the agent updates for. The default is to download all operating systems. Valid values are win32, linux, suse, and hpux. Note that RedHat, SuSE, Solaris, and HP-UX agent update are only available starting with version 2.0.

- **Version:** Select which Patch Manager version for which you would like to acquire the agent updates. You can only publish one version to one Configuration Server. One Configuration Server cannot host multiple versions of the agent. If piloting, create a separate Configuration Server for the other version.

  To update for version 3, specify 3. This is the default for new Patch Manager 3.0 installations. This is also the default value if you migrated from an earlier release and removed the existing `patch.cfg` before performing the migration.

  If you migrated from an earlier version and did not remove the existing `patch.cfg` before performing the migration, the version will default to the value contained in the old `patch.cfg` file. Migrating customers are strongly advised to set the "Publish and Distribute" option and set the Agent Updates Version to Version 3, through the Patch Manager Administrator. This will ensure the successful migration of Patch Agents to Version 3. This is needed to continue management of Microsoft Security patches when Microsoft discontinues updates to `MSSecure.xml`, and replaces it with the new Microsoft Update feed, expected to occur in calendar year 2006. Note that when patches are acquired from Microsoft Update, the **Source** column in the report will show "Microsoft Update" instead of "Microsoft".

  ➤ To accommodate Microsoft Update technologies, client computers must have the Windows Update Agent installed. This is part of the Client Agent Update downloaded from the HP OpenView Patch Update Site. The Patch Manager acquisition process automatically acquires the latest Windows Update Agent required for the Patch Manager Client Agent. The Discover Patch Service will automatically apply the current Windows Update Agent to the client computer on the next client connection.

# Product Discovery and Analysis

Before you can manage vulnerabilities, the Patch Manager client must discover which products are on the client computer. Patch Manager objects are cached locally on the client device to optimize bandwidth. Objects are downloaded only if they are different. In addition, the Patch Manager client needs to detect which patches are installed for each discovered product. To do this, assign the Patch Manager Discover Patch Service to the client computers.

➤ Running the Patch Manager client connect *requires* that the dname parameter be set to PATCH. This will keep the resolution of services for the Patch Manager client separate from the resolution of services for the Application Manager client. If you are using Policy Server with Patch Manager, see Appendix C, Policy Server Integration.

### To perform patch discovery

1 Connect your client computer (e.g. POLICY.USER.&(ZUSERID)) directly to the PATCHMGR.ZSERVICE.DISCOVER_PATCH service.

   ➤ During a Solaris Patch Manager connect, applicable Solaris patches are downloaded and queued for management by a Patch Manager Service called FINALIZE_PATCH. This service must be specified in the client computer's policy. This service is prioritized to run as the last service on Patch Manager client agents. If you do not include this service in the client computer's policy, the client agent will fail to successfully apply Sun Alerts.

2 Create a radskman command line to make a regular client connect. At a minimum, the command line should look like:

```
radskman ip=<RadiaConfigurationServerIPaddress>,
   port=<RadiaConfigurationServerport>,dname=patch
```

For additional information on creating a radskman command line, refer to the *Application Manager Guide*.

## Detecting and Managing Microsoft Office Security Bulletins

Read the following information regarding best practices for Microsoft Office patch management in Radia Patch Manager 3.0 environments. Patch Manager 3.0 uses Windows Update Agent to scan for vulnerabilities. Windows Update agent requires Windows Installer 3.1. This information applies to both migrated and new installations.

➤ Windows Installer 3.1 is required to detect patches for Windows Installer enabled applications like Office.

The method initially used for deploying Microsoft Office products determines available options for updating those clients. Microsoft Office products use Windows Installer technology, which supports installation from compressed media typically found on a CD-ROM or an Administrative Installation Point (AIP).

- If the Microsoft Office product was initially installed using compressed media from a CD-ROM or network file server, Microsoft recommends updating these clients by distributing the binary patch to the client device, and allowing Windows Installer to perform local patching of the application.
- If the Microsoft Office product was installed from an AIP, Microsoft recommends that administrators obtain the appropriate administrative updates, and continue to update the centrally located AIP. This will keep clients reliably synchronized. For details on Microsoft best practices, see the article Distributing Office 2003 Product Updates on the Microsoft Web site. At the time of this posting, the location is **http://office.microsoft.com/en-us/assistance/HA011402381033.aspx**.
- If the Microsoft Office product was deployed using HP OpenView Software Manager Using Radia (RSM) or HP OpenView Application Manager Using Radia (RAM), determine if the application was published in accordance with the Basic or Advanced management guidelines. If the Advanced approach was used, the media was in AIP format. This allows the administrator to use Radia packaging technologies to streamline the AIP update process, and distribute updates using RSM.
- Use Patch Manager to deploy Microsoft Office product patches when you are certain the Office product was installed from compressed media, or you have decided to no longer use the AIP synchronization process for updating Microsoft Office products.

For administrators who manage client devices running Microsoft Office products currently updated via the AIP synchronization process, be careful not to use both Microsoft patching methods at the same time. Doing so may cause a break in the synchronization between the client device and the AIP. For details about the Synchronization process, read the article Updating Office XP Clients from a Patched Administrative Image on the Microsoft Web site. At the time of this posting, the location is **http://office.microsoft.com/en-us/assistance/HA011525721033.aspx**.

In using the new Microsoft Update technologies data feed, Patch Manager does not support patch management for Office 95, Office 97, and Office 2000. Supported products include Office XP, Office 2003, as well as stand alone products such as Project 2002. The Patch Manager client agent relies on the Microsoft Update technology to detect Microsoft vulnerabilities.

Patch Manager supports deployment and acquisition of Microsoft Office Service Packs. In some cases, Microsoft will determine that a particular Office patch is dependent on a specific Service Pack. In those cases, it will be necessary to distribute the Office Service Pack prior to installing the patch. Patch Manager Reports will assist in determining which bulletins have service pack dependencies, as that information is gathered during product discovery. For example, suppose you have Microsoft Project 2002 Gold installed locally to your client computer. Patch Manager will identify that this computer is vulnerable to MS05-005. You will see this in the Patch Manager Compliance by Device report. In some cases, Microsoft requires that a service pack be installed before a bulletin can be applied. So, before MS05-005 can be deployed to your client computer, Microsoft Project 2002 Service Pack 1 must be deployed. In some cases, application of the service pack will eliminate the vulnerability detected for the bulletin. For example, after this service pack is installed, the client computer will *still* be out of compliance because MS05-005 has not been installed. In other words, for this client computer to be in compliance, you will need to deploy Service Pack 1 and, then, MS05-005. Note that no bulletin or service pack will be deployed if the client computer has not been entitled to it in policy.

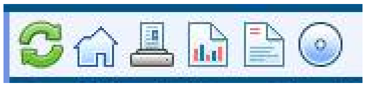
## About ZOBJSTAT

The ZOBJSTAT object is created during patch resolution. This object contains information about what products and patches are installed on the client computer. During the resolution process, ZOBJSTAT is sent to the Configuration Server. Instead of storing the information in the Radia Database, the object's content is copied to a directory that is monitored by the Radia Messaging Service. The default location of this directory is `*System Drive*:\Novadigm\ConfigurationServer\data\patch`. The Radia Messaging Service exports this information to the Patch ODBC Database for storage and analysis. Only the most recent ZOBJSTAT for each client computer is kept. Furthermore, all client device information is stored in the ODBC Database, not in the Radia Database as in previous releases.

## Patch Manager Administrator Icons

When you are in the Patch Manager Administrator, there are icons available to take you to available functions, including the Reporting Server.

**Figure 13 Click an icon**

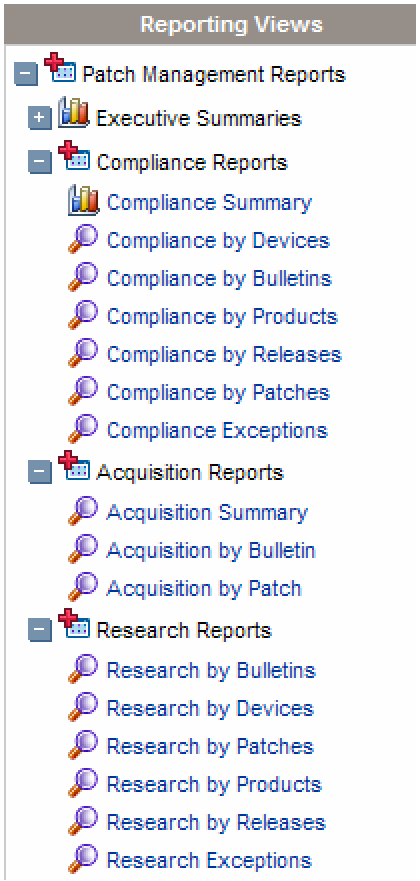


- Click the ⟳ icon to refresh the page.
- Click the ⌂ icon to return to Patch Manager Administrator Home Page.
- Click the 🖶 icon to print the currently viewed page.
- Click the 📊 icon to go to Patch Manager Reporting using the Reporting Server.
- Click the 📄 icon to see the latest Bulletin correction information.
- Click the 💿 icon to see the latest agent update information.

## Patch Analysis and Reports

Reporting Server 4.2 provides web-based reports for Patch Manager. For installation and configuration instructions for the Reporting Server, refer to the *Reporting Server Guide*. The installation media is on the Radia Infrastructure CD-ROM. To view the reports, first access your Reporting Server. Then, under Reporting Views, click **Patch Manager Reports** to expand the list of reports.

**Figure 14 View the list of Patch Manager reports**



Reporting Views

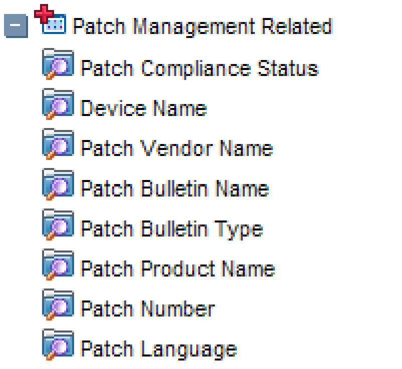
- Patch Management Reports
  - Executive Summaries
  - Compliance Reports
    - Compliance Summary
    - Compliance by Devices
    - Compliance by Bulletins
    - Compliance by Products
    - Compliance by Releases
    - Compliance by Patches
    - Compliance Exceptions
  - Acquisition Reports
    - Acquisition Summary
    - Acquisition by Bulletin
    - Acquisition by Patch
  - Research Reports
    - Research by Bulletins
    - Research by Devices
    - Research by Patches
    - Research by Products
    - Research by Releases
    - Research Exceptions

There are three types of Patch Manager Reports, Compliance, Acquisition, and Research. For information on the Acquisition Reports, see Chapter 3, Patch Acquisition.

## Filtering Patch Reports with Reporting Server

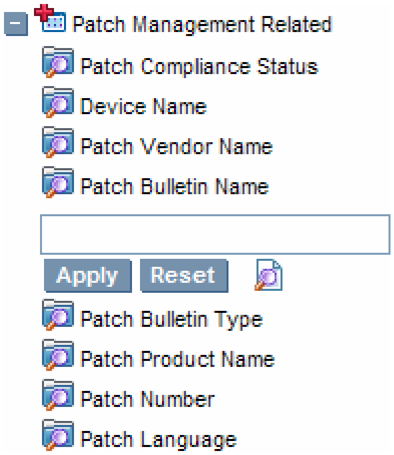
Reporting Server also provides filtering capabilities. To access the filters, expand Patch Manager Related in the Search Controls section of the Reporting Server page.

**Figure 15 View the Patch Manager Related Data Filters**



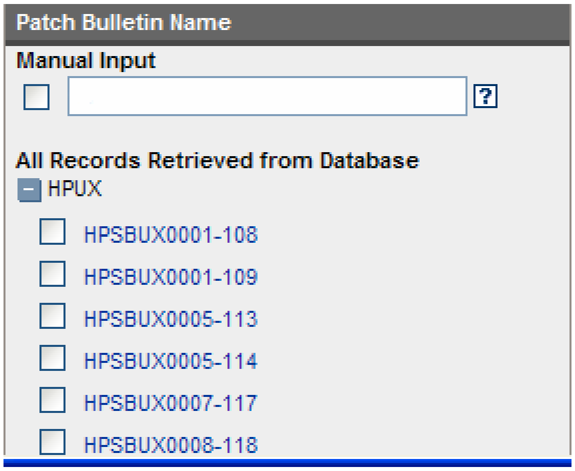
Some filters only allow a text entry. Others have a Show available options button or magnifying glass to open a filter lookup window.

**Figure 16 Expand a filter**



Click the magnifying glass to open the filter lookup window.

**Figure 17 Select the filter.**



Patch Bulletin Name

Manual Input

□ ?

All Records Retrieved from Database

− HPUX

□ HPSBUX0001-108

□ HPSBUX0001-109

□ HPSBUX0005-113

□ HPSBUX0005-114

□ HPSBUX0007-117

□ HPSBUX0008-118

Click any of the available criteria check boxes to select the criteria you would like to use in your filter. For additional information on creating filters refer to the *Reporting Server Guide*.

## Compliance Reports

When a device in your enterprise runs the Patch Manager client, product and patch information is sent to Patch Manager. Then, this information is compared to the available patches to see if this device requires a patch to remove vulnerabilities. Compliance reports show only the information applicable to detected devices in your environment.

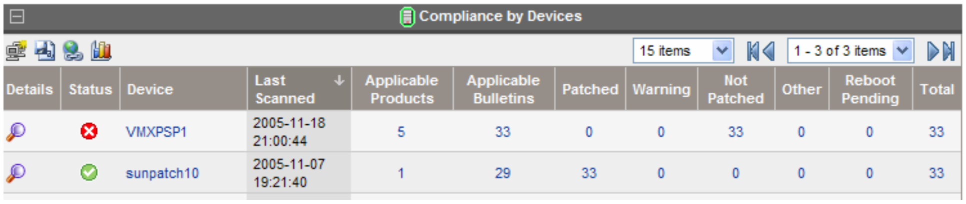
- **Compliance by Device**

  Use this report to see the vulnerabilities for devices under Radia patch management. The date of the last scan is listed in the last column. Each row contains information relating to a specific device and an icon.

  - A check mark indicates all applicable vulnerabilities have been patched.
  - A power button indicates that the vulnerability will be in compliance pending a device reboot.

