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IMPORTANT INFORMATION FOR TESTERS:

Remember that this is still a draft. It's pretty solid but I do have some outstanding items. However, you can begin your testing. A few things to note:

1. **Testing:** In order to properly test this document and demo, you must complete the entire installation in the sequence presented in this document. If you install only certain products, I cannot guarantee anything. As for the exercises, I would like to have them all tested to confirm that the installation works. Also, this should provide you with the best possible experience.
2. **Support**: I will be available at **tara.english-sweeney@hp.com** or through **tara.english-sweeney@jabber.hp.com** to handle any technical issues that you run into. I will respond as quickly as possible and if necessary, we can set up a call or netmeeting. I am in my office Monday through Thursday in New Jersey (EST).
3. **Feedback:** *Please provide your feedback by tracking changes in the document or using the comments feature. If you need help using these features, please check the online help or contact me for assistance.* I am looking forward to your feedback. However, due to limited cycles:
   - *General questions* - I am going to ask that you limit feedback to this document and demo. For example, if you want to know why an install is done a certain way that is something that would go through different channels.
   - *Solutions* - Please *do not* provide feedback in the form of a question, such as "why are we doing this?" Please provide a direct suggested change. If you want me to include it, please find out and tell me what you would like to see added or changed.
   - *Formatting*- This document has not been edited. Please do not comment on formatting, numbering issues, grammar and so on. We will have a full edit performed after the test cycle is complete.
   - *Editing* – Although we will go through a complete edit, please do keep your eye out for consistency in terminology. Note that we are using the existing product names and not the ones that will be rebranded.
   - *Technical accuracy* – If you are a somewhat experienced user, please review for technical accuracy as well.
2. **Responding to my open items:** Please take the time to review my comments and questions throughout. If you can answer, please do!
3. **Remember our audience:** It is very important to keep in mind that our target audience is **HP EMPLOYEES NEW TO HP OPENVIEW CONFIGURATION MANAGEMENT SOLUTIONS**. Therefore, if something is not clear, please let me know and make suggestions on how to clarify or simplify whenever possible.
4. **Improvements:** If you have any ideas on how to improve this document, please let me know. Even if they don't make it into this version, I will track the items for the next revision.
5. **Experience:** If you run into issues that are things that you know how to fix as an experienced HP OVCM Solutions user, but that a new user might not know, please let me know. I may consider adding a troubleshooting section or adding more information in the appropriate places in this version or later.
6. **Glossary:** The glossary on the DVD is currently being reviewed by another group. I included it as reference although the final version of the glossary will also include additional information about how to find terms and how to use Advanced Self Solve. If you do have comments, please send them to Janet May (OVCM) at may@hp.com.

KNOWN ISSUES:

- Patch manager causes many nvdkits to run causing the processor to reach 100%. This has been reported to dev and they have a fix that has not been released. Therefore, we are using a utility called MoveRIS in this version to handle this issue.
- We are currently still using the name Radia in certain cases, including in passwords. This will change in future revisions.

Possible items for next revision:

- Break/fix scenario for Patches
- Break/fix scenario for Application Manager
- Exercise for Configuration Analyzer from creating state files to comparing
- Exercise for Proxy Server

Commented [TES1]: Pl;ease feel free to add suggestions here.

HP OpenView Configuration Management Solutions using Radia

for the Windows operating system

Software Version: 1.0.0

Concepts and Processes Guide

Manufacturing Part Number: [Number]
Document Release Date: [Month Year]
Software Release Date: [Month 2006]

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Documentation Updates

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

- Software Version number, which indicates the software version
- Document release date, which changes each time the document is updated
- Software release date, which indicates the release date of this version of the software

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

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

Support

You can visit the HP OpenView support web site at:

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 sign in. Many also require a support contract.

To find more information about access levels, go to:

www.hp.com/managementsoftware/access_level

To register for an HP Passport ID, go to:

www.managementsoftware.hp.com/passport-registration.html

Contents

1 About this Guide

Introduction

This guide is intended for internal HP employees who must understand, use and possibly support the HP OpenView Configuration Management Solutions. The guide covers the following topics:

- An overview of HP OpenView Configuration Management Solutions products as well as information about essential processes.
- Instructions for installing and configuring the HP OpenView Configuration Management Solutions products in this very specific, single server environment to be used for the exercises.
- Exercises that demonstrate the basic capabilities of the HP OpenView Configuration Management Solutions products.

This guide is *not* intended to be used to set up as a production version of the HP OpenView Configuration Management Solutions.

The primary objective of this guide is to provide a starting point for your journey to understanding the HP OpenView Configuration Management Solutions. Once you have an introduction to some of the solutions, you can access additional resources to learn more.

In order to use this document successfully, you must complete the entire installation in the sequence presented in this document.

Audience

The audience for this book is internal HP employees, such as new OpenView Configuration Management personnel, personnel in other OpenView blades, HP Software, HP Services, and other hardware divisions.

Prerequisites

You must be comfortable using Windows, Active Directory and VMware.

Summary

Welcome to Configuration Management Solutions

This chapter describes the subset of solutions included in this document, as well as about some key processes needed to understand the HP OpenView Configuration Management Solutions.

Essential Processes

This chapter provides a look at some of the fundamental processes used by Configuration Management Solutions. Before discussing the essential processes, a brief introduction of the Radia Client Objects is provided.

Preparing the HP OpenView Configuration Management Solutions Environment

This chapter describes how to prepare the hardware and install the required software before installing the HP OpenView Configuration Management Solutions.

Installing the HP OpenView Configuration Management Solutions Software

This chapter describes how to install and configure the HP OpenView Configuration Management Solutions software.

Using the HP OpenView Configuration Management Solutions

This chapter provides exercises intended to be an introduction to the HP OpenView Configuration Management Solutions. It is important to recognize that this is simply an introduction to these solutions and is by no means comprehensive.

Advanced Exercises

This chapter is a follow on to the chapter Using the HP OpenView Configuration Management Solutions. It contains an advanced exercise that you may choose to perform based on your comfort level with the solutions that you have learned about so far.

Related Documents

The following table provides a list of the HP OpenView Management Solutions publications that are associated with the HP OpenView products that are detailed in this book.

Table 1 HP OpenView Management Solutions Publications

Product	Publication Title
HP OpenView Configuration Server Using Radia	User's Guide for the HP OpenView Configuration Server Using Radia
HP OpenView Administrator Workstation Using Radia	Publisher Guide for the HP OpenView Administrator Workstation Using Radia System Explorer Guide for the HP OpenView Administrator Workstation Using Radia
HP OpenView Proxy Server Using Radia	Installation and Configuration Guide for the HP OpenView Proxy Server Using Radia

Product	Publication Title
HP OpenView Management Portal Using Radia	Installation and Configuration Guide for the HP OpenView Management Portal Using Radia
HP OpenView Messaging Server Using Radia	Installation and Configuration Guide for the HP OpenView Messaging Server Using Radia
HP OpenView Policy Server Using Radia	Installation and Configuration Guide for the HP OpenView Policy Server Using Radia
HP OpenView Patch Manager Using Radia	Installation and Configuration Guide for the HP OpenView Patch Manager Using Radia
HP OpenView Packager for Windows Using Radia	User's Guide for the HP OpenView Extensions for Windows Installer Using Radia
HP OpenView Knowledge Base Manager Using Radia	Installation and Configuration Guide for the HP OpenView Knowledge Base Manager Using Radia
HP OpenView Usage Manager Using Radia	User's Guide for the HP OpenView Usage Manager Using Radia
HP OpenView Reporting Server Using Radia	Installation and Configuration Guide for the HP OpenView Reporting Server Using Radia
HP OpenView Radia Clients Using Radia	Installation and Configuration Guide for the HP OpenView Software Manager Using Radia Installation and Configuration Guide for the HP OpenView Application Manager Using Radia

These documents and others are located in `Publications CD\pdfs` on the HP OpenView Configuration Management Solutions CD-ROM.

For new documents and updated versions, go to **ovweb.external.hp.com/lpe/doc_serv/**.

When using doc_serv to access the documentation, select **Radia** from the **Product** list, then select the version number and operating system to narrow the search for the appropriate guide.

2 Essential HP OpenView Configuration Management Solutions

The HP OpenView Configuration Management (HP OVCM) Solutions automate the management of data on target devices in your enterprise. These solutions manage devices based on parameters that you configure.

Note that throughout this guide, when we refer to "you" we are referring to an IT administrator unless otherwise noted.

Using this document, you will install a subset of the solutions and perform some basic exercises to provide you with an introduction to HP's OpenView Configuration Management Solutions. The subset of products and components in this guide were selected because they are the most frequently installed components. Additional products may be included in future versions of this guide. In this chapter, you will learn about the solutions included in this document, as well as about some key processes.

The following are some key characteristics of the HP OVCM Solutions that you will be working with:

- **Desired State Approach**

  You can configure and maintain the [desired] state of a device's operating system, applications, and configuration. If there is a difference between the device's desired state and the current state, HP's differencing technology determines the precise component-level changes that are required and sends only those changes to the managed device.

- **Policy based Management**

  You can define entitlements which control the deployment of data to authorized users or target devices. For example, an IT administrator may implement a policy permitting access to certain financial databases only to a selected workgroup within an organization's finance department. Subsequent changes to entitlements cause data to be installed, changed, or removed for affected users or devices.

- **Adaptive Configuration Management**

  As the policies change, the current state is differenced and reconfigured to correspond to the desired state.

- **End to End Lifecycle Management**

  You can automate the policy-based management of data throughout the deployment life-cycle. With the HP OVCM solutions you can:

  - Package applications
  - Analyze the impact of packages prior to deployment
  - Discover, collect and report on hardware and software information
  - Configure policy assignments to assign data to the appropriate device or user
  - Distribute and install data across enterprise networks
  - Repair data and configurations through the desired-state process.
  - Deploy patches, service packs, hot fixes and application updates.
  - Remove data from target devices by changing entitlement policies.

With HP's OVCM products, you can manage data and continuously configure devices.

Terminology

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

client

The Client software (such as the Software Manager, Application Manager, Inventory Manager, Patch Manager, or Usage Manager) that runs on the managed device and communicates with the Configuration Server.

client connect

It is the process in which a managed device communicates with the HP OpenView Configuration Server Using Radia.

Configuration Server

In conjunction with the Configuration Server Database, a server that stores, manages, and distributes application package information, and manages policy relationships and information about managed devices. This server is the only product that is mandatory in a HP OpenView Configuration Management Solutions environment; without it, the infrastructure will not function.

desired state

The condition of a device as defined by the configuration parameters you set in the Configuration Server database. These parameters include software, operating system, and policy.

device

In this document, a device is a piece of hardware, such as a computer or ATM that may be either a managed device or a target device.

managed device

A managed device is a piece of hardware, such as a computer or ATM that is recognized and managed by the HP OpenView Configuration Management Solutions.

package

A package is data that is published as an individual unit.

policy

A policy defines what services a user, a target device, or a managed device is entitled to.

resolution

It is the process in which values on a device are replaced with those that are required to achieve its desired state. These values are retrieved from the Configuration Server during a client connect.

service

A service organizes a group of related packages, methods, or behaviors into manageable units.

target device

A target device is a piece of hardware such as a computer or ATM (that can become a managed device).

user or subscriber

A user or subscriber is the person who uses managed applications on a managed device.

HP OpenView Configuration Management Solutions Overview

This section contains an overview of the products and components for the HP OpenView Configuration Management solutions. Depending on your enterprise's configuration, your infrastructure may use any combination of these products and components. Components are shared among two or more products. In this section, we will give brief descriptions of all of the products and components, but we will concentrate on the subset of products and components that are used in the environment that you will create using this guide.

Configuration Management Solutions can be divided into four categories.

- HP OpenView Management Applications Using Radia
- HP OpenView Management Infrastructure Using Radia
- HP OpenView Extended Infrastructure Using Radia
- HP OpenView Management Extensions Using Radia

HP OpenView Management Applications Using Radia

HP OpenView Management Applications Using Radia are agent-based applications that can be installed on target devices in your enterprise. They communicate with HP's OpenView Configuration Management servers to enable you to manage the discovery, deployment, configuration, repair, update, and removal of data on devices such as servers, desktops, mobile devices such as laptops and handhelds, and specialty devices such as ATMs, point-of-sale and Internet kiosks.

Once a management application is installed on a target device, the device is considered a **managed device**.

There are several types of Management Applications (clients) available for communicating with the Configuration Server. The Configuration Server stores the configuration parameters and links policies to your managed devices. This server will be discussed in further detail later in this chapter. You can install more than one management application on a device to combine features.

Not all management applications are available for all operating systems and architectures. Consult the HP OpenView web site or your HP representative for the most current information on platform availability. This guide is for Windows only.

The table below describes the essential functions of each of the Management Application Products.

Table 2 Management Applications Essential Functions

Management Application Product	Use
HP OpenView Application Manager Using Radia	Deploys mandatory services to unattended devices.
HP OpenView Inventory Manager Using Radia	Tracks and reports on hardware and software on managed devices.
HP OpenView OS Manager Using Radia	Enables your managed devices to work properly with OS Manager for operating system deployment.

Management Application Product	Use
HP OpenView Patch Manager Using Radia	Deploys and analyzes vendor's security patches and bulletins.
HP OpenView Software Manager Using Radia	Allows users to install the services that they are entitled to.
HP OpenView Usage Manager Using Radia	Supports monitoring of all application usage.
HP OpenView Server Management Using Radia	Deploys server applications, manages Windows Terminal Server and Citrix applications, and manages configuration baselines and configuration files.

Next you will learn more details about the Management Applications used in this demo environment.

HP OpenView Application Manager Using Radia

HP OpenView Application Manager Using Radia enables you to deploy mandatory data to devices without user intervention. You, as the IT administrator, control deployments, updates, repairs and removals through policy-based entitlements.

With the HP OpenView Application Manager Using Radia installed on the target device, you can:

- Deploy mandatory data to unattended devices.
- Install, remove, verify, repair, and update data on a schedule or immediately.
- Control application versions.

For more information, see the *Installation and Configuration Guide for the HP OpenView Application Manager Using Radia*.

HP OpenView Software Manager Using Radia

HP OpenView Software Manager Using Radia enables you to offer self-service data management. You control what data is available to your users through policy-based entitlements. Then, users can choose whether to install, update, verify, repair or remove through a service list.

For more information, see the *Installation and Configuration Guide for the HP OpenView Software Manager Using Radia*.

HP OpenView Patch Manager Using Radia

HP OpenView Patch Manager automatically discovers, analyzes, and deploys software patches for Windows, Linux, and UNIX platforms. You as the IT administrator control the patch lifecycle, which includes acquisition, testing, conflict analysis, vulnerability assessments, deployment, and ongoing management, through policy-based entitlements.

The Patch Manager:

- Gathers information about security patches installed on the managed device.
- Manages the deployment of patches.
- Monitors the continued security vulnerability compliance of managed devices.

See the *Installation and Configuration Guide for the HP OpenView Patch Manager Using Radia* for details.

HP OpenView Usage Manager Using Radia

The HP OpenView Usage Manager Using Radia uses parameters that you set in the Configuration Server Database to collect data on the patterns of application usage on your managed devices. This data is reported back to the HP OpenView Usage Manager Server for Radia for reporting and analysis.

For more information, see the *User's Guide for the HP OpenView Usage Manager Using Radia*.

HP OpenView Management Infrastructure Using Radia

Use the HP OpenView Management Infrastructure Using Radia to maintain desired state information, store data packages, automate software management activities, and administer your environment. The Configuration Server and the Configuration Server Database are the core of your management infrastructure.

Table 3 Management Infrastructure Essential Functions

Management Infrastructure Product	Use
HP OpenView Configuration Server Using Radia	Configures and maintains desired state information for your devices.
HP OpenView Configuration Server Database Using Radia	Stores the desired state configuration in a hierarchical structure. The Configuration Server Database resides on the Configuration Server.
HP OpenView Administrator Workstation Using Radia	Contains tools to configure and maintain your environment.

Next you will learn more details about the Management Infrastructure products used in this demo environment.

HP OpenView Configuration Server Using Radia

The HP OpenView Configuration Server Using Radia can reside on a single server, or several can be installed across a network of servers. Data and information about the users and managed devices are stored in the Database on the Configuration Server. The Configuration Server distributes data based on policy.

The Configuration Server:

- Generates the desired-state based on configuration parameters
- Can maintain policies in the Database. When a device connects to the Configuration Server, the current policy is transmitted and updated on the device. The device that receives the data may be a target device or a managed device. If the device was previously unmanaged, it would now be considered managed.
- Contacts devices to have them initiate requests to the Configuration Server according to a schedule, upon notification from an administrator, or when requested by the user.

See the *User's Guide for the HP OpenView Configuration Server Using Radia* for details.

HP OpenView Configuration Server Database Using Radia

The HP OpenView Configuration Server Database Using Radia, stored on the Configuration Server, records your enterprise's desired state model. This model is made up of the data to be distributed, policies which define the services that users or devices are entitled to, and security and access rules for administrators. See the *Radia Database Reference Guide* for details.

The database is hierarchically structured as follows:

- **Files** are used to group similar domains. The PRIMARY file is used to define and maintain the desired state.
- **Domains** are logical file partitions used to group similar classes. The POLICY domain contains the classes needed to create users and groups.
- **Classes** are templates containing the attributes needed to create an instance. A class represents a category of the desired state. The USER class of the POLICY domain defines users of managed applications. It defines all of the attributes necessary to identify the managed device.
- **Instances** are actual occurrences of classes. The attributes of a class instance contain data describing one specific entity of that class. For example, a USER instance contains the information needed to identify target devices or user.
- **Attributes** are data elements of a class. The class contains the definition (e.g., the name, data type, description, and length) for each attribute belonging to the class. Each class instance created from the class contains a value for each of the attributes defined in the class. For example, the NAME attribute of a USER class contains the name of the user.

Default Files and Domains

When you install the Configuration Server, LICENSE and PRIMARY are the only two Files available. As you use the HP OpenView Configuration Management Solutions, your Database may change. Some of the Management Infrastructure products add other domains. For example, Patch Manager adds the PATCHMGR Domain, and Usage Manager adds the USAGE Domain.

- The LICENSE file is read-only and is used for Configuration Server processing. This file is for HP use only, and should not be modified.
- The PRIMARY file is where you will find most information regarding software management. Within the PRIMARY file, there are seven default domains.
  - Use the ADMIN domain to define administrative rights and rules for connecting classes.
  - Use the AUDIT domain to configure tasks that will inventory assets on your devices.
  - Use the CLIENT domain to configure Client Operations Profiles. This includes defining which Configuration Servers, Proxy Servers, and Staging Servers the client computer can use. See the Application Manager Guide for more information.
  - Use the POLICY domain to create users and groups, and to assign users to groups.
  - Use the PRDMAINT domain to store packages for self-maintenance. The client software uses this domain to heal and update itself.
  - The SOFTWARE domain contains information about the software being managed and the methods used to deploy the software.
  - The SYSTEM domain contains administrative and process control definitions.

As you begin to use Configuration Management Solutions, the PROFILE file appears after the first device has registered with the Configuration Server. This file contains information that is collected from managed devices. This information is used to connect to devices to deploy data managed by the HP OpenView Configuration Management Solutions, and to see the configuration of the managed device.

In this guide, you will use the HP OpenView Management Portal Using Radia (a part of the Extended Infrastructure) to work with the Configuration Server Database. More experienced users may use the System Explorer, a tool of the Administrator Workstation, for advanced tasks.

HP OpenView Administrator Workstation Using Radia

The HP OpenView Administrator Workstation Using Radia tools enable you as an IT administrator to manage the Database, prepare data for management, view Client objects, and customize your environment. The Administrator Workstation includes the following tools and capabilities:

- **Packager**
  The Packager provides a graphical interface for packaging all data for distribution. The packages are published to the Database by using either the Component Selection Mode or the Installation Monitor Mode in the Packager. In Installation Monitor Mode, the Packager determines what to package by scanning the computer before and after installing the data. It differences the before and after scans to determine what changes were made to the computer. These differences make up the package that you publish to the Database. In Component Selection Mode, you select the individual components that make up the package, such as files, directories, registry entries, and links. See the *Installation and Configuration Guide for the HP OpenView Application Manager Using Radia* for details.
- **Publisher**
  The Publisher provides a graphical interface for publishing Windows Installer applications and operating system images to your Database in preparation for deployment to your environment. Additionally, the Publisher allows for the publication of files in batch mode. Note that the Packager is similar; it performs the same function for non-Windows Installer applications. See the *Publisher Guide for the HP OpenView Administrator Workstation Using Radia* for details.
- **System Explorer**
  The System Explorer provides an experienced Configuration Management administrator a graphical user interface to configure policy and application services stored in the Database. In this Guide, you will use the Management Portal to accomplish all of the necessary tasks in the exercises. See the *System Explorer Guide for the HP OpenView Administrator Workstation Using Radia* for details. The System Explorer allows advanced administrators to perform the following tasks:
  - Modify application packages after the initial publishing process.
  - Establish reuse of application components between application services.
  - Define application service prerequisites.
  - Define policy for application entitlements.
  - Control deployment of application versions.
  - Centralize control for unattended application service updates, install, and repairs.
- **Client Explorer**
  The Client Explorer provides a graphical user interface that you can use to view and edit client objects on managed devices, as well as diagnose issues by viewing error objects. Client objects represent the current state of the managed device.

Extended Infrastructure

Use the Extended Infrastructure to scale software management services across your entire enterprise, giving you the ability to manage devices across multiple network segments. The Extended Infrastructure can be divided into two categories; products and components. Components are shared among two or more products. The software for the components is provided as needed with the products.

Table 4 Extended Infrastructure Essential Functions

Extended Infrastructure	Use
HP OpenView Distributed Configuration Server Using Radia	Replicates part or all of your Databases across a network of Configuration Servers.
HP OpenView Management Portal Using Radia	Manages your infrastructure through a Web browser.

Extended Infrastructure	Use
HP OpenView Multicast Server Using Radia	Sends the same resources in one data stream to multiple devices at the same time.
HP OpenView OS Manager Using Radia	Provisions and manages operating systems on target devices.
HP OpenView Patch Manager Using Radia	Deploys and analyzes vendors' security patches and bulletins. Used with the Patch Manager Server. The Patch Manager has both a client and server component.
HP OpenView Proxy Server Using Radia	Uses cache management over HTTP or TCP/IP to store and transmit application data dynamically, freeing resources on the Configuration Server.
HP OpenView Staging Server Using Radia	Stores and transmits application data over TCP/IP or IPX/SPX, freeing resources on the Configuration Server.
HP OpenView Usage Manager Using Radia	Assesses patterns of application usage in your environment.

Products

Through distributed administrative capabilities, vulnerability assessments, and monitoring of application usage patterns, Extended Infrastructure products provide a complete analysis of your management solution. In this section you will learn more about the Management Portal, Patch Manager, Proxy Server, and Usage Manager products which are used in this Guide.

HP OpenView Management Portal Using Radia

The HP OpenView Management Portal Using Radia is web-based and provides you with the ability to manage your entire environment regardless of location or computing platform. Administrative tasks can be distributed to administrators in remote locations based on roles and policies. Some of these tasks are deploying Management Applications, detecting the status of installed Configuration Management services, managing the Configuration Server Database, and tracking the completion status of all Management Portal tasks

The Management Portal cannot always perform tasks remotely; therefore, the Management Agent, which must be installed on a remote managed device, performs these tasks on behalf of the Management Portal.

Some of the functions the Management Portal can perform are the following:

- Discover and view devices on your network.
- Set policy and configure the desired state.
- Remotely start and stop services.
- Remotely install some of the Configuration Management products, such as the Management Applications, the Management Agent, and the Proxy Server.
- Notify a group of devices to perform an action such as installing software or auditing services.

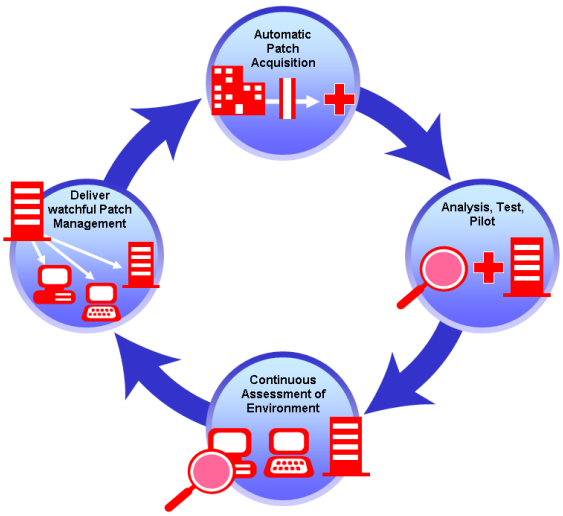
See the *Installation and Configuration Guide for the HP OpenView Management Portal Using Radia* for details.

HP OpenView Patch Manager Using Radia

HP OpenView Patch Manager eliminates known software vulnerabilities by automating the patch management process including acquisition, impact analysis, pilot testing, discovery, assessment, deployment, maintenance, and compliance assurance. This ensures that managed devices are always

configured correctly. With it, you can configure acquisition tools in order to automatically collect security patches from a vendor's web-based security patch repository, as well as perform impact analysis and pilot testing in order to identify affected applications and devices.

Figure 1 Patch Management life cycle



Features of the Patch Manager include, but are not limited to:

- An acquisition tool that can be configured to enable automatic collection of new security patches directly from a vendor's web-based depository for security patches.
- Ability to perform impact analysis to identify affected applications and devices.
- 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.
- Policy-based management capabilities that interface directly with a variety of existing policy sources such as Active Directory, LDAP or SQL databases.
- Monitoring devices and checking policy to see if they are in compliance. If they are not in compliance, devices are automatically updated with the appropriate patches.

Patch Manager acquires security patches and synchronizes the patch's information in the Database on the Configuration Server with the Patch database on an SQL or Oracle Server. During the acquisition, the following occurs:

- The vendor's web site or local data cache is contacted to prepare for the acquisition of Bulletins.
- Either the information about the Security Bulletins 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 patch, such as if the patch has been superseded by a more recent patch, and reboot requirements.
- An XML file is created for each security bulletin acquired and is put in the vendor's folder in the Integration Server's directory. These files are called patch descriptor files.
- The Database 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 SQL database you created.

If you have already performed an acquisition, only instances that are different are updated.

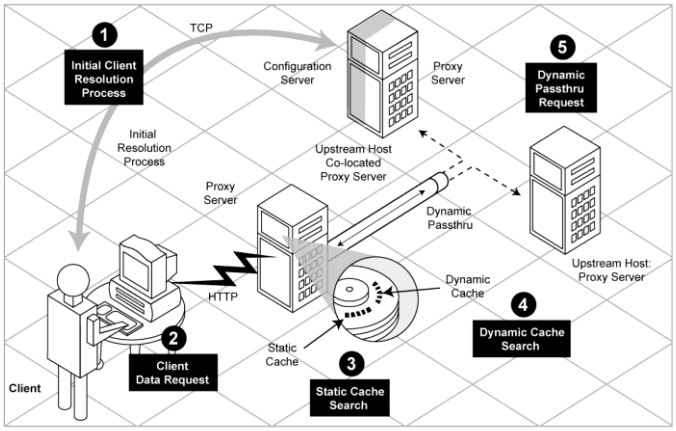
See the *Installation and Configuration Guide for the HP OpenView Patch Manager Using Radia* for details.

HP OpenView Proxy Server Using Radia

The HP OpenView Proxy Server Using Radia allows data to be locally available to managed devices. Managed devices can receive the data over the Local Area Network (LAN) instead of across a Wide Area Network (WAN). Proxy Servers increase scalability while dramatically reducing traffic over the network. When data is cached on the Proxy Server, the demand placed on the Configuration Server is decreased, allowing the Configuration Server to allocate more resources to other tasks.

Placing Proxy Servers at strategic points in your network increases the efficiency at which data is transferred. The connection between users and the Proxy Server may be more efficient than the connection between the users and the Configuration Server. The factors that determine the efficiency of a connection between a server and a device include hardware capability, network bandwidth, workload on the servers, network traffic patterns, and the volume of software to be distributed.

Figure 2 Proxy Server caching



The Proxy Server, when used, is the primary repository for data to be deployed. Once the managed device determines the resources needed for its desired state, the device can request those resources from the Proxy Server. The Proxy Server provides the following benefits:

- The ability to choose between having requests made using either HTTP (recommended) or TCP/IP.
- The ability to service multiple, concurrent requests from either protocol source.
- The ability to have data automatically loaded onto the Proxy Server for distribution when the first request comes in from a managed device. This occurs if the data does not already exist on the Proxy Server.
- The ability to automatically send requests to the Configuration Server for processing if the Proxy Server cannot handle the request.

See the *Installation and Configuration Guide for the HP OpenView Proxy Server Using Radia* for details.

HP OpenView Usage Manager Using Radia

You can use the HP OpenView Usage Manager Using Radia to assess patterns of application usage in your environment. This allows you to facilitate adherence to license agreements, re-provision licenses if needed, and monitor user productivity.

The Usage Manager monitors the use of every application on all of your devices. This enables you to:

- Enforce corporate standards by identifying non-standard software and software versions in use within your enterprise.
- Implement license tracking, giving you the ability to purchase and maintain only those licenses that are needed.
- Prioritize distribution of content based on the information captured about usage.
- View reports of the actual use of application resources.

The Usage Manager can be used in your existing environment whether or not you are currently using HP OpenView Configuration Management Solutions for data distribution.

See the *User's Guide for the HP OpenView Usage Manager Using Radia* for details.

Components

Some products share components to consolidate communications and facilitate data flow. Shared components include the Integration Server, Messaging Server, and the Reporting Server.

