

# HP OpenView Configuration Management Application Self-service Manager

for the Windows operating system

Software Version: 5.00

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## Installation and Configuration Guide

Document Release Date: April 2007

Software Release Date: April 2007



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## Documentation Updates

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

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Table 1 lists new features added for the Configuration Management 5.00 release.

**Table 1 New features added for Configuration Management 5.00**

Chapter	Version	Changes
Chapter 2	5.00	Page 32, <a href="#">System Requirements</a> have changed for this version.
Chapter 2	5.00	Page 32, <a href="#">Platform Support</a> <a href="#">For information</a> about the platforms that are supported in this release, see the accompanying release notes. About the Installation Process, Radia401.msi has been renamed to CM-MgmtApps50.msi.
Chapter 2	5.00	Page 43, Default_catalog, Default_catalog_only, and Root_catalog_name are new attributes available to args.xml.
Chapter 3	5.00	Page 68, <a href="#">System Requirements</a> have been updated for this version.
Chapter 3	5.00	Page 72, <a href="#">Specifying the Features to Install</a> , the CM AMP Editor is a new feature.
Chapter 4	5.00	Page 86, <a href="#">64-Bit Applications</a> , the CM Admin Packager now supports 64-bit applications.
Chapter 7	5.00	Page 248, <a href="#">ZBITARCH</a> is a new attribute of the ZSERVICE Class.

Table 2 indicates changes made to this document for earlier releases.

**Table 2 Document Changes**

Chapter	Version	Changes
Chapter 2	4.0	Page 37, <a href="#">[PROPERTIES] Section of INSTALL.INI</a> : The following have been added to the properties section of the install.ini file: NVDSTARTWMICFGMGR, NVDRAMSHORTCUT, NVDRAMSTARTMENUSHORTCUT; NVDRAMCONNECT, NVDMAINTDIR, NVDNOTIFYINTERACT, NVREDIRECTORINTERACT, NVDSCHEDULERINTERACT.
Chapter 2	4.0.1	Page 37, <a href="#">[PROPERTIES] Section of INSTALL.INI</a> , NVDINSTALLSVR has been added as a value of ADDLOCAL. This allows you to install the CM Server Management Client. This change also affects "Specifying the CM Agent Features to Install." Only install the clients for which you are licensed.
Chapter 2	4.0	Page 51, <a href="#">Specifying the CM Agent Features to Install</a> : The CM Patch Manager and CM OS Manager clients have been added to the CM client installation. Only install the clients for which you are licensed.
Chapter 6	4.0	Page 185: <a href="#">Configuring Client Operations Profiles</a> is a new feature of version 4.0 for the CM Application Manager client. Client Operations Profiles allow you to create redundancy and fail over capabilities for CM Configuration Servers and Radia Proxy Servers, control hardware scans, diagnostic settings, and user interface options.
Chapter 7	4.0	Page 232, <a href="#">Enhanced Machine User Services for CM Application Self-service Manager</a> : Radia 4.0 has augmented its machine/user services.
Chapter 8	4.0	Page 252, <a href="#">About the CM Application Self-service Manager User Interface</a> : now provides support for French and German.
Chapter 8	4.0	Page 274, <a href="#">CM Self Maintenance</a> : is now supplied to the customer in the form of export decks. The Radia 4.0 clients use the PRDMAINT Domain.

<b>Chapter</b>	<b>Version</b>	<b>Changes</b>
Chapter 8	4.0	Page 285, <a href="#">Local AIP support for the CM MSI Redirector</a> : allows you to add another level of redirection at the local file system level. When using this method, MSI is told that the AIP is local, and requests files directly from the file system.
Chapter 9	4.0	Page 295, <a href="#">Table 36</a> : added a row for SMINFO.
Chapter 9	4.0	Page 306, <a href="#">Radskman Execution (PREFACE)</a> : The following client objects are documented in this guide: ZCONFIG, SAPSTATS, SYNOPSIS, PREFACE, and SMINFO. Radskman Execution (PREFACE) was introduced in version 3.1. SAPSTATS and SYNOPSIS are used with Client Operations Profiles. Systems Management Information (SMINFO) is a new object that includes unique computer information taken from the agent computer's BIOS tables.
Chapter 9	4.0	Page 307, <a href="#">Systems Management Information (SMINFO)</a> : new section.

## Support

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# 1 Introduction

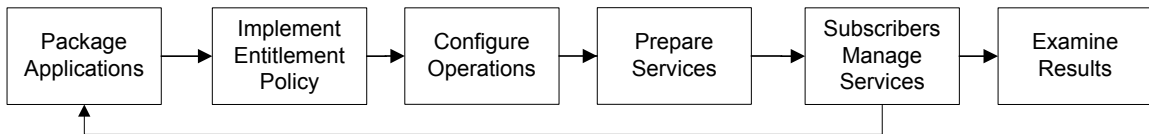
At the end of this chapter, you will:

- Understand the components of HP OpenView Configuration Management Products (CM Products).
- Be familiar with the structure of the HP OpenView Configuration Management Configuration Server Database (CM Configuration Server Database).
- Understand suggested deployment strategies.

# About This Guide

This guide covers the *suggested* implementation for the CM Application Self-service Manager. Although you will tailor this strategy to meet your organization's needs, we recommend that you review this guide for a comprehensive understanding of the CM Application Self-service Manager. At the start of each chapter, you will find the following diagram to help you locate where you are in the implementation. The appropriate area will be shaded. Before you can manage software, you must install the CM client and the CM Administrator.

**Figure 1** Tasks completed in this guide



The *CM Application Self-service Manager Guide* covers the following:

- Chapter 2, [Installing the CM Agents](#)  
This chapter describes how to install the CM clients.
- Chapter 3, [Installing the CM Administrator](#)  
This chapter describes how to install the CM Administrator.
- Chapter 4, [Packaging Applications and Content](#)  
This chapter describes how to package applications using Component Selection Mode and Installation Monitor Mode.
- Chapter 5, [Implementing Entitlement Policy](#)  
This chapter shows you how to define users and groups, and how to connect them to the appropriate applications.
- Chapter 6, [Configuring Client Operations Profiles](#)  
This chapter explains how to configure your clients to use the most appropriate CM Configuration Servers and CM Proxy Servers, provide for fail over capabilities, and configure your CM client.
- Chapter 7, [Preparing Services](#)  
This chapter describes services options such as restarting the agent computer and implementing applications that have machine and user specific components.

- Chapter 8, [CM Application Self-service Manager User Interface](#)  
This chapter explains how to use the CM Application Self-service Manager User Interface.
- Chapter 9, [CM Client Directories and Objects](#)  
This chapter shows you where to find and how to examine the results of your CM implementation.
- Chapter 10, [Deploying Mandatory Applications for the CM Application Self-service Manager](#)  
This chapter describes how to designate an application as mandatory, and how to deploy them.

## About HP OpenView Configuration Management Solutions

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.

The following are some key characteristics of HP OVCM Solutions:

- **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, the HP 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 that only permits access to certain financial databases by a select 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 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 managed devices by changing entitlement policies.

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

## Terminology

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

### agent

The software (such as the CM Application Manager, CM Application Self-service Manager, CM Inventory Manager, CM Patch Manager, or CM Application Usage Manager) that runs on a managed device and communicates with the CM Configuration Server.

### CM agent connect

The process by which a managed device communicates with the CM Configuration Server.

### CM Configuration Server

Used in conjunction with the CM 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 the CM environment; without it, the infrastructure will not function.

### desired state

The condition of a device defined by configuration parameters set in the CM Configuration Server Database.

### 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 computer, ATM, or other piece of hardware that is managed by HP OpenView Configuration Management Solutions.

### package

(n) A unit of software or data that can be published to the Configuration Server Database.

(v) The process of grouping data into a unit that can be published to the Configuration Server Database.

### policy

A designation of the services to which a user, a target device, or a managed device is entitled.

### resolution

The process by which the object attribute values on a managed device are replaced with those that are required to achieve its desired state.

### service

A group of related packages, methods, or behaviors organized into manageable units.

### target device

A workstation or server on which you want to install, replace, or update software.

### user or subscriber

In HP OpenView Configuration Management Solutions, the identity of the device or subscriber being managed.

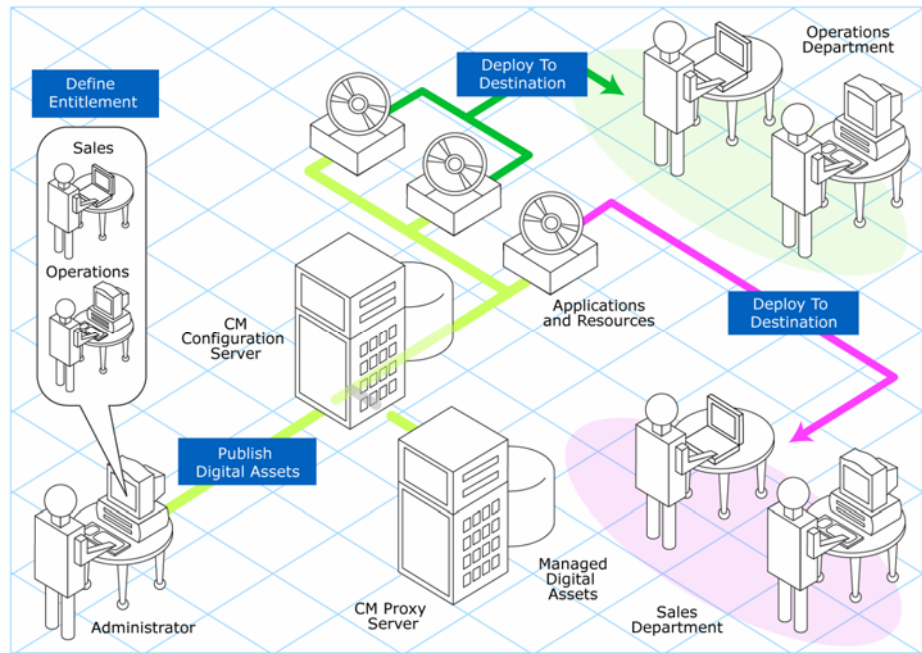
# Desired State

CM manages the distribution of assets based on your **desired state**. This records the identities and intended configurations of your managed devices. The desired state can be simple or complex.

At a minimum, the desired state includes the following five elements:

- **Users**  
The identity of the devices being managed. This can be either a computer name or a user name.
- **Applications**  
The software that is being managed.
- **Application Resources**  
The components that make up the applications.
- **Deployment Source**  
The location where the application components are stored, such as on a HP OpenView Configuration Management Proxy Server (CM Proxy Server) or on an HP OpenView Configuration Management Configuration Server (CM Configuration Server), so they can be distributed to the users.
- **Deployment Destinations**  
The location to which the application and its files will be distributed such as desktop computers, servers, PDAs, and laptops.

**Figure 2 Elements in the desired state.**



Use CM to manage all of these components. You will publish **packages** of digital assets, determine entitlement policy, and define how the packages will be deployed.

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

# The CM Configuration Server Database

The HP OpenView Configuration Management Configuration Server Database (CM Configuration Server Database), located on the HP OpenView Configuration Management Configuration Server (CM Configuration Server), records your enterprise's desired state model. This model is made up of the data to be distributed, policies that define the services to which users or devices are entitled, and security and access rules for administrators. Refer to the *HP OpenView Configuration Management Configuration Server Database Reference Guide (CM Database Reference Guide)* for information on the structure and usage of CM classes.

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. For example, 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. For example, 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 a target device 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 CM, your database may change. Some of the management infrastructure products add other domains. For example, CM Patch Manager adds the PATCHMGR Domain, and CM ApplicationUsage Manager adds the USAGE Domain.



- The LICENSE File is read-only and is used for CM 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 CM Configuration Servers and CM Proxy Server the managed device can use. For more information, see Chapter 6, [Configuring Client Operations Profiles](#)
  - Use the POLICY Domain to create users and groups, and to assign users to groups. See Chapter 5, [Implementing Entitlement Policy](#).
  - Use the PRDMAINT Domain to store packages for self-maintenance. The agent 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. See Chapter 7, [Preparing Services](#).
  - The SYSTEM Domain contains administrative and process control definitions.

As you begin to use CM, the PROFILE File appears after the first device has registered with the CM 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 CM, and to see the configuration of the managed device. The PROFILE File is discussed in Chapter 9, [CM Client Directories and Objects](#).

The NOTIFY File contains information about attempts by the Notify function to update, remove or e-mail subscribers. This file appears after the first attempted Notify. For more information about Notify, see Chapter 10, [Deploying Mandatory Applications for the CM Application Self-service Manager](#).

# CM Infrastructure

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

- CM management applications
- CM management infrastructure
- CM extended infrastructure
- CM management extensions

Some of the basic CM infrastructure components are described below. For more information on all of the CM products, see the *HP OpenView Configuration Management Configuration Server and Portal Getting Started Guide (CM Configuration Server and Portal Getting Started Guide)* on the HP OpenView web site.

## CM Configuration Server

The CM Configuration Server is part of the CM management infrastructure, and resides on a single server or across a network of servers. Applications and information about the subscribers and agent computers are stored in the CM Configuration Server Database. The CM Configuration Server distributes packages based on policies established by the CM administrator. See the *CM Configuration Server Guide* for more information.

## CM Portal

The CM Portal is a Web-based interface that you can use to manage your CM infrastructure. The CM Portal is part of the CM extended infrastructure. Whether you are already using CM, or are just beginning, you can use the portal to create a graphical representation of your infrastructure. Refer to the *HP OpenView Configuration Management Portal Guide (CM Portal Guide)* for more information.

## CM Proxy Server

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



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

## CM Administrator

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

- **CM Administrator Packager**  
Use the CM Admin Packager to create groups of components, called packages, and promote them to the CM Configuration Server. See Chapter 4, [Packaging Applications and Content](#) for more information.
- **CM Administrator Configuration Server Database Editor**  
Use the CM Admin Configuration Server Database Editor to view and to manipulate the CM Configuration Server Database. In addition to this publication, refer to the *CM Configuration Server Database Editor Guide* for more information.
- **CM Administrator Agent Explorer**  
Use the CM Admin Agent Explorer to view and to manipulate CM objects on the agent computer.
- **CM Administrator Screen Painter**  
Use the CM AdminScreen Painter to create custom dialog boxes.
- **CM Administrator Publisher**  
Use the CM Administrator Publisher to publish Windows Installer files. Refer to the *CM Admin Publisher Guide* for more information.

# Management Applications

Management applications (agents) allow you to automate deployment, update, repair, and deletion activities, and inspect hardware and software. Install the CM management applications onto the subscriber's computer.

There are six types of management applications available for communicating with the CM Configuration Server. Install the only those agents for which you have a license.

- **HP OpenView Configuration Management Application Manager (CM Application Manager)**  
Use this agent to distribute mandatory applications throughout the enterprise. This agent is described in this book.
- **HP OpenView Configuration Management Application Self-service Manager (CM Application Self-service Manager)**  
Subscribers install, remove, or update optional applications that are available to them in a service list. For more information, refer to the *CM Application Self-service Manager Guide*.
- **HP OpenView Configuration Management Inventory Manager (CM Inventory Manager)**  
This client allows you to collect hardware information and send it to the CM Inventory Manager for collection and reporting. Refer to the *CM Inventory Manager Guide* for details.
- **The HP OpenView Configuration Management Patch Manager (CM Patch Manager)**  
The CM Patch Manager analyzes and manages security patches. Refer to the *HP OpenView Configuration Management Patch Manager Guide (CM Patch Manager Guide)*.
- **HP OpenView Configuration Management OS Manager (CM OS Manager)**  
The CM OS Manager controls the provisioning of operating systems. Refer to the *HP OpenView Configuration Management OS Manager Guide (CM OS Manager Guide)*.
- **HP OpenView Configuration Management Solutions for Servers (CM Solutions for Servers)**  
Server Management includes the capabilities to control server applications, analyze settings and baselines. Refer to the HP Openview Configuration Management Server Management Guides.

If you install both the CM Self-service Manager and the CM Application Manager feature sets, you decide if an application is mandatory or optional,

and specify who controls the installation of the application. By adding the CM Inventory Manager, you can also find out the hardware and software configurations of the agent computer.

## Summary

- CM gives you the flexibility and control to efficiently manage desktop software.
- The CM Configuration Server Database includes all the information needed to manage your software.
- We provide suggested deployment strategies that you should tailor to your organization's needs.

## 2 Installing the CM Agents

At the end of this chapter, you will:

- Understand the system requirements for installing CM agents.
- Know how to customize the installation process.
- Be able to modify the [PROPERTIES] section of the `INSTALL.INI` in order to customize the behavior of the installation process.
- Be able to modify the [ARGS] section of the `INSTALL.INI` in order to customize the behavior of the HP OpenView Configuration Management Application Self-service Manager (CM Application Self-service Manager).
- Be able to modify the [OBJECTS] section of the `INSTALL.INI` in order to specify CM objects to be created on the agent computer.
- Know how to use the Installation Wizard.
- Know how to remove and repair CM agents using the Installation Wizard and command lines.
- Know how to modify the installation of the CM agents using the Installation Wizard and command lines.
- Know how to use a pre-install script to customize MSI properties that affect installation.
- Know how to use a post-install script to run processes after installing CM agents.

The CM agent installation program uses Microsoft Windows Installer. The program consists of one MSI package with six feature sets:

- HP OpenView Configuration Management Application Manager (CM Application Manager)
- HP OpenView Configuration Management Application Self-service Manager (CM Application Self-service Manager)
- HP OpenView Configuration Management Inventory Manager (CM Inventory Manager)
- HP OpenView Configuration Management OS Manager (CM OS Manager)
- HP OpenView Configuration Management Patch Manager (CM Patch Manager)
- HP OpenView Configuration Management Server Management (CM Server Management)



Install only the CM agents for which you have licenses. If you do not have a license, the CM agent will not authenticate with the HP OpenView Configuration Management Configuration Server (CM Configuration Server).

## System Requirements

- Microsoft .NET runtime Version 1.1 or higher (required for CM Application Self-service Manager only). The .NET installation program is available in the `\DotNet` folder on the CM agent media. If .NET does not exist on the agent computer, the .NET installation program runs automatically. Microsoft .NET requires Microsoft Internet Explorer 5.01 or later.
- TCP/IP connection to a computer running the CM Configuration Server.
- For Windows 2000, Server 2003, XP or Vista, you must have administrator rights to the computer to install the CM agents.

## Platform Support

For information about the platforms that are supported in this release, see the accompanying release notes.



# About the Installation Process

Whether the CM agent installation program is distributed as an executable (`setup.exe`) or an Administrative Installation Point (AIP), the installation process is the same. You can customize many aspects of the installation including which CM agents to install and to what directory the installation files should be copied. If you want to customize the installation process, you should be familiar with the following files.

- **setup.exe**

`setup.exe` is stored in the `\win32` directory on the CM agent media. It accepts any standard Windows Installer command line parameters and passes them to the Windows Installer service.

You can also create an AIP for network installations.



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

To create the Windows Installer AIP in a specified target directory, type:

```
SETUP.EXE /a TARGETDIR=drive:\targetdirectory /qb
```

The target directory contains `Cm-Mgmtapps50.Msi`, the installation folders, `setup.exe`, and any files (such as `INSTALL.INI` or Visual Basic scripts) stored in the same directory as `setup.exe`. Next, copy the `\DotNet` and `\MSI` folders into the target directory.

- **Cm-Mgmtapps50.Msi**

`Cm-Mgmtapps50.Msi` is the MSI database file, which contains the default configuration information for the installation. This file is stored in the `\win32` directory on the CM agent media.

- **INSTALL.INI**

Use `INSTALL.INI` to customize the installation or the CM agent arguments file, or to create or set attributes for CM objects. Settings in `INSTALL.INI` override the defaults stored in `Cm-Mgmtapps50.Msi`.

A sample `INSTALL.INI` is available in the `\win32` directory on the CM agent media.

- **args.xml**

`args.xml` is the CM Application Self-service Manager arguments file created from information stored in the `[ARGS]` section of `INSTALL.INI`. This file, stored in `IDMLIB` on the agent computer, controls the behavior of the CM Application Self-service Manager. The default directory for

IDMLIB is `SystemDrive:\Program Files\Hewlett-Packard\CM\Agent\Lib\`.

- **Pre-install scripts**

*(Recommended for experienced users only.)*

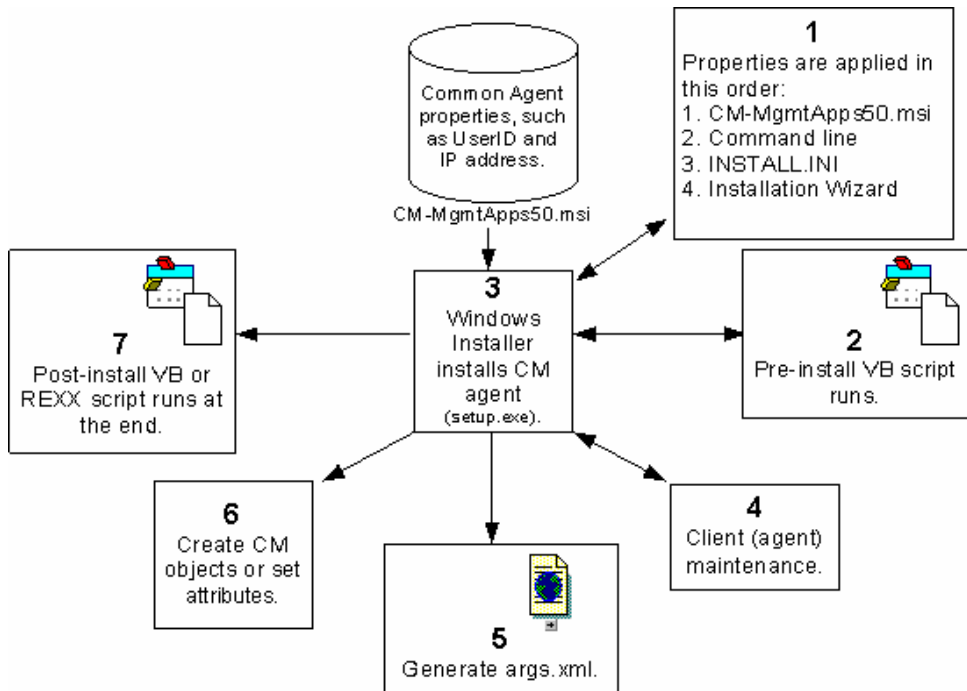
Use custom Visual Basic scripts to customize MSI properties that affect the installation. For an example of a simple script, see [Using a Pre-Install Script](#) on page 63.

- **Post-install scripts**

*(Recommended for experienced users only.)*

Use custom Visual Basic, REXX, or Tcl scripts to run processes such as the first agent connect. For an example, see [Using a Post-Install Script](#) on page 64.

**Figure 3 CM agent installation process**



## Preparing INSTALL.INI

Create an installation file, `INSTALL.INI`. Use this file to:

- Customize the installation.

- Customize the CM Application Self-service Manager.
- Create or set attributes for CM objects.

Below is a sample `INSTALL.INI`. A description of the three sections and the attributes in each of these sections follows.



A semi-colon (;) at the beginning of attributes, properties, and object names indicates that this item is commented out and will be ignored. If you want to specify a value for any of these items, delete the semi-colon (;) and then type the appropriate value.

The following is a sample `INSTALL.INI`:

```
[Properties]
;MSI Property overrides (Novadigm properties have the "nvd" prefix)

;Uncomment and specify the installation directory to replace the default directory
;INSTALLDIR=

;Uncomment to prevent subscribers from using Add/Remove Programs in the Control Panel to remove
the CM Agent
;ARPNOREMOVE=1

;Uncomment and specify the features that you want to install
;ADDLOCAL=NVDINSTALLLRAM,NVDINSTALLRSM,NVDINSTALLRIM,NVDINSTALLRLAE

;Uncomment to show/hide panels in the installation wizard (defaults shown below)
;NVDENABLEUSER=Y
;NVDENABLEIP=Y
;NVDENABLEPROXY=N
;NVDENABLESHORTCUT=Y
;NVDSHORTCUT=Y
;NVDSTARTMENUICON=Y
;NVDSTARTWMICFGMGR=Y
;NVDDRAMSHORTCUT=N
;NVDDRAMSTARIMENUSHORTCUT=N
;NVDDRAMCONNECT="radntfyc localhost radskman
cat=prompt,uid=$machine,ulogon=n,hreboot=y,ind=y,ask=y,ip=xxx.xxx.xxx.xxx,port=3464,mnam
e=Radia,dname=Software,startdir=SYSTEM,timeout=1800,context=n,log=connect_manual.log"

;Uncomment and specify the location of maintenance files
;NVDMAINTDIR=

;Uncomment to allow notifies only from the local host.
;NVDLOCALNOTIFYONLY=Y

;Uncomment to start the System Tray automatically if CM Application Manager is selected durin
the client install process.
;NVDRADTRAYSTART=Y
```

```
;Uncomment to disable "Allow service to interact with desktop" flag for HP CM Services
;NVDNOTIFYINTERACT=N
;NVDREDIRECTORINTERACT=N
;NVDSCHEDULERINTERACT=N
```

```
;Uncomment and specify the file names of pre- and post-install custom action scripts
;NVDPRECAPATH=
;NVDPSTCAPATH=
```

#### [Args]

```
; Tags to be placed into the CM Application Self Service Manager Agent ARGS.XML file
; A value of _NONE_ removes the tag from the file
```

```
;
;askconfirm=
;channelname=software
;dataurl=
;enterprisemanagement=
;identification=$USER
;log=connect.log
;logsize=
;logonpanel=
;managerurl=
;providername=Radia
;redirect=
;resolutionmanager=
;resolutionport=
;sslmanager=
;sslport=
;startdir=
;uioption=
```

#### [Objects]

```
; Set CM object attribute values
; A value of _NONE_ will set the attribute to blank
```

```
;
;ZMASTER_ZDSTSOCK=3464
;ZMASTER_ZIPADDR=xxx.xxx.xxx.xxx
;ZMASTER_ZNIFPORT=3465
;ZMASTER_ZNIFYSEC=Y
;ZMASTER_ZTIMEO=240
;ZMASTER_ZTRACE=N
;ZMASTER_ZTRACEL= _NONE_
;ZMASTER_ZUSERID=
;ZMASTER_ZVRFYUID=N
;
;PROXYINF_USEPROXY=
;PROXYINF_DISCOVER=
;PROXYINF_PROXADDR=
```

```

;
; Uncomment to enable Client Operations Profile (COP)
;RADSETUP_COP=Y
; Uncomment to disable collection of AD information
;RADSETUP_ADINFO=N
; Uncomment to disable collection of NT Group information
RADSETUP_ZGRPINFO=N
; Uncomment to always send configuration objects to the RCS
RADSETUP_ALWAYS=Y

```

## [PROPERTIES] Section of INSTALL.INI

Use the [PROPERTIES] section to modify Windows Installer properties or HP-specific properties to customize the behavior of the installation program. The values that you set in this section override the default values stored in the Cm-Mgmtapps50.Msi database file.



All properties such as INSTALLDIR must be typed in all uppercase.

**Table 3 [PROPERTIES] section of INSTALL.INI**

Argument	Description	Default Value*
ADDLOCAL	<p>Specify the features that you want to install on the local hard drive. You must be properly licensed to use these products.</p> <p>The features may be:</p> <ul style="list-style-type: none"> <li>• NVDINSTALLLRAM = Application Manager</li> <li>• NVDINSTALLRSM = Application Self-service Manager</li> <li>• NVDINSTALLRIM = Inventory Manager</li> <li>• NVDINSTALLROM = OS Manager</li> <li>• NVDINSTALLPATCH = Patch Manager</li> <li>• NVDINSTALLSVR = Server Management</li> </ul>	N/A

Argument	Description	Default Value*
	<ul style="list-style-type: none"> <li>NVDINSTALLRLAE = CM Local AIP Extension</li> </ul> <p>Note: This must be installed to use the <a href="#">Local AIP support for the CM MSI Redirector</a> feature described on page 285.</p>	
ARNOREMOVE	<p>Set ARPNOREMOVE to 1 to indicate that you want to disable the ability to remove the CM agent from the computer using Add/Remove Programs in the Control Panel.</p> <p>Note: Setting ARPNOREMOVE to 0 will <i>not</i> disable this option due to a Windows Installer issue. If you want to allow your subscribers to remove the CM agent from the computer using Add/Remove Programs in the Control Panel, place a semi-colon (;) in front of the ARPNOREMOVE argument in INSTALL.INI.</p> <ul style="list-style-type: none"> <li>For Windows 2000 or XP, the Remove button is disabled.</li> <li>For earlier operating systems, the CM agent will not be listed in Add/Remove Programs in the Control Panel.</li> </ul>	Subscribers can remove the CM agent from the computer using Add/Remove Programs in the Control Panel.
INSTALLDIR	<p>Specify the directory where you want to install the CM agent. This value will be overridden if a new directory is specified in the Destination Folder window in the CM Agent Installation Wizard.</p>	<i>SystemDrive</i> : \Program Files\Hewlett-Packard\CM\Agent

<b>Argument</b>	<b>Description</b>	<b>Default Value*</b>
NVDENABLEUSER	<p>Indicate whether to show or hide the Set User window in the Installation Wizard.</p> <ul style="list-style-type: none"> <li>• Y – Show the window.</li> <li>• N – Hide the window.</li> </ul> <p>Note: If you hide the window, the Create CM Application Self-service Manager icon on the desktop check box will no longer be available to your subscribers.</p> <ul style="list-style-type: none"> <li>• D – Show the window, but disable the User Name field. The Create CM Application Self-service Manager icon on the desktop check box is still available.</li> </ul>	Y
NVDENABLEIP	<p>Indicate whether to show or hide the CM Configuration Server window in the Installation Wizard.</p>	Y
NVDENABLEPROXY	<p>Indicate whether to show or hide the Proxy Information window in the Installation Wizard.</p> <p>If you want to use a CM Proxy Server during the CM agent connect, show this window.</p> <p>The information entered in the Proxy Information window is stored, by default, in the PROXYINF object in the agent computer's IDMLIB directory.</p>	N

<b>Argument</b>	<b>Description</b>	<b>Default Value*</b>
NVDENABLESHORTCUT	Indicate whether to show the Create CM Application Self-service Manager icon on the desktop check box in the Set User window. Selecting this check box installs a desktop shortcut for the CM Application Self-service Manager on the subscriber's desktop.	Y
NVDSHORTCUT	Indicate whether to install a desktop shortcut for the CM Application Self-service Manager on the subscriber's computer.	Y
NVDSTARTMENUICON	Indicate whether to install an icon in the Start Menu for the CM Application Self-service Manager on the subscriber's computer.	Y
NVDSTARTWMICFGMGR	Indicates whether to install the shortcuts for WMI.	Y
NVDRAMSHORTCUT	Indicate whether to install a desktop shortcut for the CM Application Manager on the subscriber's computer.	N
NVDRAMSTARTMENUSHORTCUT	Indicate whether to install an icon in the Start Menu for the CM Application Manager on the subscriber's computer.	N
NVDRAMCONNECT	Specify a command line to run if a CM Application Manager shortcut is created on the desktop or the Start Menu.	Blank



<b>Argument</b>	<b>Description</b>	<b>Default Value*</b>
NVDMAINTDIR	Specify a directory that stores the CM agent maintenance files. Note: Type a value only if you want to store maintenance files in a directory other than the MAINT subdirectory in the folder containing setup.exe. If files exist in this directory that are newer than the installation files, they will be copied into the CM agent's IDMSYS directory.	MAINT subdirectory in the folder containing setup.exe
NVDLOCALNOTIFYONLY	If set to Y, the agent will allow CM Notifies only from the local host.	N
NVDRADTRAYSTART	Set to Y to start the System Tray automatically, if the CM Application Manager is selected during the agent installation process.	N
NVDNOTIFYINTERACT	Set to Y to enable the HP OVCM Notify Daemon to interact with the desktop.	N
NVDREDIRECTORINTERACT	Set to Y to enable the CM MSI Redirector to interact with the desktop.	N
NVDSCHEDULERINTERACT	Set to Y to enable the HP OVCM Scheduler to interact with the desktop.	N

Argument	Description	Default Value*
NVDPRECAPATH	<p>Specify the fully qualified path and filename of a custom Visual Basic pre-install script.</p> <p>Note: New objects or properties must be defined in <code>INSTALL.INI</code>.</p> <p>You can use a pre-install script to override a value for the object or property, but if you attempt to specify a new object or property in the pre-install script, it will be ignored.</p> <p>For an example of a simple script, see <a href="#">Using a Pre-Install Script</a> on page 63.</p>	N/A
NVDPPOSTCAPATH	<p>Specify the fully qualified path and filename of a custom Visual Basic or REXX post-install script.</p> <p>For an example, see <a href="#">Using a Post-Install Script</a> on page 64.</p>	N/A

## [ARGS] Section of INSTALL.INI

Use the [ARGS] section to control the behavior of the CM Application Self-service Manager. The information in this section is used to build the CM Application Self-service Manager arguments file, `args.xml`, which is stored in **IDMLIB** on the agent computer. The default directory for IDMLIB is `SystemDrive:\Program Files\Hewlett-Packard\CM\Agent\Lib\`.

Below is an example of `args.xml`.

```
<?xml version="1.0" ?>
<RADIO_ARGUMENTS>
<ARGUMENTS><CHANNELNAME>software</CHANNELNAME>
<IDENTIFICATION>jsmith</IDENTIFICATION>
<PROVIDERNAME>radia</PROVIDERNAME>
<RESOLUTIONMANAGER>10.10.10.1</RESOLUTIONMANAGER>
<LOG>connect.log</LOG>
```

```

<RESOLUTIONPORT>3464</RESOLUTIONPORT>
<ROOT_CATALOG_NAME>All Software</ROOT_CATALOG_NAME>
</ARGUMENTS>
</RADIA_ARGUMENTS>

```



The XML tags (arguments) described in this section are not case-sensitive when you type them in `INSTALL.INI`. However, the arguments will automatically be converted to all uppercase in `args.xml`.

If you are using the CM Application Manager, any of the parameters in the [ARGS] section can be added to the `radskman` command line.

**Table 4 [ARGS] Section of INSTALL.INI**

Argument	Mandatory or Optional	Description	Default Value
askconfirm	Optional	Controls the display of a confirmation message to your subscribers. For example, some instances in which a confirmation message may display are: <ul style="list-style-type: none"> <li>• A reboot is required.</li> <li>• There is insufficient disk space during deployment.</li> <li>• A data download is interrupted.</li> </ul>	Y
channelname	Mandatory	The domain in the CM Configuration Server DB from which applications are retrieved.	SOFTWARE
default_catalog	Optional	Set the default catalog that is selected when the CM Application Self-service Manager starts	

<b>Argument</b>	<b>Mandatory or Optional</b>	<b>Description</b>	Default Value
default_catalog_only	Optional	Set this to Y to make only the Default_catalog available when the CM Application Self-service Manager starts.	N
identification	Optional	<p>Identifies the agent to the CM Configuration Server by defining the value for the ZUSERID variable in the ZMASTER object.</p> <p>This value will be overridden if a different User Name is specified in the Set User window in the CM Agent Installation Wizard. If you do not want this value to be modified, set NVDENABLEUSER = N in the [PROPERTIES] section of INSTALL.INI.</p> <p><b>\$MACHINE</b> – The CM user ID is the name of the subscriber's computer.</p> <p><b>\$USER</b> – The CM user ID is the logon ID for the subscriber currently logged on.</p> <p><b>CUSTOM</b> – literal custom specification.</p>	\$USER
log	Optional	<p>Specifies the name of the log stored in IDMLOG. IDMLOG is specified in NVD.INI.</p> <p>NVD.INI is stored in <i>SystemDrive:\Program Files\Hewlett-Packard\CM\Agent\LIB</i>, by default.</p>	Connect.log

<b>Argument</b>	<b>Mandatory or Optional</b>	<b>Description</b>	<b>Default Value</b>
logsize	Optional	Specifies the size of the log file in bytes. When the logsize is reached, a backup file (.BAK) is created. By default, this file is connect.bak. If a backup file already exists, it will be overwritten.	1000000
logonpanel	Optional	Controls the display of the logon panel.	Y
managerurl	Optional	Specifies the address of the CM Configuration Server to be used for HTTP object transfer. The managerurl specification takes the form <code>http://hostname:port/nvdurl</code> .	N/A
providername	Mandatory	The name of the CM Configuration Server, which is set during the standard installation. This is used to name the folder below the STARTDIR on the agent computer. See <a href="#">startdir</a> on page 48 for more information.	Radia

<b>Argument</b>	<b>Mandatory or Optional</b>	<b>Description</b>	Default Value
redirect	Optional	<p><i>Used for the CM Application Self-service Manager only.</i></p> <p>Specifies an alternate start-up file (<i>filename.xml</i>), which can be accessed via a network path or URL.</p> <p>If the redirect tag is set in <i>args.xml</i>, the CM Application Self-service Manager uses the properties specified in the alternate file.</p> <p>For example, you might set redirect to point to a start-up file on the network that is shared by all users.</p>	N/A
resolutionmanager	Mandatory	<p>Identifies the IP address for the CM Configuration Server. You can also use the server name.</p> <p>This value will be overridden if a different IP address is specified in the CM Configuration Server window in the CM Agent Installation Wizard. If you do not want this value to be modified, set <code>NVDENABLEIP = N</code> in the [PROPERTIES] section of the <code>INSTALL.INI</code>.</p>	N/A

<b>Argument</b>	<b>Mandatory or Optional</b>	<b>Description</b>	Default Value
resolutionport	Mandatory	<p>Identifies the port for the CM Configuration Server.</p> <p>This value will be overridden if a different port is specified in the CM Configuration Server window in the CM Agent Installation Wizard. If you do not want this value to be modified, set <code>NVDENABLEIP = N</code> in the [PROPERTIES] section of the <code>INSTALL.INI</code>.</p>	N/A
root_catalog_name	Mandatory	Use this to customize the name of the root catalog display name.	All Software
sslmanager	Optional	<p>Specifies the address of the CM Configuration Server to be used for SSL communications.</p> <p>If you want self-maintenance to use SSL communications, concatenate <code>::SM</code> to the end of the specified IP address or host name. For example, <code>sslmanager=hostname::SM</code></p> <p>Warning: Use the <code>::SM</code> switch with the following caveat in mind; the file (<code>cacert.pem</code>) that contains the CA root certificates cannot be maintained. If the corresponding CA root certificate for the certificate in use by the CM Configuration Server should ever become expired, revoked, or corrupt, it will</p>	N/A

Argument	Mandatory or Optional	Description	Default Value
		result in disabling SSL communications to the CM Configuration Server.	
sslport	Optional	Specifies the TCP/IP port that the SSL manager is listening on. This is normally 443. The sslport specification takes the form <i>sslport=port</i> .	N/A
startdir	Optional	Specifies the starting IDMLIB directory (by default, <i>SystemDrive:\Program Files\Hewlett-Packard\CM\Agent\Lib\</i> ).  <b>\$MACHINE</b> – Uses the current computer name.  <b>\$USER</b> – Uses the subscriber who is logged on.  <b>CUSTOM</b> – Literal custom specification. Type <i>startdir=foldername</i> . If the folder name contains embedded spaces, enclose the entire name in double quotes.  Note: You might want to do this to distribute a set of common applications to be shared by all subscribers of a multi-user computer.	\$USER
uioption	Optional	Controls the display of the status window.	N



## [OBJECTS] Section of INSTALL.INI

Use the [OBJECTS] section to specify CM objects to be created on the agent computer and to set their default values. The format is *clientobject\_attribute*. For example, if you want to set the IP address for your CM Configuration Server, set ZMASTER\_ZIPADDR.

**Table 5 [OBJECTS] section of install.ini**

Argument	Description	Default Value
ZMASTER_ZDSTSOCK	The port setting for the CM Configuration Server.	3464
ZMASTER_ZIPADDR	The IP address for the CM Configuration Server.	N/A
ZMASTER_ZNTFPORT	The port that the CM agent's notify daemon is 'listening' on.	3465
ZMASTER_ZNTFYSEC	This attribute allows a Notify operation to execute programs only from the IDMSYS directory. This is used for security during Notify operations.	Y
ZMASTER_ZTIMEO	Amount of time that the CM agent will wait for a response from the CM Configuration Server before the CM agent program is deactivated (timed out). Numeric value between 0 and 3200, in seconds.	240
ZMASTER_ZTRACE	Enables log to include communications buffer information; also generates unique logs for create methods. <b>Y</b> Turns on Communication and Method Tracing. <b>S</b> Turns on Communication summary information; Method Tracing is <i>not</i> enabled. <b>N</b> Communication Tracing and Method Tracing are disabled.	N

<b>Argument</b>	<b>Description</b>	<b>Default Value</b>
ZMASTER_ZTRACEL	Level of tracing generated in the CM agent log files. 0 to 999, where 0=minimal tracing, 40=acceptable for most activity, and 999=maximum.	040
ZMASTER_ZUSERID	The subscriber's user ID.	The name of the user currently logged on to the computer.
ZMASTER_ZVRFYUID	Verify the user ID sent by the CM Configuration Server's Notify command with the ZUSERID field found in the CM agent's ZMASTER object.	N
PROXYINF_USEPROXY	Indicates whether you use a proxy server to connect to the CM Configuration Server.	N
PROXYINF_DISCOVER	<i>For use with Microsoft Internet Explorer.</i> Set to the proxy address and port that your web browser is using.	N
PROXYINF_PROXADDR	The IP address and port number of your proxy server.	xxx.xxx.xxx.xxx:1080
RADSETUP_COP	Set this to Y to enable Client Operations Profiles.	N

## Installing the CM Agents

Before installing the CM agents, you must decide whether to initiate the installation from:

- a command line that initiates the installation from a web page, FTP site, mapped drive, CD-ROM, or e-mail. See [Installing the CM Agent from a Command Line](#) on page 51.

- a logon script. See [Initiating the CM Agent Installation from a Logon Script](#) on page 54.
- the CM Portal. We recommended this for mass rollouts in a Windows 2000, or XP environment. Refer to the *HP OpenView Configuration Management Portal Installation and Configuration Guide (CM Portal Guide)* for more information.

After initiating the installation, the CM Agent Installation Wizard runs. This section describes some of the ways that you can initiate the CM agent installation, and then describes the standard CM Agent Installation Wizard.

## Installing the CM Agent from a Command Line

Before performing an installation from a command line, you must determine:

- how you are going to make the CM agent installation program available to your subscribers. You can do this via a Web page, FTP site, mapped drive, CD-ROM, or e-mail.
- what CM agent features (CM Application Manager, CM Application Self-service Manager, CM Patch Manager, CM Inventory Manager, CM OS Manager, CM Server Management) you want to install and pass any additional arguments to the command line.

### Example

The following is an example of a command line that will install the CM Application Self-service Manager silently and create a detailed Windows Installer log.

```
SETUP.EXE ADDLOCAL=NVDINSTALLRSM /qn /L*v C:\Hewlett-Packard\CM\Agent\install.log
```

The arguments in this command line, and others, are described in [Table 6](#) on page 52 and [Table 7](#) on page 53.

## Specifying the CM Agent Features to Install

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

**Table 6 CM agent feature state arguments**

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

When specifying features on the command line, reference the CM agent features as follows:

- NVDINSTALLRAM installs the CM Application Manager.
- NVDINSTALLRSM installs the CM Application Self-service Manager.
- NVDINSTALLRIM installs the CM Inventory Manager.
- NVDINSTALLROM installs the CM OS Manager.
- NVDINSTALLPATCH installs the CM Patch Manager.
- NVDINSTALLSVR installs CM Server Management.

For example, to install the CM Application Manager and the CM Application Self-service Manager to the computer, use the following command line:

```
SETUP.EXE ADDLOCAL= NVDINSTALLRAM,NVDINSTALLRSM
```

## Additional Command Line Arguments

Some additional arguments that you can pass to the installation program on the command line are described [Table 7](#) on page 53.

**Table 7 Command Line Arguments**

Sample	Sample
<code>/qn</code>	Performs a silent installation. Note: A silent installation is one that takes place without a user interface. Throughout our literature, the terms "silent installation," "quiet installation," and "unattended installation" are all used to refer to the same process.
<code>/qb</code>	Displays the progress bar only during the installation.
<code>/L*v</code> <code>drive:\install.log</code>	Creates a detailed Windows Installer log. Note: Using this option may impact the performance of the installation.
<code>/a TARGETDIR= drive:</code> <code>\targetdirectory</code>	Creates a Windows Installer AIP in the specified target directory. Note: A Windows Installer Administrative Installation Point (AIP) is also known as an Administrative Control Point (ACP). The target directory contains <code>RADIA.MSI</code> , the installation folders, <code>setup.exe</code> , and any files (such as <code>INSTALL.INI</code> or Visual Basic scripts) stored in the same directory as <code>setup.exe</code> . Once you have created the AIP, you can run <code>setup.exe</code> and pass the appropriate command line parameters. This starts the Windows Installer and passes the specified parameters to it.
<code>NVDINIFILE=path</code> <code>\INIfilename</code>	To rename the installation INI file, pass this parameter to the command line. Be sure to include the fully qualified path. By default, the installation program refers to <code>INSTALL.INI</code> located in the current directory.
<code>INSTALLDIR=</code>	Specify the installation directory. Use quotes if the path contains spaces.

If you initiate a CM agent installation with a command line that does not contain the silent installation arguments (`/qn`), the CM Agent Installation Wizard opens. See [Using the CM Agent Installation Wizard](#) on page 55 for more information.

## Initiating the CM Agent Installation from a Logon Script

You can use a logon script on a Windows 2000, Windows Server 2003, XP, or Netware agent to automate installation of the CM agents.

- ▶ To install the CM agents automatically on subscriber's Windows 2000 Professional or XP computer, subscribers *must* have administrator rights on their local computers, and a domain controller must authenticate each subscriber's logon.

The following is an example of code that you can add to the logon script that installs the CM agents. If the CM agents are *not* already installed when the subscriber logs on to the server, this logon script runs the CM agent installation program.

Here is a sample logon script:

```
:begin
@echo off

if exist C:\progra~1\Hewlett-Packard\CM\Agent\LIB\zmaster.edm
goto skipinst

    start setup.exe /qn

:skipinst

if exist C:\progra~1\Hewlett-Packard\CM\Agent\lib\zmaster.edm
goto skipinst
```

To determine if the CM agents already exist, the script checks to see if the ZMASTER object (ZMASTER.EDM) exists in its default location on the local computer.

- ▶ The ZMASTER object begins the resolution process and is the first object exchanged during the agent connect process.

If ZMASTER.EDM *exists*, the script skips the installation. If ZMASTER.EDM *does not exist*, the CM agent installation program launches.

```
start setup.exe /qn
```

This command line performs a silent installation of the CM agents.

- ▶ Modify this script to reflect your organization's needs.

If you initiate a CM agent installation using a command line that does not contain the silent installation arguments, the CM Agent Installation Wizard opens. See [Using the CM Agent Installation Wizard](#) on page 55 for more information.

## Using the CM Agent Installation Wizard

If you start a CM agent installation without the arguments for a silent installation, the CM Agent Installation Wizard opens. The following steps describe the standard installation procedure. These steps may vary based on `INSTALL.INI` or any arguments passed when running the installation.

### To install CM agents using the Installation Wizard

- 1 From the folder containing the CM agent installation files, run `setup.exe`.



You can initiate `setup.exe` from a command line, logon script, or from the CM Portal. Go to the beginning of this chapter for more information.

The CM Agent Installation Wizard opens.

- 2 Click **Next**.

The License Agreement window opens.

- 3 After reading and accepting the license agreement, click **Next**.

The Destination Folder window opens. The default location for the CM agents is `SystemDrive:\Program Files\Hewlett-Packard\CM\Agent`.

If you want to select a different destination for the CM agent, click **Browse** and navigate to the appropriate destination folder. This overrides the value set for `INSTALLDIR` in `INSTALL.INI`.

- 4 Click **OK** to continue.

- 5 Click **Next**.

The Set User window opens.

- 6 In the User Name text box, type the name of the subscriber for whom you are installing the CM agents. This overrides the value set for `IDENTIFICATION` in `INSTALL.INI`.

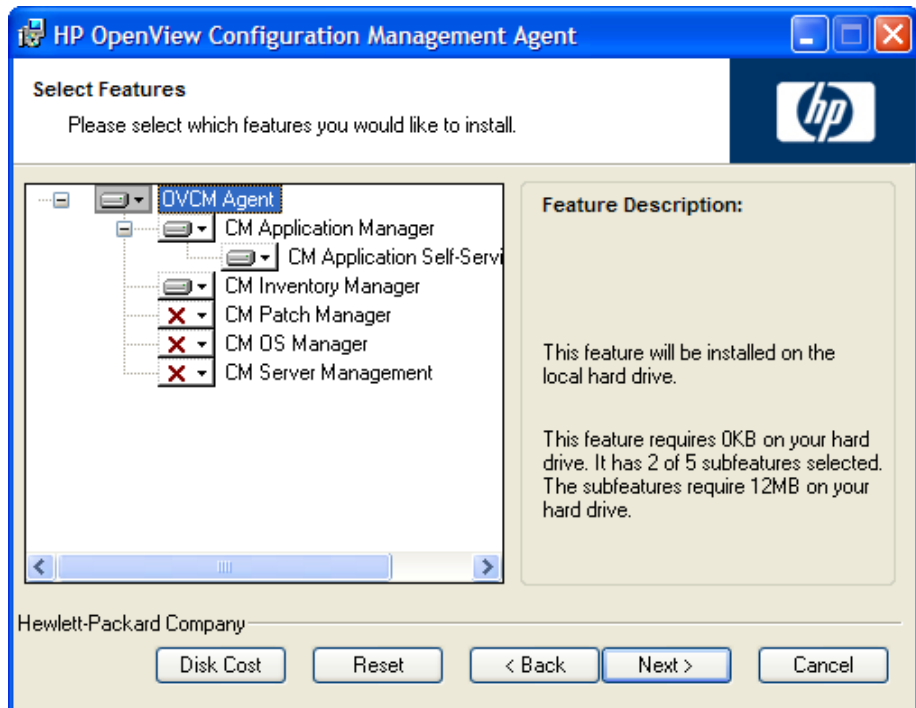
- 7 Select the **Create CM Application Self-service Manager icon on the desktop** check box if necessary.

- 8 Click **Next**.


The CM Configuration Server window opens.

- 9 In the IP Address text box, type the IP address for the CM Configuration Server. This overrides the value set for RESOLUTIONMANAGER in INSTALL.INI.
- 10 In the Port text box, type the port number. This overrides the value set for RESOLUTIONPORT in INSTALL.INI.
- 11 Click **Next**.

The Select Features window opens.



- 12 Click  to select the features that you want to install.

Each time you click , a shortcut menu for that feature opens (see the next figure).



Install only the CM agents for which you are licensed.


- 13 From the shortcut menu, select an installation option. These options are described in [Table 8](#) on page 57.



**Table 8 Feature settings for CM agents**

Option	Description
Will be installed on local hard drive	Installs the top-level feature on the local hard drive, but not any sub-features listed below.
Entire feature will be installed on local hard drive	Installs the entire feature, including any sub-features listed below.  Note: In this installation program, selecting this option or the "Will be installed on local hard drive" option for the CM Application Self-service Manager, CM Application Manager, or CM Inventory Manager results in the same installation because these features do not contain sub-features.  Example: If you select this option for the CM agent feature in the Select Features window, all of the CM agents will be installed on the local hard drive.
Entire feature will be unavailable	The feature will not be installed. If previously installed this feature will be removed.



If you want to set the same options for all of the features, you can click  **OVCN Agent** and select the appropriate option to apply the setting to all features.

Click **Disk Cost** to see an overview of the disk space needed for the installation.

**14 Click Next.**

If .NET is not installed on the agent computer and you have chosen to install the CM Application Self-service Manager, .NET will be installed during the CM agent installation. However, if you copied the installation program to your computer and did not include the \DotNet folder, the DotNet Settings message in the next figure opens.

**15 Click OK.**

**16 If necessary, click Next again.**

If .NET is not already installed on the computer, the .NET Installation window opens.

17 Click **Next**.



If you have installed .NET Beta, be sure to remove it before installing .NET.

The Ready to Install the Application window opens.

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

If necessary, the .NET Framework Setup wizard opens. Follow the prompts to install .NET on the agent computer. After .NET is successfully installed, the CM agent installation begins.

When the installation is done, successful installation window opens.

19 Click **Finish** to close the Installation Wizard.

## Removing the CM Agents

The Windows Installer installation program offers the ability to remove your CM agents. This section describes how to remove the CM agent using the Installation Wizard and using a command line.

### Using the Installation Wizard to Remove CM Agents

This section describes how to remove the CM agent using the Installation Wizard.



To remove specific features of the CM agent, use the Modify option on the Application Maintenance window. This is discussed in [Modifying the CM Agent Installation](#) on page 61.

To remove CM agents using the Installation Wizard

- 1 From the folder containing the CM agent installation files, double-click **setup.exe**. The Application Maintenance window opens.
- 2 Select the **Remove** option.
- 3 Click **Next**.  
The CM Agent Uninstall window opens.
- 4 Click **Remove**.

The files for all CM agents are removed from the computer.

The CM agent has been successfully uninstalled window opens.

- 5 Click **Finish**.

## Using a Command Line to Remove CM Agents

This section describes how to remove CM agents using a command line.

### To remove CM agents using a command line

- From the folder containing the CM agent installation files, type the following command line:

```
SETUP.EXE REMOVE=ALL
```

See [Installing the CM Agent from a Command Line](#) on page 51 for additional arguments.

or

If you would like to remove a single CM agent, type a comma-delimited list of the features that you want to remove on the command line.

Reference the features for the CM agent installation as follows:

- CM Application Manager                      NVDINSTALLRAM
- CM Application Self-service Manager      NVDINSTALLRSM
- CM Inventory Manager                        NVDINSTALLRIM
- CM OS Manager                                NVDINSTALLROM
- CM Patch Manager                            NVDINSTALLPATCH
- CM Solutions for Servers                    NVDINSTALLSVR

### Example

To silently remove the CM Application Self-service Manager and CM Application Manager, type:

```
SETUP.EXE REMOVE=NVDINSTALLRSM,NVDINSTALLRAM /qn
```



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

# Repairing the CM Agents

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

This section describes how to repair CM agents using the Installation Wizard and using a command line.

## Using the Installation Wizard to Repair CM Agents

This section describes how to repair CM agents using the Installation Wizard.

To repair CM agents using the Installation Wizard

- 1 From the folder containing the CM agent installation files, double-click **setup.exe**.

The Application Maintenance window opens.

- 2 Select the **Repair** option.

- 3 Click **Next**.

The Ready to Repair the Application window opens.

- 4 Click **Next**.

When the repair is done, the CM agent has been successfully installed window opens.

- 5 Click **Finish**.

## Using a Command Line to Repair CM Agents

This section describes how to repair CM agents using a command line.

To repair CM agents using a command line

- From the folder containing the CM agent installation files, type the following command line:

```
msiexec /f Cm-Mgmtapps50.Msi
```



You can use additional parameters with this command line. For more information, see your Windows Installer documentation.

## Modifying the CM Agent Installation

The Windows Installer installation program offers the ability to modify your CM agent installation by adding or removing individual features. This section describes how to modify the installation of CM agents using the Installation Wizard and using a command line.

### Using the Installation Wizard to Modify the Installation of CM Agents

This section describes how to modify the installation of CM agents using the Installation Wizard.

To modify the installation of CM agents using the Installation Wizard

- 1 From the folder containing the CM agent installation files, double-click **setup.exe**.  
The Application Maintenance window opens.
- 2 Select the **Modify** option.
- 3 Click **Next**.  
The Select Features window opens. See [Using the CM Agent Installation Wizard](#) on page 55 for information about how to use this window.
- 4 Click **Next**.  
The Ready to Modify the Application window opens.
- 5 Click **Next**.  
The CM agent has been successfully installed window opens.
- 6 Click **Finish** to close the installation program.

## Using a Command Line to Modify the Installation of CM Agents

This section describes how to modify the installation of CM agents using a command line.

To modify the installation of CM agents using a command line

- From the folder containing the CM agent installation files, type the following command line:

```
SETUP.EXE FeatureStateArgument=feature1 , feature2
```

**Table 9** CM agent feature state arguments

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

Reference the features for the CM agent installation as follows:

- CM Application Manager NVDINSTALLRAM
- CM Application Self-service Manager NVDINSTALLRSM
- CM Inventory Manager NVDINSTALLRIM
- CM OS Manager NVDINSTALLROM
- CM Patch Manager NVDINSTALLPATCH
- CM Solutions for Servers NVDINSTALLSVR

## Example

If you want to install the CM Application Self-service Manager, and to make the CM Inventory Manager and CM Application Manager unavailable, use the following command line:

```
SETUP.EXE ADDLOCAL=NVDINSTALLRSM  
REMOVE=NVDINSTALLRIM,NVDINSTALLRAM
```

See [Installing the CM Agent from a Command Line](#) on page 51 for additional arguments.

## Using a Pre-Install Script

Use Visual Basic scripts to customize MSI properties that affect the installation. The following is a very simple Visual Basic script, which is intended to be an example only.



Be sure to use the `NVDPRECAPATH` argument to specify the fully qualified path and file name of a custom Visual Basic pre-install script in `INSTALL.INI` or on the command line. See the description of `NVDPRECAPATH` in [Table 3](#) on page 37.

Here is a sample pre-install script:

```
' The following sample demonstrates fetching an MSI property,  
then setting the same property.
```

```
' The property values are displayed in message boxes for  
debugging purposes.
```

```
Option Explicit
```

```
msgbox Session.Property("ALLUSERS")
```

```
Session.Property("ALLUSERS") = "1"
```

```
msgbox Session.Property("ALLUSERS")
```

You can use a pre-install script to override the property settings of the arguments that control the behavior of the CM Application Self-service Manager, such as those in the `[ARGS]` section of `INSTALL.INI`, as well as the attribute values for CM objects, such as those specified in the `[OBJECTS]` section of `INSTALL.INI`.



New objects or properties must be defined in `INSTALL.INI`:  
You can use a pre-install script to override a value for the object or property, but if you attempt to specify a new object or property in the pre-install script, it will be ignored.

### To override property settings or attributes for objects



Be sure to type the name of the property or the object and its attribute such as `NVDOBJZMASTER_ZDSTSOCK` in all uppercase.

- Use the prefix `NVDARG` to override property settings.

For example, to override the value set for the identification property, which identifies the subscriber session to the CM Configuration Server, type:

```
Session.Property("NVDARGIDENTIFICATION")="jenns"
```

- Use the prefix `NVDOBJ` to override object attributes.

For example, if you want to override the value set for the `ZDSTSOCK` attribute of the `ZMASTER` object, which is the port setting for the CM Configuration Server, type:

```
Session.Property("NVDOBJZMASTER_ZDSTSOCK")="3462"
```

## Using a Post-Install Script

Use custom Visual Basic, REXX, or Tcl scripts to run processes after installing CM agents. For example, your post-install script can initiate a connection to the CM Configuration Server in order to process mandatory applications.



Be sure to use the `NVDPOSTCAPATH` argument to specify the fully qualified path and filename of the custom Visual Basic or REXX post-install script in `INSTALL.INI` or on the command line. See the description of `NVDPOSTCAPATH` in [Table 3](#) on page 37. For example, if you want to run a script called `redstart.rex`, uncomment and set `NVDPOSTCAPATH=C:\Progra~1\Hewlett-Packard\CM\Agent\radstart.rex`

Include the script in the `\maint` folder of the agent install. It will automatically get copied into `IDMSYS`. A script example is shown below:



The following is a sample REXX from a post install script.

```
/** RADSTART.REX                                **/  
/**                                            **/  
/** DESCRIPTION:                                **/  
/** Client Rexx will perform a CM connection to a CS defined in the **/  
/** install.ini to process all mandatory applications.                **/  
/**                                            **/  
/** AUTHOR:          HP                        **/  
/** LANGUAGE:       REXX                      **/  
/**                                            **/  
/*****  
/* trace i */  
  
fullcmd = 'HIDE radntfyc localhost wait radskman context=m,log=connect_initial.log'  
call edncmd fullcmd;
```

## Summary

- The CM agent installation program consists of one package with six feature sets: CM Application Manager, CM Inventory Manager, and CM Application Self-service Manager, CM Patch Manager, CM OS Manager, CM Server Management.
- You can install the CM agents using a command line or using the Installation Wizard.
- Customize your installation to suit your enterprise.
- Create pre-install and post-install scripts to run processes before or after the agents are installed.

---

## 3 Installing the CM Administrator

At the end of this chapter, you will:

- Understand the system requirements for installing the HP OpenView Configuration Management Administrator (CM Administrator).
- Be familiar with the installation files.
- Know how to install the CM Administrator using the Installation Wizard and command lines.
- Understand the feature settings of the CM Administrator.
- Know how to remove and repair the CM Administrator using the Installation Wizard and command lines.

The CM Administrator installation program uses Microsoft Windows Installer. The program consists of one MSI package with six feature sets—CM Admin Packager, CM Admin Configuration Server DB Editor, CM Admin Agent Explorer, CM Admin Publisher, CM Admin Screen Painter, and CM AMP Editor.

## System Requirements

- Clean computer. (A **clean computer** is a computer with only the target subscriber's operating system installed.)
- TCP/IP connection to the CM Configuration Server.
- Minimum resolution of 800 x 600.
- For Windows 2000, Server 2003, or XP or Vista, you must have administrator rights to the computer to install the CM Administrator.

## Platform Support

For information about the platforms that are supported in this release, see the accompanying release notes.

## About the Installation Files

### setup.exe

setup.exe is stored on the CM Infrastructure media in the `managementinfrastructure\administratorworkstation\win32\` folder. It accepts any command line parameters and passes them to Windows Installer.

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



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

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

```
SETUP.EXE /a TARGETDIR=drive:\targetdirectory /qb
```

The target directory contains `Cm-Admin50.Msi`, the installation folders, and `setup.exe`.