> A pending reboot status will take precedence over a not-patched status, because it is, typically, a short term device status. After the reboot, the device will again show the worst case status. For example, after reboot, if the device still has a vulnerability that has not been patched, the device will display with a red X to show.

- A question mark indicates that at least one vulnerability could not be confirmed.
- A red X indicates that at least one vulnerability is not patched for this device.
- An exclamation point indicates a warning.



Compliance by Devices

15 items    1 - 3 of 3 items

| Details | Status | Device | Last Scanned ↓ | Applicable Products | Applicable Bulletins | Patched | Warning | Not Patched | Other | Reboot Pending | Total |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 🔍 | ✗ | VMXPSP1 | 2005-11-18 21:00:44 | 5 | 33 | 0 | 0 | 33 | 0 | 0 | 33 |
| 🔍 | ✓ | sunpatch10 | 2005-11-07 19:21:40 | 1 | 29 | 33 | 0 | 0 | 0 | 0 | 33 |

For each device, you can

- Click the magnifying glass for additional detail.
- Click the number in the Applicable Products column to see the products discovered for that device.
- Click the number in the Applicable Bulletins column to see the applicable bulletins for that device.
- Click the number in the Patched column to see the patches that were installed.
- Click the number in the Warning column to see vulnerabilities that the Patch Manager cannot confirm as patched because there may be some discrepancy in the patch verification process.

  For example, a patch for Microsoft SQL server or Microsoft MSDE may show up as a warning. MSDE installs fewer files than SQL Server. A device with MSDE may qualify for the same patch as a device with SQL server, but does not require all the files in the patch. Since Patch Manager cannot report the vulnerability as being patched, this would be reported as a warning.

  Another example may be that a file version on the device is newer than the one delivered by the patch. Again, in this case, Patch

Manager cannot report the vulnerability as being patched so it reports a warning.

  - Click the number in the Not Patched column to see what patches are available but have not been applied to this device.
  - Items in the Other column represent patches that Patch Manager was not able to verify.
  - Items in the Reboot Pending column represent patches that will be complete after the client device is rebooted. These devices will also have a power button icon next to the device name.
  - Click the number in the Total column to see all patches that are relevant to this device.

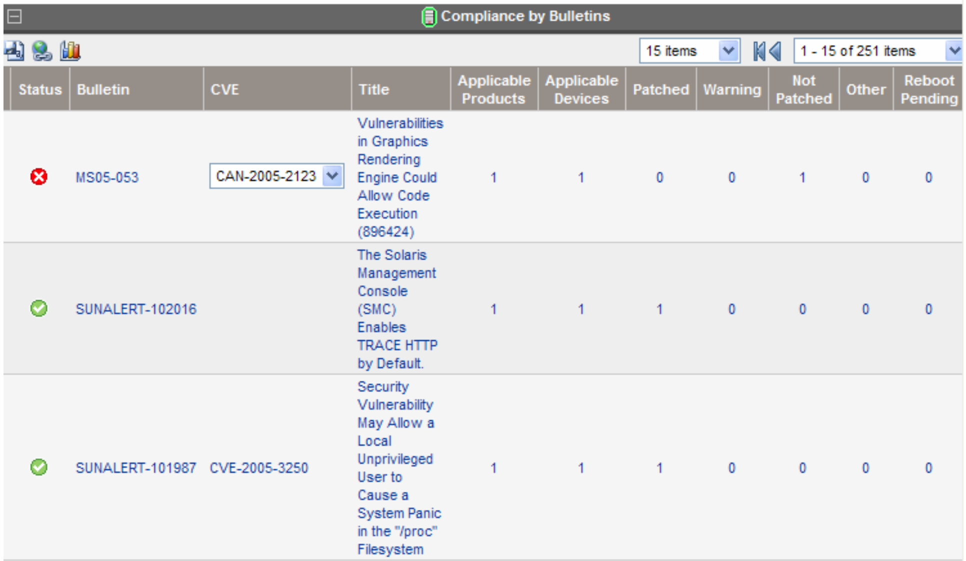
- **Compliance by Bulletin**

  Use this report to see the vulnerabilities listed by bulletin. Each row contains information relating to a specific bulletin and an icon.

  - A check mark indicates that this bulletin has been patched on all applicable devices.
  - A power button indicates that at least one device is pending a reboot to be in compliance.

    > A pending reboot status will take precedence over a not-patched status, because it is, typically, a short term device status. After the reboot, the device will again show the worst case status. For example, after reboot, if the device still has a vulnerability that has not been patched, the device will display with a red X to show.

  - A question mark indicates that this vulnerability could not be confirmed on at least one device.
  - A red X indicates at least one device is not patched for this bulletin.
  - An exclamation mark indicates a warning.



Compliance by Bulletins

| Status | Bulletin | CVE | Title | Applicable Products | Applicable Devices | Patched | Warning | Not Patched | Other | Reboot Pending |
|---|---|---|---|---|---|---|---|---|---|---|
| ✗ | MS05-053 | CAN-2005-2123 | Vulnerabilities in Graphics Rendering Engine Could Allow Code Execution (896424) | 1 | 1 | 0 | 0 | 1 | 0 | 0 |
| ✓ | SUNALERT-102016 | | The Solaris Management Console (SMC) Enables TRACE HTTP by Default. | 1 | 1 | 1 | 0 | 0 | 0 | 0 |
| ✓ | SUNALERT-101987 | CVE-2005-3250 | Security Vulnerability May Allow a Local Unprivileged User to Cause a System Panic in the "/proc" Filesystem | 1 | 1 | 1 | 0 | 0 | 0 | 0 |

For each bulletin, you can

- Click the bulletin number in the Bulletin column to go to the vendor's web site for more information on the bulleting.
- Click the CVE number in the CVE column to go the Common Vulnerabilities and Exposures web site.
- Click a title in the Title column to see all patches for that bulletin.
- Click the number in the Applicable Products column to see the products for the bulletin
- Click the number in the Applicable Devices column to see the applicable devices for that bulletin.
- Click the number in the Patched column to see the patched devices.
- Click the number in the Warning column to see vulnerabilities that the Patch Manager cannot confirm as patched because there may be some discrepancy in the patch verification process.

  For example, a patch for Microsoft SQL server or Microsoft MSDE may show up as a warning. MSDE installs fewer files than SQL Server. A device with MSDE may qualify for the same patch as a device with SQL server, but does not require all the files in the patch. Since Patch Manager cannot report the vulnerability as being patched, this would be reported as a warning.

  Another example may be that a file version on the device is newer than the one delivered by the patch. Again, in this case, Patch

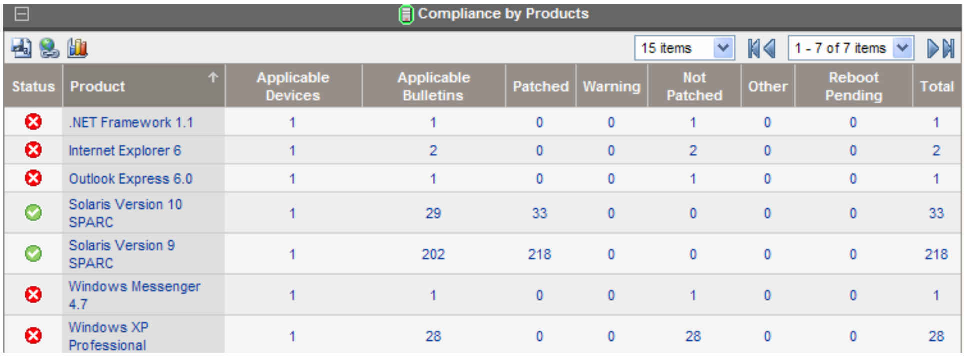
Manager cannot report the vulnerability as being patched so it reports a warning.

- Click the number in the Not Patched column to see what patches are available but have not been applied.
- Items in the Other column represent patches that Patch Manager was not able to verify.
- Items in the Reboot Pending column represent patches that will be complete after the client device is rebooted.
- Click the number in the Total column to see all patches that are relevant to this bulletin.

- **Compliance by Products**

  This report displays one row for each product. For each product, you can

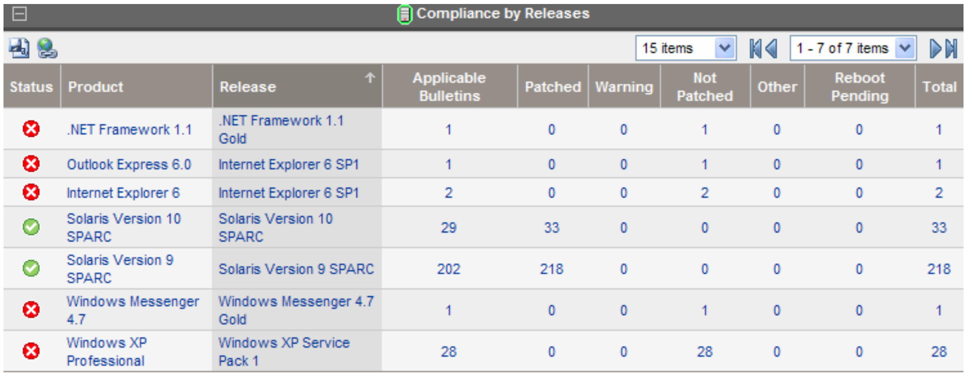
  - Click the number in the Applicable Devices column to see the devices affected by the vulnerability.
  - Click the number in the Applicable Bulletins column to see bulletins for the product.
  - View detected vulnerabilities.



| Status | Product | Applicable Devices | Applicable Bulletins | Patched | Warning | Not Patched | Other | Reboot Pending | Total |
|---|---|---|---|---|---|---|---|---|---|
| ✗ | .NET Framework 1.1 | 1 | 1 | 0 | 0 | 1 | 0 | 0 | 1 |
| ✗ | Internet Explorer 6 | 1 | 2 | 0 | 0 | 2 | 0 | 0 | 2 |
| ✗ | Outlook Express 6.0 | 1 | 1 | 0 | 0 | 1 | 0 | 0 | 1 |
| ✓ | Solaris Version 10 SPARC | 1 | 29 | 33 | 0 | 0 | 0 | 0 | 33 |
| ✓ | Solaris Version 9 SPARC | 1 | 202 | 218 | 0 | 0 | 0 | 0 | 218 |
| ✗ | Windows Messenger 4.7 | 1 | 1 | 0 | 0 | 1 | 0 | 0 | 1 |
| ✗ | Windows XP Professional | 1 | 28 | 0 | 0 | 28 | 0 | 0 | 28 |

- **Compliance by Releases**

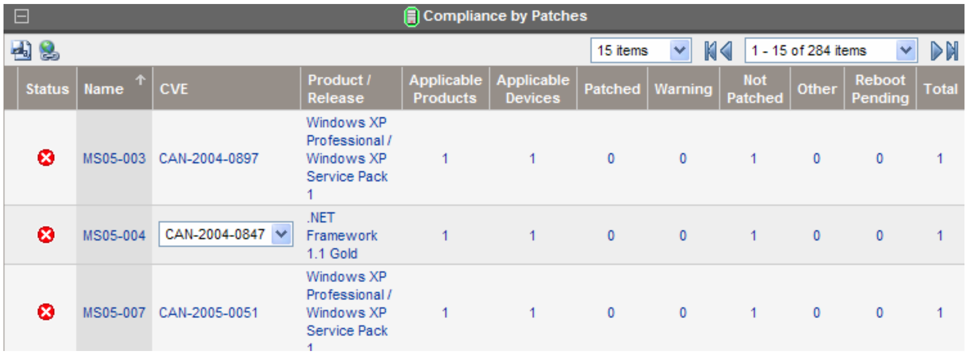
  This report lists products by release. There is one row for each release of each product. Click to see Applicable Bulletins.



| Status | Product | Release | Applicable Bulletins | Patched | Warning | Not Patched | Other | Reboot Pending | Total |
|---|---|---|---|---|---|---|---|---|---|
| ✗ | .NET Framework 1.1 | .NET Framework 1.1 Gold | 1 | 0 | 0 | 1 | 0 | 0 | 1 |
| ✗ | Outlook Express 6.0 | Internet Explorer 6 SP1 | 1 | 0 | 0 | 1 | 0 | 0 | 1 |
| ✗ | Internet Explorer 6 | Internet Explorer 6 SP1 | 2 | 0 | 0 | 2 | 0 | 0 | 2 |
| ✓ | Solaris Version 10 SPARC | Solaris Version 10 SPARC | 29 | 33 | 0 | 0 | 0 | 0 | 33 |
| ✓ | Solaris Version 9 SPARC | Solaris Version 9 SPARC | 202 | 218 | 0 | 0 | 0 | 0 | 218 |
| ✗ | Windows Messenger 4.7 | Windows Messenger 4.7 Gold | 1 | 0 | 0 | 1 | 0 | 0 | 1 |
| ✗ | Windows XP Professional | Windows XP Service Pack 1 | 28 | 0 | 0 | 28 | 0 | 0 | 28 |

- **Compliance by Patches**

  This report lists products by patch. There is one row for each patch. Click to see Applicable Products and Applicable Devices.

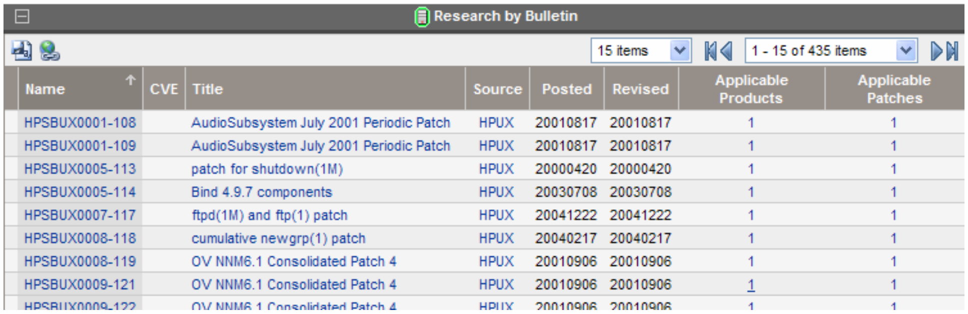


| Status | Name | CVE | Product / Release | Applicable Products | Applicable Devices | Patched | Warning | Not Patched | Other | Reboot Pending | Total |
|---|---|---|---|---|---|---|---|---|---|---|---|
| ✗ | MS05-003 | CAN-2004-0897 | Windows XP Professional / Windows XP Service Pack 1 | 1 | 1 | 0 | 0 | 1 | 0 | 0 | 1 |
| ✗ | MS05-004 | CAN-2004-0847 | .NET Framework 1.1 Gold | 1 | 1 | 0 | 0 | 1 | 0 | 0 | 1 |
| ✗ | MS05-007 | CAN-2005-0051 | Windows XP Professional / Windows XP Service Pack 1 | 1 | 1 | 0 | 0 | 1 | 0 | 0 | 1 |

## Research Reports

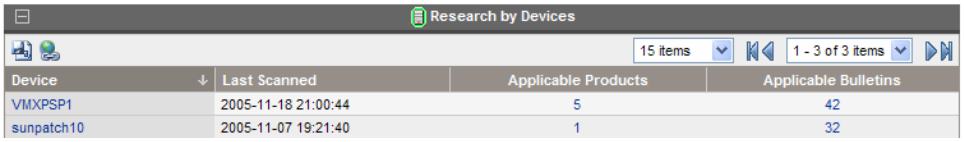
Research based reports display information about the patches acquired from the software vendor's web site. Research based reports offer a Filter bar.