Table 5 Shared Components Essential Functions

Component	Use
Integration Server	All the products using the Integration Server are loaded from a single Windows Service called "Integration Server". The Integration Server is used by Management Portal, Proxy Server, Policy Server, and Patch Manager,
Reporting Server	The web-based Reporting Server allows you to use data from SQL or Oracle for reporting. The Reporting Server is used by Patch Manager, Usage Manager, Inventory Manager, and Server Management.
Messaging Server	The Radia Messaging Server routes data from client objects to the appropriate Radia Server. The Messaging Server is used by Radia Management Portal, Radia Patch Manager, Radia Inventory Manager, and Radia Server Management.

HP OpenView Integration Server Using Radia

Many of the Extended Infrastructure products use the Integration Server, such as the Management Portal, the Proxy Server, the Policy Server, and the Patch Manager Server. Each product is composed of modules that reside in the Integration Server's modules directory. These components use the same core Integration Server files, and run under the same process. The Integration Server does not have its own install. It is loaded if the Infrastructure product needs it, and it is not already installed.

Benefits of the Integration Server are:

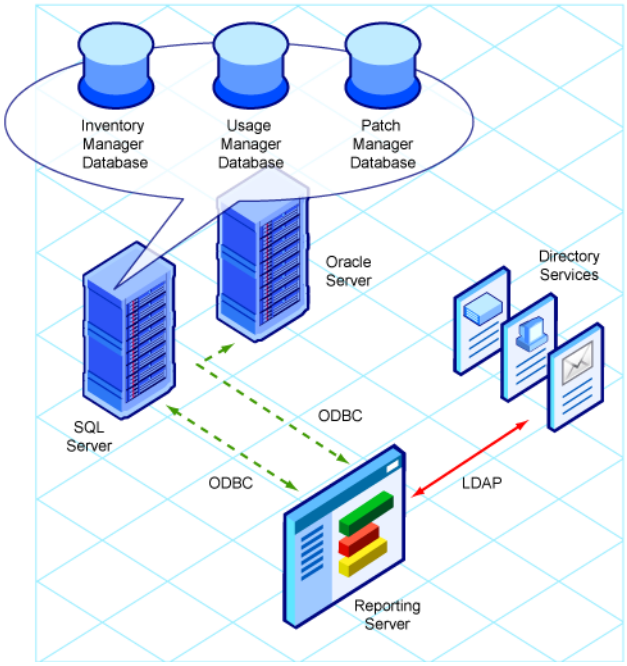
- All the products using the Integration Server for Windows can be loaded from a single Windows Service called "Integration Server".
- When the Integration Server starts, it scans its configuration file and attempts to load all the products marked for loading.
- Each product loaded from the Integration Server is separately licensed.

- The Integration Server provides Web services that are shared by all loaded modules. This integration provides increased performance, efficiency, and maintenance ease.

HP OpenView Reporting Server Using Radia

The HP OpenView Reporting Server Using Radia allows you to use SQL data for reporting. As part of the Extended Infrastructure, the web-based Reporting Server allows you to query the data in the Inventory, Patch Manager, and Usage Manager databases and create detailed reports.

Figure 3 Reporting Server environment



The Reporting Server provides the following additional value to the infrastructure:

- Connections to SQL Databases: The Reporting Server can access any SQL database, such as those for Inventory Manager, Patch Manager, and Usage Manager. However, all SQL databases accessed by the Reporting Server must exist on a single SQL or Oracle Server.
- Connections to LDAP Directory (optional): The Reporting Server supports optional access to an existing LDAP directory in your enterprise. Access to an LDAP directory allows you to filter report data according to the directory entries.

See the *Installation and Configuration Guide for the HP OpenView Reporting Server Using Radia* for details.

HP OpenView Messaging Server Using Radia

The HP OpenView Messaging Server Using Radia is a service that continually monitors a pre-defined location on the server and routes data to external destinations. The Messaging Server provides retry, rerouting, and failover capabilities to ensure all data is transferred efficiently and reliably.

If the Messaging Server is installed on the same server as the Configuration Server, the Messaging Server receives data from managed devices. Then, the Messaging Server transfers the data to the appropriate Integration Server. For example, if Patch Manager data is being transferred, the Messaging Server will move the data to the Integration Server from which the Patch Manager is loaded. From the Integration Server, the data is mapped to the appropriate SQL database, such as Patch.

The Radia Messaging Server uses Data Delivery Agents (DDAs) to handle the routing of client objects for patch management, inventory management, and usage management to the appropriate reporting database. Using data delivery agents, data can be posted directly to an ODBC database, or, it can be forwarded securely to another directory or server (such as a Store and Forward Messaging Server) using HTTPS or HTTP.

The Messaging Server runs on all Windows and UNIX platforms supported by the Configuration Server. The Messaging Server can:

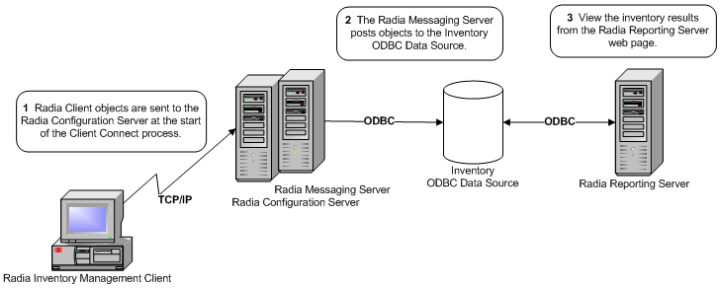
- Route a single message to multiple destinations.
- Automatically retry a delivery.
- Re-route messages to a new host after several unsuccessful delivery attempts.

See the *Installation and Configuration Guide for the HP OpenView Messaging Server Using Radia* for details.

Using the Messaging and Reporting Servers

To show how the Messaging Server and Reporting Server work together, the following is an example of inventory collection. The HP OpenView Inventory Manager Using Radia client discovers configuration information on the managed device, and reports the results to the Messaging Server. The Messaging Server moves the information to a SQL database so that you can use the Reporting Server to view the results. Web-Based Enterprise Management (WBEM) enables information such as the amount of RAM in a computer, hard disk capacity, process type, and versions of operating systems to be extracted from computers, routers, switches, and other networked devices. Windows Management Instrumentation (WMI) is Microsoft's implementation of WBEM for Microsoft Windows platforms.

Figure 4 Inventory results report to an ODBC source



1 The client communicates with the Configuration Server, and sends client objects to the Configuration Server. Some objects are always sent and others are sent as a result of an Inventory Audit Service being performed. The following information may be sent:

   — The APPEVENT object that describes the most recent service events.

   — The ZCONFIG object that contains information on the device's hardware configuration.

   — If a WBEM audit is performed and the client is a WBEM consumer, then WBEM objects will be sent.

2 The Radia Messaging Server posts the objects to the appropriate ODBC data source. All inventory-related and audit objects are posted to the Inventory database.

3 The Radia Reporting Server accesses the data and allows you to view the inventory reports.

Note that the Reporting Server allows you to view reports for Patch Manager, Usage Manager, and Server Management.

Management Extensions

Radia Management Extensions provide integration and extended enterprise functionality. They allow Radia to interface with other technologies such as Lightweight Directory Access Protocol (LDAP) and Secure Sockets Layer (SSL). Similar to the Extended Infrastructure, Management Extensions can be divided into common components, such as the Knowledge Base Manager, and products, including Extensions for Windows Installer, Policy Server, Adapter for SSL, the Publishing Adapter, and the Systems Management Adapters. The table below describes the essential functions of each of the Management Extension products.

Table 6 Management Extensions essential functions

Management Extension	Use
HP OpenView Adapter for SSL Using Radia	Maintains the safety and confidence of transmitted information.
HP OpenView Extensions for Windows Installer Using Radia	Publishes and manages Windows Installer applications.
HP OpenView Policy Server Using Radia	Uses external directory services to implement policy.
HP OpenView Publishing Adapter Using Radia	Creates fully automated, unattended updates to application packages.
HP OpenView Systems Management Adapters Using Radia	Exchanges data with other vendors' products

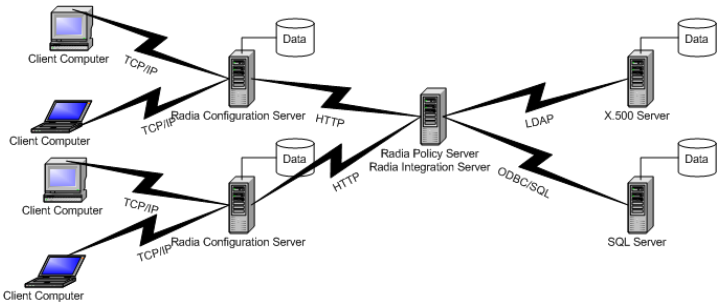
Next you will learn more details about the Management Extensions used in the exercises at the end of this Guide.

HP OpenView Policy Server Using Radia

The HP OpenView Policy Server Using Radia is a Web server used for administration purposes such as mapping services to users in an external directory tree. Connections made in the Configuration Server Database to Lightweight Directory Access Protocol (LDAP) directory are used to determine what services should be distributed and managed for the user that is currently logged on by querying the Policy Server.

The Policy Server integrates with external LDAP directory servers and SQL databases to enable single source points of control for user authentication, access policies, and user entitlement. These LDAP directory servers include Microsoft Active Directory, Novell NDS, and other vendor's LDAP servers, as well as Oracle, Sybase and Microsoft SQL-based databases.

Figure 5 Policy Server integrates with LDAP and SQL



For more information, see the HP OpenView web site and the *Installation and Configuration Guide for the HP OpenView Policy Server Using Radia* Guide.

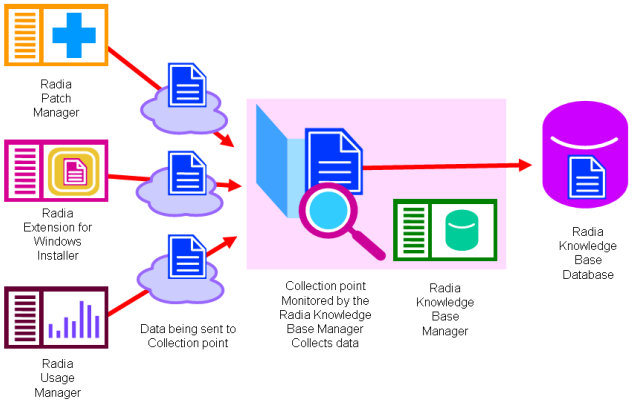
HP OpenView Knowledge Base Manager Using Radia

The HP OpenView Knowledge Base Manager Using Radia is a component of Management Extensions. The Knowledge Base database may be either a SQL Server or an Oracle database configured in your environment. The Knowledge Base is populated with data in the form of **state files**. State files consist of data that represent the current state of an application. This data is acquired by the Knowledge Base Manager from a continuously monitored user-specified directory referred to as a collection point. When data is detected in this collection point, it is automatically transferred to the Knowledge Base. The collection point is populated by one or more products including the Patch Manager, Usage Manager, and Packager for Windows Installer. From here, data analysis can take place, using the Configuration Analyzer. Application usage can be viewed with the Reporting Server.

The Knowledge Base Manager is capable of importing several types of state files including:

- Configuration Server Service/Package component extracts
- State files built by the Radia Extensions for Windows Installer components
- Usage Manager collection files
- State files built by the Radia Patch Manager.

Figure 6 Knowledge Base Manager



See the *Installation and Configuration Guide for the HP OpenView Knowledge Base Manager Using Radia* for details.

Infrastructure Example

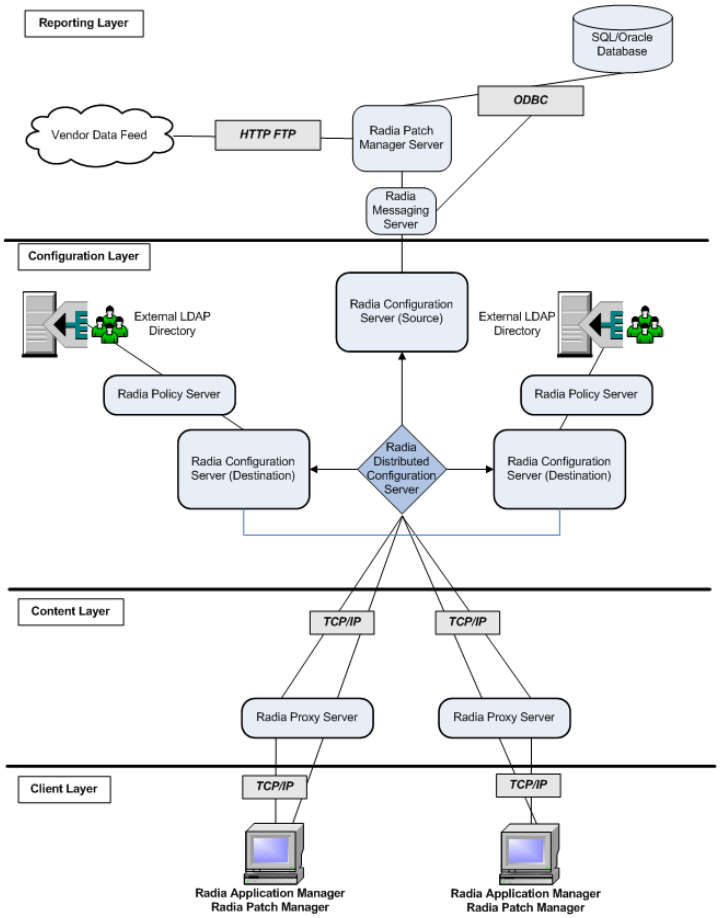
Now that you have some familiarity with Configuration Management Solutions, the following example shows how these products and components might work together.

Suppose you wanted to be able to do the following:

- Manage mandatory data. (HP OpenView Application Manager Using Radia)
- Analyze and manage security vulnerabilities. (HP OpenView Patch Manager Using Radia)
- Use your existing external LDAP directory services to create entitlements. (HP OpenView Policy Server Using Radia)
- Place servers with your data in network strategic locations to your target devices. (HP OpenView Proxy Server Using Radia)
- Distribute management of the devices across your enterprise. (HP OpenView Configuration Server Using Radia and the HP OpenView Distributed Configuration Server Using Radia)

In this case, you would want to combine the functions of the Application Manager, the Configuration Server, the Policy Server, the Proxy Server, the Distributed Configuration Server, and the Patch Manager. A diagram of your network might be similar to Figure 7 on page 29.

Figure 7 Create a Radia Patch Manager environment.



3 Essential Processes

This chapter provides a closer look at some of the fundamental processes used by the HP OpenView Configuration Management Solutions. Before discussing the essential processes, a brief introduction to Radia Client Objects is provided to help you better understand the processes.

About Radia Client Objects

When a device connects to the Radia Configuration Server, information is exchanged between the client and the Radia Configuration Server. This exchange is called **resolution**. During resolution, the Radia client checks the status of services, and updates the Radia Configuration Server with information from objects stored on the device. The resolution process will be described in more detail later in this chapter.

Radia Client Objects are stored in a directory, called IDMLIB, on the managed device. After installing the client software and connecting to the Radia Configuration Server, you can use Radia Client objects to answer questions such as:

- What is the hardware configuration of the managed device?
- Was the service successfully installed?
- When was the service installed?
- What is the managed device's name, and who was the last user logged on?
- What are the possible data sources for this managed device?

While there are multiple Radia objects on a managed device at any time, there is a core group of objects that supply information and the status of the current client connect. These objects are referred to in some of the processes discussed in this chapter. The table below includes information on when one of these objects is created or updated, and a brief summary of what the object includes. There are other objects created during the client connect, only some are noted here. Check the HP OpenView web site and the *Installation and Configuration Guide for the HP OpenView Application Manager Using Radia* for information on other client objects.

Table 7 Client Objects

Object Name	Description
PREFACE	PREFACE is sent to the Radia Configuration Server at every phase of a client connect. It contains parameters used for the current connect such as the type of connect, the user name, and if the list of applications is being updated.
ZCONFIG	ZCONFIG is created at the start of the client connect process. It contains basic hardware information for the client computer such as processor, operating system, and drives.
APPEVENT	APPEVENT reports on the status of application events, such as installation, verify, repair, and removal.
ZMASTER	ZMASTER is sent to the Configuration Server at the beginning of the client connect. It includes information to identify the managed device for implementing policy, such as user identification, operating system, and computer name.

The Client Connect Process

The purpose of the client connect process is to ensure that the device matches its desired state. The desired state embodies the data and entitlements for each device. A model representing the desired state for each device is stored in the Database.

The client connect process is initiated when a client object is sent to the Configuration Server. Typically, this is the ZMASTER object which contains information about the managed device, such as the device's identity and IP address.

The ZMASTER object is sent to the Configuration Server as a result of the following events:

- A scheduled Timer event.

  Timers are usually associated with a particular service and can be triggered periodically or randomly within a certain time period using the Application Manager or Inventory Manager

- A Notify sent by the Configuration Server to the device. A Notify is a message sent to the managed device telling the device to start a client connect using the Application Manager or Inventory Manager.

- A refresh of the Service List on the managed device in the Software Manager.

  To manage services, the administrator entitles the services, first. Then, the user uses the Service List to manage the installation, verification, removal, repair, and update of a service.

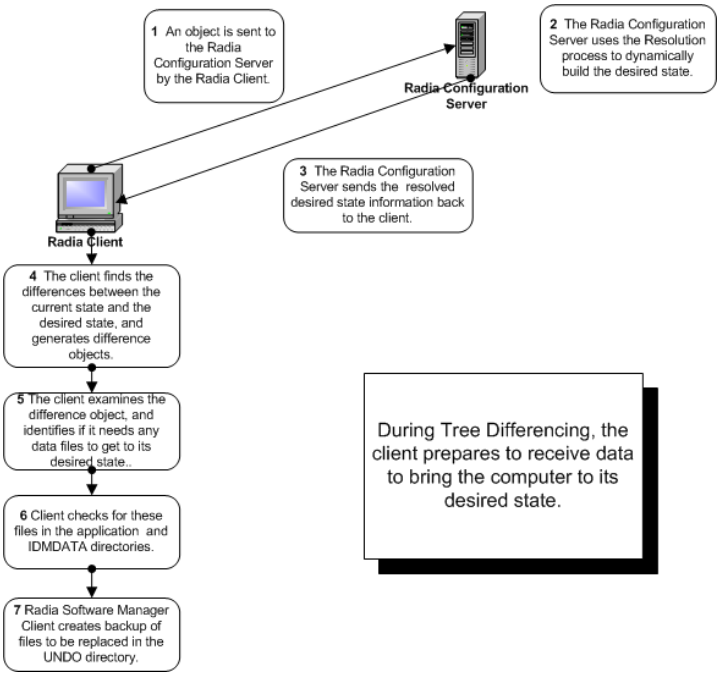
The connect process involves the following three stages:

1. **Tree Differencing** to download the new objects from the Configuration Server, create the difference objects (delta objects), and identify any data that needs to be retrieved.
2. **Data Transfer** in which data is downloaded to a temporary location on the device.
3. **State Machine** processing to install files from the temporary location to the live location and create the new desired state objects to manage services.

Tree Differencing

During the Tree Differencing phase of the client connect, the client identifies which files it needs to bring the device to the desired state. The client differentiates the data between the configuration information on the device and the Configuration Server. First, the client sends the ZMASTER object to the Configuration Server. Then, the Configuration Server builds the desired state based on the parameters designated for the user in the ZMASTER object. The desired state is sent back to the device as a new object, where the client synchronizes the old and new objects between the server and the device.

Figure 8 Tree differencing



Tree differencing works by using a reference list, which is like an object dictionary; it stores the different names for a particular class. The reference list is updated whenever a change is detected within the tree, in the "branches" or "leaves". The differencing algorithm relies on a name algorithm to generate predictable names for the difference object, the downloaded object, and the branch object.

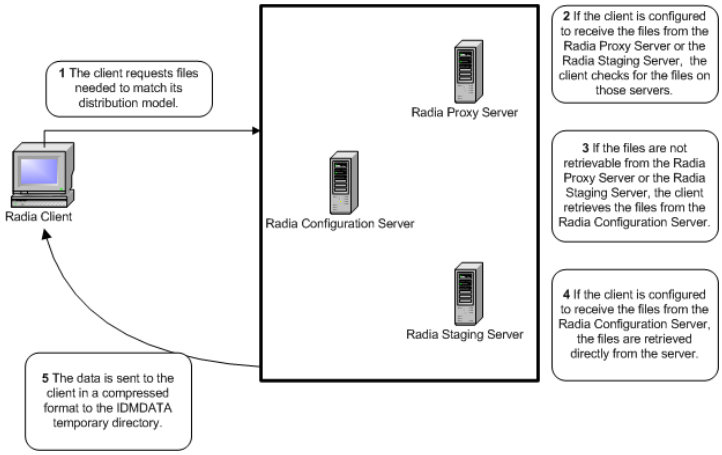
After generating the difference object, the client identifies if it needs to get any data files or install applications to bring the device to its desired state. The client requests and downloads these files from the Configuration Server, a Proxy Server, or a Staging Server during the Data Transfer stage of the client connect process.

Data Transfer

The Data Transfer phase of the client connect begins when the client sends a request for these files to the Configuration Server. If the client is configured to retrieve files from the Proxy Server or the Staging Server, the client checks those servers for the files it needs. If the files are present, the client downloads them. If any of the files cannot be retrieved from the Proxy Server or the Staging Server, the client retrieves the files from the Configuration Server. If the client is not configured to use the Proxy Server or the Staging Server, the files are retrieved directly from the Configuration Server.

The Configuration Server, the Proxy Server, or the Staging Server send the data to the device in a compressed form and copies it to a pre-defined directory on the device called IDMDATA. The IDMDATA directory is used as a temporary storage location on the managed device for these compressed files. Once the files are decompressed and installed on the managed device, the compressed files are erased automatically if configured.

Figure 9 Data transfer

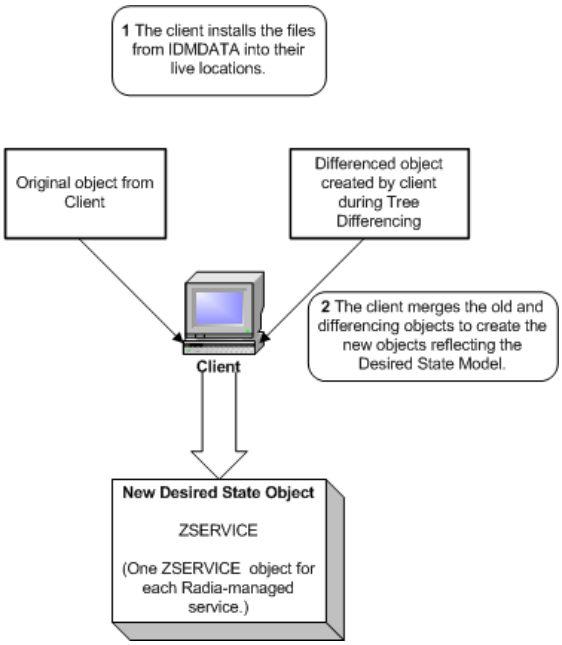


If you have multiple Radia Configuration Servers, Radia Proxy Servers, or want to store files for managing applications on a local CD-ROM, you may want to reconfigure the Radia Client before connecting to the Radia Configuration Server. Use Radia Client Operations Profiles to prioritize and set criteria for where the managed devices should obtain their data from. See the *Installation and Configuration Guide for the HP OpenView Application Manager Using Radia or the Installation and Configuration* for the *HP OpenView Software Manager Using Radia* for details.

State Machine

After the client downloads the files needed to bring the device to its desired state during the Data Transfer phase, the client installs these files from the IDMDATA directory. The client erases the compressed files after they have been installed on the managed device. Then, the client merges the original object from the client with the differenced object created during the Tree Differencing Process.

Figure 10 State machine

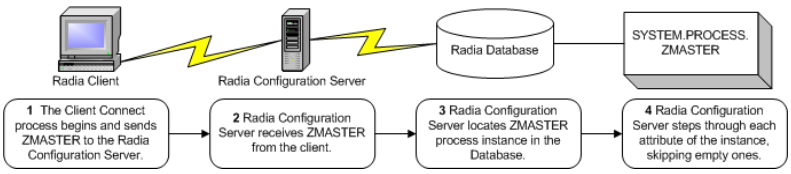


At the end of the client connect process the managed device's configuration should match its desired state built in the Database.

The Resolution Process

The Configuration Server uses the resolution process to build the device's desired state. Remember that the Database which resides on the Configuration Server contains the configuration parameters to create the desired state. The client submits a request to the Configuration Server in the form of a client connect and the Configuration Server performs a resolution process in response to that request.

Figure 11 Resolution Process



In this section, it is important for you to understand how the different parts of the Configuration Server Database are referred to. Recall that in the Essential HP OpenView Configuration Management Solutions chapter, we defined the different elements of the Configuration Server Database.

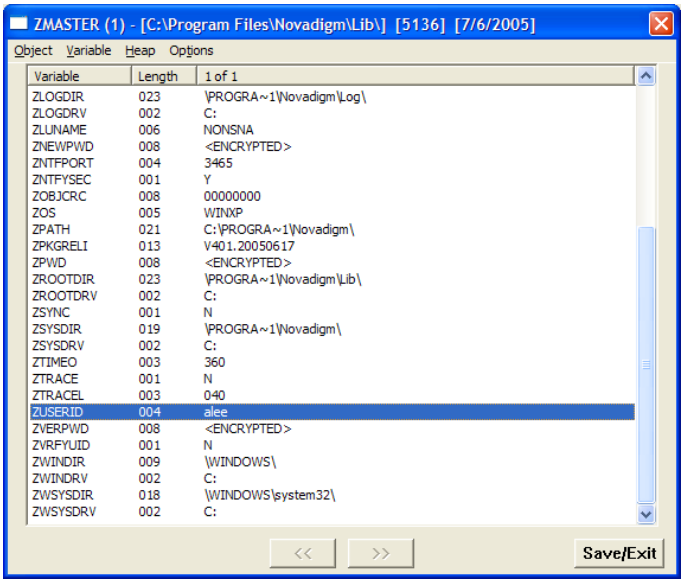
Table 8 Configuration Server Database Usage Examples

Element	Example
Files	PRIMARY
Domains	PRIMARY.SOFTWARE May also be referred to as the SOFTWARE Domain in the PRIMARY File.
Classes	PRIMARY.SOFTWARE.ZSERVICE May also be referred to as the ZSERVICE Class in the SOFTWARE Domain in the PRIMARY File.
Instances	PRIMARY.SOFTWARE.ZSERVICE.AMORTIZE May also be referred to as the AMORTIZE Instance of the ZSERVICE Class in the SOFTWARE Domain in the PRIMARY File.

The ZMASTER object is sent to the Configuration Server during the client connect. The ZMASTER object contains information about the managed device necessary to run, such as the identity of the user or device and the IP address of the device.

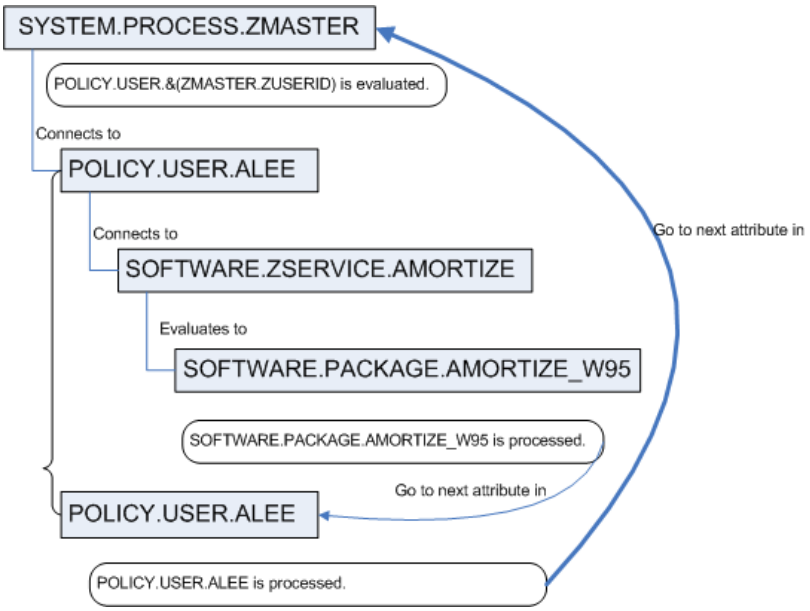
The Configuration Server stores the ZMASTER object in global memory. Global memory is a temporary storage area in the Configuration Server. The Configuration Server maintains the contents of the global memory for the duration of the resolution process. You can view the ZMASTER object using the Client Explorer. Below, you can see some of the attributes in the ZMASTER client object. Note that the ZUSERID is `alee`. This is how the Configuration Server will know how to resolve policy for this user.

Figure 12 ZMASTER object



After storing ZMASTER in global memory, the Configuration Server finds the Process in the Configuration Server Database associated with ZMASTER. This is called the process entry point. Its

location is referred to as SYSTEM.PROCESS.ZMASTER or the ZMASTER instance of the PROCESS class in the SYSTEM Domain.



The Configuration Server reads each attribute of SYSTEM.PROCESS.ZMASTER. As a result of an attribute, the Configuration Server may:

- Set variable values.
- Evaluate an expression.
- Execute a method or executable.
- Connect to other instances in the Configuration Server Database.

> For the purposes of explanation, the view of the Configuration Server Database shown in this section are all taken using the System Explorer, an administrative tool for advanced administrators. Remember that you will be using the Management Portal to manipulate the Configuration Server Database in the exercises.

