MICRO FOCUS®

PVCS Version Manager
Installation Guide

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Chapter 1
Planning Your Installation

System Requirements

For specific supported platform, version information, and disk space requirements, refer to the readme file.

Installation Options

Version Manager provides a choice between three installation types, each of which contains a set of options appropriate to its intended purpose:

- **Local:** Intended for installation by end users on their local computer.

- **Network:** A single, shared network installation that end users can share once it has been installed and configured on a network by an administrator. This saves disk space on local workstations and ensures that everyone is running the same version of the product. See Chapter 2, "About Network/Workstation Installs" on page 28.

- **Web Server:** Intended for installation by administrators to setup a Version Manager Application Server and the various server applications that run on it:

  - **File Server:** The server that accesses archives, metadata archives, revisions, and other files on behalf of Version Manager users (as opposed to each client directly accessing the archives via the file system).

  - **Web Server:** The server that supports the Version Manager Web Client.

  - **WebDAV Server:** The server that supports the Version Manager WebDAV implementation and Meritage.

  - **SSO Server:** The server that supports Single Sign On and CAC (Common Access Card) login.

The following table describes the options available for each installation type and operating system.

Feature	Description	Install Type			O/S	
		Local	Net work	Web Server	Win	Unix
Desktop Client	The Version Manager graphical user interface. See the *Getting Started Guide* and *User's Guide*.	X	N W	X	X	X
Single Sign On (SSO) Server	The server that supports SSO and CAC (Common Access Card) login. NOTE If you already have a SSO/CAC server, such as from an installation of SBM, you probably do not want to install this. See "About Version Manager Servers" on page 8.			X	X	X
SCC/COM IDE Client	Development Interface for version management within SCC and COM compliant integrated development environments (IDEs). See the *IDE Client Implementation Guide*.	X	N W	X	X	

Feature	Description	Install Type			O/S	
		Local	**Net work**	**Web Server**	**Win**	**Unix**
Plugin for Eclipse 3	Development Interface for Eclipse-based IDEs, such as IBM Rational Application Developer. This plugin integrates with issue management via PVCS Version Manager SourceBridge and Tracker TrackerLink. See the *IDE Client Implementation Guide*.	X	N	X	X	
Plugin for Eclipse 3 (rich integration)	Rich integration for Eclipse-based IDEs, such as IBM Rational Application Developer (RAD). This plugin integrates directly to Solutions Business Manager (SBM) and provides a more advanced source control integration. See the *IDE Client Implementation Guide*.	X	N	X	X	Linux
Plugin for VS (rich integration)	Rich integration for Microsoft Visual Studio. This plugin integrates directly to SBM and provides a more advanced source control integration than the SCC integration. See the *IDE Client Implementation Guide*.	X	N	X	X	
Web Server Application	The server that supports the Version Manager Web Client (as well as providing underlying services required by File Server, SSO Server, and WebDAV Server). See "About Version Manager Servers" on page 8.			X	X	X
Developer's Toolkit	The public API for developing applications that use Version Manager features. See the *Developer's Toolkit Reference Guide*.	X	N	X	X	X
Version Manager WebDAV	The server that supports the Version Manager WebDAV implementation and Meritage. See "About Version Manager Servers" on page 8, and the *Administrator's Guide*.			X		
Documentation	The Version Manager manuals in PDF format.	X	N W	X	X	X
Workstation Install	Part of a Network Installation, it allows users to run a shared copy of Version Manager. See Chapter 2, "About Network/Workstation Installs" on page 28.		N W		X	
Sample Project Database	A Version Manager project database that contains sample data that illustrates the use of Version Manager features. See the *Getting Started Guide.*	X	N	X	X	X
Command-Line Interface	The archive-centric command-line. See the *Command-Line Reference*.	X	N W	X	X	X
File Server	The server that accesses archives, metadata archives, revisions, and other files on behalf of Version Manager users (as opposed to each client directly accessing the archives via the file system). See "About Version Manager Servers" on page 8.			X		

Feature	Description	Install Type			O/S	
		Local	Net work	Web Server	Win	Unix
PCLI Command Line Interface	The project-centric command-line. See the *PCLI User's Guide and Reference*.	X	N	X		

> **NOTE** Items in the Network install-type column that are marked with an **N** will be available for use on the system from which the Network install is preformed. Those marked with a **W** will also be shared with systems that do a Workstation install from the shared network location.

About Version Manager Servers

The Version Manager Application Server runs on Apache Tomcat and hosts the following Version Manager server applications:

- File Server

- Web Server

- WebDAV Server

- SSO Server

When you start or stop the Application Server, you start or stop any of those Version Manager server applications that you installed to the same system. See the following sections for more information on each server.

About the Version Manager File Server

With the Version Manager File Server, you can increase the speed of most source control operations. Your net performance gain depends on the characteristics of your work and work practices as well as how closely you model your configuration on the ideal.

Previously, Version Manager users needed write/delete access to the archive and metadata files on the file system. This approach left open the possibility that a user could maliciously or accidentally delete archive or metadata files with tools such as Windows Explorer or the command prompt of the O/S. With the Version Manager File Server, you can eliminate this vulnerability since only the file server itself needs write/delete access to the archive and metadata files.

The file server also simplifies cross-platform implementations as you no longer need to share the archives across the network or implement NFS, Samba, or setuid.

For information on configuring and using a Version Manager File Server, see the *Administrator's Guide*.

About the Version Manager Web Server

With the Version Manager web client, you can perform version control tasks in a browser-based interface available on the Internet or intranet. The Version Manager web client is

appropriate for users in remote or mobile locations who do not need access to administrative features.

Once you have installed the Version Manager Web Server and configured a project database, users can connect to the server with their web browser and download the client interface.

> **NOTE** The Web Server Application also provides underlying services required by File Server, SSO Server, and WebDAV Server.

For information on configuring and using a Version Manager Web Server, see the *Administrator's Guide*. For information about using the Web client, see the *Web Client User's Guide*.

About the Version Manager WebDAV Server

With WebDAV Server, you can access a Version Manager project database from within a supported WebDAV client. You can automatically check out and check in files in that project database, as well as perform other common Version Manager tasks. For example, the WebDAV integration with Microsoft Office allows you to open a revision from an Office application, automatically checking it out from Version Manager. After you make changes and close that file, it gets checked back in to Version Manager.

For information on configuring and using a Version Manager WebDAV Server, see the *WebDAV Server Implementation Guide*.

About the SSO Server

SSO authenticates user IDs and passwords, or Common Access Cards and PIN's, against a Security Token Service (STS). This enables you to:

- Login once to a given Version Manager client (Desktop, Web, Eclipse RIDE, and Visual Studio RIDE) and not have to login again during that client session, even when switching between project databases.

- Login to SBM or the Version Manager Web client and not have to login to the other if you launch it as well.

- Use Common Access Card (SmartCard) authentication rather than a traditional user ID and password.

> **IMPORTANT!**
>
> - If you already have a SSO/CAC server, such as from an installation of SBM, you probably want to use it rather than install the Version Manager version of the SSO server.
>
> - If you plan to use ActiveIdentity Client as your CAC utility, install ActiveIdentity Client to your client systems BEFORE installing Version Manager to them. Else you will have some additional manual configuration to do on EVERY client system.
>
> - The task of implementing SSO/CAC can be quite complex, depending upon your usage scenario and environment. Read the chapter on configuring SSO in the *Administrator's Guide* before attempting to install or configure SSO/CAC.

About Full Releases, Patches, and Hotfixes

This manual is mainly about installing a Full Release of Version Manager. This section describes the differences between the release types and provides some about installing a Patch or Hot Fix.

Each release type has a different number of digits in its release number:

- **X.X = Full Release:** This is intended to be installed to a clean system (any previous Version Manager install should be uninstalled). In addition to newly developed features, enhancements, and fixes, it contains the enhancements and fixes of all the Patches and Hotfixes released since the previous full release.

> **TIP** You can backup and restore certain configuration settings to ease setup of a full release. See "About Upgrading an Existing Installation" on page 12.

See the rest of this manual for information about installing a full release.

- **X.X.X = Patch:** This must be installed to a system that already has a Full Release installed to it. In addition to newly developed enhancements and fixes, it contains the fixes of all the Hotfixes released since the previous patch as well as the patches released since the last full release. See "About Patches" on page 10.

- **X.X.X.X = Hotfix:** This must be installed to a system that already has a Full Release installed to it. It contains a fix for a specific issue, or small group of closely related issues. See "About Hotfixes" on page 11.

About Patches

Like full releases, patch installers come in two varieties: one for Windows, one for UNIX/Linux. The Patch and Full Release installers are similar, so you can refer to the chapters on installing full releases for general information about installing. See Chapter 2, "Installing on Windows" on page 19 or Chapter 3, "Installing on UNIX/Linux" on page 33.