- **Research by Bulletin**
  Use this report to drill down to all bulletins. Click on the bulletin's number in the Name column to go to the vendor's web site for more information. Click on the number in the CVE column to go to the Common Vulnerability Exposures web site. Click the number in the Title or Applicable Patches column to view the files needed for this bulletin, to see if they are available for deployment, and to see if the patch has been superceded by another patch. Click the number in the Applicable Products column to see which products are influenced by this bulletin.



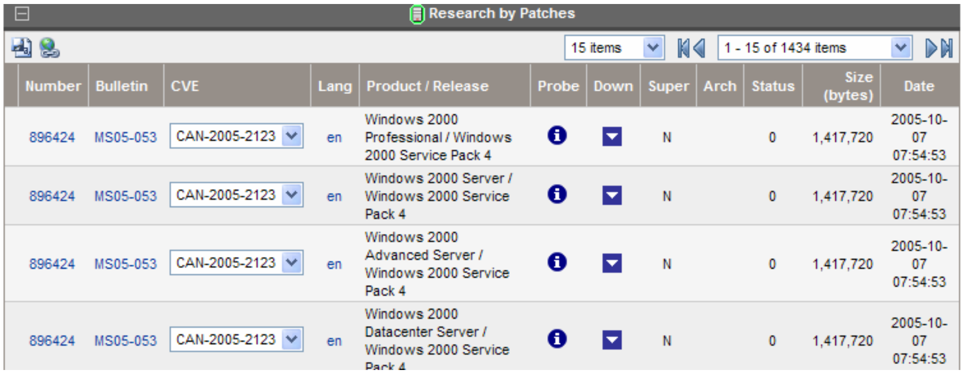
| Name | CVE | Title | Source | Posted | Revised | Applicable Products | Applicable Patches |
|---|---|---|---|---|---|---|---|
| HPSBUX0001-108 | | AudioSubsystem July 2001 Periodic Patch | HPUX | 20010817 | 20010817 | 1 | 1 |
| HPSBUX0001-109 | | AudioSubsystem July 2001 Periodic Patch | HPUX | 20010817 | 20010817 | 1 | 1 |
| HPSBUX0005-113 | | patch for shutdown(1M) | HPUX | 20000420 | 20000420 | 1 | 1 |
| HPSBUX0005-114 | | Bind 4.9.7 components | HPUX | 20030708 | 20030708 | 1 | 1 |
| HPSBUX0007-117 | | ftpd(1M) and ftp(1) patch | HPUX | 20041222 | 20041222 | 1 | 1 |
| HPSBUX0008-118 | | cumulative newgrp(1) patch | HPUX | 20040217 | 20040217 | 1 | 1 |
| HPSBUX0008-119 | | OV NNM6.1 Consolidated Patch 4 | HPUX | 20010906 | 20010906 | 1 | 1 |
| HPSBUX0009-121 | | OV NNM6.1 Consolidated Patch 4 | HPUX | 20010906 | 20010906 | 1 | 1 |
| HPSBUX0009-122 | | OV NNM6.1 Consolidated Patch 4 | HPUX | 20010906 | 20010906 | 1 | 1 |

- **Research by Devices**
  Use this report to drill down to all bulletins filtered by a particular device. Click the number in the Applicable Products column to see the discovered products on the device.



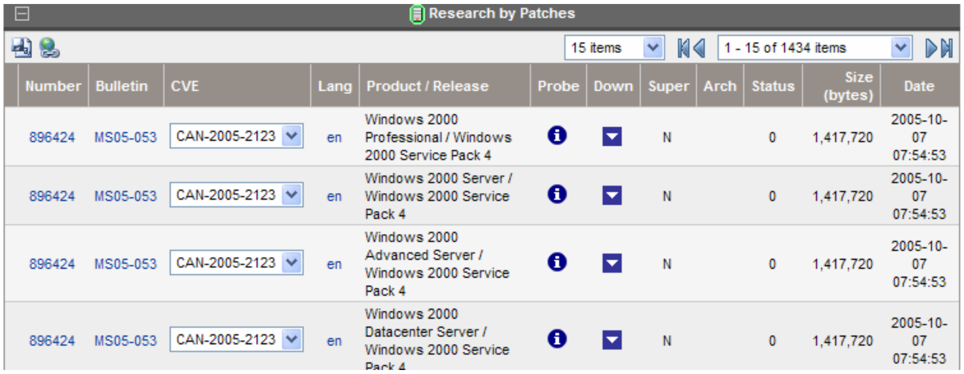
| Device | Last Scanned | Applicable Products | Applicable Bulletins |
|---|---|---|---|
| VMXPSP1 | 2005-11-18 21:00:44 | 5 | 42 |
| sunpatch10 | 2005-11-07 19:21:40 | 1 | 32 |

- **Research by Patches**
  Use this report to view information on patch files including on acquisition status. Click the number in the CVE column to go to the Common Vulnerability Exposures web site. Click the icon in the Down column to download the patch file.



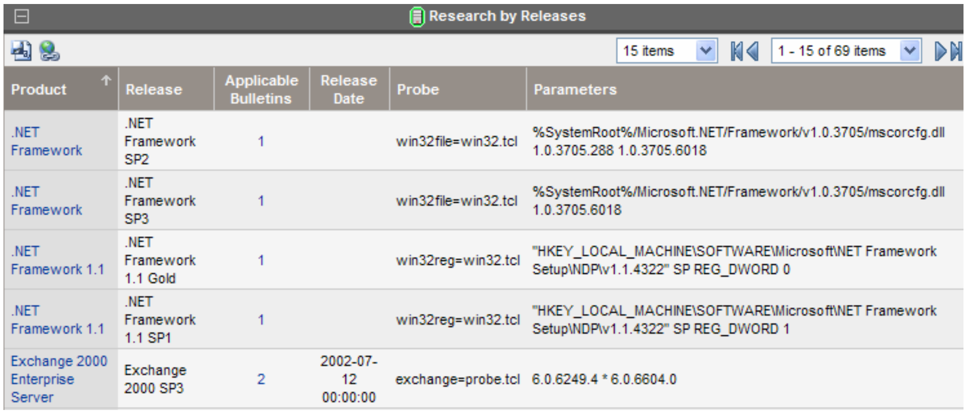
| Number | Bulletin | CVE | Lang | Product / Release | Probe | Down | Super | Arch | Status | Size (bytes) | Date |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 896424 | MS05-053 | CAN-2005-2123 | en | Windows 2000 Professional / Windows 2000 Service Pack 4 | ⓘ | ▼ | N | | 0 | 1,417,720 | 2005-10-07 07:54:53 |
| 896424 | MS05-053 | CAN-2005-2123 | en | Windows 2000 Server / Windows 2000 Service Pack 4 | ⓘ | ▼ | N | | 0 | 1,417,720 | 2005-10-07 07:54:53 |
| 896424 | MS05-053 | CAN-2005-2123 | en | Windows 2000 Advanced Server / Windows 2000 Service Pack 4 | ⓘ | ▼ | N | | 0 | 1,417,720 | 2005-10-07 07:54:53 |
| 896424 | MS05-053 | CAN-2005-2123 | en | Windows 2000 Datacenter Server / Windows 2000 Service Pack 4 | ⓘ | ▼ | N | | 0 | 1,417,720 | 2005-10-07 07:54:53 |

- **Research by Products**
  Use this report to drill down to all bulletins filtered by product.



| Number | Bulletin | CVE | Lang | Product / Release | Probe | Down | Super | Arch | Status | Size (bytes) | Date |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 896424 | MS05-053 | CAN-2005-2123 | en | Windows 2000 Professional / Windows 2000 Service Pack 4 | ℹ | ▼ | N |  | 0 | 1,417,720 | 2005-10-07 07:54:53 |
| 896424 | MS05-053 | CAN-2005-2123 | en | Windows 2000 Server / Windows 2000 Service Pack 4 | ℹ | ▼ | N |  | 0 | 1,417,720 | 2005-10-07 07:54:53 |
| 896424 | MS05-053 | CAN-2005-2123 | en | Windows 2000 Advanced Server / Windows 2000 Service Pack 4 | ℹ | ▼ | N |  | 0 | 1,417,720 | 2005-10-07 07:54:53 |
| 896424 | MS05-053 | CAN-2005-2123 | en | Windows 2000 Datacenter Server / Windows 2000 Service Pack 4 | ℹ | ▼ | N |  | 0 | 1,417,720 | 2005-10-07 07:54:53 |

- **Research by Releases**
  Use this report to filter by product release. Click the number in the Applicable Bulletins column to see all bulletins for the release.



| Product | Release | Applicable Bulletins | Release Date | Probe | Parameters |
|---|---|---|---|---|---|
| .NET Framework | .NET Framework SP2 | 1 |  | win32file=win32.tcl | %SystemRoot%/Microsoft.NET/Framework/v1.0.3705/mscorcfg.dll 1.0.3705.288 1.0.3705.6018 |
| .NET Framework | .NET Framework SP3 | 1 |  | win32file=win32.tcl | %SystemRoot%/Microsoft.NET/Framework/v1.0.3705/mscorcfg.dll 1.0.3705.6018 |
| .NET Framework 1.1 | .NET Framework 1.1 Gold | 1 |  | win32reg=win32.tcl | "HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\NET Framework Setup\NDP\v1.1.4322" SP REG_DWORD 0 |
| .NET Framework 1.1 | .NET Framework 1.1 SP1 | 1 |  | win32reg=win32.tcl | "HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\NET Framework Setup\NDP\v1.1.4322" SP REG_DWORD 1 |
| Exchange 2000 Enterprise Server | Exchange 2000 SP3 | 2 | 2002-07-12 00:00:00 | exchange=probe.tcl | 6.0.6249.4 * 6.0.6604.0 |

## Compliance and Research Exception Reports

The Compliance and Research Exception Reports were introduced to provide information about devices that do not meet the criteria for the standard research and compliance device reports. All of the devices in these exception reports are in some sort of exception state. The three main reasons for this exception state are:

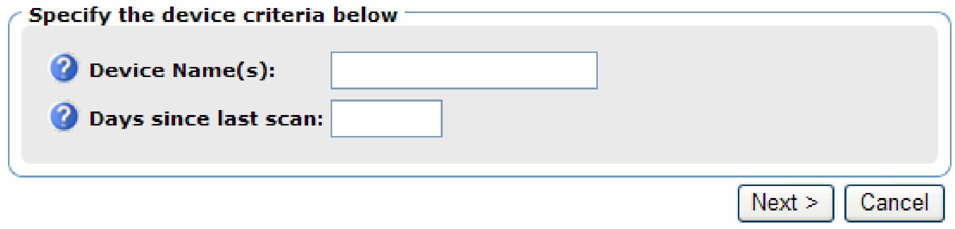
- connection errors during patch discovery
- an acquisition performed with force and replace options that caused a disconnect with the client's status information
- an inoperable Patch Client Agent

To resolve the exception, perform a new discovery on the device. The new discovery will either resolve the error, in the case of the acquisition disconnect and, possibly, the connectivity problem. In addition, it will produce logs that can be used to troubleshoot the inoperable Patch Client Agent. The research exception report will likely show only a subset of the devices in the compliance exception report because the criteria for the research reports are less restrictive.

## Deleting Devices

You can now delete Patch Manager compliance data for specific devices using the Patch Administrator. To remove compliance data from the Patch Manager ODBC database, click **Delete Devices** under Operations.

**Figure 18 Delete devices.**

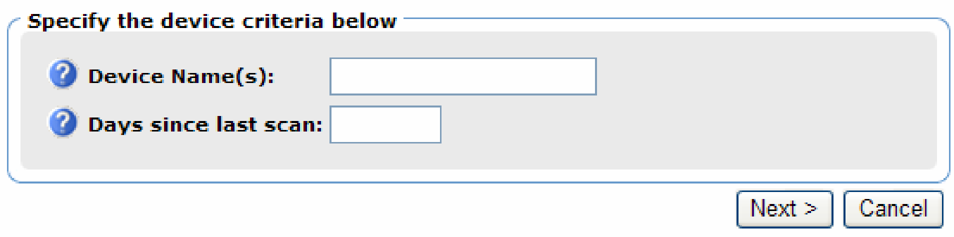


Enter device selection criteria for the devices to remove. You may:

- Specify a single device or multiple devices in a comma separated list.
- Use wildcards.
- Specify the number of days since the last vulnerability scan was performed on the device. This may be used to remove compliance information for devices who are no longer reporting compliance data to the Patch Manager Infrastructure components.

The Patch Manager Administrator allows you to preview the devices that match the selection filters before removing them from the database. Click **Delete** to remove the devices from the Patch Manager ODBC database.

⚠ Once this operation is performed it cannot be undone.



Specify the device criteria below

Device Name(s):

Days since last scan:

# Managing Vulnerabilities

After you have found where vulnerabilities may exist in your enterprise, use Patch Manager to manage these vulnerabilities to client devices. For every bulletin, there is a Services (ZSERVICE) instance in the PATCHMGR domain that is similar to the Application (ZSERVICE) instance in the SOFTWARE domain. Refer to the *Application Manager Guide* for complete descriptions of the attributes available in the ZSERVICE instance in the SOFTWARE domain. In addition, the PATCHMGR.ZSERVICE instance supports bandwidth throttling. See the HP OpenView web site for details.