If there is a connection to another instance, the Configuration Server processes the connected instance. Then, the resolution process returns to that original instance at the next attribute after the connection attribute. For example, in Figure 6, the first connection instance links to POLICY.USER.&(ZMASTER.ZUSERID). After evaluating all the attributes in POLICY.USER.&(ZMASTER.ZUSERID), the resolution process will return to the PRIMARY.SYSTEM.PROCESS.ZMASTER instance at the next attribute. In this case, the attribute connects to the PUT_PROF_ZMASTER method in the SYSTEM Domain.

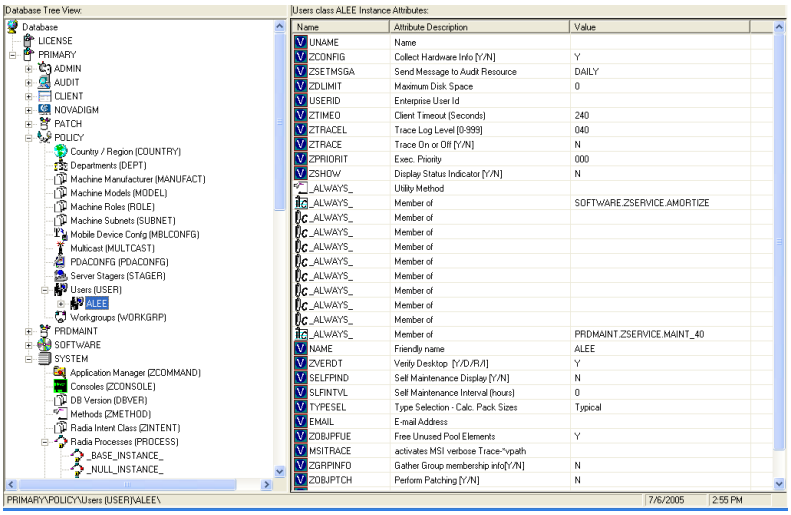
Figure 13 PRIMARY.SYSTEM.PROCESS.ZMASTER instance

Radia Processes class ZMASTER Instance Attributes:

Name	Attribute Description	Value
ALWAYS	Method	
ALWAYS	Method	
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	
ALWAYS	Method	
ALWAYS	Method	
ALWAYS	Method	
DESCRIPT	Process Description	Processing Client Request for &ZCUROBJ
ZMAXOKRC	Max acceptable method Return Code	008

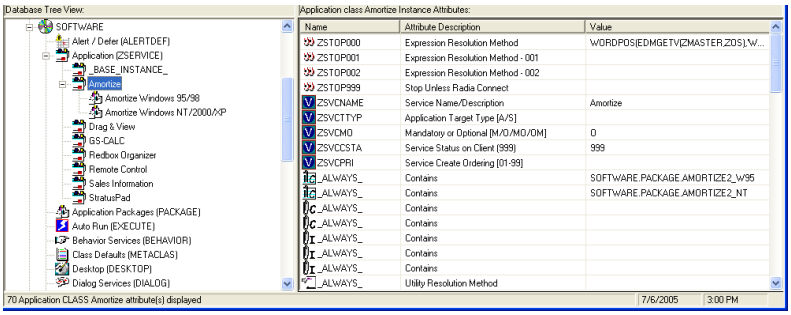
During resolution, the Configuration Server performs symbolic substitution to set values and connect to other instances. For example, in SYSTEM.PROCESS.ZMASTER there is a connection to POLICY.USER.&(ZMASTER.ZUSERID). The Configuration Server substitutes the value of the ZUSERID from the ZMASTER object that is in global memory. In Figure 12 on page 35 the value of ZUSERID is alee. Therefore, the resolution process will connect to POLICY.USER.ALEE, and resolve that instance.

Figure 14 POLICY.USER.ALEE instance



In Figure 14 above after setting a number of variables, the first connection attribute connects to the AMORTIZE instance in the ZSERVICE class of the SOFTWARE Domain.

Figure 15 ZSERVICE.AMORTIZE instance

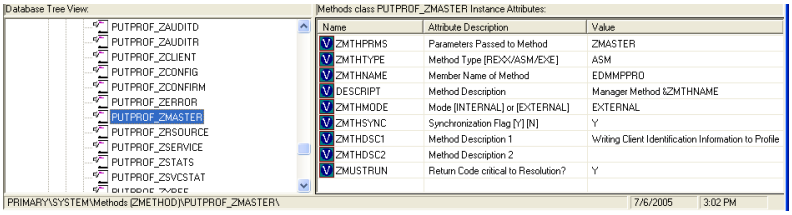


An instance of the Service class links to packages. Recall that a service organizes a group of related packages, methods, or behaviors into manageable units. The figure above begins with an expression in the ZSTOP000 attribute. An expression allows alternative paths to be taken in a given resolution, based upon variable data. In this case, the expression checks to be sure that the operating system of the client computer is allowed for the Amortize software.

A service instance connects to package instances. In our example, the first package instance is to SOFTWARE.PACKAGE.AMORTIZE2_W95. The Configuration Server looks at the instance. After setting some of the attributes, there is another expression. If the managed device's operating system is either Windows 95 or Windows 98, the resolution process continues with this instance, connecting the file instances, registry entries, path instances, and shortcuts. If the client has another operating system, resolution returns to SOFTWARE.ZSERVICE.AMORTIZE at the next connection instance.

Eventually, the resolution process will return to the User instance, finish resolving it, and return to the process entry point, the SYSTEM.ZPROCESS.ZMASTER instance. Referring back to Figure 13 on page 37, the next attribute connects to the method, PUTPROF_ZMASTER. A method is a program that performs functions based on certain parameters. The PUTPROF_ZMASTER method instance is shown in Figure 16 below.

Figure 16 ZMETHOD.PUTPROF_ZMASTER instance



The Configuration Server executes a final method in the entry point instance, which passes ZMASTER as a parameter. This causes the contents of the ZMASTER object in global memory to be written to the PROFILE file of the Configuration Server Database.

After all of the attributes in the SYSTEM.PROCESS.ZMASTER instance are evaluated, the resolution process completes.

Installations and Exercises

In the next chapter of this Guide, you will install and configure the HP OpenView Configuration Management Solutions products necessary to complete the exercises. In the final chapter, you will perform tasks using these products and components to help you begin to understand how to use the Configuration Management Solutions. Keep in mind that for the purposes of demonstration, only a subset of the products and components, and their features will be used. The tasks you will cover are:

1. Deploying Radia clients to target devices
   a. Use Management Portal to deploy the Radia clients to a target device.
2. Publishing data
   a. Use Publisher to prepare services.
   b. Use Management Portal to view the new services created by the Publisher.
3. Managing Policy
   a. Managing Optional Services with Software Manager
      – Use Management Portal to entitle the user to an optional service.
      – Use Software Manager to install the service.
      – Use Software Manager to repair a broken service.
   b. Managing Mandatory Services with Application Manager
      – Use Management Portal to entitle the user to a mandatory service.
      – Use Management Portal to install the service.
4. Gathering Hardware and Software Inventory
   a. Modify and entitle Audit services using Management Portal.
   b. Use Management Portal to send an Application Manager Notify to install the service.
   c. View the results of the audit using Reporting Server.
5. Managing Security Vulnerabilities with HP OpenView Patch Manager Using Radia
   a. Acquire patches from a local data cache. (Note that in a production Patch Manager environment, you will acquire the patches directly from the operating system's vendor.).
   b. Use Management Portal to entitle the target device to the vulnerability scan.
   c. Use Management Portal to send an Application Manager Notify to install the service.
   d. View the target device's security compliance with Reporting Server.
   e. Use Management Portal to entitle the target device to the relevant patches.
   f. Use Management Portal to send an Application Manager Notify to install the service.
   g. View that the target device is now in compliance with Reporting Server.
6. Tracking Application Usage with HP OpenView Usage Manager Using Radia
   a. Use Management Portal to configure the Usage service.
   b. Use Management Portal to entitle the target device to the service.
   c. Use Management Portal to send an Application Manager Notify to install the service.
   d. View the results with Reporting Server.

4 Preparing the HP OpenView Configuration Management Solutions Environment

This chapter describes the required hardware for the host machine and how to open and configure the virtual machines prior to installing HP OpenView Configuration Management Solutions used in this demo.

A **host machine** is any machine with the required hardware that can run the VMware software.

A **virtual machine** is a standalone machine running in a virtual environment. Consider the virtual machine a separate machine. Depending on the hardware, a host machine can support multiple virtual machines with various operating systems. For example, you may have a Windows XP host machine running VMware workstation with two VMware machines —one running Windows 2003 Server Enterprise Edition and the other running Windows XP SP2.

For this guide, we have provided two VMware images for you to use— a server and a target device. You will learn how to open these virtual machines on your host machine.

This is intended to be a demonstration for internal use only. Do not put the environment created with this guide on the HP Network or use it in a production environment.

Also, use only the resources provided on the DVD to create this environment.

Host Machine Requirements

The host machine is the machine that has VMware 5.5 running and will contain the target and server images. This machine must have the following:

- A minimum of 1.5 GB – 2 GB memory
- 20 GB free disk space
- VMware workstation 5.5 (Note that the DVD does not contain VMware 5.5. You can download a 30-day trial version from **www.vmware.com**.)

Do not perform the HP OpenView Configuration Management Solution installations covered in this guide on the host machine. All installations should be performed on the virtual server machine in order for this environment to work properly.

Setting Up Your Virtual Environment

This section describes how to prepare your virtual environment. Your virtual environment consists of two pre-configured virtual machines, a server (HPOV Config Mgmt Server) and a target device (HP OVCM Target Device).

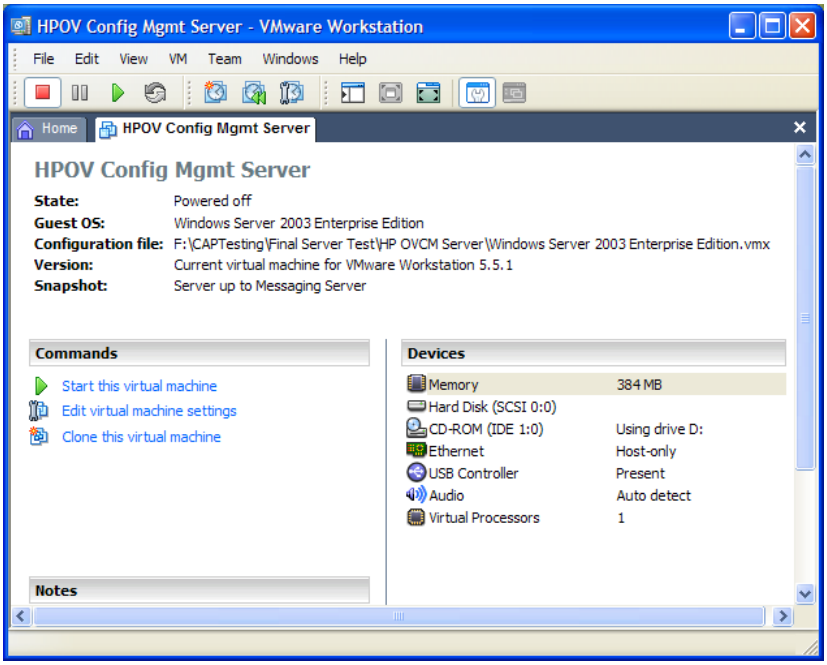
The server machine is where you will perform all of the HP OpenView Configuration Management Solution installations covered in this guide.

To open the virtual server machine

1. From the HP OpenView Concepts and Processes DVD, copy `\VMware_images\HP OVCM Server` to your host machine.
2. Open …`\HP OVCM Server` and right-click `HP OVCM Server1.zip` and select **Extract to here**.
3. When the files are extracted, delete `HP OVCM Server1.zip` and the files `HP OVCM Server1.z01` through `HP OVCM Server1.z10`.
4. Go to **Start→All Programs→VMware→VMware Workstation**.

   The VMware Workstation software opens.
5. Go to **File→Open**.
6. Browse to the location where you saved the HP OVCM Server folder, open the folder, select `Windows Server 2003 Enterprise Edition.vmx` and click **Open**.

   The HPOV Config Mgmt Server tab opens.



7. Right-click the HP OV Config Mgmt Server tab and select **Settings**.
8. Click the **Options** tab.
9. In the Settings column, select **Snapshots**.
10. In the General area, clear the Disable snapshots check box.
11. Click **OK**.
12. Click **Start this virtual machine**.

When you see the message asking whether you want to create a new unique identifier (UUID). Click **Create** and then **OK**.

13 When the Welcome to Windows dialog box opens, click in the window and then press CTRL + ALT + Insert.

14 Log on with the user ID **`Administrator`** and password **`radia`**.

15 Click **OK**.

16 You may need to change the subnet because this information is automatically assigned when you install VMware. In order for this image to work:

   a Go to **Edit→ Virtual Network Settings**.

   b Check the Summary tab to see if VMnet1 is set to subnet 192.168.5.0. If it is not, click the Host Virtual Network Mapping tab and click the arrow next to VMnet1 and select **Subnet**. Set the IP address to **`192.168.5.0`** and the Subnet Mask to **`255.255.255.0`**.

17 You may also need to remove the DHCP server from VMware. To do this, select the **DHCP** tab and then select the appropriate Virtual Network, **VMnet1** and click **Remove**.

Consider taking a snapshot of your target device while it is in a clean state. This way, you can quickly revert to the snapshot if necessary. To do this, right-click the HP OV Config Mgmt Server tab and select Take Snapshot. Type a name such as **`Initial Server Image`** and click **OK**. It may take a few minutes for the snapshot to be completed.

To open the virtual target machine

1 From the HP OpenView Concepts and Processes DVD, copy `\VMware_images\HP OVCM Target` to your host machine.

2 Open …`\HP OVCM Target` and right-click `HP OVCM Target1.zip` and select **Extract to here**.

3 When the files are extracted, delete `HP OVCM Target 1.zip` and the files `HP OVCM Target1.z01` through `HP OVCM Target1.z08.`

4 In VMware, select **File→ Open**.

5 Browse to the location where you saved the HP OVCM Target folder, open the folder, and select `Windows XP Professional.vmx`.

6 Click **Open**.

7 Right-click the HP OVCM Target Device tab and select **Settings**.

8 Click the **Options** tab.

9 In the Settings column, select **Snapshots**.

10 In the General area, clear the Disable snapshots check box.

11 Click **OK**.

12 Click **Start this virtual machine**.

When you see the message asking whether you want to create a new unique identifier (UUID). Click **Create** and then **OK**.

13 When the Welcome to Windows dialog box opens, click in the window and then press CTRL + ALT + Insert.

14 Log on with the user ID **`Administrator`** and password **`radia`**. Confirm that the Log on to drop down list box is set to DEMO.

Consider taking a snapshot of your target device while it is in a clean state. This way, you can quickly revert to the snapshot if necessary. To do this, right-click the HP OVCM Target Device tab and select Take Snapshot. Type a name such as **`Initial Target Image`** and click **OK**. It may take a few minutes for the snapshot to be completed.

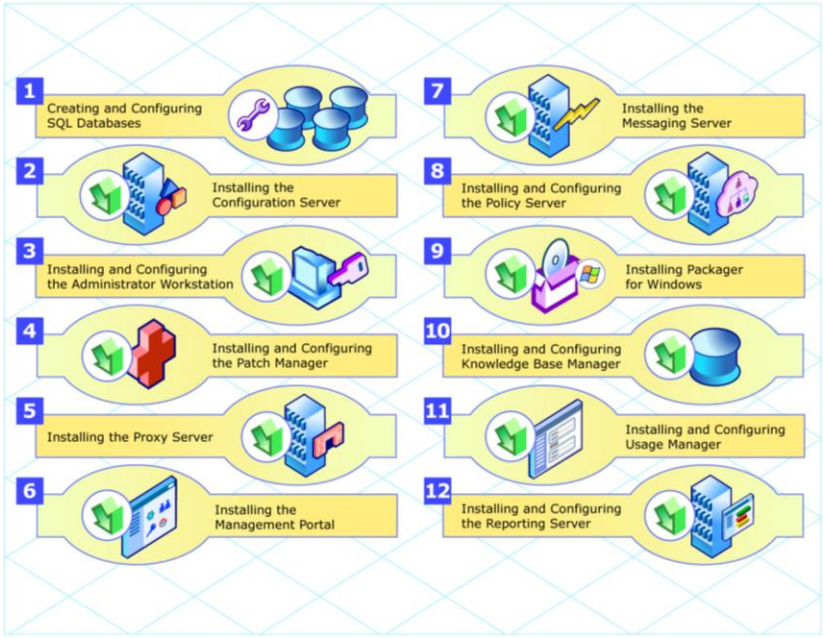
Now, you have your virtual environment and can begin installing the HP OpenView Configuration Management Solutions.

5 Installing the HP OpenView Configuration Management Solutions Software

This chapter describes how to install and configure the HP OpenView Configuration Management Solutions software on your virtual server machine.

Figure 17 below provides an overview of what you will install in this demonstration environment.

Figure 17 Installation and configuration flow used in demo environment



Commented [TES2]: Would anyone like to see a checklist so that you can refer to it if you haven't finished the installation in one sitting?

About the installation media and tools

The HP OpenView Concepts and Processes DVD contains everything you need to complete the instructions in this document. Below is a description of the folders and their contents.

Note that there are additional files and directories for other platforms and products that will not be used.

Be sure to use only the media specified in this guide.

Table 9 HP OpenView Concepts and Processes DVD Contents

Folder	Contents
\Applications_111705	Version 4.2 installation for the Radia Client
\ConfigurationServer_111705\management_infrastructure	Version 4.2 installations for: • HP OpenView Configuration Server Using Radia • HP OpenView Administrator Workstation Using Radia • HP OpenView Extensions for Windows Installer Using Radia
\Infra_111705\extended_infrastructure	Version 4.2 installations for: • HP OpenView Knowledge Base Manager Using Radia • HP OpenView Management Portal Using Radia • HP OpenView Proxy Server Using Radia
\Infra_111705\management_extensions	Version 4.2 installation for the HP OpenView Policy Server Using Radia.
\Licenses_and_Serial_Numbers	• Radia RUP.txt contains the license string for the HP OpenView Extensions for Windows Installer Using Radia, HP OpenView Usage Manager Using Radia and Patch Manager. • RADIA v3+.nvd is the license file used for all other HP OpenView Products used in this document
\Patch_prerequisite_software\extended infrastructure\messaging_server	Installation for HP OpenView Messaging Server 3.2 Using Radia
\Patch_prerequisite_software\extended infrastructure\reporting_server	Installation for HP OpenView Reporting Server 3.2 Using Radia
\Patch_prerequisite_software\Radia Self Maintenance	Update to nvdkit.exe for the Radia client to the 8.4 tcl version
\Patch_prerequisite_software\Management_Portal_2.1_Updates	• The Tcl 8.4 metakit conversion utility • HP OpenView Management Portal Using Radia updates.
\PatchMgr_3.0\ Extended_infrastructure \patch_manager_server	Installation for HP OpenView Patch Manager 3.0 Using Radia
\PatchMgr_3.0\ local_patches	The patches that you will use in the exercises for patch acquisition.
\Publications CD	Comprehensive documentation about all of the products covered in this guide. For new documents and updated versions, go to **http://ovweb.external.hp.com/lpe/doc_serv/**
\Resources	Miscellaneous resources that you will need while using this document.

Folder	Contents
\UsageManager	Installation for HP OpenView Usage Manager Using Radia.
\VMware_images\HP OVCM Server	A compressed VMware image of a server with the following: • Windows 2003 Server Enterprise Edition SP1 • Microsoft's SQL Server 2000 and Service Pack 4 • 1 GB of memory • 16 GB free disk space • Internet Information Services (IIS) • Active Directory • DHCP • DNS Server • VMware tools
\VMware_images\ HP OVCM Target	A compressed VMware image of a target machine with Windows XP with Service Pack 2.

Before You Begin

- If necessary, create Shared folders so that you can access information on your host machine. To do this, see Configuring Shared Folders in VMware on page 126.
- Copy the \Licenses_and_Serial_Numbers folder to the server desktop.
- Be sure that you are comfortable using VMware.
  - Remember that you have to click in an image to make it active.
  - To release your cursor, press CTRL + ALT on your keyboard.
  - To reboot or shutdown the machine, press CTRL + ALT + Insert on your keyboard.
  - Make sure you understand how to take snapshots and how to use the Snapshot Manager. We recommend that you take snapshots of your work along the way so that if necessary, you can return to an earlier snapshot, rather than going back to the initial image. This is also helpful when performing the exercises because it will allow you to perform them more than once by returning to an earlier snapshot.
- Whenever instructed to perform a manual exercise, such as typing information into fields, be very careful. A typo can affect the outcome of your installation.

Reference Guide for the Environment

Use the following table as reference for information that will be provided throughout this document. This table contains user ids, passwords, IP addresses and more.

Commented [TES3]: Could use better title

Commented [TES4]: WWhat do people think? Is this useful? Or, would it be better later – so that people don't try to build things on their own with this limited info? Or, is it even necessary?

Someone suggested: How about putting each of these tables in their respective sections? Use "Setup" in the name of the table. This way the user hopefully won't try to skip steps and install by themselves.

My response is that I think we should either remove it or make it an appendix. I want to hear your thoughts.

General Setup

Table 10 General

Item	Value
Domain	Demo.hp.com

Item	Value
Pre-defined users with their organizational units, user ids and passwords	Lisa Black • ou = Corporate • ou = Engineering • uid = LBlack • pw = HPOV#0123 Mark Smith • ou = Corporate • ou = Engineering • uid = MSmith • pw = HPOV#0123 Jessica Putnam • ou = Corporate • ou = Marketing • uid = JPutnam • pw = HPOV#0123 Larry Linzer • ou =Corporate • ou = Marketing • uid = LLinzer • pw = HPOV#0123

Table 11 HPOV Config Mgmt Server

Item	Value
Administrator User Name	Administrator
Administrator Password	radia
Server IP	192.168.5.40
SUBNET Mask	255.255.255.0
Hostname	HPOVSERVER
Default Gateway	192.168.5.2
Preferred DNS Server	127.0.0.1

Table 12 HP OVCM Target Device

Item	Value
Administrator User Name	Administrator
Administrator Password	radia
IP	192.168.5.10
Subnet mask	255.255.255.0
Default Gateway	192.168.5.2
Preferred DNS Server	192.168.5.40
hostname	hpovclient

Table 13 SQL Server

Item	Value
SQL administrator name	sa
SQL administrator password	radia
Inventory Manager Database Name	Inventory
Patch Manager Database Name	Patch
Usage Manager Database Name	Usage
ODBC DSN Name for Inventory Database	Inventory
ODBC DSN Name for Patch Database	Patch
ODBC DSN Name for Usage Database	Usage

Table 14 HP OpenView Configuration Server Using Radia

Item	Value
Configuration Server Name	RCS
Configuration Server ID	001
Zone Name	Demo

Table 15 Proxy Server

Item	Value
RPS User ID	RPS

Table 16 Management Portal

Item	Value
User Id	admin
Password	secret
Management Portal Zone Name	Demo
Zone Friendly Name	Demo

Creating and Configuring SQL Databases

Several of the HP OpenView Configuration Management Products use a structured query language (SQL or Oracle) database via ODBC. These databases store information that you can view through the HP OpenView Reporting Server Using Radia. For this installation, you will use SQL Server only.

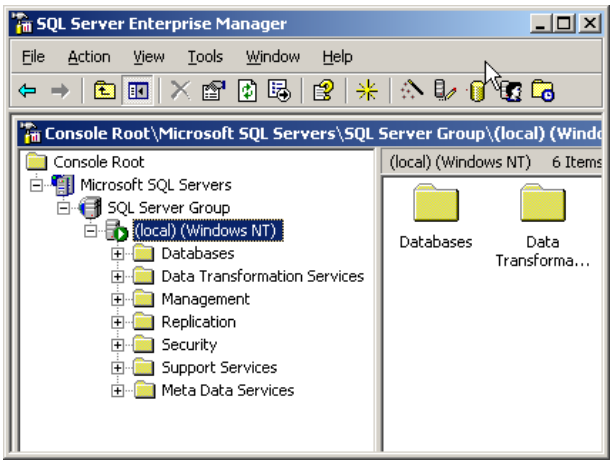
You must create the databases and create the ODBC connections to the databases prior to installing the products. You will also perform administrative tasks for allocating space and creating user IDs and passwords for the Databases.

Repeat the following steps three times in order to create three databases—Inventory, Patch, and Usage.

To create the databases

1 On the HPOV Config Mgmt Server, go to **Start→All Programs→Microsoft SQL Server→Enterprise Manager**.

2 Expand the tree on the left until you see the Databases folder.



3 Right click the **Databases** folder and select **New Database.**

The Database Properties window opens.

4 In the Name text box, type **`Inventory`**.

Each time you repeat these steps give the database a new name – **`Patch`** and **`Usage`**.

5 Select the **Data Files** tab.

6 In the Initial size (MB) field, type **`50`**.

7 In the File Properties area, confirm that the **Automatically grow file** check box is selected. Select by percent and type **`20`**.

8 Select the **Transaction Log** tab.

9 In the Initial size (MB) field, type **`25`**.

10 In the File Properties area, confirm that the **Automatically grow file** check box is selected. Select by percent and type **`20`**.

11 Click **OK**.

15 Repeat these steps two more times, changing the value that you enter in the Name text box to **`Patch`** and **`Usage`**.

16 When you are done, close the SQL Server Enterprise Manager.

When you have created the three databases, you will create ODBC system connections to the SQL Databases.

To create ODBC System Connections to the SQL Databases

You must create ODBC system connections in order to post data to your SQL Databases.

1 Go to **Start→ Administrative Tools→Data Sources (ODBC)**.

2 In the Data Source Administrator dialog box, select the **System DSN** tab.

3 Click **Add**.

4 In the Create New Data Source dialog box, select **SQL Server**.

5 Click **Finish**.

6 When creating an ODBC System Connection to the Inventory Database, in the Create a New Data Source to SQL Server dialog box, type **`Inventory`** for the name and description for the data sources.

> You will repeat these steps two more times. Each time, type a new name and description – **`Patch`** and **`Usage`**.

7 From the Server drop-down list box, select the name of the server, **HPOVSERVER**.

8 Click **Next**.

9 For How should SQL Server verify the authenticity of the login ID? select **With SQL Server authentication using a login ID and password entered by the user**.

10 In the Login ID text box type **`sa`**, and in the Password text box type **`radia`** for the SQL server authentication.

11 Click **Next**.

12 Select the Change the default database to check box and then select the appropriate database for the connection you are creating. For example, if you are creating a connection for the Inventory database, select Inventory.

13 Click **Next**.

14 Leave the default settings and click **Finish**.

15 In the **ODBC Microsoft SQL Server Setup** dialog box, click **Test Data Source** to test your data source connectivity.

16 When the test has completed successfully, click **OK** until you return to the System DSN tab in the ODBC Data Source Administrator.

> In the rare event that this test fails, your SQL service may have stopped or become unavailable before testing the data source. To check whether your SQL service is running, go to **Start→All Programs→Microsoft SQL Server→Service Manager.** If the service is stopped or paused, click Start/Continue and then retry the data source test.

17 Click **OK**.

18 Repeat these steps (from step 3) two more times, changing the value that you use for the name and description to **`Patch`** and **`Usage`**.

19 After you have created all of the connections, click **OK** in the ODBC Data Source Administrator dialog box.

Installing the HP OpenView Configuration Server Using Radia

The HP OpenView Configuration Server Using Radia resides on a single server, or several can be installed across a network. The Configuration Server installation also contains the Radia Database. To view or manipulate the contents of the Database, you must use the Management Portal or the System Explorer.

In this demo, you will install the Configuration Server on a single server. Use these instructions for the installation.

Leave the defaults unless noted otherwise in the instructions below.

To install the HP OpenView Configuration Server Using Radia

1. From the HP OpenView Concepts and Processes DVD go to `\ConfigurationServer_111705\management_infrastructure\configuration_server\win32` and double-click `setup.exe`.
2. On the select products to be installed and supported window, select the **Patch Manager** and **Usage Manager** check boxes.
3. On the License Information window, browse to `\Licenses_and_Serial_Numbers` and select `RADIA v3+.nvd`.
4. In the Specify the Zone Name text box, type **`Demo`**. The Zone Name is a label for the group of intended target devices.
5. Click **Install**.
6. Click **Finish**.

Updating the HP OpenView Configuration Server Using Radia

You must update the HP OpenView Configuration Server Using Radia so that you have the latest version which supports the Messaging Server.

To update the HP OpenView Configuration Server Using Radia

1. From the HP OpenView Concepts and Processes DVD go to `\ConfigurationServer_111705\management_infrastructure\configuration_server\migrate_rcs`.
2. Copy the file `ZTASKEND` (dated 8/10/2005) and paste it into `C:\Novadigm\ConfigurationServer\rexx`.
3. Open `C:\Novadigm\rexx\Novadigm` and rename `ZTASKEND` to `OLDZTASKEND`.

Next, you must copy a new taskend.tcl to support Radia Reporting.

To apply the taskend.tcl file to your Configuration Server

1. Stop the Configuration Server Service.
2. Go to **Start→ Administrative Tools→Services**.
3. Select **Radia Configuration Server**, right-click and select **Stop**.
4. Go to `C:\Novadigm\ConfigurationServer\Lib\taskend.tcl` and rename it to `taskend.old`.
5. From the DVD, go to `\Patch_prerequisite_software\extended_infrastructure\reporting_server\win32\media\PreReq\RCS\LIB` and copy `taskend.tcl`.
6. Paste this file into `C:\Novadigm\ConfigurationServer\Lib`.
7. Start the Configuration Server Service.
   a. Go to **Start→Administrative Tools→Services**.
   b. Select **Radia Configuration Server**, right-click and select **Start**.