## CM-ADMIN50.MSI

`Cm-Admin50.Msi` is the MSI database file, which contains the default configuration information for the installation. This file is stored on the **CM Infrastructure Media** in the `managementinfrastructure\administratorworkstation\win32\` folder.

# Installing the CM Administrator

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

## Using the Installation Wizard to Install the CM Administrator

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

### To install the CM Administrator using the Installation Wizard

- 1 From the folder containing the CM Administrator installation files, run `setup.exe`.

The CM Administrator Installation Wizard opens.

- 2 Click **Next**.

The License Agreement window opens.

- 3 After reading and accepting the license agreement, click **Next**.

If the CM agent is not installed on the computer, the Destination Folder window opens.



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

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

Click **OK** to continue.

- 4 Click **Next**.

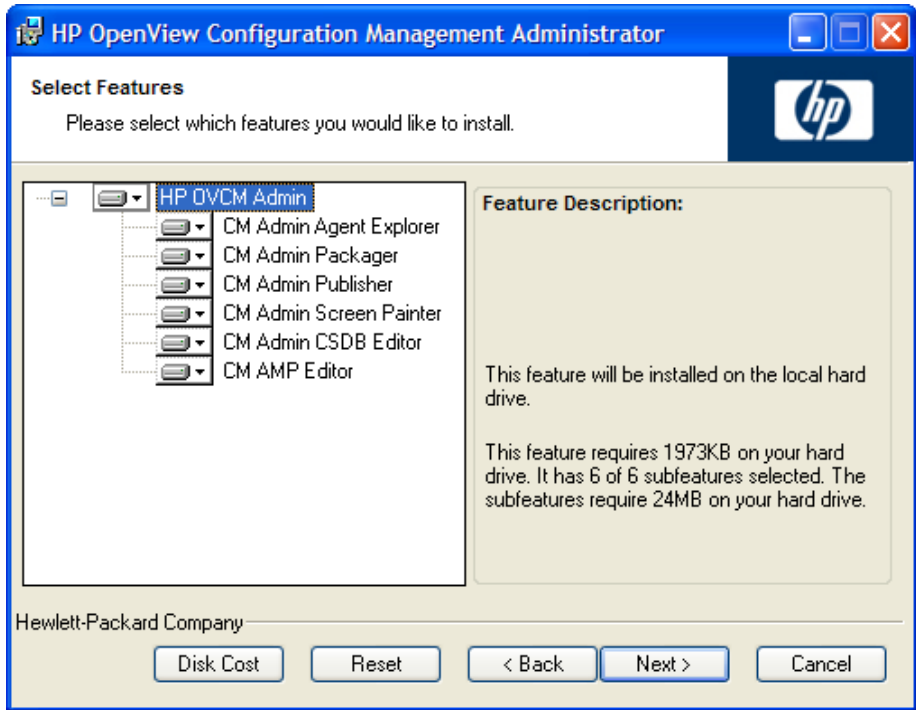
The CM Configuration Server window opens.


- 5 In the IP Address text box, type the IP address for the CM Configuration Server.

- 6 In the Port text box, type the port number (default is 3464).


- 7 Click **Next**.

The Select Features window opens.



- 8 Click  to select the features that you would like to install.



If you want to set the same options for all of the features, you can click  next to CM Administrator and select the appropriate option to apply the setting to all features.

Click **Disk Cost** to see an overview of the disk space needed for the installation.

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

- 9 From the shortcut menu, select an installation option. These options are described in [Table 10](#) below.

**Table 10 Feature settings for the CM Administrator**

Option	Description
Will be installed on local hard drive	Installs the top-level feature on the local hard drive, but not any sub-features listed below.

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

10 Click **Next**.

The Ready to Install the Application window opens.

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

When the installation is done, the CM Administrator has been successfully installed window opens.

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

## Using a Command Line to Install the CM Administrator

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

```
SETUP.EXE ADDLOCAL=NVDINSTALLPACKAGER
```

## Specifying the Features to Install

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



**Table 11 CM Administrator feature state arguments**

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

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

- NVDINSTALLPACKAGER                      CM Admin Packager
- NVDINSTALLPUBLISHER                    CM Admin Publisher
- NVDINSTALLSYSTEMEXPLORER            CM Admin CSDB Editor
- NVDINSTALLCLIENTEXPLORER            CM Admin Agent Explorer
- NVDINSTALLSCREENPAINTER              CM Admin Screen Painter
- NVDINSTALLAMPEDITOR                    OVSM AMP Editor

For example, if you want to install the CM Admin Configuration Server DB Editor and the CM Admin Agent Explorer to the computer, type the following command line:

```
SETUP.EXE ADDLOCAL=  
NVDINSTALLSYSTEMEXPLORER,NVDINSTALLCLIENTEXPLORER
```



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

```
SETUP.EXE NVDOBJZMASTER_ZIPADDR=10.10.10.1
```

## Additional Command Line Arguments

Table 12 below describes some additional arguments that you can pass to the installation program on the command line.

**Table 12 Command Line Arguments**

Argument	Description
/qn	Performs a silent installation.
/qb	Displays the progress bar only during the installation.
/l*v drive:\install.log	Creates a detailed Windows Installer log. Note: Using this option may impact the performance of the installation.
/a TARGETDIR= drive: \targetdirectory	Creates a Windows Installer AIP in the specified target directory. Note: A Windows Installer Administrative Installation Point (AIP) is also known as an Administrative Control Point (ACP). The target directory contains CM-Admin50.msi, the installation folders, and setup.exe. Once you have created the AIP, you can run setup.exe and pass the appropriate command line parameters. This starts the Windows Installer and passes the specified parameters to it.
INSTALLDIR=	Specify the installation directory. Use quotes if the path contains spaces.

# Removing the CM Administrator

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

## Using the Installation Wizard to Remove the CM Administrator

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

- ▶ To remove specific features of the CM Administrator, use the Modify option on the Application Maintenance window. This is discussed in [Modifying the CM Administrator Installation](#) on page 77.

To remove the CM Administrator using the Installation Wizard

- 1 From the folder containing the CM Administrator installation files, double-click **setup.exe**.  
The Application Maintenance window opens.
- 2 Select the **Remove** option.
- 3 Click **Next**.  
The CM Administrator Uninstall window opens.
- 4 Click **Next**.  
The files for the CM Administrator are removed from the computer.  
The CM Administrator has been successfully uninstalled window opens.
- 5 Click **Finish**.

## Using a Command Line to Remove the CM Administrator

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

To remove the CM Administrator using a command line

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

```
SETUP.EXE REMOVE=ALL
```

or

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

### Example

If you want to silently remove the CM Admin CSDB Editor and CM Admin Agent Explorer, type:

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

Reference the features for the CM Administrators as follows:

- CM Admin Packager                   NVDINSTALLPACKAGER
- CM Admin Publisher                 NVDINSTALLPUBLISHER
- CM Admin CSDB Editor               NVDINSTALLSYSTEMEXPLORER
- CM Admin Agent Explorer            NVDINSTALLCLIENTEXPLORER
- CM Admin Screen Painter            NVDINSTALLSCREENPAINTER
- OVSM AMP Editor                     NVDINSTALLAMPEDITOR



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

## Repairing the CM Administrator

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

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

## Using the Installation Wizard to Repair the CM Administrator

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

To repair the CM Administrator using the Installation Wizard

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

The Application Maintenance window opens.

- 2 Select the **Repair** option.

- 3 Click **Next**.

The Ready to Repair the Application window opens.

- 4 Click **Next**.

When the repair is done, the CM Administrator has been successfully installed window opens.

- 5 Click **Finish**.

## Using a Command Line to Repair the CM Administrator

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

To repair the CM Administrator using a command line

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

```
msiexec /f CM-Admin50.msi
```



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

## Modifying the CM Administrator Installation

The Windows Installer installation program offers the ability to modify the CM Administrator installation by adding or removing individual features.

This section describes how to modify the installation of the CM Administrator using the Installation Wizard and using a command line.

## Using the Installation Wizard to Modify the CM Administrator

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

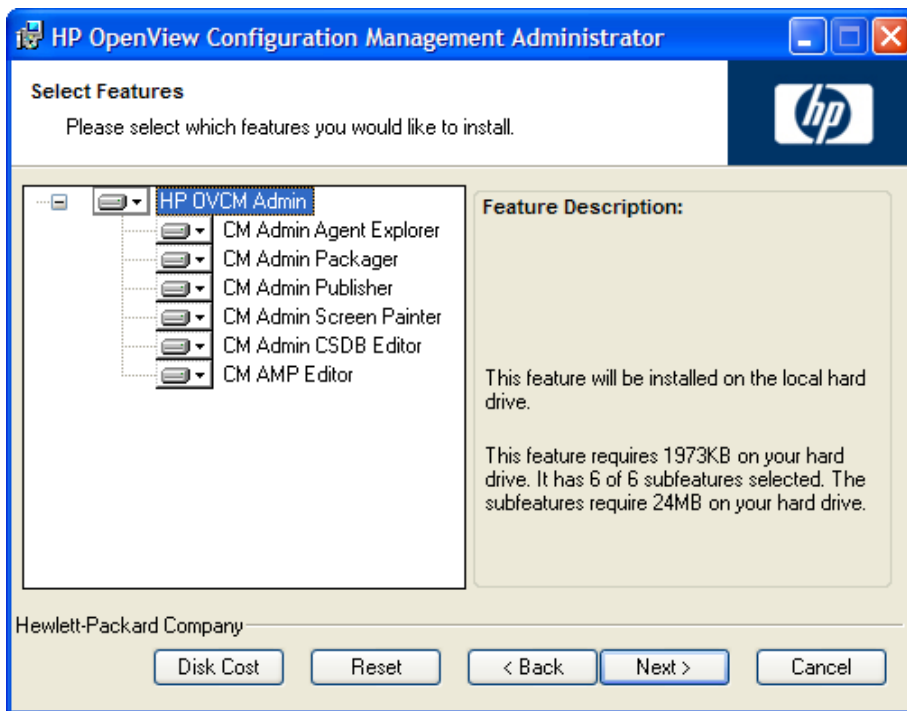
To modify the CM Administrator installation using the Installation Wizard

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

The Application Maintenance window opens.

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

The Select Features window opens. See [Installing the CM Administrator](#) on page 70 for information about how to use this window.



- 4 Click **Next**.

The Ready to Modify the Application window opens.

5 Click **Next**.

The CM Administrator has been successfully installed window opens.

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

## Using a Command Line to Modify the CM Administrator Installation

To modify the CM Administrator installation using a command line

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

```
SETUP.EXE FeatureStateArgument=feature1,feature2
```

See [Table 11](#) on page 73 for more information.

### Example

To install the CM Admin Packager to the local hard drive, and to make the CM Admin CSDB Editor and CM Admin Explorer unavailable, type the following command line:

```
SETUP.EXE ADDLOCAL=NVDINSTALLPACKAGER  
REMOVE=NVDINSTALLSYSTEMEXPLORER,NVDINSTALLCLIENTEXPLORER
```

See [Additional Command Line Arguments](#) on page 74 for additional arguments.

## Summary

- The CM Administrator consists of one package with five feature sets: CM Admin Publisher, CM Admin Packager, CM Admin CSDB Editor, CM Admin Agent Explorer, and CM Admin Screen Painter.
- Install the CM Administrator on a clean computer.
- You can install the CM Administrator using a command line or using the Installation Wizard.



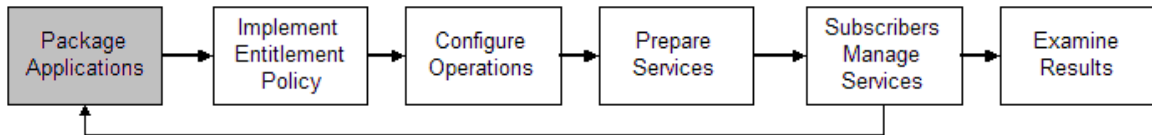
## 4 Packaging Applications and Content

At the end of this chapter, you will:

- Understand the packaging process.
- Be able to package an application using Component Selection Mode or Installation Monitor Mode.
- Be aware of the HP OpenView Configuration Management Batch Publisher (CM Batch Publisher), HP OpenView Configuration Management Extensions for Windows Installer (CM Extensions for WI), and the CM Administrator Publisher.
- Use the New Application Wizard in the CM Admin CSDB Editor to create a service.

This guide covers the *suggested* implementation for the HP OpenView Configuration Management Application Self-service Manager (CM Application Self-service Manager). Although you will tailor this strategy to meet your organization's needs, we recommend that you review this guide for a comprehensive understanding of the CM Application Self-service Manager. This chapter focuses on packaging.

**Figure 4** Tasks described in this guide



## About Packaging and Publishing with Radia

**Packaging** is the process of identifying resources, editing those resource's installation attributes, defining how they are to be installed, and saving the resources and installation instructions in a machine-readable file format. A package typically contains one or more files and configuration settings.

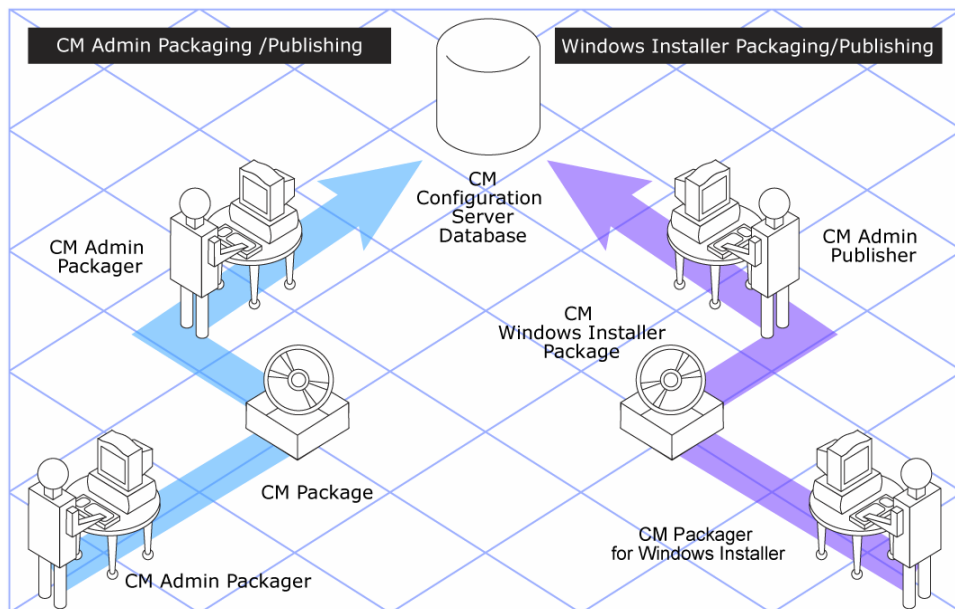
**Publishing** is the process of importing a package and its imbedded information to the CM Configuration Server DB. A package must be published before its content can be distributed and deployed into your environment.

Radia offers many different packaging and publishing options through multiple tools. Make note of the different types of resource packages you will create and publish, then choose your Radia packaging and publishing products as required.

- If you are packaging Windows Installer files, use the CM Admin Packager for Windows Installer. (Refer to the *HP OpenView Configuration Management Extensions for Windows Installer User Guide*).
- If you are publishing Windows Installer files, use the CM Admin Publisher. (Refer to the *HP OpenView Configuration Management Administrator Publisher Guide*).
- To package and publish all other types of files and applications, use the CM Admin Packager. (See the *HP OpenView Configuration Management Application Manager Installation and Configuration Guide (CM*

*Application Manager Guide) or the HP OpenView Configuration Management Application Self-service Manager Installation and Configuration Guide (CM Application Self-service Manager Guide).*

**Figure 5 Packaging/Publishing options**



## About CM Admin Packager

Packaging is the process of identifying the components of the software and organizing them into **packages**. Packages contain the files, shortcuts, links, and/or registry entries that make up the software. The software that you distribute can vary greatly—from a single data file, such as a company telephone list, to an entire application suite, such as Microsoft Office 2000.

Two packaging modes are available in the CM Admin Packager:

- **Component Selection Mode**

In Component Selection Mode, you select the individual components that make up the application, such as files, directories, registry entries, and links. We recommend this mode for packaging simple data or applications.

- **Installation Monitor Mode**

In Installation Monitor Mode, the CM Admin Packager determines what to package by scanning the computer before and after installing the software. It **differences** the before and after scans to determine what changes were made to the computer. These differences make up the package that you promote to the CM Configuration Server DB. We recommend this mode for packaging when you do not know all of the components that make up the application.



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

Several factors influence which mode you will use, the complexity of the application, your knowledge of the application's structure, and whether you would like to use the application's native installation capabilities. Later in this chapter, you will find detailed coverage of these modes.

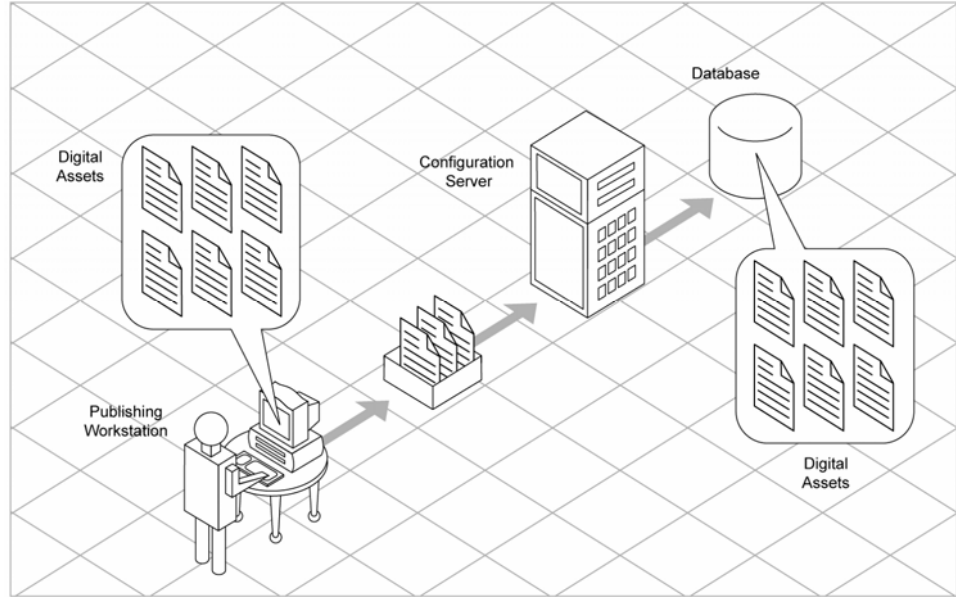
After you create a package, you **promote** it to the CM Configuration Server DB. The package is copied to the CM Configuration Server DB and several instances are created, as described below.

- An Application Packages (PACKAGE) instance that represents the promoted package.
- One File Resources (FILE) instance for each file in the package.
- One Desktop (DESKTOP) instance for each program group, link, and shortcut in the package.
- One Path (PATH) instance for each unique path to one or more components on the computer where the software is installed.
- One Registry Resources (REGISTRY) instance for each hive in the package.



Each instance described above is stored in one of the default classes in the SOFTWARE Domain, such as the PACKAGE or FILE Class. You can also add your own classes, such as a DLL class, to the CM Configuration Server DB. See the *HP OpenView Configuration Management Administrator Configuration Server Database Editor Guide (CM Admin CSDB Editor Guide)* for information on how to add a class.

**Figure 6 Packaging data**



After promoting the package, you will use the CM Admin CSDB Editor to create a service and assign policies. See Chapter 5, [Implementing Entitlement Policy](#) for more information.

## Packaging Considerations Checklist

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

### General

- What do you know about the data to be packaged?
  - If it is a simple package and you know everything about it, use Component Selection Mode.
  - If it is a more complex package and you do not know everything about it, use Installation Monitor Mode.

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

## System Configuration

See [Setting the Required System Configuration](#) for Installation Monitor Mode on page 95, or for Component Selection Mode on page 125 for more information.

- What operating systems are your target computers (workstations or servers) using?
- How much RAM is necessary to handle the data?
- What is the minimum processor necessary to handle the data?

## 64-Bit Applications

Use CM Admin Packager on a 64-bit computer to package 64-bit applications, and on a 32-bit computer to package 32-bit applications, regardless of the target computer's bit architecture. This avoids accessing both 32-bit and 64-bit registry and file systems during one packaging session.

32-bit applications being deployed to the "Program Files" directory will not be redirected to the "Program Files (x86)" directory by the CM Application Manager on a 64-bit machine. This is a convention implemented through environment variables, and not a hard requirement. There will be no adverse effect to installing 32-bit applications in the "Program Files" directory, unless you are deploying a 64-bit version of the application to the same device and same "Program Files" directory. If this situation arises, there are two methods to resolve it:

- Copy the 32-bit package and change the "Program Files" PATH instances using the CM Admin CSDB Editor to reference "Program Files (x86)".
- Convert the application to a MSI install and allow MSI to determine the correct "Program Files" location.

A ZSTOP expression is automatically generated by the packaging and publishing tools on a 64-bit operating system. Two examples are shown below:

- `WORDPOS(EDMGETV(ZMASTER,ZOSTYPE),'WINX64_NT')=0`
- `WORDPOS(EDMGETV(ZMASTER,ZOSTYPE),'WINIA64_NT')=0`

## Activation Options

- When do you want to activate the application - immediately on distribution or later? See [Setting Date and Time Constraints for Installation Monitor Mode on page 97](#), or for [Component Selection Mode on page 127](#) for more information.
- Which version of the application do you want to distribute, and when do you want to activate it? See the [Preparing Services](#) chapter starting on page 225 for more information.

## Data Options

See [Data Options Tab for Setting Default Packaging Properties on page 157](#), for [Installation Monitor Mode on page 108](#), or for [Component Selection Mode on page 135](#) for more information.

- What type of compression do you want to use?
- Will your data be stored in the CM Configuration Server DB or on a proxy server?
- Do you want to preserve the security settings for your files and folders that are being deployed to NTFS volumes?
- Are you distributing maintenance to the CM Application Self-service Manager agent?
- How do you want to promote the resources? Will you use the force lock method?
- Are you sending out an update and only want to deploy the changes?

## Verify Options

See [Agent Management Tab for Setting Default Packaging Properties on page 152](#), for [Installation Monitor Mode on page 104](#), or for [Component Selection Mode on page 131](#) for more information.

- Do you want to use the standard, default verification options?
- Is this a first time installation? Is there anything that you need to verify?
- When deploying files, what types of statistics do you want to check – date, time, size?
- Do you want to update all files, or only newer files?

- If a file already exists, do you want to deploy it again to overwrite any changes that may have been made?
- Do you want to use the internal version to determine whether a file should be deployed?

## Delivery Options

See Agent Management Tab for Setting Default Packaging Properties [on page 152](#), for Installation Monitor Mode [on page 104](#), or for Component Selection Mode [on page 131](#) for more information.

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

## Agent Behaviors

See Agent Behaviors Tab for Setting Default Packaging Properties [on page 159](#), for Installation Monitor Mode [on page 110](#), or for Component Selection Mode [on page 137](#) for more information.

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

# Using Installation Monitor Mode

In Installation Monitor Mode, the CM Admin Packager determines what to package by scanning the computer before and after installing the software. It differences the before and after scans to determine what changes were made to the computer after the installation. These differences make up the package that you will promote to the CM Configuration Server DB.



We recommend this mode for packaging when you do not know all of the components that make up an application.

Packaging in Installation Monitor Mode involves five phases:

- 1 **Defining** the application's hardware, software, and operating system requirements.
- 2 **Analyzing** (scanning) the hardware and software on the computer.
- 3 **Installing** the software you are packaging.
- 4 **Analyzing** (scanning) the hardware and software on the computer again. The difference between the pre- and post-scans represents the software you installed.
- 5 **Promoting** the package to the CM Configuration Server DB.

## Recommendations

The scans performed in Installation Monitor Mode are highly effective. Therefore, we will highlight some of the subtleties that you might want to keep in mind. If you are already familiar with systems management software, some of this material may be repetitive.

Before packaging your application in Installation Monitor Mode:

- Set up a **clean computer**.  
A clean computer has the same operating system as your target audience and the CM Administrator installed. Do not make any other changes to the computer.
- Use the same operating system and language version as the target computers for all packaging activities.



There are distinct differences between the national language implementations of operating systems. These differences may include different registry key names and directory locations, which can create a significant operational gap between the expected behavior of the packaged application and the actual operation of the application.

For example, if you are installing the French version of Office 2000 for Windows on computers using the French language version of Windows 2000 or Windows Server 2003, package the application on a computer with the French language version of the target operating system.

- Package on a computer with a static IP address.

If your packaging computer uses Dynamic Host Configuration Protocol (DHCP) to obtain a dynamic IP address, each time the computer is restarted you will receive a different IP address. If you are using Installation Monitor Mode, and the software you are packaging causes the computer to restart, the IP address in the registry will change. Therefore, we recommend packaging on a computer with a static IP address.

- If you are packaging Visual Basic applications, create a CM package that includes the Visual Basic 6 support files.

The CM Admin CSDB Editor, installed with the HP OpenView Configuration Management Administrator (CM Administrator), is a Visual Basic 6 application. Therefore, the following Visual Basic 6 support files are installed:

ASYCFILT.DLL	COMCAT.DLL
COMCTL32.OCX	COMDLG32.OCX
MSVBVM60.DLL	OLEAUT32.DLL
OLEPRO32.DLL	STDOLE2.TLB

If you use Installation Monitor Mode to package a Visual Basic 6 application on a computer that has CM Admin CSDB Editor installed, the support files listed above will not be included in the package. These files exist on the computer, even before the pre-installation scan is done. Therefore, the post-installation scan will not recognize these files as being added when the software is installed.

To distribute the necessary support files with your Visual Basic applications, use Component Selection Mode to create a package that includes only the Visual Basic 6 support files. Then, include this package in any application package for Visual Basic 6. For more information on including packages, see Inter-Package Relationships in the Packaging Strategy for the HP OVCM Administrator topic in the CM Admin Packager help.

The alternative is to package Visual Basic 6 applications on a computer that does not have the CM Admin CSDB Editor installed. To install the CM Administrator without the CM Admin CSDB Editor, put the CD-ROM in the drive and type the following on the command line:


```
CDDrive:\ CM-Admin50.msi -ne
```

## Packaging with Installation Monitor Mode

This section guides you through packaging a package using Installation Monitor Mode, and also provides detailed information about each of the screens that you will encounter.

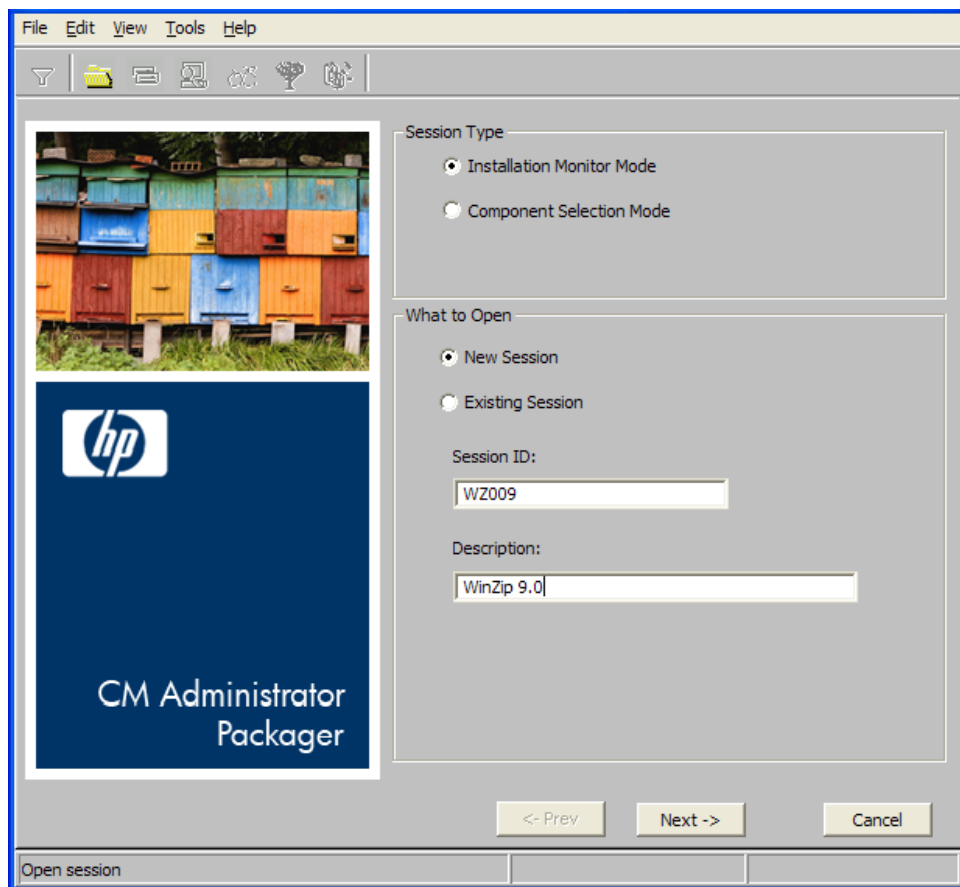
In this example, you will package an evaluation copy of WinZip 8.0, a simple shareware application available at <http://www.winzip.com>. Use this example to familiarize yourself with Installation Monitor Mode. However, please remember that there are many variables when packaging software.

### Task 1 Logging On to CM Admin Packager

- 1 Go to **Start** → **Programs** → **HP OVCM Administrator** → **CM Admin Packager**.
- 2 In the CM Admin Packager Security Information dialog box, type your User ID and Password in the appropriate text boxes.
  -  The User ID, as shipped from HP, is RAD\_MAST. No password is necessary. This might have been changed during installation. You can also change this by selecting the **Change Password** check box and typing the new password in the New Password and Verify New Password text boxes.
- 3 Click **OK**.

### Task 2 Completing the Open Packaging Session Window

Use the Open Packaging Session window to select the packaging mode and enter information to identify the packaging session.



At the end of a **packaging session**, you will have a CM package—a unit of distributable software or data—that you will connect to a service. You will set up policies to distribute the software or data to the targeted subscribers.

The following sections describe the options on the Open Packaging Session window, as shown in the figure above.

### Session Type Area

- **Installation Monitor Mode**

Use this mode to create CM packages when you do not know the structure of the software or data. CM Admin Packager performs a scan of your computer, and then prompts you to install the software using its native installation program. After the software is installed, CM Admin Packager performs another scan and then compares the scans. The differences are packaged and promoted to the CM Configuration Server DB.

- **Component Selection Mode**  
Use this mode to create CM packages when you know which files need to be distributed and what impact the installation will have on the agent computer. In this mode, you identify the files that are packaged and then promoted to the CM Configuration Server DB. For more information, see [Using Component Selection Mode](#) on page 120.

#### What to Open Area

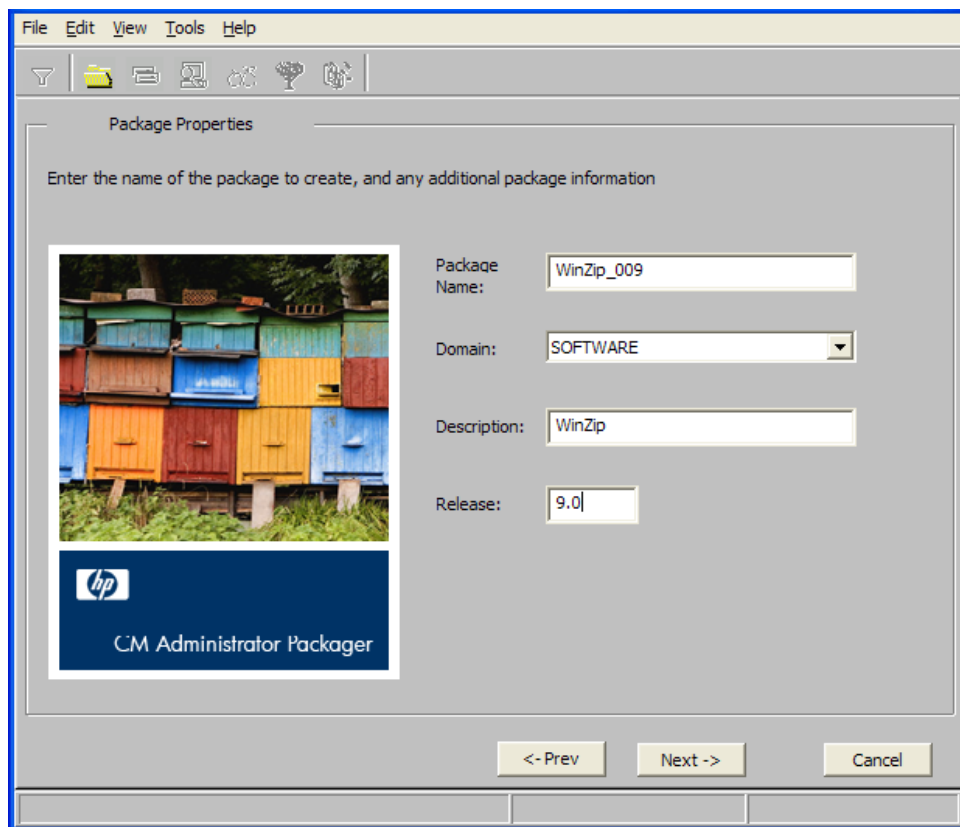
- **New Session**  
Select **New Session** to begin a new packaging session. You must complete the Session ID and Description text boxes.
- **Existing Session**  
Select **Existing Session** to resume a previous session.
- **Session ID**  
Type a *unique* identifier that is one to six characters long.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

In the WinZip example, as shown in the figure above, we are using Installation Monitor Mode to begin a New Session. The Session ID is WZ009 and we have described the session as WinZip 9.0.

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

#### **Task 3**    Entering Package Properties

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



- **Package Name**

Type a name for the package. This is the name for the PACKAGE Class instance in the CM Configuration Server DB, and should conform to your naming conventions. Note that the name cannot contain any spaces.

▶ You may want to establish a naming convention to ensure that identifiers are unique. CM Admin Packager uses this identifier to construct data objects and filenames.

See Appendix A, [Naming Conventions](#) for more information.
- **Domain**

Select the domain in which you want to store the instance. This is normally the SOFTWARE Domain unless you have customized the CM Configuration Server DB with proprietary domains.
- **Description**

Type a description for the package.

- **Release**

Type the release number of the software.

In the WinZip example, as shown in the figure above we named the package WinZip\_0009 and gave it a description and release number, WinZip and 9.0, respectively.



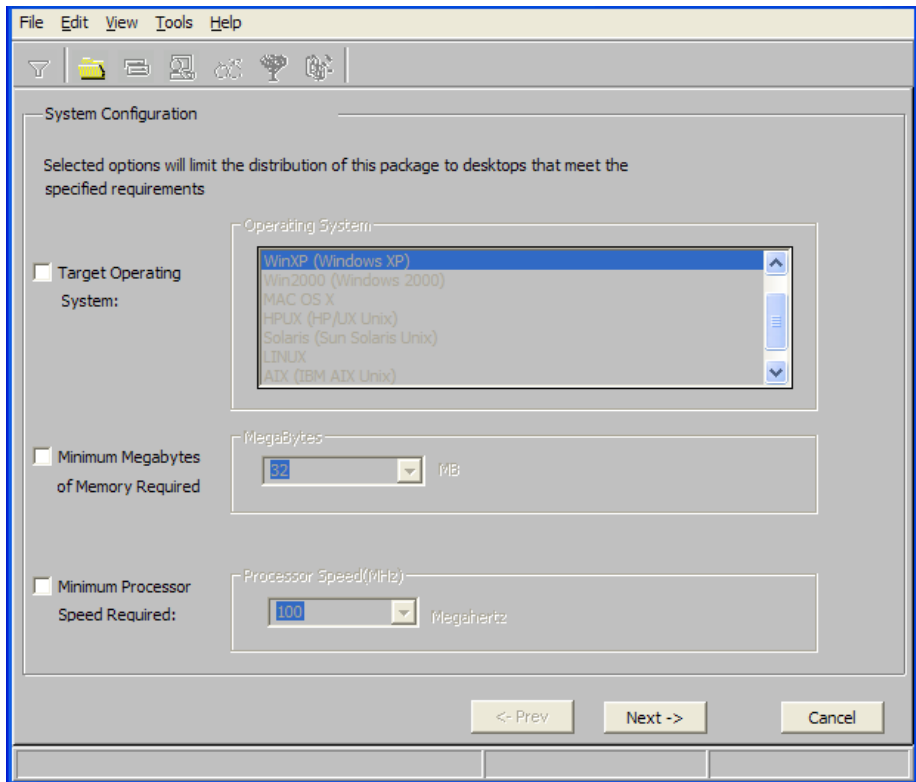
The current session information is stored in *SystemDrive*:  
`\Program Files\Hewlett-Packard\CM\Agent\LIB\ZPAKSESS.EDM` on your computer. Use the CM Admin Agent Explorer to view this object.

If you decide to close this packaging session and do not plan to complete the session, you can delete this object. You can also use the CM Admin CSDB Editor to delete the PACKAGE Instance from the CM Configuration Server DB.

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

#### **Task 4**    Setting the Required System Configuration

Use the System Configuration window to limit the distribution of the package to computers that meet specific requirements. Distribution is based on the computer's operating system, installed RAM, and processor.



- **Target Operating System**

Select this check box to make the Operating System list box available. Then, select one or more operating systems required for this package.

- To select multiple, consecutive operating systems, press and hold down the **Shift** key on your keyboard and click the appropriate items.
- To select multiple, non-consecutive operating systems, press and hold down the **Ctrl** key on your keyboard and click the appropriate items. If no option is selected, the package will be available to subscribers running all operating systems.

- **Minimum Megabytes of Memory Required**

Select this check box to make the Megabytes options available. Then, select the minimum number of megabytes of RAM required for this package. If no option is selected, the package will be available to subscribers with any amount of available memory.

- **Minimum Processor Required**

Select this check box to make the Processor options available. Then, select the minimum processor that is required for this package. If no



option is selected, the package will be available to subscribers with any processor. If none of the options is selected, the package will be available to all eligible subscribers.

In the WinZip example, as shown in the figure above, we accepted the defaults so there are not any restrictions.

Click **Next** to go to the Availability window.

### Task 5 Setting Date and Time Constraints

Use the Availability window to specify the date and/or time when the package will be available for deployment. The date and time is based on the system clock, on the computer running the CM Configuration Server. If no date and time constraints are specified, the package is available as soon as it is promoted to the CM Configuration Server DB and configured for distribution.

The screenshot shows a software window titled "Availability". The window has a menu bar with "File", "Edit", "View", "Tools", and "Help". Below the menu bar is a toolbar with icons for search, folder, list, print, refresh, and help. The main area of the window is titled "Availability" and contains the following text: "Indicate the date and/or time that this package will be available for deployment. (\*If no availability is specified, the package will be available immediately.)". Below this text is a section titled "Do not Distribute" which contains two checkboxes: "Before" and "After". Each checkbox is followed by a date and time selection area. The "Before" area has fields for Month, Day, Year, Hour, and Min. The "After" area has fields for Month, Day, Year, Hour, and Min. At the bottom of the window are three buttons: "<- Prev", "Next ->", and "Cancel".

- **Before**  
Select this check box to prevent distribution of the package *before* the

specified date and time. Use the Month, Day, Year, Hour, and Min text boxes to specify the date and time.

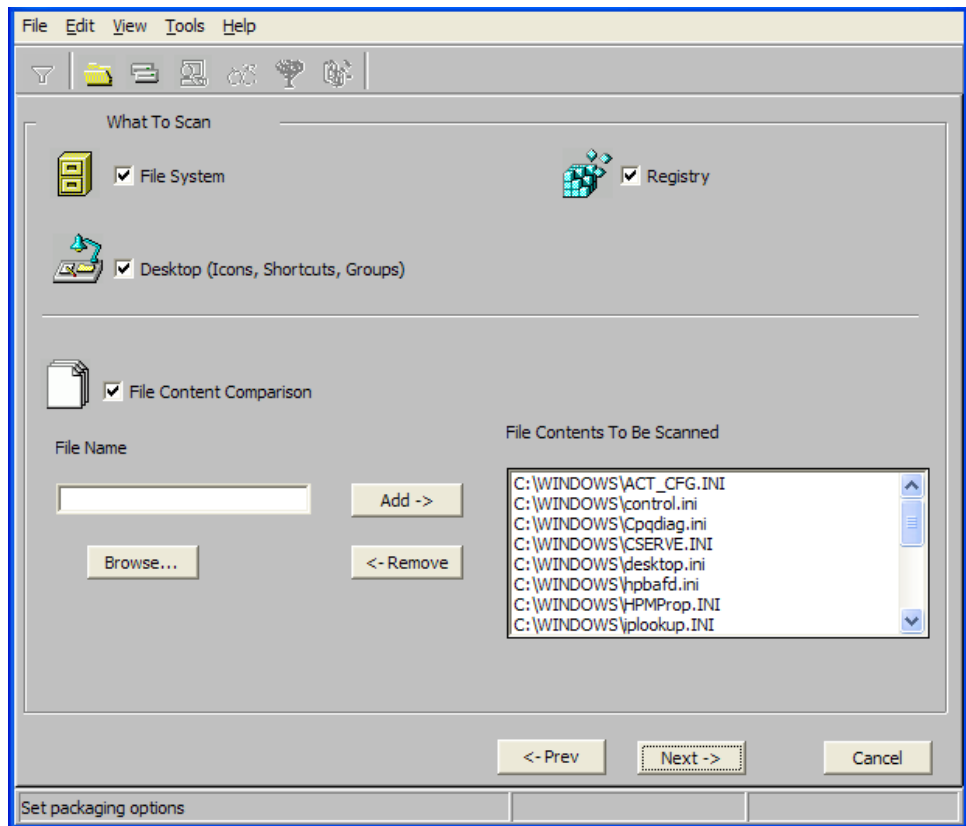
- **After**  
Select this check box to prevent distribution of the package *after* the specified date and time. Use the Month, Day, Year, Hour, and Min text boxes to specify the date and time.

In the WinZip example, as shown in the figure above, we left the default settings so that the package will be available for distribution as soon as we promote it to the CM Configuration Server DB.

Click **Next** to go to the What to Scan: Set Packaging Options window.

## Task 6 Identifying What to Scan

Use the What to Scan: Set Packaging Options window to identify areas where the software may make changes to the target computer. You can choose to scan the desktop, registry, file system, or to compare file content.



Before you install the application, the CM Admin Packager scans the selected areas and takes a **snapshot** that records their current state. After you install the application, the CM Admin Packager takes another snapshot. CM compares these before and after snapshots, and the differences make up the package.

If you do not know how the installation of the application will affect the target computers, scan all areas to ensure that all changes made by the application are recorded.

The more information that you have about the software that you are packaging, the easier it will be to package and deploy. One benefit of knowing the application is that you can save time during scanning. Below are some examples of this.

- If you know that the application does not make any registry changes, you can clear the Registry check box so that CM Admin Packager does not scan the registry.
- If you are packaging some favorites to Internet Explorer and you know that Internet Explorer stores favorites in individual `.URL` files, you can scan only the file system to pick up the changes.
- If you are packaging several bookmarks to Netscape Navigator and you know that Netscape Navigator stores bookmarks in a single `.HTM` file, you can include this file in the File Contents to be Scanned list, select the File Content Comparison check box, and CM Admin Packager picks up the changes to the bookmark file.

You can see how the more information you have, the less time you will spend on scanning.



CM does *not* support the packaging of files from the `IDMSYS`, `IDMLIB`, or `IDMLOG` directories.

#### To add files to be scanned

- Type the full path and file name into the File Name text box, and then click **Add**, or click **Browse** to navigate to the appropriate file.

#### To remove files to be scanned

- 1 Click the file that you want to remove from the File Contents to Be Scanned list.

or

If you want to remove multiple files from the list, press **Ctrl** and click the files to remove.

2 Click **Remove**.

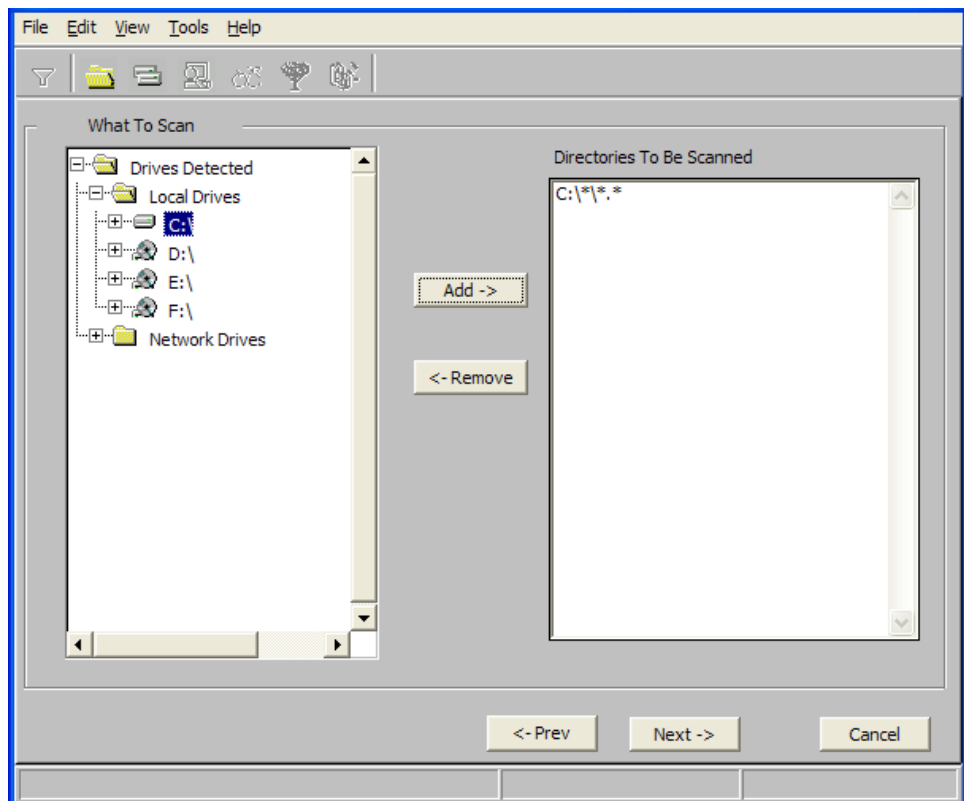
In the WinZip example, as shown in the previous figure, we accepted the default settings so that the entire desktop, registry, and file system will be scanned.

3 Click **Next** to go to the Set Drives to Scan window.

### Task 7 Identifying What to Scan in the File System

Use the Set Drives to Scan window to select the areas of the file system to scan. All of the drives (local and network) connected to your computer are considered the **file system**. Many factors, including the computer's hardware and software, affect the amount of time it takes to scan the system.

► This window opens *only* if you selected the File System check box in the Set Packaging Options: What to Scan window.



To set the drives to scan

- 1 Select *all* the folders or drives that will be affected by the installation.



We recommend that you do *not* scan network drives. These can take longer due to the overhead transmission across the network. Also, the mapping of network drives may vary from one user to another.

- 2 Click **Add** to move your selections into the Directories to be Scanned list.

In the WinZip example, as shown in the figure above, we decided to scan the entire C drive for changes made when the application is installed.

Click **Next** to go to the Pre-Installation Scan window.

### Task 8 Beginning the Pre-Installation Scan

Use the Pre-Installation Scan window to begin the scan. A check mark appears next to each area as the scan is finished. The CM Admin Packager alerts you when the scan is done.

To begin the pre-installation scan

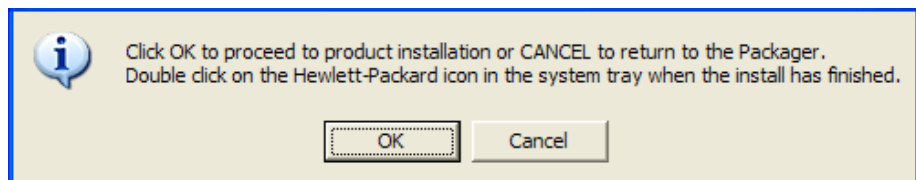
- 1 Click **Begin Scan**. When the scan is done, a message box opens.
- 2 Click **OK**.

### Task 9 Installing the Software

After the pre-installation scan is complete, you must install the software.

To install the software

- 1 In the Pre-Installation Scan window, click **Next**. The following message opens.



- 2 Click **OK**. The CM Admin Packager minimizes and CM Packager icon appears in the system tray.
- 3 Install the application using its native installation.



Do *not* do anything other than install the application. If you do, you risk making changes to the file system, registry, desktop, and so on. CM will detect these (unrelated) changes during the post-installation scan and include them in the package.



If the application that you are installing requires that you restart your computer, the HP logo in the system tray will be available when you log on again.

- 4 When the application is installed, double-click the HP logo in the system tray. A message asks if the installation was successful.
- 5 Click **Yes**. You may be prompted to type your User ID and Password.

In this example, WinZip 8.0 was installed in C:\Program Files\WinZip.

### Task 10 Beginning the Post-Installation Scan

Use the Post-Installation Scan window to begin the final scan. Then, CM Admin Packager compares the results of the pre- and post-installation scans and alerts you when it is done. After closing the alert, you will see information about the number of changes made to files, registry keys, icons, and links.



The comparison of the registry scans may seem to take a long time, and there may be very little disk activity. Although it may seem as though no progress is being made during this step, be patient. The registry scan comparison will complete normally. Use a clean computer to minimize the time it takes to complete this comparison.

To begin the post-installation scan

- 1 Click **Begin Scan**. When the scan is done, a message box opens.
- 2 Click **OK**.



After differencing the before and after scans, the CM Admin Packager creates three registry (.EDR) files in the REGISTRY class. These files are promoted to the CM Configuration Server.

- 3 Click **Next** to go to the Summary window.

## Task 11 Reviewing the Modifications to the File System

Use the Summary window, shown in the next figure, to review the changes made when you installed the software to your computer. There are three tabs: Files, Desktop, and Registry.

- Click the **Files** tab to review the files that were added, deleted, or updated.
- Click the **Desktop** tab to review the program groups, links, and shortcuts that were added, deleted, or updated.
- Click the **Registry** tab to review changes detected in the registry.

Detailed information about the Files, Desktop, and Registry tabs follows, beginning with [Viewing File Properties and Locations](#) below.

## Task 12 Viewing File Properties and Locations

Use the Files tab in the Summary window to see the files and folders to be included in the package.

To view the selected files and folders

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

In the WinZip example, we expanded the tree view to see all the files and folders that are included in this package.

## Task 13 Setting File Properties and Locations

You can modify the properties of the files and folders displayed on the Files tab, or you can exclude them from the package

To edit a file's properties

- Right-click a file or folder. If you right-click a file, a shortcut menu opens with the following three options.
  - To exclude this file from the package, click **Inactive**. If you select a folder, all the files in that folder will also be inactive.
  - To include this file in the package, click **Active**. This is the default setting. If you select a folder, all the files in that folder will also be active.

- To modify the properties of the file, select **Set Properties**. If you select a folder, you must also indicate whether you want the changes to affect the Directory Only or Directory and Files.

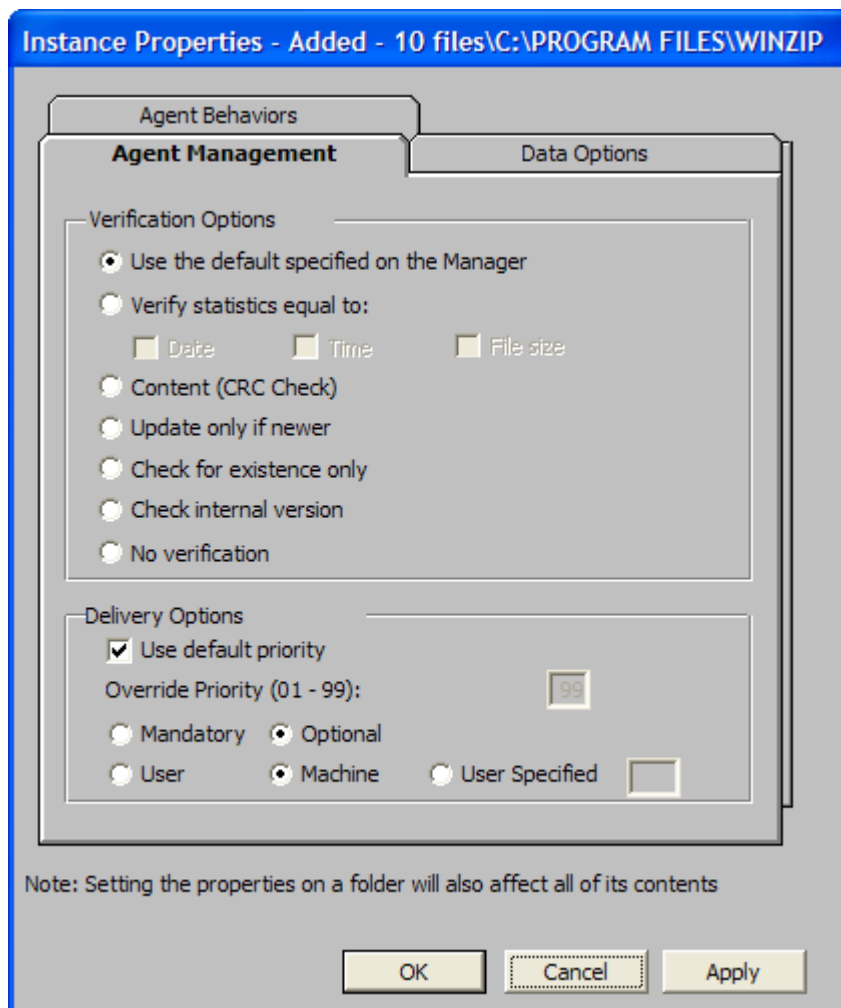
The Instance Properties dialog box opens. Use this dialog box to modify the attributes of the files in the package. The properties of a file are stored in its instance in the CM Configuration Server DB. The default values of these properties are set in the Global Default Properties dialog boxes. For more information see [Setting Default Packaging Properties](#) on page 151.

### Agent Management Tab

Use the Agent Management tab to set verification and delivery options for the selected file or folder in the package. After promoting this package to the CM Configuration Server DB, you can still modify these settings using the CM Admin CSDB Editor.

- Use Verification Options to specify the verification actions that the CM Application Self-service Manager will take for this file or folder.
- Use Delivery Options to specify delivery options, such as the order in which files are deployed.





### Verification Options

- **Use the default specified on the Manager** (default)  
Select this option so that verification options for this file or folder are inherited from the base instance of the FILE Class in the CM Configuration Server DB.

Use the CM Admin CSDB Editor to look at the ZRSCVRFY attribute of the base instance of the FILE Class to determine what the default verification options are.

- **Verify statistics equal to**  
Select this option so that the agent checks the selected statistics (Date, Time, File Size) for the file on the agent computer. The file is deployed

from the CM Configuration Server DB (or CM Proxy Server) if its statistics are different from the file on the agent computer. You can also use the CM Admin CSDB Editor to set this option: ZRSCVRFY=D, ZRSCVRFY=S, ZRSCVRFY=T, or ZRSCVRFY=Y.

- **Content (CRC Check)**

Select the CRC option so that the CM Application Self-service Manager checks the statistics Content (CRC) of the file on the agent computer. When the file is verified, the file will *first* be checked based on the Date, Time, and File Size. To save time during the verify, the CRC will be checked *only* if the file passes the Date, Time, and File Size verification. Then, the CM Configuration Server (or CM Proxy Server) will deploy a file if its statistics are different from those on the agent computer. By selecting this option, the CM Admin Packager will calculate the CRC and put the value in the ZRSCCRC attribute.

- **Update only if newer**

Select this option so that this file is deployed from the CM Configuration Server DB (or CM Proxy Server) if it has a later date/time stamp than the one on the agent computer. You can also use the CM Admin CSDB Editor to set this option: ZRSCVRFY=U.

- **Check for existence only**

Select this option so that this file is deployed only if it is not on the agent computer. No action is taken if it already exists on the agent computer, even if its statistics differ from those in the CM Configuration Server DB. You can also use the CM Admin CSDB Editor to set this option: ZRSCVRFY=E.

- **Check internal version**

Select this option to compare the version of the file being deployed against the version that may already exist on the agent computer. This ensures that the correct file will be updated if more than one version exists. You can also use the CM Admin CSDB Editor to set this option: ZRSCVRFY=V. This feature applies to the following file types: .DLL, .EXE, .OCX, .SYS, .VBX.

- **No verification**

Select this option so that the file is deployed the first time the application is deployed. No subsequent action is taken. You can also use the CM Admin CSDB Editor to set this option: ZRSCVRFY=N.

## Delivery Options

- **Use default priority**

Select this check box to use the default priority of 50. Priority determines

the order of deployment, from highest priority to lowest priority. You can also use CM Admin CSDB Editor to set this option: ZRSCPRI=50.

- **Override Priority (01-99)**

Type a number from 1 to 99 to override the default priority of 50. 1 is the highest priority and 99 is the lowest. You can also use CM Admin CSDB Editor to set this option: ZRSCPRI=1.

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

- **Mandatory**

Select this option to indicate that this file is critical to the application.

- If there is not enough space on the agent computer for the entire application, CM will *only* deploy mandatory files.
- If there is not enough space for the mandatory files, then the application is not deployed at all.

You can also use the CM Admin CSDB Editor to set this option: ZRSCMO=M.

- **Optional** (default)

Select this option to indicate that a file is not critical to the application.

- If there is not enough space on the agent computer for the entire application, CM will *not* deploy optional files.

You can also use the CM Admin CSDB Editor to set this option: ZRSCMO=O.

The following options apply only to operating systems supporting multiple users with a required sign on, such as Windows NT 4.0, 2000, or Windows Server 2003.

- **User**

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

- **Machine**

Select **Machine** to indicate that the file will be deployed to all users of the computer. You can also use the CM Admin CSDB Editor to set this option: ZCONTEXT=M.

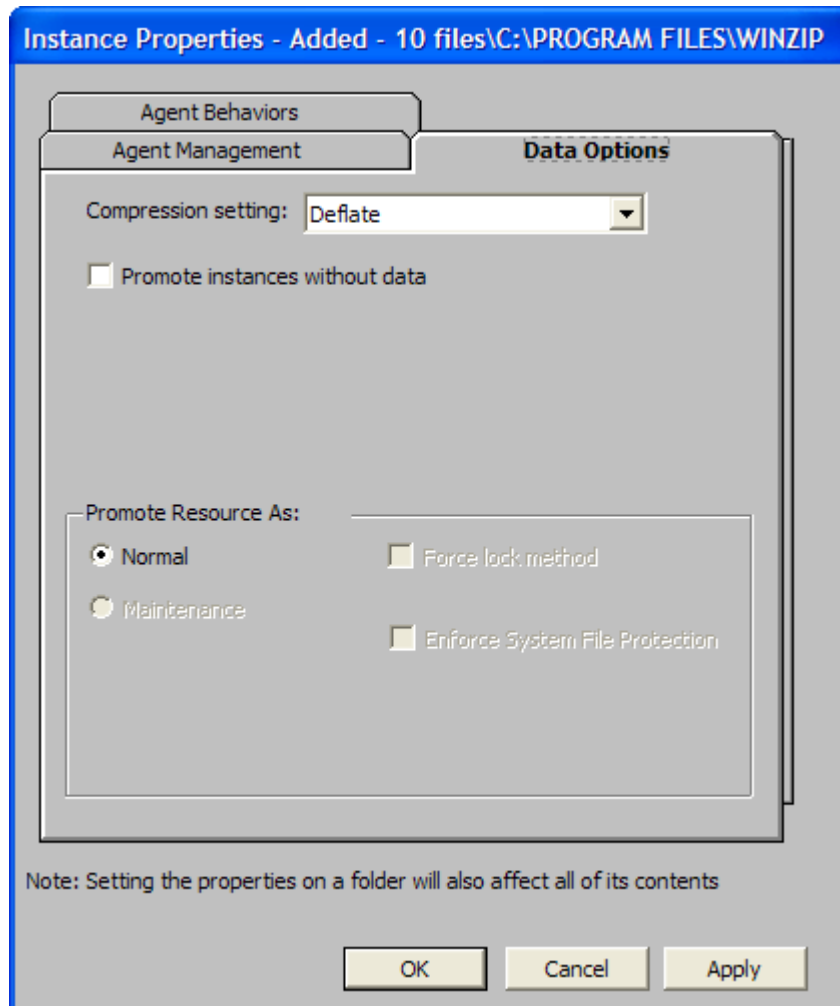
- **User Specified**

This option is for future use.

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

### Data Options Tab

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



- **Compression setting**

If necessary, select the compression setting for storing this file in the CM Configuration Server DB. Compression minimizes the time required to transmit data and the amount of disk space required to store it.

- Select **Deflate** for the most efficient compression, which produces smaller compressed images.
- Select **None** if the file is already compressed. If you are packaging an application that contains one or more compressed files, do *not* have CM Admin Packager compress the file as well. The file may actually grow in size if it is compressed again.
- **Promote instances without data**  
Select this check box to indicate that this file should not be transferred to the CM Configuration Server DB as part of the package. Only the instance representing it is included in the package. The data remains in compressed format in the `IDMDATA` location on your computer. The default `IDMDATA` location is `SystemDrive:\Program Files\Hewlett-Packard\CM\Agent\Lib\Data\`. You can manually place a file on a CM Staging Server if you have connectivity to it and do not want a copy of it in the CM Configuration Server DB.



We recommend that you do *not* use this property without a thorough understanding of the extended security in the NT operating system

#### Promote Resource As

- **Normal**  
Select this option to indicate that this file is to be deployed as part of an application.
- **Maintenance**  
This is a feature from previous versions and, as of version 4.0, is no longer used.
- **Force lock method**  
Select this check box to force the use of the **locked file method** for deploying this file. If the file is in use on the agent computer when CM attempts to deploy a new copy of it, the locked file method is normally used to deploy it. If necessary, it is decompressed and stored locally in a folder. The agent connect process forces a restart when it ends and the file is deployed to its correct location during startup.
- **Enforce System File Protection** (Windows 2000 and Windows Server 2003 only)  
Select this check box to specify that you want to enforce Windows System File Protection (SFP). CM first attempts to verify the resource using the current verify options, as specified in the `ZRSCVRFY` attribute located in the `FILE` Class.