Set policy entitlement at the ZSERVICE level. Connect the ZSERVICE instance that has the same name as bulletin to the user instances in the POLICY domain or to the Null Instance.

### To manage a vulnerability

1. Right-click a user instance and select **Show Connections**.
2. Select the **PATCHMGR** domain from the drop-down box as shown in the figure below.
3. Click **OK**.
4. Drag-and-drop the bulletin you want to manage the vulnerability for to the appropriate user instance. When the cursor turns to a paper clip, release the mouse.
5. Click **Copy**.
6. Click **Yes** to Confirm the Connection.

The patch is added to the user's policy. The next time the user logs in the vulnerability will be managed, including installation if necessary.

## Notes on Solaris Patch Management

During a Solaris Patch Manager connect, applicable Solaris patches are downloaded and queued for management by a Patch Manager Service called FINALIZE_PATCH. This service must be specified in the client computer's policy in addition to any patch. This service is prioritized to run as the last service on Patch Manager client agents. If you do not include this service in the client computer's policy, the client agent will fail to successfully apply Sun Alerts.

The Patch Manager client agent will not apply a Solaris patch which conflicts with a currently installed Solaris patch.

The management of a Solaris patch may require an immediate reboot to complete patch installation. As a result, the machine running the Patch Manager agent may require a number of successive reboots to install all pre-requisite patches required by a Sun Alert.

## Deploying Automatic and Interactive Patches

Some patches require user intervention for deployment as designed by the patch's vendor. Patch Manager defines a patch as **automatic** if it does not require user interaction for deployment. A patch is defined as **interactive** if it requires user interaction for deployment. Patch Manager can detect vulnerabilities for both automatic and interactive patches. Patch Manager supports deployment of both interactive and automatic patches. However, those which the vendor has created as interactive will either require user intervention to be installed or will fail to be installed.

Only bulletins that Hewlett-Packard has provided data correction for in an xml file or that a customer has customized may be marked as interactive. This information can be found in the Deployment attribute in the Bulletin and Patch nodes of a Hewlett-Packard provided xml file. Valid values are AUTOMATIC and INTERACTIVE. By default, the vendor does not supply this information. Therefore, customers are required to test the deployment of a patch to verify if it is interactive before entitling the bulletin in their environment.

When the bulletin is published to the Configuration Server Database, the RUNMODE attribute of the ZSERVICE class of the PATCHMGR domain defines the type of patch. Use the catexp parameter of the radskman command line to limit your installation to bulletins marked as automatic only. The format would be `catexp=runmode:automatic`. If the catexp parameter does not exist, all bulletins will be processed. For a typical Patch

Manager client Agent connect, you may want to use the following radskman command line:

```
radskman ip=<RCSIP>,port=<RCSPORT>,dname=patch,catexp
=runmode:automatic
```

To deploy Solaris patches, the `catexp` parameter must be set to `runmode:automatic` on your `radskman` line in the client connect.

For more information on radskman, refer to the *Application Manager Guide*.

## Customizing Reporting Options

In some cases, you may not want to mark a vulnerability as an error (shown as an X), or you may not want to mark a warning (shown as an exclamation point [!]) with a status of OK (check mark). Defaults are supplied in the OPTIONS class. You may want to view instances of the OPTIONS class as examples.

The information regarding the OPTIONS class applies only to patches downloaded using MSSECURE.XML not Microsoft Update. When patches are acquired from Microsoft Update, the **Source** column in the report will show "Microsoft Update" instead of "Microsoft".

If you need to modify this behavior, create a custom xml file using three new attributes. The three new patch descriptor xml attributes are:

- **DesiredState**
  This attribute maps to the DSTATE attribute in the OPTIONS, FILECHG, and REGCHG classes. Use this attribute to set what the return code should be based on the criteria stated in the USE variable.
- **ReportThreshold**
  This xml attribute maps to the REPORT attribute in the OPTIONS, FILECHG, and REGCHG classes. The properties of the file or registry key will be sent to the Patch Manager based on this value. If the return code is greater than or equal to the value of the REPORT attribute, the file and registry information will be sent to the Patch Manager and will be available in Patch Manager reports. For example, set REPORT to 1 to send the properties if the return code is either 4 (Warning) or 8 (Error).

Setting REPORT to 0 will send the information for all files that show an OK status. This may overburden the Patch Manager Server.

- **Use**
  This xml attribute maps to the USE attribute in the OPTIONS, FILECHG, and REGCHG classes. USE specifies what the criteria are that you are judging against. The possible criteria for the files (FILECHG) are GMTDATE, SIZE, VERSION, CHECKSUM, CRC32. For registry the option is VALUE.

  Be aware that if you customize how a file or registry change is reported, then vulnerabilities may still exist, but will not be reflected in your reports. Prior to changing the reporting status of a detected vulnerability, be sure you have taken measures to eliminate the particular exposure or vulnerability in your environment. Keep track of any customizations that you create.

Values for these attributes in the FILECHG and REGCHG instances will override the value in a connection OPTIONS instance. If these variables are blank in the FILECHG and REGCHG instances, then the value from the connected OPTIONS class will be used. If the patch descriptor xml file does not contain these attributes, then the values from the connected OPTIONS instance will be used.

### To customize reporting options

For the purposes of this exercise, assume that all changes are to the OPTIONS class. Connect instances of the OPTIONS class to the file or registry component that you want to customize reporting for.

1. In the USE attribute in the appropriate class (or in the patch descriptor file), specify what properties of the file or registry key you want to evaluate. For example, if you were only interested in the date of a file, set USE to GMTDATE.

2. Set DesiredState (DSTATE) by equating a state with a return code. Separate multiple conditions with commas. Use the appropriate state from the list below.

   — Use state E (exists) if your only criterion for status is if the file or registry key exists.

   — Use state !E (does not exist) if your only criterion for status is if the file or registry key does *not* exist.

— Use state EQ (equal) if the file or registry key meets the exact criteria.

— Use state !EQ (not equal) if the file or registry key does not meets at least one of the criteria.

— Use state LT (less than) if the file or registry key is less than at least one of the criteria.

— Use state GT (greater than) if the file or registry key is greater than at least one of the criteria.

Use the appropriate return code from the list below.

— Use 0 to represent a status of OK.

— Use 4 to represent a warning status.

— Use 8 to represent an error status.

### Rules for Valid DSTATE Values

— At least one of the conditions should have a return code of 0 (OK), but you could have more than one condition return a non-zero value (4, 8).

— Testing for Equality (EQ) implies that the component should exist and need not be expressed in the DSTATE variable.

The samples below shows an example of a customized option for a file option. The criteria specified in the Use tag are version, gmtdate, and size. The DesiredState tag describes to:

— Return a status of OK if the file does not exist (!E=0).

— Return a Warning Status if the version, gmtdate or size of the file are greater than the patched file (GT=4).

— Return an Error Status if the version, gmtdate or size of the file is less than the patched file (LT=8).

```
<FileChg Name="snmpsfx.dll" CRC32="" Gmttime=""
Path="%windir%\system32" Size="" Checksum="14922"
Gmtdate="19990212" Version="4.0.1381.164"
DesiredState="!E=0,GT=4,LT=8" ReportThreshold="1"
Use="VERSION,GMTDATE,SIZE" />
```

The values in the XML file are entirely surrounded by quotes.

3. Set a REPORT threshold. The properties of the file or registry key will be sent to the Patch Manager based on this value. If the return code is greater than or equal to the value of the REPORT attribute, the file and

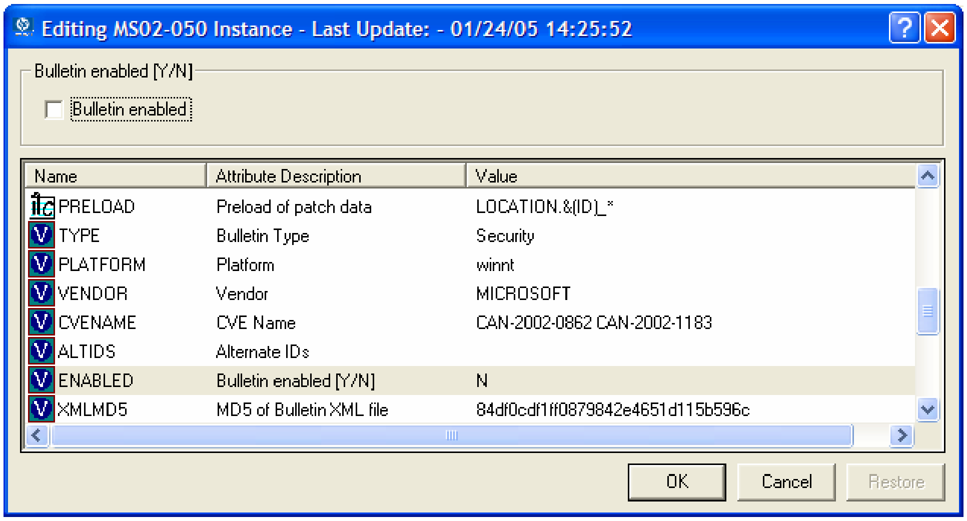
registry information will be sent to the Patch Manager and will be available in Patch Manager reports. For example, set REPORT to 1 to send the properties if the return code is either 4 (Warning) or 8 (Error).

The changes will take effect the next time you publish the patch descriptor file to the Radia Database.

## Disabling Vulnerability Detection and Deployment

You may want to disable the detection or deployment of a specific Bulletin or Patch. To do this, use the System Explorer to set the ENABLED attribute to N in the Bulletin or Patch instance in the PATCHMGR domain.

**Figure 19 Disable detection of Bulletin MS00-001**



Editing MS02-050 Instance - Last Update: - 01/24/05 14:25:52
Bulletin enabled [Y/N]
□ Bulletin enabled
OK
Cancel
Restore

| Name | Attribute Description | Value |
|---|---|---|
| PRELOAD | Preload of patch data | LOCATION.&(ID)_* |
| TYPE | Bulletin Type | Security |
| PLATFORM | Platform | winnt |
| VENDOR | Vendor | MICROSOFT |
| CVENAME | CVE Name | CAN-2002-0862 CAN-2002-1183 |
| ALTIDS | Alternate IDs | |
| ENABLED | Bulletin enabled [Y/N] | N |
| XMLMD5 | MD5 of Bulletin XML file | 84df0cdf1ff0879842e4651d115b596c |

If you want to disable all patches for a particular bulletin, set the ENABLED attribute to N in the Bulletin's instance. If you only want to disable a specific patch file's detection and deployment, set the ENABLED attribute in the patch file's instance.

## Controlling Patch Deployment (PATCHARG)

For each patch file, Patch Manager populates the parameters for installing and, where possible, for removing the patch. These parameters can be found in the Patch Command Line (OCREATE) and the Uninstall Command Line

(ODELETE) attributes in the PATCHARGS class in the PATCHMGR domain.

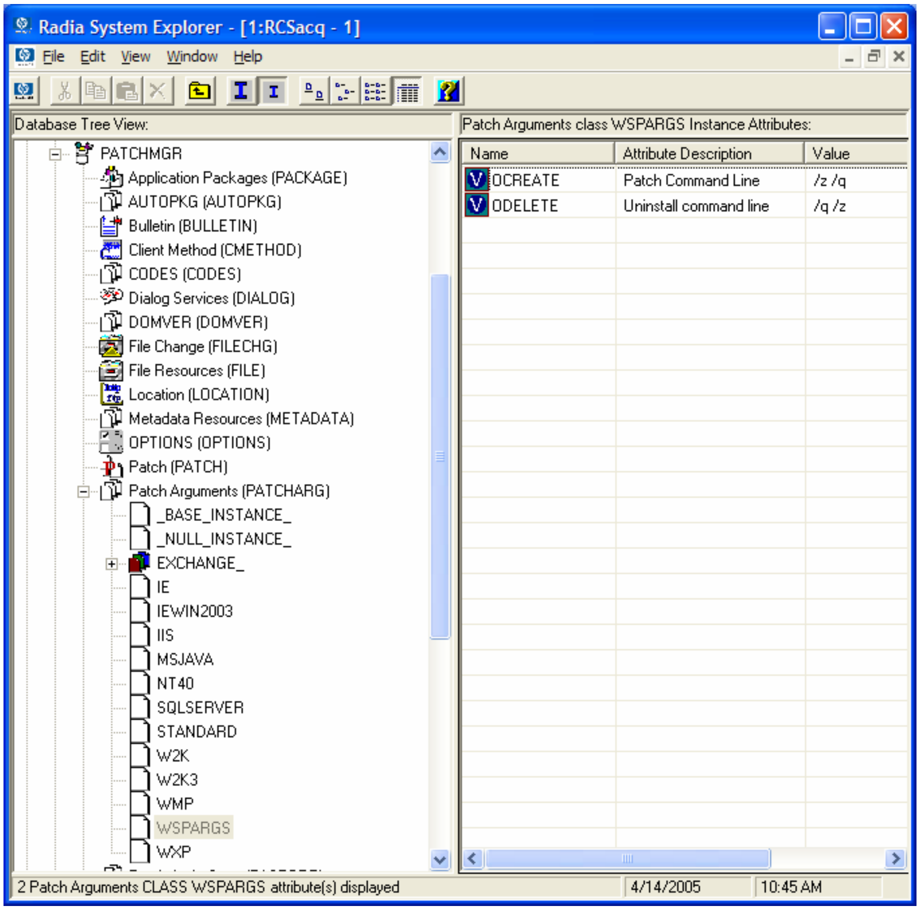
PATCHARG options apply only to patches downloaded using MSSECURE.XML not Microsoft Update.  When patches are acquired from Microsoft Update, the **Source** column in the report will show “Microsoft Update” instead of “Microsoft”.

You may want to change the command line parameters for installing and uninstalling the patch file. To do this, use the PATCHARG class to create an instance and connect it to the appropriate patch file.

### To create alternate command line parameters using PATCHARG

1 Use the System Explorer to navigate to the PATCHARG class in the PATCHMGR domain.

2 Right-click **PATCHARG** and create a new instance. A new instance called WSPARGS has been created in the figure below.