Installing and Configuring the Administrator Workstation

The Administrator Workstation contains a set of tools for basic administrative functions such as managing the Radia Database, preparing applications, and viewing client objects.

Use these instructions to install the Administrator Workstation.

Leave the defaults unless noted otherwise in the instructions below.

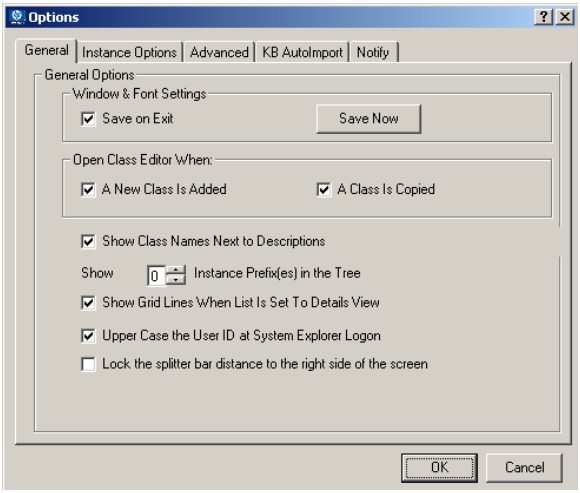
To install the Administrator Workstation

1. From the HP OpenView Concepts and Processes DVD, go to `\ConfigurationServer_111705\management_infrastructure\administrator_workstation\win32` and double-click `setup.exe`.
2. On the IP address and port window, type the IP address, **`192.168.5.40`**, for the Configuration Server.
3. Once the installation is complete, go to **Start→All Programs→Radia Administrator Workstation→Radia System Explorer** to open the System Explorer.
4. In the User ID text box, type **`RAD_MAST`** and leave the password text box blank.
5. In the System Explorer, go to **View→Options** and set the options as follows.

   See *HP OpenView Administrator Workstation Using Radia: System Explorer Guide* for more information about these options.

   For this demo, use the recommended settings; otherwise your view of the System Explorer may be different from what is shown in this document.

   a. On the **General** tab, select the Show Class Names Next to Descriptions check box as shown in the figure below. Leave the rest of the default settings.

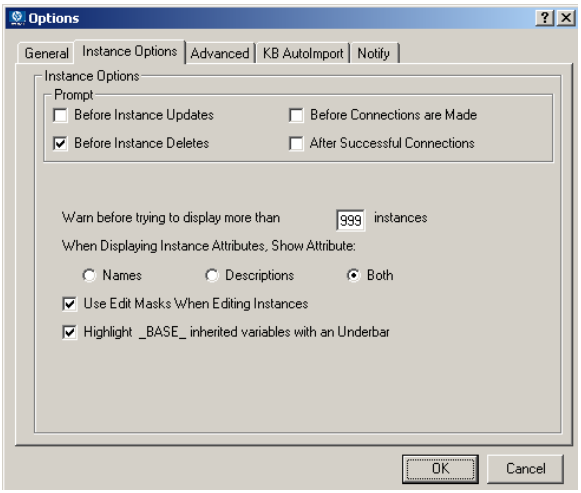


   b. On the **Instance Options** tab:

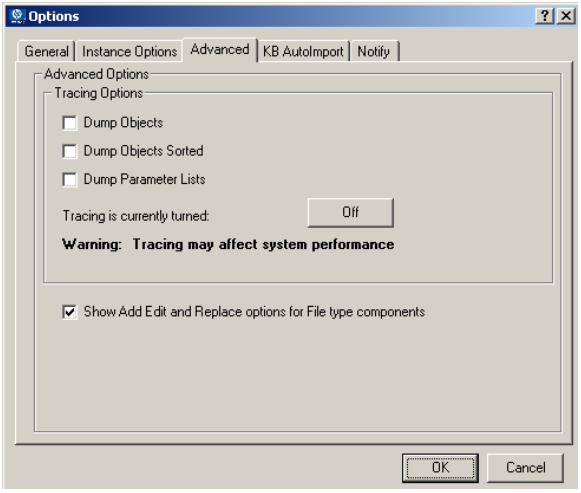
   – Clear the check boxes for Before Instance Updates, Before Connections are Made and After Successful Connections.

– In the When Displaying Instance Attributes, Show Attribute, select Both.

– Select the Highlight _BASE_ inherited variables with an Underbar check box.



c On the **Advanced** tab, select the Show Add Edit and Replace options for File type components check box as shown below.



8 Click **OK**

9 From the View menu, select **List View→Details.**

10 From the View menu, select **Tree Icons→Small.**

11 Close the System Explorer.

Performing Radia Self Maintenance

You must use the supplied Client Self-Maintenance package to automate the distribution of an updated nvdkit.exe (which uses Tcl 8.4 for its performance improvements).

To import the client self maintenance package

1. From the HP OpenView Concepts and Processes DVD go to `\Patch_prerequisite_software\Radia_Self_Maintenance\4.x` and copy the files to `C:\Novadigm\ConfigurationServer\Bin`.
2. Go to **Start→Administrative Tools→Services**.
3. Go to the Radia Configuration Server service, right-click it and select **Stop**.
4. Go to command prompt and change the directory `C:\Novadigm\ConfigurationServer\Bin`.
5. Type the following:

   ```
   Zedmams zfile import.txt
   ```

   A return code of 0 or 4 is successful.
6. Exit the command window.
7. Go to **Start→Administrative Tools→Services**.
8. Go to the Radia Configuration Server service, right-click it and select **Start**.

Updating the HP OpenView System Explorer Using Radia

You must perform this update for your HP OpenView System Explorer Using Radia to work properly.

1. From the DVD, go to `\resources` and copy `R3207241.zip` to your machine.
2. Extract the file to `C:\Program Files\Novadigm`.

Installing and Configuring the HP OpenView Patch Manager Using Radia

HP OpenView Patch Manager Using Radia provides an administrator with the ability to configure acquisition tools to automatically collect security patches from a vendor's web-based security patch repository. In addition, Patch Manager can perform impact analysis and pilot testing to identify affected applications and devices.

Use these instructions to install HP OpenView Patch Manager Using Radia 3.0.

Leave the defaults unless noted otherwise in the instructions below.

To install the HP OpenView Patch Manager Using Radia

1. From the HP OpenView Processes and Concepts DVD, go to `\PatchMgr_3.0\extended_infrastructure\patch_manager_server\win32.`
2. Double-click `setup.exe`.

3 For **Select Components to Install**, select all of the check boxes**.**

4 Go to `\Licenses_and_Serial_Numbers\RADIA v3+.nvd`, select the file and click **Open**.

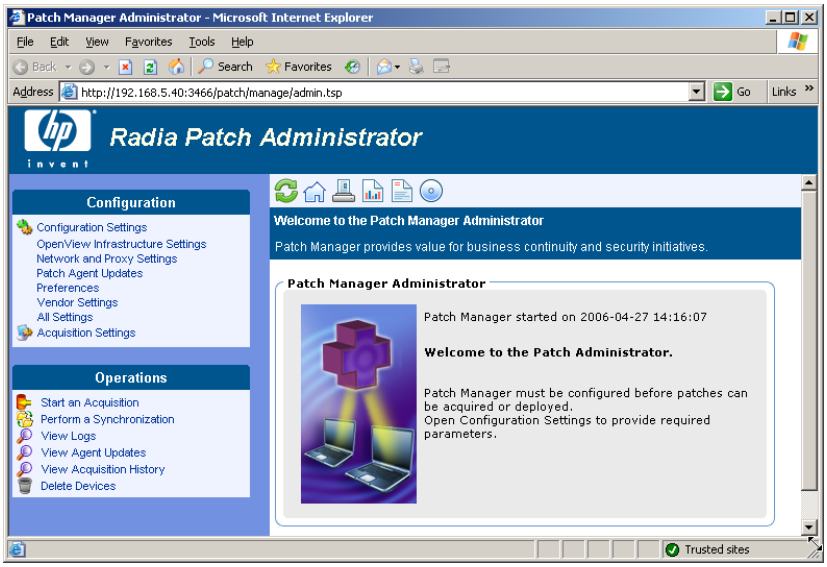
5 Specify the Integration Server IP address **`192.168.5.40`**.

6 Accept the rest of the defaults and click **Install**.

The installation may seem to stall at 44%. However, it will continue after a short wait.

7 When asked if you want to delete the existing PATCH domain, click **Yes**.

8 When asked if you want to open a web browser to finish the configuration, click **Yes**. The URL for the web page is **http://192.168.5.40:3466/patch/manage/admin.tsp**.



9 On the left, in the Configuration area, click **All Settings.**

10 Enter the following information:

a In the Configuration Server area, type **`RAD_MAST`** in the User ID text box.

b In the ODBC DSN area; in the Name text box, type **`Patch`** and the password, **`radia`**.

c In the Patch Agent Updates area, make sure that the following are selected – Publish and Distribute, All, Version 3.

d In the Reporting Server area, replace *`reportingserver`* with **`reporting`**.

11 To save your changes, click **Save**.

12 Click **Apply configuration Changes Now** and then click **Apply.**

The page displays the date and time that the Patch Manager was started.

13 Click **Perform Database Synchronization Now** and then click **Submit**.

You should view a `Database Synchronization in progress` message, including the start date and time .

When done, you will see a final message that says Patch Manager started on *`MM-DD-YY HH:MM`*.

Using the MoveRIS Utility (internal use only)

The following procedure is a temporary *internal* solution to an issue where nvdkit.exe consumes 100% of the server's CPU. The issue is caused by co-locating Patch 3.0 (which uses tcl 8.4) on the same Integration Server instance using tcl 8.2. This issue can be resolved by running Patch 3.0 by itself on a separate Integration Server that utilizes the new nvdkit. To do this, you can use the MoveRIS utility.

To use the MoveRIS utility

1. From the DVD, Go to `\resources\`MoveRIS_1.2.4`\` and copy `MOVERIS.CMD` and `RISINDEX.CMD` from `\resources` to `C:\Novadigm`.
2. Open a command prompt and change the directory to `C:\Novadigm`.
3. Type the following command: **`Moveris.cmd RPM`** and press **Enter** on your keyboard.

   This duplicates the RIS instance and configures it to run on the port, 3469.
4. When Notepad opens and displays the module load lines, close Notepad to continue the move.
5. When you are done, go to `C:\Novadigm` and delete `MOVERIS.CMD` and `RISINDEX.CMD`.
6. Go to `C:\Novadigm` and you will notice a new directory called `PatchManager_3469`.
7. Go to `C:\Novadigm\PatchManager_3469\etc` and use Notepad to open `patch.cfg`.
8. Do a search for IntegrationServer and replace it with PatchManager_3469. You should make five replacements. The lines where the replacements should be made are listed below.

   ```
   DATA_DIR {C:\Novadigm\IntegrationServer\data}
   ETC C:/Novadigm/IntegrationServer/etc/patch
   HOME C:/Novadigm/IntegrationServer/modules/patch.tkd
   LOG C:/Novadigm/IntegrationServer/logs
   ROOT C:/Novadigm/IntegrationServer
   ```
9. Save and close `patch.cfg`.
10. Go to **Start→ Administrative Tools→Services** if you want to see the new Patch Manager Service. It is called Radia Integration Server (httpd-rpm) with a description of Patch Manager.
11. To open the Patch Manager Administrator, go to **http::/192.168.5.40:3469/patch /manage/admin.tsp**. Add this page to your Favorites.

If you receive an Internet Explorer message indicating that the content from the Web site is blocked, click **Add**. In the Trusted sites window, click **Add** and then click **Close**.

Acquiring Patches

Typically patches are acquired from the vendor and require Internet access. However, for this demo we do not have internet access and will use a pre-populated configuration.

To store patches locally

1 In `C:\Novadigm\PatchManager_3469`, create a directory called `data`.

2 From `PatchMgr_3.0\local_patches`, copy the `\patch` directory and the `packing.list` to `C:\novadigm\PatchManager_3469\data\`.

Installing the HP OpenView Proxy Server Using Radia

The HP OpenView Proxy Server enables Radia-managed devices to receive application data over the Local Area Network (LAN) instead of across a Wide Area Network (WAN). HP OpenView Proxy Servers increase scalability while dramatically reducing traffic over the network. The HP OpenView Proxy Servers used in your environment are beneficial if you have many target devices requesting the same resources from the same location. When data is cached on the HP OpenView Proxy Server, the demand placed on the HP OpenView Configuration Server is decreased, allowing the HP OpenView Configuration Server to allocate more resources to other tasks.

Placing the HP OpenView Proxy Servers at strategic points in your network increases the efficiency at which data is transferred. The connection between subscribers and the HP OpenView Proxy Server may be more efficient than the connection between the subscribers and the HP OpenView Configuration Server. The factors that determine the efficiency of a connection between a server and a target device include hardware capability, network bandwidth, workload on the servers, network traffic patterns, and the volume of software to be distributed.

For this demonstration, a Proxy Server isn't truly necessary because we have a simple environment. However, since it is generally recommended to use Proxy Servers (because they can deliver data via HTTP) and to co-locate them if other Proxy Servers aren't being used, we will install a co-located Proxy Server in order for you to gain the experience.

A co-located proxy server is a Proxy Server placed on the same machine as the Configuration Server to provide a source for downloading resources to other HP OpenView Configuration Management Solutions using HTTP.

Use these instructions to install the Proxy Server.

Leave the defaults unless noted otherwise in the instructions below.

To install the HP OpenView Proxy Server Using Radia

1 From the HP OpenView Concepts and Processes DVD go to `Infra_111705\extended_infrastructure\proxy_server\win32` and double-click `setup.exe`.

2 On the License Information window, browse to `\Licenses_and_Serial_Numbers` and select `RADIA v3+.nvd`.

3 In the Server IP address text box, type the server machine's IP address, **`192.168.5.40`**.

4 Click **Install** and then click **Finish**.

5 Because you are installing the Proxy Server on the same machine as the Configuration Server, you must configure the proxy as a co-located proxy. To do this:

   a Use a text editor to open `C:\novadigm\IntegrationServer\etc rps.cfg`.

   b Change **static-root** to **`C:/Novadigm/ConfigurationServer/DB`** and the **static-type** attribute to **`server`** and as shown in the example below:

```
-static-root        "C:/Novadigm/ConfigurationServer/DB"
```

```
-static-type       server
```

Be sure to use forward slashes as shown in the example above.

c Save and close the file.

6 Restart the Radia Integration Server service.

To restart the Radia Integration Server service

1 Go to **Start→ Administrative Tools→Services**.

2 Select **Radia Integration Server (httpd)**, right-click and select **Restart**.

Installing the HP OpenView Management Portal Using Radia

The HP OpenView Management Portal Using Radia is a web-based interface that can be used to manage your HP OpenView Configuration Management infrastructure. Use these instructions to install the Management Portal.

Leave the defaults unless noted otherwise in the instructions below.

To install the HP OpenView Management Portal Using Radia

1 From the HP OpenView Concepts and Processes DVD go to `\Infra_111705\extended_infrastructure\management_portal\win32` and double-click `setup.exe`.

2 In the **Management Portal Zone Name** text box, type **`Demo`**.

3 In the **Management Portal Zone Friendly Name** text box, type **`Demo.`**

4 When prompted, click **`Yes`** to allow **Remotely Installable Infrastructure Components** to be copied.

5 When prompted, click **`Yes`** to allow **Remotely Installable Client Components** to be copied.

6 When prompted for the location of these files, browse to the `\Applications_111705` folder and click **Next**.

7 When prompted, click **Yes** to install the Documentation.

8 When you are prompted for the location of these files, browse to the `\Publications CD` folder and click **Next**.

9 After you complete the Management Portal installation, a web page opens the Management Portal. Set this page as the default home page.

To log into the Management Portal, the user id is `admin` and the password is `secret`.

If you get a message about the content from the Web site being blocked, click **Add**. In the Trusted Sites dialog box, click Add and then Close.

10 Close the web browser.

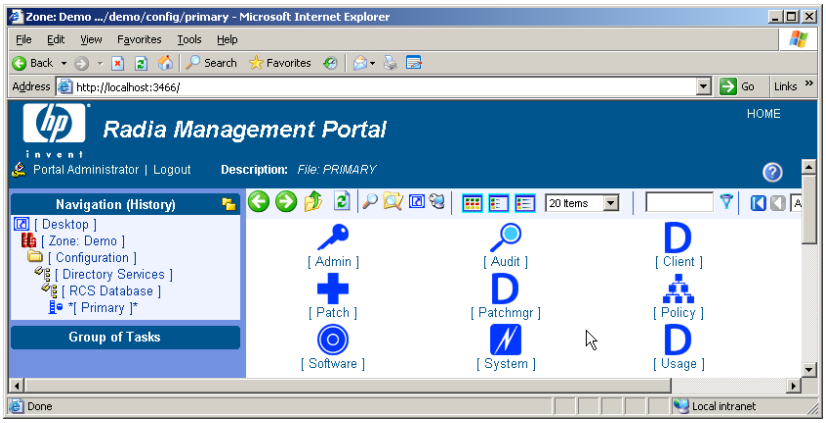
Configuring the Management Portal to access the Configuration Server

You must add a new directory service to configure a connection between the Management Portal and the Configuration Server.

To configure the Management Portal

1. Open your Web browser. If you set the Management Portal as the default page, it will load automatically. If not, go to **http://192.168.5.40:3466**. In the User Name text box, type **`admin`** and in the Password text box, type **`secret`**.
2. Click **Login**.
3. In the workspace, click the **ZONE: Demo** icon, then click **Configuration**, and then click **Directory Services**.
4. From the Model Administration task list, click **Add Directory Service**.
5. In the Type list box, select **ds-rcs**.
6. In the URL text box, change the value of localhost to the IP address of the Configuration Server which is **`192.168.5.40`**.
7. Click **Submit**.

   Now, you can see the classes stored in the Primary file of the Radia Database.



You may want to click to create a shortcut in the Management Portal's desktop to the Primary file. If you click this icon, you will be asked to confirm that you want to add a shortcut. Click the check mark to confirm.

In the future, you will not have to navigate to Zone: Demo, Configuration to access this information. When you log into the Management Portal, Primary will be one of the items on the main desktop.

Installing the HP OpenView Messaging Server Using Radia

The Messaging Server is a service that is used with several of the HP OpenView Configuration Management infrastructure components. It continually monitors pre-defined locations on the server and routes data to external destinations.

Use these instructions to install the Messaging Server 3.2.

Leave the defaults unless noted otherwise in the instructions below.

To install the Messaging Server

1. Go to `\Patch_prerequisite_software\extended_infrastructure \messaging_server\win32` and double-click `setup.exe`.
2. On the Select each Data Delivery Agent (DDA) to Install dialog box, select all of the check boxes and click **Next**.
3. For the RIM Server IP Address type the IP address **`192.168.5.40`** for the server.
4. For the RIM Server Port, leave the default 3466.

   The RIM information must be entered even though we are not using the Inventory Manager. This is included for compatibility with existing installations of the Messaging Server.

5. Leave the RMP IP Address and Port text boxes blank.
6. Leave the default Store and Forward Port as 3461.
7. On the RMS Configuration screens:
   a. For the **Data Source Name**, type **`Patch`**.
   b. For the **Data Source User Name**, type **`sa`**.
   c. For the **Data Source Password**, type **`radia`**.
8. On the Core Data Delivery Agent Configuration screens:
   a. For the **Data Source Name**, type **`Inventory`**.
   b. For the **Data Source User Name**, enter **`sa`**.
   c. For the **Data Source Password**, enter **`radia`**.
9. Type the RMP IP address **`192.168.5.40`**.
10. Type the RMP Port **`3466`**.
11. On the Inventory Data Delivery Agent Configuration screens:
    a. For the **Data Source Name**, type **`Inventory`**.
    b. For the **Data Source User Name**, type **`sa`**.
    c. For the **Data Source Password**, type **`radia`**.
12. On the WBEM Data Delivery Agent Configuration screens:
    a. For the **Data Source Name**, type **`Inventory`**.
    b. For the **Data Source User Name**, type **`sa`**.

c For the **Data Source Password**, type **radia**.

13 On the Patch Data Delivery Agent Configuration screens:

a For the **Data Source Name**, type **Patch**.

b For the **Data Source User Name**, type **sa**.

c For the **Data Source Password**, type **radia**

14 To install the Messaging Server, click **Install**.

15 When the installation has completed, click **Finish**.

16 Go to `C:\novadigm\MessagingServer\etc`.

17 Use a text editor to open `wbem.dda.cfg`.

18 Change the values of AUTOCREATE and STARTUPLOAD to **1**.

— AUTOCREATE enables the creation of a new SQL file and table entry for a new object class.

— Setting STARTUPLOAD to 1 allows SQL tasks to be performed when the Messaging Server starts up.

19 Save and close the file.

20 Use a text editor to open `core.dda.cfg`.

21 Change the value of STARTUPLOAD to 1.

22 Save and close the file.

23 Use a text editor to open `inventory.dda.cfg`.

24 Change the value of STARTUPLOAD to 1.

25 Save and close the file.

26 Restart the Messaging Server service.

a Go to **Start→Administrative Tools→Services**.

b Select **Radia Messaging Server**, right-click and select **Restart**.

Installing and Configuring the HP OpenView Policy Server Using Radia

The HP OpenView Policy Server integrates with Microsoft's Active Directory. The Policy Server is a Web server used for administration purposes such as mapping services to users in the directory tree. It provides integration and extended enterprise functionality with your directory services.

Policy method connections in the Configuration Server Database are used to determine what services should be distributed and managed for the user that is currently logged on by querying the HP OpenView Policy Server.

Modifying the Active Directory Schema

The HP OpenView Policy Server integration with Microsoft's Active Directory requires that certain attributes be added to the Directory schema. A properly formatted LDIF file has been included on the DVD.

To modify the Active Directory Schema

1. From the HP OpenView Concepts and Processes DVD go to `\Resources` and copy `demo.ldif` to your server machine.
2. Go to a command prompt and change to the directory containing the demo.ldif file.
3. Type the command **`ldifde -I -f demo.ldif`** and press Enter.

   The script runs and makes the necessary changes to your schema. You will be advised when the command has been completed successfully.

Installing the HP OpenView Policy Server Using Radia

Use these instructions to install the Policy Server. *Leave all of the defaults.*

To install the Policy Server:

1. From the HP OpenView Concepts and Processes DVD, go to `Infra_111705\management_extensions\policy_server\win32` and double-click `setup.exe`.
2. Click **Install**.

   If prompted, do not replace nvdkit with an older file.

3. Click **Finish**.

Configuring the HP OpenView Policy Server Using Radia for Active Directory

Use the steps below to configure the Policy Server to communicate with Active Directory.

To configure the Policy Server for Active Directory

1. Open your Web browser. If you set the Management Portal as the default page, it will load automatically. If not, go to **http://192.168.5.40:3466**.
2. In the top right banner area, click **POLICY**.
3. Click **Setup**.

   The Setup/Configuration window opens.

   a. Change **Type** to **`ldap.`**

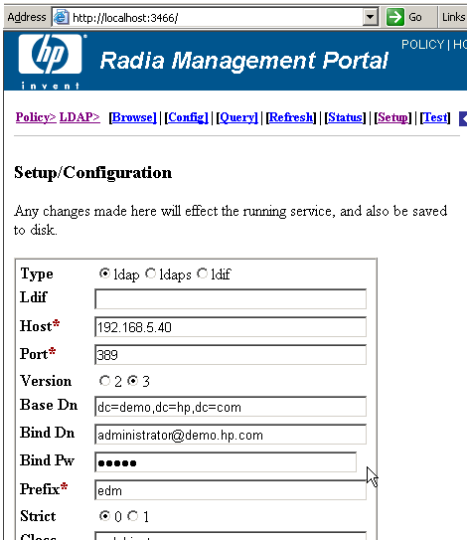
   b. In the LDIF text box, delete acme.ldif and leave this empty.

   c. For Host, enter the IP address of the server machine **`192.168.5.40`**.

   d. In Base Dn type **`dc=demo,dc=hp,dc=com`**

   e. In Bind Dn type **`administrator@demo.hp.com.`**

   f. In the Bind Pw password, type **`radia.`**



4 To save your changes, click **Submit**.

5 If the changes were accepted, you will see the following message:

Configuring the HP OpenView Management Portal Using Radia for Active Directory

You can use the HP OpenView Management Portal to mount and browse LDAP directories to be used for policy management. To do this, you must add a directory service for Active Directory in the Management Portal.

To add a directory service for Active Directory

1 Open your Web browser. If you set the Management Portal as the default page, it will load automatically. If not, go to **http://192.168.5.40:3466**. In the User Name text box, type **admin** and in the Password text box, type **secret**.

2 Click **Login**.

3 Click the **ZONE: Demo** icon, then click **Configuration**, and then click **Directory Services**.

4 In the Model Administration task list (on the left), select **Add Directory Service**.

5 Enter the Directory Services values as follows.

a In the Common Name and Display Name text boxes, type **AD_Demo**.

b In the Description text box, type **AD Demo.**

c In the Type text box, select **ds-ldap**.

d In the URL text box, type **ldap://192.168.5.40:389/administrator@demo.hp.com**.

e In the password text box, type the password for your Active Directory Server, **radia**.

f In the Use text box, type **dc=demo,dc=hp,dc=com**.

d To save the new configuration, click **Submit**.

You may want to click  to create a shortcut in the Management Portal's desktop to the demo.hp.com domain. If you click this icon, you will be asked to confirm that you want to add a shortcut. Click the check mark to confirm.

In the future, you can access the demo domain from the main desktop.

6 In the navigation pane, click **Desktop**,

7 In the workspace, click the **Zone: DEMO** icon, click **Configuration**, and then click **Directory Services**.

8 In the workspace, click **AD Demo** and the properties window opens.

9 From the Model Administration task list, select **Modify**.

10 From the Used for Policy drop-down list, select **true** and click **Modify**.

Configuring the LDAP Method

Policy method connections in the Configuration Server Database are used to determine what services should be distributed and managed for the user or machine that is currently logged on by querying the HP OpenView Policy Server.

In order to resolve both machine and user connects, you must create two LDAP methods in the Configuration Server Database and then connect the appropriate users to the LDAP methods. This prepares your Configuration Server Database to use LDAP for policy.

To create the LDAP method in the Radia Database

1 Go to **Start→All Programs→Radia Administrator Workstation→Radia System Explorer**.

2 In the User ID text box, type **RAD_MAST,** leave the password text box blank and click **OK**.

3 In the Database tree view, double-click **PRIMARY** and then **POLICY**.

In later instructions, you may encounter instructions such as "Go to PRIMARY.POLICY". This is a common way of instructing you to use the Database tree view and double-click each item.

4 Right-click **Users (USER)** and select **New Instance**.

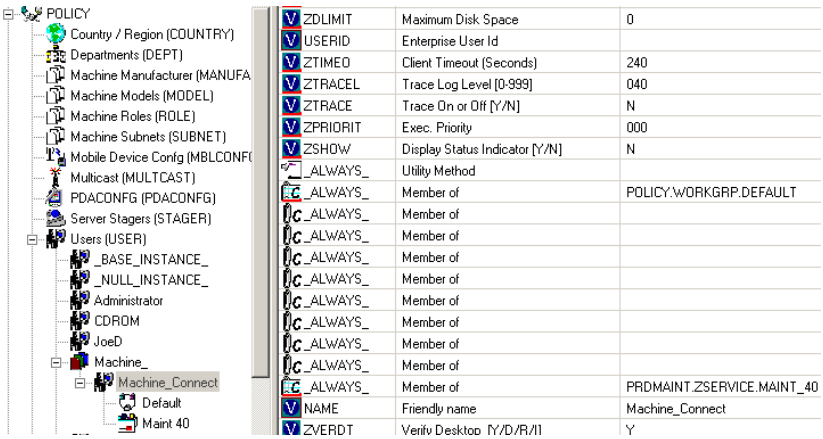
The Create Instance dialog box opens.

5 Type **Machine_Connect** for the Display name and **SYSTEM** for the instance name. The instance name *must* be SYSTEM because this allows the policy instance to be connected to the SYSTEM context. When a machine connects, it goes through the SYSTEM context to find its policy. The Configuration Server takes this entry plus the machine name from the client and goes to the LDAP server to get the policy for that device.

6 Click **OK**.

7 Open the new instance by double-clicking **Machine_** and then **Machine_Connect**.

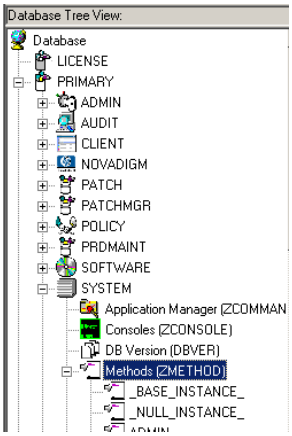
8 In the right pane, double-click the _ALWAYS_ connection that has a value of **POLICY.WORKGRP.DEFAULT**.



9 Modify the text in the Member of text box to **`POLICY.WORKGRP.DEFAULT-x`**. This comments out the use of internal policy so we can use Active Directory.

10 Click **OK**.

11 Go to **PRIMARY.SYSTEM.ZMETHOD**.



12 Double-click **ZMETHOD** to open the class. Then, right-click **ZMETHOD** and create a new instance with the name **`LDAP_USER`** .