The following interactive steps are included in a patch installer:

- License Agreement
- Choose Destination Location

Unlike a full release, a patch installer does NOT provide the ability to select which features to install. Rather, it updates whatever features were installed by the previous full release.

As needed, patches include updates to the documentation (readme, PDF manuals, and help) to support the enhancements and fixes made to the software.

> **NOTE** If you are patching a Network Install, see Chapter 2, "Patching a Network/Workstation Install that Used the "Local Copy of Java Packages" Option" on page 32.

About Hotfixes

Hotfixes usually include an interactive installer, but it is much simpler than those used by full releases and patches. Each hotfix includes a text-based readme that describes what the hotfix fixes and how to install it.

CAUTION! A hotfix is intended as a quick and responsive fix for a specific customer reported issue. If a given issue is of relatively low impact to your organization, you should probably wait for the next full release or patch, when the hotfix will be tested against a wider spectrum of scenarios and any corner cases properly addressed.

Hotfix files are named like this:

```
vm_####_patch_DEF######.exe |.tar
```

Where the first four # tell you which release of Version Manager the hotfix is intended to be applied to, and the DEF###### is the ID number of the customer reported defect that the hotfix is intended to fix. The file extension is `.exe` or `.tar` depending on whether it is for Windows or UNIX/Linux.

The following sections briefly describe how to install and uninstall a typical hotfix that has an interactive installer.

IMPORTANT! Always read the hotfix readme before installing/uninstalling a hotfix. Its install/uninstall procedure may differ from the typical ones described below.

Installing a Windows Hotfix

To install a Windows hotfix:

1 Double-click the patch file: `vm_####_patch_DEF######.exe`

2 Follow the installer prompts.

Uninstalling a Windows Hotfix

To uninstall a Windows hotfix:

1 Use Windows' built-in facility for removing programs.

Installing a UNIX/Linux Hotfix

To install a UNIX/Linux hotfix:

1 Extract the installer from the tar file:

```
tar -xf vm_####_patch_DEF######.tar
```

2 Initiate the installer:

```
vm_####_patch_DEF######.ex
```

3 Follow the installer prompts.

Uninstalling a UNIX/Linux Hotfix

To uninstall a UNIX/Linux hotfix:

1 From a command prompt, change to the patch_backout directory:
    cd *Install_Dir*/patch_backout

2 Run the uninstaller for the hotfix:

    ./vm####_DEF######_backout.sh

About Upgrading an Existing Installation

> **NOTE** This section is about installing a Full Release of Version Manager to a system that already has Version Manager installed. This section is NOT about installing a Patch or a Hotfix. For clarification on those terms, see "About Full Releases, Patches, and Hotfixes" on page 10.

This section contains important information and tips about updating an existing installation of Version Manager. Please review the sub-sections below for ones applicable to your usage scenario.

General Upgrade Considerations

- **Backup and Restore Configuration Settings:** It is possible to backup and restore a variety of server and client configuration settings; doing so can save considerable time and aggravation. See "Backup and Restore Configuration Settings" on page 13.

- **Uninstall:** If you intend to install to the same location as your existing Version Manager installation, you must uninstall your existing installation.

- **Stop the Servers:** Before uninstalling or installing, stop the Version Manager Application Server (File Server, Web Server, WebDAV Server, SSO Server) and any third-party servers you are using with it (Apache, IIS, iPlanet, JSWS).

- **Upgrade Both Clients and Servers:** If you use the Version Manager File Server, you must install the latest version of both the Version Manager clients and the server.

> **NOTE** If circumstances prevent you from completing both the server and client upgrades before work must resume, complete the server upgrades before resuming work. You are less likely to encounter problems when running old clients against new servers than when running new clients against old servers. However *neither* is recommended practice.

- **Windows XP: Location of ISLV.INI Differs Between Upgrade from 8.1 (or Older) and 8.2 (or Newer):** If you upgrade from Version Manager 8.1, or older, the islv.ini file will be stored in the \Windows directory as it has been in the past. If you upgrade from 8.2, or newer, or install Version Manager on a Windows XP system that does not already have an islv.ini file in the old location, the islv.ini file will

be stored in the new location:
`\Documents and Settings\All Users\Application Data\Serena\VM`

> **TIP** On Windows the file is located at: `%ISLVINI%\islv.ini`. If that variable is not set, run `pcli -d` and look at the value shown for `Dislv.ini`. On UNIX\Linux the file is located at: `$HOME/.islvrc`.

- **Cleanup References to Obsolete File Servers:** If a Version Manager client is configured to access a Version Manager file server that is unavailable, the client will hang. To avoid this, be sure to remove any obsolete file server definitions from your `servers.ini` file. See the *Administrator's Guide* for information on configuring clients for use with file servers.

Backup and Restore Configuration Settings

It is possible to backup and restore a variety of server and client configuration settings; doing so can save considerable time and aggravation.

FIRST: Backup These Files

- *Install_Dir*`\vm\common\bin\pvcsstart.bat`
  (pvcsstart.sh on UNIX; pvcsrunner.bat on Windows starting with 8.4.6)

- *Install_Dir*`\vm\common\tomcat\conf\jk\uriworkermap.properties`
  (Windows servers only)

- *Install_Dir*`\vm\inet\props\PVCSServlets.properties`
  (Windows web servers only)

- *Install_Dir*`\vm\common\tomcat\webapps\vminet\WEB-INF\web.xml`
  (web servers only)

- *Install_Dir*`\vm\common\tomcat\webapps\`*WebDAVServlet*`\WEB-INF\classes\webdav.properties`
  (WebDAV servers only)

- *Install_Dir*`\vm\common\tomcat\webapps\`*WebDAVServlet*`\WEB-INF\classes\merant\adm\dav\vm\vm.properties`
  (WebDAV servers only)

- *Install_Dir*`\vm\common\tomcat\webapps\`*WebDAVServlet*`\WEB-INF\classes\merant\adm\notification\notification.properties`
  (WebDAV servers only)

> **NOTE** Repeat the WebDAV steps for each servlet you have installed.

- *Install_Dir*`\vm\common\tomcat\webapps\serenafs\WEB-INF\server-config.wsdd`
  (file servers only)

- *Install_Dir*\vm\common\tomcat\conf\server.xml
  (servers only)

> **IMPORTANT!** If upgrading from Version Manager 8.4.3.x, or earlier, do not use your old server.xml file. If you wish to bring your old customizations forward to the new release, edit the new file as needed to reflect your customizations.
>
> **TIP** If you have modified the server.xml file AND THEN applied a patch to your Version Manager installation, there will be backup copies of the server.xml file. These can be of use in determining what customizations you have made.
>
> - **server.xml:** The default file as installed by the latest patch.
>
> - **server.xml.bak_####:** The previous version as modified by you.
>
> - **server.xml.org_####:** The default version as installed by the previous patch/install before you modified it.
>
> In the above file names, **####** represents the Version Manager release number. To determine what customizations you have made, compare the .bak version of the file to the .org version.

Preserving File Server Settings

To preserve all user-configurable settings of the File Server, including the Path Maps, you can copy the relevant information from your old server-config.wsdd. The file is located at:

Install_Dir\vm\common\tomcat\webapps\serenafs\WEB-INF\

Copy only the section marked by the following tags:

```
<globalConfiguration>
</globalConfiguration>
```

Paste the copied section into the similar section in the new file.

> **CAUTION!** Do **NOT** replace an entire server-config.wsdd file with one from a different version of Version Manager. Doing so can cause problems, for example compromising new features added to support RIDE performance improvements.

Preserving Servlet Definitions

The following applies to both Windows and UNIX/Linux:

- If the installation directory is the same, paths internal to these files should still be valid. However, you should double-check the following file:

  Install_Dir\Serena\vm\common\tomcat\webapps\vminet\WEB-INF\web.xml

- If the server name is the same, this parameter should still be valid; however, if you migrate to a new server, you should modify the following files:

  Install_Dir\Serena\vm\common\tomcat\webapps\vminet\WEB-INF\web.xml
  Install_Dir\Serena\vm\inet\props\PVCSServlets.properties

- As of Version Manager 8.0, we use a different AJP worker (AJP13 instead of AJP12). We recommend that you make the change as well. Check the following file:

  Install_Dir\Serena\vm\common\tomcat\conf\jk\uriworkermap.properties

■ Version Manager 7.5 has a now obsolete parameter. It should be removed. It will not be written in the new files.

Edit the following file:

Install_Dir\Serena\vm\common\tomcat\webapps\vminet\WEB-INF\web.xml

To remove the servlet mapping for "ProjectServletAlias". This is a delicate edit. You must comment out or remove the entire exact section. As long as you are careful, the format is easy to discern. It looks like this:

```
<servlet-mapping>
    <servlet-name> ProjectServletAlias </servlet-name>
    <url-pattern> /ProjectRootName </url-pattern>
 </servlet-mapping>
```

The following is specific to Windows:

1 To preserve your Servlet definitions, backup the PVCSServlets.properties file and restore it to *Install_Dir*\vm\inet\props\PVCSServlets.properties after installing the new release of Version Manager.