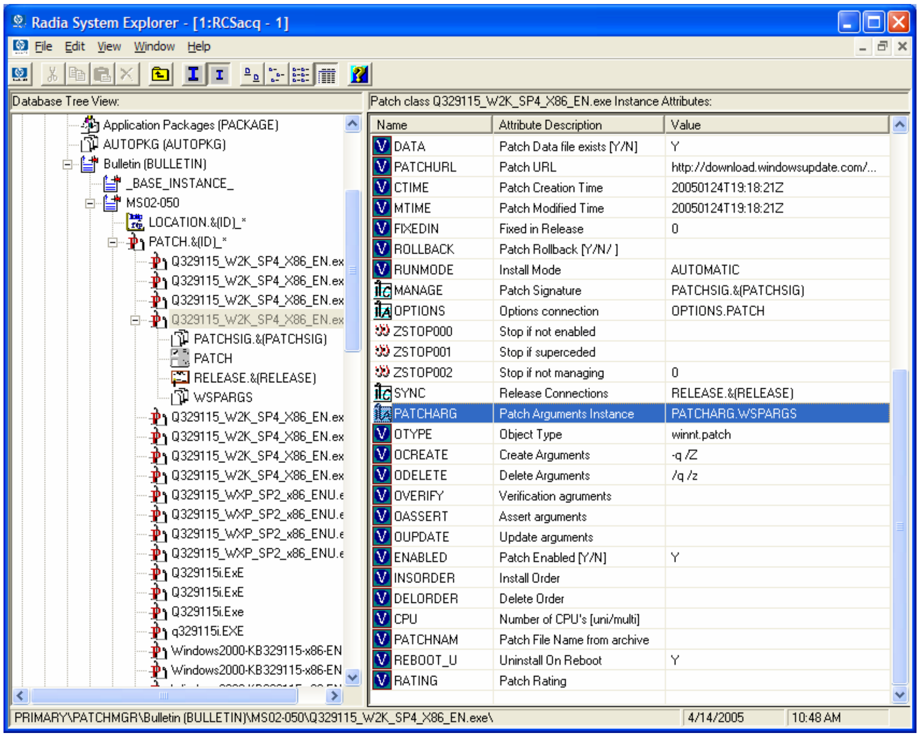


| Name | Attribute Description | Value |
|---|---|---|
| V OCREATE | Patch Command Line | /z /q |
| V ODELETE | Uninstall command line | /q /z |

2 Patch Arguments CLASS WSPARGS attribute(s) displayed 4/14/2005 10:45 AM

3 Type the new parameters that you want to use. There are two attributes in the PATCHARG class, OCREATE to install the patch, and ODELETE to remove the patch.

4 Type the path to the PATCHARG instance in place of the PATCHARG attribute for the patch file in the BULLETIN class.


Radia System Explorer - [1:RCSacq - 1]
File Edit View Window Help
Database Tree View:
Application Packages (PACKAGE)
AUTOPKG (AUTOPKG)
Bulletin (BULLETIN)
_BASE_INSTANCE_
MS02-050
LOCATION.&(ID)_*
PATCH.&(ID)_*
Q329115_W2K_SP4_X86_EN.ex
Q329115_W2K_SP4_X86_EN.ex
Q329115_W2K_SP4_X86_EN.ex
Q329115_W2K_SP4_X86_EN.ex
PATCHSIG.&(PATCHSIG)
PATCH
RELEASE.&(RELEASE)
WSPARGS
Q329115_W2K_SP4_X86_EN.ex
Q329115_W2K_SP4_X86_EN.ex
Q329115_W2K_SP4_X86_EN.ex
Q329115_W2K_SP4_X86_EN.ex
Q329115_WXP_SP2_x86_ENU.e
Q329115_WXP_SP2_x86_ENU.e
Q329115_WXP_SP2_x86_ENU.e
Q329115_WXP_SP2_x86_ENU.e
Q329115i.ExE
Q329115i.ExE
Q329115i.Exe
q329115i.EXE
Windows2000-KB329115-x86-EN
Windows2000-KB329115-x86-EN

Patch class Q329115_W2K_SP4_X86_EN.exe Instance Attributes:

| Name | Attribute Description | Value |
|---|---|---|
| DATA | Patch Data file exists [Y/N] | Y |
| PATCHURL | Patch URL | http://download.windowsupdate.com/... |
| CTIME | Patch Creation Time | 20050124T19:18:21Z |
| MTIME | Patch Modified Time | 20050124T19:18:21Z |
| FIXEDIN | Fixed in Release | 0 |
| ROLLBACK | Patch Rollback [Y/N/ ] | |
| RUNMODE | Install Mode | AUTOMATIC |
| MANAGE | Patch Signature | PATCHSIG.&(PATCHSIG) |
| OPTIONS | Options connection | OPTIONS.PATCH |
| ZSTOP000 | Stop if not enabled | |
| ZSTOP001 | Stop if superceded | |
| ZSTOP002 | Stop if not managing | 0 |
| SYNC | Release Connections | RELEASE.&(RELEASE) |
| PATCHARG | Patch Arguments Instance | PATCHARG.WSPARGS |
| OTYPE | Object Type | winnt.patch |
| OCREATE | Create Arguments | -q /Z |
| ODELETE | Delete Arguments | /q /z |
| OVERIFY | Verification agruments | |
| OASSERT | Assert arguments | |
| OUPDATE | Update arguments | |
| ENABLED | Patch Enabled [Y/N] | Y |
| INSORDER | Install Order | |
| DELORDER | Delete Order | |
| CPU | Number of CPU's [uni/multi] | |
| PATCHNAM | Patch File Name from archive | |
| REBOOT_U | Uninstall On Reboot | Y |
| RATING | Patch Rating | |

PRIMARY\PATCHMGR\Bulletin (BULLETIN)\MS02-050\Q329115_W2K_SP4_X86_EN.exe\ 4/14/2005 10:48 AM

5 The parameters you created will be used for this patch file.

## Preloading Proxy Server and Staging Servers

If you are using a Proxy Server or Staging Server you may want to preload the patch files. To do this, go to your preload user instance (the default for Proxy Server is RPS) in the POLICY domain. If you do not already have a preload user instance, create one. You must add connections to both the DISCOVER_PATCH service and the services for the bulletins to download. At the end of the bulletin you want to download put a suffix of (PRELOAD). For example, if you wanted to preload only the MS03-039 bulletin, you would add a connection to PATCHMGR.ZSERVICE.MS03-039(PRELOAD). You can use wild cards in the bulletin name. If you want to preload all bulletins beginning with MS03, type **`PATCHMGR.ZSERVICE.MS03-*(PRELOAD)`** in the connection instance.

The next time you run a preload, the Proxy Server or Staging Server will load the compressed data files from the PATCHMGR domain. For more information on preloading, refer to the *Proxy Server Guide* or the *Staging Server Guide*.

## Removing a Patch

By default, if you disconnect a user from a Microsoft vulnerability service (ZSERVICE) instance, the patch that was installed is not removed. This behavior is controlled in the ZDELETE attribute of the MANAGE instance in the Client Method (CMETHOD) class, and is disabled by default.

Both Red Hat Security Advisory and SuSE Security Advisory removal is disabled deliberately in Patch Manager. When a Linux vendor supplied patch is applied to a target system, the affected Linux software is updated to the current rpm package version and release that addresses the specific security vulnerability. Application of a Linux vendor supplied advisory (patch) does not maintain a backup of the original package, making automated rollback to a prior version impossible. An attempt to remove a Linux rpm package from a client computer would result in the removal of the patch as well as the rpm software package to which the patch applies. If a new vulnerability is found, Linux Security patch vendors release a new patch. This is the nature of Red Hat and SuSE Security Advisories as provided by these patch vendors.

At the time of this writing, Patch Manager does not support removal of HP-UX patches or HP-UX patch bundles.

Acquisition and deployment of HP-UX patch bundles is not supported. Acquisition does not automatically acquire HP-UX security patch pre-requisites, nor will the deployment of a HP-UX security patch install pre-requisite patches if they are missing on the agent. Roll back of HP-UX security patches is not supported.

For Microsoft patches, if you want the patch files removed when you remove a user from vulnerability management, edit the ZDELETE attribute.

⚠ Modifying the PATCHMGR.CMETHOD.MANAGE.ZDELETE method will remove *all* patches for *all* users if the user is no longer assigned the vulnerability.

Roll back of Solaris patches is supported if roll back of the patch is supported by the patch vendor, *and* the roll back of the patch does not conflict with another patch's pre-requisite requirements. By default, patch roll back capabilities are disabled. See Removing a Patch on page 98 for additional information.

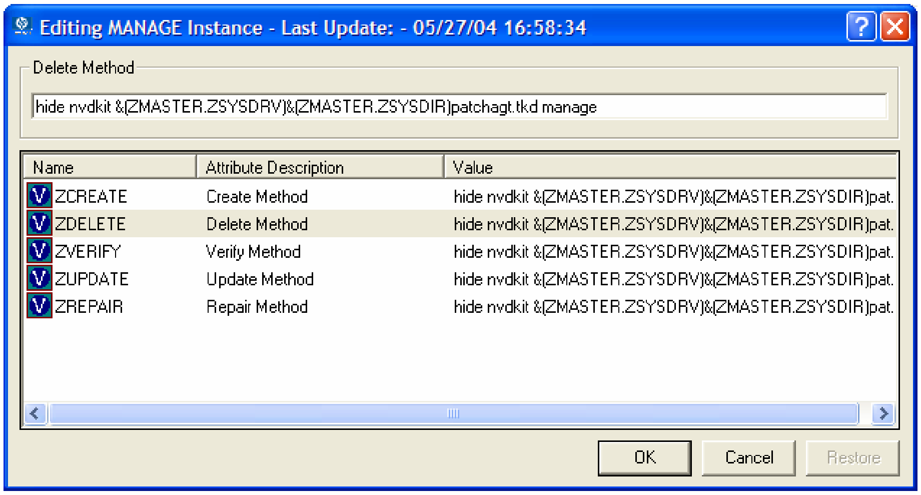
### To remove a patch when a user is no longer assigned the service

1 Use the System Explorer to navigate to the MANAGE instance of the Client Method (CMETHOD) class in the PATCHMGR domain.

2 Double-click the ZDELETE attribute in the tree view.

3 In the text box, type:

**`hide nvdkit &(ZMASTER.ZSYSDRV)&(ZMASTER.ZSYSDIR) patchagt.tkd manage`**



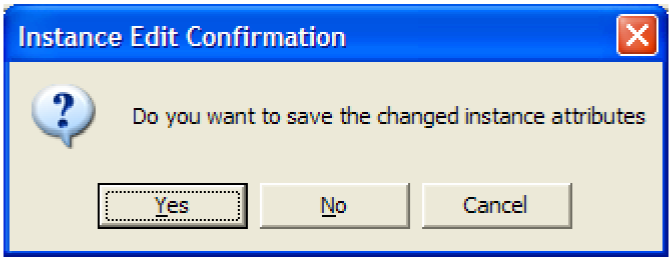
Editing MANAGE Instance - Last Update: - 05/27/04 16:58:34

Delete Method

hide nvdkit &(ZMASTER.ZSYSDRV)&(ZMASTER.ZSYSDIR)patchagt.tkd manage

| Name | Attribute Description | Value |
|---|---|---|
| ZCREATE | Create Method | hide nvdkit &(ZMASTER.ZSYSDRV)&(ZMASTER.ZSYSDIR)pat. |
| ZDELETE | Delete Method | hide nvdkit &(ZMASTER.ZSYSDRV)&(ZMASTER.ZSYSDIR)pat. |
| ZVERIFY | Verify Method | hide nvdkit &(ZMASTER.ZSYSDRV)&(ZMASTER.ZSYSDIR)pat. |
| ZUPDATE | Update Method | hide nvdkit &(ZMASTER.ZSYSDRV)&(ZMASTER.ZSYSDIR)pat. |
| ZREPAIR | Repair Method | hide nvdkit &(ZMASTER.ZSYSDRV)&(ZMASTER.ZSYSDIR)pat. |

4 Click **OK** to change the instance.



Instance Edit Confirmation

Do you want to save the changed instance attributes

5 Click **Yes** to confirm the changes.

6 The Patch Manager client must make a connect for the client to receive the necessary configuration change to allow the removal of patches.

The next time you disconnect a user from a ZSERVICE instance in the PATCHMGR domain, the patch files will be removed.

# Summary

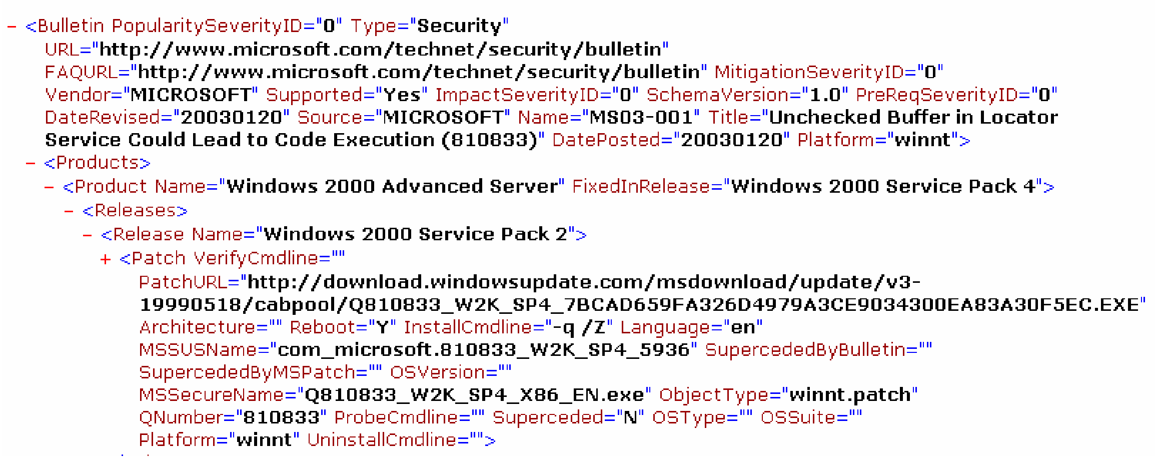
- Install the Patch Manager client on devices that you want to manage.
- Patch Manager supplies you with research, patch acquisition, and vulnerability reports.
- Use the reports to identify vulnerabilities in your enterprise.
- Manage vulnerabilities by assigning the patch's service to your client computers.

# A Supported XML Tags for Patch Descriptor Files

The patch descriptor files from HP contain information about Products, Releases, Patches, and Patch Manifests. These are shown in tables following the figure.

If you are creating custom patch descriptor files, use the tags that are supported. The node hierarchy of a patch descriptor file is shown in the figure below.