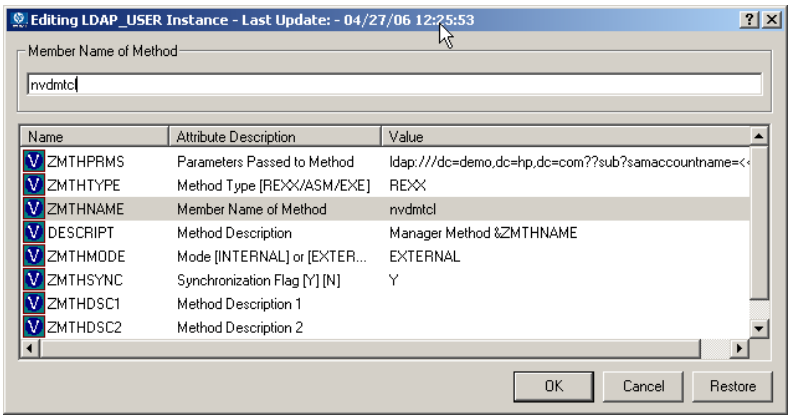
13 Double-click **LDAP**_ and then double-click **LDAP_USER.**

14 Double-click **ZMTHPRMS**.

15 In the Parameters Passed to Method text box, type **`ldap:///dc=demo,dc=hp,dc=com??sub?samaccountname=<<LOCALUID>>`**.

16 Click **ZMTHTYPE**, and select **REXX**

17 Click **ZMTHNAME**, and in the member name of method text box, type **`nvdmtcl`**.



18 Click **OK**.

You have finished creating the user method and must create the machine method.

19 In the Database Tree View, right-click **LDAP_USER,** and select **Copy Instance**.

20 In the Copy Instance LDAP_USER dialog box, type **`LDAP_MACHINE`**, and click **OK**.

21 Double-click the LDAP_MACHINE instance, and double-click **ZMTHPRMS**.

22 Change the Parameters Passed to Method to read as follows:
`ldap:///dc=demo,dc=hp,dc=com??sub?samaccountname=<<COMPNAME>>.`

23 Click **OK**.

24 Go to **PRIMARY.POLICY.USER**.

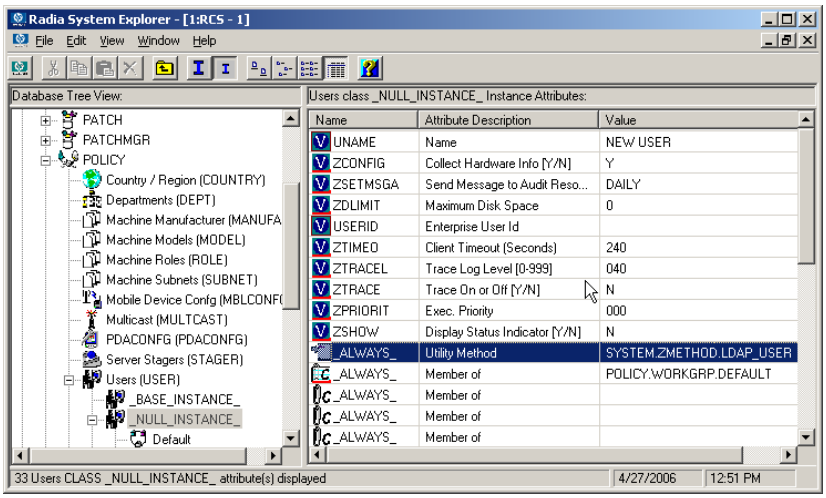
25 Right-click **PRIMARY.POLICY.USER** and select **Refresh**.

26 Double-click the **_NULL_INSTANCE_**.

27 In the right pane, double-click the **_ALWAYS_** connection that has a value of **POLICY.WORKGRP.DEFAULT**.

28 Modify the text in the Member of text box to **`POLICY.WORKGRP.DEFAULT-x`**. This comments out the use of internal policy so we can use Active Directory.

29 Select the _ALWAYS_ Utility method and in the Utility Method text box, type **SYSTEM.ZMETHOD.LDAP_USER**.



30 Click **OK**.

31 Go to **PRIMARY.POLICY.USER**, double-click **MACHINE_** and then double-click **MACHINE_CONNECT** and change the Utility method to **SYSTEM.ZMETHOD.LDAP_MACHINE**.

32 Click **OK**.

When a user logs onto Radia, the Null instance calls the LDAP_USER method and determines the appropriate services for that user. When a machine connect occurs, the UID will be set to SYSTEM, by default, and the LDAP_MACHINE method is used to determine the appropriate services for the machine.

Modifying the HP OpenView Configuration Server Using Radia

In this section, you must update to the Configuration Server's Database using the HP OpenView System Explorer Using Radia

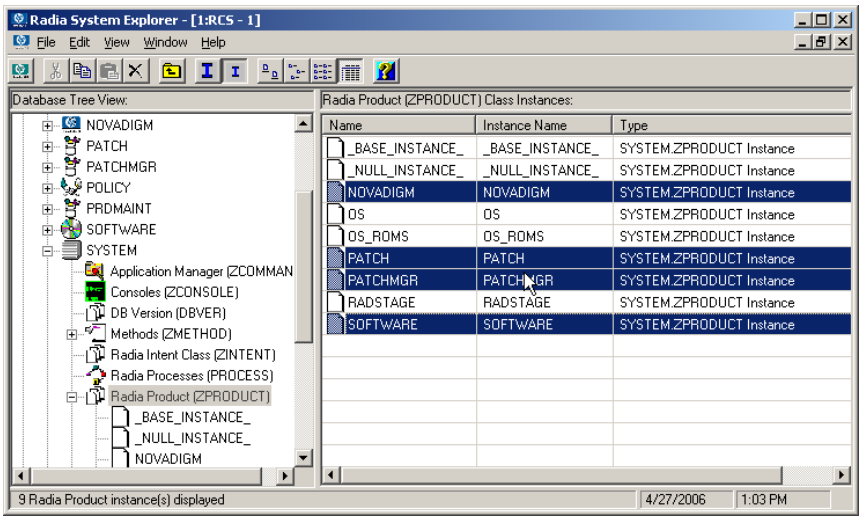
To update the Configuration Server

1 Go to **Start→All Programs→Radia Administrator Workstation→Radia System Explorer**.

2 In the User ID text box, type **RAD_MAST**, leave the password text box blank and click **OK**.

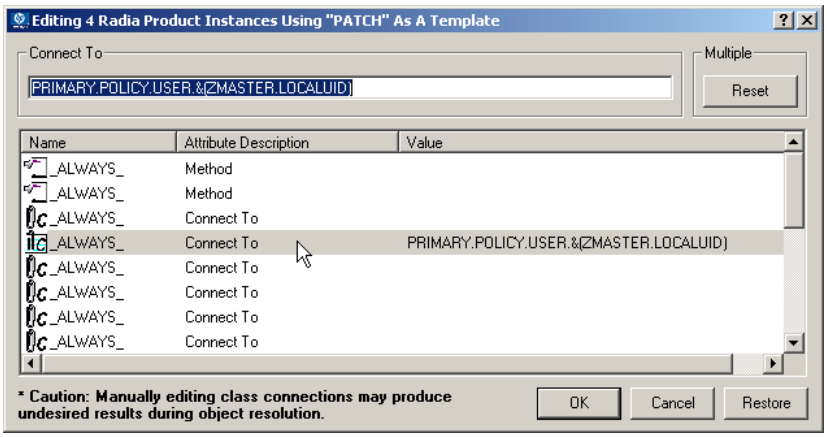
3 Go to **PRIMARY.SYSTEM.ZPRODUCT** and double-click **ZPRODUCT**.

4 **Ctrl+click** to edit the Novadigm, Patch, PatchMgr, and Software instances in the right pane.



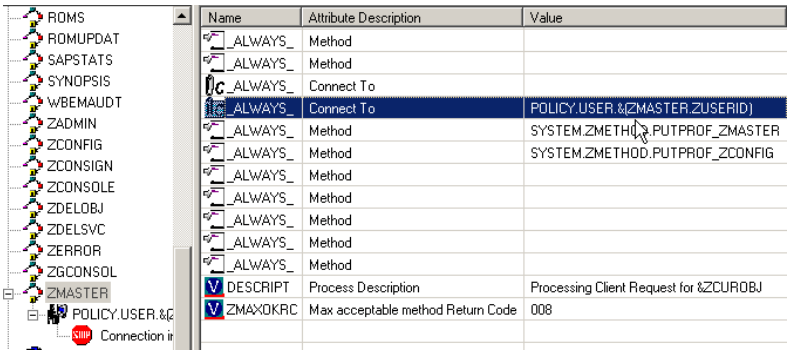
5 Right-click and select **Edit Multiple Instances**.

6 Look for the _ALWAYS_ connection that has a value of **PRIMARY.POLICY.USER.&(ZMASTER.ZUSERID)** and change it to **`PRIMARY.POLICY.USER.&(ZMASTER.LOCALUID)`**.



7 Click **OK**. When you get the Multiple Instance Edit Confirmation, click **OK**.

8 Go to **PRIMARY.SYSTEM.PROCESS.ZMASTER**.



9 Double-click **ZMASTER**.

10 In the right pane, double-click **POLICY.USER.&(ZMASTER.ZUSERID)** and change the value to **`SYSTEM.ZINTENT.&(SESSION.INTENT)`**.

11 Click **OK**.

12 Close the System Explorer.

Modifying the Configuration Server's Profile

The following must be done because your HP OpenView Configuration Server will use the HP OpenView Policy Server. The EDMPROF file is the configuration file for the HP OpenView Configuration Server. The following changes must be made to `C:\Novadigm\ConfigurationServer\bin\edmprof.dat`.

To modify the Configuration Server's Profile

1 Go to **Start→All Programs→HP Radia Configuration Server→Profile Editor**.

2 Locate the [`MGR_POLICY`] section and edit the following lines to read as follows.

`HTTP_HOST=` **`192.168.5.40`**

`HTTP_PORT =` **`3466`**

3 Save and close the file.

Installing HP OpenView Packager for Windows Using Radia

Use the HP OpenView Packager for Windows Using Radia to package MSI files. Packaging is the process of identifying resources, editing the resources' installation attributes, defining how they are installed and saving the resources and installation instructions. A package typically contains one or more files and configuration settings.

Use these instructions to install the Packager for Windows.

Leave the defaults unless noted otherwise in the instructions below.

To install the Packager for Windows

1. From the HP OpenView Configuration Server DVD, go to `\ConfigurationServer_111705\management_infrastructure\Radia_Ext_for_Win_Install\Installs\Admin Components\Radia Packager for Windows Installer.`
2. Double-click **Package.msi**.
3. Go to `\Licenses_and_Serial_Numbers\Radia RUP.txt` and copy the license string and paste it into the Enter the Product Serial Number text box.
4. Clear the checkbox for Install Application Insight, Insulation, Windows Installer Advanced Features.
5. Click **Install**.
6. Click **Finish**.

Installing and Configuring the HP OpenView Knowledge Base Manager Using Radia

The HP OpenView Knowledge Base Manager Using Radia automatically scans specific directories for data and imports the data into the appropriate databases.

Use these instructions to install the Knowledge Base Manager.

Leave the defaults unless noted otherwise in the instructions below.

To install the Knowledge Base Manager

1. From the HP OpenView Concepts and Processes DVD, go to `\UsageManager\Radia Knowledge Base Manager`.
2. Double-click **Package.msi**.
3. When done, click **Finish**.

Installing and Configuring HP OpenView Usage Manager Using Radia

The HP OpenView Usage Manager Using Radia assesses patterns of application usage in your environment. This allows you to facilitate adherence to license agreements, re-provision licenses if needed, and monitor user productivity.

Use these instructions to set up and install the HP OpenView Usage Manager Using Radia.

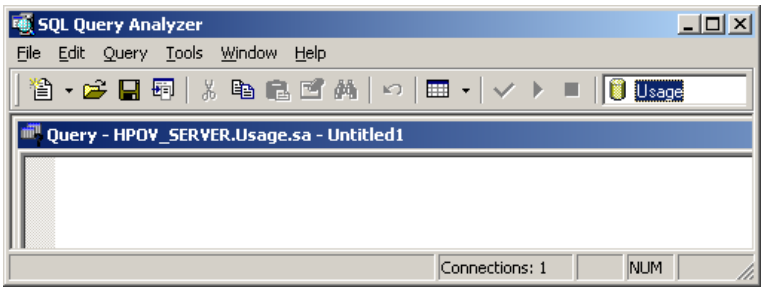
Leave the defaults unless noted otherwise in the instructions below.

Modifying the HP OpenView Usage Manager Using Radia Database

You must run several scripts to import the Usage Database schema information which accommodates the Reporting Server.

To modify the Usage Database to accommodate the Reporting Server

1. Go to **Start→All Programs→Microsoft SQL Server→Enterprise Manager**.
2. From the Tools menu select **SQL Query Analyzer**.
3. Confirm that the drop-down box in the toolbar displays the Usage database.



4. From the File menu select **Open**.
5. From within the Query Analyzer, open `\UsageManager\SQL Server\SQL Server 2000` on the DVD .
6. Execute the SQL scripts in the following order:

   Use Query Execute or press **F5** to run each script.

   a. `Step2_Define_UsageManager_Tables.sql`
   b. `Step3_Define_Common_Tables.sql`
   c. `Step4_Define_Views.sql`
   d. `Step5_Define_Stored_Procedures.sql`
   e. `Step6_Insert_Common_Functions.sql`
   f. `Step7_Insert_Common_DefaultData.sql`

   Do not exit the Query Analyzer.

7. In the SQL Query Analyzer, open `\UsageManager\SQL Server\SQL Server 2000\ServicePacks\Required and execute SERVICEPACK13_RUM_SQL_SERVER 2000.sql`
8. When you receive the message Query Batch Completed in the status bar, close the SQL Query Analyzer.

Configuring the HP OpenView Usage Manager Using Radia Client

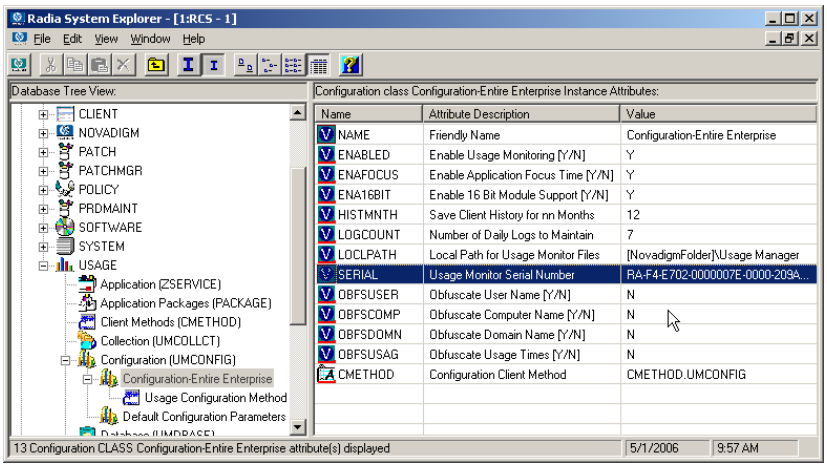
The HP OpenView Usage Manager Using Radia client is installed through a pre-defined service in the Configuration Server Database that requires minimal configuration. Define inventory and collection parameters in this service and then distribute it to your target devices.

Setting the Usage Manager's Serial Number

You must set the Usage Manager's serial number in the System Explorer in order to integrate Usage Manager with the HP OpenView Configuration Management infrastructure.

To set the serial number

1. Go to **Start→All Programs→Radia Administrator Workstation→Radia System Explorer**.
2. Login as **RAD_MAST** with no password.
3. Go to **PRIMARY.USAGE.UMCONFIG.Configuration-Entire Enterprise** and in the **SERIAL** attribute enter a valid serial number. Note that this is the same license string from `Radia RUP.txt`.

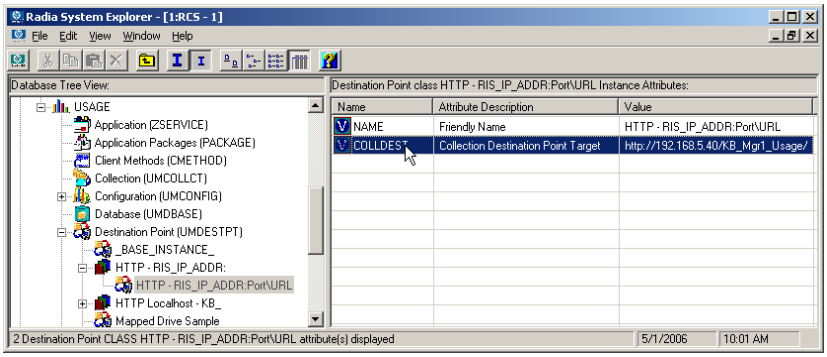


Setting the Collection Point

In the following steps, you will define where data is sent after collection.

To set the collection point

1. Go to **PRIMARY.USAGE.UMDESTPT.HTTP-RIS_ADDR**.
2. Double-click **HTTP-RIS_ADDR** and then double-click **HTTP – RIS_IP_ADDR:Port\URL**.
3. Double-click COLLDEST and change the collection destination point as follows: `http://192.168.5.40:3466/KB_Mgr1_Usage`.



4 Click **OK**.

Updating the Usage Manager Client

You must perform the following updates to the Usage Manager Client.

To update the Usage Manager Client

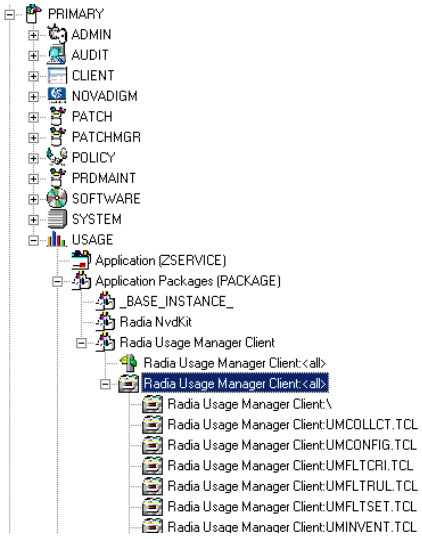
1 Go to **Start→All Programs→Radia Administrator Workstation→Radia System Explorer**.

2 Login with a User ID of **`RAD_MAST`** and a blank password.

3 Click **OK**.

4 Go to **PRIMARY.USAGE.PACKAGE**.

5 Double-click **Radia Usage Manager Client** and then double-click the files icon for the client.



6 Right-click **Radia Usage Manager Client:UMSetup.exe** and select **Replace Component Data**.

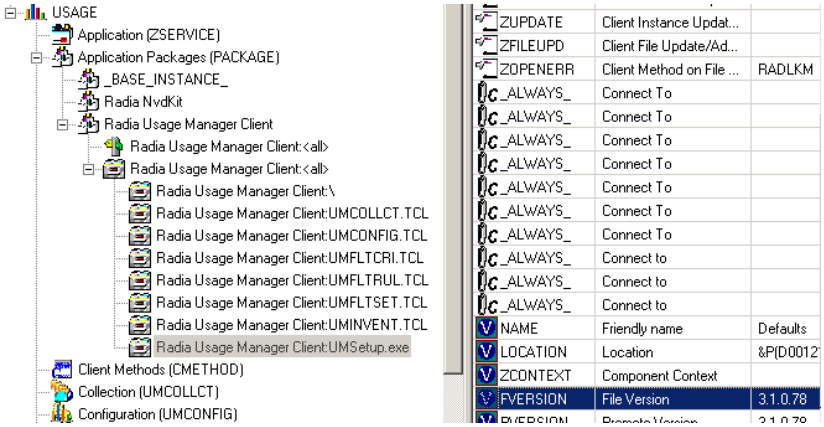
7 Go to `\UsageManager\Client Install\Setup` and select `UMSetup.exe`.

8 Click **Open**.

9 When asked to confirm, click **Yes**.

10 Now, open Radia Usage Manager Client:UMSetup.exe.

11 Confirm that the File Version is set to 3.1.0.78.



12 Right-click **Radia Usage Manager Client:UMCOLLCT.TCL** and select **Replace Component Data**.

13 Go to `\UsageManager\Client Install\Scripts` and select `UMCollct.tcl`.

14 Click **Open**.

15 When asked to confirm, click **Yes**.

16 Right-click **Radia Usage Manager Client:UMCONFIG.TCL** and select Replace Component Data.

17 Go to `\UsageManager\Client Install\Scripts` and select `Umconfig.tcl`.

18 Click **Open**.

19 When asked to confirm, click **Yes**.

20 Right-click **Radia Usage Manager Client:UMINVENT.TCL** and select **Replace Component Data**.

21 Go to `\UsageManager\Client Install\Scripts` and select `uminvent.tcl`.

22 Click **Open**.

23 When asked to confirm, click **Yes**.

Installing the Usage Manager Administrator

The Usage Manager Administrator installs a tool called the Rule Editor that is used by the Reporting Server to create Usage reports.

To install the Usage Manager Administrator

1. From the HP OpenView Concepts and Processes DVD, go to `UsageManager\Radia Usage Manager Administrator`.
2. Double-click **Package.msi**.
3. Copy the license string from `Radia RUP.txt` into the Enter the Product Serial Number text box.
4. Click **Install** and then **Finish**.

Updating the HP OpenView Usage Manager Using Radia

You must perform the following updates to the Usage Manager.

To update the Usage Manager

1. Copy `\UsageManager\Radia Integration Server\etc\usage.cfg` to `C:\novadigm\IntegrationServer\etc`.
2. Use a text editor to open the usage.cfg file and change the DSN to "**`Usage`**" and the DSN_PASSWD, "**`radia`**".
3. Save and close the file.

Configuring the HP OpenView Knowledge Base Manager Using Radia

The final step in setting up the Usage Manager is to configure the Knowledge Base Manager so that it populates data into the Usage Manager Database.

To configure the Knowledge Base Manager

1. Go to **Start→Control Panel→Radia KB Manager Configuration**.
2. At the top of the dialog box, click **New**.
3. In the Knowledge Base Name text box, type **`Usage`**.
4. From the Data Source Name drop-down list box, select **Usage**.
5. Type **`sa`** for the username and **`radia`** for the password.
6. Click **OK**.

   If you receive an error that the DataSource Name is already assigned to the Knowledge Base, click OK and Cancel. Then, click Save Configurations and try to add the new Knowledge Base again.

7. Click **New task**.
8. From the Task Type drop-down list box, select **Radia Usage Manager Collection Files**.
9. In the Task name text box, type **`Usage Collection`**.
10. Click **Browse** and go to `C:\Novadigm\IntegrationServer\etc\usage\KB_MGR1_Usage`.
11. Click **OK.**

12 Click **OK** to close the Add Task dialog box.

13 Click **Save configurations**...

14 Click **OK.**

15 Click **Exit** to close the Radia KB Configuration Manager.

16 Restart the Radia KB Manager service.

To restart the Radia Knowledge Base Manager service

1 Go to **Start→ Administrative Tools→Services**.

2 Click **Radia Knowledge Base Manager**, right-click and select **Restart**.

Installing and Configuring the HP OpenView Reporting Server Using Radia

The HP OpenView Reporting Server Using Radia interface provides a dynamic and intuitive way to use HP OpenView Configuration Management SQL data for reporting and overall environmental assessment. The web-based Reporting Server allows you to query the combined data in existing Inventory Manager, Patch Manager, and Usage Manager databases and create detailed reports. In addition, you have the option of mounting an existing LDAP directory, which allows you to filter your data using your LDAP directory levels.

Use these instructions to install the HP OpenView Reporting Server Using Radia.

Leave the defaults unless noted otherwise in the instructions below.

To install and configure the Reporting Server

1 From the HP OpenView Concepts and Processes DVD, go to `\patch_prerequisite_software\extended_infrastructure\reporting_server\win32`.

2 Run `setup.exe`.

If you are asked to replace a .tcl file with an older version, click No.

2 When done, click **Finish**.

3 Go to **Start→All Programs→Microsoft SQL Server→Enterprise Manager**.

4 From the Tools menu, select **SQL Query Analyzer**.

3 Make sure Inventory is selected in the toolbar.

4 From the File menu, select Open and go to `C:\Novadigm\ReportingServer\prereq\SQL\RIM`.

5 Select the file and click **Open**.

6 Press **F5** on your keyboard to run the `RIM PreReq Creation Script.sql`.

7 When the query batch is completed, select **Patch** in the toolbar.

8 Go to `C:\Novadigm\ReportingServer\prereq\SQL\RPM` and run the `RPM PreReq Creation Script.sql`.

9 When the query batch is completed, select `Usage` in the toolbar.

10 Go to `C:\Novadigm\ReportingServer\prereq\SQL\RUM` and run the `RUM PreReq Creation Script.sql`.

11 Close the SQL Query Analyzer.

Configuring Microsoft's Internet Information Services (IIS) for Reporting

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

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

1 Go to **Start→Administrative Tools→Internet Information Services (IIS) Manager**.

2 Go to **Internet Information Services**, HPOVSVR **(local computer)**, **Web Sites**, **Default Web Site**.

3 Right-click **Default Web Site** and select **Properties**.

4 In the Default Web Site Properties dialog box, select the **Home Directory** tab.

5 Click **Configuration…**.

6 Click **Add…** and complete the entries as follows:

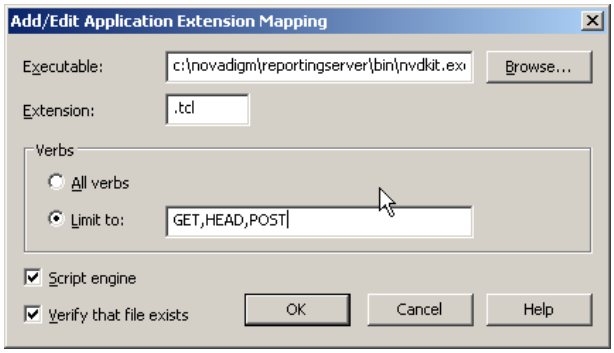
a In the Executable text box, type **`C:\novadigm\reportingServer\bin\nvdkit.exe "%s" %s`**

b In the Extension text box, type **`.tcl`**.

c In the Verbs area, select **Limit to:** and type **`GET,HEAD,POST`**.

d Select the **Script Engine** check box.

e Select the **Verify that file exists** check box.



f Click **OK**.

5 Click **OK** until the dialog boxes are closed.

To enable Web Sharing from the Root Directory for Reporting

1 Go to `C:\Novadigm\`.

2 Right-click the Reporting Server folder and select **Properties**.

3 Select the **Web Sharing** tab.

4 Select **Share the folder.**

5 In the Alias text box, type **`Reporting`**.

6 Use the defaults for **Access and Application permissions**.

7 Click **OK**.

8 Click **Apply** and **OK**.

Additional IIS Configuration for Windows 2003 Server

You must perform some additional IIS configuration server steps when using Windows 2003 Server.

To create the TCL CGI extension

1 Go to **Start→Administrative Tools→Internet Information Services (IIS) Manager**.

2 Select Web Service Extensions.

3 In the right pane, click **Add a new Web service extension**.

4 In the New Web Service Extension dialog box, type the Extension Name **`TCL CGI Extension.`**

5 Click **Add…**

6 In the Path to File text box, type **C:\novadigm\reportingServer\bin\nvdkit.exe "%s" %s**

7 Click **OK**.

> If you receive the error "Environment variables in file names will not be expanded", you can ignore the error and proceed. In this configuration we are defining nvdkit in a non-standard way. The error is actually a warning that does not affect this because we do not need to expand the environment variables.

8 Select the check box **Set extension status to Allowed**.

9 Click **OK**.

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

To add a new MIME type for Windows Server 2003

1 Go to **Start→Settings→Control Panel→Administrative Tools→Internet Information Services (IIS) Manager**.

2 Right-click your IIS server, such as HPOV_SERVER (local computer) and select **Properties**.

3 Click **MIME Types…**.

4 Click **New…** and type the following information:

   a For Extension, type: **`.tcl`**

   b For MIME Type, enter: **`application/x-tcl`**.

   c Click **OK**. If this is already set, then simply continue.

5 Click **OK**.

Allowing Anonymous Access

The following procedure allows anyone who can access the Reporting Server web site the ability to review the reports.

You would *not* do this in a production environment.

To enable access to the Reporting Server without logging in

1. Go to **Start→Administrative Tools→Internet Information Services (IIS) Manager**.
2. Go to **Internet Information Services**, **HPOV_SERVER (local computer)**, **Web Sites**, **Default Web Site**, **Reporting**.
3. Right-click **Reporting** and select **Properties**.
4. Select the Directory Security tab.
5. In the Authentication and access control area, click **Edit**.
6. Select the **Enable anonymous access** check box.
7. In the user name text box, type **`administrator`**.
8. In the password text box, type **`radia`**. When asked to confirm the password, type **`radia`** again.
9. Click **OK** until you exit the dialog boxes.

To allow full control to everyone

1. Open Windows Explorer.
2. Go to `C:\Windows\`.
3. Right-click `temp` and select **Properties**.
4. Select the Security tab.
5. Click **Add**.
6. In the **Enter the object names** to select text box, type **`Everyone`**.
7. Click **`Check Names`**.
8. Click **`OK`**.
9. In the Permissions for Everyone area, select the Allow check box for Full Control.
10. Click **Apply** and then **OK**.
11. Go to `C:\novadigm\reportingserver\log` and delete `reporting.log` if it exists.

Configuring the HP OpenView Reporting Server Using Radia

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

To set parameters in config.tcl

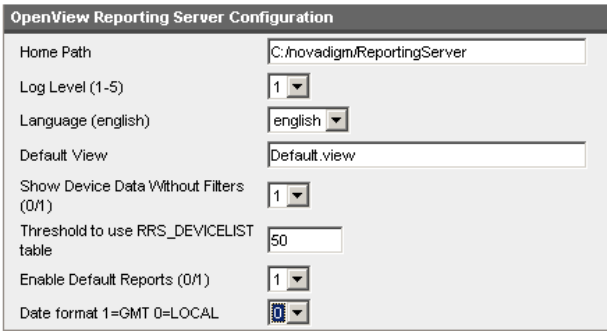
1 Open a web browser and go to **http://192.168.5.40/reporting/setup.tcl**.