- If the verification is successful, the resource is in the desired state and no further verification is necessary.
- If the verification fails, CM checks to see if System File Protection protects the file. If the file is protected, it will not be deployed.

Finally, CM checks this attribute to see whether you want to enforce SFP.

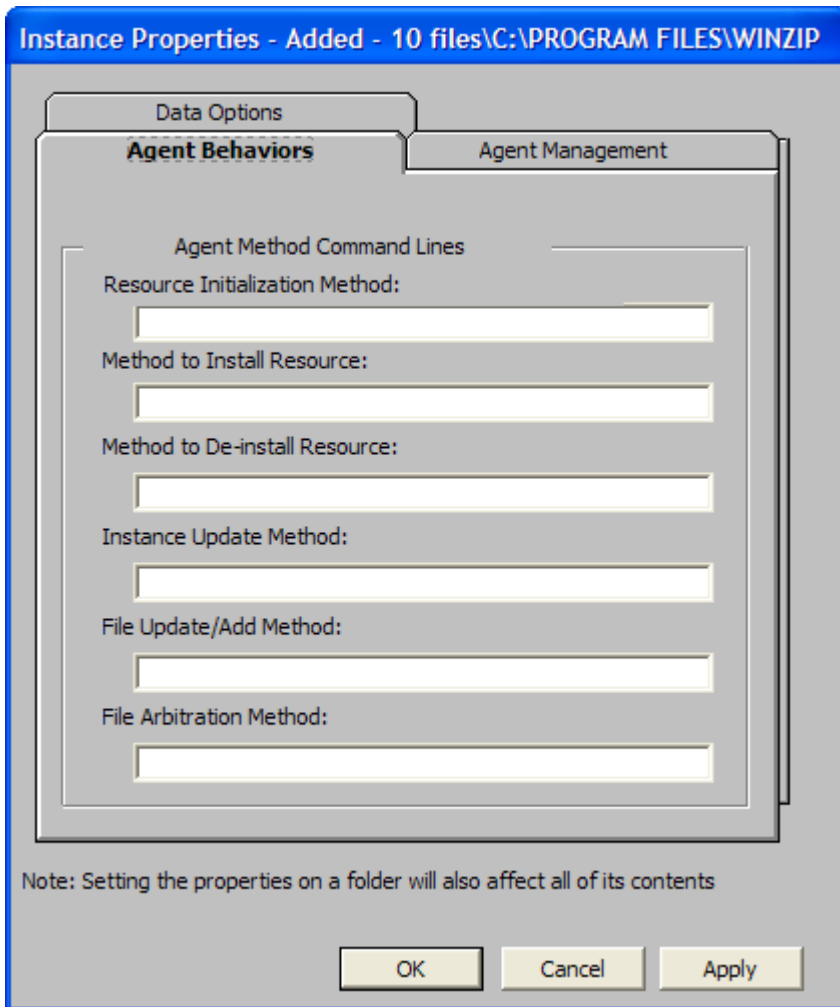
- If you select this check box, the ZRSCVRFY attribute is set to P and deployment of this resource and the service are marked as failed due to SFP processing.
- If you do not enforce SFP, the file is marked as having passed verification.

A ZERROR instance is created to describe the actions taken against the SFP file.

In the WinZip example, we accepted the default data options.

### Agent Behaviors Tab

Use the Agent Behaviors tab to specify methods (programs) that CM executes on the agent computer.



The command lines that you type in this dialog box are stored in attributes in the FILE Class instances in the SOFTWARE Domain.

#### Agent Method Command Lines

- **Resource Initialization Method** (Attribute in Database: ZINIT)  
Type the method to run when the file is stored on the agent computer.
- **Method to Install Resource** (Attribute in database: ZCREATE)  
Type the method to run after the file has been stored on the agent computer. This is used if some processing is required to enable it to be used on the agent computer.

- **Method to De-install Resource** (Attribute in database: ZDELETE)  
Normally, files are removed if the subscription to the software is cancelled. If a file, such as a shared DLL file, is not supposed to be deleted from the agent computer, even if the subscription to the software is cancelled, type **\_NONE\_** (with the underscores) as the value for the **Method to De-install Resource**.
- **Instance Update Method** (Attribute in database: ZUPDATE)  
Type the method to run when the instance is modified on the computer, after the file has been deployed.
- **File Update/Add Method** (Attribute in database: ZFILEUPD)  
Type the method to run when the file is new or has been updated. The method executes just before it is deployed to the agent computer.
- **File Arbitration Method** (Attribute in database: ARBITRAT)  
Type the method to run if a file is about to be replaced. This method compares the version information of the file or folder on the agent computer and the one that is going to replace it, and then determines which to keep.



You must add the ARBITRAT method to the CM Configuration Server DB to use this field. See the Technical Note *About the File Arbitration Method* on the HP OpenView web site for more information.

In the WinZip example, we have not specified any methods.

#### Task 14 Working with Updated Files

In addition to the files that were added, you might notice Updated files, as shown below.

Updated files are control files whose ASCII text has been modified, such as configuration files. You can set the properties for a standard ASCII text file as described in [Setting File Properties and Locations](#) on page 103.

If a control file, such as `WIN.INI`, has been updated, the file name of the desktop object is listed, followed by the name of the section, in the `.INI` file, that has been modified. Below the section name, you will see the changes to individual lines. Each line is listed separately so that you can edit them as necessary.

[To edit a line in a control file](#)

Right-click the line that you want to modify in the tree view.

- Click **Active** to include the change to the text file in the package.



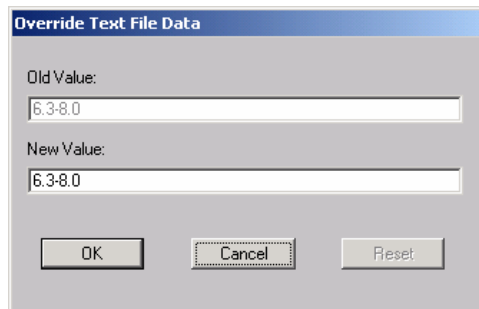
or

- Click **Inactive** if you do *not* want to include the change to the text file in the package.

OR

- Click **Override Value** if want to modify the change to the text file.

If you selected **Override Value**, the Override Text File Data dialog box opens.



To use the **Override Value** feature

- 1 Click **Override Value**.
- 2 Type the New Value for the line in the text box.
- 3 Click **OK**.

To restore the text line

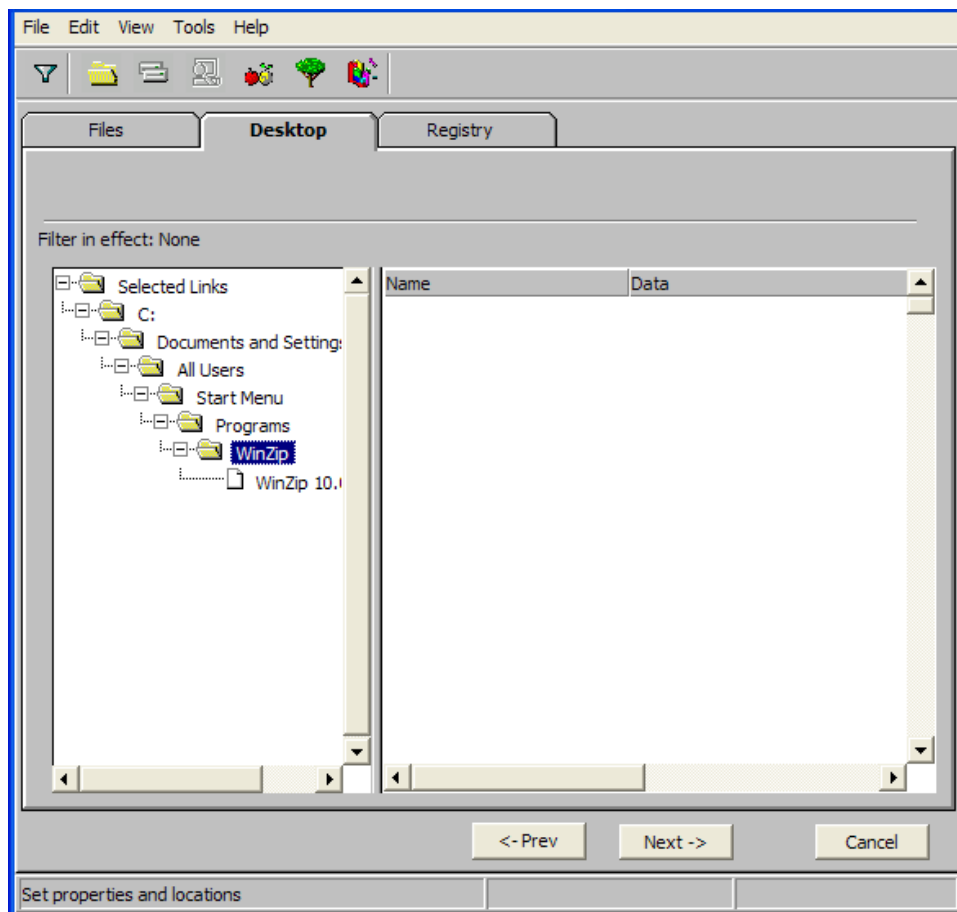
- 1 Right-click the line that you want to modify in the tree view.
- 2 Click **Override Value**.
- 3 Click **Reset**.
- 4 Click **OK** to save your changes and close the dialog box.

### **Task 15** Setting Desktop Properties and Locations

Use the Desktop tab in the Set Properties and Locations window to see the selected program groups, links, and shortcuts in the package, and to modify their properties.

To view the selected program groups, links, and shortcuts

- Right-click **Selected Links**, and select **Expand All**.



To set properties for program groups, links, and shortcuts

- Right-click the link in the tree view. A menu opens with options listed below



When you right-click a folder or link, CM applies the changes to all links within that folder or within the link's branch in the tree view.

— **Just In Time (App Mgr Only)**

The CM Application Manager (App Mgr) lets you designate applications as **self-maintaining**. This means that each time the subscriber launches the application, a connection is made to the CM Configuration Server to verify the application and, if necessary, update or repair it.

Note that the use of Just In Time with Machine/User applications can only verify or repair either the Machine or User portion of the service. If the Just In Time icon is using context=M, then startdir should be set to SYSTEM, and the user portion of the service will not be verified/repared. If the Just In Time icon is using context=U, then startdir should be \$USER, and only the user portion of the service will be verified/repared.

#### — **Properties**

Select **Properties** to open the Verify/Type submenu.

### Verify Menu Commands

- **Full Verify**  
Select this command to deploy the link every time a subscriber connects to the CM Configuration Server, even if it already exists on the agent computer. This repairs broken or modified links.
- **No Verify**  
Select this command if you do *not* want to verify the link after initial deployment. No repairs are made to the link, even if the user modifies or removes it.
- **Exists**  
Select this command to deploy the link only if it does *not* exist on the agent computer, during initial deployment and on each subsequent connection. The link is deployed again only if it was deleted. This allows users to modify the link.

### Type Menu Commands

The following options apply only to operating systems supporting multiple users, such as Windows 2000, Windows XP, or Windows Server 2003.

- **User**  
Select this command to deploy this link only to the subscriber logged on when the application is initially deployed.
- **Machine**  
Select this command to deploy this link to all users of the computer.

In the WinZip example, we left the default settings for program groups, links, and shortcuts.

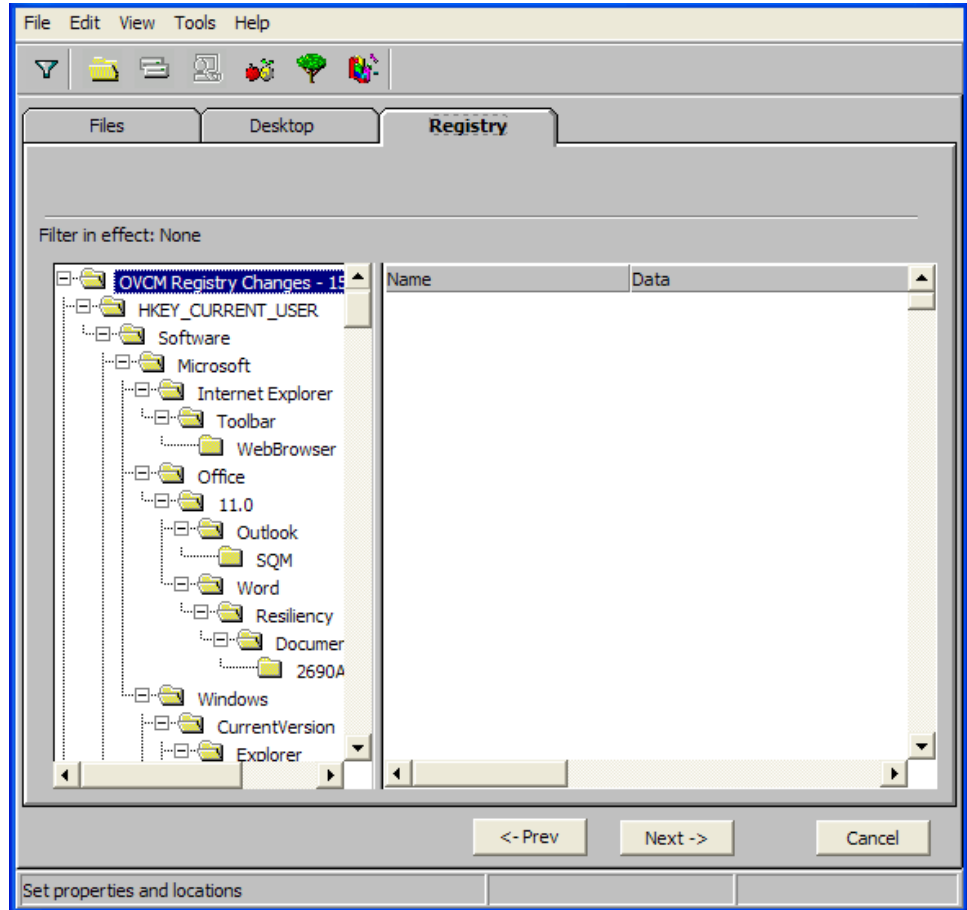
## **Task 16** Setting Registry Properties and Values

Use the Registry tab in the Set Properties and Locations window to see the changes that will be made to the registry when the application is deployed.

You can also modify the values in registry keys and set various deployment options.

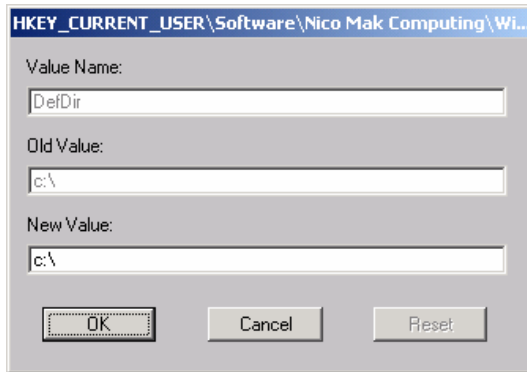
To view the selected registry

- Right-click **Selected Registry Keys**, and select **Expand All**.



To edit values in a registry key

- 1 Select the registry key in the tree view.
- 2 Double-click the registry key in the list view.
- 3 Edit the data in the New Value text box.
- 4 Click **OK** to save your changes and close the dialog box.



To restore the registry key to its original value

- 1 Double-click the registry key in the list view.
- 2 Click **Reset**.
- 3 Click **OK** to save your changes and close the dialog box.

To set properties for registry keys

- Right-click the link in the tree view. A shortcut menu opens.
  - ▶ When you right-click a registry key, CM applies the changes to all registry keys within the key's branch in the tree view.
- **Active**  
Select this command to include registry changes in the package.
- **Inactive**  
Select this command to prevent registry changes from being included in the package.
- **Properties**
  - **Unconditional/Enforced**  
Select this command to deploy the registry key, even if it already exists on the agent computer. Every time the subscriber connects to the CM Configuration Server, this registry key is reset to the packaged value, if it has been modified on the agent computer. Use this setting for registry keys that must not change in order for the application to function properly.
  - **Unconditional/Exist** (default)  
Select this command to deploy the registry key upon initial

deployment or if it has been deleted. However, the value of the registry key is not reset.

- **Exist/Exist**

Select this command to deploy the registry key only if it *does not exist* on the agent computer. This allows you to modify the registry key and your changes will not be overwritten because the key will be deployed again only if it is deleted.

In the WinZip example, we set the registry keys to Unconditional/Exist. Click **Next** to go to the Promote Files window.

## Promoting Packages

Use the Promote Files window to create instances for the package in the CM Configuration Server DB.



Once you promote the package, the session's objects are deleted and you *cannot* resume the session. Therefore, you may want to save the session so that you can reopen it later. For example, you might find problems while testing the deployment of the package, and want to make corrections. Here's how to save the session:

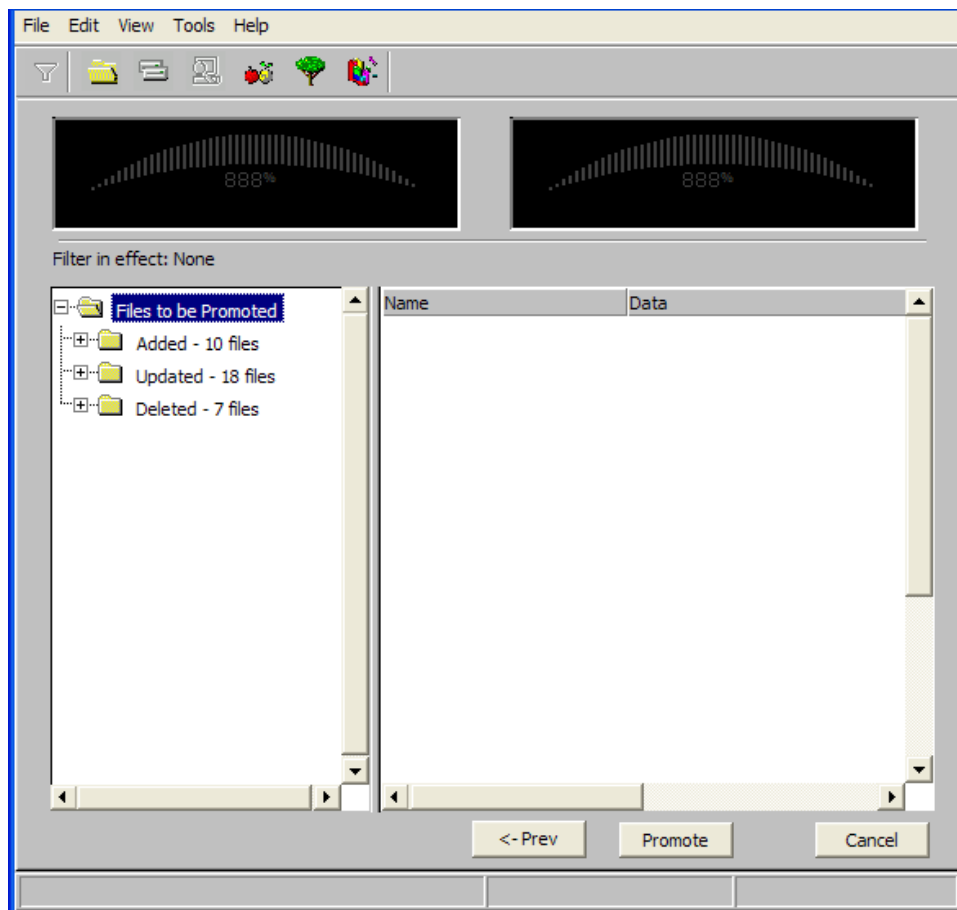
Copy the LIB directory (and its subdirectories) from `SystemDrive:\Program Files\Hewlett-Packard\CM\Agent\LIB` to a backup location. The LIB directory contains the objects that were built by the CM Admin Packager during your packaging session.

By saving the LIB directory, promoting the package, and then restoring the LIB directory, you can alter the settings in the CM Admin Packager's windows, and promote the package again. Use the toolbar buttons to jump directly to the various windows in the CM Admin Packager.

If you find a problem while testing the deployment of the promoted package, this allows you to fix it.

To view the files to be promoted

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



To promote the package

- 1 Click **Promote**.
- 2 Click **OK** when you receive the prompt that the package has been promoted successfully.
- 3 Click **Finish** to close CM Admin Packager.
- 4 Click **Yes** to confirm that you want to close the CM Admin Packager.

In this example, WinZip 9.0 was promoted to the CM Configuration Server DB. Next, use the CM Admin CSDB Editor to create a service. For more information, see [Creating a Service](#) on page 146.

# Using Component Selection Mode

In Component Selection Mode, you select the individual components that make up the application, such as files, directories, registry entries, and links to create a package. We recommend this mode for packaging simple applications.



If the application makes changes to an existing text file, such as `Win.ini`, you *must* use Installation Monitor Mode.

Also, use Installation Monitor Mode to package any application with which you are not completely familiar.

Packaging in Component Selection Mode involves three phases:

- 1 **Defining** the application's hardware, software, and operating system requirements.
- 2 **Selecting** the individual files to be packaged.
- 3 **Promoting** the files to the CM Configuration Server DB.

## Prerequisites

Before packaging your application in Component Selection Mode:

- Install the target application on your (administrator) computer. This ensures that the files you need to select reside on the computer.
- If the application makes changes to the registry, export the registry entries.



When you export the registry entry, be sure that you set the Export range to Selected branch so that you do not export all registry entries.

Also, if you are running Windows 2000 or Windows Server 2003, select **Win9x/NT 4 Registration Files (REGEDIT4)** from the Save as Type menu.

## Packaging with Component Selection Mode

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



In the example, you will package GS-CALC, a simple shareware application available at <http://www.jps-development.com/gs-calc.htm>. The target platform is Windows 2000.

Use this example to familiarize yourself with Component Selection Mode. However, please remember that there are many variables when packaging applications.



For the following example to work, be sure to:

- Install GS-CALC on your administrator computer.

Export the registry entry in `HKEY_CURRENT_USER\SOFTWARE\JPS Development`.

### Task 1 Logging On to CM Admin Packager

- 1 Go to **Start** → **Programs** → **HP OVCM Administrator** → **CM Admin Packager**.
- 2 In the CM Admin Packager Security Information dialog box, type your User ID and Password in the appropriate text boxes.



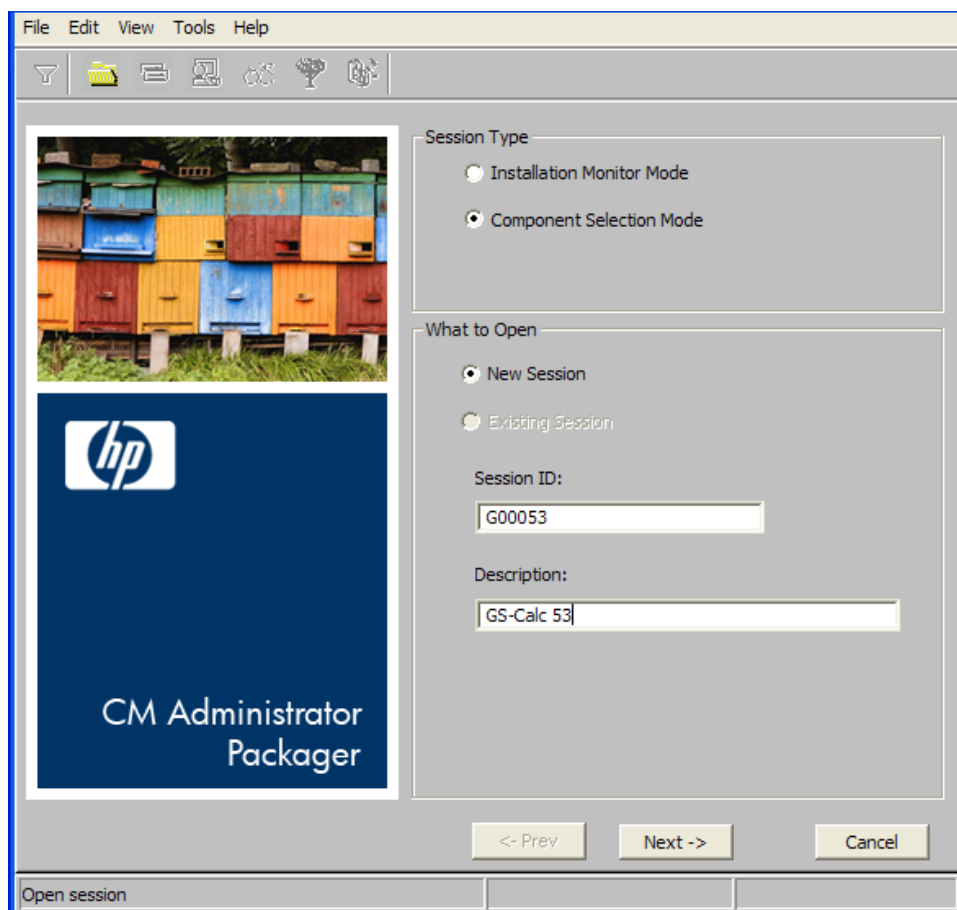
The User ID, as shipped from HP, is RAD\_MAST. No password is necessary. This might have been changed during installation. You can also change this by selecting the **Change Password** check box and typing the new password in the New Password and Verify New Password text boxes.

- 3 Click **OK**.

The Open Packaging Session window opens.

### Task 2 Completing the Open Packaging Session Window

Use the Open Packaging Session window to select the packaging mode and enter information to identify the packaging session.



At the end of a **packaging session**, you will have a CM package—a unit of distributable data—that you will connect to a service. You will set up policies to distribute the data to the targeted subscribers.

The following sections describe the options on the Open Packaging Session window, as shown in the figure above.

- ▶ Review the Global Defaults prior to beginning any Packaging Session. See [Setting Default Packaging Properties](#) beginning on page 151.

### Session Type Area

- **Installation Monitor Mode**  
Use this mode to create CM packages when you do not know the structure of the application or data. CM Admin Packager performs a scan

of your computer, and then prompts you to install the software using the native installation program. After the software is installed, CM Admin Packager performs another scan and then compares the scans. The differences are packaged and promoted to the CM Configuration Server DB. For more information, see [Using Installation Monitor Mode](#) on page 88.

- **Component Selection Mode**

Use this mode to create CM packages when you know which files need to be distributed and what impact the installation will have on the agent computer. In this mode, you identify the files that are packaged and then promoted to the CM Configuration Server DB.



In previous versions of CM Admin Packager, Import Mode was available for applications installed or maintained using Windows Installer. For information on packaging these applications, see the *CM Extensions for WI User Guide*. This is a separately licensed product.

### What to Open Area

- **New Session**

Select **New Session** to begin a new packaging session. You must complete the Session ID and Description text boxes.

- **Existing Session**

Select **Existing Session** to resume a previous session.

- **Session ID**

Type a *unique* identifier that is one to six characters long.

- **Description**

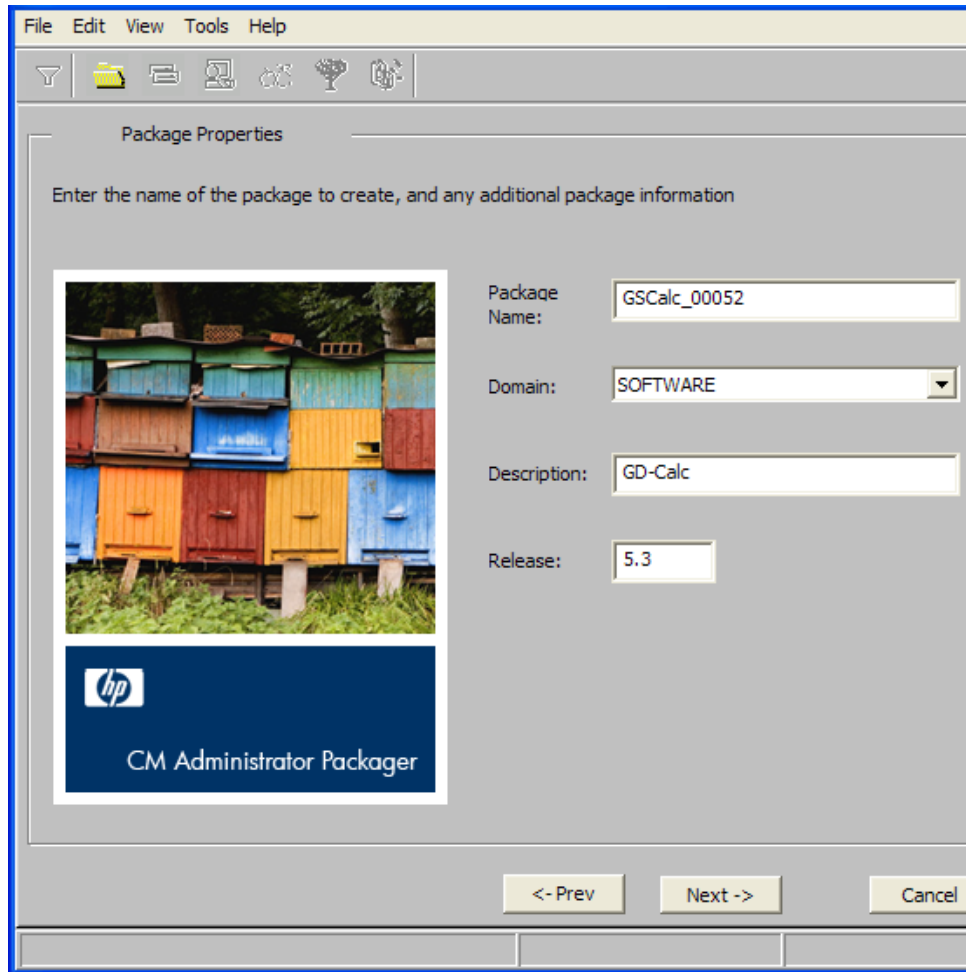
Type a description of the session.

In the GS-CALC example, as shown in the previous figure, we are using Component Selection Mode to begin a New Session. The Session ID is G00053 and we've described the session as GS-Calc 53.

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

### Task 3 Entering Package Properties

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



- **Package Name**

Type a name for the package. This is the name for the PACKAGE Class instance in the CM Configuration Server DB and should conform to your naming conventions. Note that the name cannot contain any spaces.



You might want to establish a naming convention to ensure that identifiers are unique. The CM Admin Packager uses this identifier to construct data objects and filenames.

See Appendix A, [Naming Conventions](#) for more information.

- **Domain**

Select the domain in which to store the instance. This is normally the SOFTWARE Domain unless you have customized the CM Configuration Server DB with proprietary domains.

- **Description**  
Type a description for the package.
- **Release**  
Type the release number of the software.

In the GS-Calc example, as shown in the previous figure, we named the package GSCalc\_00053 and gave it a description and release number, GS-Calc, and 5.3 respectively.



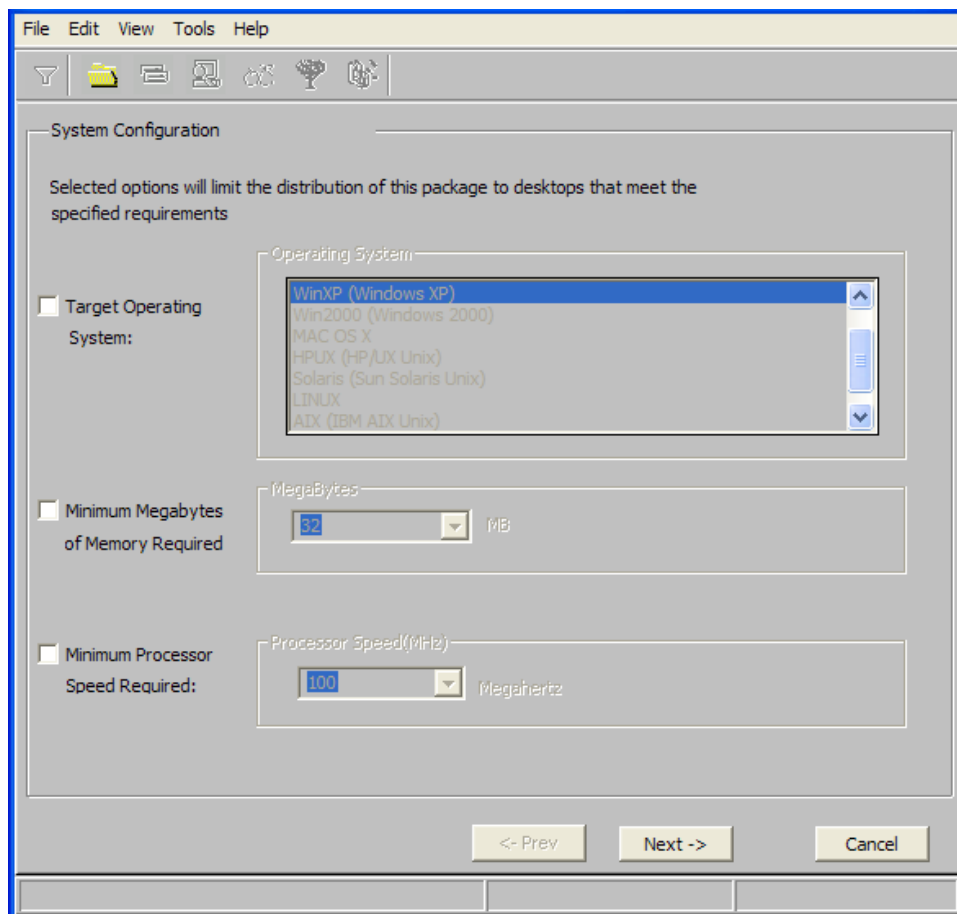
The current session information is stored in *SystemDrive*:  
\\Program Files\\Hewlett-Packard\\CM\\Agent\\LIB\\ZPAKSESS.EDM on your computer. Use the CM Admin Agent Explorer to view this object.

If you decide to close this packaging session and do not plan to complete it, you can delete this object. You can also use the CM Admin CSDB Editor to delete the PACKAGE Instance from the CM Configuration Server DB.

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

#### **Task 4**    Setting the Required System Configuration

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



- **Target Operating System**  
Select this check box to make the Operating System list box available. Then, select one or more operating systems required for this package.
  - To select multiple, consecutive operating systems, press and hold down **Shift** and click the appropriate items.
  - To select multiple, non-consecutive operating systems, press and hold down **Ctrl** and click the appropriate items. If no option is selected, the package will be available to subscribers running all operating systems.
- **Minimum Megabytes of Memory Required**  
Select this check box to make the Megabytes options available. Then, select the minimum number of megabytes of RAM required for this package.

- **Minimum Processor Required**

Select this check box to make the Processor options available. Then, select the minimum processor that is required for this package.

Click **Next** to go to the Availability window.

### Task 5 Setting Date and Time Constraints

Use the Availability window to specify the date and/or time when the package will be available for deployment. The date and time is based on the system clock, on the computer running the CM Configuration Server. If no date and time constraints are specified, the package is available as soon as it is promoted to the CM Configuration Server DB and configured for distribution. After promoting this package to the CM Configuration Server DB, you can still modify these settings using the CM Admin CSDB Editor.

File Edit View Tools Help

Availability

Indicate the date and/or time that this package will be available for deployment.  
(\*If no availability is specified, the package will be available immediately.)

Do not Distribute

Before  After

Month Day Year Month Day Year

Hour Min Hour Min

<- Prev Next -> Cancel

- **Before**  
Select this check box to prevent distribution of the package *before* the specified date and time. Use the **Month, Day, Year, Hour, and Min** text boxes to specify the date and time.
- **After**  
Select this check box to prevent distribution of the package *after* the specified date and time. Use the **Month, Day, Year, Hour, and Min** text boxes to specify the date and time.
  - In the GS-Calc example, as shown in the figure above, we accepted the default settings so that the package will be available for distribution as soon as we promote it to the CM Configuration Server DB.
  - Click **Next** to go to the Select Files to Be Packaged window.

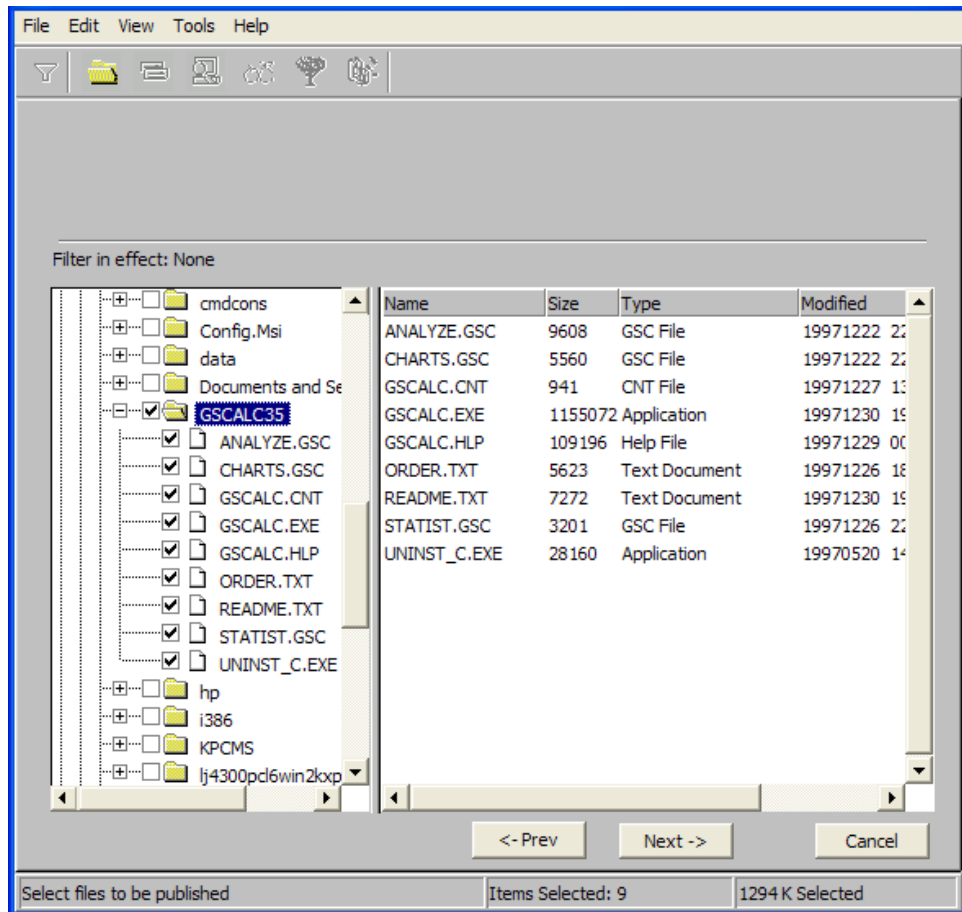
### **Task 6**    **Selecting the Files to Package**

Use the Select Files to be Packaged window to select all files, links, or shortcuts, and registry entries that need to be included in the package. If you are unsure about any of these components, consider using Installation Monitor Mode instead.

To select the files to package

- Navigate through your file system (shown in the tree view in the next figure) and select the files or folders to be included in the package.  
Click a check box to clear a selection.





In the GS-Calc example, we selected the folder `C:\GS-Calc` that contains the program files, as shown in the figure above. Next, we selected the links located in the folder `C:\Documents and Settings\All Users\Start Menu\Programs\GS-Calc`. Finally, we selected the registry entry that we exported earlier.

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



When you add a new line to a batch or text file as part of a package, the packaging process uses the previous line as the search line when applying those changes during deployment. Be aware that if you have two identical lines, such as `REM`, the service will automatically put the new line after the first occurrence of `REM`.

## Task 7 Viewing File Properties and Locations

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


To view the selected files and folders

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


Some of the properties in the next figure such as Verify, Priority, and Mandatory/Optional, are initially set according to the selections in the CM Admin Packager – Global Default Properties dialog box, as described starting on page 151. In [Setting File Properties and Locations](#) on page 131, you will learn how to modify these settings, if necessary.

To filter the displayed files and folders

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

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

To remove a filter

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

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

## Task 8 Setting File Properties and Locations

Use the Instance Properties dialog box to modify the properties of the files and folders in the package. The properties of a file or folder are stored in its instance in the CM Configuration Server DB.

Use the CM Admin Packager – Global Default Properties dialog box to set the default values of these properties. For more information see [Setting Default Packaging Properties](#) on page 151.

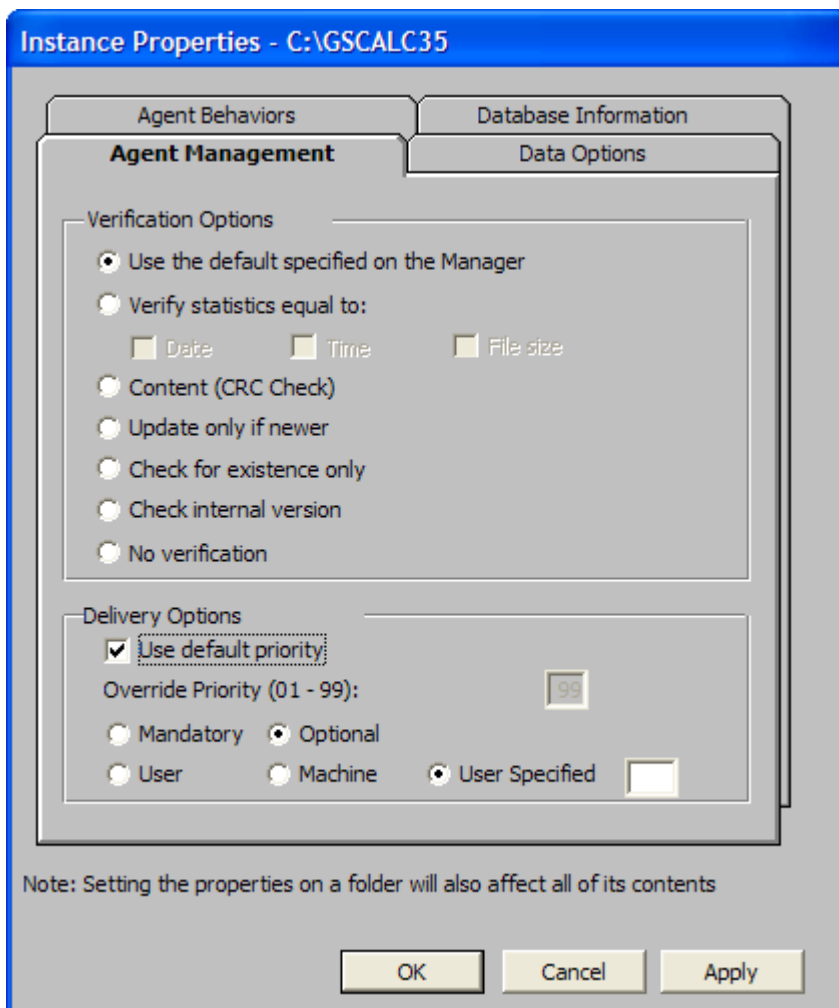
To access the Instance Properties dialog box

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

### Agent Management Tab

Use the Agent Management tab to set verification and delivery options for the selected file or folder in the package. After promoting this package to the CM Configuration Server DB, you can still modify these settings using the CM Admin CSDB Editor.

- Use the Verification Options to specify the verification actions that the CM Application Self-service Manager will take for this file or folder.
- Use the Delivery Options to specify delivery options, such as the order in which files are deployed.



### Verification Options

- **Use the default specified on the Manager** (default)  
Select this option so that verification options for this file or folder are inherited from the base instance of the FILE Class in the CM Configuration Server DB.

Use the CM Admin CSDB Editor to look at the ZRSCVRFY attribute of the base instance of the FILE Class to determine what the default verification options are.

- **Verify statistics equal to**  
Select this option so that the agent checks the selected statistics (Date,

Time, File Size) for the file on the agent computer. The file is deployed from the CM Configuration Server DB (or CM Proxy Server) if its statistics are different from the file on the agent computer. You can also use the CM Admin CSDB Editor to set this option: ZRSCVRFY=D, ZRSCVRFY=S, ZRSCVRFY=T, or ZRSCVRFY=Y.

- **Content (CRC Check)**

Select the CRC option so that the CM Application Manager checks the statistics Content (CRC) of the file on the agent computer. When the file is verified, the file will *first* be checked based on the Date, Time, and File Size. To save time during the verify, the CRC will be checked *only* if the file passes the Date, Time, and File Size verification. Then, the CM Configuration Server (or CM Proxy Server) will deploy a file if its statistics are different from those on the agent computer. By selecting this option, the CM Admin Packager will calculate the CRC and put the value in the ZRSCCRC attribute.

- **Update only if newer**

Select this option so that this file is deployed from the CM Configuration Server DB (or CM Proxy Server) if it has a later date/time stamp than the one on the agent computer. You can also use the CM Admin CSDB Editor to set this option: ZRSCVRFY=U.

- **Check for existence only**

Select this option so that this file is deployed only if it is not on the agent computer. No action is taken if it already exists on the agent computer, even if the statistics differ from those in the CM Configuration Server DB. You can also use the CM Admin CSDB Editor to set this option: ZRSCVRFY=E.

- **Check internal version**

Select this option to compare the version of the file being deployed against the version that may already exist on the agent computer. This ensures that the correct file is being updated if more than one version exists. You can also use the CM Admin CSDB Editor to set this option: ZRSCVRFY=V. This feature applies to the following file types: DLL, .EXE, .OCX, .SYS, and .VBX.

- **No verification**

Select this option so that the file is deployed the first time the application is deployed. No subsequent action is taken. You can also use the CM Admin CSDB Editor to set this option: ZRSCVRFY=N.

## Delivery Options

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

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

- **Mandatory**  
Select this option to indicate that this file is critical to the application.
  - If there is not enough space on the agent computer for the entire application, CM will *only* deploy mandatory files.
  - If there is not enough space for the mandatory files, then the application is not deployed at all.You can also use the CM Admin CSDB Editor to set this option: ZRSCMO=M.
- **Optional** (default)  
Select this option to indicate that a file is not critical to the application.
  - If there is not enough space on the agent computer for the entire application, CM will *not* deploy optional files.You can also use the CM Admin CSDB Editor to set this option: ZRSCMO=O.

The following options apply only to operating systems supporting multiple users with a required logon, such as Windows NT 4.0, 2000, or Windows Server 2003.

- **User**  
Select **User** if you want to indicate that the file will be deployed only to the subscriber logged on when the application is initially deployed. You can also use the CM Admin CSDB Editor to set this option: ZCONTEXT=U.
- **Machine**  
Select **Machine** to indicate that the file will be deployed to all users of the computer. You can also use the CM Admin CSDB Editor to set this option: ZCONTEXT=M.

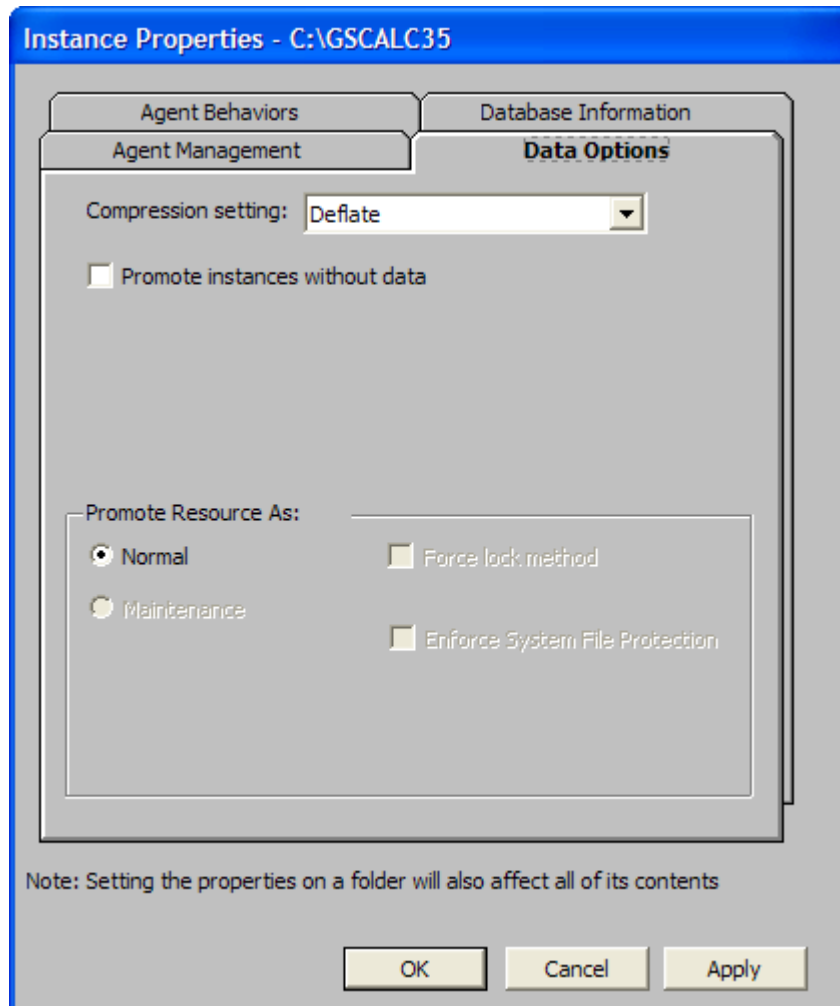
- **User Specified**

This option is reserved for future use.

In the GS-Calc example, we accepted the default verification and delivery settings.

### Data Options Tab

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



- **Compression setting**

If necessary, select the compression setting for storing this file in the CM Configuration Server DB. Compression minimizes the time required to transmit it and the amount of disk space required to store it.

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

- **Promote instances without data**

Select this check box to indicate that this file should not be transferred to the CM Configuration Server DB as part of the package. Only the instance representing it is included in the package. The data remain in compressed format in the IDMDATA location on your computer. The default IDMDATA location is *SystemDrive:\Program Files\Hewlett-Packard\CM\Agent\Lib\Data\*. You can manually place a file on a CM Staging Server if you have connectivity to it and do not want a copy of it in the CM Configuration Server DB.

Promote Resource As

- **Normal**

Select this option to indicate that this file is to be deployed as part of an application.

- **Maintenance**

This is a feature from previous versions and, as of version 4.0, is no longer used.

- **Force lock method**

Select this check box to force the use of the locked file method for deploying this file. If the file is in use on the agent computer when CM attempts to deploy a new copy of it, the locked file method is normally used to deploy it. If necessary, this file is decompressed and stored locally in a folder. The agent connect process forces a restart when it ends and the file is deployed to its correct location during the startup.

- **Enforce System File Protection (Windows 2000 and Windows Server 2003 only)**

Select this check box to specify that you want to enforce Windows System File Protection (SFP). CM first attempts to verify the resource using the current verify options, as specified in the ZRSCVRFY attribute located in the FILE Class.



- If the verification is successful, the resource is in the desired state and no further verification is necessary.
- If the verification fails, CM checks to see if System File Protection protects the file. If the file is protected, it will not be deployed.

Finally, CM checks this attribute to see whether you want to enforce SFP.

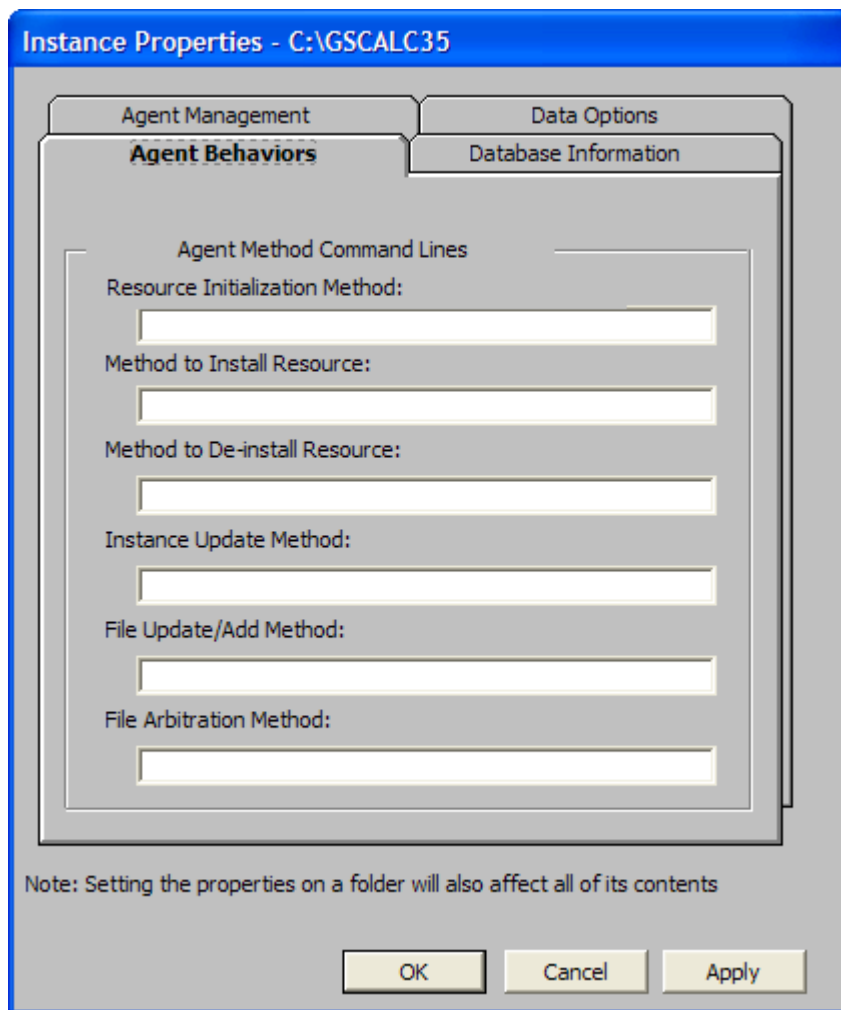
- If you select this check box, the ZRSCVRFY attribute is set to P and deployment of this resource and the service are marked as failed due to SFP processing.
- If you do not enforce SFP, the file is marked as having passed verification.

A ZERROR instance is created to describe the actions taken against the SFP file.

In the GS-Calc example, we accepted the default data options.

### Agent Behaviors Tab

Use the Agent Behaviors tab to specify methods (programs) that Radia executes on the agent computer.



The command lines that you type in this dialog box are stored in attributes in the FILE Class instances in the SOFTWARE Domain.

#### Agent Method Command Lines

- **Resource Initialization Method** (Attribute in database: ZINIT)  
Type the method to run when the file is stored on the agent computer.
- **Method to Install Resource** (Attribute in database: ZCREATE)  
Type the method to run after the file is stored on the agent computer. This is used if some processing is required to enable it to be used on the agent computer.

- **Method to De-install Resource** (Attribute in database: ZDELETE)  
Normally, files are removed if the subscription to the software is cancelled. If a file, such as a shared DLL file, is not supposed to be deleted from the agent computer, even if the subscription to the software is cancelled, type **\_NONE\_** (with the underscores) as the value for the Method to De-install Resource.
- **Instance Update Method** (Attribute in database: ZUPDATE)  
Type the method to run when the instance is modified on the agent computer after the file or folder has been deployed.
- **File Update/Add Method** (Attribute in database: ZFILEUPD)  
Type the method to run when the file is new or has been updated. The method executes just before the file is deployed to the agent computer.
- **File Arbitration Method** (Attribute in database: ARBITRAT)  
Type the method to run if a file is about to be replaced. This method examines the version information of the file on the agent computer and the one that is going to replace it, and then determines which to keep.

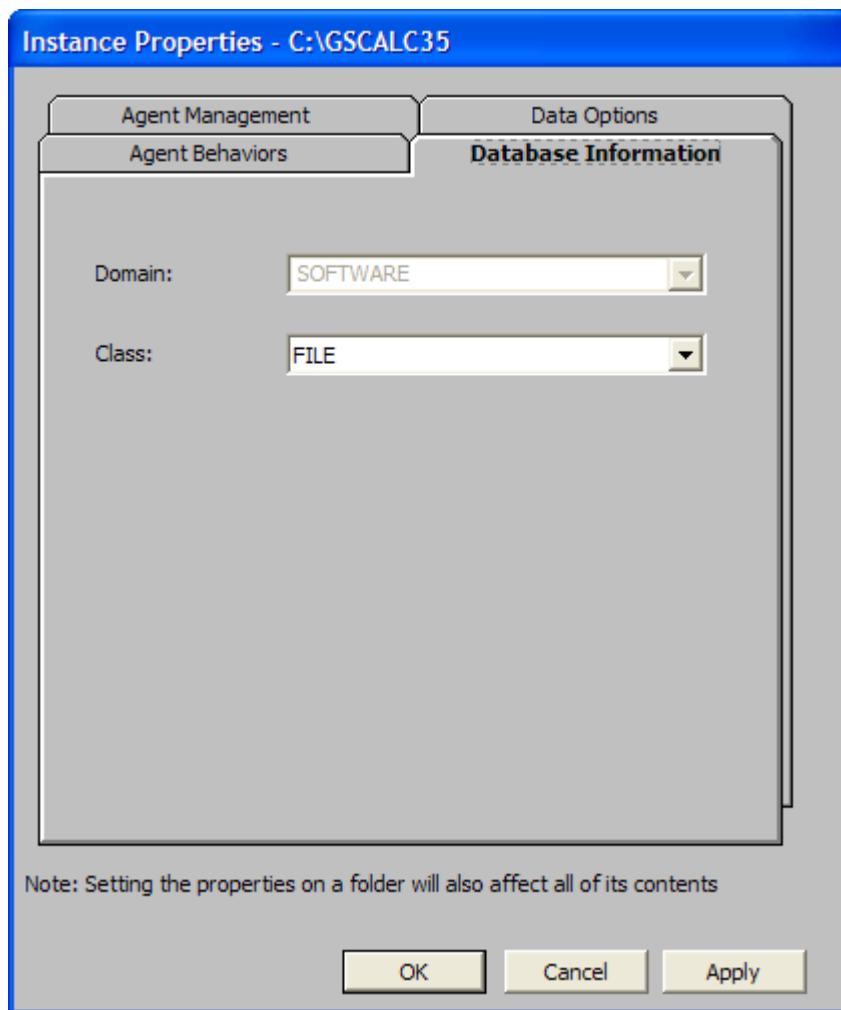


You must add the ARBITRAT method to the CM Configuration Server DB to use this field. See the Technical Note *About the File Arbitration Method* on the HP OpenView web site for more information.

In the GS-Calc example, we have not specified any methods.

### Database Information Tab

Use the Database Information tab to specify where the instance for the selected file or folder will be stored in the CM Configuration Server DB.



- **Domain**  
Select the domain in which to store the instance. This is normally the SOFTWARE Domain unless you customized the CM Configuration Server DB with proprietary domains.
- **Class**  
Select the component class in which to store the instance for this file.

In the GS-Calc example, we accepted the default settings for the domain and class.

Click **OK** to return to the Set Properties and Locations window, and then click the Desktop tab.

## Task 9 Setting Desktop Properties and Locations

Use the Desktop tab in the Set Properties and Locations window to see the selected program groups, links, and shortcuts in the package, and to modify their properties. These program groups, links, and shortcuts will appear on the agent computer.

To view the selected program groups, links, and shortcuts

- Right-click **Selected Links** and select **Expand All**.

To set properties for program groups, links, and shortcuts

- Right-click the link in the tree view. A menu opens with the following options



When you right-click a folder or link, CM applies the changes to all links within the folder or within the link's branch in the tree view.

### — **Just In Time (App Mgr Only)**

The CM Application Manager lets you designate applications as **self-maintaining**. This means that each time the subscriber launches the application, a connection is made to the CM Configuration Server to verify the application and, if necessary, update or repair it.

Note that the use of Just In Time with Machine/User applications can only verify or repair either the Machine or User portion of the service. If the Just In Time icon is using context=M, then startdir should be set to SYSTEM, and the user portion of the service will not be verified/repared, If the Just In Time icon is using context=U, then startdir should be \$USER, and only the user portion of the service will be verified/repared.

### — **Properties**

Select **Properties** to open the Verify/Type submenu.

Verify Menu Commands

- **Full Verify**

Select this command to deploy the link every time a subscriber connects to the CM Configuration Server, even if it already exists on the agent computer. This repairs broken or modified links.

- **No Verify**  
Select this command if you do *not* want to verify the link after initial deployment. No repairs are made to the link, even if the user modifies or removes it.
- **Exists**  
Select this command to deploy the link only if it does *not* exist on the agent computer, during initial deployment and on each subsequent connection. The link is deployed again only if it was deleted. This allows users to modify the link.

### Type Menu Commands

The following options apply only to operating systems supporting multiple users, such as Windows 2000, Windows XP, or Windows Server 2003.

- **User**  
Select this command to deploy this link only to the subscriber logged on when the application is initially deployed.
- **Machine**  
Select this command to deploy this link to all users of the computer.

In the GS-Calc example, we left the default settings for program groups, links, and shortcuts. Click the **Registry** tab.

### Task 10 Setting Registry Properties and Values

Use the Registry tab in the Set Properties and Locations window to see the changes that will be made to the registry when the application is deployed. You can also modify the values in registry keys and set various deployment options.

To view the selected registry

- Right-click **Selected Registry Keys**, and select **Expand All**.

To edit values in a registry key

- 1 Select the registry key in the tree view.
- 2 Double-click the registry key in the list view.
- 3 Edit the data in the New Value text box.
- 4 Click **OK** to save your changes and close the dialog box.

To restore the registry key to its original value

- 1 Double-click the registry key in the list view.
- 2 Click **Reset**.
- 3 Click **OK** to save your changes and close the dialog box.