**Figure 20 View a sample patch descriptor file.**



```
- <Bulletin PopularitySeverityID="0" Type="Security"
    URL="http://www.microsoft.com/technet/security/bulletin"
    FAQURL="http://www.microsoft.com/technet/security/bulletin" MitigationSeverityID="0"
    Vendor="MICROSOFT" Supported="Yes" ImpactSeverityID="0" SchemaVersion="1.0" PreReqSeverityID="0"
    DateRevised="20030120" Source="MICROSOFT" Name="MS03-001" Title="Unchecked Buffer in Locator
    Service Could Lead to Code Execution (810833)" DatePosted="20030120" Platform="winnt">
  - <Products>
    - <Product Name="Windows 2000 Advanced Server" FixedInRelease="Windows 2000 Service Pack 4">
      - <Releases>
        - <Release Name="Windows 2000 Service Pack 2">
          + <Patch VerifyCmdline=""
              PatchURL="http://download.windowsupdate.com/msdownload/update/v3-
              19990518/cabpool/Q810833_W2K_SP4_7BCAD659FA326D4979A3CE9034300EA83A30F5EC.EXE"
              Architecture="" Reboot="Y" InstallCmdline="-q /Z" Language="en"
              MSSUSName="com_microsoft.810833_W2K_SP4_5936" SupercededByBulletin=""
              SupercededByMSPatch="" OSVersion=""
              MSSecureName="Q810833_W2K_SP4_X86_EN.exe" ObjectType="winnt.patch"
              QNumber="810833" ProbeCmdline="" Superceded="N" OSType="" OSSuite=""
              Platform="winnt" UninstallCmdline="">
```

# Bulletin Node

***Node name:*** Bulletin

***Parent node:*** None

***Children:*** Products

**Table 2 XML Tags in the BULLETIN class**

| XML Tag | Radia Attribute | Description |
|---|---|---|
| PopularitySeverityID | POPULAR | Popularity ID<br>Source: `MSSECURE.XML` |
| URL | URL | Bulletin URL<br>Source: `MSSECURE.XML` |
| FAQURL | FAQURL | Frequently Asked Questions (FAQ) URL<br>Source: `MSSECURE.XML` |

| XML Tag | Radia Attribute | Description |
|---|---|---|
| Supported | SUPPORT | Supported [Y/N]<br>Source: `MSSECURE.XML` |
| ImpactSeverityID | IMPACT | ImpactID<br>Source: `MSSECURE.XML` |
| MitigateSeverityID | MITIGATE | Mitigate ID<br>Source: `MSSECURE.XML` |
| PreReqSeverityID | PREREQ | Prereq ID<br>Source: `MSSECURE.XML` |
| DateRevised | REVISED | Bulletin Revised On<br>Date the bulletin was revised in YYYYMMDD format.<br>Source: `MSSECURE.XML` |
| Source | SOURCE | Source [MICROSOFT/NOVADIGM /CUSTOM]<br>Directory from which the patch descriptor file was published. |
| Vendor | VENDOR | MICROSOFT/REDHAT/HPUX |
| Type | TYPE | Type of Bulletin<br>Security/ServicePack/Other |
| Platform | PLATFORM | Winnt/linux |
| Name | NAME | External ID<br>Source: `MSSECURE.XML` |
| Title | TITLE | Title<br>Bulletin title.<br>Source: `MSSECURE.XML` |
| DatePosted | POSTED | Bulletin Posted On<br>Date the bulletin was posted in YYYYMMDD format.<br>Source: `MSSECURE.XML` |

| XML Tag | Radia Attribute | Description |
|---|---|---|
| Schema Version | | The patch schema version currently 1.0 |
| | MTIME | Time the instance was modified in the Radia Database. |
| | CTIME | Time the instance was created in the Radia Database. |
| | ID | Internal instance ID. |
| HPPosted | HPPOSTED | Date the bulletin was initially posted by HP. |
| HPRevised | HPREVISD | Date the bulletin was revised by HP. |
| Deployment | RUNMODE | Specifies whether the patch can be installed automatically (AUTOMATIC) or needs user interaction (INTERACTIVE). |

## Products Node

***Node name:*** Products

***Parent node:*** Bulletin

***Children:*** Product

***Attributes:*** None

## Product Node

***Node name:*** Product

***Parent node:*** Products

***Children:*** Releases

**Table 3 XML Tags in the PRODUCT class**

| XML Tag | Radia Attribute | Description |
|---|---|---|
| Name | NAME | Source: `MSSECURE.XML` |
| FixedInRelease | FIXEDIN | Source: `MSSECURE.XML` |

# Releases Node

***Node name:*** Releases

***Parent node:*** Product

***Children:*** Release

***Attributes:*** None

# Release Node

***Node name:*** Release

***Parent node:*** Releases

***Children:*** Patch

**Table 4 XML Tags in the RELEASE class**

| XML Tag | Radia Attribute | Description |
|---|---|---|
| Name | NAME | Source: `MSSECURE.XML` |

# Patch Node

***Node name:*** Patch

***Parent node:*** Release

***Children:*** Package

Table 5 XML Tags in the PATCH class

| XML Tag | Radia Attribute | Description |
|---|---|---|
| PatchURL | PATCHURL | A URL that points to an .EXE or .MSI file.<br>Source: `MSSECURE.XML/SUS` |
| Reboot | REBOOT | Specified if the client device should be rebooted, after the patch is installed.<br>Source: `MSSECURE.XML/SUS` |
| Architecture | ARCH | x86\|i64<br>Source: `MSSECURE.XML/SUS` |
| Language | LANG | en,fr,de<br>Source: SUS |
| MSSUSName | SUSNAME | The SUS name for the patch from `MSSECURE.XML`.<br>Source: `MSSECURE.XML` |
| SupercededByBulletin | SUPERBU | The bulletin name that supercedes this patch.<br>Source: `MSSECURE.XML` |
| SupercededByMSPatch | SUPERMSS | The MSSECURE patch name that supercedes this patch.<br>Source: `MSSECURE.XML` |
| Superceded | SUPERCED | Specifies if the patch has been superceded. Valid values are Y or N.<br>Source: `MSSECURE.XML` |
| MSSecureName | MSSNAME | The MSSECURE name for this patch.<br>Source: `MSSECURE.XML` |
| OSVersion | OSVER | Operating System Version |
| QNumber | QNUMBER | QNUMBER for the patch from `MSSECURE.XML`.<br>Source: `MSSECURE.XML` |

| XML Tag | Radia Attribute | Description |
|---|---|---|
| OSType | OSTYPE | The operating system type, such as server or workstation. |
| OSSuite | OSSUITE | The operating system suite, e.g., datacenter,blade. |
| Platform | PLATFORM | The platform type winnt,win9x,hpux,solaris,linux. |
| InstallCmdline | OCREATE | This is the arguments that are passed to the create procedure.<br>Source: SUS |
| VerifyCmdline | OVERIFY | The Verify Arguments. |
| UninstallCmdline | ODELETE | The Uninstall Arguments. |
| ObjectType | OTYPE | Format:<br>namespace=script filename<br>Default: winnt.patch<br>This specifies the type of the object and the name of the script file that would have the following procedures defined<br>verify<br>create<br>delete<br>assert<br>The procedures should have the namespace as part of the name, e.g., winnt.patch::create.<br>If the script filename is not specified then the filename is {namespace}`.tcl`.<br>Source: Novadigm |
| ProbeCmdline | OVERIFY | The probe command line.<br>Source: Novadigm |
|  | ID | The unique ID created in the RCS database for this patch. |

| XML Tag | Radia Attribute | Description |
|---|---|---|
| | PATCHSIG | The name of the Patch Signature instance.<br>Source: Novadigm |
| | LOCATION | The name of the LOCATION instance that contains the patch data. |
| | BULLETIN | The bulletin name set during publishing.<br>Source: `MSSECURE.XML` |
| | DATA | Does the RCS have the patch data [Y/N] filled in during publishing. If the RCS has the data the value would be Y else it would be N. |
| | DSTATE | Desired state for a patch, this is usually classed in from an instance.<br>Source: Novadigm |
| | REPORT | Report threshold, similar to DSTATE is classed in from an instance.<br>Source: Novadigm |
| | USE | The variables used in checking the desired state.<br>Source: Novadigm |
| Deployment | RUNMODE | Specifies whether the patch can be installed automatically (AUTOMATIC) or needs user interaction (INTERACTIVE). |

# Patch Signature Node

***Node name:*** PatchSignature

***Parent node:*** Patch

***Children:*** FileChg, RegChg

***Attributes:*** None

# FileChg Node

***Node name:*** FileChg

***Parent node:*** PatchSignature

***Chidren:*** None

**Table 6 XML Tags in the FILECHG class**

| XML Tag | Radia Attribute | Description |
|---|---|---|
| Name | NAME | File name.<br>Source: `MSSECURE.XML` |
| Path | PATH | The directory name, this can contain environment variables, e.g., `%windir%`, and is used by the appropriate scripts for Windows and Linux.<br>Source: `MSSECURE.XML` |
| CRC32 | CRC32 | The CRC of the data. |
| Gmttime | GMTTIME | The GMTDATE expressed as YYYYMMDD.<br>Source: `MSSECURE.XML` |
| Gmtdate | GMTDATE | The GMTTIME expressed as HH:MM:SS.<br>Source: `MSSECURE.XML` |
| Size | SIZE | The size of the file.<br>Source: `MSSECURE.XML` |

| XML Tag | Radia Attribute | Description |
|---|---|---|
| Checksum | CHECKSUM | The checksum of the file.<br>Source: MSSECURE.XML |
| Version | VERSION | The version of the file.<br>Source: MSSECURE.XML |
|  | DSTATE | The desired state of the FILECHG instance, this is usually classed in from another instance in the RCS database.<br>Source: Novadigm |
|  | REPORT | The report threshold. If on evaluation of this file change instance the RC is greater than the threshold then we will create a ZOBJSTAT for that instance.<br>Source: Novadigm |
|  | USE | The variables to use during comparison, e.g., Version,Checksum,Gmtdate.<br>Source: Novadigm |

## RegChg Node

***Node name:*** RegChg

***Parent node:*** PatchSignature

***Children:*** None

**Table 7 XML Tags in the REGCHG class**

| XML Tag | Radia Attribute | Description |
|---|---|---|
| Name | NAME | Value Name.<br>Source: MSSECURE.XML |
| Path | PATH | The fully qualified Registry Key Name.<br>Source: MSSECURE.XML |

| XML Tag | Radia Attribute | Description |
|---|---|---|
| Value | VALUE | The Data value stored in the registry.<br>Source: `MSSECURE.XML` |
| Type | TYPE | Registry data type should be one of the following:<br>sz = Simple Registry String<br>multi_sz = Registry Multi String<br>expand_sz = Registry string with environment variables<br>dword = Registry dword<br>binary = Binary data<br>Source: `MSSECURE.XML` |
|  | DSTATE | The desired state of the FILECHG instance, this is usually classed in from another instance in the RCS database.<br>Source: Novadigm |
|  | REPORT | The report threshold. If on evaluation of this file change instance the RC is greater than the threshold then we will create a ZOBJSTAT for that instance.<br>Source: Novadigm |
|  | USE | Not used.<br>Source: Novadigm |

## HPFileset Node

***Node name:*** HPFileset

***Parent node:*** PatchSignature

***Children:*** None

Table 8 XML Tags in the HPFSET class

| XML Tag | Radia Attribute | Description |
|---|---|---|
| Name | NAME | Fileset Name |
| Version | VERSION | Fileset Version |

# B Restarting the Client Computer

You may need to restart a client computer based on an application event. To do this, specify a reboot type and reboot modifiers in the ZSERVICE.REBOOT attribute. The modifiers allow you to:

- set the type of warning message
- handle a reboot with either a machine or user connect
- and cause an immediate restart after the application event.

## Application Events

First, specify the application event that needs the reboot. Set the application event code to a reboot type and any reboot modifier that you need to use. The sections below describe each type of reboot and all reboot modifiers.

If the hreboot parameter is missing from the radskman command line, the parameter defaults to Y to handle service reboot requests. If you set hreboot to p, the client computer will *power down*, regardless of whether or not there is a service requiring a reboot.

If you need an application to immediately perform a hard reboot with no warning messages on application installation and repair, set the ZSERVICE.REBOOT variable to AI=HQI, AR=HQI.

If you wish to alter reboot panel behaviors based solely upon the requirements of a patch, as supplied by the vendor, use the AL event, to trigger the reboot event for locked files. The versioning event (VA) is not applicable in Patch Manager.

- Use AI to specify a reboot behavior for application installations. The default is no reboot.
- Use AD to specify a reboot behavior for application removals. The default is no reboot.
- Use AL to specify a reboot behavior when a locked file is encountered. The default behavior when a locked file is encountered is to perform a Hard reboot with just an OK button (HY).
- Use AU to specify a reboot behavior for application updates. The default is no reboot.
- Use AR to specify a reboot behavior for application repairs. The default is no reboot.
- Use AV to specify a reboot behavior for application version activations. The default is no reboot.

# Reboot Types

After deciding which application events need a computer reboot, you will need to choose the type of reboot. Radia sends a message to the operating system that the computer needs to reboot. There are three types of reboot.

- **Hard Reboot (H)**

  All applications are shut down regardless of whether there are open, unsaved files or not. The subscriber will not be prompted to save open, modified files.

- **Soft Reboot (S)**

  Users are prompted to save their data if applications have open, unsaved files. If applications have unsaved data, the reboot will wait for the user to respond to the application's request for the user to save his data.

- **No Reboot (N) (default reboot type)**

  The computer will not restart after completing the specified application event. This is the default reboot type for all application events except a Locked File Event (AL). If you specify AL=N, then the client computer will not perform a hard reboot with OK and Cancel buttons when a locked file is encountered. If no restart type is specified for an application event, no restart will occur.

# Reboot Modifier: Type of Warning Message

You can specify the type of warning message you want to send to the subscriber before the restart occurs. If you specify a type of reboot, but do not specify a type of warning message, the default warning message for that type will be displayed. There are three types of warning messages. Warning messages are displayed automatically for the Radia Software Manager and for Application Manager used with the Radia System Tray. If you do not want to show a warning message, specify ask=N in a radskman command line.

Radia Clients for Linux do not display reboot panels.

- **Quiet (Q)**

  No reboot panel will be displayed.