IMPORTANT! If the servlets were configured to use a Version Manager File Server, you must reconfigure or restore the File Server path map definitions BEFORE proceeding to the next step.

2 Launch the Version Manager Application Server Admin utility and make sure the "Location of Netscape Configuration Files" and/or "Location of Microsoft IIS Scripts Directory" matches the desired location for the new server installation (as they too will be inherited from PVCSServlets.properties).

3 If the servlets were configured to use a Version Manager File Server, start the File Server.

4 From the Servlets of the Version Manager Application Server Admin utility, select the first servlet from the list, click **Modify,** and then click **Apply**.

The following is specific to UNIX/Linux:

NOTE Servlets defined in UNIX Version Manager Server releases prior to 6.8.00 (using the servlets.properties file) cannot be preserved.

1 To preserve your Servlet definitions, backup the web.xml file and copy relevant information into the new file. The location of the old file depends upon the version of Version Manager. For Version Manager:

■ 6.8.00 the file is located at:

VM_Install_Dir/vminet/tomcat/webapps/vminet/WEB-INF/web.xml

■ 6.8.1 or newer, the file is located at:

VM_Install_Dir/vm/common/tomcat/webapps/vminet/WEB-INF/web.xml

CAUTION! In the following steps, do NOT copy the <servlet> ... </servlet> section that contains <servlet-name> "vminet". Also, do NOT modify any <servlet-mapping> values that refer to the "vminet" servlet.

2   After installing the new version, copy the sections from `<servlet>` up to and including `</servlet>` for every servlet referring to a project database that was added to the old `web.xml` file, and paste them into the new `web.xml` file (which can be found at *Install_Dir*/vm/common/tomcat/webapps/vminet/WEB-INF/web.xml).

3   The two `<servlet-mapping>` ... `</servlet-mapping>` sections that exist for every one of these servlets should also be copied into the new `web.xml` file.

Supported UNIX and Cross-Platform Networks

Version Manager runs on writable UNIX/Linux file systems such as the UNIX file system (UFS) and the Network File System (NFS). Version Manager archives and projects can be shared with Windows users who are sharing UNIX file systems with NFS or Samba.

TIP If you use a Version Manager File Server, you do not need to share the archives across the network or implement NFS, Samba, or setuid.

For best results, we recommend that you choose a 32-bit NFS package that supports the following:

- Long filenames

- Case preservation

- Desktop and command-line interfaces

- The ability to set file permissions or *umask*

For more information on sharing archives and projects between a UNIX system and a Windows local area network, see "Using setuid in a Cross-Platform Environment" on page 44 and the *Administrator's Guide*.

Obtaining the Software and Documentation

The software is available from the Micro Focus Support web site:

https://supportline.microfocus.com/

The documentation is available from this Micro Focus web site:

http://help.serena.com/doc_center/doc_center.html#othpvm

Licensing Version Manager

SLM is a licensing server that manages licenses for your Version Manager clients. During Version Manager installation, you are prompted for the server name or IP address of the license server.

TIP During installation, you can choose the **30 day evaluation** option if you just want to try out Version Manager or if you do not yet have licences. Version Manager will be fully functional during the 30 day evaluation period.

See the documentation for information on installing and configuring SLM.

NOTE SLM is a separate installation.

End-User Licensing on UNIX/Linux Workstations

To set up licensing for end-user workstations on UNIX, the Version Manager installation script and launch scripts automatically run a shell script named vmreg that updates the license.ini file in the $PVCS_BINDIR directory and/or the .islvrc file in an end user's home directory.

However, administrators and users can run vmreg as needed. For example, end users who use the command line, but not PCLI or the desktop client, need to run vmreg once before using the command line.

The Administrator can save the current configuration-file information in $PVCS_BINDIR/license.ini, and then users can move the information into their personal .islvrc files by running vmreg.

The script can be called in the following ways:

- vmreg [*server*]
  Copies license information from $PVCS_BINDIR/license.ini to .islvrc. If the server argument is present, the script takes the server name from the argument rather than from the value in $PVCS_BINDIR/license.ini. Users execute this command from the command line.

- vmreg -t
  Copies license information from $PVCS_BINDIR/license.ini to .islvrc only if no server definition exists in .islvrc. The PCLI and desktop-client launchers execute this command automatically at startup.

- vmreg -m *server*
  Updates $PVCS_BINDIR/license.ini with the name of the server and copies that data to .islvrc. The Version Manager installation script and Administrators execute this command.

- vmreg -h
  Provides usage information.

- vmreg -v
  Provides version information.

Working with 5.3/6.0 Project Roots

You can either upgrade a 5.3/6.0 project root to the new format, or you can work with it as it is--but with some limitations on the functionality supported. See the following sections for more details on your options.

Upgrading 5.3/6.0 Project Roots

Installing and using this release of Version Manager enables you to take advantage of the functions and features identified in the *Version Manager Getting Started Guide*. Because these features are more powerful and intuitive than the features provided in earlier releases of Version Manager, we recommend you upgrade your 5.3/6.0 project roots to the new project database format.

For information on upgrading a 5.3/6.0 project root by copying it to a project database, refer to the *Administrator's Guide*.

Supported and Restricted Functionality for 5.3/6.0 Project Roots

Without upgrading a 5.3/6.0 project root to the project database format, there are many features of the new Version Manager desktop client that you can still use. This release of Version Manager supports all of the basic Version Manager tasks, such as adding workfiles, checking in workfiles, checking out revisions, and assigning version labels. All of these tasks can be completed more easily than with the Version Manager 6.0 desktop client.

Some tasks, however, are restricted. When you open and work with a 5.3/6.0 project root in Version Manager, you cannot:

- Create new projects within the 5.3/6.0 project root.

- Delete projects from the 5.3/6.0 project root.

- Copy projects, subprojects, or versioned files from a project database into a 5.3/6.0 project root.

- Configure a 5.3/6.0 project root.

- Define or modify security on a 5.3/6.0 project root.

To complete any of these tasks, upgrade your existing projects to the new project format, or use the Version Manager 6.0 desktop client. This release of Version Manager honors the changes.

Chapter 2
Installing on Windows

Before Installing

Before initiating the Version Manager installer, ensure that the target system is in the necessary state. See the following sections.

Stop Version Manager Servers

If any of the following Version Manager servers are installed to the target system:

- File Server
- Web Server Application
- WebDAV Server
- Single Sign On (SSO) Server

Then you MUST do the following:

- Remove the NT service if you installed the Version Manager Application Server as an NT service.
- Stop the Version Manager Application Server and any third-party servers being used with it.

Remove the NT Service

To remove the NT service:

1   Launch the Version Manager Application Server Admin from the Windows Start menu (Programs | Serena | Version Manager | Version Manager Application Server). The Version Manager Application Server Admin appears.

2   Click the **Remove NT Service** button.

3   Restart the computer.

Stop the Version Manager Application Server

To stop the application server:

1   Launch the Version Manager Application Server Admin from the Windows Start menu (Programs | Serena | Version Manager | Version Manager Application Server). The Version Manager Application Server Admin appears.

2   Click the **Stop** button.

Disable Anti Virus Software

Before installing, disable any anti virus software. In particular, disable any anti virus software that scans files in real-time as you access them. Such real-time scanning software may hang the installer during the creation of the sample database.

Are You Doing a Network/Workstation Install?

Are You Installing the Integration to Visual Studio?

Before installing the Version Manager integration to Visual Studio, ensure that the IDE has been run at least one time. Else a package load error may appear the next time Visual Studio is started. This in itself does no harm, but it prompts you as to whether you want to load this package in the future (you DO!). Choosing incorrectly at this point will disable the integration and require an uninstall and reinstall to fix the integration.

Are You Updating an Existing Version Manager Installation?

See Chapter 1, "About Upgrading an Existing Installation" on page 12.

If Only I had Known then What I Know Now... :-(

Have you reviewed Chapter 1, "Planning Your Installation" on page 5 and the Version Manager readme? We suggest that you take a quick look for topics that may apply to your install and usage scenario.

Installing Version Manager

The following procedure explains how to install Version Manager. For information on obtaining the software, see page 16.

> **IMPORTANT!** Make sure you are logged in to Windows as an Administrative user or that you run the Version Manager installer with Administrative privileges.

1 Copy the installer to the target system or an accessible network location.

2 Double-click the installer.

3 The Welcome page of the Version Manager installation wizard appears, click the **Next** button.

4 **License Agreement Page:** Select the option to accept the license agreement, and click the **Next** button. The Choose License Server page appears.