To set properties for registry keys

- Right-click the link in the tree view. A menu opens with the following options.
  - ▶ When you right-click a registry key, CM applies the changes to all registry keys within the key's branch in the tree view.
  - **Active**  
Select this command to include registry changes in the package.
  - **Inactive**  
Select this command to prevent registry changes from being included in the package.
  - **Properties**
    - **Unconditional/Enforced**  
Select this command to deploy the registry key, even if it already exists on the agent computer. Every time the subscriber connects to the CM Configuration Server, this registry key is reset to the packaged value, if it has been modified on the agent computer. Use this setting for registry keys that must not change in order for the application to function properly.
    - **Unconditional/Exist**  
Select this command to deploy the registry key upon initial deployment or if it has been deleted. However, the value of the registry key is not reset. This setting is the default.
    - **Exist/Exist**  
Select this command to deploy the registry key only if it *does not exist* on the agent computer. This allows you to modify the registry key, and your changes will not be overwritten because the key will be deployed again *only* if it is deleted.

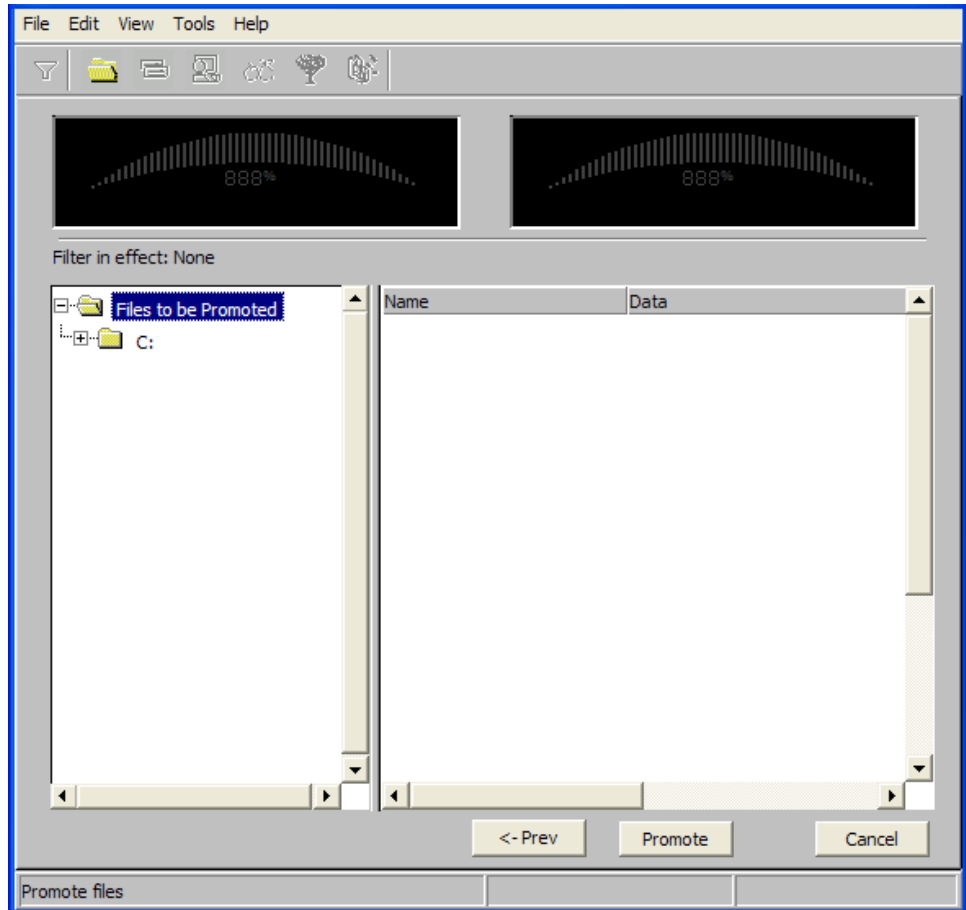
In the GS-Calc example, the registry keys are set to Unconditional/Exist. Click **Next** to go to the Promote Files window.

## Task 11 Promoting Packages

Use the Promote Files window to create instances for the package in the CM Configuration Server DB.

To view the files to be promoted

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



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

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



To promote the package

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

In this example, GS-Calc was promoted to the CM Configuration Server DB. Next, use CM Admin CSDB Editor to create a service. For more information, see [Creating a Service](#) on page 146.

## HP OpenView Configuration Management Batch Publisher

The HP OpenView Configuration Management Batch Publisher (CM Batch Publisher) is a command-line alternative to using Component Selection Mode. The CM Batch Publisher offers an automated, repeatable command-line process to create CM packages and store them in the CM Configuration Server DB for distribution.

CM Batch Publisher can:

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

Additionally, CM Batch Publisher can accommodate frequent patching of internal applications, as well as publish build versions, and output from legacy (PVCS or ClearCase) adapters. Its capacity to revise content material is reliable, and can be designed to perform continuously, at designated times, and in pre-determined intervals. The CM Batch Publisher can be easily executed from within any script or code capable of calling a command prompt.



The CM Batch Publisher is an optional feature available from HP. Please contact your sales representative for more details.

# Creating a Service


Once you have created a package with the CM Admin Packager, use the New Application Wizard in the CM Admin CSDB Editor to create a service. A **service** is the fundamental unit of content managed by CM. Use the CM Admin CSDB Editor to see services listed in the Application (ZSERVICE) class.

In this example, you will create a service using the WinZip 8.0 package that you created in [Using Installation Monitor Mode](#), beginning on page 88.

## Using the New Application Wizard to Create a Service

### Task 1 Access CM Admin CSDB Editor

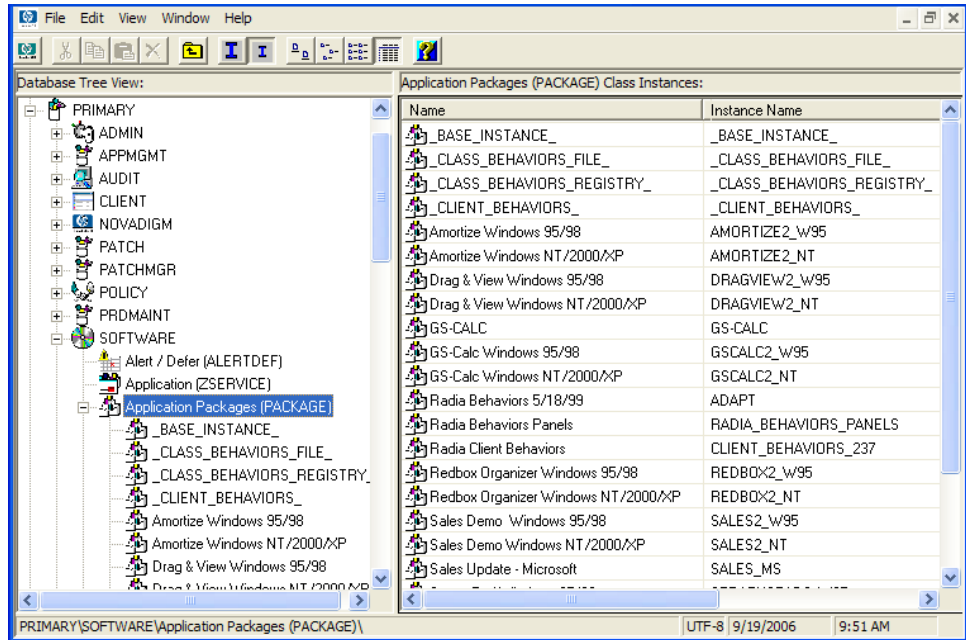
To access the CM Admin CSDB Editor

- 1 Go to **Start** → **Programs** → **HP OVCM Administrator** → **CM Admin CSDB Editor**.
- 2 In the CM Admin CSDB Editor Security Information dialog box, type your User ID and Password in the appropriate text boxes.
  -  The User ID, as shipped from HP, is RAD\_MAST. No password is necessary. This might have been changed during installation. You can also change this by selecting the **Change Password** check box and typing the new password in the New Password and Verify New Password text boxes.
- 3 Click **OK**.

### Task 2 Navigate to the Package Class

To navigate to the PACKAGE Class of the SOFTWARE Domain

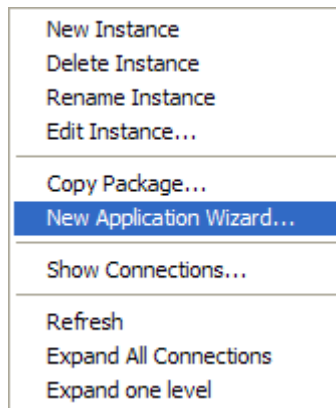
- 1 Double-click **PRIMARY**. The domains of the PRIMARY File appear beneath its icon in the tree view and in the list view.
- 2 Double-click **SOFTWARE**. The classes of the SOFTWARE Domain appear beneath its icon in the tree view and in the list view.
- 3 Double-click **Application Packages (PACKAGE)**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



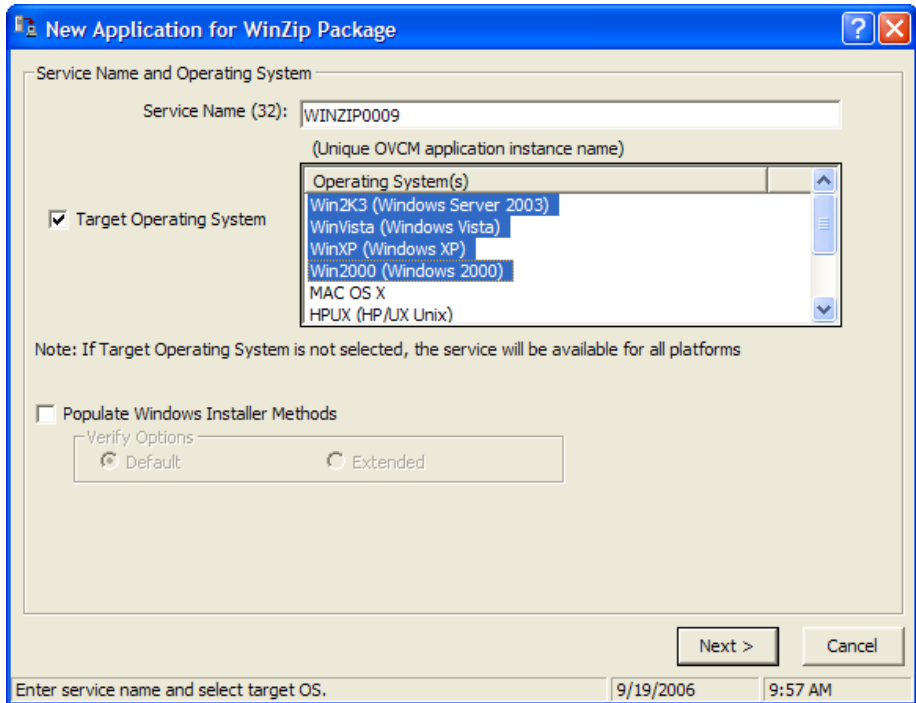
### Task 3 Create a Service

To create a service using the New Application Wizard

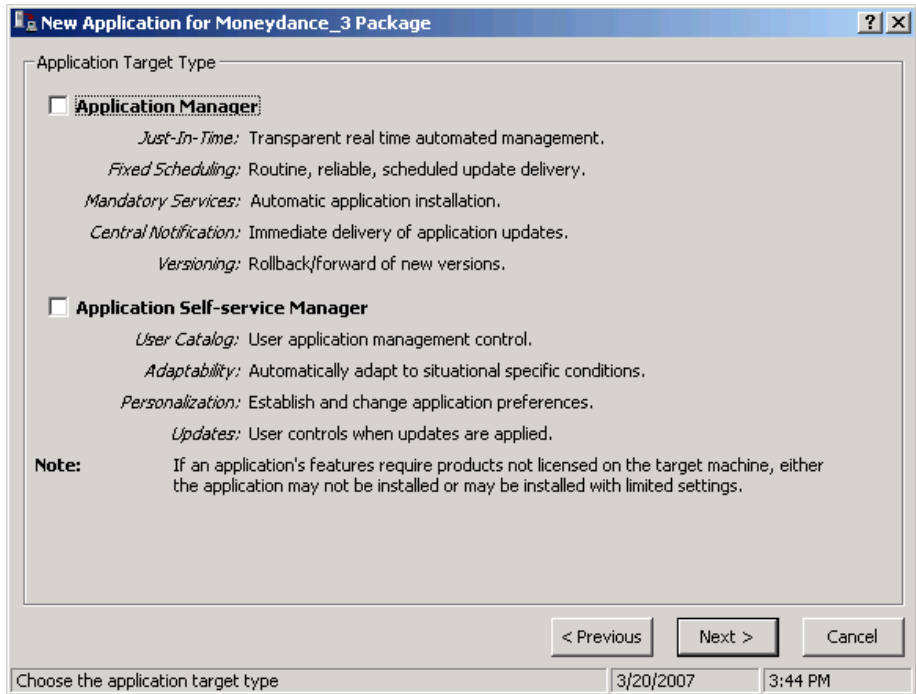
- 1 In the PACKAGE Class of the SOFTWARE Domain, right-click the **WinZip** instance. A shortcut menu opens.



- 2 Click **New Application Wizard**.



- 3 In the Service Name (32) text box, type a name, such as **WINZIP0009**, for the Application (ZSERVICE) instance.
- 4 Select the **Target Operating System** check box if you want to specify which operating systems are eligible for this service. Then, select the appropriate operating systems.  
  
If you do not select the Target Operating System check box, the service is available on *all* platforms.
- 5 If you are creating a service for a Windows Installer-enabled application, you must select the **Populate Windows Installer Methods** check box. *Do not select this check box for this exercise.*
- 6 Click **Next** to select the application target type.



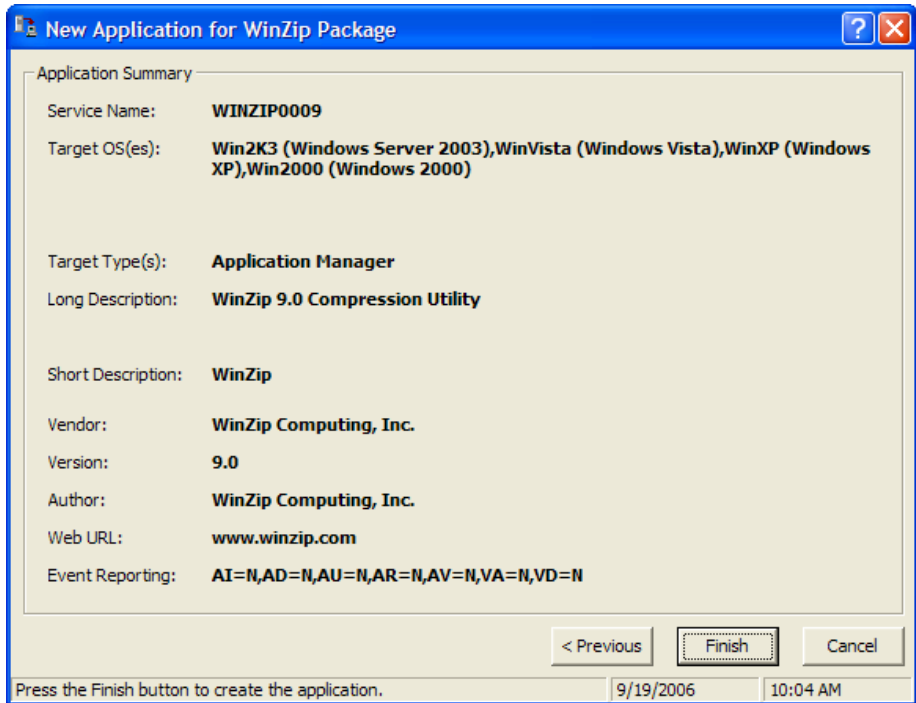
- 7 Select the **Application Manager** check box. This designates the service as a mandatory application for your users.
  - ▶ When using the CM Application Manager, applications *must* be mandatory in order to deploy them to your subscribers.
- 8 Click **Next** to enter the application properties.

The screenshot shows a Windows-style dialog box titled "New Application for WinZip Package". It contains a section for "Application Properties" with the following fields:

- Service Name: WINZIP0009
- Long Description: WinZip 9.0 Compression Utility
- Short Description: WinZip
- Vendor: WinZip Computing, Inc.
- Version: 9.0
- Author: WinZip Computing, Inc.
- Web URL: www.winzip.com

At the bottom of the dialog, there are three buttons: "< Previous", "Next >", and "Cancel". A status bar at the very bottom of the window displays "Enter the application properties", the date "9/19/2006", and the time "10:01 AM".

- 9 Type the appropriate information in the text boxes as shown in the figure above.
  - 10 Click **Next** to select the events that the CM Application Manager will report on.
  - 11 Click the check box for each application event that you want to report on. Then, select the appropriate option button to indicate whether to report on the event's success, failure, or both.
- or
- Click **Use Base** if you want to inherit the values for the ERTYPE and EVENTS attributes from the base instance of the Application (ZSERVICE) instance. These attributes control event reporting.
- 12 If you want to save the current settings as the default settings for the Application Event Panel, click **Save as Default**.
  - 13 Click **Next** to review your selections.



- 14 Click **Finish** to create the application instance.
- 15 Click **OK** when you are prompted with a message indicating that the application has been added. The instance appears in the ZSERVICE Class.
  - ▶ Use the CM Admin CSDB Editor to modify any of the information that you entered in the New Application Wizard. Locate the corresponding attribute in the ZSERVICE instance and change its value.

Now, you are ready to set up policies that identify *which* subscriber receives *what* software. See Chapter 5, [Implementing Entitlement Policy](#) for more information.

## Setting Default Packaging Properties

You might want to set default properties (such as compression settings and verification options) for the files that will be included in the package.

Changes made to the default properties apply to new CM Admin Packager sessions.

If necessary, you can modify the properties later for any file or folder from the Set Properties and Locations window. Learn how to do this in Installation Monitor Mode [on page 103](#) and in Component Selection Mode [on page 131](#).

You can also use the CM Admin CSDB Editor to modify the default properties in the base instance. Or, after you promote the package to the CM Configuration Server DB, you can modify the properties for an individual instance in the FILE, REGISTRY, or DESKTOP Classes.

To log on to CM Admin Packager

- 1 Go to **Start** → **Programs** → **HP OVCM Administrator** → **CM Admin Packager**.
- 2 In the CM Admin Packager Security Information dialog box, type your User ID and Password in the appropriate text boxes.
  - ▶ The User ID, as shipped from HP, is RAD\_MAST. No password is necessary. This might have been changed during installation. You can also change this by selecting the **Change Password** check box and typing the new password in the New Password and Verify New Password text boxes.
- 3 Click **OK**.

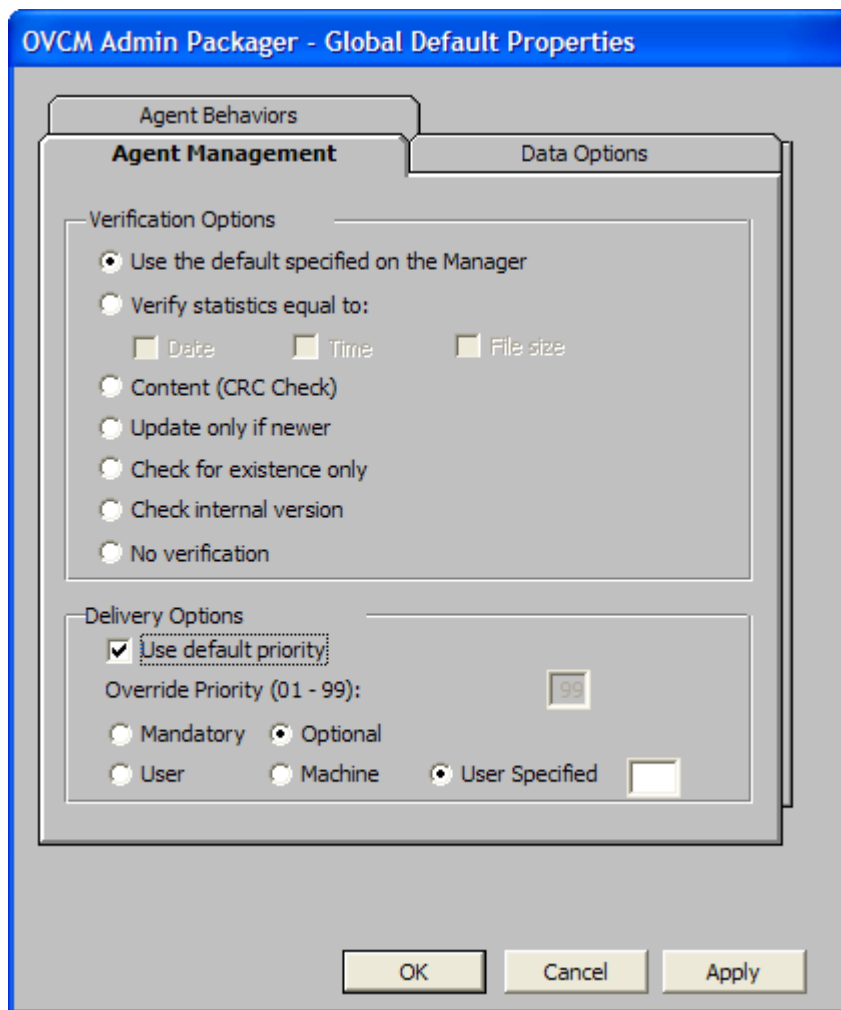
To access the Global Default Properties dialog box

- From the Edit menu, select **Change Global Defaults**. The CM Admin Packager – Global Default Properties dialog box has three tabs: Agent Management, Data Options, and Agent behaviors.

## Agent Management Tab

Use the Agent Management tab to set verification and delivery options for the files in the package.





## Verification Options

Use Verification Options to specify the default actions that the CM Application Manager will take for the files.

**Table 13 Verification Options**

<b>Verification Option</b>	<b>Usage</b>	<b>ZRSCVRFY Setting</b>
<b>Use the default specified on the Manager</b>	Select this option to inherit verification options from the FILE, REGISTRY, or DESKTOP Class' base instance in the CM Configuration Server DB.	ZRSCVRFY=<blank space>
<b>Verify statistics equal to</b>	Select this option so that the CM Application Manager checks the selected statistics (Date [D], Time [T], File Size [S]) of the files on the agent computer. The CM Configuration Server DB (or CM Proxy Server) will deploy a file if its statistics are different from those on the agent computer.	ZRSCVRFY=D ZRSCVRFY=T ZRSCVRFY=S ZRSCVRFY=Y (to check date, time and size)
<b>Content (CRC Check)</b>	Select this option so the CM Application Manager checks the statistics Content (CRC) of the file on the agent computer. When the file is verified, it will <i>first</i> be checked based on the Date, Time, and File Size. To save time during the verify, the CRC will be checked <i>only</i> if the file passes the Date, Time, and File Size verification. Then, the CM Configuration Server (or CM Proxy Server) will deploy a file if its statistics are different from those on the agent computer. By selecting this option, the CM Admin Packager will calculate the CRC and put the value in the ZRSCCRC attribute.	ZRSCVRFY=Y
<b>Update only if newer</b>	Select this option so a file is deployed from the CM Configuration Server DB (or CM Proxy Server) if it has a later date/time stamp than the one on the agent computer.	ZRSCVRFY=U

<b>Verification Option</b>	<b>Usage</b>	<b>ZRSCVRFY Setting</b>
<b>Check for existence only</b>	Select this option so a file is deployed only if it is not on the agent computer. No action is taken if it already exists on the agent computer, even if its statistics differ from those in the CM Configuration Server DB.	ZRSCVRFY=E
<b>Check internal version</b>	Select this option to compare the version of the file being deployed against the version that may already be on the agent computer. This ensures the correct file is being updated if more than one version exists. This applies to the following file types: .DLL, .EXE, .OCX, .SYS, and .VBX.	ZRSCVRFY =V
<b>No verification</b>	Select this option so the files are deployed the first time the software is deployed. No subsequent action is taken.	ZRSCVRFY=N

## Delivery Options

Use Delivery Options to specify the default delivery options, such as the order in which files are deployed. Your selections in this dialog box set the corresponding attributes in the base instance of the FILE, REGISTRY, or DESKTOP Classes. Use the CM Admin CSDB Editor to view or modify the appropriate attributes.

**Table 14 Delivery Options**

<b>Delivery Option</b>	<b>Usage</b>	<b>Attribute Settings</b>
<b>Use default priority</b>	Select this check box to use the default priority of 50. Priority determines the order of deployment, from highest priority to lowest priority.	ZRSCPRI=50

<b>Delivery Option</b>	<b>Usage</b>	<b>Attribute Settings</b>
<b>Override Priority</b>	Type a number from 1 to 99 to override the default priority of 50. 1 is the highest priority, 99 the lowest.	ZRSCPRI=1

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

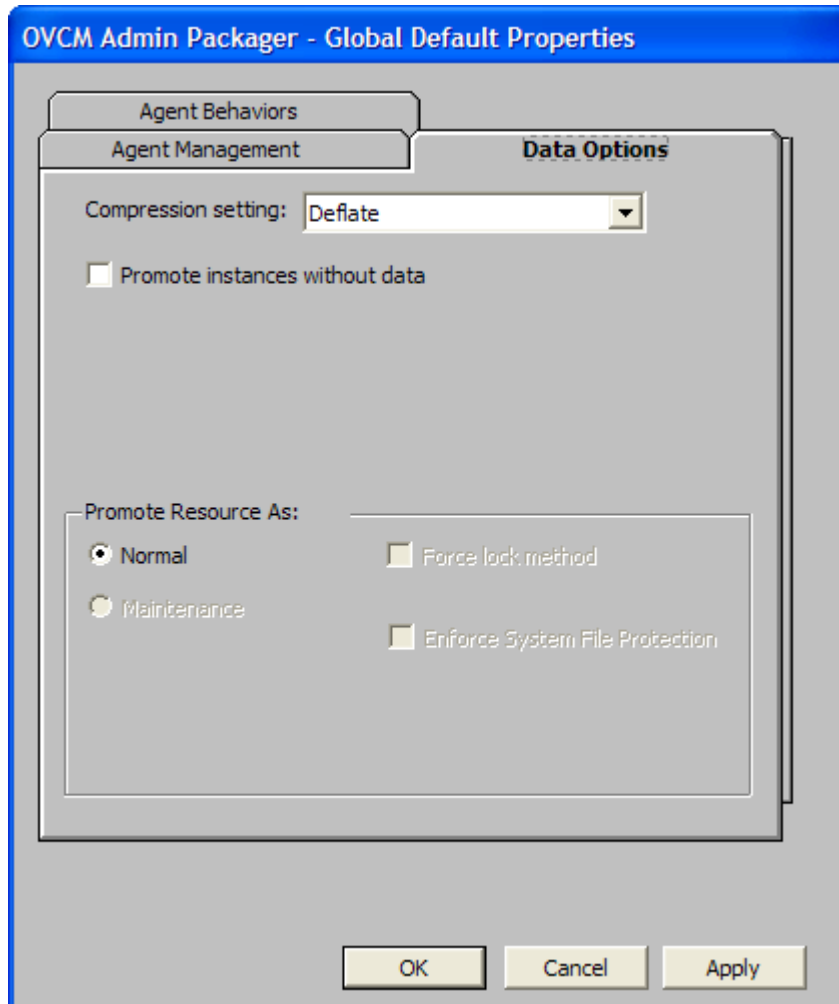
<b>Mandatory</b>	Select this option to indicate that the files are critical to the software. If there is not enough space on the agent computer for the entire application, CM will only deploy mandatory files. If there is not enough space for the mandatory files, then the software is not deployed at all.	ZRSCMO=M
<b>Optional</b> (default)	Select this option to indicate that the files are not critical to the software. If there is not enough space on the agent computer for the entire application, CM will not deploy optional files.	ZRSCMO=O

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

<b>User</b>	Select <b>User</b> to indicate that the files will be deployed only to the subscriber logged on when the application is initially deployed.	ZCONTEXT=U
<b>Machine</b>	Select <b>Machine</b> to indicate that the files will be deployed to all users of the computer.	ZCONTEXT=M
<b>User Specified</b>	<i>This option is for future use.</i>	<i>For future use.</i>

## Data Options Tab

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



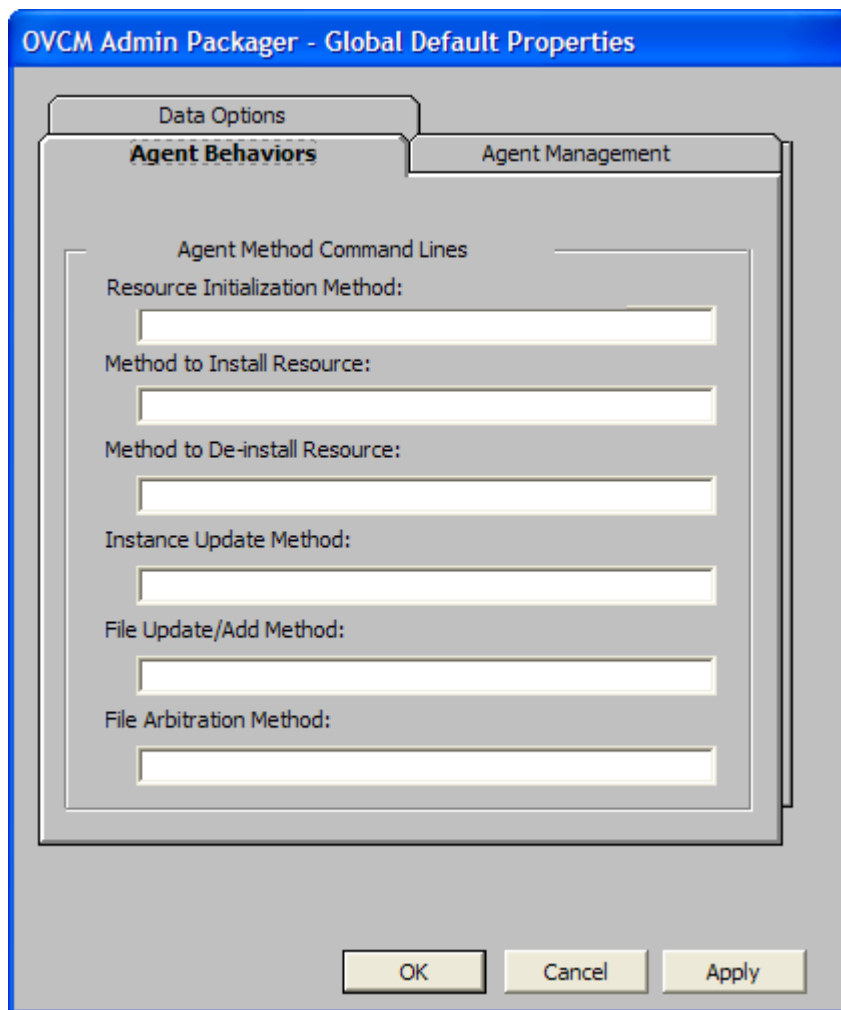
**Table 15 Data Options**

Data Option	Usage
<p><b>Compression setting</b></p>	<p>If necessary, select the compression setting for storing files in the CM Configuration Server DB. Compression minimizes the time required to transmit the files and the amount of disk space required to store them.</p> <ul style="list-style-type: none"> <li>• Select <b>Deflate</b> for the most efficient compression, which produces smaller compressed images.</li> <li>• Select <b>None</b> if the files are already compressed. If you are packaging an application that contains one or more compressed files, do <i>not</i> have the CM Admin Packager compress them as well. The files may actually grow in size if they are compressed again.</li> </ul>
<p><b>Promote instances without data</b></p>	<p>Select this check box to indicate that the files should not be transferred to the CM Configuration Server DB as part of the package. Only the instances representing the files are included in the package. The data remains in compressed format in the IDMDATA location on your computer. The default IDMDATA location is <i>SystemDrive:\Program Files\Hewlett-Packard\CM\Agent\Lib\Data\</i>.</p> <p>You can manually place files on a CM Staging Server if you have connectivity to it and do not want copies of them in the CM Configuration Server DB.</p>
<p><b>Promote Resource As</b></p> <ul style="list-style-type: none"> <li>• Normal</li> <li>• Maintenance</li> <li>• Force lock method</li> </ul>	<p>Select this option to indicate that the files are to be deployed as part of an application. This is the default selection.</p> <p>This is a feature from previous versions and, as of version 4.0, is no longer used.</p> <p>Select this check box to force the use of the locked file method for deploying the files.</p> <p>If a file is in use on the agent computer when CM attempts to deploy a new copy of it, the locked file method is normally used to deploy it.</p> <p>If necessary, the file is decompressed and stored locally in a folder. The agent connect process forces a restart when it ends and the file is deployed to its correct location during startup.</p>

Data Option	Usage
<ul style="list-style-type: none"> <li>Enforce System File Protection (<i>Windows 2000 only</i>)</li> </ul>	<p>Select this check box to specify that you want to enforce Windows System File Protection (SFP).</p> <p>CM first attempts to verify the resource using the current verify options, as specified in the ZRSCVRFY attribute located in the FILE Class.</p> <ul style="list-style-type: none"> <li>If the verification is successful, the resource is in the desired state and no further verification is necessary.</li> <li>If the verification fails, CM checks to see if System File Protection protects the file. If the file is protected, it will not be deployed.</li> </ul> <p>Finally, CM checks this attribute to see whether you want to enforce SFP.</p> <ul style="list-style-type: none"> <li>If you select this check box, the ZRSCVRFY attribute is set to P and deployment of this resource and the service are marked as failed due to SFP processing.</li> <li>If you do not enforce SFP, the file is marked as having passed verification.</li> </ul> <p>A ZERROR instance is created to describe the actions taken against the SFP file.</p>

## Agent Behaviors Tab

Use the Agent Behaviors tab to specify default methods (or programs) that CM executes on the agent computer.



The command lines that you type in this dialog box are stored in attributes in the FILE Class instances in the SOFTWARE Domain. The following table describes the fields available on the Agent Behaviors tab, as shown in the figure above.

**Table 16 Agent Behaviors**

Agent Behaviors	Usage
Resource Initialization Method (Attribute in database: ZINIT)	Type the method to run when the files are stored on the agent computer.



Agent Behaviors	Usage
Method to Install Resource (Attribute in database: ZCREATE)	Type the method to run after the files are stored on the agent computer. This is used if some processing is required to enable them to be used on the agent computer.
Method to De-install Resource (Attribute in database: ZDELETE)	Normally, files are removed if the subscription to the software is cancelled.  If a file, such as a shared DLL file, is not supposed to be deleted from the agent computer, even if the subscription to the software is cancelled, type <b><u>NONE</u></b> (with the underscores) as the value for Method to De-install Resource.
Instance Update Method (Attribute in database: ZUPDATE)	Type the method to run when an instance is modified on the agent computer after the file has been deployed.
File Update/Add Method (Attribute in database: ZFILEUPD)	Type the method to run when a file is new or has been updated. The method executes just before the file is deployed to the agent computer.
File Arbitration Method (Attribute in database: ARBITRAT)	Type the method to run if a file is about to be replaced. This method compares the version information of the file that exists and the one that is going to replace it, and then determines which one to keep.  Note: You must add the ARBITRAT method to the CM Configuration Server DB to use this text box. See the Technical Note about the File Arbitration Method on the HP OpenView web site for more information.

## Service Groups

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

This includes applications installed or maintained using Windows Installer where:

- A product may utilize more than one MSI service-package, for example, where MS Office may require other language pack services.
- A large product, MS Office for example, may need to be split into smaller sub-services to install only specific parts of the product suite.

The CM Application Self-service Manager user interface will display only the master service.

For detailed information on creating Service Groups, refer to the *CM Admin CSDB Editor Guide*.

## Optimizing Services

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

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



Patches can only be created for components that contain a signature. Initially, only MD5 is supported.

Components being used for patching must be packaged from the same location, or computer, to qualify for byte level differencing patching. This will populate the eight-byte CRC found in the suffix of the instance names.

For detailed information, refer to the *CM Admin CSDB Editor Guide*.

## Windows System File Protection

CM enforces System File Protection (SFP) on Windows Installer, and other packaged content, defers deployment of SFP-protected files, and reports SFP conflicts to administrators.

CM will first attempt to verify the resource using the current verify options, as specified in the ZRSCVRFY attribute located in the FILE Class.

- If the verification is successful, the resource is in the desired state and no further verification is necessary.
- If the verification fails, CM checks to see if System File Protection protects the file. If the file is protected, it will not be deployed.

Finally, CM checks to see whether you want to enforce SFP. To enforce SFP, use CM Admin Packager and select the **Enforce System File Protection** check box on the Data Options tab in the Instance Properties dialog box for the selected file. See [Table 15](#) on page 158 for a complete description of System File Protection. If you select this check box, the ZRSCVRFY attribute is set to P.

- If you enforce SFP, deployment of this resource and the service are marked as failed due to SFP processing.
- If you do not enforce SFP, the file is marked as having passed verification.

A ZERROR instance is created to describe the actions taken against the SFP file.

For more details on System File Protection, see the Microsoft web site.

## Summary

- Packaging is the process of identifying the components of the software or content and organizing them into packages.
- To package and configure applications, install the CM Administrator on a clean computer. You can install these tools on the same computer as the CM Configuration Server if you are running Windows NT 4.0 (or greater), or Windows 2000 or Windows Server 2003.
- You can use Installation Monitor Mode to package applications when you do not know all of the components that make up the application. CM scans the computer before and after you install the application and differences these scans to make up the package.
- You can use Component Selection Mode for packaging simple applications by selecting the individual components that make up the software.
- Use the CM Batch Publisher as an alternative to Component Selection Mode.
- After packaging applications, use the New Application Wizard in the CM Admin CSDB Editor to create a service—the fundamental unit of content managed by CM.

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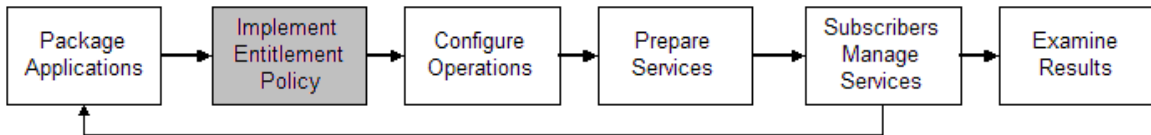
# 5 Implementing Entitlement Policy

At the end of this chapter, you will:

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

This guide describes the *standard* implementation for the HP OpenView Configuration Management Application Manager (CM Application Manager). Although you will tailor this strategy to meet your organization's needs, we recommend that you review this guide for a comprehensive understanding of the CM Application Manager. This chapter describes how to integrate your existing policy information with CM. It also describes the POLICY Domain, and provides background information about how to create users and groups, assign users to groups, and connect services to groups.

**Figure 7** Tasks described in this guide



## About Policy Management and CM

As your organization grows and changes, it is your job to manage *who* has access to *what* software. You have invested time and money to determine the best way to handle policy information for your organization. Now, you want to use CM to manage your data. CM allows you to use your *existing* policy information, while using managing your data.

CM can use real-time policy information from:

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

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

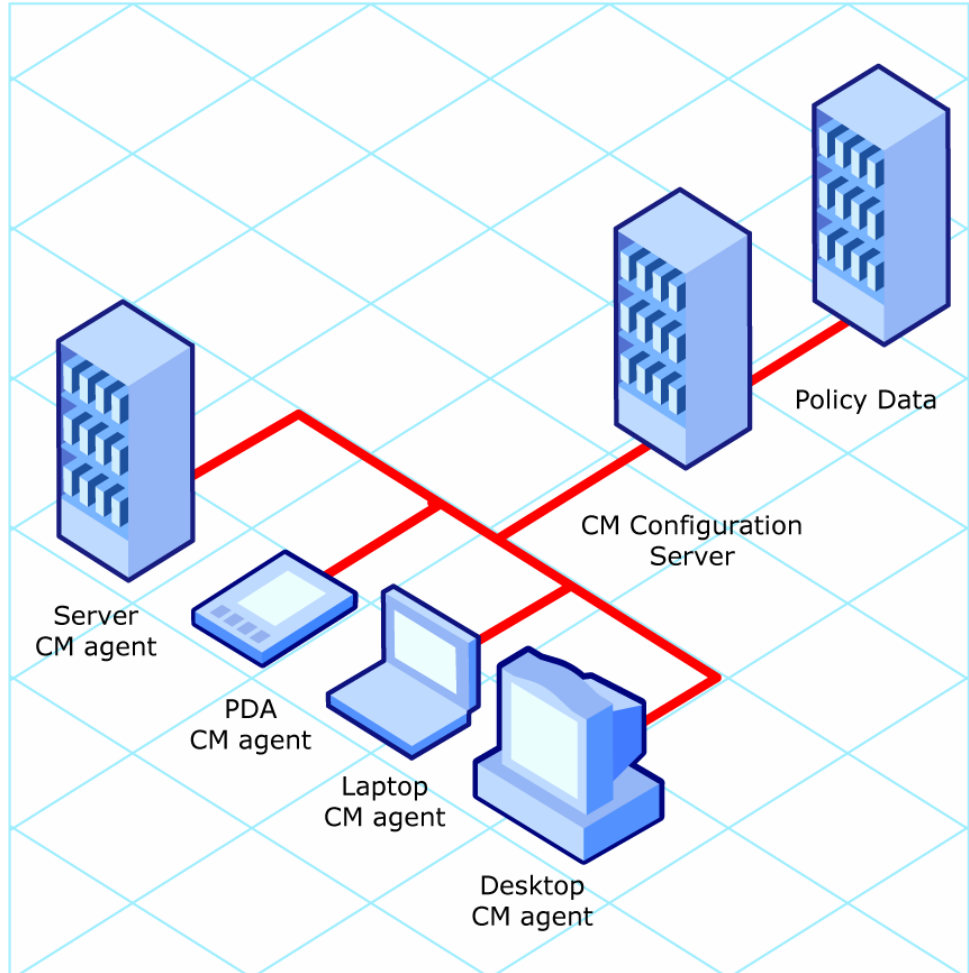
## Accessing Existing External Policy Information

When a CM agent connects to the CM Configuration Server, CM retrieves policy information in real-time from the appropriate data stores. In the simplest environment, such as a lab used for testing, you might want CM to search the CM Configuration Server DB for this information. In a large-scale environment where an external policy store already exists, CM can leverage this existing information. This information is sent back to the CM Configuration Server, which determines which data are to be managed for the user, group, or computer.



For technical details about integrating your existing policy using the CM Policy Server, see the HP OpenView web site and the *HP OpenView Configuration Management Policy Server Installation and Configuration Guide (CM Policy Server Guide)*.

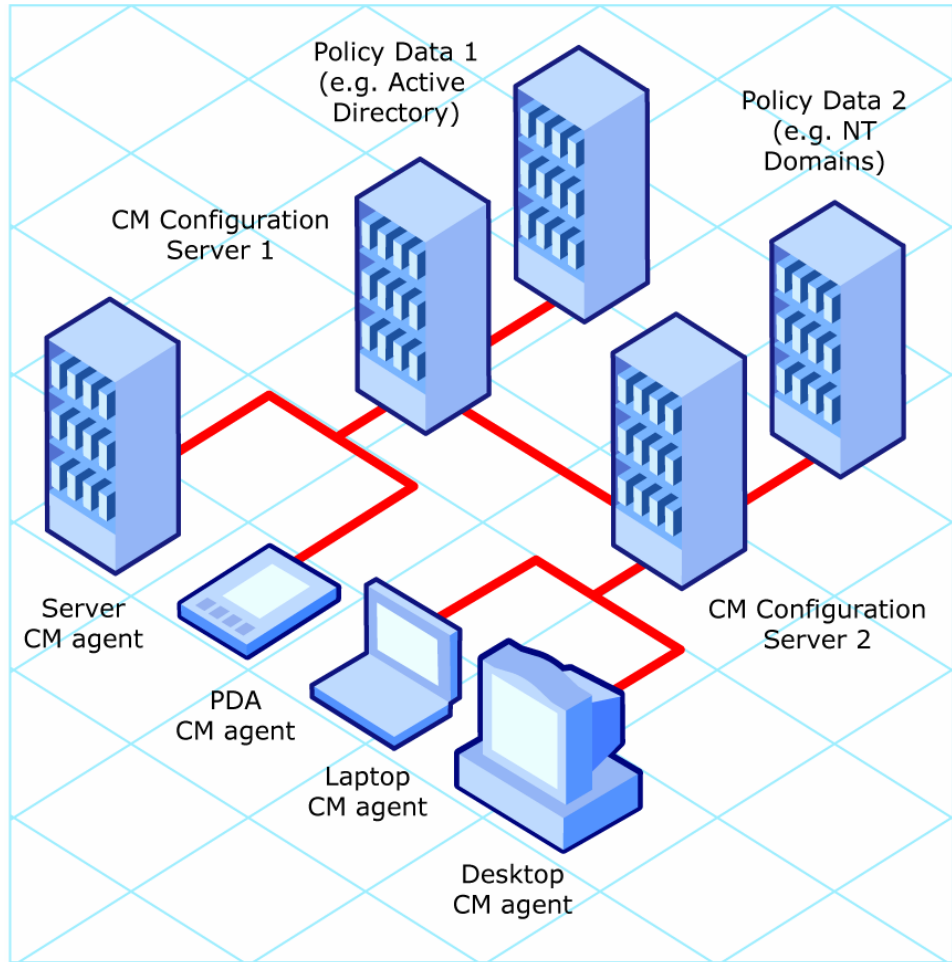
**Figure 8 Policy information from an external source**



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



**Figure 9 Policy information from multiple external sources**



## Directories-Based Entitlement

**(such as Active Directory and NDS)**

If you want to leverage your investment in LDAP-based directory services or SQL-based databases, HP offers the HP OpenView Configuration Management Policy Server (CM Policy Server). The CM Policy Server is a plug-in to the CM Integration Server used for administration purposes such as mapping services to users or computers in the directory tree. The CM

Configuration Server can be configured to query the CM Policy Server to determine what services should be distributed and managed for the agent.



The CM Policy Server is an optional feature available from HP. Contact your HP sales representative for details.  
See the *CM Policy Server Guide* for more information.

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

## About the POLICY Domain

If you are using real-time policy information from an external source, such as NT domains, to manage your data, you may need to configure a connection from your external policy store to the POLICY Domain in the CM Configuration Server DB. The configuration may vary based on the policy store.

This section contains an overview of the POLICY Domain. Most medium to large organizations will use its existing policy information and will have limited use for this domain. However, in the simplest environment, you can use the POLICY Domain in the CM Configuration Server DB to organize subscribers into logical groups in preparation for distributing software.

In this section, you will learn:

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

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

### To access the POLICY Domain

- 1 Go to **Start** → **Programs** → **HP OVCM Administrator** → **CM Admin CSDB Editor**.

The CM Admin CSDB Editor Security Information dialog box opens.

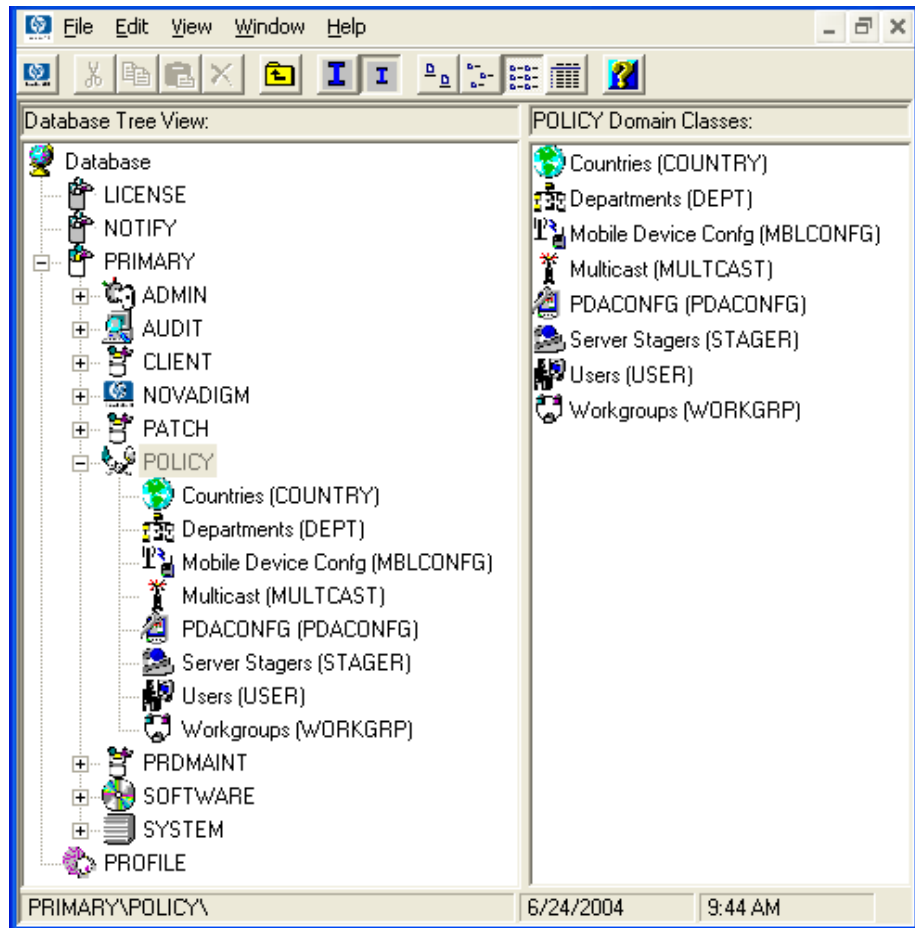
- 2 If necessary, type a User ID and Password, and then click **OK**.



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

The CM Admin CSDB Editor window opens.

- 3 Double-click **PRIMARY**.
- 4 Double-click **POLICY**.



## Classes in the POLICY Domain

The POLICY Domain has eight default classes, Country/Region (COUNTRY), Departments (DEPT), Mobile Device Config (MBLCONFIG), Multicast (MULTICAST), PDACONFIG (PDACONFIG), Server Stagers (STAGER), Users (USER), and Workgroups (WORKGRP), as described below.

**Table 17** Classes in the POLICY Domain

Class	Description	Instance Examples
Country/Region (COUNTRY)	Use for clock synchronizations with the CM Configuration Server. Do not assign services to this class.	France, Japan, Italy
Departments (DEPT)	Use to group subscribers into departments.	Finance, Customer Service, Manufacturing
Mobile Device Config (MBLCONFIG)	Defines the parameters for mobile device configuration when using the Mobility Server.	RmmUser
Multicast (MULTICAST)	Use the MULTICAST class to configure agent computers to use multicasting.	MCast1, Mcast2
PDACONFIG (PDACONFIG)	This class defines the parameters for PDA configuration.	PDAUser
Server Stagers (STAGER)	Use to define CM Proxy Servers or Staging Servers within your distribution network.	CDROM, RPS, RPSUser
Users (USER)	Use to define individual subscribers. This can be either a user name <i>or</i> a computer name.	William, John Doe, SSampson

Class	Description	Instance Examples
Workgroups (WORKGRP)	Use to group subscribers into functional groups. For example, a project team may be made up of subscribers from several different departments.	Project Planning, Managers, ABC Project Team

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



Refer to the *CM Admin CSDB Editor Guide* for information about creating new classes.

## Creating Users or Groups

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

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

In the following example, you will use the CM Admin CSDB Editor to create a new user (SSampson) in the User Class.

To create a new user

- 1 Go to **Start** → **Programs** → **HP OVCM Administrator** → **CM Admin CSDB Editor**.

The CM Admin CSDB Editor Security Information dialog box opens.

▶ The User ID, as shipped from HP, is RAD\_MAST. No password is necessary. This might have been changed during installation. You can also change this by selecting the **Change Password** check box and typing the new password in the New Password and Verify New Password text boxes.

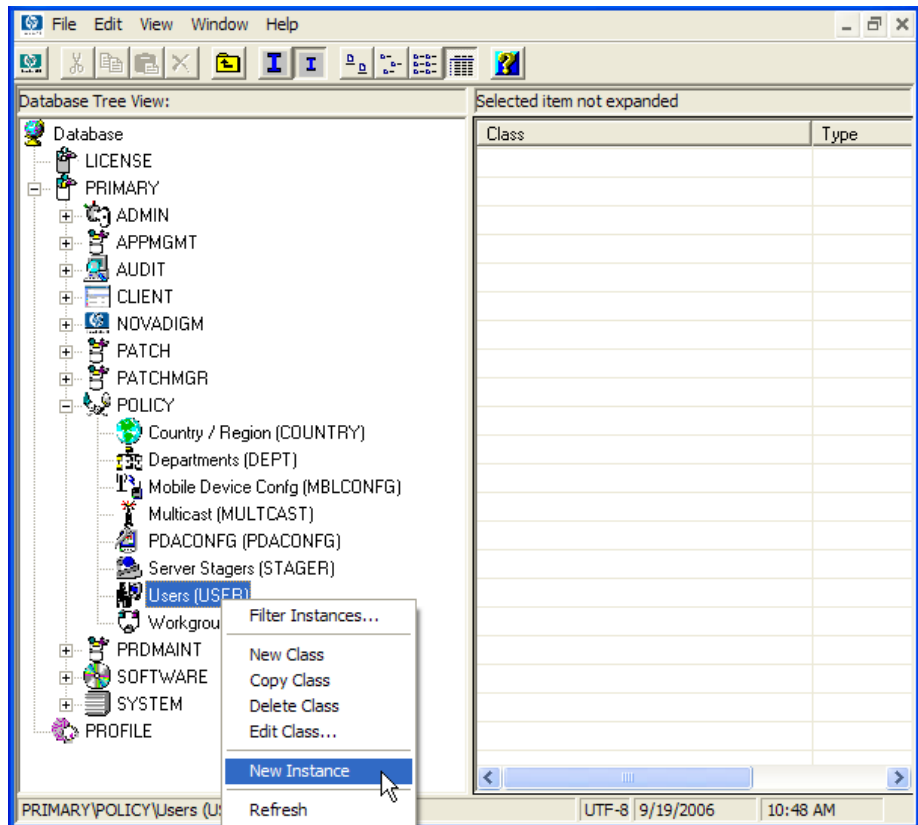
2 If necessary, type a User ID and Password, and then click **OK**.

The CM Admin CSDB Editor window opens.

3 Double-click **PRIMARY**.

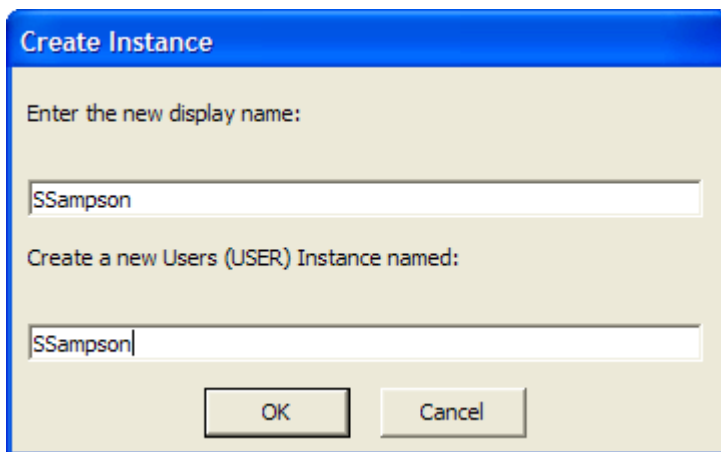
4 Double-click **POLICY**.

5 Right-click **Users (USER)**.



6 Select **New Instance**.

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



- 8 Click **OK**.

The user instance, SSampson, is created.

## Assigning Users to Groups

If you created several users, you might want to assign them to one or more groups. In the following example, we will use the CM Admin CSDB Editor to assign the user SSampson to the Sales department.

- ▶ The Sales instance, shown in the Departments (DEPT) Class may not appear in your CM Configuration Server DB. To add this instance (or instances that are appropriate to your organization), follow the procedure [To create a new user](#) on page 173. However, instead of right-clicking **USER**, right-click the appropriate class, such as **Departments (DEPT)**.

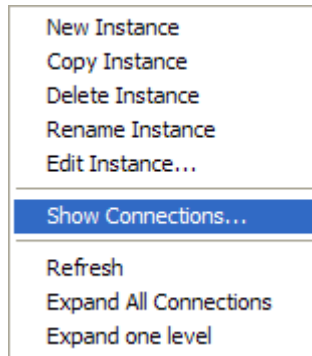
To assign a user to a group

- 1 Go to **Start** → **Programs** → **HP OVCM Administrator** → **CM Admin CSDB Editor**.

The CM Admin CSDB Editor Security Information dialog box opens.

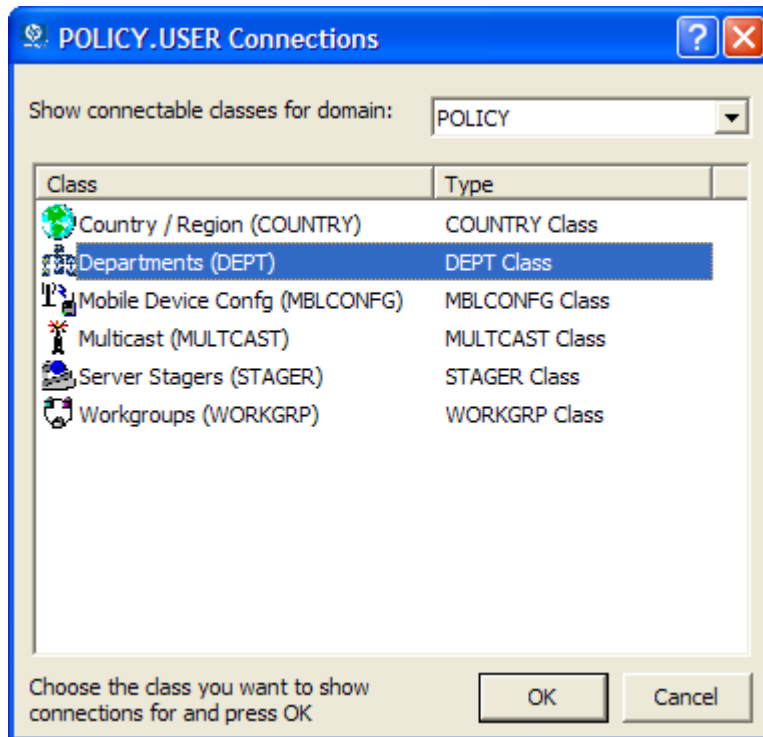
- ▶ The User ID, as shipped from HP, is **RAD\_MAST**. No password is necessary. This might have been changed during installation. You can also change this by selecting the **Change Password** check box and typing the new password in the **New Password** and **Verify New Password** text boxes.

- 2 If necessary, type a User ID and Password, and then click **OK**.  
The CM Admin CSDB Editor window opens.
- 3 Double-click **PRIMARY**.
- 4 Double-click **POLICY**.
- 5 Double-click **Users (USER)** to open the list of all user instances.
- 6 Right-click the user instance (in this example, SSampson) and select **Show Connections** from the menu that opens.



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

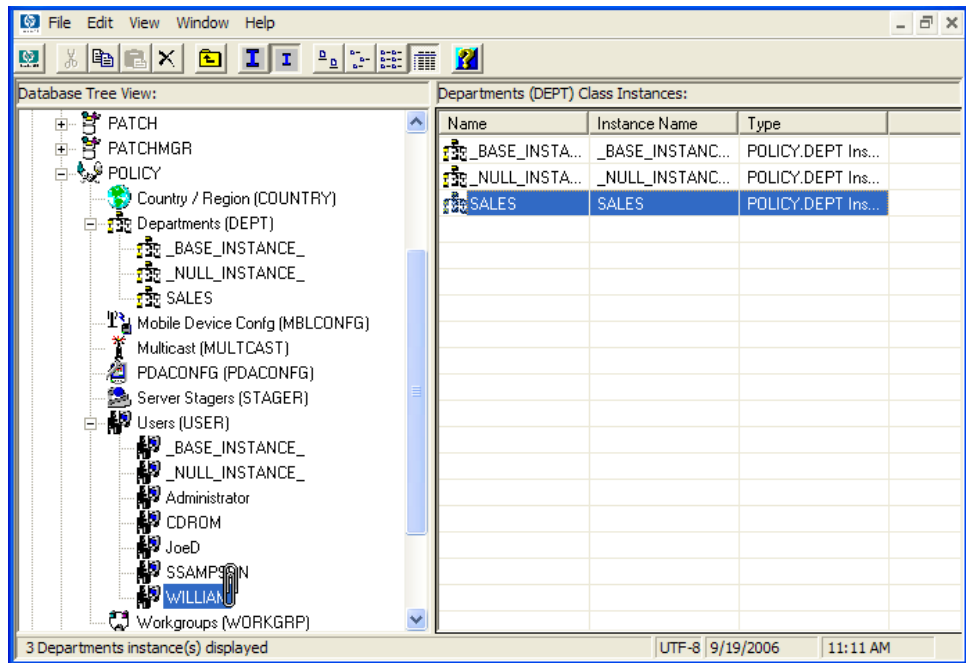




- 8 Select **Departments (DEPT)**, and then click **OK**.

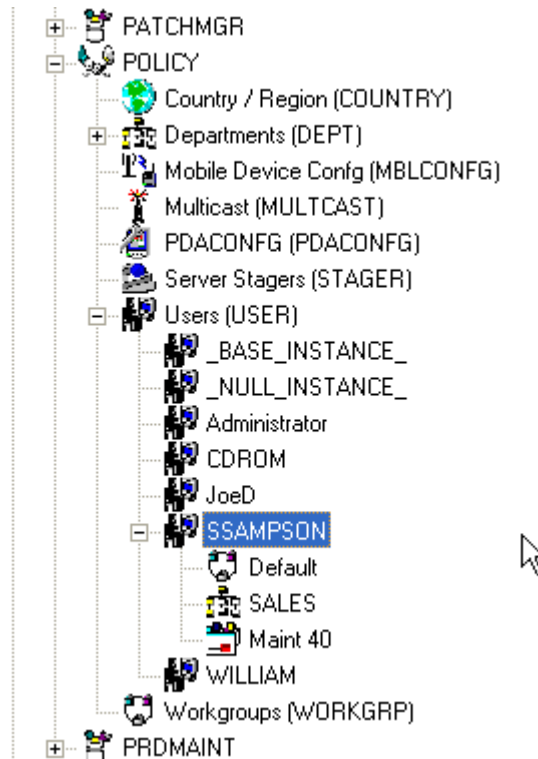
The DEPT Class instances appear in the list view. This allows you to easily make a connection between an instance in the DEPT Class and an instance in the USER Class.