- **OK Button (A)**

  A warning message will display with an OK button only. Clicking the OK button will initiate the reboot. The user will not be able to cancel the restart.

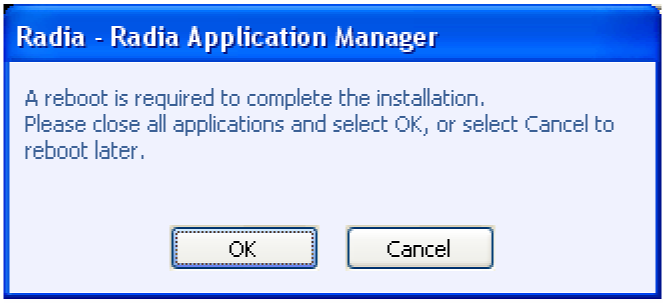
- **OK and Cancel Button (Y)**

  Clicking the OK button will initiate reboot. If the subscriber clicks Cancel, the reboot will be aborted.

You can specify a timeout value for the Warning Message box by adding the RTIMEOUT value to the radskman command line. Set RTIMEOUT to the number of seconds you want the Radia Client to wait before continuing with the reboot process.

For example, the default Reboot panel displays both an OK and Cancel as shown in the figure below.

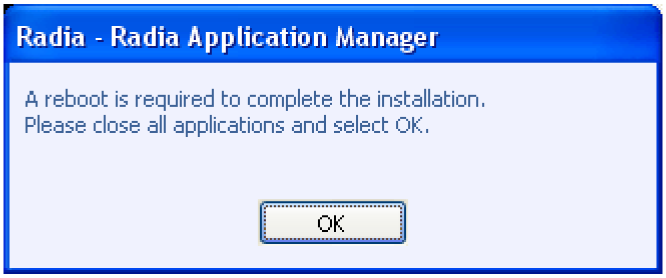
**Figure 21 View the default reboot panel.**



A reboot is required to complete the installation.
Please close all applications and select OK, or select Cancel to reboot later.

If would like to suppress the Cancel button on the agent reboot panel, specify a ZSERVICE.REBOOT attribute of: AL=SA which would display the dialog box shown in the figure below. Use this if the vendor-supplied patch mandates a reboot to complete the Patch installation.

**Figure 22 Change the reboot panel to show only the OK button.**


Radia - Radia Application Manager

A reboot is required to complete the installation.
Please close all applications and select OK.

# Reboot Modifier: Machine and User Options

The Radia Client can connect as a machine or as a user by specifying the context parameter on the radskman command line. Use the Machine/User reboot modifier to specify if the reboot should complete based on the type of connect.

Patch Manager client connects occur in the machine context.

- **Reboot on Machine connect (blank)**

  When a machine/user reboot modifier is not supplied, the default behavior will be to reboot only on a machine connect where context=m in radskman, or if the context parameter is not specified. This default behavior should satisfy the majority of reboot requirements.

- **Reboot on User connect only (U)**

  The reboot will be honored on a user connect only where context=u in radskman or if the context parameter is not specified. The reboot will NOT occur where context=m in radskman.

- **Reboot on both Machine and User connect (MU)**

  Reboot will only occur when both the machine and user components of the application are installed.

## Reboot Modifier: Immediate Restart

You can modify each type of reboot by adding I for Immediate. Use Immediate when you want the computer to restart immediately after resolving the current service. Radia will resolve the rest of the subscriber's services after the computer restarts. If you specify I, but do not specify H or S as the type of reboot, a hard reboot will be performed.

## Specifying Multiple Reboot Events

If you have two services that require a reboot event on the same Client Connect, the most restrictive reboot type and reboot panel will be used. The least restrictive reboot type is No Reboot (N), followed by Soft Reboot (S), and the most restrictive is Hard Reboot (H). The least restrictive reboot warning message supplies both OK and Cancel buttons (Y), followed by an OK button only (A), and the most restrictive is completely quiet (Q).

Suppose a subscriber is assigned an application that needs a soft reboot with just an OK button on installation, AI=SA. The subscriber is also assigned a second application that needs a hard reboot that displays both an OK and Cancel button, AI=HY. After all of the subscriber's application events are completed, a Hard Reboot (H) with only an OK button displayed (A) will be performed.

# C Policy Server Integration

If you are using Policy Server to create entitlements in your enterprise, you can filter out which domains the Policy Server will assign services from based on connect parameters.

If you are using Policy Server with Patch Manager, you will want to separate resolution of regular software services from those for Patch Manager. Policy Server filters services based on the dname passed on the radskman command line. The Policy Server configuration file, `pm.cfg`, contains filter settings in format:

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

Where the DOMAIN NAME is the value passed in dname by RADISH. In the case of a Patch Manager client, this will be the dname parameter of radskman. Dname should be "patch". If the filter name passed in dname is not found in `pm.cfg`, then the filter `DNAME=*` will be used. The minimum version requirement for Policy Server is version 3.2.1.

The default configuration for these filters is shown in the figure below:

```
DNAME=*      { * !PATCHMGR !OS }

DNAME=PATCH    { PATCHMGR }

DNAME=OS      { OS }
```

In this configuration the default rule (*) will ignore PATCHMGR and OS domains and allow everything else as denoted by the use of "!". PATCH and OS rules allow only policies for PATCH and OS domains respectively. If for instance, we wanted to allow any policies for OS manager resolution we would change the last filter to: `DNAME=OS { * }`.

# D Patch.cfg Parameters

This appendix describes all of the possible parameters in the Patch configuration file, `patch.cfg`. Wherever possible these parameters should be edited using the Patch Administrator. This list is provided as supporting information.

# Patch Manager Server Configuration Parameters

HP recommends that you configure the Patch Manager's parameters in the Patch Manager Administrator. If you are unable to use the Patch Manager Administrator, you can make changes directly in the `patch.cfg` file. The default location is *`System Drive`*`:\Novadigm\IntegrationServer\etc`. The parameters are listed in this appendix.

If you are migrating from a previous version of Patch Manager, your old values in `patch.cfg` will be retained. Be aware that you will not get the new available parameters in your old `patch.cfg` nor will you get the new default values for old parameters.

- **admin_date_fmt:** Specify the date and time format for the Patch Manage Administrator. The default is {%Y-%m-%d %H:%M:%S} where %Y is the year with century, %m is the month number, %d is the day of the month, %H is the hour in 24-hour format, %M is the minute, and %S is the seconds.
- **data_dir**: Specify the directory on the local computer (Patch Manager Server) where you want the patches downloaded to before they are sent to your Configuration Server. Use this parameter to set where to store your patch descriptor files and patch data files in an alternate directory. If you choose to perform an acquisition using a directory that is pre-populated with data from a previous acquisition, specify a different directory in this parameter. The default is `IntegrationServer}\data\patch`.
- **db_type**: Specify the database type. The two possible values are mssql for Microsoft SQL Server and oracle for Oracle. Mssql is the default value. If you are using Oracle, change this value to oracle before doing a patch acquisition or a database synchronization.
- **dsn**: Specify the Data Source Name (DSN) the Patch SQL database. This parameter is required.
- **dsn_user**: Specify the SQL user for the dsn for the Patch SQL database.
- **dsn_pass**: Specify the password for the SQL user for the dsn for the Patch SQL database.
- **ftp_proxy_pass**: If you use a proxy server for ftp traffic, specify your password.
- **ftp_proxy_url**: If you use a proxy server for ftp traffic, specify its URL in the format **ftp://ip:port.** At the time of this writing, Patch Manager supports basic authentication only.

- **ftp_proxy_user**: If you use a proxy server for ftp traffic, specify your user ID.
- **History**: Specify how long in days to keep the Patch Auth Store (PASTORE) instances. This class contains one instance for each patch acquisition session. HP recommends specifying this in the `patch.cfg` file, and not on the command line. If history has a smaller value than purge_errors, then purge_errors will be set to the value for history. The default of 0 means never delete any history of Patch Acquisition.
- **hpux_patch_url**: Specify the HP-UX url for downloading the patches. This is the same as the hpux_patch_url parameter in `patch.cfg`. The default is **ftp://ftp.itrc.hp.com/.**
- **hpux_url**: Specify the url for the data source used to assess HP-UX security vulnerabilities. This is set in the hpux_url parameter in `patch.cfg`. The default is **http://itrc.hp.com/service/patch/security PatchCatalog.do?item=security_catalog2.gz**
- **hpux_xml_url**: Specify the url for the file containing data on every HP-UX patch. This is set in the hpux_xml_url parameter in `patch.cfg`. The default is **http://itrc.hp.com/service/patch/security PatchCatalog.do?item=patches.xml**
- **http_proxy_pass**: If you use a proxy server for http traffic, specify your password.
- **http_proxy_url**: If you use a proxy server for http traffic, specify its URL in the format **http://ip:port**. At the time of this writing, Patch Manager supports basic authentication only.
- **http_proxy_user**: If you use a proxy server for http traffic, specify your user ID.
- **http_timeout**: Set the total amount of time to wait for the file to be completely downloaded. If the acquisition session is unable to download the file in this time, then the acquisition will abort the current http location, and will continue the acquisition with the next http location. Increase the http_timeout if you need to allow additional time for a bulletin to download.

  Http_timeout is displayed in the `setup.tsp` page in seconds. Specify http_timeout in either the `patch.cfg` file or on the command line in milliseconds. This is reflected in `patch.cfg` as 3600000. If you specify http_timeout on the command line, it will be for this acquisition session only.

- **lang**: Patch Manager supports non-double byte languages. Specify the abbreviation of the languages for which you want to acquire patches. Precede any products you want excluded with an exclamation point (!). The default is en (English). If you wanted to include French and English, you would specify, - lang fr, en.
- **microsoft_sus_url**: Specify the URL for the Microsoft SUS feed. The default is **http://www.msus.windowsupdate.com /msus/v1/aucatalog1.cab**.
- **microsoft_url**: Specify the URL for the Microsoft `MSSECURE.XML` file. The efault is **http://download.microsoft.com /download/0/d/b/0db2e5d7-0ba9-4856-b51f-db7c0b838c68/MSSecure_1033.CAB.**

  If you are using a release of Patch Manager previous to 1.2.2, you must specify this path on the acquisition command line. This path is hard coded into Patch Manager 1.2.2.
- **nvdm_url**: Specify the URL to connect to the Radia Patch Update web site provided by HP. This is the same as the nvdm_url parameter in `patch.cfg`. The default is **http://managementsoftware.hp.com /Radia/patch_management/data.** This is a new location as of Version 2.0. The nvdm_user and nvdm_password parameters are no longer used.
- **purge_errors**: Specify how long in days to keep the Publisher Error (PUBERROR) instances. This class contains one instance for each patch acquisition error. HP recommends specifying this in the `patch.cfg` file, and not on the command line. If history has a smaller value than purge_errors, then purge_errors will be set to the value for history. Default: 7.
- **rcs_pass**: If authentication has been enabled on your Configuration Server, specify the password for the rcs_user.
- **rcs_url**: Specify the location of your Configuration Server in URL format. This parameter is required. Use the format `radia://`*`ipaddress`*`:`*`port`* where:
  - `radia` indicates the session type to be opened to the Configuration Server
  - *`ipaddress`* is the hostname or IP address of the computer hosting the Configuration Server
  - *`port`* is the port number of the Configuration Server.
- **rcs_user**: If authentication has been enabled on your Configuration Server, specify the rcs_user.

- **reporting_url**: Specify the URL of your Reporting Server.
- **retire**: Specify the bulletins to retire separated by commas. Use the -retire parameter to:

  - Delete specified bulletins if they exist in the Configuration Server database during the current publishing session.
  - Not publish the bulletins specified in the retire parameter to the Configuration Server database during the current publishing session. The use of the retire option supersedes the bulletins option.

  This parameter works on the bulletin level, not at the product or release level.

  To only retire a specific bulletin, but not acquire any new ones, use – bulletin NONE in addition to the retire parameter.

  Note the following:

  - The only time the retire option should be used on the command line is to delete specific bulletins from the Configuration Server Database. However, it does not keep a cumulative list of retired bulletins if you specify the option on the command line.
  - It is recommended that you set a retired bulletin list in the `patch.cfg` so a cumulative list is maintained. As needed, add to the list in `patch.cfg` instead of recreating the list of retired bulletins on the command line each time you want to retire a new one.
  - If you have enabled patch removal capabilities, and retire bulletins that are currently under management in your enterprise, the retired security patches may be removed from your Patch Manager client devices.

  Example: -retire MS00-001,MS00-029

- **rh_depends**: Specify **yes** if you want to publish additional Red Hat packages that downloaded security advisories may depend on. You can override this setting for a specific acquisition by setting it in Acquisition Settings.

  Prerequisite, or dependent, Red Hat packages required to install Red Hat Security Advisories can be acquired from two places. They can either be downloaded from the Red Hat Network during acquisition or they can be found locally if copied from the Red Hat Linux installation media. During an acquisition, Patch Manager will first look for the `.rpm` packages in the appropriate directory. For example, for Red Hat Enterprise Linux 3ES, the baseline operating system rpm files supplied on Red Hat installation media should be placed in `data/patch/redhat/packages/3es`. If a patch's prerequisite software is not found locally, then the package will be downloaded from the Red Hat Network. To decrease the time needed for acquisition, HP recommends copying the dependency packages to the appropriate packages directory from your Linux installation media. The Red Hat RPM packages can be found on the installation media under the `RedHat/RPMS` directory.

The default is No.

- **rhn_url**: Specify the URL for the Red Hat Security Network. The default is **http://xmlrpc.rhn.redhat.com/XMLRPC**.
- **solaris_patchpro_base_url**: This parameter defines the directory repository for Sun Solaris meta data files. The default is **https://patchpro.sun.com/database/.**
- **solaris_patchpro_db_url**: This url provides meta data concerning Sun Solaris "available" patches. The default is **https://patchpro.sun.com /database/patchdb.zip.**
- **solaris_patchpro_jar_url**: This auxiliary file is used by Sun Patch Manager Version 2.0 to perform patch applicability and vulnerability assessment. The default is **https://patchpro.sun.com/database /detectors.jar**.
- **solaris_patch_url**: This url provides a reference to the download locations of signed Sun Solaris patches. The default is **http://sunsolve.sun.com/search/pdownload.pl?target=%s&method=hs**,
- **solaris_pdiag_url**: This file includes information on all patches, both security and non-security related. This url provides a list of all Sun Solaris patches as well as meta data concerning Sun Solaris version applicability and the type of patch (recommended or security).The default is **http://sunsolve.sun.com/pub-cgi/pdownload.pl?target =patchdiag.xref.**
- **solaris_sunalerts_url**: This url provides a list of all available Sun Alerts and the patch ids associated with each Sun Alert. The default is **http://sunsolve.sun.com/pub-cgi/show.pl?target=sunalert_patches.**
- **suse_pass**: Specify the password for the user for the SuSE web site.
- **suse_urls**: Specify the urls for the SuSE network. The defaults are:

  **8 {http://sdb.suse.de/download/i386/update/SuSE-SLES/8/}**

  **9 {http://sdb.suse.de/download/i386/update/SUSE-CORE/9/ http://sdb.suse.de/download/i386/update/SUSE-SLES/9/}**
- **suse_user**: Specify the user for the SuSE web site.