5 **License Server Page:** Do one of the following:

- Select the **Specify License Server** option and enter the name or IP address of the license server in the **Host Name** field.

- Select the **Install a 30 day evaluation license** option.

Click the **Next** button.

6 **Customer Information Page:**

a Complete the **User Name** and **Company Name** fields.

b Do one of the following:

- To make the installation available to anyone who can log in to the computer, select **Anyone who uses this computer (all users)**.

- To make the installation available to only yourself, select **Only for me**.

> **IMPORTANT!** If you are limiting access to only one user, make sure you are logged in as the that user. If not, exit the installation program and log in to Windows as the correct user.

  c Click the **Next** button.

7 **Setup Type Page:** Choose one of the following installation types:

- **Local**: Install client features on this machine.

- **Network**: Install client features to a network location and enable users to share it via workstation installs. See "About Network/Workstation Installs" on page 28.

- **Web Server**: Install server and client features on this machine. See Chapter 1, "About Version Manager Servers" on page 8.

8 **Destination Location Page:** Accept the default Destination Folder or click the **Browse** button to select a different location.

> **IMPORTANT!** If you are installing Version Manager to a network location so that other users can perform a workstation installation, make sure that you and the users use the same drive mapping. See "About Network/Workstation Installs" on page 28.

Click the **Next** button.

9 **Select Features Page:** Select the features that you want to install.

		Install Type		
Feature	**Description**	**Local**	**Net work**	**Web Server**
Desktop Client	The Version Manager graphical user interface. See the *Getting Started Guide* and the *User's Guide*.	X	N W	X
Single Sign On (SSO) Server	The server that supports SSO and CAC (Common Access Card) login. **NOTE** If you already have a SSO/CAC server, such as from an installation of SBM, you probably do not want to install this. See Chapter 1, "About Version Manager Servers" on page 8.			X
SCC/COM IDE Client	Development Interface for version management within SCC and COM compliant integrated development environments (IDEs). See the *IDE Client Implementation Guide*.	X	N W	X
Plugin for Eclipse 3	Development Interface for Eclipse-based IDEs, such as IBM Rational Application Developer. This older plugin integrates with issue management via PVCS Version Manager SourceBridge and Tracker TrackerLink. See the *IDE Client Implementation Guide*.	X	N	X

		Install Type		
Feature	**Description**	**Local**	**Net work**	**Web Server**
Plugin for Eclipse 3 (rich integration)	Rich integration for Eclipse-based IDEs, such as IBM Rational Application Developer (RAD). This newer plugin integrates directly to SBM and provides a more advanced source control integration. See the *IDE Client Implementation Guide*.	X	N	X
Plugin for VS (rich integration)	Rich integration for Microsoft Visual Studio. This plugin integrates directly to SBM and provides a more advanced integration than SCC. See the *IDE Client Implementation Guide*.	X	N	X
Web Server Application	The server that supports the Version Manager Web Client (as well as providing underlying services required by File Server, SSO Server, and WebDAV Server). See Chapter 1, "About Version Manager Servers" on page 8.			X
Developer's Toolkit	The public API for developing applications that use Version Manager features. See the *Developer's Toolkit Reference Guide*.	X	N	X
Version Manager WebDAV	The server that supports the Version Manager WebDAV implementation and Meritage. See Chapter 1, "About Version Manager Servers" on page 8, and the *Administrator's Guide*.			X
Documentation	The Version Manager manuals in PDF format.	X	N W	X
Workstation Install	Part of a Network Installation, it allows users to run a shared copy of Version Manager. See "About Network/Workstation Installs" on page 28.		N W	
Sample Project Database	A Version Manager project database that contains sample data that illustrates the use of Version Manager features. See the *Getting Started Guide.*	X	N	X
Command-Line Interface	The archive-centric command-line. See the *Command-Line Reference*.	X	N W	X
File Server	The server that accesses archives, metadata archives, revisions, and other files on behalf of Version Manager users (as opposed to each client directly accessing the archives via the file system). See Chapter 1, "About Version Manager Servers" on page 8.			X
PCLI Command Line Interface	The project-centric command-line. See the *PCLI User's Guide and Reference*.	X	N	X

NOTE Items in the Network install-type column that are marked with an **N** will be available for use on the system from which the Network install is preformed. Those marked with a **W** will also be shared with systems that do a Workstation install from the shared network location.

Click the **Next** button.

10 **Eclipse Installation Page:** If you chose the **Plugin for Eclipse 3** or the **Plugin for Eclipse 3 (rich integration)**, the Eclipse Installation page appears. Do any of the following to specify the location of your Eclipse-based IDEs:

- To add installation paths to the list, click the **Add** button and browse to the IDE's installation location using the resulting dialog box.

- To remove installation paths from the list, select them and click the **Remove** button.

> **NOTE**
>
> - Installations of Rational Application Developer 6 will automatically be included in the list. Use the **Add** button to include installations of Eclipse.
>
> - See the readme for information on supported sub-versions of Rational Application Developer 7.

Click the **Next** button.

11 **Single Sign On Server Configuration Page:** If you chose the **Single Sign On (SSO) Server**, the Single Sign On Server Configuration page appears. If you wish to use user ID and password based SSO login (requires an LDAP server), complete the following fields:

- **Host Name:** The host name or IP address of your LDAP server.

- **Port:** The port number of your LDAP server. Typically LDAP servers are configured to use port 389; 636 for SSL.

- **Base DN:** The base from which to search for users.

- **Search Filter:** The search filter you want to use. The default for Active Directory Server is:

  `(&(objectClass=user)(sAMAccountName={0}))`

- **Bind User DN:** The full user DN of a user with permission to query the LDAP server.

- **Password:** The LDAP password for the above user.

> **IMPORTANT!** If you wish to use user ID and password based SSO login but you **Skip** the Single Sign On Configuration page of the installation wizard, you must manually edit the LDAP connection information in the `Configuration.xml` file. See the *Administrator's Guide*.

Click the **Next** button.

12 **Select Program Folder Page:** Accept the default name and location for Version Manager Start menu shortcuts, or specify a new one.

Click the **Next** button.

13 **Ready to Install the Program Page:** Click the **Next** button to begin installing files (or **Back** to change your installation choices).

A progress page displays while the files install.

14 **InstallShield Wizard Complete Page:** By default, the following options are selected. Change these settings as needed:

■ **Check to view the PVCS Version Manager Readme file:** Opens the readme in your default browser.

■ **Register online for a services account:** Opens your default browser to the sign up page of the support web site.

15   Click the **Finish** button.

Silent Installation

Silent Server Installation Script

Use the following script to perform a silent Windows server installation:

```
[{2F3900A5-667B-4043-8467-9E3DBB97486F}-DlgOrder]
Dlg0={2F3900A5-667B-4043-8467-9E3DBB97486F}-SdWelcome-0
Count=9
Dlg1={2F3900A5-667B-4043-8467-9E3DBB97486F}-SdLicense2Rtf-0
Dlg2={2F3900A5-667B-4043-8467-9E3DBB97486F}-FLEXLM
Dlg3={2F3900A5-667B-4043-8467-9E3DBB97486F}-SdCustomerInfo-0
Dlg4={2F3900A5-667B-4043-8467-9E3DBB97486F}-SdSetupType-0
Dlg5={2F3900A5-667B-4043-8467-9E3DBB97486F}-SdComponentTree-0
Dlg6={2F3900A5-667B-4043-8467-9E3DBB97486F}-SSO
Dlg7={2F3900A5-667B-4043-8467-9E3DBB97486F}-SdSelectFolder-0
Dlg8={2F3900A5-667B-4043-8467-9E3DBB97486F}-SdStartCopy2-0
[{2F3900A5-667B-4043-8467-9E3DBB97486F}-SdWelcome-0]
Result=1
[{2F3900A5-667B-4043-8467-9E3DBB97486F}-SdLicense2Rtf-0]
Result=1
[{2F3900A5-667B-4043-8467-9E3DBB97486F}-FLEXLM]
szServer=27000@flexserver
[{2F3900A5-667B-4043-8467-9E3DBB97486F}-SdCustomerInfo-0]
szName=WIN10TEST
szCompany=TEST
nvUser=1
Result=1
[{2F3900A5-667B-4043-8467-9E3DBB97486F}-SdSetupType-0]
szDir=C:\Program Files (x86)\Serena\
Result=303
[{2F3900A5-667B-4043-8467-9E3DBB97486F}-SdComponentTree-0]
szDir=C:\Program Files (x86)\Serena\
Component-type=string
Component-count=19
Component-0=CM
Component-1=APPSERVER64
Component-2=DEVINT_COMMON
Component-3=INETSSO64
Component-4=SSO_GUI
Component-5=TESTDIRECTOR
Component-6=TOMCAT_COMMON64
Component-7=VM_COMMON
Component-8=VM_COMMON32_64
Component-9=VM
```

```
Component-10=SSO64
Component-11=DEVINT
Component-12=INET64
Component-13=WEBDAV64
Component-14=DOC
Component-15=SAMPLEDB
Component-16=CMDLN
Component-17=FILESERVER64
Component-18=PCLI
Result=1
[{2F3900A5-667B-4043-8467-9E3DBB97486F}-SSO]
ldap_host_name=test
ldap_port=389
ldap_user=test
ldap_pwd=test
ldap_search_base=test
ldap_search_filter=(&amp;(objectClass=user)(sAMAccountName={0}))
[{2F3900A5-667B-4043-8467-9E3DBB97486F}-SdSelectFolder-0]
szFolder=Serena\PVCS Version Manager 8.6.1
Result=1
[{2F3900A5-667B-4043-8467-9E3DBB97486F}-SdStartCopy2-0]
Result=1
```