- 9 Select the **Sales** Instance from the list view, and then drag it to the appropriate USER instance (in this example, **SSampson**). When your cursor turns into a paper clip, release the mouse button.



- 10 The Select Connection Attribute dialog box opens.
- 11 Click **Copy** to create the connection from **Users.SSampson** to **Department.Sales**.
- 12 Click **Yes** to confirm the connection.
- 13 Click **OK** when you receive the confirmation that "SSampson has been connected to Sales."

Sales is now listed under the SSampson user instance, which indicates that SSampson is part of the Sales department.



## Connecting Services to Groups

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

▶ If you are using the CM Policy Server, see the *CM Policy Server Guide* for more information.

In this section, you will learn how to connect users and groups to the services that CM will manage. In the following example, we will use the CM Admin CSDB Editor to authorize all subscribers in the Sales department for the WinZip application.

To connect the WinZip application to the Sales department

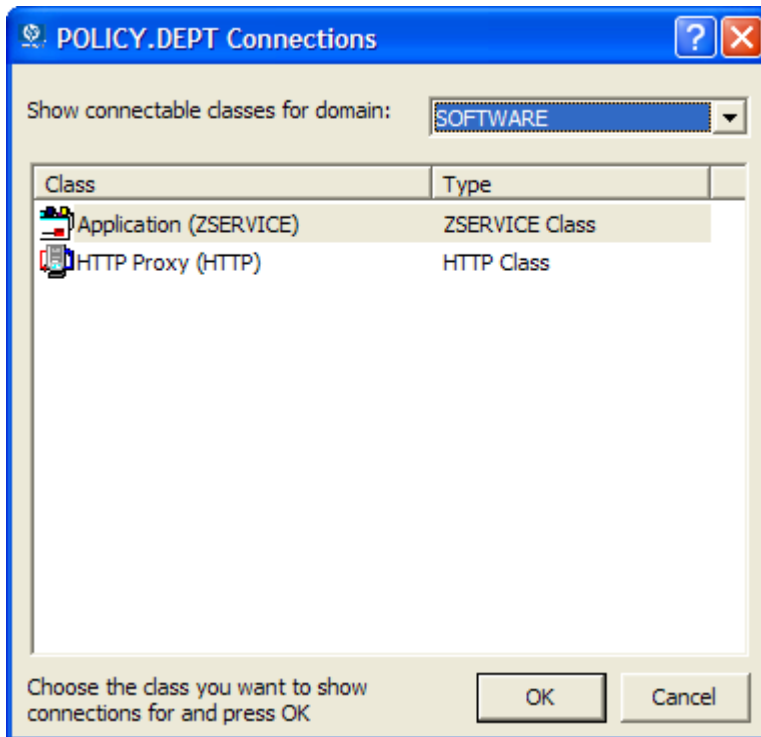
- 1 Go to **Start** → **Programs** → **HP OVCM Administrator** → **CM Admin CSDB Editor**.

The CM Admin CSDB Editor Security Information dialog box opens.

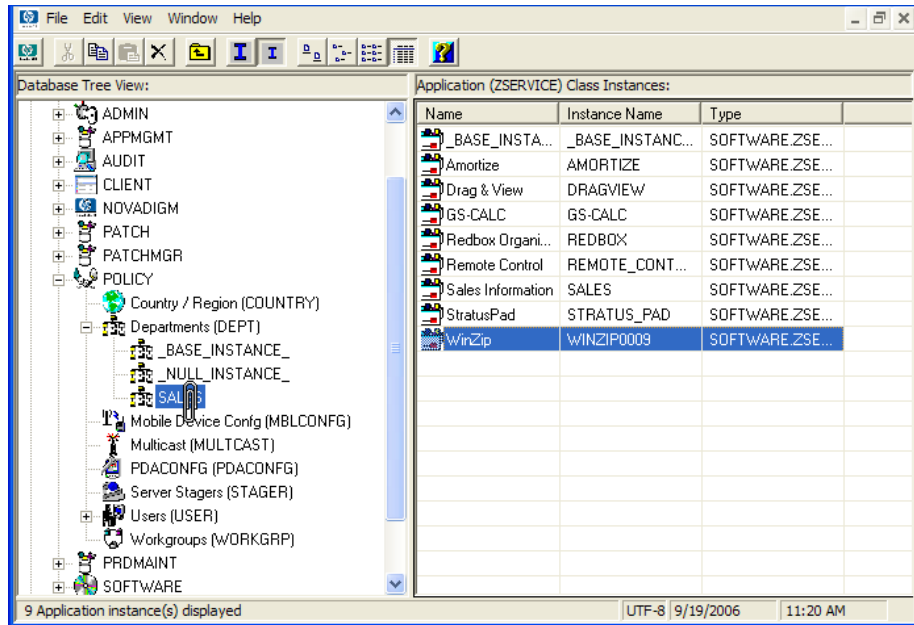


The User ID, as shipped from HP, is RAD\_MAST. No password is necessary. This might have been changed during installation. You can also change this by selecting the **Change Password** check box and typing the new password in the New Password and Verify New Password text boxes.

- 2 If necessary, type a User ID and Password, and then click **OK**. The CM Admin CSDB Editor window opens.
- 3 Double-click **PRIMARY**.
- 4 Double-click **POLICY**.
- 5 Double-click **Departments (DEPT)** to open the Departments Class.
- 6 Right-click the **Sales** instance (in the tree view) and select **Show Connections**. The POLICY.DEPT Connections dialog box opens. This dialog box displays a list of classes to which you can connect the selected instance.
- 7 From the Show connectable classes for domain drop-down list, select **SOFTWARE**.



- 8 Click **Application (ZSERVICE)**, and then click **OK**. The instances in the ZSERVICE Class appear in the list view.
- 9 Select the **WinZip** Instance from the list view, and drag it to the appropriate Departments instance (in this example, Sales). When your cursor turns into a paper clip, release the mouse button.



- 10 The Select Connection Attribute dialog box opens.
- 11 Click **Copy** to create the connection from Departments.Sales to Application.WinZip.
- 12 Click **Yes** to confirm the connection.
- 13 Click **OK** when you receive the confirmation that "Sales has been connected to WinZip."

Notice that WinZip is listed under the Sales Instance, which indicates that the entire Sales department is now authorized to receive the WinZip application.

In the next figure, notice that SSampson, listed in the Users (USER) Class, is part of the Sales department. You can also see that the WinZip application has been authorized for the entire Sales department. Therefore, as long as SSampson is part of the Sales department, CM will manage the WinZip application on his computer.

The screenshot displays a database management interface. On the left, a 'Database Tree View' shows a hierarchy of users. The 'Users (USER)' folder is expanded, showing sub-folders for '\_BASE\_INSTANCE\_', '\_NULL\_INSTANCE\_', and 'Administrator'. The 'SSAMPSON' user is selected and highlighted in blue. On the right, the 'Users class SSAMPSON Instance Attributes' table is visible, listing various attributes and their values.

Name	Attribute Description	Value
UNAME	Name	
ZCONFIG	Collect Hardware Info [Y/N]	Y
ZSETMSGA	Send Message to Audit R...	DAILY
ZDLIMIT	Maximum Disk Space	0
USERID	Enterprise User Id	
ZTIMED	Client Timeout (Seconds)	240
ZTRACEL	Trace Log Level [0-999]	040
ZTRACE	Trace On or Off [Y/N]	N
ZPRIORIT	Exec. Priority	000
ZSHOW	Display Status Indicator [Y...	N
_ALWAYS_	Utility Method	
_ALWAYS_	Member of	POLICY:WORKGRP.DEF.
_ALWAYS_	Member of	POLICY.DEPT.SALES
_ALWAYS_	Member of	
_ALWAYS_	Member of	
_ALWAYS_	Member of	
_ALWAYS_	Member of	
_ALWAYS_	Member of	

At the bottom of the window, a status bar indicates '34 Users CLASS SSAMPSON attribute(s) displayed', 'UTF-8', '9/19/2006', and '11:23 AM'.

Whether you are using an external policy store, or managing policy within CM, you can quickly modify the services that individuals are authorized for by manipulating the connections between services and groups, adding users to groups, or removing users from groups.

## Summary

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



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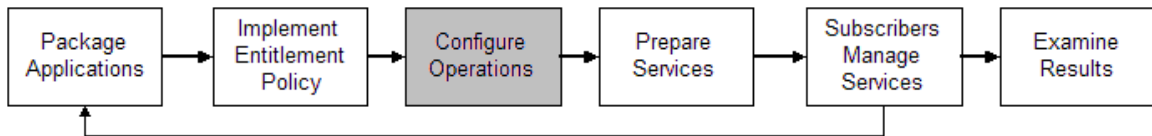
# 6 Configuring Client Operations Profiles

At the end of this chapter, you will:

- Understand the benefits of Client Operations Profiles.
- Know how to implement Client Operations Profiles.
- See a simple implementation example.

This guide describes the *standard* implementation for the HP OpenView Configuration Management Self-service Manager (CM Self-service Manager). Although you will tailor this strategy to meet your organization's needs, we recommend that you review this guide for a comprehensive understanding of the CM Self-service Manager. This chapter discusses how to configure the operations of your CM agent. It describes the CLIENT Domain, and contains information about providing failover capabilities, designating servers for an agent based on criteria you set, controlling trouble shooting settings, hardware scan settings, and user interface settings.

**Figure 10** Tasks described in this guide



## Client Operations Profiles

If you have multiple CM Configuration Servers, CM Proxy Servers, or want to store files that manage applications on a local CD-ROM, you might want to reconfigure the CM agent before connecting to the CM Configuration Server. Use Client Operations Profiles to do this. Client Operations Profiles, along with the CM object-oriented schema, allow you to control certain agent behaviors based on any attribute from an agent object. Benefits of using Client Operation Profiles include, but are not limited to:

- Failover capability for CM servers.
- Dynamic assignment and selection of an agent computer's available servers based on network location, speed, or other criteria.
- Defining which CM Configuration Server to use based on its functional role, allowing for load balancing among CM Configuration Servers.
- Enhanced diagnostics capabilities.



To use Client Operations Profiles, you must be using the Application Manager version 3.1 or higher and the CM Configuration Server DB version 3.1 or higher.

## The CLIENT Domain

The CLIENT Domain in the CM Configuration Server DB controls Client Operations Profiles. It includes six classes with sample instances that you can use to configure your CM agent computers operations. We provide an example of using the agent computer's network location, stored in the ZCONFIG object to prioritize the downloadable locations for application data for each agent computer. The six classes are:

- **Core Settings (SETTINGS)**  
Use an instance in the SETTINGS Class to define how to use your Server Access Profile, to define scripts you want to use, and to set other global parameters.
- **Diagnostics (DIAGS)**  
Use instances in this class to override tracing levels set on the CM agent.
- **Hardware Scan Config (RADHWCFG)**  
Use an instance in this class to control the type of hardware scan that the CM agent should perform.
- **Network Location (LOCATION)**  
Use the LOCATION Class to group users based on a location, such as their subnet.
- **RSM UI Preferences (RADUICFG)**  
Use instances in this class to manage the display of the CM Application Self-service Manager User Interface.
- **Server Access Profile (SAP)**  
Use instances in the Server Access Profile (SAP) class to define CM Configuration Servers and possible data access points for CM-managed services.

## Recommendations

We recommend the following for using Client Operations Profiles.

- Use our Professional Services to help you implement this feature.
- Configure Client Operations Profiles *only* if you fully understand this process.
- Avoid single point of failure in all aspects, for servers of both types and for each role. Create redundancy where possible.
- Use base and null instances for unknown and new network addresses.

# Implementing Client Operations Profiles

Use CLIENT Domain class instances to customize the profiles to meet your enterprise's needs. There are five major steps for implementation.

- 1 Identify Servers.
- 2 Create Server Access Profile instances.
- 3 Set criteria for Server Access Profile instances.
- 4 Set priorities for Server Access Profile instances.
- 5 Enable Client Operations Profiles.

The following sections describe each of these steps. Before beginning this procedure, a discussion of Server Types and Roles is required.

## Understanding Server Types and Roles

A Server Access Profile (SAP) is a generic way to define all possible data access points for a service. A SAP can be a CM Configuration Server, CM Proxy Server, or CD-ROM drive. Client Operations Profiles allow you to identify and prioritize data access points without the need to use additional customized scripts.

Before beginning this process, you must have an understanding of server types and roles. These are reflected, respectively, in the TYPE and ROLE attributes of the SAP Class. A server can either be identified as an RCS or DATA type. Only a CM Configuration Server can be identified as type RCS. A CM Configuration Server, CM Proxy Server, or CD-ROM drive can be identified as DATA in the TYPE attribute. Use DATA type only for servers from which the agent will download applications.

In addition, each CM Configuration Server can have a role, or function, specified in the ROLE attribute of the SAP Class. Possible roles are:

- **Client Operations Profiles (O)**  
Use this CM Configuration Server to get the agent computer's Client Operations Profile.
- **Service resolution (S)**  
Use this CM Configuration Server to resolve the agent computer's services.
- **Agent self maintenance (M)**  
Use this CM Configuration Server to perform Agent Self Maintenance.

- **Reporting (R)**  
Use this CM Configuration Server for storing reporting objects from the agent computer. These objects are stored in the PROFILE File in the CM Configuration Server DB.
- **Data download (D)**  
Use this CM Configuration Server to download application data to the agent computer.
- **All (A)**  
Use this CM Configuration Server for any of the roles listed above.

A CM Proxy Server or CD-ROM can only serve the role of Data download (D). A CM Configuration Server can serve any of the above roles.



When an agent is ready to download files, the agent will first use servers with TYPE=DATA in order of priority set in the LOCATION Class. If a server with TYPE=DATA, has a ROLE of anything other than D, it will be skipped and not used for data download.

If the agent is still unable to download all the needed files after processing all servers with TYPE=DATA, then the agent will begin processing servers of TYPE=RCS in order of priority. In order to use a CM Configuration Server for data download, two conditions must be met:

- The SETTINGS.RCSDATA attribute for the agent computer must be set to Y.
- The SAP.ROLE for the CM Configuration Server must be either D or A.

### **Task 1** Identify CM Servers

Identify your CM Servers, and determine the type and role for each. Types are defined in the TYPE attribute of the SAP Class. Roles are defined in the ROLE attribute of the SAP Class. Your CM Server can be a CM Configuration Server, CM Proxy Server, or CD-ROM. CM Servers with TYPE=DATA, must have a role of Data download (D). CM Configuration Servers, set to TYPE=RCS, can serve many roles. You will need to decide which roles your CM Configuration Servers can perform.



Only a CM Configuration Server can be designated as anything other than data download. For all other SAP instances, if you specify anything other than data download, the SAP will be ignored.

## Task 2 Create Server Access Profile Instances (SAP)

Use CM Admin CSDB Editor to create one SAP instance for each Server Access Profile. [Table 18](#) below describes the attributes in the SAP Class. We provide you with samples for each type of Server Access Profile in the CM Configuration Server DB. A number of SAP samples are provided in the Configuration Server Database.

Use the CM Admin CSDB Editor to make a copy of the instance that most closely approximates the server type and role for which you need an SAP instance. After copying the instance, use [Table 18](#) to configure the instance for your enterprise.



Instances in the SAP Class are used before the IP specified in the radskman command line.

**Table 18 Attributes of the SAP Class**

Attributes	Description
ZSTOP00n	<b>Expression Resolution Method</b> Use a ZSTOP expression to stop the process from completing if certain requirements are met. For example, you may want to prevent a laptop computer from using this SAP.
NAME	<b>Friendly Name</b> Friendly name of the SAP instance.
TYPE	<b>Type [RCS/DATA]</b> Specify the Type of CM server. Set to RCS if using CM Configuration Server. Set to Data for CM Proxy Server or CD-ROM. If the agent computer is unable to reach any of its Server Access Profile, then the agent will default to the last known CM Configuration Server.
URI	<b>Universal Resource Identifier</b> Create the Universal Resource Identifier to specify the CM Configuration Server, or CM Proxy Server. See <a href="#">Table 19</a> on page 194 for examples.

<b>Attributes</b>	<b>Description</b>
ROLE	<p><b>RCS Role A,O,S,M,R,D</b></p> <p>Specifies the role of the SAP. Specify as many values as are needed separated by a comma. A blank or null value defaults to ALL. Possible values are A = all, O = Client Operations Profiles, S = Service Resolution, M = Client Self Maint, R = Reporting, D= Data Download.</p> <p>Default: The default value is A.</p> <p>Note: Only a CM Configuration Server can be designated as anything other than type D. For servers where TYPE=DATA, if you specify anything other than D, that SAP instance will be skipped.</p>
ENABLED	<p><b>Enable SAP [Y/N]</b></p> <p>Specify if this SAP is enabled (Y) or disabled (N). If the variable is blank or non-existent, then this SAP is enabled.</p> <p>Default: The default value is Y.</p>
TIMEOUT	<p><b>Communications Timeout (0-3200)s</b></p> <p>Specify the timeout in seconds. This will override client timeout (ZMASTER.ZTIMEO) if it contains a valid numeric value. If blank, then use existing variable value on client.</p>
PUSHBACK	<p><b>Push Back (0-999 retries)</b></p> <p>Set to 0 to skip a CM Configuration Server if the CM Configuration Server pushes back on the agent connect. Set to 1 - 999 for number of retries if the CM Configuration Server pushes back.</p> <p>Default: The default setting is 0.</p>
THROTYPE	<p><b>Throttle [NONE/ADAPTIVE/RESERVED/]</b></p> <p>This attribute applies to Windows only.</p> <p>Type of bandwidth throttling to use.</p> <ul style="list-style-type: none"> <li>• Set to <b>ADAPTIVE</b> to yield to other services that are using the network.</li> <li>• Set to <b>RESERVED</b> to allow for a specific reservation of the bandwidth. It is the maximum percentage of network bandwidth to use.</li> <li>• Set to <b>NONE</b> for no bandwidth throttling, and use the maximum available bandwidth.</li> </ul> <p>This will override client bandwidth throttling if it contains a valid value. If blank, then use existing variable value on the agent computer.</p>

<b>Attributes</b>	<b>Description</b>
BANDWIDTH	<p><b>Bandwidth Percentage (1-99)</b></p> <p>Specify the percentage of bandwidth to use between 1 and 99. If blank value or non-existent variable, then use all of the bandwidth. This attribute applies to Windows only.</p> <p>This will override agent bandwidth setting if it contains a valid value. If blank, then use existing variable value on agent computer.</p>
STREAM	<p><b>Enable Streaming [Y/N]</b></p> <p>Specify Y to use streaming. This will override the agent setting in ZMASTER.ZNORSPNS.</p> <p>Default: The default value is N.</p> <p>Caution: Streaming is not suitable for all network environments. Consult your network administrator before setting this to Y.</p>
PROXY	<p><b>Internet Proxy URI</b></p> <p><i>Do not modify.</i> The Internet proxy URI through which the agent will connect to the SAP. Maintained by agent.</p>
PRIORITY (&(LOCATION. SAPPRI))	<p><b>Selection Priority</b></p> <p><i>Do not modify.</i> The SAP obtains its priority by looking at the priority specified in the LOCATION Class.</p>
PRODUCT	<p><b>Product Filter</b></p> <p>Specify which types of CM agents can use this SAP instance. Specify multiple clients separated by a comma. Below are suggested identifiers for each CM agent:</p> <ul style="list-style-type: none"> <li>• CM Application Manager: AM</li> <li>• CM Inventory Manager: IM</li> <li>• CM Application Self-service Manager: ASM</li> <li>• CM OS Manager: OSM</li> <li>• CM Patch Manager: PATCH</li> </ul> <p>On your radskman command line, specify which products to filter by using the product parameter.</p> <p>For example, if this SAP should only be used by CM Application Manager, then you may want to set this attribute to AM. Then, set product to CM-AM on your radskman command line.</p> <p>Default: Blank means that all products can use this SAP instance.</p>



Attributes	Description
FILTER	<p><b>Filter Expression [Obj.Var = Value]</b></p> <p>Use this attribute to filter the SAP based on any available object attribute. For example, if you only wanted to use this SAP for a specific service, specify APPINFO.ZOBJNAME=GS-CALC.</p> <p>Note: The ZSERVICE object is not available during installation. Use the APPINFO object instead. Appinfo, located in the service's LIB directory, is a copy of the service's instance from the ASERVICE object.</p>
NETTTL	<p><b>Network Time To Live (0-999)</b></p> <p>Set the number of hops to use for the ICMP speed checks used by the agent computer. If NETTTL does not exist or is blank, the value will be 3.</p>



If you want to override the use of the SAP object, add the RCSURI parameter to the radskman command line. RCSURI should be in the same format as the Universal Resource Identifier. For the syntax of this parameter, see [Table 19](#) on page 194.

## Creating the Universal Resource Identifier

For each instance of the SAP Class, you will need to identify a URI (Universal Resource Identifier) for the Server Access Profile (SAP). RFC 1630 proposes the following format:

```
<scheme>:<scheme specific format>
```

where the scheme is usually the network protocol such as HTTP or TCP. If the scheme-specific format has slashes, it indicates a hierarchical path. Universal Resource Locator (URL) is a form of URI where the scheme specific format is defined as:

```
//<user>:<password>@<host>:<port>/<url path>
```

Details on how to access the specified resource are defined in the URL path. The most prevalent form is: `//host:port/url path`. Examples for specifying the URI are shown in [Table 19](#):

**Table 19 URI Example**

SAP Type	URI and TYPE attributes are set to:
CM Configuration Server over TCP/IP using default port of 3464	URI = tcp://ovcmcs:3464 TYPE = RCS
CM Configuration Server over TCP/IP using port 7800	URI = tcp://ovcmcs:7800 TYPE = RCS
Configuration Server using SSL on port 443	URI = tcps://ovcmcssl:443 TYPE = RCS
CM Proxy Server using HTTP	URI = http://ovcmps:3466 TYPE = DATA
CD-ROM	URI = file://&(ZCONFIG.ZHDWCDDR)   /DATA/ TYPE = DATA

**Task 3** Set Criteria for each SAP Instance

After creating your SAP instances, you must decide how you are going to segment your enterprise. You may want to assign a SAP to an agent computer based on its subnet. If so, use CM Admin CSDB Editor to create one LOCATION instance for each subnet. In the sample database, there are two locations, Sample\_Location East and Sample\_Location West.

The ZCONFIG object for an agent computer includes an attribute called NETLOC. The ZCONFIG.NETLOC variable identifies the agent computer's subnet using underscores instead of periods. You may want to name the LOCATION instance based on possible subnets of your agent computers so that you can easily connect a user to their appropriate LOCATION Instance based on their subnet. For example, if you have a subnet of 10.10.10.1, create a LOCATION instance called 10\_10\_10\_0. [Enable Client Operations Profiles](#) on page 198 shows you how to connect the subscribers to the appropriate LOCATION Class using the agent computer's ZCONFIG.NETLOC variable.

**Task 4** Set Priority for each SAP for each Location

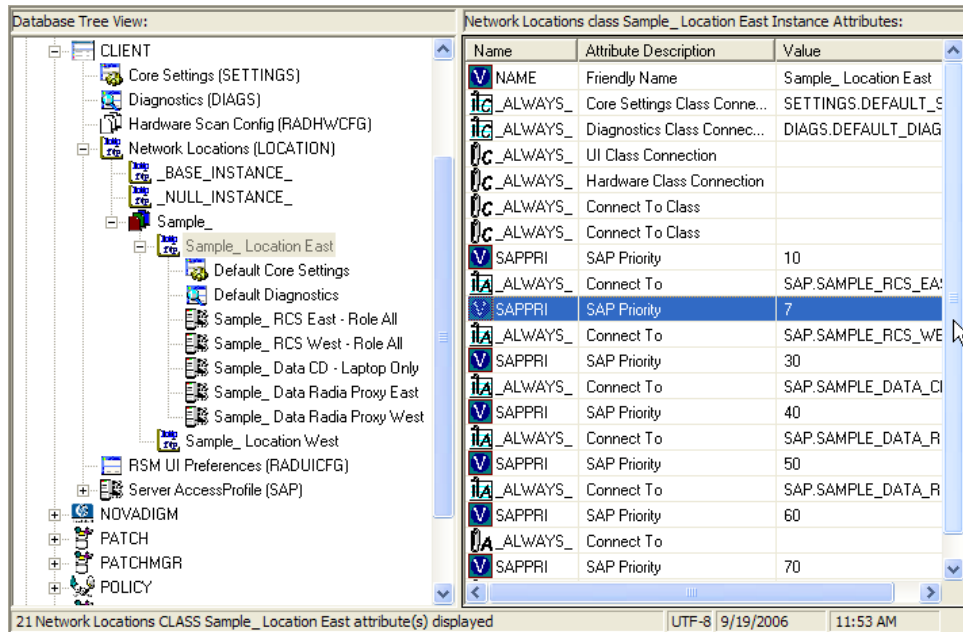
Use instances in the LOCATION Class to define the priorities of your Server Access Profile based on location criteria. The figure below shows one of the samples that we provide. The priority for a Server Access Profile is defined directly above the connection to that SAP instance in the SAPPRI attribute.

Lower numbers have a higher priority. For example, SAP.SAMPLE\_RCS\_EAST has a priority of 10, and SAP.SAMPLE\_DATA\_RPS\_EAST has a priority of 40.



The SAPPRI can be any whole number from 01 to 99. The SAPs do not need to be listed in the LOCATION instance in their priority order.

Table 20 below describes the attributes of an instance in the LOCATION Class. For example, if you want your SAMPLE\_RCS\_WEST to be used before your SAMPLE\_RCS\_EAST, increase its priority to 7. To do this, change the SAPPRI for SAMPLE\_RCS\_WEST to 7 as shown in the figure below.



**Table 20 Attributes of the LOCATION Class**

Attribute	Description
COPLNAME	<b>Friendly Name</b> Type the friendly name of the instance.
_ALWAYS_	<b>Core Settings Class Connection</b> Specify an instance in the SETTINGS class. Default: The default connection is SETTINGS.DEFAULT_SETTINGS.

<b>Attribute</b>	<b>Description</b>
<code>_ALWAYS_</code>	<p><b>Diagnostics Class Connection</b> Specify an instance in the DIAGS Class. Default: The default connection is DIAGS.DEFAULT_DIAGS.</p>
<code>_ALWAYS_</code>	<p><b>UI Class Connection</b> Specify an instance in the RADUICFG Class.</p>
<code>_ALWAYS_</code>	<p><b>Hardware Class Connection</b> Specify an instance in the RADHWCFG Class.</p>
<code>_ALWAYS_</code>	<p><b>Class Connection</b> Specify an instance in any class to connect to this LOCATION instance.</p>
SAPPRI	<p><b>SAP Priority</b> Specify the priority of the SAP instance referenced in the <code>_ALWAYS_</code> class connection below this attribute. Default: The SAP referenced in the connection below this instance has a priority of 10 by default.</p>
<code>_ALWAYS_</code>	<p><b>Connect to</b> Specify an SAP instance for the priority entered into SAPPRI above this attribute. This SAP will default to a priority of 10.</p>
SAPPRI	<p><b>SAP Priority</b> Specify the priority of the SAP instance referenced in the <code>_ALWAYS_</code> class connection below this attribute. Default: The SAP referenced in the connection below this instance has a priority of 20 by default.</p>
<code>_ALWAYS_</code>	<p><b>Connect to</b> Specify an SAP instance for the priority entered into SAPPRI above this attribute. This SAP will default to a priority of 20.</p>
SAPPRI	<p><b>SAP Priority</b> Specify the priority of the SAP instance referenced in the <code>_ALWAYS_</code> class connection below this attribute. Default: The SAP referenced in the connection below this instance has a priority of 30 by default.</p>

<b>Attribute</b>	<b>Description</b>
<u>_ALWAYS_</u>	<p><b>Connect to</b></p> <p>Specify an SAP instance for the priority entered into SAPPRI above this attribute. This SAP will default to a priority of 30.</p>
SAPPRI	<p><b>SAP Priority</b></p> <p>Specify the priority of the SAP instance referenced in the <u>_ALWAYS_</u> class connection below this attribute.</p> <p>Default: The SAP referenced in the connection below this instance has a priority of 40 by default.</p>
<u>_ALWAYS_</u>	<p><b>Connect to</b></p> <p>Specify an SAP instance for the priority entered into SAPPRI above this attribute. This SAP will default to a priority of 40.</p>
SAPPRI	<p><b>SAP Priority</b></p> <p>Specify the priority of the SAP instance referenced in the <u>_ALWAYS_</u> class connection below this attribute.</p> <p>Default: The SAP referenced in the connection below this instance has a priority of 50 by default.</p>
<u>_ALWAYS_</u>	<p><b>Connect to</b></p> <p>Specify an SAP instance for the priority entered into SAPPRI above this attribute. This SAP will default to a priority of 50.</p>
SAPPRI	<p><b>SAP Priority</b></p> <p>Specify the priority of the SAP instance referenced in the <u>_ALWAYS_</u> class connection below this attribute.</p> <p>Default: The SAP referenced in the connection below this instance has a priority of 60 by default.</p>
<u>_ALWAYS_</u>	<p><b>Connect to</b></p> <p>Specify an SAP instance for the priority entered into SAPPRI above this attribute. This SAP will default to a priority of 60.</p>

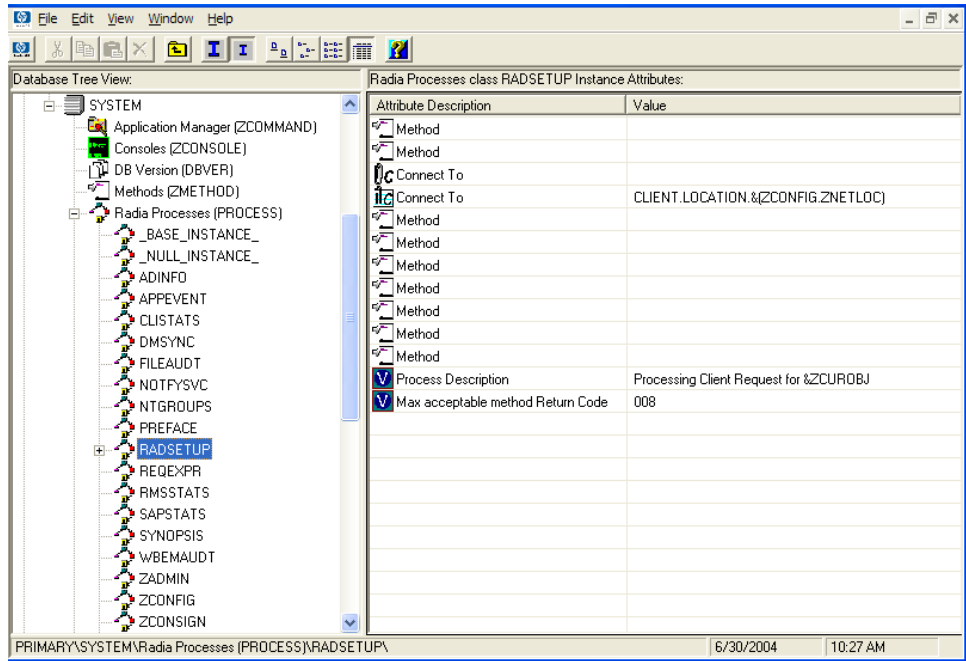
<b>Attribute</b>	<b>Description</b>
SAPPRI	<p><b>SAP Priority</b></p> <p>Specify the priority of the SAP instance referenced in the <code>_ALWAYS_</code> class connection below this attribute.</p> <p>Default: The SAP referenced in the connection below this instance has a priority of 70 by default.</p>
<code>_ALWAYS_</code>	<p><b>Connect to</b></p> <p>Specify an SAP instance for the priority entered into SAPPRI above this attribute. This SAP will default to a priority of 70.</p>

### **Task 5** Enable Client Operations Profiles

There are two phases to this step. First, you will need to create a process on the CM Configuration Server so that the objects associated with Client Operations Profiles are resolved. Second, you will need to enable the agent computer to use Client Operations Profiles.

### Enable on the CM Configuration Server

To enable Client Operations Profiles, you must use the RADSETUP instance in the PROCESS class in the SYSTEM Domain. This instance should already be present in the 5.0 Configuration Server Database. Make a class connection to `CLIENT.LOCATION.&(ZCONFIG.ZNETLOC)`. This will map the user to its appropriate LOCATION instance based on the ZNETLOC attribute in the agent computer's ZCONFIG object. The ZNETLOC attribute identifies the agent computer's subnet using underscores instead of periods to separate the four octets. Instances of the LOCATION Class must be defined to match each of the subnets in your environment to be able to dynamically assign Client Operations Profiles configuration settings based on locations within your network. The next figure shows an example.



## Enable on the Client

By default, Client Operations Profiles are disabled on agent computers for backwards compatibility with older version of CM. There are three ways to enable Client Operations Profiles on the agent computer. Choose your method based on whether the CM agent has already been installed, and the method that suits your needs best.

If you have not already installed the CM agent,

- You can customize the `install.ini` to add the COP variable to the RADSETUP object. To do this, add one line to the [Objects] section of the `install.ini`. The figure below shows an example of the section with a new line. See [\[OBJECTS\] Section of INSTALL.INI](#) on page 49 for more details.

The following code shows the RADSETUP line added to the Objects section of the `install.ini`.

```
[Objects]
; Set CM object attribute values
; A value of _NONE_ will set the attribute to blank
;
```

```
RADSETUP_COP=Y
;ZMASTER_ZDSTSOCK=
;ZMASTER_ZIPADDR=
;ZMASTER_ZNTFPORT=3465
```

If you want to enable Client Operations Profiles on already existing CM agents:

- You can use a rexx method, `initmeth.rex` to add and set the COP variable in the RADSETUP object. `initmeth.rex` runs each time a First Refresh Catalog is called and can build the RADSETUP object with COP=Y to enable Client Operations Profiles. The figure below shows the lines to add to your `initmeth.rex`. Be sure to deploy the updated `initmeth.rex`.

Add the following lines to the `initmeth.rex`:

```
/* Sample INITMETH.REX to Enable the COP */
call edmget('RADSETUP',0)
RADSETUP.COP = 'Y'
call edmset 'RADSETUP'
```

- You can use the COP parameter of `radskman` to enable or disable Client Operations Profiles. To enable, add COP=Y to your list of parameters for `radskman`. *This will only enable or disable Client Operations Profiles for this agent connect.* Use `initmeth.rex` as shown above to enable COP for all agent connects or create a variable in CLIENT.SETTINGS called COP, and set the value to Y. Ultimately, both of these methods will create a COP attribute in the RADSETUP object with a value of Y. Alternatively, if you need to disable Client Operations Profiles after enabling it, run `radskman` with COP=N to disable for *that* agent connect only.

## Additional Classes in the CLIENT Domain

There are two additional classes in the CLIENT Domain used for customizations and diagnosis. Define your own scripts to be used during the agent connect with the Core Settings (SETTINGS) Class. Set tracing levels and use other diagnostic tools by configuring the attributes in the Diagnostics (DIAGS) Class.



## Core Settings (SETTINGS)

Use an instance in the SETTINGS Class to define how to use your Server Access Profile, define scripts you want to use in pre-configuration processing, and set other global parameters.



If similar attributes exist in both the SETTINGS and SAP Classes, the attribute in the SAP Class will be used.

**Table 21 Attributes of the SETTINGS Class**

Attributes	Description
COPSNAME	<b>Friendly Name</b> Type the friendly name of the instance.
SAPPING	<b>Ping all SAP [Y/N]</b> Set to Y if the agent should ping all of the SAPs. If EQUISORT is set to S, then you must set SAPPING to Y. A result reflecting the speed of the connection will be returned and stored in the SPEED attribute in the SAPSTATS object. Default: The default setting is N.
PUSHBACK	<b>Push Back (0-999 retries)</b> Set to 0 to skip a CM Configuration Server if the CM Configuration Server pushes back on the agent connect. Set to 1 to 999 for number of retries if the CM Configuration Server pushes back. Default: The default setting is 0.
EQUISORT	<b>Secondary SAP Priority [R/S]</b> If several SAP instances have the same priority, set this to R to randomly select which one to use. Set to S to use the SAP with faster network speed. SAPPING must be set to Y to use EQUISORT= S. Use R for workload balancing. Default: The default setting is R.
USELSAP	<b>Use Last SAP [N/Y]</b> Set this Y to specify that the last SAP used in this agent connect should be the SAP used for all remaining services to be resolved. Use of SAPs with type of DATA is at the service level. If set to N, then the client will go through

Attributes	Description
	<p>the SAPs in priority for each service.</p> <p>During an agent connect, if a service has to go to a lower priority SAP to complete the data download, decide if you want the remaining services to continue from this SAP (USELSAP=Y) or go back to the highest priority DATA SAP to search for files for the next service (USELSAP=N) and to continue through the SAP priorities.</p> <p>Default: The default setting is Y.</p>
RCSDATA	<p><b>Download DATA from RCS [Y/N]</b></p> <p>After using all of the TYPE = DATA SAPS, if all the needed data has not been downloaded then specify Y to go to SAPs with TYPE = RCS. If you do not want the agent computers to use CM Configuration Servers, set RCSDATA to N.</p> <p>Default: The default setting is Y.</p>
ADINFO	<p><b>Query Active Directory Info [Y/N]</b></p> <p>Specify Y if you want to collect the agent computer's active directory information. The information is stored in the ADINFO object in the RADSETUP directory. The default location for the RADSETUP directory is <i>System Drive:\Program Files\Hewlett-Packard\CM\Agent\Lib\RADSETUP</i>. This information will be sent to the CM Configuration Server for all resolution processes.</p> <p>Default: The default setting is Y.</p>
ZGRPINFO	<p><b>Query NT User Group Info [Y/N]</b></p> <p>Specify Y if you want to collect the agent computer's Windows NT user group information. This information will be reflected in the NTGROUPS object in the RADSETUP directory. The default location for the RADSETUP directory is <i>System Drive:\Program Files\Hewlett-Packard\CM\Agent\Lib\RADSETUP</i>. This information will be sent to the CM Configuration Server for all resolution processes.</p> <p>Default: The default setting is Y.</p>

Attributes	Description
LSCRIPT	<p><b>Disable Connect on UI Reboot [Y/N]</b></p> <p>If you have set a service to perform an immediate reboot and you run radskman from a login script, set this to Y to run radskman from the login script.</p> <p>If you have set a service to perform an immediate reboot, and you want radskman to be restarted in the User context when a user logs, set this to N.</p> <p>In other words, if your users are configured to connect to CM Configuration Server when they log in, set this to N. If you want to do an immediate reboot with context=u, and you want the user to re-establish connection with the CM Configuration Server, then set LSCRIPT=Y. For more information on reboot options, see the section <a href="#">Restarting the Agent computer</a> on page 236.</p> <p>Default: The default setting is Y.</p>
ALWAYS	<p><b>Always Download CFG Objects [Y/N]</b></p> <p>Set to Y to always download pre-configuration objects. This guarantees that your SAP or persistent objects are downloaded even if nothing has changed. If your SAP client object is corrupted for any reason, then it will be re-downloaded even if the desired state didn't change. In addition, if one of the variables is a substitution then you will download the object with the new values since a variable change by substitution doesn't change the desired state.</p> <p>Default: The default setting is Y.</p>
ALWAYS	<p><b>Always Upload CFG Objects [Y/N]</b></p> <p>Set to Y to always upload all objects in the RADSETUP directory to the CM Configuration Server. The default location for the RADSETUP directory is <i>System Drive:\Program Files\Hewlett-Packard\CM\Agent\Lib\RADSETUP</i>. Set to N to prevent the objects from being sent.</p> <p>Default: The default setting is Y.</p>

Attributes	Description
EXBSETUP	<p><b>Pre Config Resolution Script</b></p> <p>Specify a script to run before pre-configuration processing. This script must be in the agent computer's IDMSYS directory. The default location is <i>System Drive:\Program Files\Hewlett-Packard\CM\Agent</i>.</p> <p>Default: The default setting is PRESETUP.REX.</p>
EXASETUP	<p><b>Post Config Resolution Script</b></p> <p>Specify a script to run after pre-configuration processing. This script must be in the agent computer's IDMSYS directory. The default location is <i>System Drive:\Program Files\Hewlett-Packard\CM\Agent</i>.</p>
CMETHOD	<p><b>Post Catalog Script</b></p> <p>Specify a script that can run after catalog resolution, but before service processing.</p>
EXBOUOTBX	<p><b>Pre Outbox Script</b></p> <p>Specify a script that can run after service processing, but before the objects in the outbox are flushed to the CM Configuration Server.</p>
EXBEXIT	<p><b>Post Connection Script</b></p> <p>Specify a script to execute before radskman ends. If you are doing a customized reboot process, this is where you would specify it. This script must be in the agent computer's IDMSYS directory. The default location is <i>System Drive:\Program Files\Hewlett-Packard\CM\Agent</i>.</p> <p>Note: Client Operations Profiles must be enabled on the client for the EXBEXIT to be used. If Client Operations Profiles are not enabled, the EXBEXIT will be ignored.</p>
TIMEOUT	<p><b>Communications Timeout (0-3200)s</b></p> <p>Specify the timeout in seconds for the Server Access Profile (SAP). This will override the client timeout (ZMASTER.ZTIMEO) if it contains a valid numeric value. If the value is blank, then the client will use the existing timeout value on client.</p>

Attributes	Description
THROTYPE	<p><b>Throttle [RESERVED/ADAPTIVE/NONE/]</b></p> <p>This attribute applies to Windows only.</p> <p>Type of bandwidth throttling to use.</p> <ul style="list-style-type: none"> <li>• Set to <b>ADAPTIVE</b> to yield to other services that are using the network.</li> <li>• Set to <b>RESERVED</b> to allow for a specific reservation of the bandwidth. It is the maximum percentage of network bandwidth to use.</li> <li>• Set to <b>NONE</b> for no bandwidth throttling, and use the maximum available bandwidth. NONE is the default.</li> </ul>
BANDWIDTH	<p><b>Bandwidth Percentage (1-99)</b></p> <p>This attribute applies to Windows only.</p> <p>Specify the percentage of bandwidth to use between 1 and 99. If the value is blank or the variable does not exist, then all of the bandwidth will be used.</p>
RADTRAY	<p>Radtray Command Line Arguments</p> <p>Set command line arguments you want to use for the CM System Tray. Specify Y for the first argument to enable the CM System Tray, and N to disable it. If set to Y, you can then specify other parameters separated from the Y with a comma. Possible parameters are:</p> <p>/C                      Show the CM System Tray in console mode when it starts.</p> <p>/NOCANCEL          Hide the Cancel button.</p> <p>/NOPAUSE            Hide the Pause button.</p> <p>/D                      Add debug message to the log for troubleshooting.</p> <p>Example: Y, /C /NOPAUSE enables the CM System Tray in console mode and does not display the PAUSE button.</p>
USEDEFS	<p><b>Use Default SAP [Y/N]</b></p> <p>If a SAP cannot be found for the needed ROLE, specify Y to default to the CM Configuration Server set on the command line.</p>

Attributes	Description
DEFROLE	<p><b>Default SAP ROLE (A,O,S,M,R)</b></p> <p>Specify roles for the CM Configuration Server specified on the command line. If not specified, the ROLE is set to A (All), and the CM Configuration Server will be able to perform any ROLE.</p> <p>Note: USEDEFS must be set to Y to use DEFROLE.</p>
RAD2XUI	<p><b>Enable RADUI 2.x</b></p> <p>Specify Y to view the vintage Radia UI dialogs. Use this if you are not using System Tray or if you want a message to pop up on the screen in addition to the CM System Tray.</p>
RSTROPT	<p><b>Bandwidth Checkpoint Restart</b></p> <p>Use this attribute to determine when a file is eligible for checkpoint restart based on calculated network bandwidth. This will apply to <i>all</i> files to be downloaded in this agent connect. Specify eligibility in the format (Below Threshold limit, Network Threshold Value, Above Threshold). Suppose you set RSTROPT to 100KB, 86KB, 10MB. First the client calculates the network bandwidth. One of two scenarios will apply:</p> <p>If the network bandwidth is under 86KB, the file size is compared to 100KB. If the file size is over 100KB, checkpoint restart is enabled for that file.</p> <p>If the network bandwidth is over 86KB, the file size is compared to 10MB. If the file size is over 10MB, checkpoint restart is enabled for that file.</p>
DISKFREE	<p><b>Minimum Free Disk Space Threshold</b></p> <p>Specify a minimum of free disk space for CM to maintain. If a service is over the limit, it will not be installed.</p>
REMUNINS	<p><b>Allow Remote Notify Uninstall [Y/N]</b></p> <p>Specify Y to stop notifies from remote machines from uninstalling a service. This does not stop applications from being un-installed as part of a policy change if a normal agent connect is started from a remote notify. The remove notify string must contain the text req="Uninstall."</p>

Attributes	Description
DETPROXY	<p><b>Internet Proxy detection [Y/N]</b></p> <p>Set to N to skip running Internet proxy detection at the beginning of the agent connect.</p>
ACTMAINT	<p><b>Maintenance Activation [I/D/P]</b></p> <p>The CM maintenance module, upgrdmaint, processes all maintenance activities. Upgrdmaint can be launched by radskman immediately after the maintenance is staged or on an independent schedule.</p> <p>Note: The mnt parameter of radskman must be set to Y for maintenance to be processed.</p> <ul style="list-style-type: none"> <li>• Set ACTMAINT to I (Immediate) to download maintenance files and immediately activate them. CM Application Self-service Manager subscribers will receive a dialog box showing just an OK button that the CM Application Self-service Manager needs to be updated. CM Application Self-service Manager will close, install maintenance, and then restart.</li> <li>• Set to D to defer maintenance activation. Maintenance files are downloaded, but not activated. To activate maintenance, you can call radskman req="Self Maintenance" or call upgrdmaint directly using a timer or other method.</li> <li>• Set to P to prompt CM Application Self-service Manager users. A dialog box will display stating that maintenance is available, but the subscriber will be given the option to cancel. The files are downloaded, but not activated. The subscriber will be prompted again at the next check for maintenance by the CM Application Self-service Manager Interface. P is the same as I for Application Manager users.</li> </ul> <p>Default: I</p>

Attributes	Description
SENDRPT	<p><b>Send Reporting Object [I/D]</b></p> <p>Set to D to defer sending all reporting objects to CM Configuration Server at the end of agent connect. Usually, the reporting objects for each service, such as APPEVENT, CLISTATS, and ZSVCSTAT, are sent to the CM Configuration Server immediately (I) after they are created. This requires multiple disconnects and reconnects to the CM Configuration Server.</p> <p>Default: I</p>
NETTTL	<p><b>Network Time To Live (0-999)</b></p> <p>Set the number of hops to use for the ICMP speed checks used by the agent computer. If NETTTL does not exist or is blank, the value will be 3</p>

## Diagnosics (DIAGS)

Use this class to override default trace settings on the CM agent computer. In addition, you can set parameters for running the radstate program. Radstate is a diagnostic module designed to give an overview of the current state of the CM agent. The information in the radstate output is based on data retrieved from numerous CM agent objects. For additional information on radstate, see the HP OpenView web site,.



Instances of this class allow you to easily set tracing levels and set parameters for radstate for a particular user, machine, or group of users for troubleshooting purposes. These attributes were intentionally put into their own transient class for this purpose.

To do this, set the `_ALWAYS_` Diagnostics Class Connection in the `_BASE_INSTANCE_` of the LOCATION Class to `DIAGS.&(ZCONFIG.ZHDWCOMP)`. Then, create an instance in the DIAGS Class with the computer name of the CM agent computer that you want to set the tracing for. If the machine name does not exist in the DIAGS Class, then the settings in the `DEFAULT_DIAGS` Instance will be used.



**Table 22 Attributes of the DIAGS Class**

<b>Attribute</b>	<b>Description</b>
COPDNAME	<b>Friendly Name</b> Type the friendly name of the instance.
RADSTATE	<b>Command String for radstate</b> This will run radstate with the parameters specified in this attribute. The base instance of the DIAGS Class is set to VO, which will run radstate in verbose mode, building the ZRSTATE and ZRSTATES objects. See the documentation on radstate for more information. If no parameters are specified, radstate will not run. Radstate must exist in the IDMSYS directory. You only need to specify the parameters for radstate, not the radstate executable. Refer to the document on radstate for additional information.
ZTRACE	<b>Communication Tracing [Y/S/N]</b> <ul style="list-style-type: none"><li>• Specify N to turns off communication buffer tracing. Tracing is off by default.</li><li>• Specify S to provide summary communication buffer information to the client log. This includes number of records read and written and the type of records processed.</li><li>• Specify Y to provide full communication buffer information to the client log. All data transmitted and received will be echoed to the client log file</li></ul> Caution: Setting ZTRACE = Y may generate very large logs and severely impact performance of the client. Do not set this unless instructed to do so by Technical Support.
ZTRACEL	<b>Trace level (000/040/999)</b> Specify tracing level. If blank, use existing value. Caution: Setting ZTRACEL to a higher number may generate very large logs and severely impact performance of the client. Do not set this unless instructed to do so by Technical Support.

## Hardware Scan Options (RADHWCFG)

Use instances in the RADHWCFG Class in the CLIENT Domain to specify the type of hardware scans you want performed on the agent device. Hardware scan information is reported in the ZCONFIG object. To implement the hardware scan options, connect an instance of the RADHWCFG Class to an instance in the LOCATION Class.



Client Operations Profiles must be enabled to use the RADHWCFG Class. For testing, you may want to create a RADHWCFG object on the agent device with all the attributes in the RADHWCFG Class. Then, change the attributes to Y or N to see the result in the ZCONFIG object.

**Figure 11 Sample instances in the RADHWCFG Class**

Name	Instance Name	Type
Base Instance	_BASE_INSTANCE_	CLIENT.RADHWCFG In...
Default Hardware scan	DEFAULT	CLIENT.RADHWCFG In...
Hardware Configuratio...	NETWORK_ONLY	CLIENT.RADHWCFG In...
Sample Dynamic Scan	DYNAMIC_SCAN_1	CLIENT.RADHWCFG In...

We provide you with four sample instances in RADHWCFG.

- **Base Instance**  
Create copies of the base instance to create your own hardware scans.
- **Default Hardware Scan**  
This instance scans for the most commonly requested information.
- **Hardware Configuration (Network Only)**  
This instance scans for network information only.

- **Sample Dynamic Scan**

This instance provides samples using the Dynamic Scan variables.

The table below details each of the possible hardware scans. Examples of the ZCONFIG attributes that may be returned are provided.



Note that the attributes returned depend on what the hardware configuration is. For example, if the agent device has only one printer connected, then only one ZHDWPA0n attribute will be reported in ZCONFIG.

**Table 23 Attributes in the RADHWCFG Class**

<b>Attribute</b>	<b>Description</b>
NAME	<b>Friendly Name</b> The friendly name of the instance.
CPU	<b>CPU [Y/N]</b> Specify Y to scan for CPU information. ZCONFIG attributes: ZHDWBIOS, ZHDWCOMP, ZHDWCPU, ZHDWCPUN, ZHDWCPUS, ZHDWFPU, ZHDWXPAG, ZHWCPU01, ZHDFPU01
OS	<b>OS [Y/N]</b> Specify Y to scan for Operating System information. ZCONFIG attributes: REBOOTD, REBOOTT, WTSSRVR, ZHDWLANG, ZHDWOS, ZHDWOSDB, ZHDWOSOG, ZHDWOSOW, ZHDWSVCP
MEMORY	<b>Memory [Y/N]</b> Specify Y to scan for memory information. ZCONFIG attributes: ZHDWMEM, ZHDWMEMF
HDLOCAL	<b>Local Drives [Y/N]</b> Specify Y to scan for internal hard drives. ZCONFIG attributes: ZHDWCDDR, ZHDWD00, ZHDW00C, ZHDWD00F, ZHDWD00S, ZHDW00T, ZHDWD01, ZHDW01C, ZHDWDF_A, ZHDWDLST, ZHDWDNUM

<b>Attribute</b>	<b>Description</b>
HDREMOTE	<p><b>Remote Drives [Y/N]</b></p> <p>Specify Y to scan for external hard drives.</p> <p>ZCONFIG attributes: ZHDW00, ZHDWD00C, ZHDWD00F, ZHDW00S, ZHDW00T, ZHDWDLST, ZHDWDNUM</p>
NETWORK	<p><b>Network [Y/N]</b></p> <p>Specify Y to scan for network information.</p> <p>ZCONFIG attributes: GATEWY01, IPADDR01, LADAPT01, NETLOC01, SUBNET01, ZGATEWAY, ZHDWIPAD, ZHDWLANA, ZHDWNET1, ZHDWNNET, ZNETLOC, ZSUBNET</p>
PERIPHER	<p><b>Peripherals [Y/N]</b></p> <p>Specify Y to scan for peripherals such as keyboard and mouse.</p> <p>ZCONFIG attributes: ZHDWKYBD, ZHDWMOUS, ZHDWPPAR, ZHDWPSE, ZHDWVIDO, ZHDWVRES</p>
PRINTER	<p><b>Printers [Y/N]</b></p> <p>Specify Y to scan for printers.</p> <p>ZCONFIG attributes: ZHDWPA00, ZHDWPA01, ZHDWPPRN</p>
HAL_VER	<p><b>HAL Statistics [Y/N]</b></p> <p>Specify Y to scan for the HAL (Hardware Abstraction Layer) version.</p> <p>ZCONFIG attributes: HALCOMP, HALDATE, HALFNAME, HALFVER, HALINAME, HALLANG, HALPNAME, HALPVER, HALSIZE.</p>
APP_VER	<p><b>Application Version [Y/N]</b></p> <p>Specify Y to scan for versions of MSI (ZHDWVMSI) and IE (ZHDWVIE).</p>
WMISCAN	<p><b>Use WMI to collect data [Y/N]</b></p> <p>Specify Y to perform the scan using WMI (Windows Management Instrumentation).</p>

Attribute	Description
DSCAN00n	<b>Dynamic Scan 00n</b> Specify Y to use the dynamic scan variable. See Dynamic Scanning below.
ZCFGOBJ	<b>Name of Dynamic Scan Object</b> Specify the name of an object created to receive the results of any dynamic scans defined in the RADHWCFG class. The default is the ZCONFIG object. The new object will be created in the RADSETUP directory, and will be sent to the CM Configuration Server as part of the CM Agent connect.

## Dynamic Scanning

In addition to the built in scans, create your own scans using the Dynamic Scan (DSCAN00n) Instances. There are three types of dynamic scan instances WMI, Registry, and File. The format for a dynamic scan is: VariableName = Type(Parm1, Parm2, ...) where VariableName is the attribute in ZCONFIG where you want the information to be reported, Type is WMI, Registry or File, and Parmn is the query for the information. See the examples below.

### Example 1: WMI

A WMI scan would use the following format: VariableName = WMI(WQL Statement, Property, Default). To collect the Model of an agent device using WMI, create a DSCAN000 variable similar to:

```
HWMODEL=WMI("Select * from Win32_ComputerSystem"; Model; NONE)
```

This scan would create the variable ZCONFIG.HWMODEL, and populate it with the agent device's model.

### Example 2: Registry

To scan a registry key to determine where Adobe 5.0 is installed, create a DSCAN001 variable similar to:

```
ADOBEPATH=REG(HKLM\SOFTWARE\Adobe\Acrobat_Reader\5.0\InstallPath)
```

The result will be reported in ZCONFIG.ADOBEPATH.



When scanning for a default registry value, the path to the registry key must end with a backslash. For example, to read the default value of the Installer key type `ADOBEPATH=REG ("HKLM\SOFTWARE\Adobe\Acrobat Reader\6.0\Installer\")`

To read the Path value of the Installer key, type `ADOBEPATH=REG ("HKLM\SOFTWARE\Adobe\Acrobat Reader\6.0\Installer\Path")`

### Example 3: File

Dynamic File scanning can return size (SIZE), date stamp (DATE), file version (FVER), product version (PVER), and time (TIME) stamp of a specified file. You may request any combination of these properties. To scan for the file `C:\temp\test.exe`, create a DSCAN002 similar to:

```
TEST####=FILE(c:\Temp\Test.exe;SIZE,DATE,FVER,PVER,TIME)
```

The #### will be replaced by the corresponding file property name. One attribute will be created in the ZCONFIG object for each file property for which you scanned. In this example, five variables will be created based on the information collected on the `C:\temp\test.exe` file, `ZCONFIG.TESTSIZE`, `ZCONFIG.TESTDATE`, `ZCONFIG.TESTFVER`, `ZCONFIG.TESTPVER`, and `ZCONFIG.TESTTIME`.

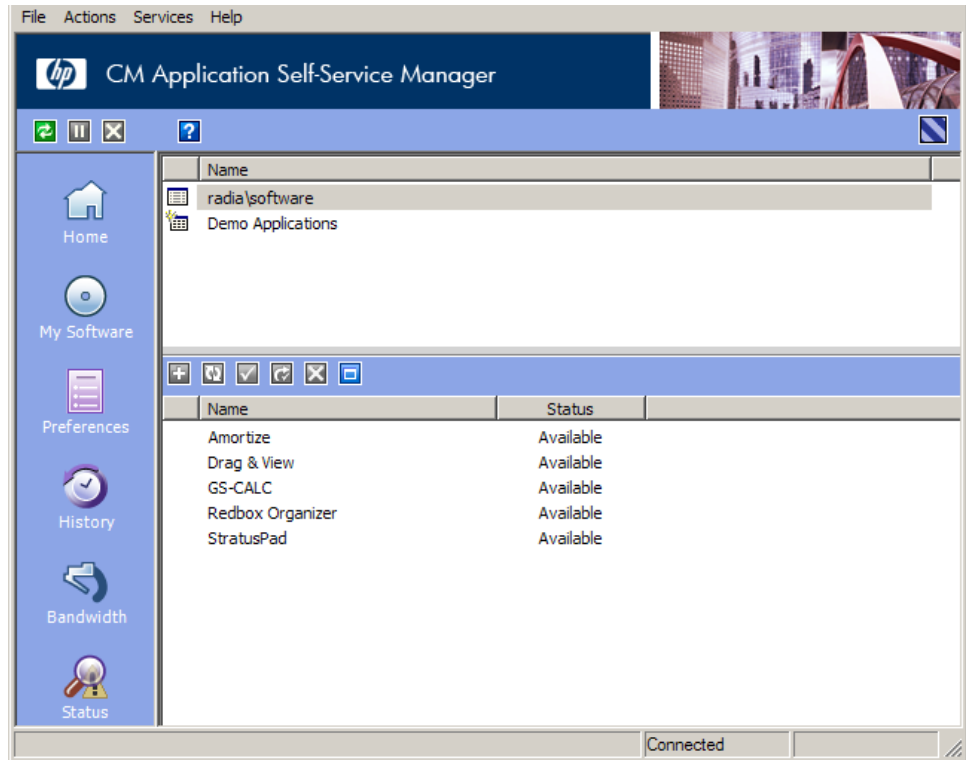
## Setting User Interface Properties (RADUICFG)

Use the RADUICFG Class to specify settings for the CM Application Self-service Manager User Interface. You must be licensed for the CM Application Self-service Manager agent. To implement the hardware scan options, connect an instance of the RADUICFG Class to an instance in the LOCATION Class.



You must be licensed for the CM Application Self-service Manager to use this class.

**Figure 12 CM Application Self-service Manager User Interface**



**Table 24 Attributes of the RADUICFG Class**

Attribute	Description
PNLOUTBR	<b>Display Outbar [Y/N]</b> Specify Y to display the Side Bar. This is located on the left side of the panel and provides navigation throughout the interface.
BNHOME	<b>Display Home Button [Y/N]</b> Specify Y to display the Home button on the Side Bar.
BNMYSOFT	<b>Display My Software [Y/N]</b> Specify Y to display the My Software button on the Side Bar.

<b>Attribute</b>	<b>Description</b>
BNPREFER	<b>Display Preferences [Y/N]</b> Specify Y to display the Preferences button on the Side Bar.
BNBNDWTH	<b>Display Bandwidth [Y/N]</b> Specify Y to display the Bandwidth button on the Side Bar.
BNHISTORY	<b>Display History [Y/N]</b> Specify Y to display the History button on the Side Bar.
BNSTATUS	<b>Display Status [Y/N]</b> Specify Y to display the Status button on the Side Bar.
SHWMENUS	<b>Show Menus [Y/N/U]</b> Specify U to allow the user to control appearance of the menu bar. Specify Y or N to turn the Menu bar on or off, and not allow the user to control its appearance.
SHWCATLG	<b>Show Catalog [Y/N/U]</b> Specify U to allow the user to control appearance of the list of catalogs. Specify Y or N to turn the catalog list on or off, and not allow the user to control its appearance.
STRTCHNG	<b>Startup param modifications [Y/N]</b> Specify Y to allow the user to modify the startup parameters in General Options in Preferences. Specify N to not allow the user to modify the startup parameters.
STRTFILE	<b>Startup parameter filename</b> Specify the filename for the startup parameters found in the General Options in Preferences.
STRUPMSG	<b>Warn if Startup file changes [Y/N]</b> Specify Y to warn the user if the startup parameter file has changed.
ASKOFFL	<b>Prompt for offline mode [Y/N/U]</b> Specify U to allow the user to control prompting for offline use of CM Application Self-service Manager. Specify Y or N to turn the prompt on or off, and not allow the user to control the prompt.