- **sync**: Specify the targets that need to be synchronized. The default is rcs.

# Patch Acquisition Parameters

## To acquire patches from a command line

1 From a command prompt on your Patch Manager Server, navigate to the Radia Integration Server's directory. The default location is

```
System Drive:\Novadigm\IntegrationServer
```

> You can also use the acquisition file you created from a command line. To do this, use the config parameter.

2 Using the parameters listed in the bulleted list below, create a command line similar to the following:

```
nvdkit ./modules/patch.tkd acquire -bulletins MS04-*
```

where you want to acquire the patch files for only bulletins from the Microsoft web site matching a filter of MS04-*.

> Parameters specified on the command line overwrite those specified in `patch.cfg`. Use `patch.cfg` for default parameters.

- **arch**: Specify the computer architecture for which you want to acquire patches separated by a comma. Valid values for Microsoft acquisitions is x86. Valid values for Red Hat acquisitions are i386,i486,i586,i686,athlon,noarch. The default is x86,i386,i486,i586,i686,athlon,noarch.
- **bulletins**: Specify the bulletins for acquisition separated by commas. The asterisk (*) wildcard character is recognized. This is the same as the bulletins parameter in `patch.cfg`. For Red Hat Security advisories, use a hyphen (-) in place of an asterisk (*) for filtering.
  - Microsoft Security bulletins use the naming convention `MS`*`YY-###`*, where *`YY`* is the last two digits of the year that the bulletin was issued and *###* is a sequential number of the bulletin number being released for this the year specified. Microsoft service packs are listed in the format `MSSP_`*`operatingsystem_spnumber`*. To acquire *sample* Microsoft Operating System service packs, specify MSSP*. This will download sample service packs using information in the Novadigm or Custom folders. For example, specify -bulletins MS00-001,MS00-029.

- HPUX Security bulletins use the naming convention `HPSBUX######`, where `HP` indicates HP hardware, `SB` indicates security bulletin, and `UX` indicates the HP-UX operating system. At times the HP-UX security bulletin may contain an embedded hyphen
- Red Hat Security advisories use the naming convention `RHSA-`*`CCYY-###`*, where *`CC`* indicates the century and *`YY`* the last to digits of the year when the advisory was issued, and *###* the Red Hat patch number. Red Hat Security advisories, use a hyphen (-) in place of an asterisk (*) for filtering.
- SuSE Security patches use the naming convention `SUSE-PATCH-`*`####`*, where *###* represents a numbering scheme provided by SuSE.
- Sun Solaris Sun Alerts use the naming convention `SUNALERT`-*`patchid-revision`*, where patch-id represents the specific Sun Microsystems patch number, and revision is the revision identifier of the patch.

If you do not want to download any bulletins, use –bulletins NONE. You may want to do this when you want to only acquire agent updates.

- **config**: Use this parameter to append an alternate configuration file for acquisition to override settings in `patch.cfg`. The default is `patch.cfg`.
- **data_dir**: Specify the directory on the local computer (Patch Manager Server) where you want the patches downloaded to before they are sent to your Configuration Server. Use this parameter to set where to store your patch descriptor files and patch data files in an alternate directory. The default is `{IntegrationServer}\data\patch` (a directory structure off of the directory where you are running the command from).
- **force**: Use force in the following situations.
  - You previously ran an acquisition using the mode MODEL, and now you want to use BOTH.
  - You previously ran an acquisition filtering for one language (lang), and now, you need to acquire bulletins for another.
  - You previously ran an acquisition specifying one product, and, now, you need to acquire for another.

  For example, suppose that originally you only had Windows 2000 computers in your enterprise, so you used -product {Windows 2000*}. A month later, you roll out Windows XP. If you want to acquire the same bulletins, you will need to run the acquisition with -product {Windows XP*,Windows 2000*} and -force y.

The default is N. If replace is set to Y, the bulletins will be removed and reacquired, regardless of the value of force.

- **mode**: Specify BOTH to download patches and the information about the patches. Specify MODEL to acquire only the metadata for patches. Only the Bulletins and Numbers for the patches are downloaded, but not the actual patch files. Use this mode so that you can use the reports to expose vulnerabilities on client devices. BOTH is the default.
- **product**: Specify which products you want to include in the acquisition in the format of *vendor*::*product* in a comma separated list. Precede any products you want excluded with an exclamation point (!). If an include filter is not set, all products are assumed. If you provide any included filters, then the excluded filters will be a subset of the included products. Be sure to conform to the vendor's naming standards. For example, Microsoft refers to Internet Explorer using its full name, rather than a common abbreviation such as IE. For example,to include all Windows products except Windows 95, type `{Microsoft::Windows*, Microsoft::!Windows 95}`.

  By default, Microsoft Office, Windows 95, Windows 98, Windows Me, and SuSE specific products *-yast2, *-yast2-*, and *-liby2 are excluded since these platforms and SuSE OS specific products are not supported by Patch Manager. Microsoft Office products were excluded starting with version 3.0 of Patch Manager. If specifying on the command line, surround the complete product string filters in quotes. The default looks like {!Windows 95,!Windows 98*,!Windows Me,!*Office*,SUSE::!sles*-yast2,SUSE::!sles*-yast2-*,SUSE::!sles*-liby2*}.
- **Replace**: Set replace to Y to delete old bulletins, specified in the bulletins parameter, and then re-acquire them. This will supersede the value for force. In other words, if you set replace to Y, then any bulletin specified for that acquisition will be deleted and reacquired, whether force is set to N or Y. The default is N.
- **superceded_patches**: Set superceded_patches to Y if you want to publish the data even if a patch is marked as superceded. The default is N.
- **vendors**: Specify the vendors to acquire patches from. Example: -vendors Microsoft, RedHat, SuSE, HPUX, SOLARIS. The default is Microsoft.
- **vendor_os_filter**: Specify a filter for the vendor’s operating systems in the format *vendor*::*operatingsystem*.
  - — RedHat examples: REDHAT::2.1es,REDHAT::3es,REDHAT::4es
  - — SuSE examples: SUSE::8,SUSE::9, SUSE::10

- — HP-UX examples: HPUX::11.00,HPUX::11.11, HPUX::11.23
- — Do not use vendor_os_filter to specify Microsoft operating systems as they are treated as products. Use the product filter for Microsoft operating systems instead.

# Database Synchronization Parameters

## To synchronize the databases from a command line

- Run the following command line from the Radia Integration Server directory:

  ```
  nvdkit ./modules/patch.tkd sync -dsn patch -dsn_user
  rpmadmin -dsn_pass rpmdb -host localhost:3464 -class
  "*"
  ```

  dsn is a required parameter.

  For example, if you only wanted to update the PRODUCT class, you would type:

  ```
  nvdkit ./modules/patch.tkd sync -dsn PATCH -host ↵
  localhost:3464   -class "PRODUCT"
  ```

  where the dsn is called PATCH and the Configuration Server is the local machine.

The parameters are described below:

- **dsn**: Specify the Data Source Name (DSN) the Patch ODBC database. This parameter is required.
- **dsn_user**: Specify the user for the dsn for the Patch ODBC database.
- **dsn_pass**: Specify the password for the user of the Patch ODBC database.
- **host**: Specify the location of your Configuration Server in URL format. This parameter is required. Use the format radia://*ipaddress*:*port*
  - — radia indicates the session type to be opened to the Configuration Server.
  - — *ipaddress* is the hostname or IP address of the computer hosting the Configuration Server.
  - — *port* is the port number of the Configuration Server.

- **class**: Specify the classes you wish to synchronize between the Configuration Server and the Patch SQL Database. For example, if you want to synchronize only the DEVICE class, specify class="DEVICE". This parameter also accepts a wildcard.  The default is "*" (synchronize all classes).
- **commit**: Specify 1 if you want to commit changes found in the Configuration Server database to the SQL database. Specify 0 if you do not want change automatically committed. You can view the changes.  By default, all changes are committed.
- **rcs_pass**: If authentication has been enabled on your Configuration Server, specify the password for the rcs_user.
- **rcs_user**: If authentication has been enabled on your Configuration Server, specify the rcs_user.

## Patch Agent Update Parameters

These settings are for the maintenance of the Patch Manager client agent files. For more information on this, see Updating the Patch Manager Client Agent on page 71. The following settings are configured in the Patch Agent section:

- **agent_updates**: Use Publish and Distribute to publish the updates to the PATCHMGR domain and connect them to the Discover Patch instance. This option will distribute the updates to your Patch Manager client computers. Use Publish only to publish the update, but not connect for distribution (deployment) to Patch Manager client computers.
- **agent_os**: Specify for which operating systems to acquire the agent updates. Valid values are win32, linux, suse, and hpux. Note that RedHat, SuSE, Solaris, and HP-UX agent updates are only available starting with version 2.0.
- **agent_version**: Select which Patch Manager versions you would like to acquire the agent updates for. You can only publish one version to one Configuration Server.

See the sample `patch.cfg` file below. Note the use of brackets for parameters. If you are specifying any of these from a command line for acquisition, be sure to use quotes around values containing spaces.

```
patch::init {
        ADMIN_DATE_FMT %Y-%m-%d
```

```
AGENT_OS *
AGENT_UPDATES PUBLISH,DISTRIBUTE
AGENT_VERSION VERSION2
ALERT_DAYS 14
BUILD 399
BULLETINS *
COMMIT_INTERVAL 5000
CVENAME Y
DATA_DIR C:/Novadigm/IntegrationServer/data
DB_TYPE mssql
DL_DATEFMT {%Y-%m-%d %T}
DSN LocalServer
DSN_ATTEMPTS 3
DSN_DATEFMT {%Y-%m-%d %H:%M:%S}
DSN_DELAY 10
DSN_PASS {}
DSN_PING 60
DSN_TRACE 0
DSN_USER sa
ETC C:/Novadigm/IntegrationServer/etc/patch
FORCE no
FTP_PASS {{DES}Z4WefDOU43Grvr7MygliwA==:14}
FTP_PROXY_AUTHENTICATION basic
FTP_PROXY_PASS {}
FTP_PROXY_SCRIPT {}
FTP_PROXY_URL {}
FTP_PROXY_USER {}
FTP_USER anonymous
HISTORY 0
HOME C:/Novadigm/IntegrationServer/modules/patch.tkd
HPUX_PATCH_URL ftp://ftp.itrc.hp.com/
HPUX_URL
http://itrc.hp.com/service/patch/securityPatchCatalog.do?item=security_catalog2.gz
HPUX_XML_URL http://itrc.hp.com/service/patch/securityPatchCatalog.do?item=patches.xml
HTTP_PROXY_AUTHENTICATION basic
HTTP_PROXY_PASS {}
HTTP_PROXY_SCRIPT {}
HTTP_PROXY_URL {}
HTTP_PROXY_USER {}
HTTP_RETRIES 2
HTTP_TIMEOUT 120000
LABEL PATCH
LANG en
```

```
LANGUAGE {}
LOG C:/Novadigm/IntegrationServer/logs
MICROSOFT_ASP_EXT mspx
MICROSOFT_PASS {}
MICROSOFT_SUS_URL http://www.msus.windowsupdate.com/msus/v1/aucatalog1.cab
MICROSOFT_TECHNET http://www.microsoft.com/technet/security/bulletin
MICROSOFT_URL http://download.microsoft.com/download/0/d/b/0db2e5d7-0ba9-4856-b51f-
db7c0b838c68/MSSecure_1033.CAB
MICROSOFT_USER {}
MODE both
MODULE patch
NVDM_PASS {}
NVDM_URL http://managementsoftware.hp.com/Radia/patch_management/data
NVDM_USER {}
N_WORKERS 2
PRODUCT {!Windows 95,!Windows 98*,!Windows Me,!*Office*,SUSE::!sles*-yast2,SUSE::!sles*-
yast2-*,SUSE::!sles*-liby2*}
PURGE_ERRORS 7
RCS_PASS {}
RCS_URL radia://localhost:3464
RCS_USER RAD_MAST
REPLACE N
REPORTING_URL http://localhost/reportingserver
REPORT_TZ LOCAL
RETIRE {}
RHN_URL http://xmlrpc.rhn.redhat.com/XMLRPC
RH_DEPENDS N
ROOT C:/Novadigm/IntegrationServer
SOLARIS_PATCHPRO_BASE_URL https://patchpro.sun.com/database/
SOLARIS_PATCHPRO_DB_URL https://patchpro.sun.com/database/patchdb.zip
SOLARIS_PATCHPRO_JAR_URL https://patchpro.sun.com/database/detectors.jar
SOLARIS_PATCH_URL http://sunsolve.sun.com/search/pdownload.pl?target=%s&method=hs
SOLARIS_PDIAG_URL http://sunsolve.sun.com/pub-cgi/pdownload.pl?target=patchdiag.xref
SOLARIS_SUNALERTS_URL http://sunsolve.sun.com/pub-cgi/show.pl?target=sunalert_patches
STATUS_INTERVAL 600
STATUS_RESET {12:00 am}
SUPERCEDED_PATCHES N
SUSE_PASS {
SUSE_URLS {8 http://sdb.suse.de/download/i386/update/SuSE-SLES/8/ 9
{http://sdb.suse.de/download/i386/update/SUSE-CORE/9/
http://sdb.suse.de/download/i386/update/SUSE-SLES/9/}}
SUSE_USER {
TITLE {Radia Patch Manager Reporting}
URL /patch
```

```
        VENDORS microsoft
        VENDOR_OS_FILTER {}
        VERSION 2.2.0
        WORKER_RETRY 3
        WORKER_TIMEOUT 180
}
```

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