2 Click **OpenView Reporting Server Configuration**.

a Confirm that the Home Path is correct.

b Confirm that Enable Default Reports is set to 1 (enabled).

c Change the Date format to 0 (LOCAL).



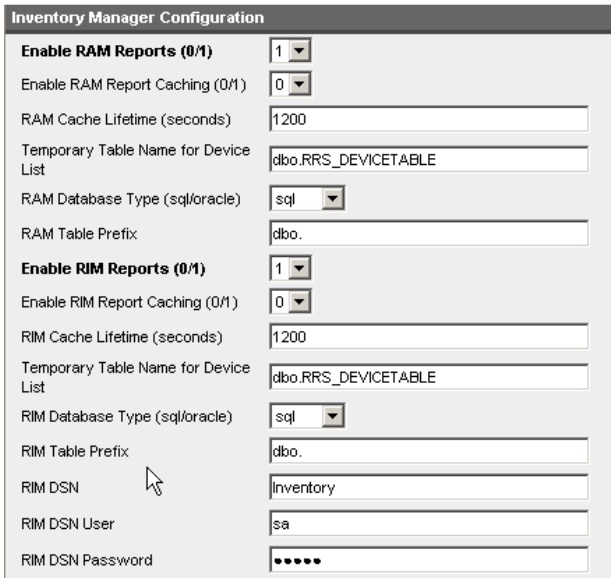
3 Click **Inventory Manager Configuration**.

a Set Enable RAM Report Caching to 0.

b Set Enable RIM Report Caching to 0.

c In the RIM DSN text box, type **`Inventory`**.

d In the RIM DSN Password text box, type **`radia`**.



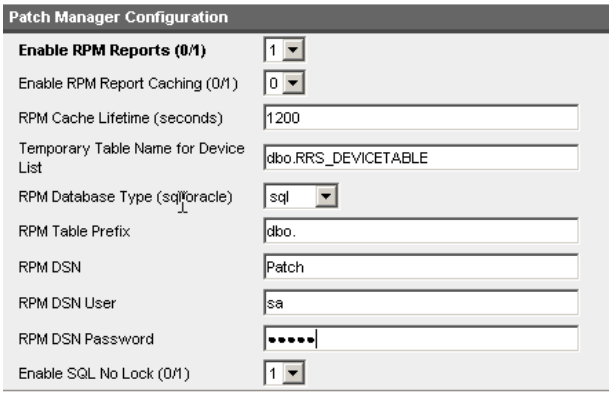
4 Click **Patch Manager Configuration**.

b Set Enable RPM Reports to 1.

c Set Enable RPM Report Caching to 0.

e In the RPM DSN, type **`Patch`**.

f In the RPM DSN Password text box, type **`radia`**.



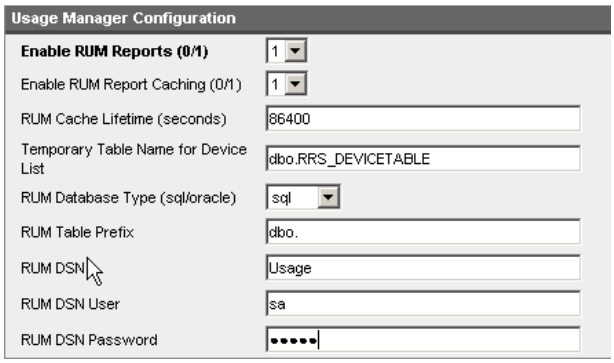
5 Click **Usage Manager Configuration**.

a Set Enable RUM Reports to 1.

b In the RUM Cache Lifetime, type **`86400`**.

c In the RUM DSN, type Usage.

d In the RUM DSN Password text box, type the password.



6 Click **LDAP Configuration**.

a Set Enable LDAP to 1

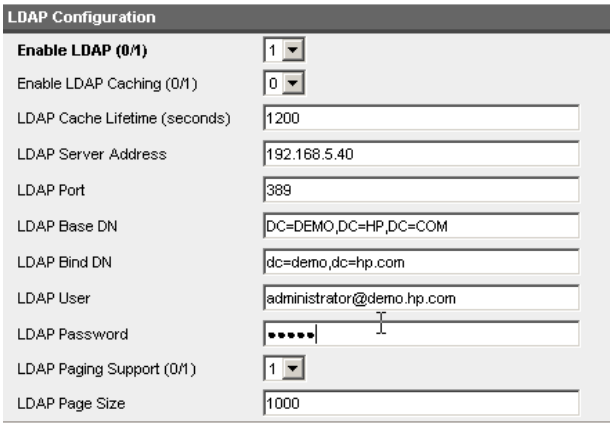
b In Enable LDAP Caching to 0.

c In the LDAP Server Address, type the IP address for your Active Directory server—192.168.5.40.

d In LDAP Base DN, type **`DC=DEMO,DC=HP,DC=COM`**.

e In the LDAP User text box, type **`administrator@demo.hp.com`**.

f In the LDAP Password text box, type **`radia`**.



7 Click **Radia Management Portal Configuration**.

8 In the RMP address text box, type 192.168.5.40.

9 Click **Apply**.

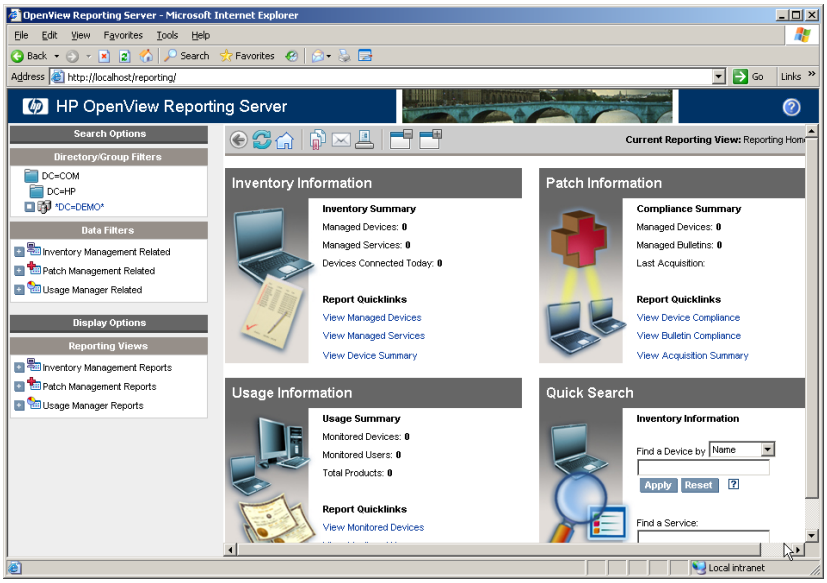
A file named `config.new.tcl` is created in `C:\Novadigm\ReportingServer`.

10 Go to `C:\Novadigm\ReportingServer`.

11 Rename the existing `config.tcl`. to `config.old` in order for the configuration changes to take effect.

12 Rename `config.new.tcl` to config.tcl.

13 If you would like to see the Reporting Server, open your Web browser and go to Open a web browser and go to **http://192.168.5.40/reporting**. Add this page to your Favorites.



Your HP OpenView Configuration Management Solutions installation is complete.

6 Using the HP OpenView Configuration Management Solutions

This chapter provides an introduction to the HP OpenView Configuration Management Solutions. At the end of each topic, a list highlights some additional tasks that can be done and references to additional information. Note that this list is not all-inclusive. It is important to recognize that this is simply an introduction to these solutions and is by no means comprehensive.

Deploying Radia Clients to Target Devices

Radia clients are agent-based applications that reside on target devices in your enterprise. They communicate with the HP OpenView Configuration Management servers to enable you to manage the discovery, deployment, configuration, repair, update and removal of content on devices.

You can use the HP OpenView Management Portal Using Radia, a Web based interface, to deploy the Radia clients to the target devices in your enterprise. Before you can do this, you must add the target devices in your environment to the Management Portal directory. This can be done automatically through network discovery (when the Management Portal is in an NT domain) or manually using Management Portal tasks. Once the target devices are in the Management Portal directory, you can use the Management Portal to deploy the Radia Clients remotely.

Your HPOV Config Mgmt Server should already be running.

Be sure to also log on to your HP OVCM Target Device, with a User ID of **`administrator`** and password of **`radia`** in the DEMO domain.

Adding a device

In this task, your device will not be discovered through the network, so you must add it manually. Devices are always added to a group. In this task you will create a new group named Demo, and then add the Demo Target Machine to the Demo group.

To add a device

1. Go to the HPOV Config Mgmt Server machine.
2. Open your web browser and type **`http://192.168.5.40:3466`** in the address bar.
3. Log into the Management Portal using the user id **`admin`** and the password **`secret`**.
4. Click **Login**.
5. In the workspace, click the **Zone: Demo** icon and then click **Groups**.
6. From the Model Administration task list, click **Add Group**.
7. In the Common Name and Display Name text boxes, type **`Demo`**.
8. Click **`Add`**.
9. From the Model Administration task list, click **Add Device**.
10. In the Display Name text box, type **`HPOVClient`**.

14 In the DNS Host Name text box, type **hpovclient**.

11 In the IP address text box, type **192.168.5.10**.

15 Click **Submit**.

The device appears in the workspace.

Deploying the Radia Clients to the Target Device

Now that you have access to a target device, you can use the Management Portal to install the Radia Client. When you install the Radia Client for the first time, the Management Agent will also be automatically installed. The Management Agent allows the Management Portal to handle remote tasks. There are a number of Radia Clients. In this demo, we will be installing all of them.

To deploy the clients to the target device

1 Go to the HOPV Config Mgmt Server machine.

2 Use a text editor to open `C:\novadigm\integrationserver\media\client\default\win32\install.ini`.

Confirm that the file is not set to read-only otherwise you will not be able to save your changes.

3 Remove the semi-colon before the line that says the following:

```
ADDLOCAL=NVDINSTALLRAM,NVDINSTALLRSM,NVDINSTALLRIM,NVDINSTALLPATCH,NVDI
NSTALLRLAE,NVDINSTALLROM,NVDINSTALLSVR
```

This ensures that all of the Radia Clients are installed.

4 Remove the semi-colon before `;resolutionmanager` and set resolutionmanager=**192.168.5.40**. `Resolutionmanager` is the IP address of the Configuration Server.

5 Remove the semi-colon before resolutionport and set resolutionport=**3464**. `Resolutionport` is the port of the Configuration Server.

6 Save and close the file.

7 Go back to the Management Portal and click **HPOVClient**.

8 From the Operations task group, click **Install Radia Client**.

9 In the Product area, leave all of the check boxes selected.

10 In the RCS Host Name text box, leave the default setting to **192.168.5.40**. This is the IP address that the Radia Client will use to access the Configuration Server.

11 In the RCS Port number text box, leave the default setting to **3464**. This is the port number that the Radia Client will use to access the Configuration Server.

12 Select the **Perform Silent Install?** check box to install the clients without any user interface.

13 Select the **Perform Connect After Install?** check box to have the target device connect to the Configuration Server after the installation. This allows the target device to register with the Configuration Server.

14 In the User text box, type the administrator ID, **administrator** to obtain administrative authority on the target device's domain.

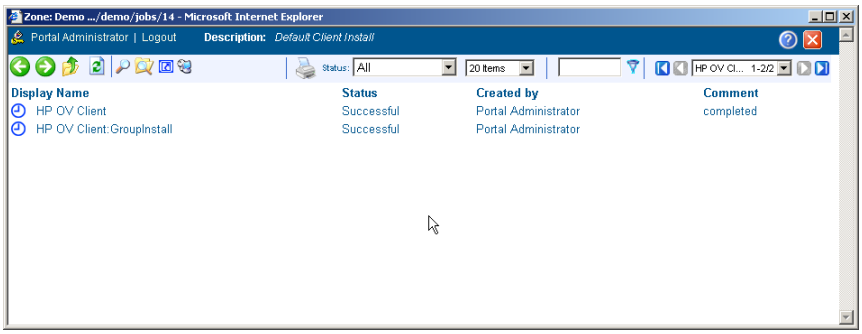
15 In the User Password text box, type the administrator password, **radia** to obtain administrative authority on the target device's domain.

16 Click **Next**.

17 Click **Next** again.

18 Click **Submit** to initiate the installation immediately.

The installation may take a while. You can watch the progress in the job status window.

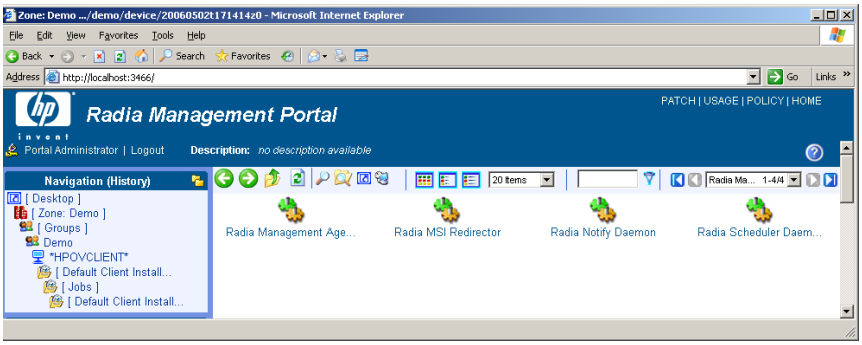


When the Client installation is complete, the following will be on your target device:

- A shortcut to the Radia Software Manager
- `C:\Novadigm`
- `C:\Program Files\Novadigm`

Once the Radia Client is installed, it is registered with the Configuration Server and is ready to be managed.

On your server machine, go to the Management Portal and click on the HPOVCLIENT device and you will notice four new services have been installed. These are representations of the services that are running on the target device.



Additional Uses for the HP OpenView Management Portal Using Radia

The above information is intended to introduce you to the HP OpenView Management Portal Using Radia. This component contains a great deal of functionality. Some additional things that you can use the Management Portal to do are:

- Discover devices on your network that can be managed with the HP OpenView Configuration Management Solutions
- Customize deployment settings, such as which products to deploy (e.g. Application Manager, Software Manager, Patch Manager, etc.)
- Remotely distribute and administer OVCM infrastructure components such as Proxy Server
- Set up multiple HP OpenView Configuration Management administrator accounts with different privileges and scope (role-based administration)
- Configure policy assignments to manage software in your enterprise
- Schedule and monitor jobs
- Mount multiple directory services for device management

Publishing Data

In this section you will publish two sample MSI applications to the Radia Database; the first will be published as an optional service for use with the HP OpenView Software Manager Using Radia, and the second will be published as a mandatory service for use with the HP OpenView Application Manager Using Radia.

Use the HP OpenView Publisher Using Radia to publish a package to the Radia Database. Once stored in the Database, the software packages are ready for distribution to your environment.

To publish an MSI application as an optional service

1. Go to the HPOV Config Mgmt Server machine.
2. From the DVD, go to `\Resources\Congrats\Product` and copy the Software Congrats folder to `C:\`.
3. Go to **Start→All Programs→Radia Administrator Workstation→Radia Publisher**.
4. In the User ID text box, type **`rad_mast`**.
5. Leave the Password text box blank.
6. From the Type of data to publish drop-down list, confirm that **Windows Installer** is selected.
7. Click **OK**.
8. Go to `C:\Software Congrats\WinNt\1.0.0\Package.Msi`. The right pane displays information about the selected MSI file.
9. In the Publish Mode section, leave the default setting, **Advanced**.
10. Click **Next**.
11. In the AIP location text box, type **`C:\temp\congrats`**. This is a temporary directory to store the package's Administrative Install Point (AIP) in.
12. Click **Next**.

13 The Welcome to the Software Congrats Setup Wizard opens.

14 Follow the prompts to navigate through the wizard.

15 In the Package Information section, perform the following tasks:

   a In the Name text box, type **SWCONGRATS.**

   b In the Display Name text box, type **Software Congrats**.

   c In the Domain text box, confirm that SOFTWARE is selected.

   d In the Description text box, type **Software Congrats**.

   e In the Release text box, type **1.0**.

16 Click **Next**.

17 In the Service Information area, leave the default setting, **Create new**.

18 In the Name text box, type **SWCONGRATS.**

19 In the Display Name text box, type **Software Congrats.**

20 In the Assignment type section, select **optional**. Optional services are only available if you are using the Software Manager client.

21 In the Management type section, select **Manual**. This option means that you are responsible for managing your application through the Software Manager. In some cases, a company will configure their environment to do a nightly connect. Then, if this was set to Automatic, the applications that you installed using the Software Manager would be verified at that time.

22 In the Report on the following events section, leave the default selections.

23 Click **Next**.

24 Review the Summary section to verify the package and service information you provided during the previous steps. When you are satisfied, click **Publish**.

25 Click **Finish** when the publishing process is finished to exit the Publisher.

The service is now ready for distribution to your enterprise.

To keep your machine clean, go to `C:\` and delete the `Software Congrats` folder.

To publish an MSI application as a mandatory service

1 Go to the HOPV Config Mgmt Server machine.

2 From the DVD, go to `\Resources\Congrats\Product` and copy the `Application Congrats` folder to `C:\`.

3 Go to **Start→All Programs→Radia Administrator Workstation→Radia Publisher**.

4 In the User ID text box, type **rad_mast**.

5 Leave the Password text box blank.

6 From the Type of data to publish drop-down list, confirm that **Windows Installer** is selected.

7 Click **OK**.

8 Go to `C:\Application Congrats\WinNT\1.0.0\Package.Msi`. The right pane displays information about the selected file.

9 In the Publish Mode section, leave the default setting, **Advanced**.

10 Click **Next**.

11 In the AIP location text box, type **`C:\temp\congrats`**; this is a temporary directory to store the AIP in.

12 Click **Next**.

The Welcome to the Application Congrats Setup Wizard opens.

13 Follow the prompts to navigate through the wizard.

14 In the Package Information section, perform the following tasks:

a In the Name text box, type **`APPCONGRATS.`**

b In the Display Name text box, type **`Application Congrats`**.

c In the Domain text box, confirm that SOFTWARE is selected.

d In the Description text box, type **`Application Congrats`**.

e In the Release text box, type **`1.0`**.

15 Click **Next**.

16 In the Service Information area, leave the default setting, **Create new**.

17 In the Name text box, type **`APPCONGRATS.`**

18 In the Display Name text box, type **`Application Congrats`**.

19 Click **Next**.

20 Review the Summary section to verify the package and service information you provided during the previous steps. When you are satisfied, click **Publish**.

21 Click **Finish** when the publishing process is finished to exit the Publisher.

To keep your machine clean, go to `C:\` and delete the `Application Congrats` folder.

The service is now ready for distribution to your enterprise. If you want, you can use the Management Portal to view the new services.

To view the new services

1 In the Management Portal, click the **ZONE: Demo** icon, then click **Configuration**, and then click **Primary**.

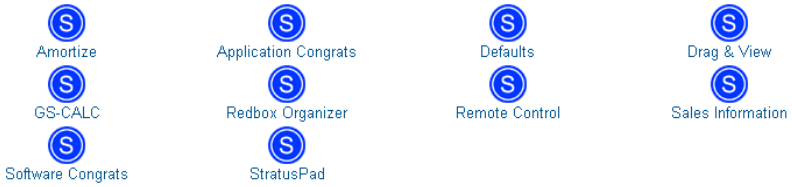
If Primary is not available, you may need to click the ZONE: Demo icon, then click Configuration, Directory Services, RCS Database and start the directory service.

2 In the workspace, click **Software**.

3 Click in the workspace toolbar to go to the next page.

4 Click **Software Services**.

5 In the workspace, notice the new services, Application Congrats and Software Congrats.



If the applications do not appear in the workspace, click the **Zone: Demo** icon, **Configuration**, **Managed Services Cache** and click **Refresh** from the toolbar. Then, return to step 2 and continue to see the applications.

Additional Uses for the Publisher

The above information is intended to introduce you to the Publisher. All content that you wish to deploy with HP's OpenView Configuration Management Solutions will first need to be published using the Publisher. The Publisher supports a wide variety of packages, including:

- Operating system images
- Content such as data files, documents, etc

Managing Policy

In this section, you will entitle and deploy the services that you just created.

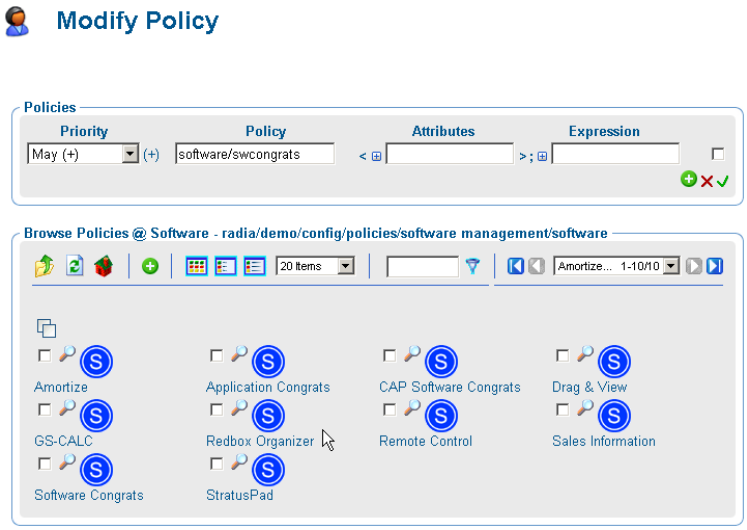
Entitling an Optional Service to a User

In this section, you will entitle an optional service to a user. This service will be accessible to the user from the HP OpenView Software Manager Using Radia.

To entitle the optional service to a user

1. Go to the HPOV Config Mgmt Server machine.
2. In the Management Portal, go to **Directory→Demo.**
3. Click **Corporate**, **Engineering**, **Lisa Black.**
4. From the Policy task group, click **Modify Policies**.
5. In the workspace, click **Software Management**, and then click **Software**.

6 Select the check box for Software Congrats and click in the Browse toolbar.



7 Click **Commit**.

You have now entitled the optional service to the user Lisa Black, making it available for management through the Software Manager on the target device.

Using the HP OpenView Software Manager Using Radia

Now that you have entitled an optional service to a user, you will switch roles from being the administrator and become the user. You will work on the target device and learn how to use the Software Manager to install and repair applications.

To install the service

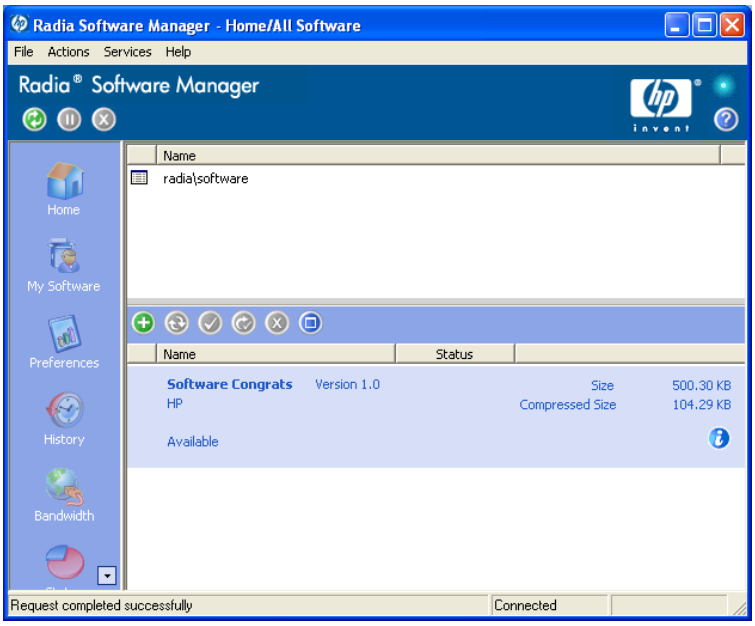
1 Go to the HP OVCVM Target Device.

2 Log in to the machine as **`LBlack`** with a password of **`HPOV#0123`**.

3 From the desktop, double-click Radia Software Manager.

4 On the Login screen, click **OK**.

5 In the software catalog, select Software Congrats.



6 Click to install the application.

7 The application runs. In this case, the application is simply a message that says "Congratulations! You successfully installed this application using Software Manager."

8 Click **OK**. The Software Congrats shortcut appears on your desktop. If you double-click it, you will receive a the same message box.

To repair the application

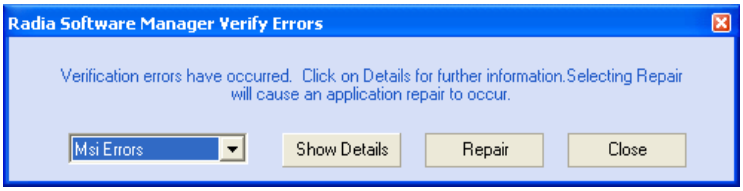
Before you can repair this application, it must be broken. For the purposes of this demo, you are going to break the application. To do this, delete the desktop shortcut, Software Congrats, and then go to `C:\Program Files\Software Congrats` and delete `Congrats.exe`.

1 If the Radia Software Manager is not running, double-click **Radia Software Manager** on the desktop.

2 In the software catalog, select **Software Congrats**.

3 Click to verify the application.

4 You will receive a message that indicates that verification errors have occurred.



5 Click **Show Details** to see what has happened to your application. In this case, the application is missing a key file.

6 Click Repair.

7 Notice that the shortcut appears on your desktop again and the service is listed as installed in the Software Catalog.

8 Double-click **Software Congrats** on your desktop to see the application run again.

9 Close the Software Manager.

Entitling a Mandatory Service to a User

In this section, you will return to the server machine and become the administrator again. You will entitle a mandatory service to a machine.

To entitle the mandatory service to a machine

1 Go to the HOPV Config Mgmt Server machine.

2 In the Management Portal, go to **Directory**, **demo**, **Computers**.

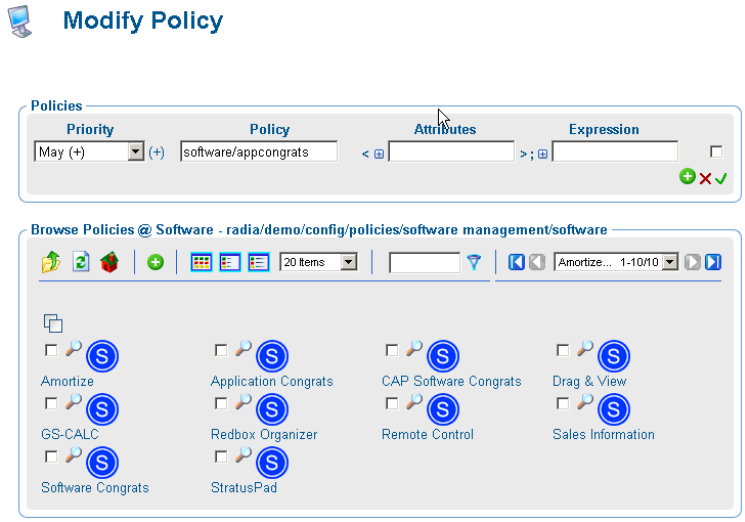
If necessary, you may need to click Desktop in the navigation pane so that you can click Directory in the workspace.

3 Click **HPOVCLIENT$**.

4 From the Policy task group, click **Modify Policies**.

5 In the workspace, click **Software Management** and then click **Software**.

6 Select the check box for Application Congrats and click in the Browse toolbar.



7 Click **Commit**.

Using the HP OpenView Application Manager Using Radia

You have now entitled the mandatory service to the target device HPOVCLIENT, making it available for management through the HP OpenView Application Manager Using Radia. There are many ways to manage applications using the Application Manager. In this exercise, you will notify the target device and the application will be installed. You can also configure the Application Manager to run periodically and detect policy changes and ensure that the target device is in compliance with current policy. Using Application Manager, you can manage software without user intervention.

To notify the machine

1. If you are not already on the HPOVCLIENT$ Computer Properties page, go to **Directory**, **demo**, **Computers** and click **HPOVCLIENT$**.
2. From the Operations task group, click **Notify**.
3. Confirm that the Notify type is set to Full Connect.
4. Change the command line to read as follows:

   `radskman dname=SOFTWARE,ip=192.168.5.40`
5. Click Next.
6. In the Job Name text box, type **`Notify Target`**.
7. Click **Next**.
8. Click **Submit**.
9. Go to the HP OVCM Target Device and double-click the OVCM system tray icon  . A window opens showing you the progress of the connect.
10. When the application is installed successfully, it runs. This is a simple application that displays a message box that says “Congratulations! You successfully installed this application using Application Manager.”
11. Click **OK**.

To run the service

1. On the HP OVCM Target Device, double-click **Application Congrats** on the desktop.
2. Click **OK**.

If you would like to see the Application Manager repair an application, you can perform steps similar to what you did with the Software Manager. Remove some key files, then run the Notify again and the application will be repaired.

Additional Uses for the Software Manager and Application Manager

The above information is intended to introduce you to Policy Management and the Software Manager and Application Manager. These are key components used to distribute software with HP’s OpenView Configuration Management Solutions. Some operations they can be used for are:

- Creating a self-service software catalog for users, allowing them to pick which applications to install and at what time and then verify, repair and remove them on demand.
- Deploy, update, verify, repair and remove managed software without end-user intervention.
- Defer software distributions.
- Control bandwidth utilization.

Gathering Hardware and Software Inventory

You can entitle inventory scans to target devices that have the HP OpenView Inventory Manager Using Radia client installed. After a scan is completed, you can view the results in the Reporting Server.