Silent Client Installation Script

Use the following script to perform a silent Windows client installation:

```
[{2F3900A5-667B-4043-8467-9E3DBB97486F}-DlgOrder]
Dlg0={2F3900A5-667B-4043-8467-9E3DBB97486F}-SdWelcome-0
Count=9
Dlg1={2F3900A5-667B-4043-8467-9E3DBB97486F}-SdLicense2Rtf-0
Dlg2={2F3900A5-667B-4043-8467-9E3DBB97486F}-FLEXLM
Dlg3={2F3900A5-667B-4043-8467-9E3DBB97486F}-SdCustomerInfo-0
Dlg4={2F3900A5-667B-4043-8467-9E3DBB97486F}-SdSetupType-0
Dlg5={2F3900A5-667B-4043-8467-9E3DBB97486F}-SdComponentTree-0
Dlg6={2F3900A5-667B-4043-8467-9E3DBB97486F}-SdSelectFolder-0
Dlg7={2F3900A5-667B-4043-8467-9E3DBB97486F}-SdStartCopy2-0
Dlg8={2F3900A5-667B-4043-8467-9E3DBB97486F}-SdFinish-0
[{2F3900A5-667B-4043-8467-9E3DBB97486F}-SdWelcome-0]
Result=1
[{2F3900A5-667B-4043-8467-9E3DBB97486F}-SdLicense2Rtf-0]
Result=1
[{2F3900A5-667B-4043-8467-9E3DBB97486F}-FLEXLM]
szServer=27000@flexserver
[{2F3900A5-667B-4043-8467-9E3DBB97486F}-SdCustomerInfo-0]
szName=WIN10TEST
szCompany=WINTEST
nvUser=1
Result=1
[{2F3900A5-667B-4043-8467-9E3DBB97486F}-SdSetupType-0]
szDir=C:\Program Files (x86)\Serena\
Result=301
[{2F3900A5-667B-4043-8467-9E3DBB97486F}-SdComponentTree-0]
szDir=C:\Program Files (x86)\Serena\
Component-type=string
```

```
Component-count=12
Component-0=CM
Component-1=DEVINT_COMMON
Component-2=SSO_GUI
Component-3=TESTDIRECTOR
Component-4=VM_COMMON
Component-5=VM_COMMON32_64
Component-6=VM
Component-7=DEVINT
Component-8=DOC
Component-9=SAMPLEDB
Component-10=CMDLN
Component-11=PCLI
Result=1
[{2F3900A5-667B-4043-8467-9E3DBB97486F}-SdSelectFolder-0]
szFolder=Serena\PVCS Version Manager 8.6.1
Result=1
[{2F3900A5-667B-4043-8467-9E3DBB97486F}-SdStartCopy2-0]
Result=1
[{2F3900A5-667B-4043-8467-9E3DBB97486F}-SdFinish-0]
Result=1
bOpt1=0
bOpt2=0
```

Running a Silent Installation

1   To capture an `.iss` file, run the installer on a system that does not have the VM release and record the installation using the option `/r`, for example:

```
setup.exe /r /f1"FullyQualifiedDirectory\<filename>.iss"
```

The `.iss` file will contain the options you selected during the installation. Verify that they are applicable to all users.

2   Save the `.iss` to a local folder.

3   Run the silent installation command using the `.iss` file, for example:

```
setup.exe /s /v/qn /f1"FullyQualifiedDirectory\setup.iss" /
    verbose"%TEMP%\vm_install.log" /f2"%TEMP%\vm_install_f2.log" /
    debuglog"%TEMP%\vm_install_debug.log"
```

Silent Uninstall Script

```
[{2F3900A5-667B-4043-8467-9E3DBB97486F}-DlgOrder]
Dlg0={2F3900A5-667B-4043-8467-9E3DBB97486F}-SdWelcomeMaint-0
Count=4
Dlg1={2F3900A5-667B-4043-8467-9E3DBB97486F}-AskYesNo-0
Dlg2={2F3900A5-667B-4043-8467-9E3DBB97486F}-SAMPLEDB_UNINSTALL
Dlg3={2F3900A5-667B-4043-8467-9E3DBB97486F}-SdFinish-0
[{2F3900A5-667B-4043-8467-9E3DBB97486F}-SdWelcomeMaint-0]
Result=302
[{2F3900A5-667B-4043-8467-9E3DBB97486F}-AskYesNo-0]
Result=1
[{2F3900A5-667B-4043-8467-9E3DBB97486F}-SAMPLEDB_UNINSTALL]
nDelete=1
```

```
[{2F3900A5-667B-4043-8467-9E3DBB97486F}-SdFinish-0]
Result=1
bOpt1=0
bOpt2=0
```

About Network/Workstation Installs

A workstation install enables users to run a shared copy of Version Manager on a network. This saves disk space on local workstations and ensures that everyone is running the same version of the product.

Although the Version Manager installation is shared amongst users, each user can still choose how they want Version Manager to behave (such as the default size of windows and panes, whether dialogs are automatically dismissed, and which project databases are opened at startup). These settings are automatically stored on the user's machine the same way they are for a Local install.

A Network/Workstation install is a two stage installation process:

1 The administrator performs a Network install from a Windows computer to a mapped network drive. This creates the shared Version Manager installation and the workstation install files necessary to connect individual user systems to the shared Version Manager installation.

2 Each user accesses the network location and runs the workstation install to connect their individual computer to the shared network installation. See "Connecting a Workstation to the Shared Install" on page 30.

Network Installation Options and Considerations

This section and the following sub-sections describe options and install considerations that you should be familiar with before initiating a Network install:

■ Determine the network location for the install and verify that all users have access to the location.

■ Verify that all users use the same drive mapping for the network location and that the workstation from which the network copy will be installed uses this same drive mapping.

■ Install Version Manager to the network from a local workstation. Do not install the program directly at the network server console.

NOTE If you are patching a Network Install, see "Patching a Network/Workstation Install that Used the "Local Copy of Java Packages" Option" on page 32.

Silent Workstation Installs

After you have performed a network installation of Version Manager, you can prepare a silent workstation setup template to simplify setup for your users. A silent workstation installation allows users to set up workstations using the options you predefine.

To prepare a silent setup, you need to create a response file by running the workstation setup program on your network. Use the `/r` flag to create the `setup.iss` template with all the installation options saved in the Windows directory. When you have completed running the Setup program, copy the `setup.iss` file to the workstation setup directory on your network and instruct your users to run the setup program with the following command-line option from their individual workstations:
Install_Dir`\vm\workinst\setup.exe /s`

File Server Access for Workstation Installs

If you will be using a Version Manager File Server, you can ease client setup by predefining a network location for the `SERVERS.INI` file. Look in the `ISLV.INI` file under the `[PVCSGUI_6.5]` heading for the `pvcs.fileserver.path=` entry. For more information about the Version Manager File Server, see the *Administrator's Guide*.

NOTE If you perform a clean install of the Version Manager Server (with fileserver, WebDAV or I-Net services) and the file "servers.ini" does not exist in the system, the installer will create this file with a sample configuration containing only localhost record.

If the file "servers.ini" is not empty and contains any fileserver configuration record, it will be left as is and no new configuration parameters will be added.

Example of the sample fileserver configuration:

`[FileServer]`

`pvcs.fileserver.0=http://localhost:8080/serenafs/FileServer;`

Copying Files Locally

You can choose to copy some files to the local workstations to improve performance. These files include Java packages that can be located anywhere on the user's workstation. To copy files locally, choose the **Local Copy of Java Packages** feature during the Workstation install and specify the target directory for the files.

NOTE If you are preparing a silent workstation install and wish to copy files locally, make sure that the target directory for the Java packages exists on your users' workstations.

Performing a Network Install

Before users can perform workstation installs to share a single Version Manager installation, the administrator must install Version Manager to a network location.