<b>Attribute</b>	<b>Description</b>
BWSTRTUP	<b>Show BW Control on Startup [A/Y/N]</b> Set to A to automatically display the bandwidth control when processing a service that has bandwidth settings. Set to Y to always display whether or not the service has bandwidth settings and N never to display.
COLORSET	<b>Colors [SYSTEM/DEFAULT/CUSTOM/USER]</b> Select <b>SYSTEM</b> to use the operating system colors, <b>DEFAULT</b> to use the CM default color scheme, <b>CUSTOM</b> to use COLORSEL, COLORBAK, COLORBTN and COLORWK. The user will not be able to change the colors if SYSTEM, DEFAULT, or CUSTOM is selected. Select <b>USER</b> to allow the user to control the colors.
COLORSEL	<b>Specify RGB or actual Color Select</b> Specify color for selection areas. Check the Microsoft web site for possible colors.
COLORBAK	<b>Specify RGB or actual Color Back</b> Specify color for the interface's background. Check the Microsoft web site for possible colors.
COLORBTN	<b>Specify RGB or actual Color Button</b> Specify the button colors. Check the Microsoft web site for possible colors.
COLORWK	<b>Specify RGB or actual Color WorkAr</b> Specify the color for the work area. Check the Microsoft Web site for possible colors.
STATSTRT	<b>Status window on startup [Y/N]</b> Set to Y to show the status window on start up.
CUSTIMG	<b>Custom Image File or RSM Banner</b> Specify a custom image file or banner. Acceptable file types are JPG/JPEG, GIF, TIF, and BMP. The size limitations in pixels are approximately height of 60 and a width of 250. If no location is specified for the file, the default is IDMLIB ( <i>System Drive:\Program Files\Hewlett-Packard\CM\Agent\Lib</i> ).

<b>Attribute</b>	<b>Description</b>
CUSTURL	<b>Custom URL on RSM Banner</b> Specify a URL that the agent computer's default Internet browser will open to if the subscriber clicks on the CUSTIMG.
CUSTTEXT	<b>Custom Hover Text on RSM Banner</b> Specify the text to display when the agent computer's mouse hovers over the CUSTIMG.
CUSTTITLE	<b>Custom Title on RSM Banner</b> Specify the text to display in the CM Application Self-service Manager title bar.
COLTYPE	<b>Columns [Forced/Required]</b> Set to <b>Forced</b> if you want only the columns specified in COLNAMES to appear. Set to <b>Required</b> if at least the columns specified in COLNAMES should appear. Name and Status are always displayed.
COLNAMES	<b>Name of Columns (CSV format)</b> Specify the columns you want displayed. Separate the columns with a comma.
EXPSITEM	<b>Expand Active Service item [Y/N/U]</b> Specify U to allow the user to control the expansion of the active Service List item. Specify Y or N to allow or not allow the user to expand the active item in the Service List.
EXPCITEM	<b>Expand Active Catalog Item [Y/N/U]</b> Specify U to allow the user to control the expansion of the active catalog item. Specify Y or N to allow or not allow the user to expand the active catalog item.
SHWGRID	<b>Show Grid Lines [Y/N/U]</b> Specify U to allow the user to control the display of grid lines. Specify Y or N to turn off or on the display of grid lines.

<b>Attribute</b>	<b>Description</b>
SHWADVOP	<b>Show Advanced Options [Y/N/U]</b> Specify U to allow the user to control the display of Advanced Options. Specify Y or N to turn off or on the display of Advanced Options such as Download Only, Reconfigure, and Undo buttons.
PROXYUSE	<b>Use Proxy Server [Y/N/U]</b> Specify U to allow the user to control the use of an Internet proxy. Specify Y or N to turn the use of an Internet proxy on or off, and not allow the user to control the use of an Internet proxy.
PROXYDSC	<b>Discover proxy address [Y/N/U]</b> Specify U to allow the user to control Internet proxy discovery. Specify Y or N proxy discovery on or off, and not allow the user to control its appearance.
PROXYADD	<b>Proxy Server Address</b> Specify the Internet proxy server's address.
PROXYPRT	<b>Proxy Server Port</b> Specify the Internet proxy server's port.
BTNINST	<b>Enable Install Button [Y/N]</b> Specify Y to enable the Install button.
BTNUPDT	<b>Enable Update Button [Y/N]</b> Specify Y to enable the Update button.
BTNDWLD	<b>Enable Download Button [Y/N]</b> Specify Y to enable the Download button.
BTNRECFG	<b>Enable Reconfigure Button [Y/N]</b> Specify Y to enable the Reconfigure button.
BTNUNDO	<b>Enable Undo Button [Y/N]</b> Specify Y to enable the Undo button.
BTNVRFY	<b>Enable Verify Button [Y/N]</b> Specify Y to enable the Verify button.
BTNREPR	<b>Enable Repair Button [Y/N]</b> Specify Y to enable the Repair button.

<b>Attribute</b>	<b>Description</b>
BTNDEL	<b>Enable Delete Button [Y/N]</b> Specify Y to enable the Delete button.
BTNCANCL	<b>Enable Cancel Button [Y/N]</b> Specify Y to enable the Cancel button.
BTNPAUSE	<b>Enable Pause Button [Y/N]</b> Specify Y to enable the Pause button.
SHWCOLEX	<b>Show Expand/Collapse Button [Y/N]</b> Specify Y to show the Install button .
SHWINFO	<b>Show/Hide Extended Info [Y/N]</b> Specify Y to show the Extended Info button when a service item is expanded.
SHWSCHEV	<b>Show/Hide Scheduled Event [Y/N]</b> Specify Y to show the Scheduled Event button when a service item is expanded. This button looks like a clock.
TMNUTXT0 <i>n</i>	<b>RadTray Menu Text n</b> Create a custom menu item for the CM System Tray. This menu will be available when you right click on the CM System Tray icon. To create a separator bar, type <b>SEPARATOR</b> as the menu text.
TCMDTXT0 <i>n</i>	<b>RadTray Menu Command n</b> Create a custom menu item for the CM System Tray. Specify a command to run when <b>TMNUTXTn</b> is clicked in the CM System Tray. The command must be available from the <code>IDMSYS</code> directory.
NAME	<b>Friendly Name</b> Friendly name of the instance.

## Client Operations Profiles Example

This section provides a simple example of how to configure a Client Operations Profiles. The driving force is to have your agent computers connect with the most appropriate CM Configuration Server. Usually,

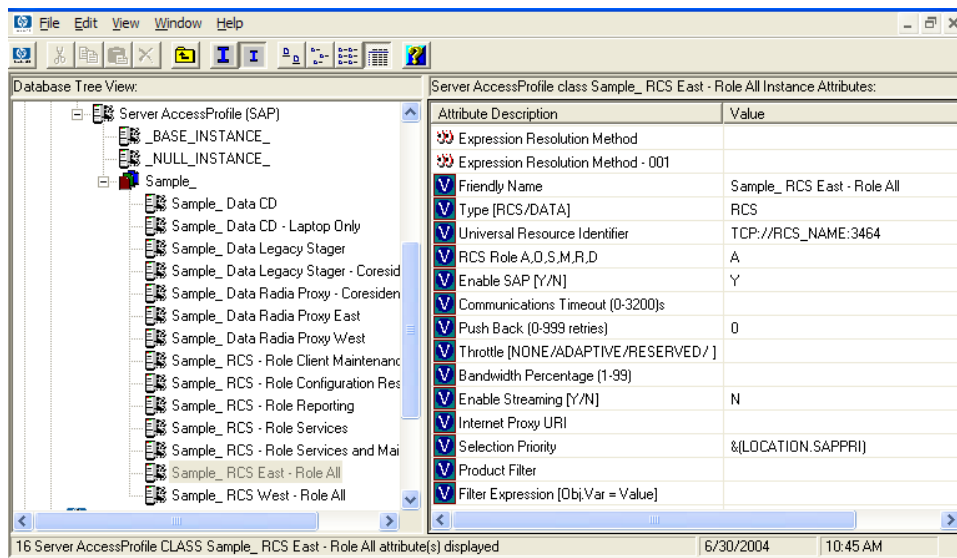
you will want to assign your agent computers to a CM Configuration Server based on network address.

## Scenario

Suppose you divide your enterprise into two regions, EAST and WEST. All agent computers in the EAST region are in the 192.111.111.0 network, and all agent computers in the WEST region are in the 193.111.111.0 network. In addition, suppose you have two CM Configuration Servers, one called RCS\_EAST as the primary CM server for the EAST region, and one called RCS\_WEST as the primary CM server for the WEST region.

To configure the sample scenario

- 1 Build two Server Access Profile (SAP) instances, one for RCS\_EAST and one for RCS\_WEST. The figure below shows a SAMPLE\_RCS\_EAST.



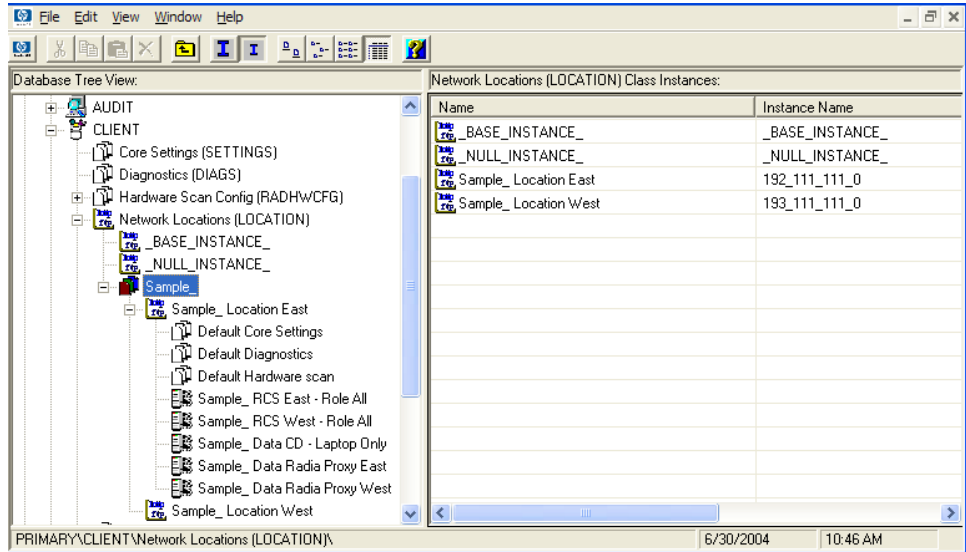
In the Server Access Profile (SAP) Class use the TYPE attribute to specify a server as type DATA or RCS. In this example, we will be configuring only CM Configuration Servers. Therefore, all servers will have SAP.TYPE set to RCS.

For each Server Access Profile instance, you must also identify a role. Again, for simplicity, we will set SAP.ROLE to A for all. This means that the CM Configuration Server can provide client operations profiles, service resolution, maintenance, data, and reporting.

At a minimum, you will need to specify the Universal Resource Identifier (URI) attribute. Customize other variables as needed.

- 2 Build two location instances, one for the EAST region, and one for the WEST region.

Create a location instance called 192\_111\_111\_0 with a friendly name of Sample\_Location East, and a location instance called 193\_111\_111\_0 with a friendly name of Sample\_Location West. See the figure below for an example.



- 3 Connect the LOCATION instance to the appropriate Server Access Profile (SAP) instance.
  - In the LOCATION.Sample\_Location East instance define a connection to the SAP.Sample\_RCS EAST.
  - In the LOCATION.Sample\_Location West instance define a connection to the SAP.Sample\_RCS WEST.
- 4 Now, consider what you want to happen in the following cases:
  - Suppose you are a client in the EAST Region and the RCS\_EAST is unavailable. Your options are:
    - Abort
    - or
    - Go to RCS\_WEST as a second choice.

- Suppose you are an agent in the EAST region and the RCS\_EAST is busy. In other words, the task limit defined in your CM Configuration Server settings file has been reached. Your options are:
  - Continue to retry the RCS\_EAST until a connection is available  
or
  - Go to RCS\_WEST as a second choice.

Once you understand the concepts involved, and feel comfortable with this process, you can begin to add other components to the Client Operations Profile. After you finish with TYPE=RCS, configure your servers with TYPE=DATA. In addition, you can identify particular servers of TYPE=RCS to use different ROLES.

## Summary

- Use Client Operations Profiles to provide redundancy in your environment.
- Select which servers will perform which roles.
- You can assign agent computers to specific servers based on network location or any other criteria.
- You must enable Client Operations Profiles in the CM Configuration Server DB and on the agent computer.



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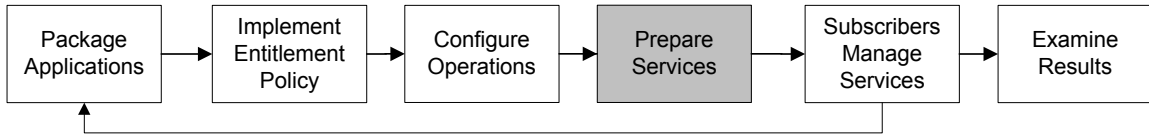
# 7 Preparing Services

At the end of this chapter, you will:

- Know how to install services with machine and user components and under the system account.
- Know how to restart the agent computer.
- Be aware of service options.

This guide covers the *suggested* implementation for the CM Application Self-service Manager. Although you will tailor this strategy to meet your organization's needs, it is recommended that you review this guide for a comprehensive understanding of the CM Application Self-service Manager. This chapter covers preparing services.

**Figure 13** Tasks completed in this guide



## Configuring Applications in the Machine/User Context

Your enterprise might require that applications be configured to accommodate multiple users, or that one computer always have the same applications available without regard to the current user. A service might be considered multi-context if it has components to be installed in the machine context and in the user context.



This is a feature of only the CM Application Manager agents.

In order to complete the installation of a multi-context service, the agent computer will need to connect to the CM Configuration Server twice; once to install the machine components, and once to install the user components. The machine components are installed first. If the machine portion does not complete successfully, installation of the user component will not take place. The machine portion can be invoked through notify or timers. The user portion should be embedded in a logon script, desktop shortcut, or batch file that is local to the user.

Complete the following steps to configure your service for machine or user installations:

- 1 Use CM Admin Publisher to specify whether a package component is to be installed in the User or Machine context, or use CM Admin CSDB Editor to specify a component's context.

- 2 Use CM Admin CSDB Editor to configure your service to deploy in either the system or user context.
- 3 Use CM Admin CSDB Editor to set the deployment methods for the service.

## Setting the Context of Components (ZCONTEXT)

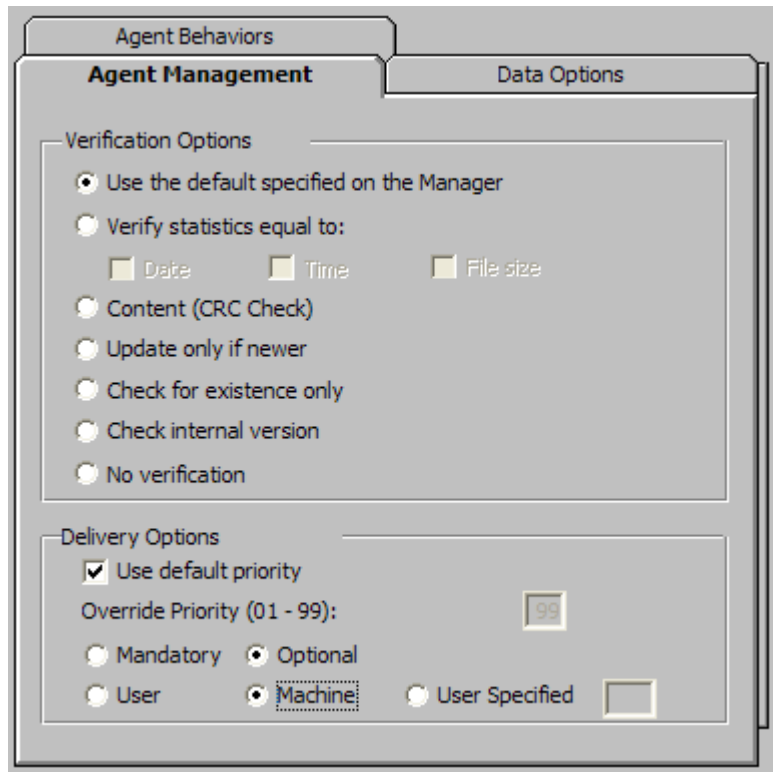
Use the CM Admin Publisher to select machine and user components separately. Set the context of a component using either the CM Admin Publisher during the publishing process, or using the CM Admin CSDB Editor after the publishing process.



To take advantage of the Machine/User context, previously packaged applications must be repackaged.

### To set the context of a component in CM Admin Publisher

- 1 Right-click the files or directories and select **Set Properties**.  
The Instance Properties dialog box opens.
- 2 In the Agent Management tab, select the appropriate context for the component as shown in the next figure below and described in [Table 25](#) on page 229.



If you have already completed the publishing process, use the CM Admin CSDB Editor to set the ZCONTEXT attribute in the component's instance.

To set the context in CM Admin CSDB Editor

- 1 Go to **Start** → **Programs** → **HP OVC Administrator** → **CM Admin CSDB Editor**.

The CM Admin CSDB Editor Security Information dialog box opens.



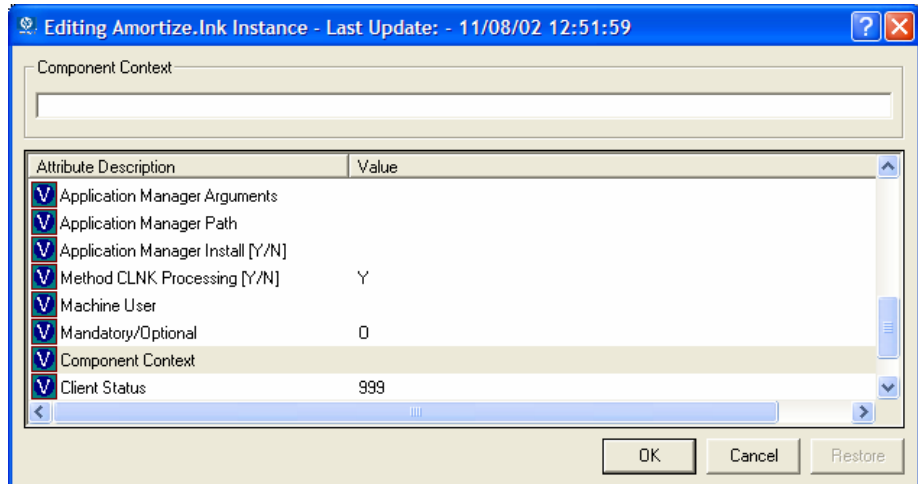
The factory set user ID is RAD\_MAST. No password is necessary. This might have changed during installation. You can also change this by selecting the **Change Password** check box and typing the new password in the New Password and Verify New Password text boxes.

- 2 If necessary, type a User ID and Password, and then click **OK**.

The CM Admin CSDB Editor window opens.

- 3 Double-click **PRIMARY**.

- 4 Double-click **SOFTWARE**.
- 5 Double-click **Application Packages (PACKAGE)**.
- 6 Double-click the component's class.
- 7 Double-click the component.
- 8 Double-click **ZCONTEXT**.



- 9 Type the appropriate value based on Table 25 below.

**Table 25 Component Context (ZCONTEXT) options**

Setting	Explanation
blank	Leave ZCONTEXT blank if the component is independent of context. This component is installed during both machine and user connects.
U	Type U if you want to indicate that this component will be deployed only to the subscriber logged on when the application is initially deployed.
M	Type M to indicate that the file should be deployed to all users of the computer.
User Specified	<i>This option is for future use.</i>

- 10 Click **OK** to complete the changes.

- 11 Click **Yes** to confirm the changes and return to the CM Admin CSDB Editor.



As a rule, the component will be processed if its ZCONTEXT attribute matches the value of the context parameter in the radskman command line or if the component's ZCONTEXT attribute is blank.

Now that you have set the component's context, you must specify that the ZSERVICE instance for the application has both machine and user components.

## Setting the Service Mode (ZSVCMODE)

The ZSVCMODE attribute in the ZSERVICE class is used to determine if the machine/user context is relevant to the package's deployment. If you need to create the ZSVCMODE attribute, add it to the class template for the ZSERVICE class. Create it as a variable of length 3. Accept the other default properties. The possible values are M, U, MU, blank, and EMU.



We recommend that you back up the CM Configuration Server Database prior to making class template changes.

**Table 26 Values for ZSVCMODE in the ZSERVICE Class**

Value	Explanation
Blank	Use this when you want the components to install whether the client is logged on in the machine or user context. The application will only be installed using the available context.
EMU	Enhanced Machine/User service: If the CM agent connect is being made in the user context, but the machine side of the application has not yet been installed, this will force the machine connect. After the machine connect completes successfully, the user connect is initiated to install the user components. Use this for optional applications that the user controls through the CM Application Self-service Manager.

Value	Explanation
EMU:AD=N	<p>Enhanced Machine/User service:</p> <p>If the CM agent connect is being made in the user context, but the machine side of the application has not yet been installed, this will force the machine connect. After the machine connect completes, the user connect is initiated to install the user components.</p> <p>Use this for optional applications on a shared computer that the user controls through the CM Application Self-service Manager. The addition of AD=N prevents a user from being able to remove the machine components of the application. Other users of the agent computer may still need the machine components of the application. The possible application events are:</p> <p>AI = application install  AD = application delete  AU = application update  AR = application repair  VA = version activation  VD = version deactivation</p> <p>The default for each event is Y. Separate multiple events with a comma.</p>
M	<p>Machine service only</p> <p>Set ZSVCMODE to M if the service has only machine components. This service will be ignored if context is set to u on the radskman command line.</p>
MU	<p>Machine/User service</p> <p>Set ZSVCMODE to MU if the service has both machine and user components. The user connect will verify that the machine components have been installed before installing the user components. The user components will not be installed if the machine components are not present.</p>

To set ZSVCMODE in the ZSERVICE

- 1 Go to **Start** → **Programs** → **HP OVCM Administrator** → **CM Admin CSDB Editor**.

The CM Configuration Server Database Editor Security Information dialog box opens.



The factory set user ID is RAD\_MAST. No password is necessary. This might have changed during installation. You can also change this by selecting the **Change Password** check box and typing the new password in the New Password and Verify New Password text boxes.

- 2 If necessary, type a User ID and Password, and then click **OK**.
- 3 The CM Configuration Server Database Editor window opens.
- 4 Double-click **PRIMARY**.
- 5 Double-click **SOFTWARE**.
- 6 Double-click **Application (ZSERVICE)**.
- 7 Double-click the appropriate service.
- 8 Double-click **ZSVCMODE** in the list view.
- 9 Type the appropriate values based on the values show in Table 26 on page 230.
- 10 Click **OK** to complete the changes.
- 11 Click **Yes** to confirm the changes and return to the CM Configuration Server Database Editor.

## Enhanced Machine User Services for CM Application Self-service Manager

When an application has machine and user components, the CM Application Self-service Manager agent needs elevated privileges on the client device to install machine components properly, and the user components need a user logged on to access the user's settings. A machine component might be a file or registry key while a user component might be a desktop shortcut. If context is set to U the subscriber will not be able to install the machine side of the application, and the user connect will fail. By setting ZSVCMODE to EMU, when the subscriber selects the application to install, the client will check to see if the machine components are already installed. If they are not, CM Application Self-service Manager will install the machine components *for that service only*, and, then, install the user components. In other words, two separate CM agent connects will run, one in machine context and one in the user context. Set the CONTEXT tag to U in the `args.xml` file to enforce EMU behaviors.





ZSVCMODE must be changed to 3 bytes and EMU must be one of the choices.

If ZSERVICE.ZSVCMODE is set to EMU, when the CM Application Self-service Manager client encounters a service that is marked as EMU it first checks to see if the machine catalog exists, and if the requested service exists in the machine catalog:

- If the service exists, and is marked installed in the machine catalog, the service is installed for the user.
- If the service is not installed on the machine side, but the catalogs are synchronized, then the client will first install the machine side of the service and then install the user piece of the service.
- If the machine catalog is missing (because a machine connect never ran), then the client gets the machine catalog, and installs the service on the machine side. Then, if the service was successfully installed on the machine side, the user side of the service will be installed.

## Deploying a Machine/User Service

The client will need to connect to the CM Configuration Server twice to complete the installation of services that are marked with ZSVCMODE set to MU. The first connect will be in the machine context. In the radskman command line, add a parameter of context=M. This will set the startdir=SYSTEM by default. Do this by using either a Timer or a Notify command.

The second connection will install the user components. Do this in a logon script, batch file, or desktop icon since the user needs to be logged on. Use the radskman command line with the context=U parameter added. If ZSVCMODE is MU, the user components will *only* be installed if the machine connect has finished successfully.

## Installing Services with the System Account (ZSYSACCT)

For computers running Windows NT, Windows 2000 or Windows XP, you can specify whether to install the service under the system account or the user's account. To do this, modify the ZSYSACCT attribute in the Application

(ZSERVICE) instance. This attribute controls whether to use the system account for installation on a per service basis.

**Table 27 ZSERVICE Attribute: ZSYSACCT**

Attribute	Description
ZSYSACCT	<ul style="list-style-type: none"><li>• Set to Y to install the application under the system rights. The type of connect is ignored.</li><li>• Set to N or blank to install the application under the user who is currently logged on. The type of connect is ignored.</li><li>• Set to M to install the application under the System Account if the current connect is in the machine context (context=m).</li><li>• Set to U to install the application under the System Account if the current connect is in the user context (context=u).</li></ul> <p>Default: N</p>

To edit the ZSYSACCT attribute in the Application instance

- 1 Go to **Start** → **Programs** → **HP OVCM Administrator** → **CM Admin CSDB Editor**.

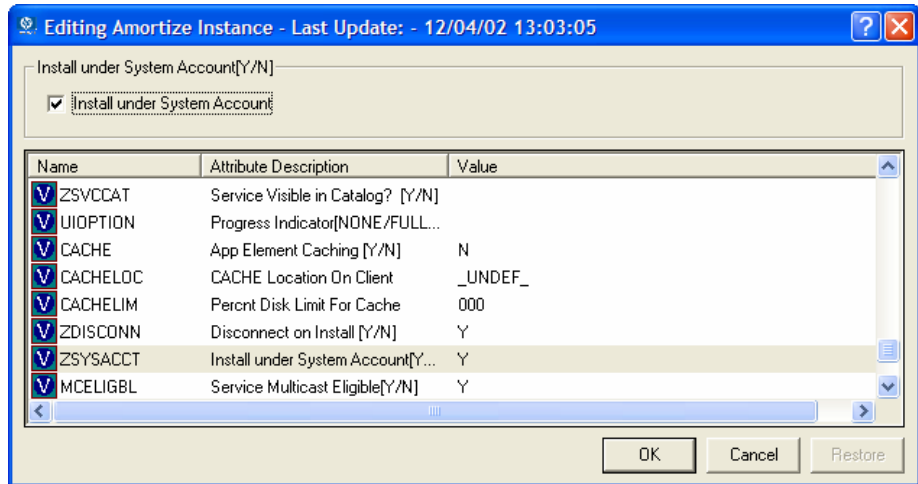
The CM Configuration Server Database Editor Security Information dialog box opens.



The factory set user ID is RAD\_MAST. No password is necessary. This might have changed during installation. You can also change this by selecting the **Change Password** check box and typing the new password in the New Password and Verify New Password text boxes.

- 2 If necessary, enter a User ID and Password, and then click **OK**.  
The CM Configuration Server Database Editor window opens.
- 3 Double-click **PRIMARY**.
- 4 Double-click **SOFTWARE**.
- 5 Double-click **Application (ZSERVICE)**.
- 6 Double-click the appropriate application instance, such as Amortize. The attributes appear in the list view on the right side.
- 7 Double-click **ZSYSACCT**.

The Editing Instance dialog box opens.



- 8 Select **Install under System Account** to use system rights, or clear the check box to install under the rights of the user who is logged on.
- 9 Click **OK** to close the Editing Instance dialog box.
- 10 Click **Yes** to confirm your changes.

## Local Catalog Processing

Local catalog processing reduces the network bandwidth and the number of connects required to the CM Configuration Server to manage applications. Use a Timer or a Notify command to make the machine connect with context = m on the radskman command line.

▶ The ZSVCMODE attribute of the application must be M or MU to use this feature.

If you have only one user for a computer or multiple users on one computer with the same entitlements, local catalog processing allows you to make one connection to the CM Configuration Server for both the machine and user components of a service. During the machine connect, the required configuration information will be downloaded to the agent computer, machine and user components of the services will be downloaded in a compressed format, and the machine components will be installed. For the user connect, set cat = m, local = y, and context = u on the radskman command line. When the user connect is made, the user's services will be resolved based on the

machine's service list, and the already downloaded resources will be added, modified, or deleted as needed.

If a agent computer has two or more users with distinct entitlements, then you will need to create policies for each machine so that all components for all of the services for all users of that agent computer will be downloaded. Contact Professional Services for implementation.

## Restarting the Agent computer

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

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



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

First, specify the application event that needs the reboot. [Table 28](#) below lists the codes for all possible application events. Set the application event code to a reboot type and any reboot modifier that you need to use. The sections below describe each type of reboot and all reboot modifiers.

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



The parameters for the reboot attribute are not case-sensitive.

**Table 28 Reboot Events and Codes**

Application Events	Code	Description
Install	AI	Use AI to specify a reboot behavior for application installations. The default is no reboot.

<b>Application Events</b>	<b>Code</b>	<b>Description</b>
Deinstall	AD	Use AD to specify a reboot behavior for application removals. The default is no reboot.
Locked File	AL	Use AL to specify a reboot behavior when a locked file is encountered. The default behavior when a locked file is encountered is to perform a Hard reboot with just an OK button (HY).
Update	AU	Use AU to specify a reboot behavior for application updates. The default is no reboot.
Repair	AR	Use AR to specify a reboot behavior for application repairs. The default is no reboot.
Version Activation	VA	Use VA to specify a reboot behavior for application version activations. The default is no reboot.

## Reboot Types

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

- Hard Reboot (H)**  
 All applications are shut down regardless of whether there are open, unsaved files or not. The subscriber will not be prompted to save open, modified files.
- Soft Reboot (S)**  
 Users are prompted to save their data if applications have open, unsaved files. If applications have unsaved data, the reboot will wait for the user to respond to the application's request for the user to save his data.
- No Reboot (N) (default reboot type)**  
 The computer will not restart after completing the specified application event. This is the default reboot type for all application events except a Locked File Event (AL). If you specify AL=N, then the agent computer will not perform a hard reboot with an OK and Cancel button when a locked file is encountered. *If no restart type is specified for an application event, no restart will occur.*

## Reboot Modifier: Type of Warning Message

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

- **Quiet (Q)**  
No reboot panel will be displayed.
- **OK Button (A)**  
A warning message will display with an OK button only. Clicking the **OK** button will initiate the reboot. The user will not be able to cancel the restart.
- **OK and Cancel Button (Y)**  
Clicking the **OK** button will initiate reboot. If the subscriber clicks **Cancel**, the reboot will be aborted.



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

## Reboot Modifier: Machine and User Options

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

- **Reboot on Machine connect (blank)**  
When a machine/user reboot modifier is not supplied, the default behavior will be to reboot only on a machine connect where `context=m` in `radskman`, or if the context parameter is not specified. This default behavior should satisfy the majority of reboot requirements.
- **Reboot on User connect only (U)**  
The reboot will be honored on a user connect only where `context=u` in `radskman` or if the context parameter is not specified. The reboot will NOT occur where `context=m` in `radskman`.

- **Reboot on both Machine and User connect (MU)**  
Reboot will only occur when both the machine and user components of the application are installed.

## Reboot Modifier: Immediate Restart

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

## Specifying Multiple Reboot Events

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

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

## Application (ZSERVICE) Attributes

This section describes the attributes that you will see if you open an Application (ZSERVICE) instance in the CM Configuration Server Database Editor. Many of the values for these attributes are set when using the CM Administrator, such as the CM Administrator Packager or the New Application Wizard in the CM Configuration Server Database Editor. You can also use the CM Configuration Server Database Editor to modify the values of these attributes in the SOFTWARE.ZSERVICE class.

You may notice that some attributes do not have values, or their values are not displayed in the CM Configuration Server Database Editor. The CM

client uses these attributes. For example, an attribute such as INSTDATE is used to record the date the service was installed on the agent computer. The value for this attribute is stored in the PROFILE File for the agent computer in the CM Configuration Server Database.

**Table 29 Modifiable SOFTWARE.ZSERVICE Attributes**

<b>Attribute</b>	<b>Description</b>
ZSTOPnnn	<p><b>Expression Resolution Method</b></p> <p>Stops resolution if the expression evaluates to TRUE.</p> <p>Example: WORDPOS(EDMGETV(ZMASTER,ZOS),'WINXP WIN2K NT')=0</p> <p>This example expression will stop resolution on the instance if the agent computer's operating system if the operating system is <i>not</i> Windows XP, Windows 2000, or Windows NT. In other words, the application will not be installed unless the agent computer is running Windows XP, Windows 2000, or Windows NT.</p>
ZSVCNAME	<p><b>Service Name/Description</b></p> <p>Name of the service used for display in the CM Application Self-service Manager user interface. Value is set initially in the Short Description field in the New Application Wizard.</p>
ZSVCTTYP	<p><b>Application Target Type [A/S]</b></p> <p>Indicates which CM client this application was packaged for, CM Application Manager or CM Application Self-service Manager. Value is set initially in the New Application Wizard. Possible values are <b>A</b> for CM Application Manager and <b>S</b> for CM Application Self-service Manager.</p>
ZSVCMO	<p><b>Mandatory or Optional Service [M/O]</b></p> <p>Designates a service as mandatory or optional. This value is set initially based on the setting for the application target type (ZSVCTTYP) in the New Application Wizard. Usually, when using the CM Application Manager, services are marked as mandatory, M. When using the CM Application Self-service Manager, services are usually marked as optional, O.</p> <p>If you are using CM Application Manager and CM Application Self-service Manager, you could also specify mandatory and then optional, MO, or optional then mandatory, OM. The first character indicates how the application should be handled before installation. The second character indicates how the application should be handled after installation. For example, suppose you want a CM Application Self-service Manager subscriber to have the option of installing the</p>



<b>Attribute</b>	<b>Description</b>
	<p>application, but, once installed, want the maintenance or removal of the application to be mandatory, set ZSVCMO to be OM.</p> <p>Note: If you may need to edit the ZSERVICE class template, to allow you to set ZSVCMO to OM. See the CM Configuration Server Database Editor Guide for more information on editing a class template. To process mandatory applications using CM Application Self-service Manager, add "enterprisemanagement=auto" to the <code>args.xml</code> file.</p>
ZSVCPRI	<p><b>Service Create Ordering [01-99]</b></p> <p>Set the priority level for the service. Services are created based their priority. The lower the number the higher the service's priority. A service with ZSVCPRI set to 01 would have the highest priority while a service set to 99 would have the lowest priority.</p>
_ALWAYS_	<p><b>Contains</b></p> <p>Any method that you specify for this attribute is unconditionally executed when this instance is resolved.</p> <p><b>Example:</b> A valid method name such as ZSYSTEM.ZMETHOD.PUT HIST_ZERROR.</p>
ZCREATE	<p><b>Service Installation Method</b></p> <p>Method that runs when the service is installed. For example, a command to start a service that was stopped to install files.</p>
ZINIT	<p><b>Service Initialization Method</b></p> <p>Method that runs when the service is initialized. For example, a command to stop a service before installing files that the service might lock.</p>
ZDELETE	<p><b>Service Delete Method</b></p> <p>Method to run when the service is deleted.</p>
ZUPDATE	<p><b>Service Update Method</b></p> <p>Method to run when the service is updated.</p>
ZVERIFY	<p><b>Service Verify Method</b></p> <p>Method to run when the service is verified.</p>
ZREPAIR	<p><b>Service Repair Method</b></p> <p>Method to run when the service is repaired.</p>
PUBDATE	<p><b>Published Date of Service</b></p> <p><i>Reserved for future use.</i></p>

<b>Attribute</b>	<b>Description</b>
UPDDDATE	<b>Upgrade Date (Programmatic)</b> <i>Reserved for future use.</i>
AUTHOR	<b>Author Name</b> Name of the author of the service that appears in the extended information area in the CM Application Self-service Manager user interface. Value is set initially in the Author field in the New Application Wizard.
DESCRIPT	<b>Application Description</b> Description of the service that appears in the properties for the service in the Service List. Value is set initially in the Long Description field in the New Application Wizard.
VENDOR	<b>Vendor Name</b> Name of the vendor of the service that appears in the CM Application Self-service Manager user interface. Value is set initially in the Vendor field in the New Application Wizard.
URL	<b>WEB URL Name</b> Address of a Web page where the subscriber can find additional information about the service. This appears in the properties for the service in the CM Application Self-service Manager user interface. Value is set initially in the Web URL field in the New Application Wizard
CATGROUP	<b>Catalog Group Name</b> Use CATGROUP to group a set of applications into a group. You can display applications based on their group in the CM Application Self-service Manager user interface.
PRICE	<b>Price</b> Type in the price of an application to be displayed to subscribers in the extended information area in the CM Application Self-service Manager user interface.
SCHEDOK	<b>Update Schedule Locally [Y/N]</b> <i>For CM Application Self-service Manager only.</i> <ul style="list-style-type: none"> <li>• Specify Y to allow the subscriber to change the update schedule locally.</li> <li>• Specify N to maintain control on the CM Configuration Server.</li> </ul>

<b>Attribute</b>	<b>Description</b>
VERSION	<p><b>Version Description</b></p> <p>Version of the software. This appears in the properties for the service in CM Application Self-service Manager user interface. The value is set initially in the Version field in the New Application Wizard.</p>
NAME	<p><b>Friendly Name</b></p> <p>This name appears in the properties for the service in the CM Application Self-service Manager user interface. The value is set initially in the Short Description field in the New Application Wizard.</p>
OWNER	<p><b>Application Contact</b></p> <p><i>Reserved for future use.</i></p>
RUNDLG	<p><b>Dialog Processing [Y/N]</b></p> <p>Specifies whether to enable processing of instances in the DIALOG class during the installation of the service. Specify Y for Yes and N = No. Default: N</p>
REBOOT	<p><b>Install/Update/Delete/Version Chang</b></p> <p>Used to restart the agent computer based on application event. Specify your action by equating an application event to a reboot type, panel, or connect.</p> <p>Event to restart on:</p> <p>AI = Install AD = Deinstall AU = Update AR = Repair AV = Verify</p> <p>Type of reboot:</p> <p>S = Soft Boot (Default of type Y panel.) H = Hard Boot (Default of type A panel.) N = None</p> <p>Type of panel:</p> <p>Q = No panel. A = OK button only. Y = OK and Cancel button.</p> <p>Type of connect:</p> <p>None specified: Reboot on Machine connect (context = m).</p>

<b>Attribute</b>	<b>Description</b>
	<p>U =     reboot on user connect only (context = u).</p> <p>MU =    reboot when both machine and user parts of the service have been installed.</p> <p>Example: AI=S performs a soft boot on application installation</p>
<b>EVENTS</b>	<p><b>Events to Report</b></p> <p>Indicates which events to report on. Specify your event by equating an application event to an event type.</p> <p>AI:     Application Install</p> <p>AD:     Application Deinstall</p> <p>AU:     Application Update</p> <p>AR:     Application Repair</p> <p>AV:     Application Verify</p> <p>VA:     Version Activation</p> <p>VD:     Version Deactivation</p> <p>What to report on:</p> <p>S:     Success</p> <p>F:     Failure</p> <p>B:     Both Success and Failure</p> <p>N:     None</p> <p>Default: AI=B,AD=B,AU=F,AR=N,VA=F,VD=F</p>
<b>ERTYPE</b>	<p><b>Event Reporting Method [O/E/X]</b></p> <p>Set this attribute to send an APPEVENT object. Currently, this supports object (O) format only.</p> <p>Default: O</p>
<b>ADAPTIVE</b>	<p><b>Auto Adaptability [Y/N]</b></p> <p>Indicates whether the installed package is dependent on client settings that must be monitored periodically, such as plug and play devices. If the settings change, the client must reconnect to the CM Configuration Server to get new or different components. Specify Y for Yes and N for No.</p>

<b>Attribute</b>	<b>Description</b>
LREPAIR	<p><b>Local Repair [Y/N]</b></p> <p>Enables local repair of broken applications. If an application is broken because of missing files, the files (stored locally) can be used to repair the application. Specify Y for Yes and N for No.</p> <p>Default: N</p>
REMOVAL	<p><b>Un-Managed Behavior [A/D/U]</b></p> <p>Controls how the application is managed when a service is removed.</p> <ul style="list-style-type: none"> <li>• Set REMOVAL to A (Abandon) to delete the service's objects on the client, but leave the application components. The service will no longer be managed by CM.</li> <li>• Set REMOVAL to D (Delete) to delete the service's objects and components. The service will still be managed by CM.</li> <li>• Set REMOVAL to U (Unmanage) to stop management of the service by CM. Neither the objects nor the components are deleted. This applies only to optional applications (ZVSCMO set to O) that are removed based on entitlement policy.</li> </ul> <p>If a subscriber removes an optional application, the service's objects are always removed no matter what REMOVAL is set to.</p> <p>Default: D</p>
RECONFIG	<p><b>Reconfiguration Enabled [Y/N]</b></p> <p>Indicates whether an application can be relocated after it has been installed. Specify Y for Yes and N for No. For example, this allows you to move an application that was installed on the C drive to the D drive without removing and re-installing the application.</p>
ZSVCCAT	<p><b>Service Visible in Catalog [Y/N]</b></p> <p>Specifies whether the service is visible in the CM Application Self-service Manager Catalog. For optional applications, the default is Y. For mandatory applications, the default is N. Specify Y for Yes and N for No if you want to override these defaults.</p>
UIOPTION	<p><b>Progress Indicator [NONE/FULL/INFO]</b></p> <p>Controls whether the service status window appears. Possible values are:</p> <p>NONE = No interface appears.</p> <p>FULL = Interface appears and Cancel button is available.</p> <p>INFO = Interface appears with no option to cancel.</p>

<b>Attribute</b>	<b>Description</b>
CACHE	<p><b>App Element Caching [Y/N]</b>            Enables element caching. Specify Y for Yes and N for No.            Default: N</p>
CACHELOC	<p><b>CACHE Location On Client</b>  <i>For Windows Installer applications only.</i>            Location of the folder on the agent computer that is used to cache the compressed application files needed for the product.            CM support for Windows Installer tags the PRODGUID value to this value to create the folder. For example,            If CACHELOC=C:\progra~1\Hewlett-Packard\CM\Agent and PRODGUID = 12345_XXXX, then the cache folder would be:            c:\progra~1\Hewlett-Packard\CM\Agent\12345_XXXX\cache.            Note: The folder \cache is automatically appended to PRODGUID. If you are not deploying a Windows Installer-enabled application, the files will be cached in IDMDATA.            Default: _UNDEF_</p>
CACHELIM	<p><b>Percent Disk Limit For Cache</b>            For Windows Installer applications only.            Cache limit, which is defined as the percentage of used drive space. Type a number between 000 and 100. If the percentage of used space is greater than the cache limit, then all of the cached files for the product are removed and the cache folder is deleted.            This is checked after every file is cached on the disk.</p>
ZDISCONN	<p><b>Disconnect on Install [Y/N]</b>            Allows the client to disconnect from the CM Configuration Server if there is an open session with the CM Configuration Server.</p> <ul style="list-style-type: none"> <li>• Specify Y to disconnect the client from the CM Configuration Server.</li> <li>• Specify N to keep the CM agent connected to the client from the CM Configuration Server.</li> </ul> <p>Default: N</p>

<b>Attribute</b>	<b>Description</b>
ZSYSACCT	<p><b>Install under System Account [Y/N]</b></p> <p>Specifies whether to install the service under the system account or the user's account.</p> <ul style="list-style-type: none"> <li>• Specify Y to install the application using the system rights.</li> <li>• Specify N to install the application using the rights of the logged on user.</li> </ul> <p>Default: N</p>
MCELIGBL	<p><b>Service Multicast Eligible [Y/N]</b></p> <p>Indicates if the application is eligible for multi-casting. Specify Y for Yes and N for No.</p> <p>Default: Y</p>
RSTRSIZE	<p><b>Download restart threshold (bytes)</b></p> <p>Use the RSTRSIZE attribute in the appropriate ZSERVICE class instance to control which files are enabled for check point restart based on the amount of data being downloaded (in bytes).</p>
ZSVCMODE	<p><b>Application Context [M/U/MU/EMU]</b></p> <ul style="list-style-type: none"> <li>• Set ZSVCMODE to M if the service has only machine components. This service will be ignored if context is set to u on the radskman command line.</li> <li>• Set ZSVCMODE to U if the service has only user components. This service will be installed if context is set to u or is left blank on the radskman command line. You may want to set ZSVCMODE to u if the application consists only of user registry changes or user desktop shortcuts.</li> <li>• Set ZSVCMODE to MU if the service has both machine and user components. The user connect will verify that the machine components have been installed before installing the user components. You will need to run two radskman connects, one with context set to m and one with context set to u.</li> <li>• Set ZSVCMODE to EMU if the CM agent connect is being made in the user context, but the machine side of the application has not yet been installed, this will force the machine connect. After the machine connect completes successfully, the user connect is initiated to install the user components. Use this for optional applications that the user controls through the CM Application Self-service Manager.</li> <li>• Leave ZSVCMODE blank to treat the service as single mode that can be installed independently by the machine or the user. In</li> </ul>

Attribute	Description
	other words, install the entire service ignoring the component's ZCONTEXT.
ZBITARCH	<b>Target Bit Architecture [ /32/64]</b> <ul style="list-style-type: none"> <li>• Set to 32 to deploy to 32-bit architectures.</li> <li>• Set to 64 to deploy to 64-bit architectures.</li> <li>• Set to blank to deploy to all architectures.</li> </ul>

## Reporting Attributes in ZSERVICE

Some of the attributes in the ZSERVICE class are calculated. They are updated when the service is installed, verified, updated, repaired or deleted and reported in the agent computer's service objects. These attributes should *not* be modified using CM Configuration Server Database Editor.

**Table 30 Calculated ZSERVICE Attributes – DO NOT MODIFY**

Attribute	Description
ZSVCCSTA	<b>Service Status on Client</b> Status code for the service. Used to determine why files for a service may not be deployed correctly. Values range from 000-999.
SIZE	<b>Application Size - Uncompressed</b> The size of the uncompressed application displayed to the subscribers in the extended information area in the CM Application Self-service Manager user interface. Since this is a calculated field, do not modify it. It is the cumulative value of the SIZE defined in the PACKAGE class.
COMPSize	<b>Application Size - Compressed</b> The size of the compressed application displayed to the subscribers in the extended information area in the CM Application Self-service Manager user interface. Since this is a calculated field, do not modify it. This is the cumulative value of the COMPSize defined in the PACKAGE class.
ZAVIS	<b>Available, Verified, Installed, Sync F</b> The CM client manages and maintains this attribute to show the different states of the application in the catalog. The four states are: <ul style="list-style-type: none"> <li>• Available indicates whether a service is available from the CM Configuration Server.</li> <li>• Verified indicates whether a service has been verified.</li> <li>• Installed indicates whether the service has been installed.</li> </ul>



<b>Attribute</b>	<b>Description</b>
	<ul style="list-style-type: none"> <li>Synchronized indicates whether the installed service has all of the latest changes from the CM Configuration Server.</li> </ul> <p>The possible values for each are:</p> <p>Y = Yes</p> <p>N = No</p> <p>X = Unknown</p>
VERDATE	<p><b>Verified Date of Service</b></p> <p>Indicates when the application was last verified (in local time) on the agent computer. The CM client manages and maintains this attribute. This is displayed to the subscribers in the extended information area in the CM Application Self-service Manager user interface. This attribute is useful for reporting purposes. The value is in the format of MMM DD,YYYY HH:MM:SS.</p> <p>Example: Jul 28, 2003 16:10:00</p>
UPGDATE	<p><b>When Application was Upgrade on De</b></p> <p>The CM client manages and maintains this attribute. It indicates when the application was last updated (in local time) on the agent computer. This attribute is useful for reporting purposes. The value is in the format of MMM DD,YYYY HH:MM:SS.</p> <p>Example: Jul 28, 2003 16:10:00</p>
INSTDATE	<p><b>Installed Date</b></p> <p>Indicates when the application was installed (in local time) on the agent computer. The CM client manages and maintains this attribute. This is displayed to the subscribers in the extended information area in the CM Application Self-service Manager user interface. This attribute is useful for reporting purposes. The value is in the format of MMM DD,YYYY HH:MM:SS.</p> <p>Example: Jul 28, 2003 16:10:00</p>
DELDATE	<p><b>Delete Date</b></p> <p>Indicates when the application was removed (in local time) from the agent computer. The CM client manages and maintains this attribute. This attribute is useful for reporting purposes. The value is in the format of MMM DD,YYYY HH:MM:SS.</p> <p>Example: Jul 28, 2003 16:10:00</p>

## Summary

- Set the appropriate context, M, U, MU, or EMU, for a service using the ZSVCMODE attribute.
- If a service requires a reboot of the agent computer, use the REBOOT attribute in the Application (ZSERVICE) class.
- Be aware of all of your service options in the Application (ZSERVICE) class.

---

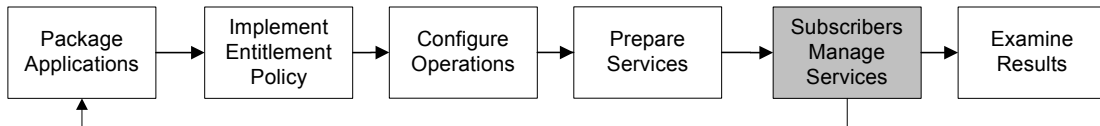
## 8 CM Application Self-service Manager User Interface

At the end of this chapter, you will:

- Know how to customize the CM Application Self-service Manager.
- Understand how your subscribers can access the CM Application Self-service Manager user interface.
- Be able to use the CM Application Self-service Manager user interface from a subscriber's perspective.

This guide covers the standard implementation for the CM Application Self-service Manager. Although you will tailor this strategy to meet your organization's needs, we recommend that you review this guide for a comprehensive understanding of the CM Application Self-service Manager. This chapter describes how to customize the CM Application Self-service Manager client and how to use the CM Application Self-service Manager user interface.

**Figure 14** Tasks completed in this guide



Subscribers use a standard Web browser to access the CM Application Self-service Manager user interface. They use this interface to install, update, verify, or remove applications from their computers.

► The term **application** refers to software or content that is available to the subscriber.

## About the CM Application Self-service Manager User Interface

This section describes how to use the CM Application Self-service Manager user interface. Although your subscribers will be using the user interface, you should know how it works. The CM Application Self-service Manager User Interface now supports French and German.

### Accessing the CM Application Self-service Manager User Interface

Depending on the installation, you will access the user interface through the Windows Start menu, or by double-clicking the CM Application Self-service Manager user interface icon on your desktop.



The CM administrator can control the display of the CM Application Self-service Manager User Interface using the RADUICFG Class in the CLIENT Domain. See [Setting User Interface Properties \(RADUICFG\)](#) on page 214 for details.

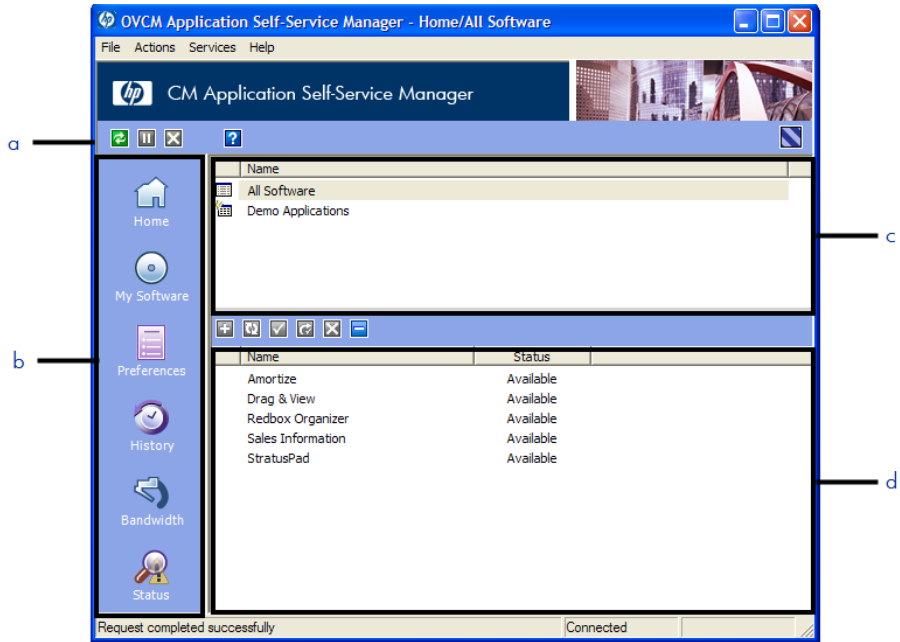
To access the user interface

- 1 Go to **Start** → **Programs** → **HP OVCM Agent** → **CM Application Self-service Manager**  
The CM Subscriber Security Information dialog box opens.
- 2 If necessary, type your User ID and Password. If you do not know what these are, contact your network administrator.
- 3 Click **OK**. The user interface opens.

## Using the CM Application Self-service Manager User Interface

The CM Application Self-service Manager user interface has four main sections.

**Figure 15 Application Self-service Manager**



**Legend**

- a** Global Toolbar
- b** Side Bar
- c** Catalog List
- d** Service List

- **Global Toolbar**

Allows you to refresh the catalog and pause or cancel the current action.

- **Side Bar**

Displays various menu choices available while using the CM Application Self-service Manager.

- **Catalog List**

Lists the different software catalogs available.

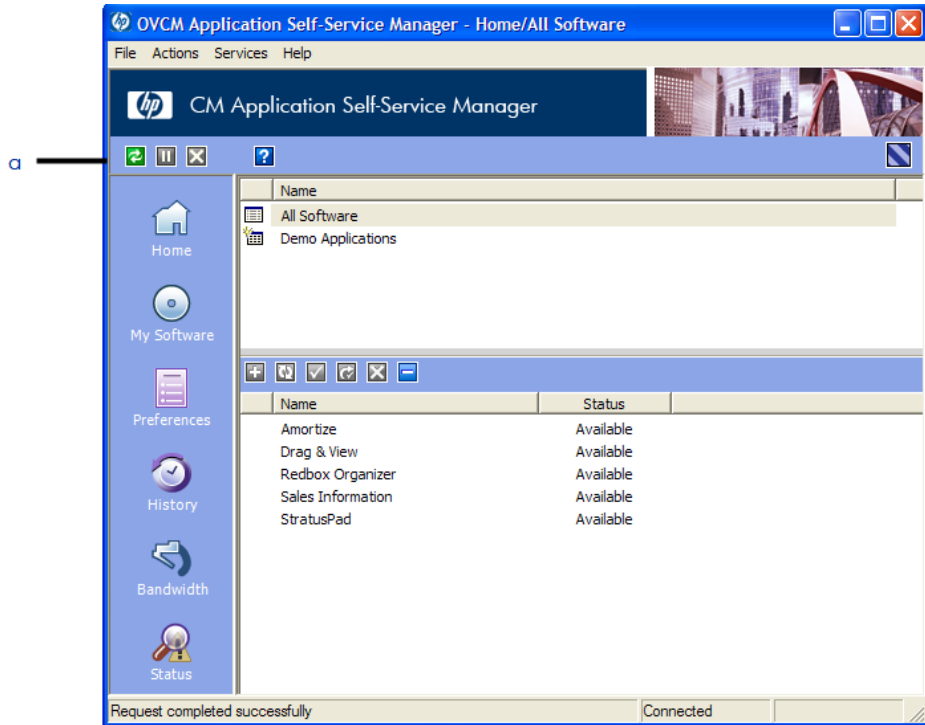
- **Service List**

Lists the applications to which you are entitled.

## Global Toolbar

The Global Toolbar allows you to refresh the catalog, pause the current action, or cancel the current action. Once an action has been paused, no other action can take place until you either resume the action, by clicking the **Pause** button again, or cancel the paused action by clicking the **Cancel** button.

**Figure 16 Global Toolbar**




### Legend



- a** Global Toolbar

Any time one of the buttons in the Global Toolbar are not available for the current action, they will appear grayed-out.


### To refresh the catalog

- To refresh the selected catalog using the Global Toolbar, click **Refresh** .

To pause or resume the current action

- To pause the current action using the Global Toolbar, click **Pause** .
- To resume a paused action, click **Resume** . (The **Pause** button is replaced with this button after you pause an action).

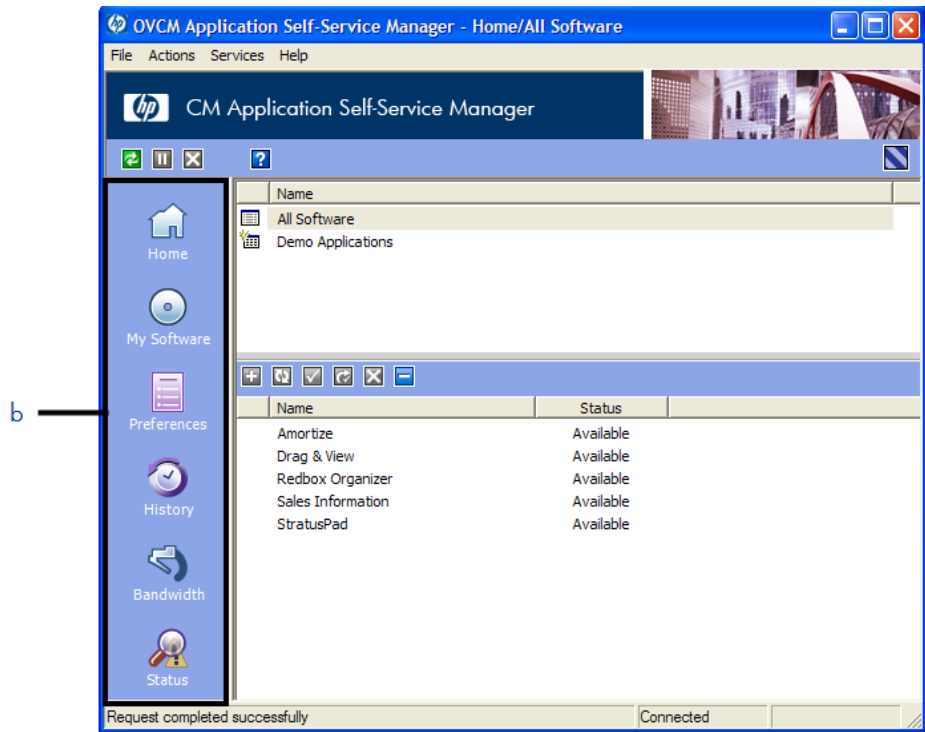
To cancel the current action

- To cancel the current action using the Global Toolbar, click **Cancel** .

## The Side Bar

Use the Side Bar to configure and customize your CM Application Self-service Manager.

**Figure 17 Side Bar**



### Legend

**b** Side bar



The following sections explain each icon on the Side Bar in detail.

### Home

Click this button to access your home catalog.

### My Software

Click this button to display only services that you have installed. Click the button again to display all available software from the selected catalog.

### Preferences

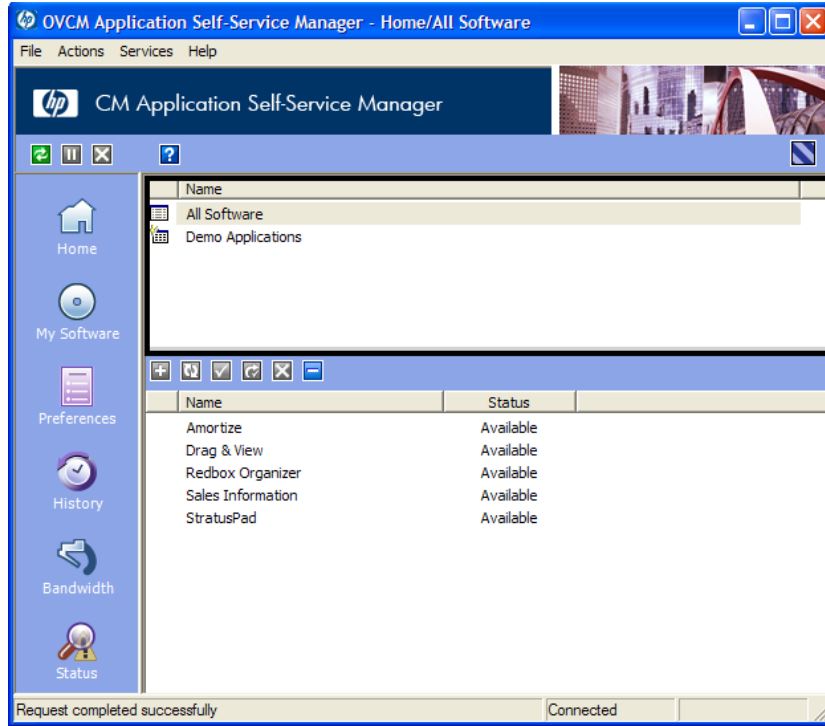
Click this button to access various display options, service list options, and connection options for the CM Application Self-service Manager.

At any point you can click on **OK**, **Apply**, or **Cancel** in the top right corner of the Preferences section to keep or disregard any changes you make.

## The Catalog List

The Catalog List section lists the available software catalogs and any virtual catalogs.

**Figure 18 Catalog List**



### Legend

- c Catalog List

### To select a catalog

- In the Catalog List, click on the CM Configuration Server catalog you would like to view in the Service List section. Refresh the catalog at any time by right-clicking on the name of the catalog and selecting Refresh from the shortcut menu.


### Virtual Catalogs

Virtual catalogs are subsets of the default catalog defined by specifying a name in the CATGROUP value for a service. Any services with the same CATGROUP value will be grouped together in a virtual catalog.

To set the **CATGROUP** attribute

- 1 Go to **Start** → **Programs** → **HP OVCM Administrator** → **CM Admin CSDB Editor**.

The CM Configuration Server Database Editor Security Information dialog box opens.