In this section, you will first use the Management Portal to entitle a target device for an audit service, perform a notify to deploy the audit service, and then use the Reporting Server to view the information

In the second set of exercises in this section, you will entitle the target device to a more detailed wbem scan to discover additional MSI-based software information. Then you will notify the device so it receives the audit service. As before, the collected information is transferred to the Reporting Server for viewing.

In both cases, the audit service runs immediately and transfers the inventory information back to the Configuration Server and Messaging Server. The Messaging Server posts the information to the Inventory Database, and then it is available for viewing from the Reporting Server.

Performing a basic RIM Reporting Audit

In this section, you will configure and run a basic Rim Reporting audit. The RIM Reporting audit discovers the device and provides basic information such as the IP address and installed operating system.

Configuring the RIM Reporting Service

In this section, you will use the Management Portal to modify the RIM Reporting Service. You will first set the inventory collection options to allow the RIM Reporting service to execute a differenced audit whenever a Radia managed-service is installed, verified, or updated. Then, you will make the service mandatory.

To modify the Inventory collection options for the RIM Reporting service

1. On the HPOV Config Mgmt machine, open the Management Portal and log in with the User Name **`admin`** and the password **`secret`**.
2. Click the **ZONE: Demo** icon, then click **Configuration**, and then click **Primary**.
3. In the workspace, go to **Audit**, **Audit Services**, **RIM Reporting**.
4. In the RIM_Reporting Service Properties page, click **Connections**. Notice in the Inventory Options area, there is a current connection to "Differenced Audit on Install and Update". This means that an audit will be performed only upon initial installation of the service and during any updates.
5. From the RCS Administration task group, click **Add Component to Instance**.
6. On the Add Connections to RIM_Reporting page, from the Type drop-down list, select **Other**.
7. From the Class drop-down list, select **Inventory Options**.
8. From the Available Connections list, double-click **Differenced Audit on Install, Verify and Update**. This moves the entry to the Selected list.
9. Click **Next**.
10. Click **Commit**.
11. In the RCS Administration task group, click **Modify Instance**.

12 From the Mandatory or Optional drop down list box, select **M**.

13 Click **Modify**.

Entitling the Target Device to the RIM Reporting Service

Now, you will use the Management Portal to assign policy through Active Directory. Specifically, you will entitle the target device to the RIM Reporting audit service.

To entitle the target device the RIM Reporting audit service

1 Go to the HPOV Config Mgmt Server machine.

2 Open the Web browser and type **http://localhost:3466** and log into the Management Portal using the user id admin and the password secret.

3 Go to **Directory**, **demo**.

If you need to restart the Directory Service for Active Directory, select demo, and from the Infrastructure task group select **Start Directory Service**.

4 Go to **Computers** and click **HPOVCLIENT$**.

5 From the Policy task group, click **Modify Policies**.

The Workspace displays the Modify Policies dialog, where you will select the RIM Reporting service and add it to the target device's policy.

6 In the Browse area, click **Software Management**, then click **Audit**.

7 Click the check box next to **RIM Reporting**.

8 In the Browse area toolbar, click  to add the RIM Reporting service to the Policies list at the top of the page. It will display as **`May (+) audit/rim_reporting`**.

9 Click **Commit** on the bottom of the page.

You have now entitled the manadatory service, RIM Reporting, to the target device HPOVCLIENT. Next, you will notify the target device and the application will be installed and basic inventory information will be collected.

Installing the RIM Reporting Audit Service

To install the RIM Reporting audit service to your target device, use the Notify task from the Management Portal.

1 Click **HPOVCLIENT$**.

2 From the Operations task group, click **Notify**.

3 On the Notify Opts page, set the Notify Type to **Full Connect.**

4 In the Notify Information area, set the command line to
`radskman ip=192.168.5.40`

5 Leave the default port set to 3465.

6 Remove any entries in the User and Password text boxes.

7 Click **Next**.

8 If you like, type a Job Name such as **`RIM Reporting`**.

9 Click **Next**.

10 Click **Submit**.

If you want to see what is happening, you can go to the HP OVCM Target Device and double-click on the OVCM system tray icon . You will see the RIM Reporting service being installed.

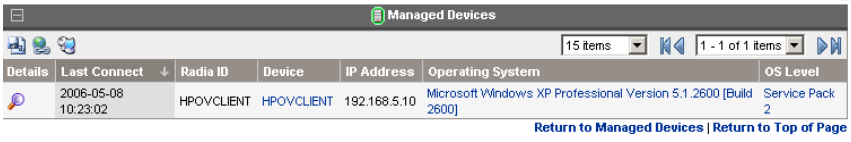
Viewing the Results of the Inventory Collection

Use the Reporting Server to view the results of the inventory collection.

To view the results of the RIM Reporting inventory collection

1. On the HPOV Config Mgmt Server, open a web browser and go to `http://192.168.5.40/reporting/`.
2. On the Reporting Home Page, go to the Quick Search area for Inventory Information.
3. In the Find a Device by Name text box type **HPOV*** and click **Apply.**

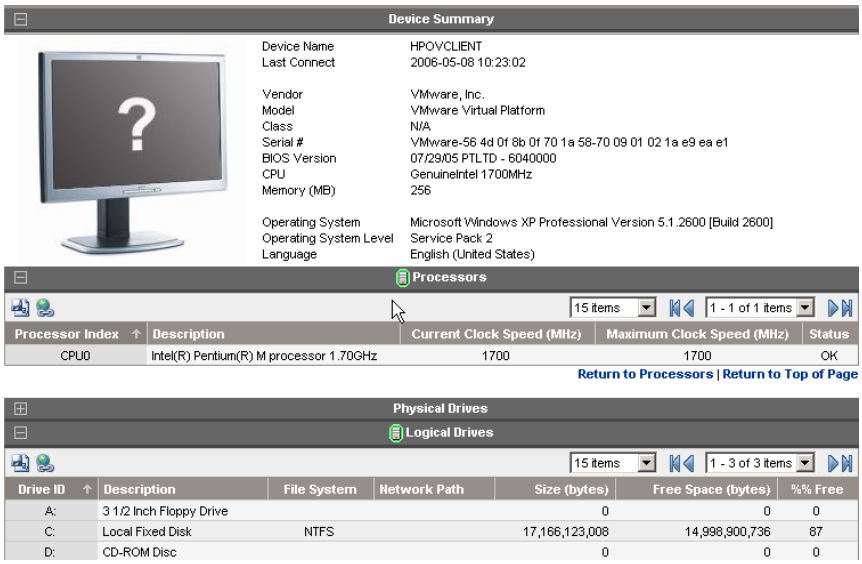
   The Managed Devices view opens, listing the device that matches the device name you just entered. In a typical environment you may have multiple listings that matched the search criteria above.



4. To see the details for **HPOVCLIENT,** click  in the Details column.

   The Device Summary Report opens.

5. To view a particular hardware report, such as Processor or Logical Drives, expand the report by clicking the + sign to the left of the title area.



This is a simple report for a single device. If you had more devices, it would be useful to select and view other types of reports from the Reporting Views area on the left of the screen. For example, if you had collected Inventory data for many devices, you could view a report of Devices by Vendor/Model by selecting **Inventory Management Reports, Hardware Reports, Detail Reports,** and then **Devices by Vendor/Model**.

Performing an NVDM Discovery of Applications

In this section, you will configure and run an NVDM Discovery of Applications scan of the user's computer to discover software applications installed on the target device. NVDM is an abbreviation for "Novadigm," the company that created Radia, now known as the HP OpenView Configuration Management Solutions and was purchased by HP.

Commented [TES5]: A suggestion from a TME. What do you all think?

Configuring the NVDM Discovery of Applications

In this section, you will use the Management Portal to modify the NVDM Discovery of Applications Scan. You will first set the inventory collection options to allow the service to execute an audit that differences the audited information whenever a Radia managed-service is installed, verified, or updated. Then, you will make the service mandatory and finally, you will remove the default timer.

To enable the NVDM Discovery of Applications Scan service to execute a differenced audit

1 On the HPOV Config Mgmt machine, open the Management Portal and log in with the User Name **admin** and the password **secret**.

2 Click the **ZONE: Demo** icon, then click **Configuration**, and then click **Primary**.

> If you do not see PRIMARY, you may need to click the ZONE: Demo icon, and then click Configuration, Directory Services, RCS Database. In the Infrastructure task group, click Start Directory Service.

6 In the workspace, go to **Audit**, **Audit Services**, **NVDM Discovery of Applications**.

7 In the NVDM Discovery of Applications Properties page, click **Connections**. Notice under the Inventory Options, there is a current connection to "Differenced Audit on Install and Update". This means that an audit will be performed only upon initial installation of the service and during any updates.

8 From the RCS Administration task group, click **Add Component to Instance**.

9 On the Add Connections to NVDM Discovery of Applications page, select a Type of **Other**, and select **Inventory Options** for the Class.

10 From the Available Connections list, double-click **Differenced Audit on Install, Verify and Update**. This moves the entry to the Selected list.

11 Click **Next**.

12 Click **Commit**.

13 In the RCS Administration task group, click **Modify Instance**.

14 From the Mandatory or Optional drop down list box, select **M**.

15 Click **Modify**.

Entitling the Target Device to the audit service NVDM Discovery of Applications

In this section, you will use the Management Portal to assign policy through Active Directory. Specifically, you will entitle the target device to NVDM Discovery of Applications service.

To entitle the target device to the NVDM Discovery of Applications service

1 Go to the HOPV Config Mgmt Server machine.

2 Log into the Management Portal using the user id admin and the password secret.

3 Go to **Directory**, **demo**.

If you need to restart the Directory Service for Active Directory, select demo, and from the Infrastructure task group select **Start Directory Service**.

4 Go to **Computers**, **HPOVCLIENT$**.

5 From the Policy task group, click **Modify Policies**.

The Workspace displays the Modify Policies dialog, where you will select the MSI Based Applications service and add it to the target device's policy.

6 In the Browse area, click **Software Management**, and then click **Audit**.

7 Click the check box next to **NVDM Discovery of Applications**.

8 In the Browse area toolbar, click  to add the NVDM Discovery of Applications service to the Policies list. It will display as **`May + audit/nvdm_discovery_of_applications`**.

9 Click **Commit** on the bottom of the page.

You have now entitled the manadatory service, NVDM Discovery of Applications, to the target device HPOVCLIENT. Next, you will notify the target device and the application will be installed and additional inventory information about applications will be collected.

Installing the Audit for NVDM Discovery of Applications

To install this NVDM Discovery of Applications service to your target device, use the Notify task from the Management Portal.

1 Click **HPOVCLIENT$**.

2 From the Operations task group, click **Notify**.

3 On the Notify Opts page, set the Notify Type to Full Connect.

4 In the Notify Information area, set the command line to
`radskman ip=192.168.5.40`

5 Leave the default port set to 3465.

6 Remove any entries in the User and Password text boxes.

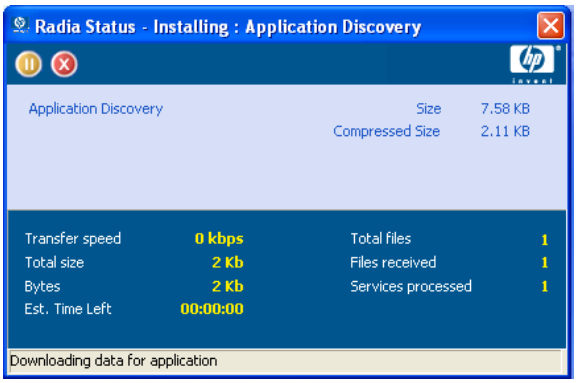
7 Click **Next**.

8 If you like, type a Job Name such as NVDM Discovery of Applications Reporting.

9 Click **Next**.

10 Click **Submit**.

If you want to see what is happening, you can go to the HP OVCM Target Device and double-click the OVCM system tray icon  . You will see the Application Discovery service being installed.



Viewing the Results of the Inventory Collection

Use the Reporting Server to view the results of the inventory collection.

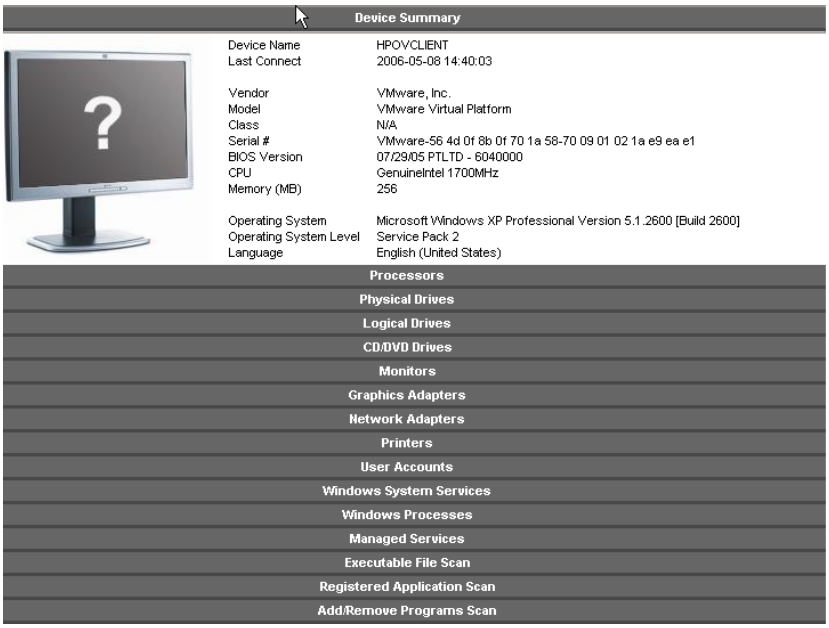
To view the results of the inventory collection

1. On the HPOV Config Mgmt Server, open a web browser and go to **192.168.5.40/reportingserver/**.
2. On the Reporting Home Page, go to the Quick Search area for Inventory Information.
3. In the Find a Device by Name text box type or **HPOV*** and click Apply.

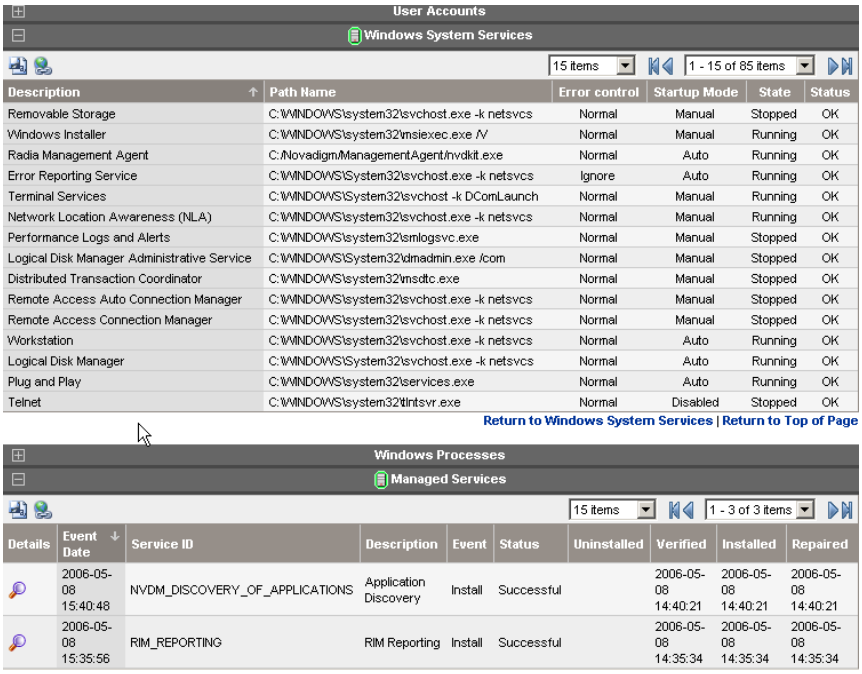
   The Managed Devices view opens, listing the device that matches the device name you just entered. In a typical environment you will have multiple listings that matched the search criteria above.

4. To see the details for **HPOVCLIENT$,** click  in the Details column.

   The Device Summary Report opens.



5 To view a particular software report, click the + next to headings such as Windows System Services, Managed Services, Registered Application Scan, or Add/Remove Programs Scan.



Additional Uses for Inventory Collection

The above information is intended to introduce you to the collecting and viewing of Inventory information. This component contains a great deal of functionality. Some additional things that you can do are:

- Use the Audit Multi Files service to locate all mp3 files on a target device and delete them or move them to another location.
- Entitle different audits for different users or device characteristics.

Managing Security Vulnerabilities with HP OpenView Patch Manager Using Radia

Several software vendors, such as Microsoft, Sun, Red Hat, and HP, use Bulletins to announce when software patches for their products are available. In many cases, you can elect to have these Bulletins e-mailed to you to alert you to new security issues. These exercises illustrate how to use HP OpenView Patch Manager Using Radia to acquire and apply patches to the appropriate target devices to bring your Radia managed-devices into compliance as quickly as possible. Compliance means that the computer is not vulnerable to the security issue described in a bulletin or security advisory.

To learn about Patch Manager, you will perform the following tasks:

- Acquire patches and publish them to the Radia database
- Use the Reporting Server to view acquisition reports.
- Entitle and deploy the Discover Patches service to determine if a target device has any vulnerabilities.
- Use the Reporting Server to view a compliance report by device.
- Bring a vulnerable device into compliance by entitling it to the patch service and deploying the patch.

For this demonstration, remember that you are running VMware in a host-only environment and do not have internet access. Therefore, you will acquire patches from a local folder that you prepared earlier, rather than Microsoft's web site.

Performing a Patch Acquisition

You can create acquisition setting files that can be saved and used repeatedly. Once you create an acquisition file, you use the Patch Manager Administrator to run the acquisition using this file.

In this exercise, you will create an acquisition settings file called MS06 and configure it to download Microsoft patches and the information about the patches. Then, you will use the Radia Patch Administrator to run the acquisition using this file.

To create an acquisition settings file

1. On the HPOV Config Mgmt Server, open a web browser and go to **`http://192.168.5.40:3469/patch/manage/admin.tsp`**.
2. From **Configuration**, click **Acquisition Settings**.
3. Click **New** to create a new file.

4 Type **MS06** for the file name and Microsoft 2006 for the description, then click **Next**.

5 In Bulletins type **MS06*** to get all bulletins that start with MS06. In this field you are searching for all Microsoft patches made available in 2006. This is Microsoft's naming convention.

6 In the Microsoft Setting Section, set Acquire Microsoft Patches? to Yes.

7 Click **Next**.

8 Click **Finish** to save the acquisition file you created.

To run the acquisition

1 From your web browser, go to **http://192.168.5.40:3469/patch/manage/admin.tsp**.

2 From Operations, click **Start an Acquisition**.

3 Click **MS06** to select that acquisition file.

4 Click **Submit** to start the acquisition.

The acquisition may take approximately 20 minutes.

When the acquisition is done, you will see a message indicating its success in the browser. A log file, `patch-acquire.log` is created in `C:\Novadigm\IntegrationServer\log`.

Viewing Acquisition Reports

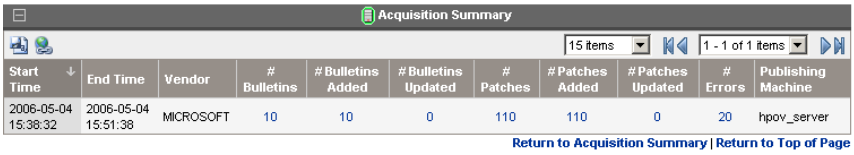
Acquisition reports show the successes and failures of the patch acquisition process. You can use the Reporting Server to view web-based reports for the Patch Manager.

To view the acquired bulletins from the Reporting Server

1 From your web browser, go to **http://192.168.5.40/reporting/**.

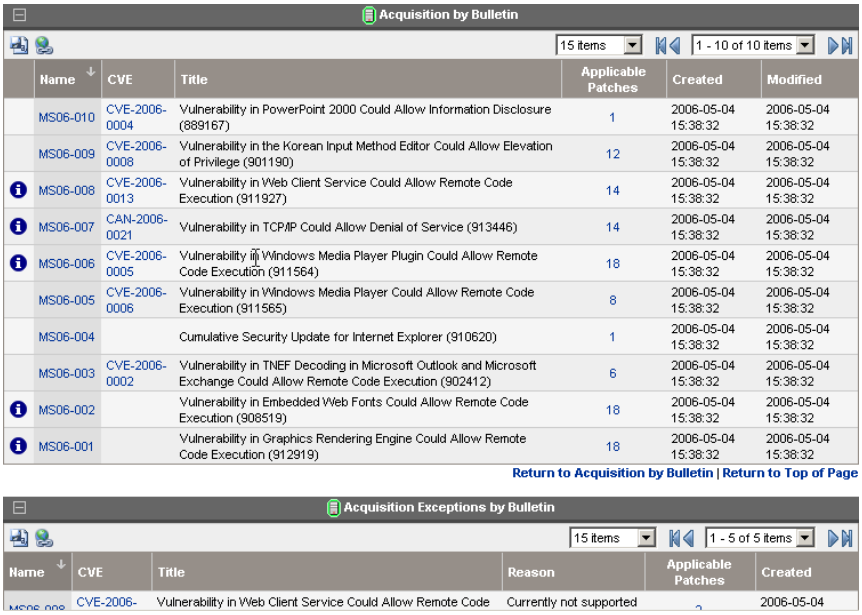
2 From Reporting Views, click **Patch Management Reports** and then click **Acquisition Reports**.

3 Click **Acquisition Summary** to see the summary of all of your acquisitions. This includes 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.



4 Click on the number in the Bulletins column to see the bulletins that were requested as part of this acquisition.

At the bottom, notice the exception report. These are bulletins that were acquired but may not be supported by Patch Manager. If you review this report, you will notice that the Reason column may say "Currently not supported product" which means that these patches cannot be applied to the target device using Patch Manager.



Acquisition by Bulletin

15 items | 1 - 10 of 10 items

Name	CVE	Title	Applicable Patches	Created	Modified
MS06-010	CVE-2006-0004	Vulnerability in PowerPoint 2000 Could Allow Information Disclosure (889167)	1	2006-05-04 15:38:32	2006-05-04 15:38:32
MS06-009	CVE-2006-0008	Vulnerability in the Korean Input Method Editor Could Allow Elevation of Privilege (901190)	12	2006-05-04 15:38:32	2006-05-04 15:38:32
MS06-008	CVE-2006-0013	Vulnerability in Web Client Service Could Allow Remote Code Execution (911927)	14	2006-05-04 15:38:32	2006-05-04 15:38:32
MS06-007	CAN-2006-0021	Vulnerability in TCP/IP Could Allow Denial of Service (913446)	14	2006-05-04 15:38:32	2006-05-04 15:38:32
MS06-006	CVE-2006-0005	Vulnerability in Windows Media Player Plugin Could Allow Remote Code Execution (911564)	18	2006-05-04 15:38:32	2006-05-04 15:38:32
MS06-005	CVE-2006-0006	Vulnerability in Windows Media Player Could Allow Remote Code Execution (911565)	8	2006-05-04 15:38:32	2006-05-04 15:38:32
MS06-004		Cumulative Security Update for Internet Explorer (910620)	1	2006-05-04 15:38:32	2006-05-04 15:38:32
MS06-003	CVE-2006-0002	Vulnerability in TNEF Decoding in Microsoft Outlook and Microsoft Exchange Could Allow Remote Code Execution (902412)	6	2006-05-04 15:38:32	2006-05-04 15:38:32
MS06-002		Vulnerability in Embedded Web Fonts Could Allow Remote Code Execution (908519)	18	2006-05-04 15:38:32	2006-05-04 15:38:32
MS06-001		Vulnerability in Graphics Rendering Engine Could Allow Remote Code Execution (912919)	18	2006-05-04 15:38:32	2006-05-04 15:38:32

Return to Acquisition by Bulletin | Return to Top of Page

Acquisition Exceptions by Bulletin

15 items | 1 - 5 of 5 items

Name	CVE	Title	Reason	Applicable Patches	Created
MS06-008	CVE-2006-	Vulnerability in Web Client Service Could Allow Remote Code	Currently not supported	2	2006-05-04

Entitling the Target Device to the Discover Patches Service

Next, you will use the Management Portal to entitle the target device to the Discover Patches service. The Discover Patches service uses the data from the acquisition to scan the target device for vulnerabilities. Discover patches scans only for vulnerabilities to the patches that you acquired.

To entitle the target device to the Discover Patches service

1 Go to the HOPV Config Mgmt Server machine.

2 Log into the Management Portal using the user id **`admin`** and the password **`secret`**.

3 Go to **Directory**, **demo**.

If you need to restart the Directory Service for Active Directory, select demo, and from the Infrastructure task group select **Start Directory Service**.

4 Go to **Computers**, **HPOVCLIENT$**.

5 From the Policy task group, click **Modify Policies**.

6 Click **Patch Management**, and then click the check box next to Discover Patches.

7 In the Browse area toolbar, click to add the Discover Patches service to the Policies list. It will display as May + patchmgr/discover_patch.

8 Click **Commit** on the bottom of the page.

Installing the Discover Patches Service

To install this Discover Patches service to your target device, use the Notify task from the Management Portal.

1 Click **HPOVCLIENT$**.

2 From the Operations task group, click **Notify**.

3 On the Notify Opts page, set the Notify Type to Full Connect.

4 In the Notify Information area, set the command line to
`radskman dname=PATCH,ip=192.168.5.40`

5 Leave the default port set to 3465.

6 Remove any entries in the User and Password text boxes.

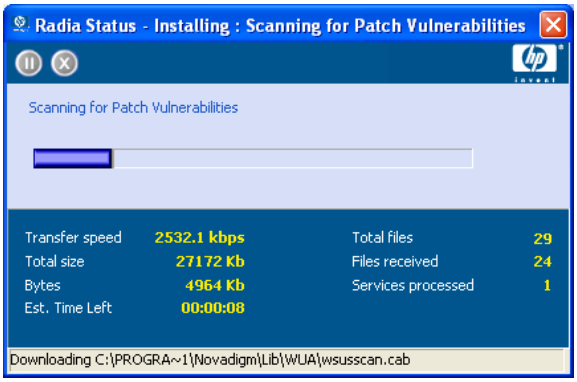
7 Click **Next**.

8 If you like, type a Job Name such as Discover Patches.

9 Click **Next**.

10 Click **Submit**.

If you want to see what is happening, you can go to the HP OVCM Target Device and click on the OVCM system tray icon . You will notice that the client is scanning for Patch Vulnerabilities on the target device.



Viewing Compliance Data

Use the compliance report in the Reporting Server to identify which devices are vulnerable and need to have the acquired patches applied.

To view the Compliance Report from the Reporting Server

1 On the HPOV Config Mgmt Server, open your web browser and go to **http://192.168.5.40/reporting**.

2 From Reporting Views, click **Patch Management Reports** and then click **Compliance Reports**.

3 Click **Compliance by Devices** to see the list of devices.

4 In the Device column, click **HPOVCLIENT** to see the list of applicable patches. Note that this target device is vulnerable to MS06-001 through MS06-008.

Compliance by Device by Bulletin

15 items | 1 - 6 of 6 items

Status	Bulletin	Title	Product / Release	Patch Language	Reason	Date
	MS06-008	Vulnerability in Web Client Service Could Allow Remote Code Execution (911927)	Windows XP Professional / Windows XP Service Pack 2	en	PATCH RISK Bulletin MS06-008 - risks have been detected	2006-05-09 10:56:48
	MS06-007	Vulnerability in TCP/IP Could Allow Denial of Service (913446)	Windows XP Professional / Windows XP Service Pack 2	en	PATCH RISK Bulletin MS06-007 - risks have been detected	2006-05-09 10:56:48
	MS06-006	Vulnerability in Windows Media Player Plugin Could Allow Remote Code Execution (911564)	Windows XP Professional / Windows XP Service Pack 2	en	PATCH RISK Bulletin MS06-006 - risks have been detected	2006-05-09 10:56:48
	MS06-005	Vulnerability in Windows Media Player Could Allow Remote Code Execution (911565)	Windows Media Player 9 Series for Windows XP / Windows XP Service Pack 2	en	PATCH RISK Bulletin MS06-005 - risks have been detected	2006-05-09 10:56:48
	MS06-002	Vulnerability in Embedded Web Fonts Could Allow Remote Code Execution (908519)	Windows XP Professional / Windows XP Service Pack 2	en	PATCH RISK Bulletin MS06-002 - risks have been detected	2006-05-09 10:56:48
	MS06-001	Vulnerability in Graphics Rendering Engine Could Allow Remote Code Execution (912919)	Windows XP Professional / Windows XP Service Pack 2	en	PATCH RISK Bulletin MS06-001 - risks have been detected	2006-05-09 10:56:48

Return to Compliance by Device by Bulletin | Return to Top of Page

Deploying the MS06-005 Patch

In this section, you will use the Management Portal to entitle the target device to the acquired patch service. Of the bulletins acquired, MS06-005 is one that the target device is both vulnerable to and is supported by Patch Manager. If you return to your Acquisition report, you will see an Exception report at the bottom of the page. Note that for some acquired bulletins, the "Reason" column states that the product to be patched is "currently not supported".

Entitling the target device to the MS06-005 Patch

To entitle the target device to the new patch

1 On the HOPV Config Mgmt Server machine, log into the Management Portal using the user id **`admin`** and the password **`secret`**.

2 Go to **Directory**, **demo**.

If you need to restart the Directory Service for Active Directory, select demo, and from the Infrastructure task group select **Start Directory Service**.

3 Go to **Computers**, **HPOVCLIENT$**.

4 From the Policy task group, click **Modify Policies**.

5 Click **Patch Management**, then click the check box next to MS06-005.

6 In the Browse area toolbar, click  to add the Discover Patches service to the Policies list. It will display as May + patchmgr/ms06-005.