To perform a Network install:

1 Start the Version Manager installer and select **Network** as the installation type. See .

2 Select the features you would like to install. Be sure that **Workstation Install** is selected.

> **NOTE**
>
> ■ Only features that are installed as part of the Network install will be available for use by workstations.
>
> ■ Also, not all features of a Network install are available for sharing with Workstation installs. See the table of install features in Step 9 on page 22.

3 (Optional) After the Version Manager installer has completed, configure the Workstation installer for use as a silent installer. See "Silent Workstation Installs" on page 28.

Connecting a Workstation to the Shared Install

After the administrator has installed Version Manager to a network location, you can set up your workstation to use it.

To run the workstation setup program:

1 Launch the Workstation installer by doing one of the following:

■ If your administrator has prepared a silent install, run the following command from the Windows Run dialog or a command prompt:

MappedDrive:\vm\workinst\setup.exe /s

The workstation install will now run to completion without prompts or further user interaction. You are done with this procedure!

■ Else, use Windows Explorer to navigate to the location of the Network install (*MappedDrive*:\vm\workinst) and double-click the setup.exe file.

The Welcome page of the installer appears. Click the **Next** button and proceed to Step 2.

2 License Agreement Page: Select the option to accept the license agreement, and click the **Next** button. The Choose License Server page appears.

3 License Server Page: Do one of the following:

■ Select the **Specify License Server** option and enter the name or IP address of the license server in the **Host Name** field.

■ Select the **Install a 30 day evaluation license** option.

Click the **Next** button.

4 Customer Information Page:

a Complete the **User Name** and **Company Name** fields.

b Do one of the following:

• To make the installation available to anyone who can log in to the computer, select **Anyone who uses this computer (all users)**.

- To make the installation available to only yourself, select **Only for me**.

> **IMPORTANT!** If you are limiting access to only one user, make sure you are logged in as the that user. If not, exit the installation program and log in to Windows as the correct user.

    c Click the **Next** button.

5 **Select Features Page:** Select the features that you want to install:

- **Desktop Client:** The Version Manager graphical user interface. See the *Getting Started Guide* and *User's Guide*.

- **SCC/COM IDE Client:** Development Interface for version management within SCC and COM compliant integrated development environments (IDEs). See the *IDE Client Implementation Guide*.

- **Documentation:** The Version Manager manuals in PDF format.

- **Command Line interface:** The archive-centric command-line. See the *Command-Line Reference*.

- **Local Copy of Java Packages:** Copies some key Version Manager files locally to improve performance. See "Copying Files Locally" on page 29.

> **NOTE**
>
> - Only features that were installed as part of the Network install will be available for selection here.
>
> - Also, not all features of a Network install are available for sharing with Workstation installs. See the table of install features in Step 9 on page 22.

    Click the **Next** button.

6 **Destination Location Page:** Accept the default Destination Folder or click the **Browse** button to select a different location.

7 **Select Program Folder Page:** Accept the default name and location for Version Manager Start menu shortcuts, or specify a new one.

8 **Start Copying Files Page:** Review the settings and click **Next** to begin installing files (or **Back** to change them).

A progress page displays while the files install.

9 **InstallShield Wizard Complete Page:** By default, the following options are selected. Change these settings as needed:

- **Check to view the PVCS Version Manager Readme file:** Opens the readme in your default browser.

- **Register online for a services account:** Opens your default browser to the sign up page of the Micro Focus support web site.

10 Click the **Finish** button.

Patching a Network/Workstation Install that Used the "Local Copy of Java Packages" Option

If you patch a Network Install, you need to do *one* of the following to update the local workstations *if* the Workstation Installs used the **Local Copy of Java Packages** option:

- Rerun the Workstation installer on each workstation.

  OR

- Copy the patched `vm.jar` file from the Network Install to each Workstation Install. The file is in the following directory in both the Network and Workstation installs:

  `vm\common\lib`

Post Install Configuration

See the following sections for information on configuring Version Manager for use once it is installed.

See the Administrator's Guide

See the *Administrator's Guide* for information on configuring Version Manager. Topics covered there include:

- Configuring Version Manager servers: File Server, Web Server, WebDAV Server, and SSO Server

- Security and user administration

- Configuring projects and project databases

- Configuring clients to access project databases on file servers

Chapter 3
Installing on UNIX/Linux

Before Installing

Before initiating the Version Manager installer, ensure that the target system is in the necessary state. See the following sections.

Third Party Dependencies

The following third party dependencies should be installed prior to installing Version Manager:

- compat-libstdc++-33.i686
- libXext.i686
- libXtst.i686
- libXrender.i686
- zlib.i686
- nss-softokn.i686
- mesa-libGL.i686
- openmotif.i686
- libXp.i686
- libXmu.i686

Stop Version Manager Servers

If any of the following Version Manager servers are installed to the target system:

- File Server
- Web Server Application
- WebDAV Server
- Single Sign On (SSO) Server

Then you MUST stop the Version Manager Application Server and any third-party servers being used with it.

To stop the application server:

1 Change to the following directory:

   /*Install_Dir*/vm/common/bin

2 Enter the following command:

   ```
   ./pvcsstop.sh
   ```

Disable Anti Virus Software

Before installing, disable any anti virus software. In particular, disable any anti virus software that scans files in real-time as you access them. Such real-time scanning software may hang the installer during the creation of the sample database.

Disable Font Substitution in Exceed or Other X Servers

If you use Exceed, you must configure it NOT to use font substitution. If font substitution is enabled, many dialog controls will not display correctly. Some may be unusable.

When you install Exceed, it enables font substitution by default. This may also apply to other X server software.

> **NOTE** The procedure below is for Exceed 10. For other versions or for other X server software, consult the product's documentation.

To disable font substitution in Exceed:

1 Launch Xconfig.

2 Select **Font Management**.

3 Select the Advanced Settings tab.

4 Deselect the **Automatic Font Substitution** checkbox.

> **NOTE** The following two steps are optional, but recommended.

5 Select the **Local Fonts First** checkbox.

6 Select the **Optimize for Java VM** checkbox.

Add Location of Web Browser to Path

To access the help system, view reports, and use the Version Manager Web client, you must add the location of a Web browser to your path. For example:

```
PATH=/apps/mozilla:$PATH; export PATH
```

Do not launch the browser by using a fully qualified path to its executable. Instead, let it be found using the PATH variable:

```
mozilla &
```

Setting Up a Browser on UNIX

To access the Version Manager help system and to view reports in an HTML browser, you must first define the location of the browser in Version Manager.

To define the location of a browser:

1   Start Version Manager.

2   Select View | Options.

3   Click the Applications tab to move it to the front.

4   In the **Browser Location** field, enter the path to the browser, such as `/usr/local/netscape/netscape`.

5   Click OK.

When you generate a report, Version Manager automatically launches the report in the browser you specified. The browser is also launched whenever you invoke the Version Manager help system.

Are You Installing the Integration to Eclipse?

See "About Installing the Eclipse Plugin on Linux" on page 45.

Have You Created a User and Group for Version Manager?

See "About Creating User Accounts for Version Manager" on page 41.

Will You Be Using setuid?

See "About Adding Security with setuid" on page 42.

Are You Updating an Existing Version Manager Installation?

See Chapter 1, "About Upgrading an Existing Installation" on page 12.

If Only I had Known then What I Know Now... :-(

Have you reviewed Chapter 1, "Planning Your Installation" on page 5 and the Version Manager readme? We suggest that you take a quick look for topics that may apply to your install and usage scenario.

Installing Version Manager

The following procedure explains how to install Version Manager. For information on obtaining the software, see page 16.

> **IMPORTANT!**
>
> ■ You should install Version Manager using the same user ID you used for previous installations. Installing under a different user ID will most likely be incompatible with the permissions of existing archives in setuid mode. See "About Adding Security with setuid" on page 42.
>
> ■ We suggest that you install Version Manager to UNIX as the user **pvcs** and that you make this user a member of a group named **pvcsgrp**. See "About Creating User Accounts for Version Manager" on page 41.

1 Launch the Version Manager installer:

  a Copy the downloaded file to the target system or a network location accessible from it (the file is named like: vm*ReleaseNumberOS*.tar).

  b Extract the contents of the tar file to an empty folder.

  c Navigate to the location to which you extracted the files.

  d Initiate the installer by entering:
  ```
  ./vminst
  ```

2 **License Agreement:** The license agreement appears. Press ENTER to accept the license agreement; otherwise, enter N and the installation stops.

3 **Review User and Group:** You should install Version Manager using the same user ID you used for previous installations. Installing under a different user ID will most likely be incompatible with the permissions of existing archives in setuid mode. See "About Adding Security with setuid" on page 42.

We suggest that you install Version Manager to UNIX as the user **pvcs** and that you make this user a member of a group named **pvcsgrp**. See "About Creating User Accounts for Version Manager" on page 41.