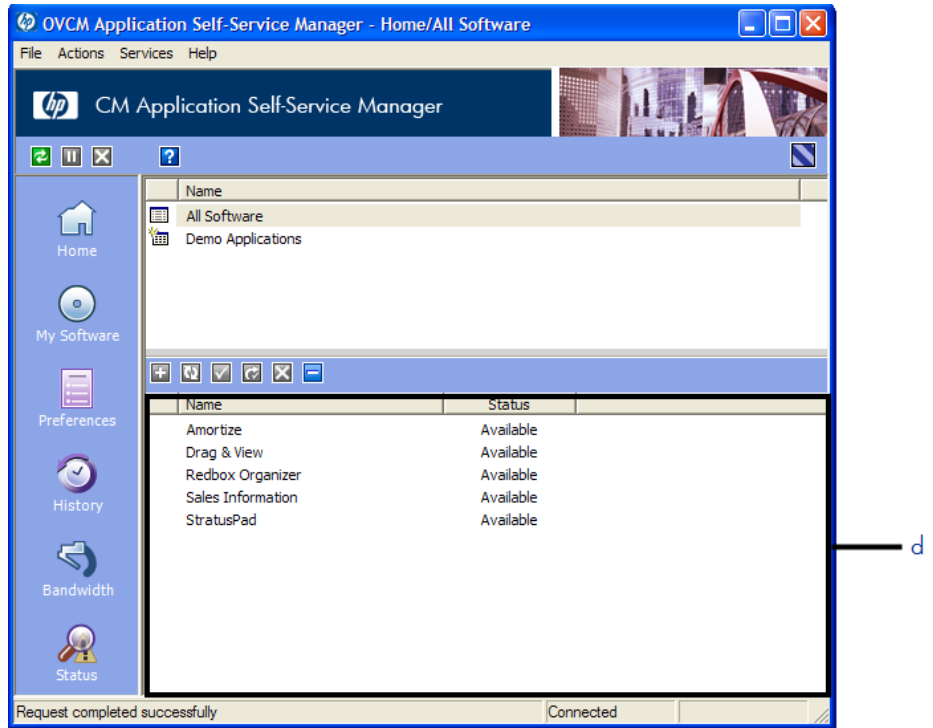
 The User ID, as shipped from HP, is **RAD\_MAST**. No password is necessary. This may have been changed in your installation. Check with your CM security administrator to obtain your own User ID and Password, if necessary.

- 2 If necessary, type a User ID and Password, and then click **OK**. The CM Configuration Server Database Editor window opens.
- 3 Double-click **PRIMARY**.
- 4 Double-click **SOFTWARE**.
- 5 Double-click the name of the service you would like to add to a virtual catalog.
- 6 Double click the **CATGROUP** attribute and type the name of the virtual catalog to which you would like to add the service.
- 7 Click **OK**.

## The Service List

The Service List section lists the applications available to you. A check mark appears next to software that is already installed. The column headings displayed can be changed to suit your needs, see [Preferences](#) on page 257 for more information.

**Figure 19 Service List**






**Legend**

**d** Catalog List

**Table 31 Buttons in the CM Service List section**

Button	Action	Description
	Install	Installs the selected service on your machine.
	Update	Updates the selected service.
	Verify	Verifies the files for the selected service.
	Repair	Repairs the selected service.
	Remove	Removes the selected service from your machine.
	Expand/Collapse	Expands or collapses the selected service.

Button	Action	Description
	Download Only (Advanced)	Download selected service from catalog into local cache without installing. This button will only be available if you have selected Show advanced operations in the Service List Options of Preference. See "Preferences" on page 257 for more information.
	Reconfigure (Advanced)	Reconfigures the installation of the selected service. This button is only available when the selected application is installed and the RECONFIG variable is set to Y in the ZSERVICE instance for the application. This button will only be available if you have selected Show advanced operations in the Service List Options of Preference. See "Preferences" on page 257 for more information.
	Undo (Advanced)	Undo the last action. This button will only be available if you have selected Show advanced operations in the Service List Options of Preference. See "Preferences" on page 257 for more information.

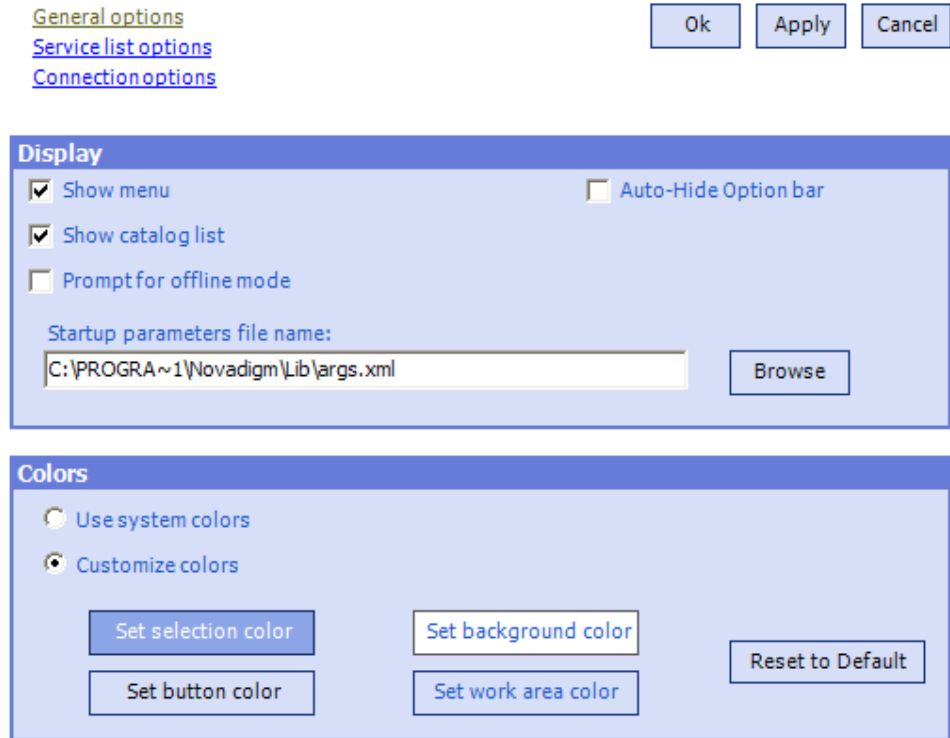


The buttons in the CM Service List section will be gray when they are not available for the selected application.

## General Options

Use the **General options** window, as shown in the next figure, to modify the appearance of the CM Application Self-service Manager.

**Figure 20 General Options**



To modify the display

- To display the menu, click **Show menu**.
- To display the catalog list, check **Show catalog list**.
- To be prompted to use the CM Application Self-service Manager in offline mode at the beginning of each session, check **Prompt for offline mode**.
- To automatically hide the option bar, check **Auto-Hide Option bar**.
- To change the start-up parameters file, type the name in the text box provided, or click **Browse**, and specify the path where your start-up parameters file exists.

To modify the colors

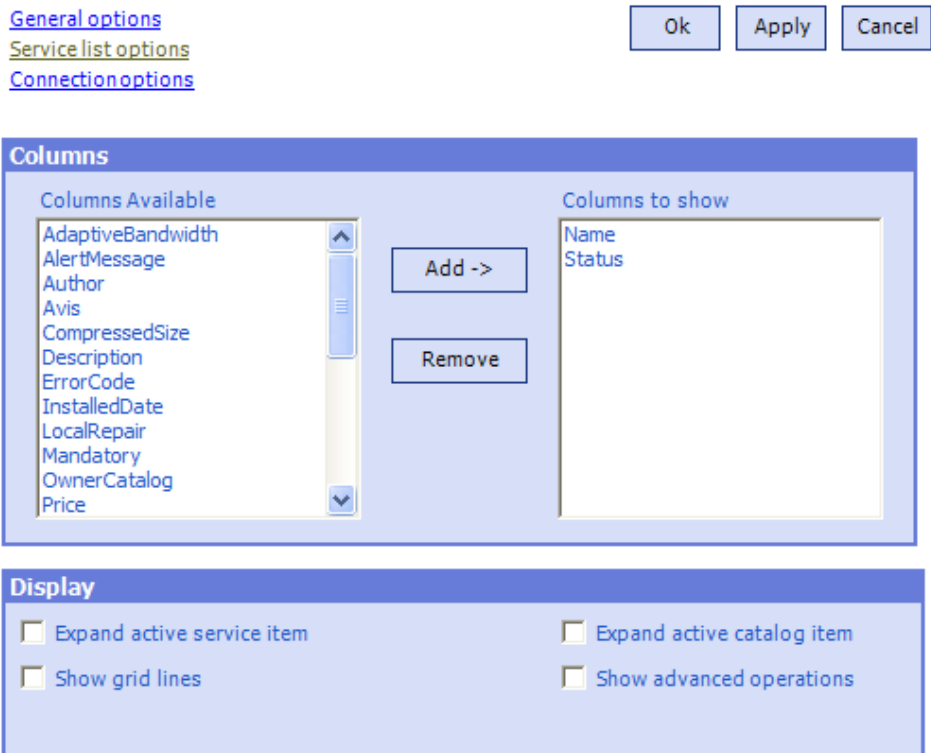
- If you would like to use the system colors, select **Use system colors**.

- If you decide to use your own custom colors, select **Customize colors**.
  - After selecting **Customize colors**, click the box for the item you want to change.
  - Set selection color to modify the color of selections.
  - Set button color to modify the button colors.
  - Set background color to modify the background color.
  - Set work area color to modify the background color.

## Service List Options

Use Service list options, as shown in the next figure, to modify the appearance of the Service List.

**Figure 21 Service List Options**



## Customizing the Column Names in the Service List

Use the Columns area to customize the columns that appear in your service list. The right-hand column lists the column names currently displayed in your service list. For a description of each available column heading, see [Table 32](#) below.

### To add columns to the Service List

- 1 In the Columns Available list box, select one or more names. Hold the **Shift** or **Ctrl** key on your keyboard to select multiple consecutive or non-consecutive column names, respectively.
- 2 Click **Add**. The selected columns are listed in the Columns to show list box.

### To remove columns from the Service List

- 1 In the Columns to show list box, select one or more names. Hold the **Shift** or **Ctrl** key on your keyboard to select multiple consecutive or non-consecutive column names, respectively.
- 2 Click **Remove**. The selected columns are removed from the Columns to show list box and returned to Columns available.

## Customizing the Display

- Select **Expand active service item** to expand the current service item in the Service List.
- Select **Show grid lines** to display the Service List with grid lines separating each service.
- Select **Expand active catalog item** to expand the current catalog selected.
- Select **Show advanced operations** to display the Download, Reconfigure, and Undo buttons in the CM Service List section.



**Table 32** Column Headings Available for the Service List

Column Heading	Description
Author	The author of the service.
CompressedSize	The size of the compressed service (bytes).
Description	A short description of the service.

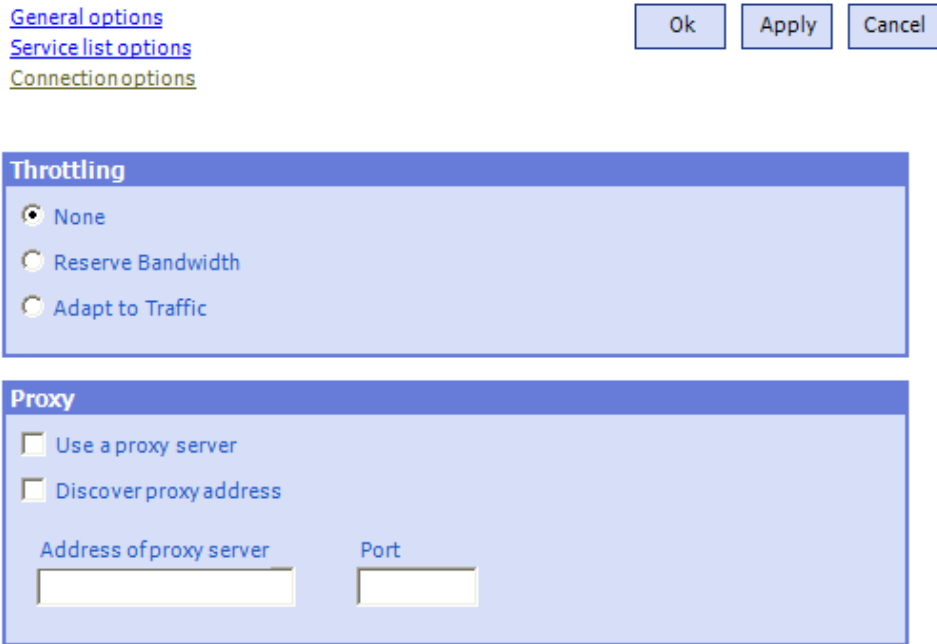


<b>Column Heading</b>	<b>Description</b>
InstalledDate	The date the service was installed on your computer.
LocalRepair	If data is repairable locally (cached on your computer).
Name	The name of the service.
OwnerCatalog	The originating application domain name.
Price	Price of the service.
PublishedDate	The date the service was published to the catalog.
RepublishedDate	The date the service was republished to the catalog.
Size	The size of the service (bytes). Note: You will need this amount of free space on your computer to successfully install the service.
Status	Current status of the software <ul style="list-style-type: none"> <li>• Available</li> <li>• Installed</li> <li>• Update Available</li> <li>• Broken</li> </ul>
UpgradedDate	The date the service was upgraded.
Url	The software vendor's url.
Vendor	The software vendor who supplied the service.
VerifiedDate	The date the service was last verified.
Version	The version of the service.

## Connection Options

Use Connection options, as shown in the next figure, to select the type of bandwidth throttling to use or to specify the settings required for using a proxy server.

**Figure 22 Connection Options**



- **Throttling**

- Select **None** for no throttling.
- Select **Reserve Bandwidth** to select along the scale to indicate the maximum percentage of the network bandwidth to use. The reserve bandwidth can be changed in the user interface by the subscriber as the download is happening.
- Select **Adapt to traffic** to slide along the scale to indicate the minimum percentage of the network bandwidth to use. The adaptive bandwidth cannot be changed during a data download process. It can only be set before a job is dispatched.

- **Proxy**

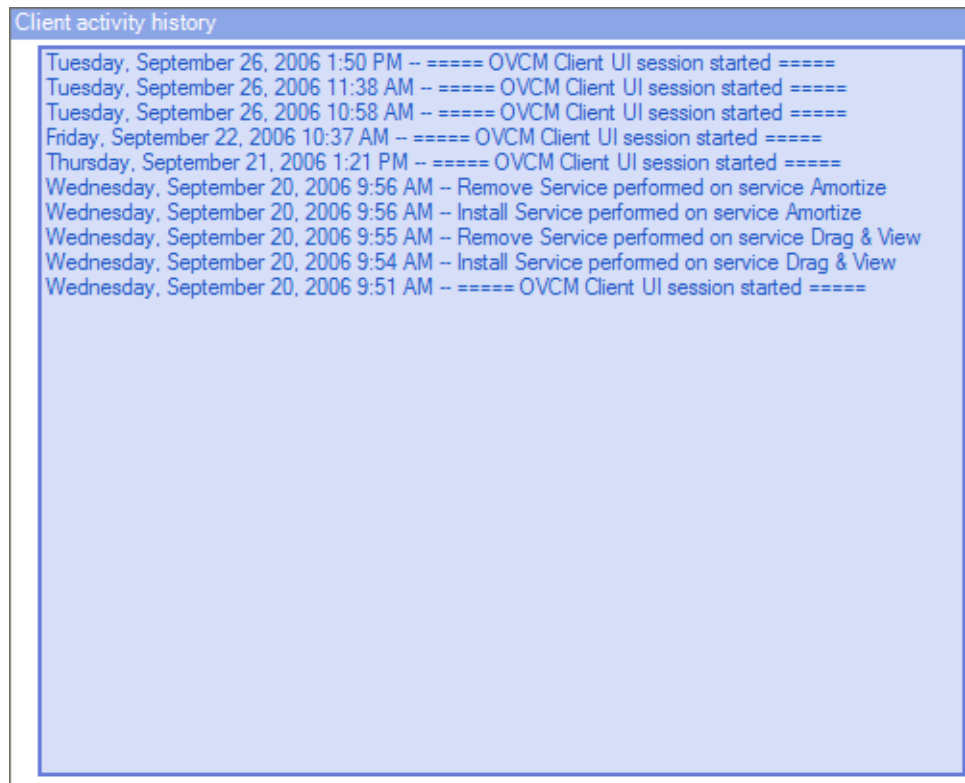
CM has the ability to detect an Internet proxy when an Internet proxy is used. The Internet proxy's address is then stored in PROXYINF.EDM located in the agent computer's IDMLIB directory. The default location of IDMLIB is *SystemDrive:\Program Files\Hewlett-Packard\CM\Agent\Lib*. The next time the agent computer connects to the CM Configuration Server the specified Internet proxy will be used. To

use this feature, you must enable your CM client to use and discover an Internet Proxy. If you are using the CM Application Self-service Manager, set the Proxy settings in the Connection section of Preferences.

## History

Click **History** in the Side Bar to display a history of the current session.

**Figure 23 Application Self-service Manager History**



## Bandwidth

Click this button to display the bandwidth slider, as seen below. Changing this value dynamically changes the throttling value.



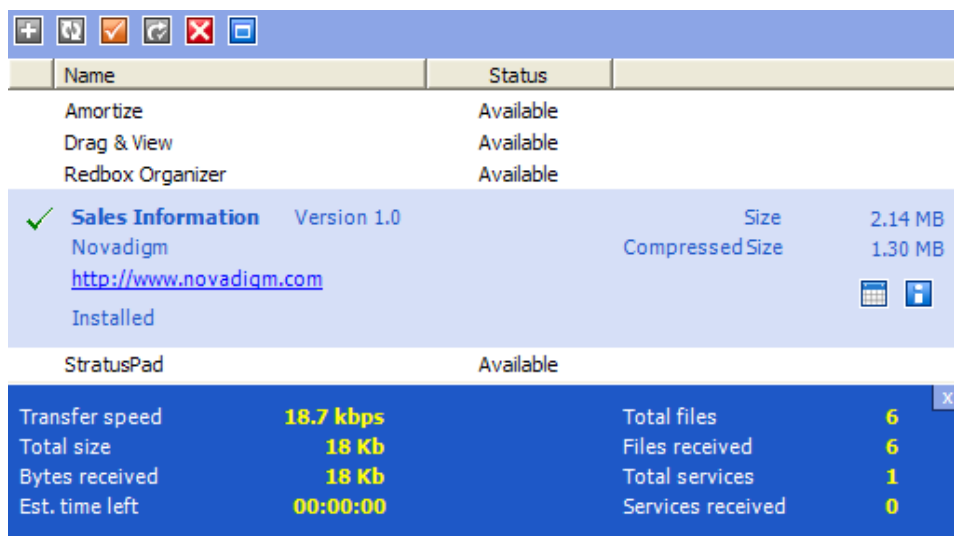
To adjust the bandwidth settings using the bandwidth slider

- Click and drag the slider to increase or decrease the amount of bandwidth throttling desired.
- You can also adjust bandwidth throttling from within the Preferences, Connection options section.

## Status

Click **Status** in the Side Bar to display the status of the current action including the size, estimated time, progress, and available bandwidth.

**Figure 24** Status



Name	Status	
Amortize	Available	
Drag & View	Available	
Redbox Organizer	Available	
✓ <b>Sales Information</b> Version 1.0		Size 2.14 MB
Novadigm		Compressed Size 1.30 MB
<a href="http://www.novadigm.com">http://www.novadigm.com</a>		
Installed		
StatusPad	Available	

Transfer speed	<b>18.7 kbps</b>	Total files	<b>6</b>
Total size	<b>18 Kb</b>	Files received	<b>6</b>
Bytes received	<b>18 Kb</b>	Total services	<b>1</b>
Est. time left	<b>00:00:00</b>	Services received	<b>0</b>

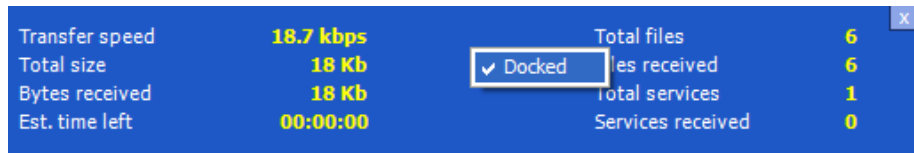
## Docking and Un-Docking the Status Window

The Status window can be docked or un-docked from the CM Application Self-service Manager. This enables you to position the Status window anywhere on your screen. The Status window is docked by default.

To un-dock the Status window

- 1 Click **Status** in the Side Bar.
- 2 Right-click in the Status window that opens.

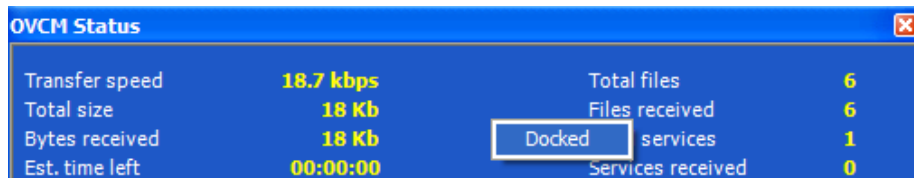
- 3 Select **Docked** from the shortcut menu. When the Status window is docked, a check mark will appear next to the word **Docked** in the shortcut menu.



The Status window will be released from the CM Application Self-service Manager, allowing you to position it anywhere on your screen.

#### To dock the Status window

- 1 Click **Status** in the Side Bar.
- 2 Right-click in the Status window that opens.
- 3 Select **Docked** from the shortcut menu (only if there is no check mark present).




The Status window will be docked into the CM Application Self-service Manager.

## Installing Software

The applications that are available to you are listed in the Service List. You can install one or more of these applications at any time.

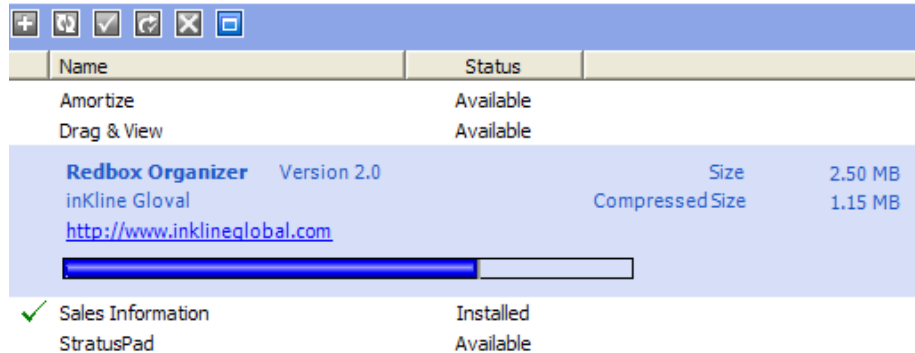
#### To install software


- 1 In the Service List, click the name of the software that you want to install.
- 2 Click **Install** .



Some installations may display a set of dialog boxes. If so, follow the instructions. Otherwise, the installation begins immediately.

- ▶ You can also right-click the name of the software that you want to install, then select **Install** from the shortcut menu that opens.


A progress bar displays the installation progress.



Name	Status		
Amortize	Available		
Drag & View	Available		
<b>Redbox Organizer</b> Version 2.0		Size	2.50 MB
inKline Gloval		Compressed Size	1.15 MB
<a href="http://www.inklineglobal.com">http://www.inklineglobal.com</a>			
			
✓ Sales Information	Installed		
StratusPad	Available		


- Click **Cancel**  in the Global Toolbar to cancel the installation.
- Click **Pause**  in the Global Toolbar to pause the installation. If you pause an action, you will not be able to perform any other actions until you either cancel or resume the currently paused action.

## Refreshing the Catalog

The catalog is refreshed whenever you log on to the CM Application Self-service Manager user interface. While you are logged on, if you believe that the list of applications that you're authorized to use has changed, or that updates to your installed applications have become available, click **Refresh Catalog**  in the Global Toolbar to retrieve the updated list of applications.


- ▶ You can also right-click any item in the Service List, then select **Refresh Catalog** from the shortcut menu that opens.

## Viewing Information

You may want more information about an application than the Service List provides. If you would like to know the vendor, version, size, and date the application was installed, you can either add these columns to the Service List or click **Show Extended Information**  in the expanded service box.

If you would like more information from the manufacturer, click on the link provided.

To view more information

- In the Service List, select the appropriate software, and click **Show Extended Information** .



You can also right-click the appropriate software, select **Properties**, then select **Information from the shortcut menu that opens**.



Redbox Organizer  
inKline Gloval  
<http://www.inklineglobal.com>


From catalog:	Demo Applications
Size (in bytes):	2.50 MB (2,556,754)
Compressed size (in bytes):	1.15 MB (1,181,410)
Authored by:	
Price:	\$39.95

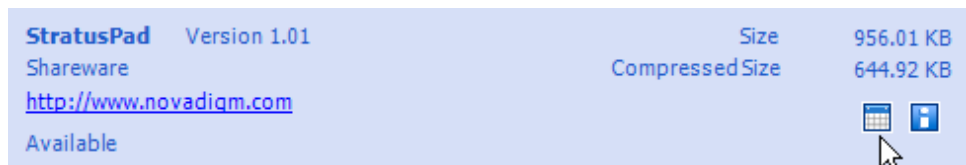
  

Installed on:	9/26/2006 2:13:11 PM
Verified on:	9/26/2006 2:13:11 PM
Published on:	
Last re-published on:	

Click the corresponding **Cancel** button to return to the Service List.



## Scheduling Timed Events

After selecting an installed service, in the expanded service box, click the **Schedule Timed Events button**  to specify a schedule that will automatically update the applications that are installed on your computer. See the next figure. For example, you can schedule updates to occur during non-business hours, when you are not using your computer and network traffic is slower.




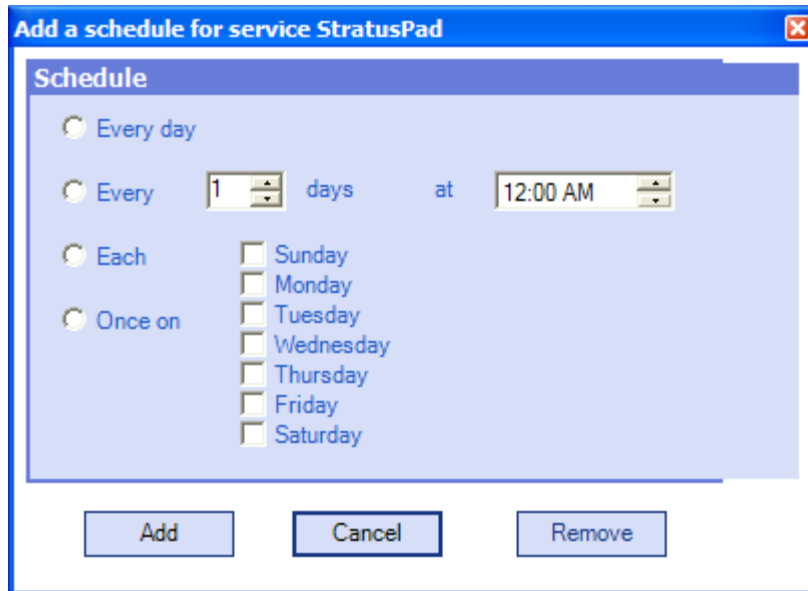
**StratusPad** Version 1.01  
Shareware  
<http://www.novadiqm.com>  
Available

Size	956.01 KB
Compressed Size	644.92 KB

To schedule updates for an installed application

- 1 In the CM Application Self-service Manager user interface, select an installed application.
- 2 Click **Schedule Timed Events** . The Schedule dialog box opens.




- 3 Select one of the following:
  - **Every day**  
Updates occur every day at the specified time.
  - **Every n days**  
Updates occur every n days. Use the up and down arrows next to the Every option button to select the frequency of updates.
  - **Each weekday**  
Updates occur every weekday whose check box is selected. You may select more than one day.
- 4 Use the up and down arrows or type in the box labeled **at** to specify a specific time for the update.
- 5 Click **Add** to close the dialog box and accept the scheduled update.



## Verifying Software


To check the installation of an application

- 1 In the Service List, select the installed service that you would like to verify.
- 2 Click **Verify** .




You can also right-click the name of the software, then select **Verify** from the shortcut menu that opens.


- If the application passes verification, the date and time of verification will appear in the Verified Date column for the application.
- If the application fails verification, Broken will appear in the Status column.

- 3 To repair the software, click **Repair** .


## Repairing Software

If there is something wrong with an application, click **Repair**  to fix it.

To repair software

- 1 Select an application that needs to be repaired (This is designated by an X in the first column, and Broken, in the Status column).
- 2 Click **Repair** . CM retrieves the files needed to fix the application.


## Reconfiguring Software

Use the Reconfigure button  in the Service List section to reconfigure the installation of software on your computer. The reconfigure option allows you to re-install the selected software to adjust different configurations, for example, the directory where the software was installed.



The Reconfigure button is only available if the application is installed and the RECONFIG variable is set to Y in the ZSERVICE instance for the application. See Chapter 4, [Packaging Applications and Content](#) for more information.


### To reconfigure software

- 1 Select the software you would like to reconfigure.
- 2 Click **Reconfigure** .
- 3 Some installations may display a set of dialog boxes. If so, follow the instructions. Otherwise, the installation begins immediately.

## Removing Software

Use the Remove button  to remove software from your computer.

### To remove software

- 1 Select the software that you want to remove.
- 2 Click **Remove** .
- 3 Click **Yes** if you are asked to confirm that you want to remove the application.



You can also right-click the name of the installed software that you want to remove, then select **Remove** from the shortcut menu that opens.

## CM Self Maintenance

Maintenance for the CM clients is available from Technical Support. The maintenance will include import decks for the CM Configuration Server Database. New instances are created in the PRDMAINT Class in the PRDMAINT Domain. There will be one PRDMAINT instance for each PRODUCT\_PLATFORM\_RELEASE combination. These instances will be connected based on the client's platform and current product level. Once you have decided to roll out the maintenance to the agent computers, you can add the service to the user's entitlements.

To minimize the need for separate PRDMAINT bundles based on different operating systems where the actual maintenance is the same, the ZMASTER.ZOSTYPE variables identify the Windows operating system type or family. The valid values for this variable are: "WIN32\_NT" (covering Windows NT, 2000, XP, and 2003).

## Usage Notes

- 1 All packages are disabled by default. This is accomplished by setting a ZSTOP expression to "1" to prevent deployment. Either remove this value for general deployment, or use this ZSTOP expression to restrict its deployment to certain groups.
- 2 The first REQUIRES connection is reserved for any possible hot fix, a fix sent to you directly by Technical Support is not yet available in a fix or service pack. This package, \_HOTFIX, will be used to chain any required fixes (and/or enhancements) and will be maintained by the customer. The second connection is for any locally customized code to be included as part of maintenance.
- 4 Use the ACTMAINT attribute in the SETTINGS class of the CLIENT Domain to specify how you want maintenance processed. You can choose to immediately download and install maintenance (I), download only and install later (D), or prompt users to install maintenance at another time (D). Maintenance *only* runs when the mnt parameter of radskman is set to Y. See [ACTMAINT](#) on page 207 for more information. For details on radskman, refer to the *CM Application Manager Guide*.

We will provide an updated PRDMAINT instance with each new maintenance pack. The customer is not required to apply all maintenance.

### To deploy client maintenance packages

- 1 A maintenance package is made available on the HP OpenView web site in the form of an export deck.
- 2 Download the files. There should be at least an xpi and xpr file.
- 3 Stop the CM Configuration Server service and copy the export files to the CM Configuration Server's bin directory.
- 4 Import the files using the ZEDMAMS utility. For detailed information on the use of this utility, refer to the *CM Configuration Server Guide*.

For example, if you were given two files, MAINT\_RAM\_40\_RC3.XPI and MAINT\_RAM\_40\_RC3.XPR. You might use the following two command lines.

```
ZEDMAMS VERB=IMPORT_INSTANCE, FILE=
MAINT_RAM_40_RC3.XPI, PREVIEW=NO
```

```
ZEDMAMS VERB=IMPORT_RESOURCE, FILE=
MAINT_RAM_40_RC3.XPR, PREVIEW=NO
```

► Your command line may vary depending on a number of factors. For detailed information on the use of this utility, see the *CM Configuration Server Guide*.

- 5 Restart the CM Configuration Server.
- 6 Assign the Maintenance Server to the appropriate users in the POLICY Domain.

► To run the maintenance portion of a CM agent connect process, the `mnt` parameter of the `radskman` command line, must be set to `Y`.

During catalog processing, the client will first process all services found in the PRDMAINT Domain, perform arbitration to determine appropriate maintenance, and deploy the maintenance to the maintenance staging directory. The default location for this is `c:\Program Files\Hewlett-Packard\CM\Agent\_Maint_`.

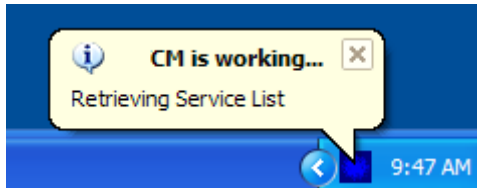
## CM System Tray

The CM System Tray icon provides status and statistics information, as well as pause and cancel mechanisms to the subscriber. The CM System Tray icon sits in listen mode, and accepts requests for the display of dialog boxes and status information that will be shown when the CM agent needs user interaction.

An icon shows in the CM System Tray area of the Task Bar. By moving your cursor over the icon, you can see one of three states depending on what the CM agent is doing at the time.

- **Idle**  
When the CM System Tray is in listen mode, the icon is static.
- **Active**  
The icon becomes active when the CM agent is working or when user intervention is required. The icon animates and an informational bubble will appear when you move your cursor over the icon. The bubble provides information on the type of activity that is occurring. If a critical notify occurs, the bubble will popup automatically:

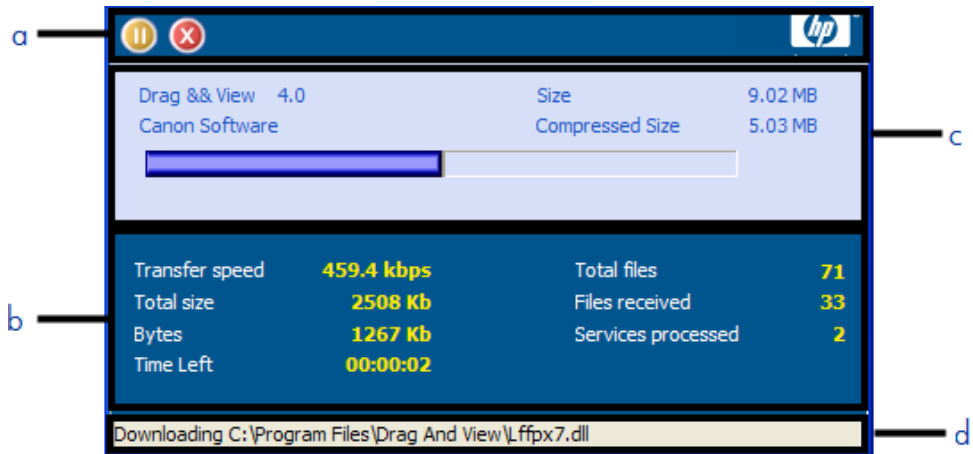
**Figure 25 CM System Tray Bubble**



- **Console View**

The Console View can be launched by the shortcut menu that is available when you right-click on the icon, or by double-clicking on the icon. The Console view appears as shown in the figure below.

**Figure 26 CM System Tray Console**



**Legend**

- a** Button Bar
- b** Information Panel
- c** Status Area
- d** Status Message Area

The Console View contains the following parts:

- **Button Bar**

Contains buttons for Pause and Cancel, and a logo that animates when CM is actively working.

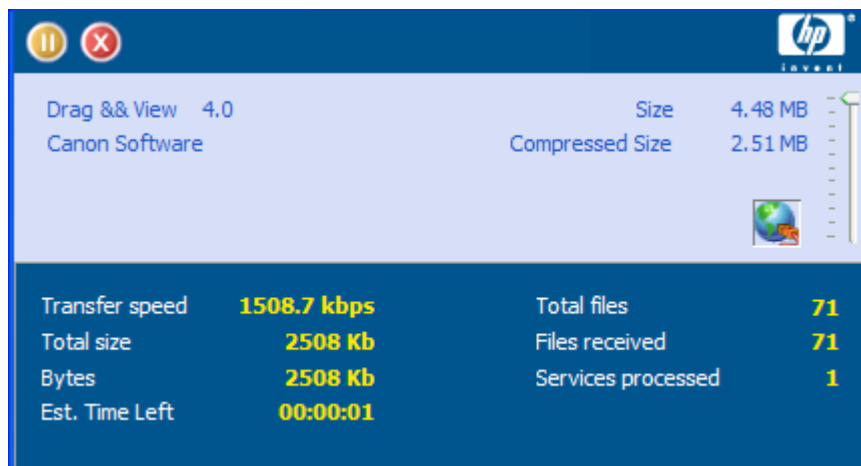
- **Information Panel**  
Contains information about the service that is currently being processed, as well as a progress bar that shows the percentage finished.
- **Status Area**  
Contains statistics about the current processes, including transfer speed, total size of transmission, bytes received, estimated time left of transmission, total files to be transmitted, number of files received, and number of services processed.
- **Status Message Area**  
The Status Message Area shows a message about the current process.



The bandwidth control shows when bandwidth throttling is available (based on the throttling type for the service, Adaptive or Reserved). In addition, the bandwidth slider will be displayed if the throttling type is valid and the UIOPTION attribute of the Application (ZSERVICE) instance is set to FULL. FULL is the default value. Set UIOPTION to INFO to show what is happening on the agent computer, but disable all the controls so that the subscriber cannot make any changes. Set the UIOPTION to NONE so that no dialog boxes are displayed. Set the UIOPTION using the CM Admin CSDB Editor.

If you set bandwidth throttling for the Service on the CM Configuration Server, and you click the bandwidth toggle button in the System Tray Console, a slider for bandwidth control appears. Adjusting the slider will result in the bandwidth throttling value being changed.

**Figure 27 Control the bandwidth from the System Tray Console.**

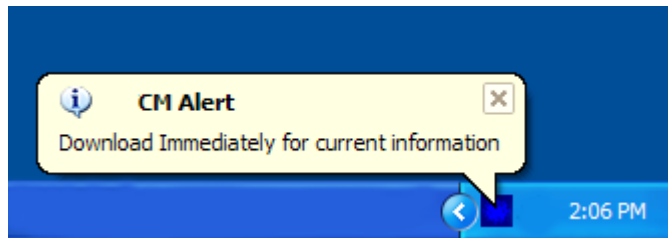


# Application Alert Messages and Deferrals

Use the CM Admin CSDB Editor to show the subscriber that an application has a high priority or to display an additional message. An Application (ZSERVICE) Instance can be set to have a high or normal priority. An exclamation point (!) denotes that an application is high priority.

If you are managing a high priority service using the CM Application Self-service Manager with the CM System Tray, then the alert message will display in the status bubble of the CM System Tray icon, and the bubble will pop up whether or not your cursor is over the icon.

**Figure 28 High priority status bubble in CM System Tray.**



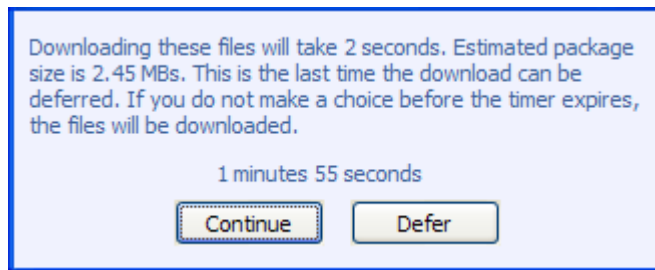
When an application is deployed, an administrator can also display a deferral message based on the network threshold, the data download size, a specified date setting, or a deferral count. When an application has data that needs to be downloaded to the agent computer, the CM Application Self-service Manager agent will check if the application is configured for deferral. If it is, the CM agent will check the current bandwidth setting against the administrator specified bandwidth threshold setting. If the current network speed is less than the Network Threshold (DT) value, and the size of the service is greater than the below threshold size (DBT), or the current network speed is greater than the Network Threshold, and the size of the service is greater than the above threshold size (DAT), a deferral message will be displayed asking the subscriber if he wants to defer the deployment. The administrator can configure the number of times an application can be deferred, the date an application can be deferred until, or a minimum byte count to alert on. If the number of deferrals or the deferral date has been reached, the application will be installed or updated without displaying a deferral message. If the size of the data is less than the minimum byte count, the alert panel will be skipped.

If the application has been configured for a deferral, and all of the requirements listed below are met, the CM agent will display the deferral dialog box.

- The Alert Mode (DM) is configured for the current operation: Install, Update, or Both.
  - The current network speed is lower than Network Threshold Speed (DT) and the data to be downloaded is greater than the below threshold size (DBT).
  - The current network speed is greater than Network Threshold Speed (DT) and the data to be downloaded is greater than the above threshold size (DAT).
  - The UIOPTION attribute in the ZSERVICE instance is *not* set to NONE.
  - If specified, the deferral date, Allow Install Deferral up to (DI), or Allow Update Deferral up to (DU) has been reached.
- or
- The number of deferrals allowed (DN) has been reached.

If these requirements are met, and you are using the CM Application Self-service Manager, the following will be displayed:

**Figure 29 CM Application Self-service Manager Defer alert**



The subscriber can choose to defer the action or to continue with it.

- ▶ If the timeout value is exceeded, the action will be taken that is identified in the DA (Action on Timeout Cont/Defer) attribute.

To implement an Application Alert or Deferral, you will need to create an instance in the Alert/Defer (ALERTDEF) Class, and connect that instance to the appropriate Application (ZSERVICE) instance.

## Creating an Alert Message or Deferral Instance

The Alert/Defer (ALERTDEF) Class has been added to the SOFTWARE Domain in the CM Configuration Server DB to configure application alerts.



In order to configure an alert, you will need to create an instance in the Alert/Defer (ALERTDEF) Class.

To create an instance of the Alert/Defer (ALERTDEF) Class

- 1 Go to **Start** → **Programs** → **HP OVCM Administrator** → **CM Admin CSDB Editor**. The CM Admin CSDB Editor Security Information dialog box opens.



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

- 2 If necessary, type a User ID and Password, and then click **OK**. The CM Admin CSDB Editor window opens.
- 3 Double-click **PRIMARY**.
- 4 Double-click **SOFTWARE**.
- 5 Right-click **Alert/Defer (ALERTDEF)**. A shortcut menu opens.
- 6 Click **New Instance**. The Create Instance dialog box opens.

Enter the new display name:

SalesAlert

Create a new Alert / Defer (ALERTDEF) instance named:

SALESALERT

OK Cancel

- 7 Type a name for the new instance. In our example, we create an instance called SalesAlert.
- 8 Click **OK**.

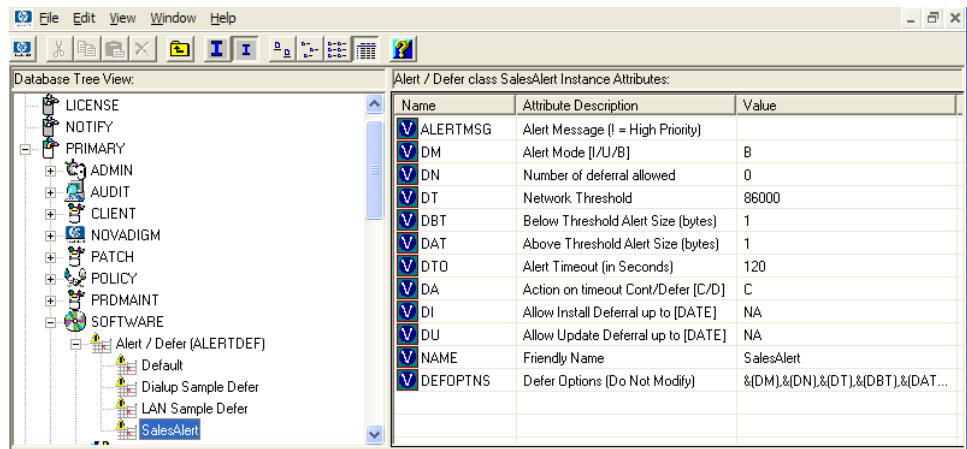
The new instance is created.

## Configuring an Alert Message or Deferral

Once the instance is created, you need to configure it for your Alert. The Alert/Deferral (ALERTDEF) class includes two sample instances, Dial Up Sample Defer, and LAN Sample Defer.

To configure an Alert/Deferral (ALERTDEF) instance

- 1 Use the CM Admin CSDB Editor to navigate to the Alert/Defer (ALERTDEF) instance you want to edit.
- 2 Double-click the instance. In this example, we are editing the **SalesAlert** instance.



- 3 Double-click the variable you want to edit. See [Table 33](#) below for information on the attributes for this class.

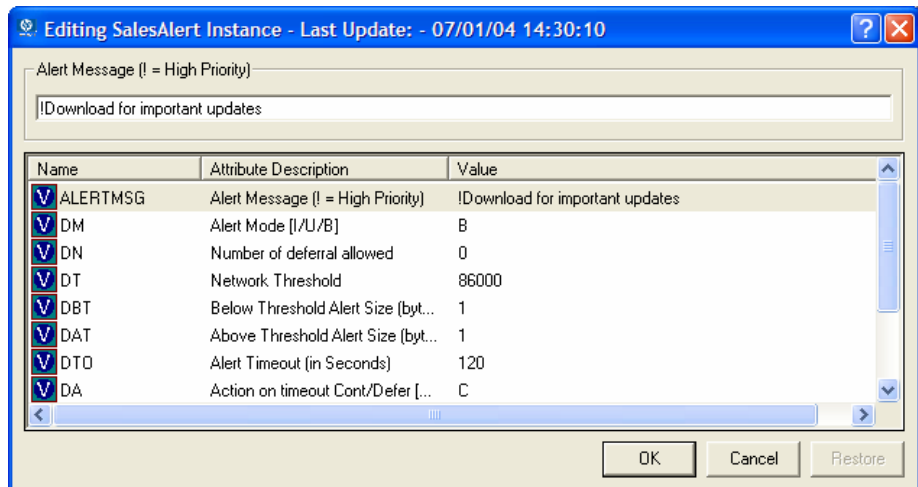
**Table 33 Variables in the ALERTDEF class**

Variable	Description	Default
ALERTMSG	<b>Alert Message</b> An exclamation point (!) preceding "Service Alert Message" denotes a high priority message.	
DM	<b>Alert Mode [I/U/B]</b> Set to I for Install. Set to U for Update. Set to B for either Install or Update.	B

<b>Variable</b>	<b>Description</b>	<b>Default</b>
DN	<b>Number of deferrals allowed</b> Maximum number of deferrals allowed before the action specified in DA (Deferral Action) is taken.	0
DT	<b>Network Threshold</b> Network bandwidth threshold in bytes. The current network speed must be less than this value to meet the deferral requirement.	86000
DBT	<b>Below Threshold Alert Size (bytes)</b> The minimum size of the files being downloaded to trigger the deferral if the speed of the network is below the Network Threshold (DT). If the value is 0, this attribute is ignored (No deferral if the speed of the network is below the Network Threshold (DT)).	50000
DAT	<b>Above Threshold Alert Size (bytes)</b> The minimum size of the files being downloaded to trigger the deferral if the speed of the network is above the Network Threshold (DT). If the value is 0, this attribute is ignored. (No deferral if the speed of the network is above the Network Threshold (DT)).	0
DTO	<b>Alert Timeout (in seconds)</b> Specify in seconds the amount of time to display the Defer Alert dialog box. After the timeout is reached, the action specified in the DA (Action on timeout) variable, will be taken.	120
DA	<b>Action on timeout Cont/Defer [C/D]</b> Specify C to continue with the specified action if the subscriber does not respond to the defer alert dialog box by the value specified in the DTO (Alert Timeout). Specify D to defer the specified action.	C

Variable	Description	Default
DI	<b>Allow Install Deferral up to [DATE]</b> After this date is reached, the option to defer installation will no longer be available. The application will be installed. This should be in the format YYYYMMDD.	NA
DU	<b>Allow Update Deferral up to [DATE]</b> After this date is reached, the option to defer an application update will no longer be available. The application will be updated. This should be in the format YYYYMMDD.	NA
Name	<b>Friendly Name</b> Friendly Name for the instance.	Default
DEFOPTNS	<b>Defer Options (Do not Modify)</b> This attribute is used to resolve the values of the other attributes of this class. Do not modify.	&(DM),&(DN),&(DT),&(DBT),&(DAT),&(DTO),&(DA),&(DI),&(DU)

In this example, we want to add an alert message with high priority. To do this, double-click the **ALERTMSG** variable in the list view.



- 4 Type the message you want displayed.

- 5 Click on the next attribute, and type in the appropriate value.
- 6 Click **OK** when you are finished editing the attributes. The Instance Edit Confirmation dialog box opens.
- 7 Click **Yes** to confirm the changes.

The changes are made to the Alert/Defer (ALERTDEF) instance.

Once the Alert/Defer (ALERTDEF) instance is created, you need to connect the Alert/Defer (ALERTDEF) Instance to an Application (ZSERVICE) instance. To do this, use the CM Admin CSDB Editor to click and drag the Alert/Defer (ALERTDEF) instance to the appropriate Application (ZSERVICE) instance. For additional information on using the CM Admin CSDB Editor see the *CM Admin CSDB Guide*.

## Local AIP support for the CM MSI Redirector

The CM MSI Redirector is a specialized, localhost HTTP server that accepts and satisfies file requests made during an MSI installation. Upon receiving the HTTP request from MSI, the Redirector retrieves the file from its local cache (if it exists) or requests the file from an upstream CM Configuration Server or CM Proxy Server. This process requires that the MSI installation support HTTP, and some vendors, including Microsoft, have removed HTTP support from their products' installations. Without HTTP support, the MSI install would not be able to directly request files from the Redirector. In order to continue to leverage the benefits of the Redirector, another module has been developed for the Redirector. This module adds another level of redirection at the local file system level. When using this method, MSI is told that the AIP is local, and requests files directly from the file system. This request is captured and forwarded to the MSI Redirector, which satisfies the request in its normal manner. The file is then placed in the defined local AIP, where MSI can process it. This local AIP is temporary, and is removed after the installation is completed.

This provides the following advantages:

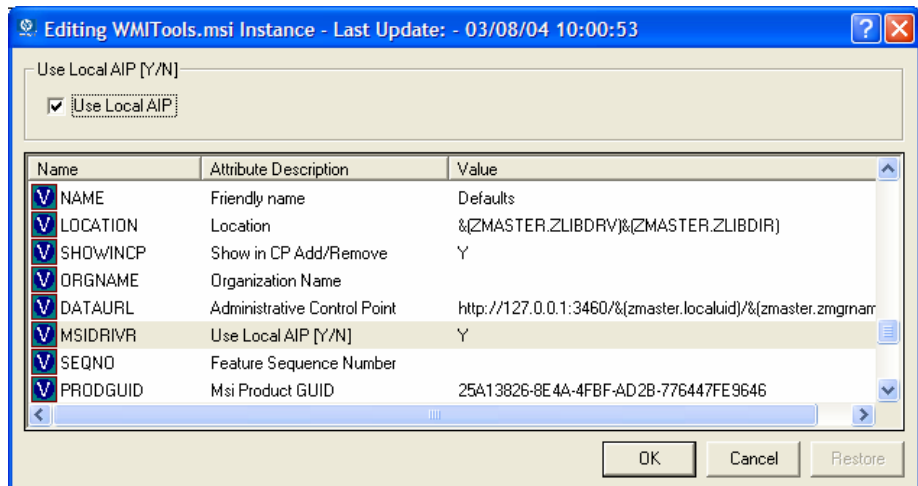
- Increased level of flexibility and performance.
- Ability to apply date/time stamps and support long file names.
- Ability to run Custom Actions that do not support http as an Install Point.

## To enable using the Local Application Installation Point

- 1 Use the CM Admin CSDB Editor to navigate to the MSI Resources (MSI) class in the SOFTWARE Domain. Each MSI application will have an msi instance and an idx instance.
- 2 Right-click the MSI instance and select **Edit Instance**.
- 3 To turn on this feature, set MSIDRIVR (Use Local AIP [Y/N]) to Y.



If MSIDRIVR is not present in your database, create it in the MSI Resources (MSI) class as a 1-byte variable with a description of "Use Local AIP [Y/N]". We recommend backing up your database before making changes to a class template. For information on editing class templates, refer to the *CM Admin CSDB Guide*.



- 4 Click **OK**.
- 5 Click **Yes** to confirm the changes.
- 6 Configure the SETTINGS.LOCALAIP variable in COP to control the destination of the local AIP folder on the client desktop. For example, C:\localaip.



We recommend keeping your LOCALAIP as short as possible to accommodate AIPs that have deep directory structures.

# Consolidated Agent Logs

In previous versions of CM (formerly known as Radia), each of the main agent modules — radskman, radpinit, and radconct — created its own log, which would be overwritten each time the module ran. Use these logs to help you troubleshoot deployment problems. Beginning with Radia 3.x, you can:

- Create a single log for all of these modules.
- Append information to the log if you prefer to see all of the activity.
- Name the log, which may be useful for debugging deployments or for collecting information from your agent computers. For example, you might name your logs based on the date and time. Then, if you notice a problem occurring on a certain date, you can retrieve only the logs that you need to review.

Each of the three main client modules takes command line parameters in the following format:

```
Keyword = value (in comma delimited format)
```

Therefore, you can use the following optional parameters on the command line if you want to name the log file or append information to an existing file. For example, you could add the log parameter to a radskman command line in a Notify to specify a particular log name.

**Table 34 Parameters for Log Files**

Parameter	Description	Default	Example
Alog	The name of the log file to append to. If you do not specify the alog parameter, information will be appended to the log file named in the log parameter.  Use a valid filename without a path. By default logs are stored in the IDMLLOG folder.	N/A	Alog=Application1.log

<b>Parameter</b>	<b>Description</b>	<b>Default</b>	<b>Example</b>
Log	<p>The name of the log file to create. Use a valid filename without a path. By default logs are stored in the <code>IDMLOG</code> folder.</p> <p>If there is an existing log file with the same name, CM creates a backup of that file called <i>logname.bak</i>. If there already is a <i>logname.bak</i>, CM will overwrite it.</p>	Connect.log	Log=20010524.log

The value for the log parameter is stored in the LOGNAME attribute, located in the ZMASTER object in the catalog and application directories.



## Summary

- Subscribers use the CM Application Self-service Manager user interface to install, update, verify, and remove software on their computers.
- Customize the user interface using the Preferences button in the Side Bar.



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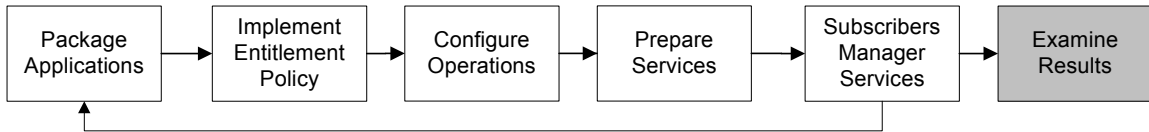
## 9 CM Client Directories and Objects

At the end of this chapter, you will:

- Know the directory structure of the CM client.
- Be familiar with core CM client objects.
- Know where client objects are stored.

Although you will tailor this strategy to meet your organization's needs, we recommend that you review this guide for a comprehensive understanding of the CM Application Self-service Manager. This chapter discusses CM agent objects.

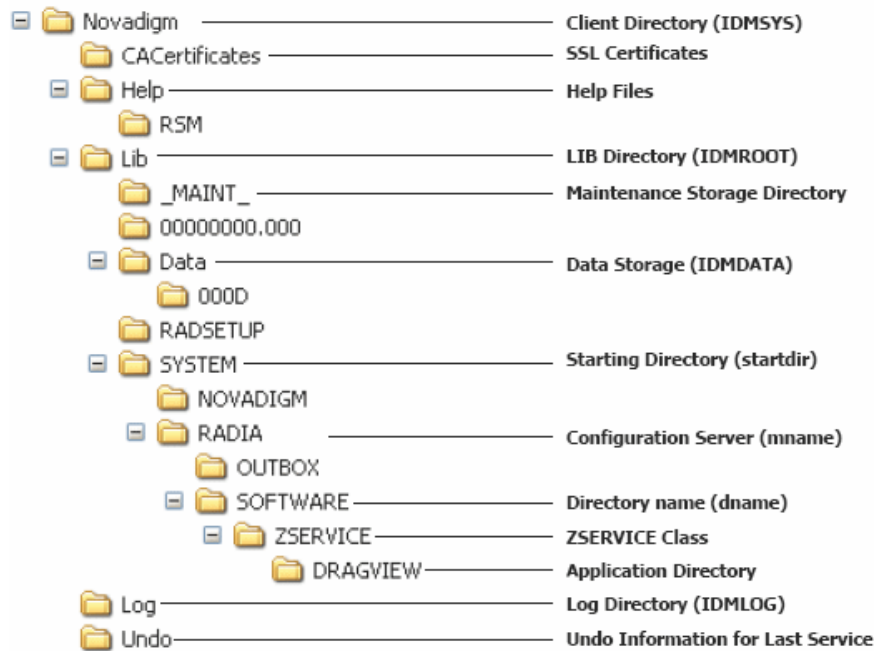
**Figure 30** Tasks completed in this guide



## CM Agent Directory Structure

Below is an example of the directory structure on an HP OpenView Configuration Management Application Self-service Manager (CM Application Self-service Manager) agent computer following the installation of the CM Application Self-service Manager, a forced system (machine) connection from the client to the HP OpenView Configuration Management Configuration Server (CM Configuration Server), and the installation of a mandatory application.

**Figure 31 View the client directory tree**



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

## CM Application Self-service Manager Directories

The initialization settings for the CM Application Self-service Manager for Windows are located in the [NOVAEDM] section in the `NVD.INI` file, on the agent computer. `NVD.INI` is located, by default, in the `IDMLIB` directory and this location is stored in the registry key

`HKLM\Software\Novadigm\Radia\Settings\Inipath.`

**Table 35 NOVAEDM Parameters**

Parameter	Description
IDMDATA	<p>When CM installs software, the CM agent temporarily stores compressed files received from the CM Configuration Server in this folder.</p> <p>Once the files are decompressed and installed on the agent computer, the compressed files are erased.</p> <p>Default: <i>SystemDrive:\Program Files\Hewlett-Packard\CM\Agent\Lib\Data\</i></p>
IDMLIB	<p>Dynamic directory that stores the objects for the service currently being managed.</p> <p>Default: <i>SystemDrive:\Program Files\Hewlett-Packard\CM\Agent\Lib\</i></p>
IDMSYS	<p>Stores the CM agent executables, such as .EXE and .DLL files.</p> <p>Default: <i>SystemDrive:\Program Files\Hewlett-Packard\CM\Agent\</i></p>
IDMROOT	<p>The base directory for IDMLIB. This is a static path.</p> <p>Default: <i>SystemDrive:\Program Files\Hewlett-Packard\CM\Agent\Lib\</i></p>
IDMLOG	<p>Stores the CM agent logs.</p> <p>Default: <i>SystemDrive:\Program Files\Hewlett-Packard\CM\Agent\Log\</i></p>

## About CM Agent Objects

When an agent computer connects to the CM Configuration Server, information is exchanged between the agent and the CM Configuration Server. This exchange is called **resolution**. During resolution, CM checks the status of services, and updates the CM Configuration Server with information from objects stored on the agent computer.

CM agent objects are stored in the IDMLIB directory on the agent computer. After installing the CM Application Self-service Manager agent and connecting to the CM Configuration Server, you can use CM agent objects to answer questions such as:

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

While there are multiple CM objects on an agent computer at any time, there is a core group of objects that supply information about and the status of the current agent connect. [Table 36](#) below lists these core objects. The table includes information on when the object is created or updated, and a brief summary of what the object includes. Each object listed has its own section in this chapter including a table listing its attributes. There are other objects created during the agent connect, but only the most commonly used ones are noted here. Check the HP OpenView web site for information on other agent objects.

**Table 36 Core Agent Objects**

<b>Object</b>	<b>When created or updated</b>	<b>Type of Information included</b>
ZCONFIG	ZCONFIG is created at start of agent connect process. See <a href="#">Table 37</a> on page 298 for more information.	Contains basic hardware information for the agent computer such as processor, operating system, and drives.
SYNOPSIS	This object is transferred to the CM Configuration Server at the end of the agent connect. Note: Client Operations Profiles must be enabled for this object to be present. See <a href="#">Table 38</a> on page 302 for more information.	RADSKMAN stores a job summary in the SYNOPSIS object. It reports some of the parameters from the RADSKMAN command line and information on the number of files and bytes added, removed, and repaired.

<b>Object</b>	<b>When created or updated</b>	<b>Type of Information included</b>
SAPSTATS	<p>Updated by any network bound modules that need to access the Server Access Profile (SAP) such as RADCONCT, RADSTGRQ, and RADSTGMS. RADSKMAN deletes the SAPSTATS object at the beginning of the job.</p> <p>Note: Client Operations Profiles must be enabled for this object to be present.</p> <p>See <a href="#">Table 39</a> on page 304 for more information.</p>	<p>The SAPSTATS object has one instance for each of the agent computer's Server Access Profiles (SAP). It summarizes information for each SAP such as speed, number of files sent and received, and the role of the SAP.</p>
PREFACE	<p>PREFACE is sent to the CM Configuration Server at every phase of a radskman process including:</p> <ul style="list-style-type: none"> <li>• Client operations profile resolution</li> <li>• Self Maintenance resolution</li> <li>• Catalog resolution</li> <li>• Single service resolution (This can happen multiple times depending on what services are processed.)</li> <li>• Outbox flush</li> </ul> <p>See <a href="#">Table 40</a> on page 306 for more information.</p>	<p>Contains core information about each invocation of radskman.</p>
SMINFO	<p>SMINFO is created during Client Operations Profiles resolution, but does not require Client Operations Profiles.</p> <p>See <a href="#">Table 41</a> on page 308 for more information.</p>	<p>SMINFO collects information that is independent of the hardware and software installed on the computer, and some network information.</p>



## CM Agent Version

Some of the objects described in this book apply only to CM agents version 3.1 and above. To verify the agent's versions, open the `connect.log` file in the `IDMLOG` directory on any operating system using a text editor and search for "version." On Windows Operating systems, you can also check the Version tab of the Properties of `radskman` in the `IDMSYS` directory.