7 Click **Commit** on the bottom of the page.

Installing the MS06-005 Patch

To install this MS06-005 Patch service to your target device, use the Notify task from the Management Portal. By installing MS06-005, the target device is no longer vulnerable to this security issue.

To install the MS06-05 patch

1. Click **HPOVCLIENT$**.
2. From the Operations task group, click **Notify**.
3. On the Notify Opts page, set the Notify Type to **Full Connect.**
4. In the Notify Information area, set the command line to
   `radskman dname=PATCH,ip=192.168.5.40`
5. Leave the default port set to 3465.
6. Remove any entries in the User and Password text boxes.
7. Click **Next**.
8. If you like, type a Job Name such as MS06-005 Patch.
9. Click **Next**.
10. Click **Submit**.

If you want to see what is happening, you can go to the HP OVCM Target Device and click on the OVCM system tray icon  . You will see MS06-005 installed on the target device.

To view that the device is in compliance with MS06-005

1. From your web browser, go to **http://192.168.5.40/reporting**.
2. From Reporting Views, click **Patch Management Reports** and then click **Compliance Reports**.
3. Click **Compliance by Devices** to see the list of devices.
4. In the Device column click **HPOVCLIENT**. Notice that the target device now has the MS06-005 patch installed.

Compliance by Device by Bulletin

15 items | 1 - 6 of 6 items

Status	Bulletin	Title	Product / Release	Patch Language	Reason	Date
✗	MS06-008	Vulnerability in Web Client Service Could Allow Remote Code Execution (911927)	Windows XP Professional / Windows XP Service Pack 2	en	PATCH RISK Bulletin MS06-008 - risks have been detected	2006-05-09 11:08:41
✗	MS06-007	Vulnerability in TCP/IP Could Allow Denial of Service (913446)	Windows XP Professional / Windows XP Service Pack 2	en	PATCH RISK Bulletin MS06-007 - risks have been detected	2006-05-09 11:08:41
✗	MS06-006	Vulnerability in Windows Media Player Plugin Could Allow Remote Code Execution (911564)	Windows XP Professional / Windows XP Service Pack 2	en	PATCH RISK Bulletin MS06-006 - risks have been detected	2006-05-09 11:08:41
✓	MS06-005	Vulnerability in Windows Media Player Could Allow Remote Code Execution (911565)	Windows Media Player 9 Series for Windows XP /Windows XP Service Pack 2	en		2006-05-09 11:09:08
✗	MS06-002	Vulnerability in Embedded Web Fonts Could Allow Remote Code Execution (908519)	Windows XP Professional / Windows XP Service Pack 2	en	PATCH RISK Bulletin MS06-002 - risks have been detected	2006-05-09 11:08:41
✗	MS06-001	Vulnerability in Graphics Rendering Engine Could Allow Remote Code Execution (912919)	Windows XP Professional / Windows XP Service Pack 2	en	PATCH RISK Bulletin MS06-001 - risks have been detected	2006-05-09 11:08:41

Return to Compliance by Device by Bulletin | Return to Top of Page

Tracking Application Usage with HP OpenView Usage Manager Using Radia

The HP OpenView Usage Manager Using Radia tracks software usage across your enterprise. While the Inventory Manager also audits software, it only reports on the application status, not usage.

In order to introduce you to the Usage Manager, you will perform the following tasks:

- Configuring the Enterprise Collection service
- Entitling the Enterprise Collection service
- Installing the Enterprise Collection Service
- Initiating Data Collection
- Creating Usage Data to be collected
- Viewing Reports

Due to the limited number of target devices and data in this demonstration, you will be able to view only a small subset of data. This is *not* a typical use case scenario.

Configuring the Enterprise Collection service

In order to deploy the Client Install – Enterprise Collection service to the target device, it must be set to mandatory. This allows us to notify the target device and deploy the service without any user interaction.

To configure the Enterprise Collection service

1. On the HPOV Config Mgmt Server, open the Management Portal. Remember, the log in is **`admin`** and the password is **`secret`**.
2. Click the **ZONE: Demo** icon, then click **Configuration**, and then click **Primary**.
3. Click **Usage**.
4. Click **Application**.
5. Click **Usage Mgr Client Install– Enterprise Collection**.
6. In the RCS Administration task group, click **Modify Instance**.
7. From the Mandatory or Optional Service drop-down list box, change the selection to **M**.
8. Click **Modify**.

Entitling the Enterprise Collection service

In this section, you will use the Management Portal to entitle the target device to the Client Install – Enterprise Collection service.

To entitle the Client Install – Enterprise Collection service to the target device

1. Go to the HPOV Config Mgmt Server machine.
2. Log into the Management Portal using the user id **`admin`** and the password **`secret`**.
3. Go to **Directory**, **demo**.

If you need to restart the Directory Service for Active Directory, select demo, and from the Infrastructure task group select **Start Directory Service**.

4 Go to **Computers**, **HPOVCLIENT$**.

5 From the Policy task group, click **Modify Policies**.

6 In the Browse area, click **Software Management**, then click **Usage**.

7 Click the check box next to **Usage Mgr Client Install – Enterprise Collection**.

8 In the Browse area toolbar, click  to add the to Usage Mgr Client Install – Enterprise Collection service to the Policies list. It will display as May + usage/client_install_enterprise.

9 Click **Commit** on the bottom of the page.

Installing the Enterprise Collection Service

To install this Usage Mgr Client Install – Enterprise Collection service to your target device, use the Notify task from the Management Portal.

By default, Usage information is collected on a weekly basis on Sundays at midnight.

1 Click **HPOVCLIENT$**.

2 From the Operations task group, click **Notify**.

3 In the Notify Information area, set the command line to
`radskman dname=SOFTWARE,ip=192.168.5.40`

4 Leave the default port set to 3465.

5 Remove any entries in the User and Password text boxes.

6 Click **Next**.

7 If you like, type a Job Name such as Usage Report.

8 Click **Next**.

9 Click **Submit**.

If you want to see what is happening, you can go to the HP OVCM Target Device and click on the OVCM system tray icon  . You will see the Windows Installer client installation.

Initiating Data Collection

By default, data is scheduled to be collected on the first of the month and repeat once a week every Sunday at midnight.

For this demonstration, you will force the collection of inventory and usage data. After the usage client is installed, two files, usdbinvn.exe and usdbcoll, are located on the target device in `C:\Program Files\Novadigm\Application Extensions\Bin`.

Forcing collection of inventory data

Rather than waiting for the scheduled collection, you can go to the target device to force an inventory collection.

To force an inventory collection on the target device

1. On the target device, go to **Start→Run**.
2. In the Open text box, type `C:\Program Files\Novadigm\Application Extensions\Bin\USDBINVN.exe` and click **OK**.

   The inventory information is stored in the history.usdbase file in `C:\Program Files\Novadigm\Usage Manager`.

Creating Usage Data to be collected

Once the Collection service has been installed, double-click Software Congrats on the target device. This runs the application so that you have some usage data to be collected.

Forcing collection of usage data

To force usage collection on the target device

1. On the target device, go to **Start→Run**.
2. In the Open text box, type **`"C:\Program Files\Novadigm\Application Extensions\Bin\usdbcoll.exe" DatabaseName=Entire_Enterprise`** and click **OK**.

This takes the active usage data and merges it into the history file and then reports it to the server.

Viewing the Results

Now, you can use the Reporting Server to view the results of your Usage Manager Collection.

To view the results of the usage collection

1. On the HPOV Config Mgmt Server, open a web browser and go to **http://192.168.5.40/reporting/**.
2. In the Reporting Views group on the left, click **Usage Manager Reports**, **Monthly Usage Reports**, **Product Reports** and then click **Monthly Usage by Product**.

Usage Manager Devices

Monthly Usage by Product Version

15 items | 1 - 15 of 66 items

Product Name	Product Version	Installed	Used	Unused	%% Used	Usage Status	Usage Time	Focus Time
Hewlett-Packard Radiamsi	4.0.1.0	1	1	0	100		0:04:59	0:01:12
HP OVCM Demonstration	1.0.0.1	1	1	0	100		0:00:48	0:00:00
Microsoft® Visual Studio .NET	7.10.3052.4	1	1	0	100		0:00:31	0:00:00
[undefined]	[undefined]	1	1	0	100		0:07:18	0:00:00
Radia Application Extension Framework	3.1.0.31	1	1	0	100		102:40:15	0:00:00
Radia Application Extension Framework	3.1.0.35	1	1	0	100		0:00:08	0:00:00
Radia Application Extension Framework	3.1.0.36	1	1	0	100		293:35:35	0:00:00
Radia Application Manager	4.0.1.0	1	1	0	100		190:08:42	0:03:24
Radia Tcl Runtime	8.4.12.0	1	1	0	100		293:34:31	0:00:00
Radia Usage Manager	3.1.0.57	1	1	0	100		0:01:34	0:00:00
Radia Usage Manager	3.1.0.69	1	1	0	100		0:00:25	0:00:00
Radia Usage Manager	3.1.0.78	1	1	0	100		0:00:12	0:00:00
Radia®	4.0.0.0	1	1	0	100		0:05:07	0:00:00
Radia®	4.0.1.0	1	1	0	100		881:22:24	0:00:00
Radia® Software Manager	4.0.0.0	1	1	0	100		0:09:53	0:02:57

Notice the list of products and the information about each of the products. We are going to focus on HP OVCM Demonstration which is the product name for the Software Congrats application.

3 Click **HP OVCM Demonstration**.

Here you can see the application name, which is installed and has been used.

Usage Manager Devices

Monthly Usage by Application

15 items | 1 - 1 of 1 items

Application Name	Installed	Used	Unused	%% Used	Usage Status	Usage Time	Focus Time
Congrats.Exe	1	1	0	100		0:00:48	0:00:00

4 Click the + to the left of Usage Manager Devices.

This displays all of the devices that have usage information for the HP OVCM Demonstration (Software Congrats) application. Again, since this is a demo environment and there is a single target device, you are unable to see how this is filtered. But, imagine you had 10 devices and only five had usage data for this application. The Usage Manager Devices report would list only those five devices.

Usage Manager Devices

15 items | 1 - 1 of 1 items

Device	Domain	Users	Operating System	OS Level	Products Usage	First Collection	Last Collection
hpovclient	demo.hp.com	3	Windows XP Professional	Service Pack 2	Show Product Usage	2006-05-15 11:36:00	2006-05-16 05:09:00

Return to Usage Manager Devices | Return to Top of Page

Monthly Usage by Application

15 items | 1 - 1 of 1 items

Application Name	Installed	Used	Unused	%% Used	Usage Status	Usage Time	Focus Time
Congrats.Exe	1	1	0	100		0:00:48	0:00:00

Return to Monthly Usage by Application | Return to Top of Page

Additional Uses for Usage Manager

The above information is intended to introduce you to the Usage Manager. The Usage Manager provides insight into the software being used in your environment. This information can be used to answer the following questions:

- Are you using more licenses than you own?
- Do you have software that was purchased and installed but remains unused? These licenses can be reclaimed and reused instead of purchasing new licenses.

Summary

This document should have provided you with a good starting point for your journey to understanding the HP OpenView Configuration Management Solutions. You should be comfortable with:

- Describing the products that you learned about in this guide.
- Installing and configuring the solutions in this guide. Please remember that if you are using the solutions in any other environment, you must refer to the mainstream documentation for installation instructions and use the standard media.
- Using the HP OpenView Configuration Management Solutions to complete basic tasks.

Now that you have an introduction to some of the solutions, you can access additional resources to learn more.

Commented [TES6]: Need to fill in where they would find this information. If you know, please respond.

7 Advanced Exercises

This chapter is a follow on to the previous chapter. It contains an advanced exercise that you may choose to perform based on your comfort level with the solutions that you have learned about so far. If you feel very comfortable with the previous information, it is recommended that you proceed. If not, please review this document again or refer to the Related Documents on page 10 to expand your knowledge.

Packaging and Publishing Windows Installer (MSI) Applications

The Radia Packager for Windows Installer (WI) is a suite of components that give you the tools to easily create, modify, customize and manage Windows Installer Packages.

In order to introduce you to the Radia Packager for Windows Installer, you will perform the following tasks:

- Create an MSI package.
- Modify the library.
- Package the modified library.
- Publish the package the Radia Database.

For these exercises, you will use a sample application which includes the following files: Congrats.exe; Congrats.ini and a Desktop Shortcut that you will create.

Currently, when Congrats.exe executes, it displays a simple message window using values set in Congrats.ini. This file reads as follows:

```
[STRINGS]
Title=AppTitle
Message=AppMessage
```

When Congrats.exe is run, the message window appears as follows.

Creating an MSI Package

First, you will use the Unified Package Creation Process of the Radia Packager for Windows Installer (WI) to create an MSI package for the Congrats.exe application. The unified process builds a package in a single, streamlined session. It produces a state file containing the resources needed by the application. From this state file, the unified package creation process builds a library file and then uses the library to create the Windows Installer Package for the application.

To create an MSI package

1. Create a folder `C:\Program Files\Congrats\` on the HPOV Config Mgmt Server machine.
2. From the DVD, copy `\Resources\Congrats\Congrats.exe` and `Congrats.ini` to `C:\Program Files\Congrats\`.
3. Create a shortcut to `Congrats.exe` on your desktop.
4. On your desktop, double-click **Radia Packager for WI**.
5. From the Radia Packager for Windows Installer wizard, select **Unified package creation process**.
6. In the Select the Package Creation Method and Name section, do the following:
   a. Select **Resource Selection**. This creates a package from a set of known resources.
   b. Under **Resource Selection**, click **Include related shortcuts**.
   c. In the Package Name text box, type **`CAP Software Congrats`**.
   d. Click **Next**.
7. On the Select Resources dialog box, set the filter as follows:
   a. Go the **Files** resource and click the check box to clear any current selections. The check box for Files should now be a white box without any check mark.
   b. Go to the **Registry** resource and click the check box to clear any current selections.
   c. Expand the Files resource and browse to `C:\Program Files\Congrats`.
   d. Select the check box to the left of **Congrats**. (This selects all of the files contained in the \Congrats directory.)
8. Click **Next**.

   The Installation Analysis, State File and Library Analysis take place.
9. On the Modify Library Installation Settings dialog box, click **Next.**
10. In the Select the package creation mode area, leave the default **Add to a New Product** selected and click **Next**.
11. On the Enter the Product Name, Version, Release and Build Numbers dialog box, leave the default settings.
12. Click **Next**.
13. In the Windows Installer Options dialog box, click **Platform Requirements**.
14. In the Package Platform Requirements dialog box, clear the **Only install if platform requirements are met** check box and click **OK**.

    Since this application can run on any Windows platform, clearing this checkbox during the packaging process ensures us that Windows Installer will not prevent the package from being installed onto any Windows version. During the publishing process, you will select which Windows platforms to allow.
15. Click **Next**.
16. The Windows Installer package is created. When package creation is complete, click **Finish**.
17. Go to `C:\Program Files\Novadigm\AdvPub\Product\CAP Software Congrats\WinNT\1.0.0` to view the contents of the package. You should see the following entries:
    - Package.Cab

- Package.IIState
- Package.Msi
- Setup.Exe
- Setup.Ini

Modifying the Library

If you were to run the setup.exe file created above, the application would be installed and if you ran it you would see the following message:

Instead of publishing the current package, you can modify the installation settings so that the Title and Message will be substituted with information entered by the user upon installation. This task demonstrates how to modify a library and define substitutions.

In this exercise, you will replace the values of the title and message string in Congrats.ini with User Interface variables. The default values of the new variables will be:

```
Title= Congratulations!

Message= You successfully installed this application using Software
Manager.
```

Establishing these variables provides the user control over the final values that are distributed in the application to the target device.

To define substitutions for the title and message strings

1. On your desktop, double-click **Radia Packager for WI**.
2. From the Radia Packager for Windows Installer wizard, select **Refine Selected Components**.
3. Click **Modify a Library** and click **Next**.
4. Click **Modify Installation Settings** and click **Next**.
5. Select the Library named **CAP Software Congrats** and click **Next**.
6. On the Modify Library Installation Settings dialog box, right-click **Files** and select **Substitutions.**
7. Now, you will specify the Search/Replacement criteria used to substitute the Title string value with a new variable, AppTitle. The value for AppTitle will be entered during the installation.
   a. From the Substitutions window, right-click Search/Replace criteria and select **Add Search/Replace Criteria**.
   b. In the String text box, type **`AppTitle`** and click **OK**.
   c. In the Replace search string with area, select **Replacement Variable**.
   d. Click **Add a Replacement Variable**.
   e. For the Variable type, click **User Interface**. User Interface variables automatically add dialog boxes to the installation process allowing users to enter values of their choice.
   f. In the Name text box, type **`APPTITLE`** and click **OK**.

You must enter APPTITLE in all caps.

g In the **Variable Description Displayed by the User Interface** text box, type a prompt for the user interface, such as:

`Enter a title for the application`.

h In the Default Value area, type the default value of **`Congratulations!`**

i Click **OK**.

j Click **OK** again to return to the Substitutions window.

8 Now, you will specify the Search/Replacement criteria used to substitute the Message string value with a new variable, APPMESSAGE. The value for APPMESSAGE will be entered during the installation.

a Right-click on Search/Replace Criteria and add the search string: **`AppMessage`**.

b Click OK.

c In the Replace search string with area, select **Replacement Variable**.

d Click **Add a Replacement Variable**.

e For the Variable type, click **User Interface**.

f Type **`APPMESSAGE`** as the Name and click **OK**. You must enter this in all caps.

g In the **Variable Description Displayed by the User Interface** text box, type a prompt for the user interface, such as:

`Enter a message to display when the application runs`.

h In the Default Value area, type a default value, such as:

`You successfully installed the application using Software Manager!`

i Click **OK** and **OK** again to return to the Substitutions window.

9 Next, you must specify when the substitutions should apply.

a Right-click the Search/Replace Criteria entry for **AppTitle** and select **Find Search String.**

b In the Resource Name area, check the box next to the occurrence found within the ini file, and click **OK**.

c Repeat steps a and b (above) for the search string **AppMessage**.

10 Click **OK** to close the substitutions window.

11 On the Modify Library Installation Settings dialog box, click **Next.**

12 Click **Finish**.

Packaging the modified library

In this exercise, you will update the initial package with the modified library and also add a Custom Action EXE that will automatically run the Congrats application after it is installed.

To update the package

1 From the Radia Packager for Windows Installer menu, select **Package Components**.

2 Click **Modify a Package** and click **Next**.

3. Click **Rebuild a Package** and click **Next**.
4. Select the **CAP Software Congrats** product to modify, and click **Next**.
5. Select the **CAP Software Congrats** package to modify, and click **Next**.
6. Select the **CAP Software Congrats** library from which the package will be created, and click **Next**.
7. In the Advanced Options dialog box, click **Custom Actions**.
8. In the Set the Desired Custom Actions dialog box, you will create a custom action that will cause the application to run immediately after it is installed. To do this:
   a. Right-click **Executables** and select **Add an Executable**.
   b. In the Enter a description, type, and source for the new executable text box, type **`CongratsEXE`**.
   c. For the Executable Type, select **Exe**.
   d. Select **Executable file is installed with the Package**.
   e. Click **OK**.
   f. In the Executable File Name text box, leave the default location of the application as `C:\Program Files\Congrats\Congrats.exe`.
   g. Click **OK**.
9. In the Set the Desired Custom Actions dialog box, add an Installation Action that will run the application after installation.
   a. Under **Installation Actions**, right-click on **After Installation Actions**, and select **Add an Action**.
   b. In the Action Name text box type **`Runcongrats`** and confirm that `CongratsEXE` is selected as the executable to run.
   c. Click **OK**.
   d. In the Set the EXE Action Properties dialog box, leave the defaults and click **OK**.
   e. Click **OK** again to exit the Set the Custom Actions dialog box.
10. In the Advanced Options dialog box, click **Next**.
11. When Package Analysis is complete, click **Next**,
12. Review the Package results and click **Next**.
13. Continue to click **Next** until the Package Creation dialog box opens. When the Package Creation is completed, click **Next**.
14. Click **Finish** to exit the Packaging session.
15. Close the Radia Packager.

Publishing the Windows Installer Package

Now that you have an MSI package for the CAP Software Congrats program, you can use the Radia Publisher to publish it to the Radia Database.

Before beginning this publishing exercise, go to **Start→All Programs→Control Panel→Add or Remove Programs** to confirm that the CAP Software Congrats or Software Congrats applications are not currently installed on your machine. If either of these programs is installed, remove them before performing this exercise.

To publish the Windows Installer Package to the Radia Database

1. Go to **Start→All Programs→Radia Administrator Workstation→Radia Publisher**.
2. Complete the initial Radia Publisher dialog as follows:
   a. Type a User ID of **RAD_MAST.**
   b. Leave the password blank.
   c. Leave the Type of data to publish set to **Windows Installer**.
   d. Click **OK**.
3. Complete the Select window as follows:
   a. Select the Windows Installer file to publish using the path and filename below:

      ```
      C:\Program Files\Novadigm\AdvPub\Product\CAP Software
      Congrats\WinNT\1.0.0\Package.msi
      ```

   b. In the Publishing Mode area, leave the default mode of **Advanced.**
   c. Click **Next**.
4. Complete the Edit window as specified below:
   a. Click **Admin Install Point**:
      – In the AIP location text box, type `C:\aip\CAP Software Congrats`
      – Under the Execute user interface check box, click **Basic.**
      – Leave the rest of the default settings.
   b. Click **Installation Simulation.**
      – Click **Run User Interface** to see the Windows Installer installation. This simulation allows you to select features and establish the property values that will be passed when the application is installed. However, the application will not be installed at this time.
      – Follow the prompts for the Setup Wizard until you are prompted to: **Enter a title for the application.**
      – Change the default value of Congratulations! to **Great Job!**
      – Click **Next**.
      – Leave the message value as is.
      – Continue through the Setup program and then click **Finish**.
      – You are returned to the Installation Simulation page of the Radia Publisher.

      Do not click **Next** yet**.**
   c. Click **Features.**
      – This allows you to configure the available MSI Features. Leave the default configuration for your application.
   d. Click **Properties**.
      – Scroll down the Properties list to VARIABLE_APPTITLE. The check box to the left is marked because the default value of Congratulations! was overwritten when you entered Great Job! during the Installation Simulation.

- If desired, you can modify other Property values at this time. For example, right-click ARPHELPLINK and select Set the Install Value. In the Install Value text box, type **`support.openview.hp.com`** and click **OK.**
- The check box to the left of ARPHELPLINK is marked as well to indicate its value has been modified.

5 If you choose, you can review the other publishing options, such as Transforms and Upgrade Options. However, these options do not apply to the current application.

For more information on any Publishing option, refer to the Advanced Publishing Mode topic in the *Publisher Guide* for the HP OpenView Administrator Workstation using Radia.

6 After completing the steps above, click **Next.**

7 The Admin Install Point is created and then the Package Information window opens. Complete this window as follows:

a In the Name field, type **`CONGRATS_RSM.`**

b In the Display name field, type **`CAP Software Congrats.`**

c Leave the Domain set to SOFTWARE.

d Leave the Description of CAP Software Congrats.

e In the Release text box, type **`1.0`**.

f In Limit package to systems with list box, select all Windows operating systems.

> Hardware settings are not needed for this package, because the application has no minimum requirements for memory or processor speed.

g Click **Next**.

8 On the Service Information window, complete the following:

a In the Name field, type **`CONGRATS_RSM`**.

b In the Display name field, type **`CAP Software Congrats.`**

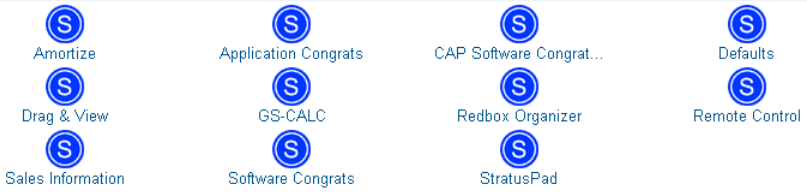
c In the Assignment type area, change Assignment type to **Optional**, and Management Type to **Manual**.

d Click **Next**.

9 On the Publish windows, click **Publish**.

10 When publishing is complete, click **Finish** and then **Yes** to exit.

You application has been published. If you want to see the application, you can use the Management Portal and click the ZONE: Demo icon, and then click Configuration, PRIMARY, Software, Software Services and you will see CAP Software Congrats listed.



If you want practice further, you can entitle this application to a user such as Lisa Black. Then, go to the target device and open the Software Catalog. The application should appear in the catalog and you can install it.

A Tips and Tricks

Configuring Shared Folders in VMware

You may need to access information from your host machine. One way to do this is to set up shared folders.

To set up shared folders

You can use these instructions to set up shared folders on any virtual machine.

1. In VMware, right-click the HPOV Config Mgmt Server tab and select **Settings**.
2. Select the **Options** tab.
3. Click **Shared Folders** (which are enabled by default).
4. Click **Add…**

   The Welcome to the Add Shared Folder Wizard opens.
5. Click **Next**.
6. In the Name text box, type the name for the Shared Folder. For example, you may have folders named Host Desktop or Host C Drive.
7. In the Host folder text box, browse to the location of the host folder.
8. Click **OK**.
9. Complete the wizard without making any changes.
10. Click **OK**.
11. Repeat this procedure for each shared folder that you want to create.
12. To access your shared folders, open Windows Explorer and then go to **My Network Places**, **Entire Network**, **VMware Shared Folders**.
13. Expand VMware Shared Folders until you see the folders that you created. You can map these as network drives for quick access.

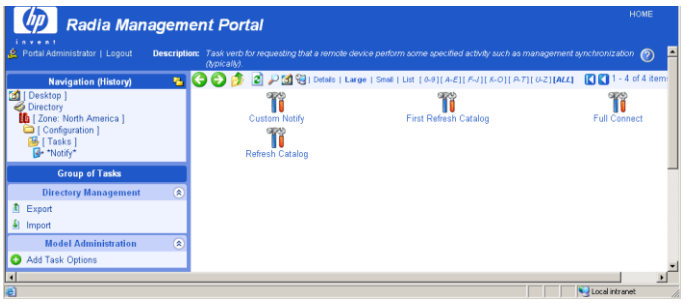
Setting Default Options for Notify Commands

If you often repeat a Notify operation, you may want to modify the appropriate Notify task so that it has default options that pertain to your organization. To do this, you will navigate to a specific Notify task and then modify the properties for the appropriate type of Notify, such as Radia Full Connect.

To set default options for Notify commands

1. In the Navigation area, go to **Directory**, **Zone, Configuration**.
2. In the workspace, click **Tasks**.
2. In the workspace, click the Notify task that you want to modify, such as **Notify**.

3 In the workspace, click the type of Notify operation for which you want to set defaults, such as **Full Connect**.



The Options Properties dialog box opens.

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

The Modify Options dialog box opens.

5 Modify the fields as necessary.

- In the Display Name text box, change the display name of the task.
- In the Command text box, change the default command line for the Notify that you want to perform.
- In the Port number text box, change the default port number that the Notify daemon will be listening on.
- If necessary, in the User text box, type the default user name for the target device.
- If necessary, in the User Password text box, type the default password for the target device.

6 Click **Modify**.

The Options Properties dialog box opens and you can review your changes.

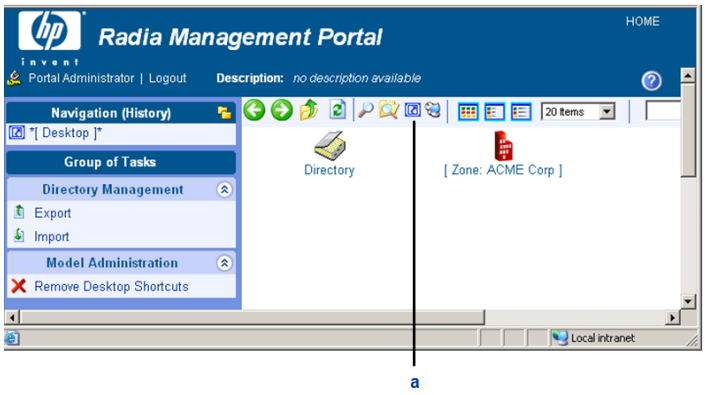
The next time you initiate a Notify and select the notification type that you modified, the new default settings appear in the Submit Notify—Notify Opts dialog box.

Adding Shortcuts to Your Management Portal Desktop

You can create shortcuts to your desktop in the Management Portal so that you do not have to drill down to items that you use often.

To add a shortcut to the desktop

1 Use the Navigation area to go to the item for which you want to create a shortcut. For example, the figure shows an example of navigating to the *Default Group* for devices by selecting **Zone**, **Groups**, and then **Default Group**.



Legend

a Click on toolbar to add desktop shortcut for current location.

2 When you reach the desired item, click on the Toolbar.

The Add Shortcut to (selected location) window opens, requesting a confirmation.

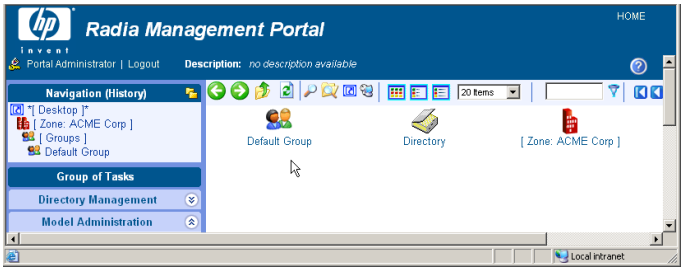
3 Click ✓ to confirm that you want to add the shortcut.

or

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

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

Below, you can see that a shortcut to Default Group has been added to the Desktop.



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