Press ENTER to continue.

4 **License Server:** Do one of the following:

  ■ Enter the name or IP address of the license server.

  ■ Leave this blank for a 30-day evaluation license.

Click the **Next** button.

5 **Features:** Select the features that you want to install.

Feature	Description
Desktop Client	The Version Manager graphical user interface. See the *Getting Started Guide* and *User's Guide*.
File Server	The server that accesses archives, metadata archives, revisions, and other files on behalf of Version Manager users (as opposed to each client directly accessing the archives via the file system). See Chapter 1, "About Version Manager Servers" on page 8.
Plugin for Eclipse 3 (rich integration)	Linux only. Rich integration for Eclipse-based IDEs, such as IBM Rational Application Developer (RAD). This newer plugin integrates directly with SBM and provides a more advanced source control integration. See "About Installing the Eclipse Plugin on Linux" on page 45 and the *IDE Client Implementation Guide*.
Web Server Application	The server that supports the Version Manager Web Client (as well as providing underlying services required by File Server, SSO Server, and WebDAV Server). See Chapter 1, "About Version Manager Servers" on page 8.
Version Manager WebDAV	The server that supports the Version Manager WebDAV implementation and Meritage. See Chapter 1, "About Version Manager Servers" on page 8, and the *Administrator's Guide*.
Documentation	The Version Manager manuals in PDF format.
Developer's Toolkit	The public API for developing applications that use Version Manager features. See the *Developer's Toolkit Reference Guide*.
Sample Project Database	A Version Manager project database that contains sample data that illustrates the use of Version Manager features. See the *Getting Started Guide.*
Single Sign On (SSO) Server	The server that supports SSO and CAC (Common Access Card) login. **NOTE** If you already have a SSO/CAC server, such as from an installation of SBM, you probably do not want to install this. See Chapter 1, "About Version Manager Servers" on page 8.

6 After you have selected the components to install, do one of the following:

- Press ENTER to continue the installation.

- Enter **N** and press ENTER to reselect the components.

7 **Operating System:** The Setup program determines which UNIX/Linux operating system you have. Do one of the following:

- Press ENTER to continue installing on the detected operating system.

- Enter **2** to select a different operating system. This feature allows you to install different operating system versions of Version Manager on the same server.

You cannot create sample project databases for different operating system versions of Version Manager.

- Enter **3** to exit the installation program.

8 **Installation Location:** Specify an installation directory by doing one of the following:

- Press ENTER to accept the default, which is `/usr/serena`.

- Enter an installation directory.

9 Confirm the installation directory path by pressing ENTER. If the directory does not exist, the installer asks if you want to create it.

10 **Ready to Install:** Do one of the following:

- Press ENTER to confirm your platform and installation directory choices. The Setup program displays the progress of the installation and a successful completion message when finished.

- Enter **E** and press ENTER to exit the Setup program.

11 **Web Server:** If you chose to install the Version Manager Web Server, you will be asked which web server should be configured for use with the Version Manager Web Server. Press ENTER to accept the default or **N** to select a different web server.

12 **LDAP Server Details:** If you chose the **Single Sign On (SSO) Server**, the Provide LDAP Server Details for Installation screen appears. If you wish to use user ID and password based SSO login (requires an LDAP server), provide answers to the following prompts:

- **Enter LDAP Server name:** The host name or IP address of your LDAP server.

- **Enter its Port Number:** The port number of your LDAP server. Typically LDAP servers are configured to use port 389; 636 for SSL.

- **Enter LDAP Search Base:** The base from which to search for users.

- **Enter LDAP Search Filter:** The search filter you want to use. The default for Active Directory Server is:

  `(&(objectClass=user)(sAMAccountName={0}))`

- **Enter LDAP User Name:** The full user DN of a user with permission to query the LDAP server.

- **Enter LDAP Password:** The LDAP password for the above user.

- You are prompted to confirm the entries you made above. Press **Y** and ENTER to confirm the entries or **N** and ENTER to go back and correct the entries.

> **IMPORTANT!** If you wish to use user ID and password based SSO login but you skip the Provide LDAP Server Details for Installation screen, you must manually edit the LDAP connection information in the `Configuration.xml` file. See the *Administrator's Guide*.

13 **Register online for an services account:** When installation is complete, you are prompted to register Version Manager online. Press ENTER to open your default browser to the sign up page of the Micro Focus support web site.

NOTE If you perform a clean install of the Version Manager Server (with fileserver, WebDAV or I-Net services) and the file "servers.ini" does not exist in the system, the installer will create this file with a sample configuration containing only localhost record.

If the file "servers.ini" is not empty and contains any fileserver configuration record, it will be left as is and no new configuration parameters will be added.

Example of the sample fileserver configuration:

```
[FileServer]

pvcs.fileserver.0=http://localhost:8080/serenafs/FileServer;
```

Silent Installation

Use the following script to perform a silent installation:

```
SILENT=1
SILENT_INST_DIR=/usr/serena
SILENT_INST_LIC_SERVER=27000@flexserver
VMUX_INSTALL=TRUE
VMFS_INSTALL=TRUE
RIDE_INSTALL=FALSE
VMIN_INSTALL=TRUE
WEBD_INSTALL=TRUE
BOOK_INSTALL=TRUE
DTKT_INSTALL=TRUE
SPDB_INSTALL=TRUE
SSOI_INSTALL=TRUE
SILENT_INST_ECLIPSE_DIR=/usr/eclipse
new_sso_server=10.10.10.10
new_sso_port=389
new_sso_sbase=CN=users,DC=vm,DC=local
new_sso_sfilter='(&amp;(objectClass=user)(sAMAccountName={0}))'
new_sso_uname=vmuser@vm.local
new_sso_pwd=password
REG_SUPPORT=0
```

To automatically perform a silent install:

1   Create a new file called `silent.inst` and save it to the directory where the other installation files are located.

2   Add the parameters above to `silent.inst`.

About Creating User Accounts for Version Manager

Before you install Version Manager, we recommend that you create a user *pvcs* and group *pvcsgrp*. This will make it easier to administer Version Manager. You must login as *root* to complete this procedure.

> **IMPORTANT!** You should install Version Manager using the same user ID you used for previous installations. Installing under a different user ID will most likely be incompatible with the permissions of existing archives in setuid mode.

Refer to the documentation for your operating system for more information on creating users and groups.

To create user accounts for Version Manager:

1 Log in as *root* and create an installation directory, such as:

`/usr/serena.`

> **NOTE** If you are installing Version Manager for more than one platform, create a different directory structure for each platform to avoid overwriting program files. For example: */usr/serena/aix*

2 Create the user who will own the executables in the installation directory, such as *pvcs.*

3 Create a specific group, such as *pvcsgrp*, or use an already existing group, and make it the primary group for all users of Version Manager.

If you are operating in a pure UNIX environment and the Version Manager executables are run in setuid mode, the user still needs to be a member of the *pvcsgrp* group, but the *pvcsgrp* group doesn't have to be the user's primary group. Only the *pvcs* user needs to have the *pvcsgrp* group name as the primary group.

4 Change the owner of `/usr/serena` to *pvcs*.

`chown pvcs /usr/serena`

5 Change the group of `/usr/serena` to *pvcsgrp*.

`chgrp pvcsgrp /usr/serena`

6 Change the directory permissions as needed, as shown in the following table:

User	Permission
user *pvcs*	read, write, and execute (7 or `u=rwx`)
group *pvcsgrp*	setuid: read and execute (5 or `g=rx`) nonsetuid: read, write, and execute (7 or `g=rwx`)
other users	read and execute (5 or `o=rx`)

For example:

`chmod 755 /usr/serena`

or

`chmod u=rwx,g=rx,o=rx /usr/serena`

About Adding Security with setuid

By default, Version Manager files are installed in *setuid* mode, which implements an additional level of security for your archives. The script that you run to start Version Manager on UNIX, *pvcsvmux*, calls the pvcsvmsuid program that has the setuid and

setgid privileges turned on by default. This script is located in the bin directory of the Version Manager installation location.

> 📝 **NOTE** For information about turning off setuid, refer to the *Administrator's Guide*.

In setuid, users login as themselves, but Version Manager creates public archives as the user who owns the executables. We recommend that you create a user named *pvcs* for this purpose. This will be the only user with access to read and write to your archives.

When running in setuid mode, Version Manager creates all files as the user *pvcs*, except for workfiles, temporary files, and $HOME/.islvrc. Access control privileges can be controlled by the Version Manager access control database. Individual users who are not *pvcs* will not have the ability to modify, add, or delete the files or directories unless they are using Version Manager commands.