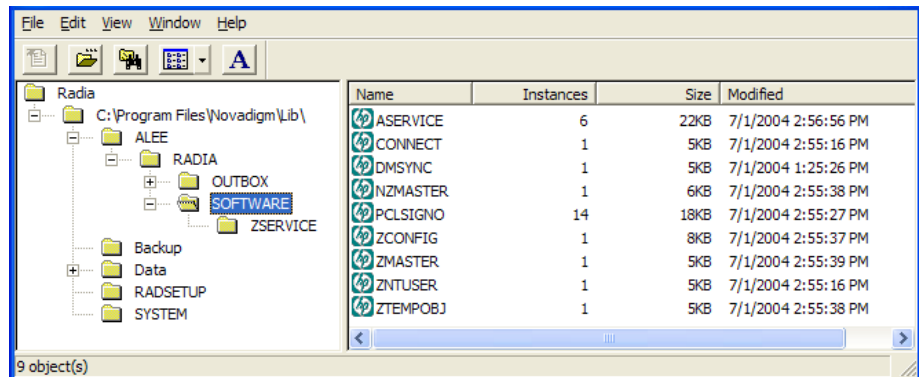
## Using the CM Admin Agent Explorer to View Objects

The CM Admin Agent Explorer is installed as a component of the HP OpenView Configuration Management Administrator (CM Administrator). Use it to view objects in the `IDMLIB` directory. You can view any object if you have access to the agent computer's `IDMLIB` directory. Otherwise, you may need to manually retrieve the object file, and store it on your CM administrator computer.

To view an object using the CM Admin Agent Explorer

- 1 Go to **Start** → **Programs** → **HP OVCM Administrator** → **CM Admin Agent Explorer**.

The CM Admin Agent Explorer opens.



- 2 If necessary, from the File menu, select **Change Directory** to navigate to the agent computer's `IDMLIB` directory or to the directory where the object is stored.
- 3 Double-click the object's name in the list view.  
The CM Admin Agent Explorer displays the selected object.
- 4 Click **Save/Exit** to close the dialog box.

## Hardware Configuration Information (ZCONFIG)

The ZCONFIG object stores hardware configuration information from the agent computer. Use the CM Admin Agent Explorer to view the ZCONFIG object. The following table describes the attributes of ZCONFIG arranged in alphabetical order. These attributes may vary depending on the configuration of the agent computer.

► The ZCONFIG object is sent to the CM Configuration Server automatically for viewing with the CM Admin CSDB Editor. If you do not want this object sent to the CM Configuration Server, set the POLICY.USER.ZCONFIG attribute to N in the base instance. This will stop collection from ALL users. The object will still exist on the agent computer.

**Table 37 ZCONFIG Attributes**

Attribute	Description	Example
BOOTDRV	Designation of the boot drive	C:
BOOTDRVI	Type of boot drive	IDE
DHCPSR0 <i>n</i>	IP address of the DHCP Server of LADAPT0 <i>n</i> adapter	10_10_10_6
DHCPSVR	IP address of the DHCP Server for the current LAN adapter	
DNSDMN01	Domain name used by the agent computer for LADAPT0 <i>n</i> adapter	
DNSDOMN	Domain name currently being used	
DNSHNM01	Host name used by the agent computer for LADAPT0 <i>n</i> adapter	
DNSHOSTN	Hostname currently being used	
GATEWY01	Gateway Address of network adapter 1	10.1.1.1
HALCOMP	Company of HAL.DLL	Microsoft Corporation
HALDATE	Date and time of HAL.DLL	20010817 19:00:00
HALFNAME	Original name of HAL.DLL	Halacpi.dll

<b>Attribute</b>	<b>Description</b>	<b>Example</b>
HALFVER	Internal version of HAL.DLL	5.1.2600.0 (xpclient.010817-1148)
HALINAME	Name of HAL.DLL	Halacpi.dll
HALLANG	Language of HAL.DLL	English (United States)
HALPNAME	Product name of HAL.DLL	Microsoft® Windows® Operating System
HALPVER	Product version of HAL.DLL	5.1.2600.0
HALSIZE	Size of HAL.DLL	78464
IPADDR01	IP address of network adapter 1	10.1.1.32
LADAPT01	LAN Adapter 1	00C04F6D76B4
REBOOTD	Reboot Date	20010126
REBOOTT	Reboot Time	13:12:30
SCANTYPE	Type of hardware scan	WMI
SUBNET01	Subnet Mask for LADAPT01	255.255.255.0
ZGATEWAY	Gateway Address	&(GATEWY01)
ZHDWARCH	Architecture	AMD64 X86
ZHDWBIOS	BIOS type	07/27/98 Phoenix ROM BIOS PLUS Version 1.10 A02
ZHDWCDDR	Drive letter of CD-ROM drive	H:
ZHDWCOMP	Computer Name	ALEE
ZHDWCPU	CPU type	GenuineIntel
ZHDWCPU	Number of CPUs installed	1
ZHDWCPU	Current CPU speed	350MHz
ZHDWCTYP	Computer Type (Desktop or Laptop)	LAPTOP

<b>Attribute</b>	<b>Description</b>	<b>Example</b>
ZHDWD00	Drive name for drive 00	C:
ZHDWD00C	Drive classification for drive 00	Fixed
ZHDWD00F	Current free space on drive 00	321,093,632
ZHDWD00S	File system on drive 00	FAT
ZHDWD00T	Total space for drive 00	2,146,467,840
ZHDWD01	Drive name for drive 01	D:
ZHDWD01C	Drive classification for drive 01	Fixed
ZHDWD01F	Current free space on drive 01	1,116,372,992
ZHDWD01S	File system on drive 01	FAT
ZHDWD01T	Total space for drive 01	2,146,467,840
ZHDWDF_A	Information for floppy drive A	3.5, 1.44MB, 512 bytes/sector
ZHDWDLST	List of assigned drive letters	A, C, D
ZHDWDNUM	Number of drive letters assigned	3
ZHDWFPU	Current FPU type	x86 Family 6 Model 5 Stepping 2
ZHDWIPAD	IP Address	&(IPADDR01)
ZHDWKYBD	Keyboard type	IBM enhanced (101- or 102-key); Number of function keys = 12
ZHDWLANA	LAN Adapter	&(LADAPT01)
ZHDWLANG	Language	English (United States)
ZHDWMEM	Total physical memory (RAM)	133,619,712
ZHDWMEMF	Current total free memory (RAM)	66,543,616
ZHDWMOUS	Mouse (pointing device) type	msps2

<b>Attribute</b>	<b>Description</b>	<b>Example</b>
ZHDWNET1	Network adapter 1 information	3Com Fast EtherLink XL 10/100Mb TX Ethernet NIC (3C905B-TX)
ZHDWNNET	Number of network adapters installed	1
ZHDWOS	Operating system and version	Microsoft Windows Server 2003 Enterprise x64 Edition Version 5.2.3790
ZHDWOSCL	Operation system classification (Workstation or Server)	Server
ZHDWOSDB	Operating system build	1381
ZHDWOSOG	Operating system organization	ASD Foods, Inc.
ZHDWOSOW	Operating system owner	Anna Lee
ZHDWPA00	Printer 00 information	\\ASD\ACCOU NTING on Port: \\ASD\ACCOU NTING Driver: HP LaserJet 4 Plus
ZHDWPA01	Printer 01 information	Apple LaserWriter Pro 810 on Port: LPT1: Driver: Apple LaserWriter Pro 810
ZHDWPPAR	Number of parallel ports	1
ZHDWPPRN	Number of printers available	2
ZHDWP SER	Number of serial ports	2
ZHDWSVCP	Service pack applied	Service Pack 4

<b>Attribute</b>	<b>Description</b>	<b>Example</b>
ZHDWVIDEO	Video type	ATI Technologies Inc. 3D RAGE PRO
ZHDWXPAG	Page size	4096 bytes
ZHWCPU01	First CPU type	GenuineIntel
ZHWFPU01	First FPU type	x86 Family 6 Model 5 Stepping 2
ZHDWVIE	Microsoft Internet Explorer Version	6.0.2600.0000
ZHDWVMSI	MSI Version	2.0.2600.0
ZHDWVRES	Video Resolution	800x600
ZMODEM	Modem present?	Y
ZOBJRRC	Resolution return code	000
ZOBJRSTY	Resolution type	C
ZUSERID	User ID or computer name	ALEE

## Client Operations Profile Summary (SYNOPSIS)

The SYNOPSIS object is created on agents using Client Operations Profiles. The SYNOPSIS object summarizes the most recent agent connect. Use the SYNOPSIS object to confirm the success or failures of the agent connect process.

**Table 38 SYNOPSIS Attributes**

<b>Attribute</b>	<b>Description</b>
STARTTIME	Start time in ISO8601 time format e.g 1997-08-15T11:12:00-0400
ENDTIME	End time in ISO8601 time format
EXITCODE	Exit code from the job
ERRORMSG	Text message corresponding to the EXITCODE described in <i>Applications Messages and Codes Guide</i> .

<b>Attribute</b>	<b>Description</b>
PRIORAPP	Total number of applications that existed in the service list (installed/not installed) before this job started
PRIORINS	Total number of installed applications that existed in the service list before this job was started
PRIORERR	Total number of applications in the service list that have errors before this job started
CURRAPP	Number of applications in the service list after the job completed
CURRINS	Number of applications in the service list that have been installed
UPDNUM	Number of updates found in the service list
UPDSKIP	Number of updates skipped
UPDDONE	Number of updates processed
UPDFAIL	Number of updated that failed
ADDNUM	Number of new applications found in the service list
ADDSKIP	Number of installs skipped (possibly optional applications)
ADDDONE	Number of installs processed
ADDFAIL	Number of installs that failed
DELNUM	Number of deletes found in the service list
DELSKIP	Number of deletes skipped
DELDONE	Number of deletes processed
DELFAIL	Number of deletes that failed
VERNUM	Number of applications that were verified
VERSKIP	Number of verifications skipped
VERDONE	Number of verifications processed
VERFAIL	Number of verifications that failed
REPNUM	Number of applications that were repaired
REPSKIP	Number of repairs skipped
REPDONE	Number of repairs processed

<b>Attribute</b>	<b>Description</b>
REPFAIL	Number of repairs that failed
CREFRESH	Catalog Refreshed (Y/N)
JOBID	Jobid passed in on the command line via notify
ZUSERID	Userid for this job
ZCONTEXT	Context of this job (M – Machine or U – User)
MACHNAME	Machine name of the agent computer from where this was run
USEREXEC	User that executed the job
CMDLINE	Command line parameters used to execute this job

## Service Access Profile Status (SAPSTATS)

The SAPSTATS object is generated on clients using Client Operation Profiles, and is used to report the Server Access Profile (SAP) status and usage statistics from the CM agent. The SAPSTATS object contains all the variables defined in the SAP Class in the CM Configuration Server Database along with the following usage related variables.

**Table 39 SAPSTATS object attributes**

<b>Attribute</b>	<b>Description</b>
BANDWIDTH	Percentage of bandwidth to use between 1 and 99.
BYTERCVD	Bytes received.
BYTESENT	Bytes sent.
ENABLED	Specifies if this SAP is enabled. Y for enabled, N for disabled.
ERRCOUNT	Number of errors.
FILEMISS	Number of files not found.
FILERCVD	Number of files received.
FILESENT	Number of files sent.
LASTXSD	Last Date/Time Accessed in ISO format.



<b>Attribute</b>	<b>Description</b>
NAME	Friendly name of the SAP.
OBJRCVD	Number of objects received.
OBJSEND	Number of objects sent.
PRIORITY	Priority for this SAP obtained from the CLIENT.LOCATION Class instance.
PROXY	The Internet proxy URI through which the client will connect to the SAP. Maintained by client.
ROLE	Role of the SAP. Possible values are: <b>O:</b> Client Operations Profiles <b>M:</b> Self Maintenance <b>S:</b> Services <b>D:</b> Data <b>A:</b> All of the above roles
SPEED	Speed to the SAP from the agent computer measured in bytes per second.
STATUS	Status of this SAP. 000= SAP was accessed successfully 920 = SAP could not be accessed 999 = SAP was not used
STREAM	Specifies if streaming is used. Y for enabled. This overrides the client setting in ZMASTER.ZNORSPNS.
THROTYPE	Type of bandwidth throttling used. Possible values are NONE, ADAPTIVE, and RESERVED.
TIMEOUT	Communications timeout in seconds.
TYPE	Type of SAP. Possible values are: RCS – CM Configuration Server DATA – CM Proxy Servers, Staging Servers or a CD-ROM.
URI	Universal Resource Identifier for the SAP

## Radskman Execution (PREFACE)

The PREFACE object contains information about each execution of radskman. PREFACE is sent to the CM Configuration Server at every phase of a radskman process including:

- Client Operations Profile resolution
- Self Maintenance resolution
- Catalog resolution
- Single service resolution (This can happen multiple times depending on what services are processed.)
- Outbox flush

At each new phase of the agent connect, the PREFACE object is updated. The variables in the PREFACE object can be used for resolution and reporting. For resolution, use the attributes of the PREFACE object for ZSTOP expressions, for symbolic substitution, and for dispatching messages. For reporting, you can combine MACHNAME, ZUSERID, ZCONTEXT, JOBID, and CTYPE to know which user ran the agent connect, the type of connect, and the context.

**Table 40 PREFACE Object Attributes**

Attribute	Description
CMDLINE	The radskman command line parameters used for the current agent connect.
COMPDN	The distinguished name of the computer in the Active Directory format. This field will be blank if the system is not part of an Active Directory or a Domain environment. Windows operating systems that do not authenticate to Active Directory would show this as their DomainName/MachineName. Example: CN=ALEE,CN=Computers,DC=usa,DC=asdfoods, DC=com
CTYPE	Type of CM agent. The possible values are: RSM CM Application Self-service Manager RAM CM Application Manager RPS CM Proxy Server or CM Radia Staging Server (for preloading application resources)
JOBID	The jobid specified on the command line for this connect

Attribute	Description
LOCALUID	The starting directory under <code>IDMROOT</code> on the agent computer. LOCALUID contains the value derived from the <code>STARTDIR</code> radskman parameter. For example, if <code>startdir = \$USER</code> then LOCALUID would contain the user's ID. If <code>STARTDIR = SYSTEM</code> then LOCALUID would contain SYSTEM. UID stands for user's initial directory <i>not</i> the user's identification.
MACHNAME	Agent computer's machine name.
USEREXEC	The user who is currently logged on and who executed the command. For Notify and Timers, this would be SYSTEM. For logon scripts, this would be the subscriber's network account name.
ZCONTEXT	The context for this connect. Possible values are: M – Machine, U – User, or blank.
ZDOMNAME	The CM Configuration Server DB's domain specified in the <code>DNAME</code> parameter of the radskman command line. If <code>DNAME</code> is not specified in the command line, the default is SOFTWARE.
ZMGRNAME	The CM Configuration Server's name specified in the <code>MNAME</code> parameter of the radskman command line.
ZUSERID	The ZUSERID field contains the same value found in <code>ZMASTER.ZUSERID</code> of the client. In most scenarios, this represents the machine name of the agent computer, but may also contain the current user name or another value. The value found in this field is often used as the key for policy resolution or reporting. The <code>UID</code> radskman parameter sets this value.

## Systems Management Information (SMINFO)

The Systems Management Information (SMINFO) object is created on all AM agent computers. The SMINFO object summarizes hardware specific information that is independent of what operating system or software is installed on the agent computer. CM uses SMBIOS standards to access data about the BIOS. SMINFO also includes some network and user ID information.

**Table 41 SMINFO Attributes**

<b>Attribute</b>	<b>Description</b>
ASSETTAG	Unique Asset Tag number of the agent computer from the BIOS
COMPDOMN	Computer Domain
COMPNAME	Computer Name
IPADDR	Agent computer's IP address
MACADDR	Agent computer's MAC address
MACHUID	Unique machine user ID
SNENCLOS	Serial Numbers for the system enclose structures from the BIOS
SNSYSTEM	Serial Numbers for the system structures from the BIOS
SUBMASK	Subnet Mask
SUBNET	Subnet
SYSMANUF	System manufacturer from the BIOS
SYSPROD	System manufacturer product information from the BIOS

## The PROFILE File

Some agent objects such as ZCONFIG and ZMASTER are sent to the CM Configuration Server during an agent connect. The objects received from the agent computer are stored in the PROFILE File in the CM Configuration Server DB. Within the PROFILE File, each agent computer is stored as a domain. By default, each agent computer is identified by the subscriber who is currently logged on. The subscriber may be either a computer name or a user name.

The following table describes some of the objects that you might find in the PROFILE File, although the objects may vary based on your configuration.

**Table 42 Objects in the PROFILE File**

<b>Instance</b>	<b>Information Recorded</b>
ZCONFIG	Contains basic hardware information for the agent computer such as processor, operating system, and drives.
ZMASTER	Contains information used to run the CM agents, such as user ID and operating system.
ZSVCSTAT	Contains information about the service after it has been successfully installed on the agent computer. This is useful for reporting purposes such as determining which users have the application or when it was installed. One instance is created for each service.
ZSTATUS	Contains information about the most recent agent connect, such as the number of objects going to and from the agent computer.

Each domain contains several classes, which represent the objects received from the agent computer. Use CM Admin CSDB Editor to view the PROFILE File.

## Reporting

As part of the Configuration Management (CM) extended infrastructure, the web-based CM Reporting Server allows you to query the combined data in existing CM Configuration Server Databases (CM-CSDB) and create detailed reports. In addition, you have the option of mounting an existing LDAP directory, which allows you to filter your data using your LDAP directory levels.

The CM Reporting Server interface provides a dynamic and intuitive way to use CM SQL data for reporting and overall environmental assessment. See the *HP OpenView Configuration Management Reporting Server Installation and Configuration Guide* for additional information.



The CM Reporting Server is an additional feature available from HP. Contact your HP sales representative for details.

## Agent Logs

One log is created from the three main agent modules, radskman, radpinit, and radconct. The default name for the log is `connect.log`, and its default location is `System Drive:\Program Files\Hewlett-Packard\CM\Agent\log`. When `connect.log` reaches a size of 1 MB, a backup is created called `connect.bak`.

For diagnosing problems, you may want to name a new log for debugging deployments or for collecting information from your agent computers. Each of the three main agent modules can be directed to use a particular log file, by adding the log parameter to its command line. For example, you might name your logs based on the date and time. Then, if you notice a problem occurring on a certain date, you can retrieve only the logs that you need to review. Add the log parameter to a radskman command line to specify a particular log name as shown below:

```
radskman log=notify10012003.log
```

The value for the log parameter is stored in the LOGNAME attribute, located in the ZMASTER object in the catalog and application directories.

## Diagnostic Module (radstate)

Radstate is a diagnostic module designed to give an overview of the current state of the CM agent. The information in the radstate output is based on data retrieved from numerous CM agent objects.

When radstate is run with the Verbose parameter (mode `v`), it provides basic information regarding the CM agent environment:

- Global object statistics
- Current date and time
- Current operating system
- Locations of the IDMSYS, IDMLIB, and IDMLOG directories
- Environment settings
- Emulator settings
- Trace levels
- Timeout settings

- All Service status including component totals by User and Service including instance totals and byte totals.
- Client Timer Information

Use radstate at anytime to check CM agent configurations. For example, run radstate at the end of each agent connect. After radstate is run using mode option o, the ZRSTATE and ZRSTATES objects are built and can be sent to the CM Configuration Server as needed.

Radstate should be run:

- Whenever CM agent-specific information is required.
- If it is suspected that some files may not have deployed correctly.
- If desktop updates have not occurred.

Manual execution of radstate produces a summary style report, `radstate.log`, regarding the current state of services and resources installed on the client desktop. Radstate is executed from the command line using the appropriate parameters, separated by a comma, for example:

```
radstate mode=vo, IDMROOT=C:\Program Files\Hewlett-  
Packard\CM\Agent\Lib
```

See the HP OpenView web site for a technote with additional information.

## Summary

- The ZCONFIG object stores hardware configuration information from the agent computer.
- Use the CM Admin Agent Explorer to view objects stored on the agent computer.
- The PROFILE File in the CM Configuration Server DB stores objects received from the agent computer.
- To generate reports from the CM Configuration Server DB, consider using the CM Inventory Manager.



---

# 10 Deploying Mandatory Applications for the CM Application Self-service Manager

At the end of this chapter, you will:

- Know how to designate applications as mandatory.
- Be familiar with the ways in which you can deploy mandatory applications and where to get more information.

By now, you have a detailed understanding of the CM Application Self-service Manager agent. Your subscribers install, update, verify, and remove applications from their computers with the CM Application Self-service Manager user interface. Subscribers have control, which means that the software available in the CM Application Self-service Manager user interface is considered optional. Subscribers have the option to install it or not.

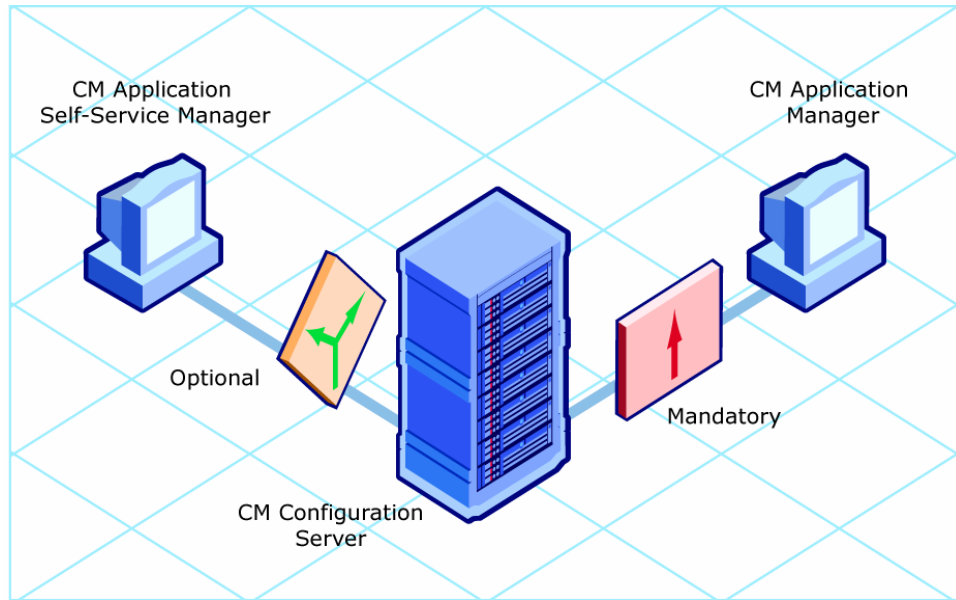
However, there may be times when you want to retain control over the management of your digital assets. For example, you may want to distribute a mandatory application, such as a price list, to your subscribers. The price list may need to be updated on a regular basis and you don't want to rely on your subscribers to remember to request the updates, or even to create a schedule to receive the updates. To do this, you can use the CM Application Manager client to handle the deployment, without relying on your subscribers.

Enabling the CM Application Manager feature set with the CM Application Self-service Manager, allows you to handle both mandatory and optional applications because it installs both the CM Application Self-service Manager client *and* the CM Application Manager agent.



You must have the proper license in order to enable the CM Application Manager Feature Set along with the CM Application Self-service Manager. Contact your sales representative for details.

**Figure 32 Two feature sets**



This chapter introduces some of the additional capabilities that are available with the CM Application Manager feature set. For detailed information about the CM Application Manager agent, refer to the *CM Application Manager Guide* on the HP OpenView web site.

## Distributing Mandatory Applications with the CM Application Self-service Manager Agent

In addition to using the CM Application Manager to handle mandatory applications, you can also configure the CM Application Self-service Manager to process mandatory applications.

To process mandatory applications, you must designate the appropriate applications as mandatory.

### Configuring Mandatory Applications

To designate an application as mandatory or optional:

- When you use the New Application Wizard to create a service for the first time, you will encounter the Application Target Type dialog box. Select **Application Manager** to designate that you are creating a mandatory service or **Self Service Manager** to designate that you are creating an optional service. See [Creating a Service](#) on page 146 for more information.

or

- Use the CM Configuration Server Database Editor to modify the ZSVCMO attribute for the application instance in the Application (ZSERVICE) class. This is initially set based on your selection in the New Application Wizard but you can use the CM Configuration Server Database Editor to modify the attribute. If you are using CM Application Manager and CM Application Self-service Manager, you could also specify mandatory and then optional, MO, or optional then mandatory, OM. The first character indicates how the application should be handled before installation. The second character indicates how the application should be handled after installation. For example, suppose you want a CM Application Self-service Manager subscriber to have the option of installing the application, but, once installed, want the maintenance or removal of the application to be mandatory, set ZSVCMO to be OM.



If you may need to edit the ZSERVICE class template, to allow you to set ZSVCMO to OM. See the *CM Configuration Server Database Editor Guide* for more information on editing a class template. To process mandatory applications using CM Application Self-service Manager, add "enterprisemanagement=auto" to the `args.xml` file.

This section covers how to configure mandatory applications using the CM Configuration Server Database Editor.

### To designate an application as mandatory

- 1 Go to **Start** → **Programs** → **HP OVCM Administrator** → **CM Admin CSDB Editor**.

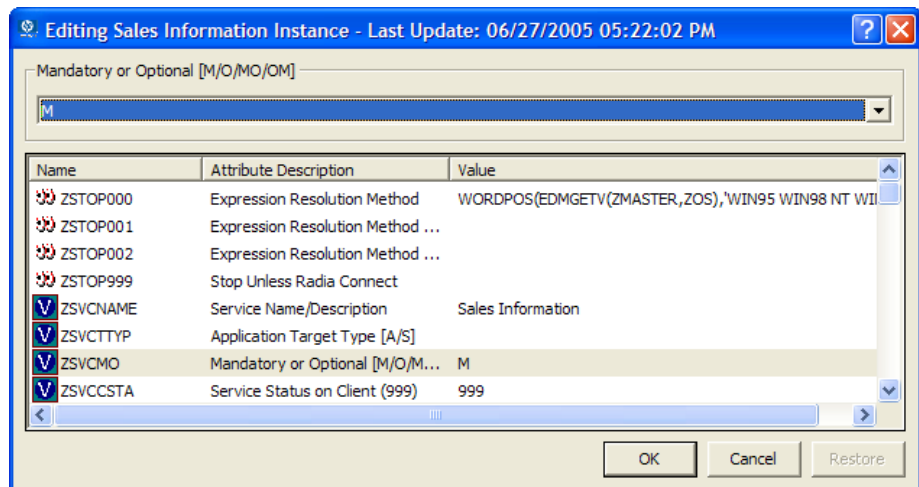
The CM Configuration Server Database Editor Security Information dialog box opens.



The factory set user ID is RAD\_MAST. No password is necessary. This might have changed during installation. You can also change this by selecting the **Change Password** check box and typing the new password in the New Password and Verify New Password text boxes.

- 2 If necessary, type a User ID and Password, and then click **OK**.  
The CM Configuration Server Database Editor window opens.
- 3 Double-click **PRIMARY**.
- 4 Double-click **SOFTWARE**.
- 5 Double-click **Application (ZSERVICE)**.
- 6 Double-click the application, such as **Sales Information**, whose ZSVCMO attribute you want to change.
- 7 Double-click **ZSVCMO**.

The Editing Instance dialog box opens.



- 8 Select M from the drop-down list.
- 9 Click **OK**.
- 10 Click **Yes** when you are asked if you want to save the changed instance attributes. The Sales Information application is now considered a mandatory service.

# Deploying Mandatory Applications with the CM Application Manager Agent

The CM Application Manager agent allows you to retain complete control over the deployment of mandatory applications without relying on the subscriber to connect to the CM Configuration Server.

This section introduces you to some of the deployment methods available with the CM Application Manager. For detailed information about implementation strategies and these methods, refer to "Deploying Services" in the *CM Application Manager Guide for Windows* on the HP OpenView web site.

## HP OVCM Scheduler

Use the HP OVCM Scheduler service to deploy a service or run any command line at a specific time.

To do this, create a timer, set the appropriate values for the attributes in the timer, and then connect it to the appropriate service. The next time the agent computer connects to the CM Configuration Server, a ZTIMEQ object is created on the agent computer, and the timer attributes and their values are transferred to the ZTIMEQ object. The Scheduler service "wakes up" once a minute and checks the timer object (ZTIMEQ) to see if there are any scheduled items to execute.

## HP OVCM Notify

Use HP OVCM Notify to force one or more agent computers to connect to the CM Configuration Server to install, update, or remove an application. Each agent computer runs the HP OVCM Notify service in the background. This service waits to receive a Notify message from the CM Configuration Server. When a message is received, the agent computer connects to the CM Configuration Server and performs the action initiated by the Notify operation. HP OVCM Notify can also send e-mail notification to agent computers.

## Version Groups

Normally, applications are deployed and activated immediately. You can use Version Groups to roll out a new version of an application to your subscribers and then activate it upon delivery, or at a later time. If the installation of the new version fails, CM automatically rolls back to the previous version. If you discover problems with a new version after installation, you can deactivate the new version and roll back to the previous version for some, or all, subscribers.

After versioning is configured, the compressed files are stored on the agent computer, and the versioning action takes place on the client machine. The roll forward/roll backward activity can be entirely local, not requiring any data to be transferred at the version change time, or partially local, with a minimum of data transmitted.

## Summary

- To process mandatory applications use the CM Configuration Server Database Editor to designate the application as mandatory. Then, modify the CM web page to enable processing of mandatory applications.
- You can process mandatory applications automatically when the CM Agent connects to the CM Configuration Server.
- You can retain control over deployment of mandatory applications by using one or more of the deployment methods available.



# A Naming Conventions

This appendix discusses the use of naming conventions to help you organize the software stored in the CM Configuration Server Database.

When packaging applications, subscribers may have different requirements such as:


- Different operating systems.
- Different amounts of free space on their hard drives.
- Different processors, memory, and so on.
- Different data or applications, depending upon their job function or other factors.

Due to these varying requirements, you might need to create several packages for a single application. To keep your digital assets organized in the CM Configuration Server Database, we recommend that you create a naming convention to be used within your organization.

This section provides some recommendations that you can use as a starting point to create your own standards.

## Categorizing Information

In general, consider using unique high-level identifiers with an underscore ( `_` ) to categorize information in the CM Configuration Server Database. The CM Configuration Server Database Editor groups instances based on the identifier that precedes the underscore.

 If you decide to use a high-level identifier without an underscore ( `_` ), you can use the CM Configuration Server Database Editor filtering capabilities to display only the instances with that identifier. Refer to the *CM Configuration Server Database Editor Guide* for more information.

For example, if you had a Windows 2000/XP version and a Windows Server 2003 version of an application to calculate loan amortizations, you might name the packages `AMORTIZE_2000/XP` and `AMORTIZE_2003`.

## Naming Conventions for the POLICY Domain

We recommend that you use a variation of the following standards.

**Table 43 Naming Conventions for the USER Class**

Format	Description	Example
USERID	Identifies the subscriber.	SJones

When you name instances in a workgroup, use information that groups your subscribers appropriately. For example, if your company is organized by division and location, you might use the conventions shown in [Table 44](#) below.

**Table 44 Naming Conventions for the WORKGRP Class**

Format	Description	Example
DIV_LOC_DESC	Defines ownership or assignment.	CTS_CLE_EVERYONE
<ul style="list-style-type: none"><li>DIV</li></ul>	Identifies the division.	CTS (Corporate Technology Services)
<ul style="list-style-type: none"><li>LOC</li></ul>	Identifies the location.	CLE (Cleveland)
<ul style="list-style-type: none"><li>DESC</li></ul>	Provides additional description of the group.	EVERYONE (all users)

## Naming Conventions for the SOFTWARE Domain

In a company organized by division and location, you might organize your digital assets using the following standards.

**Table 45 Naming Conventions for the PACKAGE Class**

Format	Description	Example
DIV_LOC_APPNAME_VER_OS	Defines the application.	CTS_CLE_WINZIP_80_WNT
<ul style="list-style-type: none"><li>DIV</li></ul>	Identifies the division.	CTS (Corporate Technology Services)
<ul style="list-style-type: none"><li>LOC</li></ul>	Identifies the location.	CLE (Cleveland)

<b>Format</b>	<b>Description</b>	<b>Example</b>
<ul style="list-style-type: none"> <li>• APPNAME</li> </ul>	Identifies the application.	WINZIP
<ul style="list-style-type: none"> <li>• VER</li> </ul>	Identifies the version of the application.	80
<ul style="list-style-type: none"> <li>• OS</li> </ul>	Identifies the operating system that the application runs on.	WNT

**Table 46 Naming Conventions for Delivery and Auditing Classes\***

<b>Format</b>	<b>Description</b>	<b>Example</b>
REG_DIV_LOC_APP NAME_VER_OS	Defines the application.	NAM_CTS_CLE_WINZIP
<ul style="list-style-type: none"> <li>• REG</li> </ul>	Identifies the region.	NAM (North America)
<ul style="list-style-type: none"> <li>• DIV</li> </ul>	Identifies the division.	CTS (Corporate Technology Services)
<ul style="list-style-type: none"> <li>• LOC</li> </ul>	Identifies the location.	CLE (Cleveland)
<ul style="list-style-type: none"> <li>• APPNAME</li> </ul>	Identifies the application.	WINZIP

\*All other classes in the SOFTWARE Domain.

Determining the conventions that make sense for your organization may take some time. However, creating a convention up front and communicating it to all of your CM administrators will keep you organized in the future.



## B Adding Classes and Attributes to the CM Configuration Server Database

The following procedures show you how to add a class to a domain or an attribute to a class in the CM Configuration Server Database.



Be sure to create a backup of your CM Configuration Server Database.

### Adding a Class to a Domain

At a minimum, you will need the following information before you make the changes to your CM Configuration Server Database:

- The name of the domain to which you are adding the class.
- The name of the new class.
- The name, size, and description of any attributes you want to add to the new class.

To add a new class

- 1 Go to **Start** → **Programs** → **HP OVCM Administrator** → **CM Admin CSDB Editor**.

The CM Configuration Server Database Editor Security Information dialog box opens.



The factory set user ID is RAD\_MAST. No password is necessary. This might have changed during installation. You can also change this by selecting the **Change Password** check box and typing the new password in the New Password and Verify New Password text boxes.

- 2 If necessary, type a User ID and Password, and then click **OK**.  
The CM Configuration Server Database Editor window opens.
- 3 Double-click **PRIMARY**.

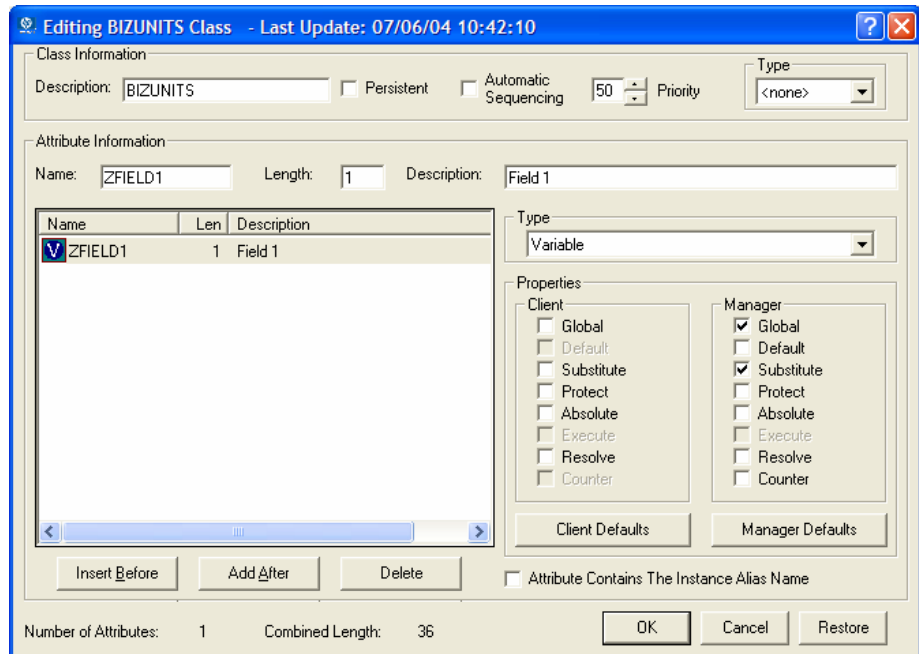
4 Right-click on the domain name where you want to add the class. In this example, we will add a new class to the POLICY Domain.

5 Select **New Class** from the shortcut menu.

The Create Class dialog box opens.

6 Enter a name for the new class (BIZUNITS in this example), and click **OK**.

If the option to open the Class Editor when a new class is added is in effect, the Editing Class dialog box will open. The Class Editor allows you to add attributes to the new class as you are creating it. Refer to the *CM Configuration Server Database Editor Guide* for more information.



If the option to open the Class Editor when a new class is added is *not* enabled, a new class is added with the specified name, and the Class Editor is not opened.

7 To complete the addition of the new class, change the Description field to identify the new class, edit the class to reflect the new class' requirements, and click **OK**.

The Class Edit Confirmation message opens.

8 Click **Yes**. The new class is added.

# Adding an Attribute to a Class


At a minimum, you will need the following information before you make the changes to your CM Configuration Server Database:

- The name of the class that you are editing.
- The name of the new attribute.
- The length of the new attribute.
- A description for the new attribute.

To add an attribute to a class template

- 1 Go to **Start** → **Programs** → **HP OVCM Administrator** → **CM Admin CSDB Editor**.


The CM Configuration Server Database Editor Security Information dialog box opens.

 The factory set user ID is RAD\_MAST. No password is necessary. This might have changed during installation. You can also change this by selecting the **Change Password** check box and typing the new password in the New Password and Verify New Password text boxes.

- 2 If necessary, type a User ID and Password, and then click **OK**.

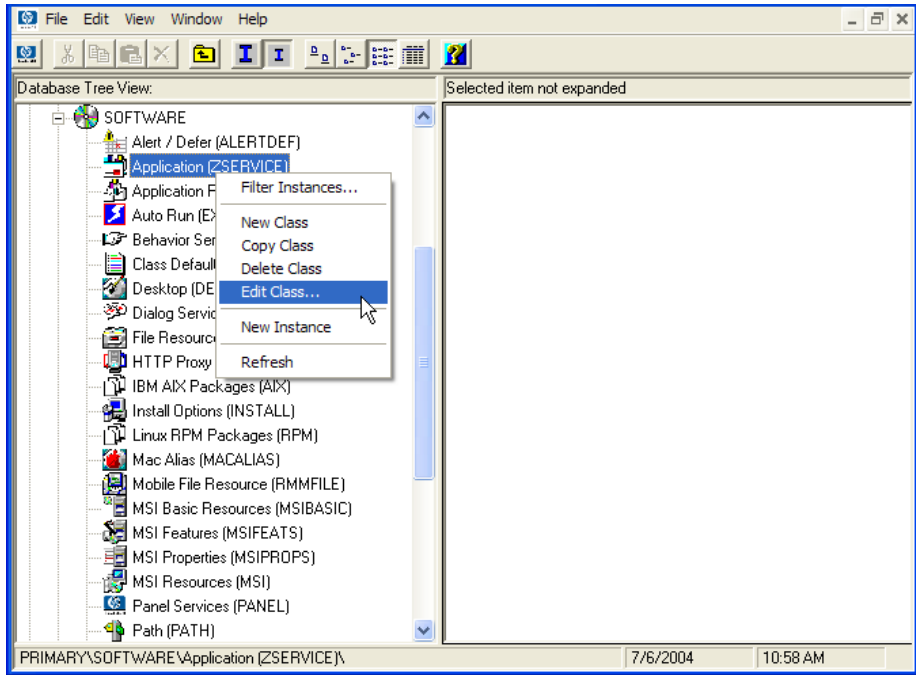
The CM Configuration Server Database Editor window opens.

- 3 Navigate to the class that you want to edit. For example, you might go to PRIMARY.SOFTWARE.ZSERVICE.

 If you do not see the name of the class (such as ZSERVICE) in the tree view, you can modify the CM Configuration Server Database Editor options. To do this:

On the CM Configuration Server Database Editor tool bar, click **View**, and select **Options**. In the Options dialog box, click the **General** tab, and then select the **Show Class Names Next to Descriptions** check box.

- 4 Right-click the class that you want to edit, such as **Application (ZSERVICE)**.



5 Select **Edit Class**.

The Editing Class dialog box opens. For detailed information about the Editing Class dialog box, refer to the *CM Configuration Server Database Editor Guide*.

6 Determine where, in the Attribute List, the attribute should be inserted.

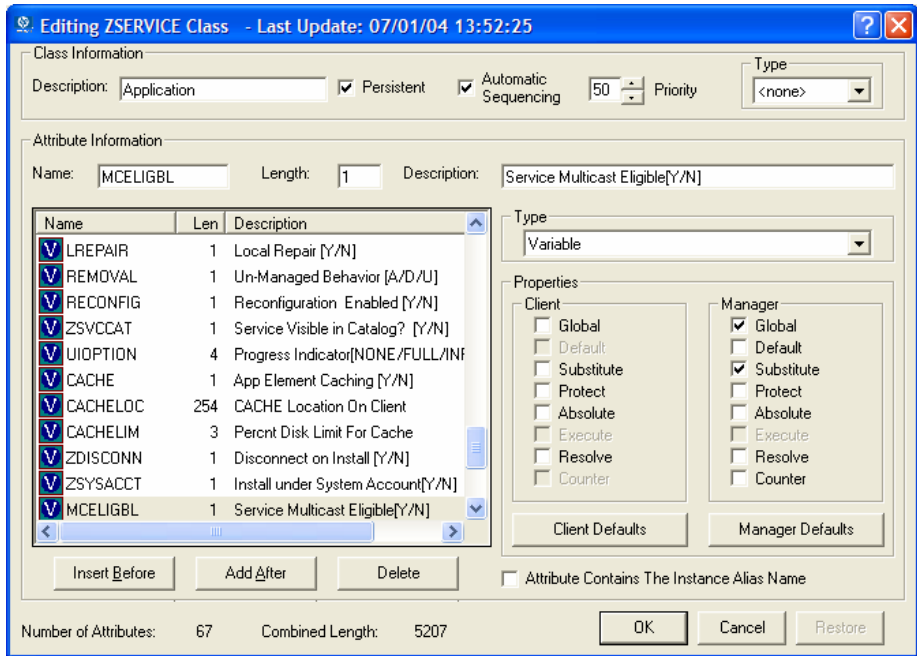
7 In the list of attributes, select the attribute adjacent to where you want to insert the new attribute.



If the Automatic Sequencing check box is not selected, attributes are processed during resolution in the order in which they appear in the Attribute List.

If the Automatic Sequencing check box is selected, the attributes of the class are processed in the following order: Expressions, Attributes, Classes (Connections), and then Methods. Refer to the *CM Configuration Server Database Editor Guide* for more information.



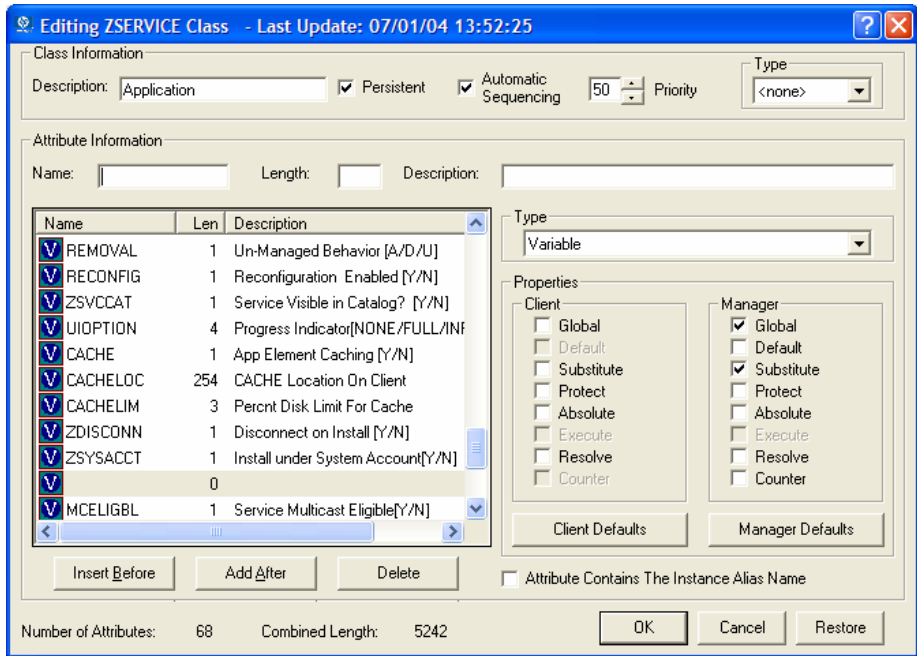


8 Click **Insert Before** to insert the attribute before the selected one.

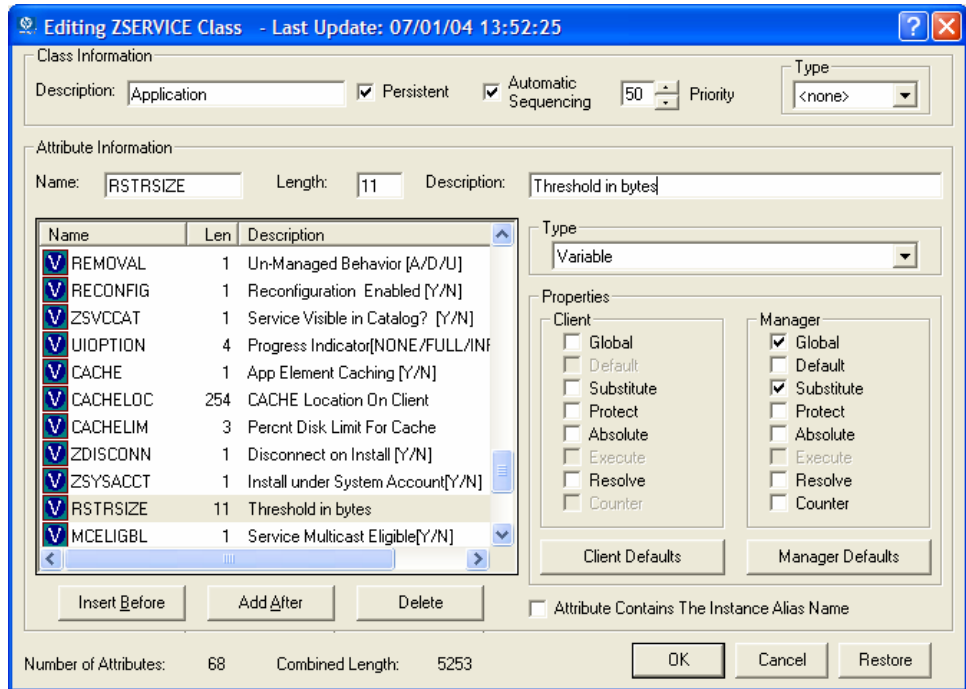
or

Click **Add After** to add the new attribute after the selected one.

A blank attribute appears.



- 9 In the Name field, type the name of the new attribute.
- 10 In the Length field, type the length for the attribute.
- 11 In the Description field, type a description for the attribute.
- 12 In the Type drop-down list, select **Attribute**.



- 13 If the document that contains the information about the new attribute specifies Client or Manager properties, select the appropriate check boxes.
- 14 Click **OK**.
- 15 Click **Yes** to confirm the changes to the class.



## C Product Name Changes

If you have used Radia in the past, and are not yet familiar with the newly rebranded HP terms and product names, Table 47 below will help you identify naming changes that have been applied to the Radia brand.

**Table 47 Product Name and Term Changes**

<b>New Name/Term</b>	<b>Old Name/Term</b>
CM Agent Installation Wizard	Radia Client Installation Wizard
CM agents	Radia clients
CM-MGMTAPPS50.MSI	Radadmin40.msi
HP OpenView Configuration Management Administrator	Radia Administrator Workstation
HP OpenView Configuration Management	Radia
HP OpenView Configuration Management Admin Agent Explorer	Radia Client Explorer
HP OpenView Configuration Management Admin CSDB Editor	Radia System Explorer
HP OpenView Configuration Management Admin Packager	Radia Packager
HP OpenView Configuration Management Admin Screen Painter	Radia Screen Painter
HP OpenView Configuration Management Application Manager	Radia Application Manager,
HP OpenView Configuration Management Application Self-service Manager	Radia Software Manager
HP OpenView Configuration Management Solutions for Servers	Server Management



# Glossary

## Administrative Installation Point (AIP)

Also called Administrative Control Point (ACP).

An AIP is a server share or local directory structure that contains all of the files that you may need to run setup for a Windows Installer-enabled application.

## agent

The CM agent (CM Application Manager or CM Application Self-service Manager) runs on the agent computer. It communicates with the CM Configuration Server to receive information about the desired state of the agent computer, and compares that information to the actual state of the agent computer. Then, the CM agent makes any adjustments necessary to make the actual state match the desired state.

## agent computer

A agent computer is a agent computer (workstation or server) that has the CM agent software installed on it.

## agent object

An agent object is a file located on the agent computer that contains information about the configuration of services or hardware.

## applications

Also called software, data, or services.

Applications are one type of content that CM can manage on subscriber computers. Use the CM Administrator Packager to create packages of data to be managed on your subscribers' computers.

## attended

An attended computer is a computer that a user is logged on to and using.

## attribute

Also called field, attribute, or property.

An attribute is a single, descriptive data item in a class. The class template contains a definition (e.g., the name, data type, description, and length) for each attribute that makes up the class. Class instances contain a set of attributes and each attribute contains a value.

#### attribute property

An attribute property controls some aspect of how an attribute is processed on the CM Configuration Server and agent computer. Each attribute defined in a class template has a set of CM Configuration Server properties and a set of client properties.

#### audience list

An audience list is a directory of the subscribers for an application used by HP OVCM Notify.

#### base instance

The base instance contains the default values for the attributes that make up a class. When you create a new instance in that class, the attributes in the new instance inherit the default values, as specified in the base instance.

#### byte level differencing

Byte level differencing is the process of packaging a patch containing updates or corrections to a resource. The patch is calculated by differencing an existing copy of the resources in the CM Configuration Server Database against the resources currently being packaged.

#### class

See instance.

#### class connection variable

A class connection variable determines the path of resolution for a client's distribution model during the CM agent connect process. It is a branch in the resolution process.

A class connection is resolved and resolution continues using the target instance identified in the class connection variable if the class connection variable attribute's name is `_ALWAYS_`, `INCLUDES`, `REQUIRES`, or if the name of the attribute matches the current value of the system message.

#### class instance

See instance.



### clean computer

A clean computer is a computer on which the operating system has just been installed, and no further changes have been made.

### Client Explorer

See CM Administrator Agent Explorer.

### CM Admin Agent Explorer

The CM Administrator Agent Explorer, installed with the CM Administrator, can be used to view or edit local objects, or create new objects. You can also use the CM Administrator Agent Explorer to view objects located on a file server or on other computers to which you are connected via a local area network (LAN).

### CM Admin CSDB Editor

The CM Admin Configuration Server Database Editor, installed with the CM Administrator, is used to manipulate the contents of the CM Configuration Server Database.

### CM Admin Packager

The CM Administrator Packager is used to create packages of data and store them in (i.e., promote them to) the CM Configuration Server Database.

### CM Admin Screen Painter

The CM Administrator Screen Painter, installed with the CM Administrator, is used to develop custom dialog boxes.

### CM Application Manager

The CM Application Manager is the CM agent that manages mandatory services. The CM administrator uses the CM Configuration Server Database Editor to specify the services that the CM Application Manager manages on the agent computer. No user interface is available.

### CM Application Self-service Manager

The CM Application Self-service Manager is the CM client used to manage optional services. The CM administrator uses the CM Configuration Server Database Editor to specify the services that are available to the subscriber.

The subscriber installs and manages data that is available from the CM Application Self-service Manager user interface.

## CM Configuration Server

Also called Manager.

The CM Configuration Server distributes applications to agent computers. It runs on the server and maintains the CM Configuration Server Database, which stores information that the CM Configuration Server needs to manage digital assets for distribution to agent computers.

## CM Configuration Server Database

The CM Configuration Server Database stores all of the information necessary to manage digital assets on a agent computer, including:

- The software and data that CM distributes.
- The "desired state" of each agent computer with respect to the CM-managed content.
- The policies determining which subscribers can subscribe to which packages.
- Security and access rules for CM administrators.

Use the CM Configuration Server Database Editor to manipulate the CM Configuration Server Database.

## CM Inventory Manager

The CM Inventory Manager is a policy-driven, inventory management tool that automatically discovers information about software and hardware, and consolidates the results into Web-based reports. The CM Inventory Management client is a WBEM (Web-based Enterprise Management) consumer.

## CM Proxy Server

When used in your environment, the CM Proxy Server can reduce the load on your CM Configuration Servers by distributing requested resources to agent computers. The CM Proxy Server maintains multiple data caches containing the resources needed for each agent computer's desired state.

## CM Scheduler

The HP OVCM Scheduler service (radsched.exe), installed with the CM Application Manager, allows you to deploy a service at a specific time.

## CM Staging Server

The CM Staging Server is used to store data required for deploying applications on a computer other than the computer with the CM Configuration Server.

### component class

A component class is a type of class used to identify the items (files, registry entries, links, icons, and so forth) that make up the content identified by a Configuration class instance. Typically, this class' instances have distributable data associated with them such as FILE, REGISTRY, or DESKTOP.

Use the CM Configuration Server Database Editor's Class Editor to set the class type to "Component".

### configuration class

A configuration class identifies content to be managed on subscribers' computers by grouping together instances of component classes. Typically, a configuration class' instances do not have distributable data associated with them. They are connected to instances of one or more component classes, perhaps through an instance of another configuration class. Examples: ZSERVICE, PACKAGE, VGROUP, VERSION, and so forth.

Use the Class Editor in the CM Configuration Server Database Editor to set the class type to "Configuration".

### desired state

The desired state embodies the content that CM manages for a specific agent computer. A model representing the desired state for each agent computer is stored in the CM Configuration Server Database. The desired state model is created and managed using the CM Configuration Server Database Editor.

### domain

A domain logically partitions a file in the CM Configuration Server Database to group "like" classes together.

Examples: POLICY Domain, SOFTWARE Domain, SYSTEM Domain.

- The POLICY Domain contains the classes that identify users individually and by their association with groups of other users.
- The SOFTWARE Domain contains the classes needed to define and deploy applications. CM administrators will do most of their work in the POLICY and SOFTWARE Domains of the PRIMARY File.

- The SYSTEM Domain contains the classes that contain administrative and process control definitions.

### expression variable

An expression variable contains a single line REXX command that is executed during resolution. If the expression evaluates to "true" in an attribute named ZSTOP, it causes resolution of the current instance to end. Resolution continues in the calling instance with the variable following the one that called the instance containing the expression variable.

### file

A file is the highest level in the hierarchy of the CM Configuration Server Database and it groups similar domains together.

Example: PRIMARY File.

The PRIMARY File is used to define and maintain the distribution model. This is one of the pre-configured files distributed with the CM Configuration Server and installed when you first install CM. Others are the NOTIFY File and the PROFILE File. CM administrators will do most of their work in the PRIMARY File.

### instance

Also called class instance.

An instance is a CM Configuration Server Database object containing a specific occurrence of a class. This is analogous to a row in a relational data table or a record in a traditional flat file. The attributes of an instance contain the data describing one specific entity of that class.

### Inventory Manager

See [CM Inventory Manager](#).

### Manager

See [CM Configuration Server](#).

### mandatory service

A mandatory service is a service that is required on the agent computer. Services are made mandatory by setting the ZSVCMO variable in the Application instance to M.

## method

A method is a program that performs functions that are meaningful in the context from which they are called.

Methods can be written in REXX or in a language that produces an executable that can validly run on the platform where it is invoked. The HP-supplied REXX run-time environment interprets REXX methods.

Client methods run on the agent computer, while CM Configuration Server methods run on the CM Configuration Server computer.

## method variable

The method variable identifies the method, or program, to be executed as part of the resolution process.

For CM Configuration Server methods, it contains a reference to an instance of the SYSTEM Domain PROCESS class that identifies the method to execute and the parameters to be passed to the method. CM Configuration Server methods are located in the CM Configuration Server BIN subfolder for .exe methods or in the Manager REXX subfolder for REXX methods.

For client methods, it contains the name of the method to execute on the agent computer. The name of a method variable that executes a client method identifies the event (such as installing or removing software) for which the method should be executed. Client methods are located in the IDMSYS location on the agent computer.

## Notify

A notify forces one or more agent computers to connect to the CM Configuration Server to install, update, or remove an application, or send an e-mail to subscribers of a particular service.

## null instance

The null instance of a class is used when an instance of that class that does not exist. During resolution, if a connection to a non-existent instance of a class is attempted, the null instance is used. This provides a resolution path that handles broken connections.

## object

An object is a data structure containing variables stored in a file with an .EDM extension on the agent computer. An object can consist of one or more instances. Each instance contains the same set of variables. The values held in the variables can vary from instance to instance.

Use the [CM Admin Agent Explorer](#) to view, edit, or create objects.

### [optional service](#)

An optional service is a service that is available to subscribers via the CM Application Self-service Manager user interface. Services are made optional by setting the ZSVCMO variable in the Application instance to O.

### [package](#)

A package is the data that is packaged as an individual unit.

### [policy](#)

A policy determines which subscribers (or computers) have access to what software. The POLICY Domain class instances identify users. Connections to the POLICY class instances identify the content to be managed for those subscribers.

### [promote](#)

When you promote a package that was created with the [CM Admin Packager](#), you are storing the package in the CM Configuration Server Database.

### [publish](#)

To bundle a set of related data into a single unit that can be managed by CM.

### [resolution](#)

Resolution occurs when the CM Configuration Server accomplishes a unit of work in response to a service request. The unit of work is defined by the contents of the CM Configuration Server Database and parameters included in the service request itself.

In other words, what CM does depends upon what information is stored in the CM Configuration Server Database and what information accompanies the request for CM to perform some action.

For example, the CM agent connect submits service requests by sending an object to the CM Configuration Server. The CM Configuration Server then performs resolution in response to each request. The parameters that control the processing of the service request are in the input object.

### [resource](#)

Also called a file.

A resource is a single component that is bundled into a package. Examples of resources are files, desktop links, and sets of registry keys.

### Scheduler

See [CM Scheduler](#).

### Screen Painter

See [CM Admin Screen Painter](#).

### service

Also called a software application, application, or software. A service represents a group of related packages that define the content to be managed by CM.

### session

A session identifies a packaging exercise in CM Admin Packager that results in the creation of one CM package.

### Software Manager

See [CM Application Self-service Manager](#).

### Staging Server

See [CM Staging Server](#).

### subscriber

A subscriber is the person who uses CM-managed applications on a agent computer.

### symbol

A symbol is the name of a variable in global memory, preceded by an ampersand.

### symbolic substitution

CM Configuration Server Database instances and client objects consist of variables that contain values. The value of a variable can contain a specification that refers to the value of another variable. During the resolution process, CM can substitute the value of the second variable to replace the reference in the first variable.

References to be processed with symbolic substitution are specified using an initial ampersand.

For example, one of the `_ALWAYS_` connection variables in the `SYSTEM.PROCESS.ZMASTER` instance of the CM Configuration Server Database contains the value `POLICY.USER.&(ZMASTER.ZUSERID)`. The reference `&(ZMASTER.ZUSERID)` refers to the `ZMASTER` object's `ZUSERID` variable, which contains the user ID typed into the CM log-on dialog box on the CM client, when the subscriber visits the CM Software Management Web page. If the user typed in `JDOE` for the user ID, symbolic substitution would render the effective value of the `_ALWAYS_` connection variable as `POLICY.USER.JDOE`.

The substitution is not permanent, i.e., the value in the CM Configuration Server Database does not change. Only the value in the in-storage object derived from the CM Configuration Server Database instance for the current resolution process contains the substituted value.

The parentheses are required only if the reference is qualified, i.e., contains a period. If the reference is unqualified, the parentheses are optional.

For example, these symbolic substitution specifications are correct:

`&(ZMASTER.ZUSERID)`

`&(ZUSERID)`

`&ZUSERID`

and this is incorrect:

`&ZMASTER.ZUSERID`

### [System Explorer](#)

See [CM Admin CSDB Editor](#).

### [System File Protection \(SFP\)](#)

System File Protection prevents protected system files from being replaced. When a program attempts to replace or move a file that is protected, the file's digital signature is checked to determine whether the file is valid or not.

### [Timer](#)

See [CM Scheduler](#).

### [unattended](#)

An unattended computer is a computer that is not currently in use (attended) by a person.



## variable

A variable is a piece of named storage that contains a changing value. The variable's value forms a part of the client's resolved distribution model and can influence the resolution process through messaging or symbolic substitution.

## version group

A version group is a collection of one or more versions of one application that CM deploys and manages. Use version groups to roll out a new version of an application to the appropriate subscribers, and activate it upon delivery or at a predetermined time.

## Web-Based Enterprise Management (WBEM)

Web-Based Enterprise Management (WBEM) is an initiative from the Distributed Management Task Force (DMTF) to develop standard technologies for accessing management information in an enterprise-computing environment.

## Windows Management Instrumentation (WMI)

Windows Management Instrumentation (WMI) is the Microsoft implementation, for Windows platforms, of Web-Based Enterprise Management (WBEM). WMI provides support for WBEM's Common Information Model (CIM).

## ZCONFIG

The ZCONFIG object contains basic hardware information for the agent computer such as processor, operating system, and drives.

## ZMASTER

The ZMASTER object contains information about the agent computer that is necessary to run the CM client such as the identity of the subscriber and the IP address of the agent computer.

## ZSTOP

A ZSTOP expression is used to stop the resolution of an instance based on certain criteria. For example, create a ZSTOP expression to deploy a ZSERVICE instance only to agent computers with a particular operations system.

## ZTIMEQ

The ZTIMEQ object is created, based on information in the Scheduler (TIMER) instance, when a timer is deployed to the client.

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