Special
Considerations

■ If all project databases are accessed through the Version Manager File Server, setuid mode is not required. The File Server process performs file system operations as the user ID that was used to start the File Server. (So end-users do not need file system access to the repository.) See Chapter 1, "About the Version Manager File Server" on page 8 and "Disabling setuid Mode" on page 44.

■ If you are not using the Version Manager File Sever and you do not implement setuid, archives can be moved, renamed, corrupted, or deleted with basic UNIX commands by anyone with permissions to your archive directory.

■ You can switch between setuid and nonsetuid modes only if you have reset permissions to rwxrwxr_x (775). All users must be in the same primary group. Alternatively, you can switch between modes if you reset the directory and/or executable permissions to rwxrwsr_x (2775). In this case, the users do not have to be in the same primary group, but *pvcsgrp* must be a secondary group. See "About Creating User Accounts for Version Manager" on page 41 for more information.

■ If you are working in a cross-platform environment (Windows and UNIX), you may not be able to use setuid. See "Using setuid in a Cross-Platform Environment" on page 44.

■ Version Manager 6.6+ setuid conflicts with 6.5 setuid. If Version Manager 6.6 (or higher) is installed on a workstation that also has Version Manager 6.5 installed, disable setuid on the 6.6+ installation. Note that sharing installations with releases of Version Manager earlier than 6.5 does not create setuid compatibility problems.

■ To run Version Manager in setuid mode on Solaris, AIX, and Linux, you must run a script after installation to create symbolic links. See "Using setuid Mode on Solaris, AIX, and Linux" on page 43.

Using setuid Mode on Solaris, AIX, and Linux

If you want to run Version Manager in setuid mode (default upon installation) on Solaris, AIX, and Linux, it is necessary to create symbolic links to the shared libraries of Version Manager on the operating systems Solaris, AIX and Linux. Depending on the OS, these links will be installed in the directory /usr/lib or /usr/lib/secure.

This is necessary to satisfy OS security requirements that prevent the use of shared libraries from arbitrary locations when an application is running in setuid mode. The links need to be created on every system where Version Manager is executed.

To help create these links, a script is included that will create the appropriate links for the OS that is being used.

To create the links:

Execute the following command as root:

```
Install_Dir/vm/OS/bin/vmlinklibs -add
```

Examples:

```
/usr/serena/vm/solaris/bin/vmlinklibs -add
/usr/serena/vm/aix/bin/vmlinklibs -add
```

You can use the option `-verify` instead of `-add` to check if the correct links are already installed, and you can use the option `-delete` to remove previously created links.

To verify the links:

To verify that all executables are matching in setuid or non-setuid mode, you can execute:

```
Install_Dir/vm/OS/bin/vmsetsuid -verify
```

HP-UX does not require these links to run in setuid mode. See the *Administrator's Guide* for an explanation of the reasons for running Version Manager in setuid mode.

Disabling setuid Mode

You can take Version Manager out of setuid mode by executing the command:

```
Install_Dir/vm/OS/bin/vmsetsuid -unset
```

as the user who installed Version Manager. All relevant Version Manager executables will be taken out of setuid mode.

Setuid mode can easily be re-enabled by executing the command:

```
Install_Dir/vm/OS/bin/vmsetsuid -set
```

Using setuid in a Cross-Platform Environment

`setuid` may be available in a cross-platform environment depending on the method used to map files between UNIX and Windows.

Using setuid with Samba

Add or edit lines similar to the following in the Samba configuration file (usually SMB.CONF):

```
[serenavm]
path = VM_Path
force user = VM_ID
force group = VM_Group
read only = No
```

Where:

■ *VM_Path* equals the location of the Version Manager project databases on the UNIX system.

- *VM_ID* equals the UNIX ID under which Version Manager was installed on the UNIX system.

- *VM_Group* equals the user group under which Version Manager was installed.

> **NOTE** This example works only for a specific share. For information on using these settings in the [global] section of the Samba configuration file, see the Samba documentation.

Using setuid with NFS

If your NFS client does not allow mapping of user IDs and user groups, then you cannot use setuid on UNIX. To use setuid on UNIX, you must configure your NFS client to allow access by the VM_ID and VM_Group after authentication is complete. (As above, the VM_ID and VM_Group equal the ID and user group under which Version Manager was installed to UNIX.)

About Installing the Eclipse Plugin on Linux

In addition to Windows platforms, the Eclipse rich integration is supported on Linux.

Consider the following in preparing to install the integration:

- The user who runs the Version Manager installation **MUST** have read, write, and execute permissions to the Version Manager **AND** Eclipse installation directories.

  See "About Creating User Accounts for Version Manager" on page 41 for more information on setting up permissions to install Version Manager.

- Since the integration cannot make use of setuid mode, you must choose one of the following approaches to allow Eclipse users to access the Version Manager archives:

  • Set up a Version Manager file server and access the archives through it. See Chapter 1, "About Version Manager Servers" on page 8.

  • Set the O/S permissions of the Version Manager project database directories so that the directories are readable and writable by all users of the integration to Eclipse. All users must have the same primary group and run Eclipse with a umask of 002. See the *Serene PVCS Version Manager Administrator's Guide* for more information on configuring security and limiting file system access to the archive files.

Installing the Plugin

To install the integration:

1 Login as a user who has read, write, and execute permissions to the Version Manager and Eclipse installation directories.

2 Run the installation script, vminst, and follow the prompts.

3 Select the **Plugin for Eclipse 3 (rich integration)** component when prompted to select the components to install. (Press the "N" key to clear the default selections. Use

the Enter key to step through the list of components. Press the "X" key to select a component. Press the "Y" key when your selections are complete.)

> **NOTE** You must also install the Desktop Client if the current version is not already installed.

4 Provide the path to the Eclipse IDE installation when prompted, specifically the location of the Eclipse directory.

5 Follow the prompts to complete the installation.

After You Install the Plugin

After the installation is complete, you must finalize the installation by configuring your operating system appropriately.

To finalize the installation:

■ If you are not accessing all archives via a Version Manager file server, you must set the O/S permissions to allow all users access certain directories and files. See the section in the *Serene PVCS Version Manager Administrator's Guide* on Protecting Program Files and Project Data; apply the permissions as described for the Nonsetuid Group.

■ You must source a profile file as described in Step 1 of "Setting Up Your UNIX Environment for Version Manager" on page 47.

Post Install Configuration

See the following sections for information on configuring Version Manager for use once it is installed.

See the Administrator's Guide

See the *Administrator's Guide* for information on configuring Version Manager. Topics covered there include:

■ Configuring Version Manager servers: File Server, Web Server, WebDAV Server, and SSO Server

■ Security and user administration

■ Configuring projects and project databases

■ Configuring clients to access project databases on file servers

Configuring a Different Web Server

You can configure a different Web Server to work with Version Manager after the installation has completed. To do so, run the command:

```
Install_Dir/vm/OS/bin/configure_inet Install_Dir
```

For example:

```
/usr/serena/vm/linux/bin/configure_inet /usr/serena
```

Setting Up Your UNIX Environment for Version Manager

Once you have installed Version Manager, you—or your UNIX administrator—must set up your UNIX environment before using Version Manager.

To set up environment variables for UNIX:

1 To enable use of the Version Manager command-line interface (CLI), you should source one of the Version Manager profile files that was generated during installation. Sourcing a profile file will add and/or modify environment variables in your current shell to enable use of the CLI.

Two profile files are available, `vmprofile` and `vmcshrc`. Which file you must use depends upon which shell you are running. These files are located in the `bin` directory below a directory named after your operating system, as in:
<VM_Install_Directory>/vm/*<OS>*/bin

For this shell...	Use this syntax...
C	source *<VM_Install_Directory>*/vm/*<os>*/bin/vmcshrc
Bash, Bourne, and Korn	**.** *<VM_Install_Directory>*/vm/*<os>*/bin/vmprofile **NOTE** The period (.) acts as the "source" command in these shells, so the leading period and space are required.

Since a sourced profile does not persist between logins, you should consider adding the source command to your start up script (`.cshrc` or `.profile`). This saves you from having to manually run the source command every time you log in to a shell from which you wish to use the CLI.

2 If you are using the desktop client, follow this procedure to setup your environment:

a Make sure the DISPLAY environment variable is set to the host name or IP address of the system used to view Version Manager. If it is not automatically assigned, you can assign it as follows:

For this shell...	Use this syntax...
C	setenv DISPLAY *host_name*:0.0 or setenv DISPLAY *ip_address*:0.0
Korn	export DISPLAY=*host_name*:0.0 or export DISPLAY=*ip_address*:0.0
Bourne	DISPLAY=*host_name*:0.0 or DISPLAY=*ip_address*:0.0 export DISPLAY

b Edit the PATH environment variable in each user's start up script (`.cshrc` or `.profile`) as follows:

For this UNIX system...	Do this...
Solaris	Include the bin directory for OpenWindows in the PATH; for example, `$PATH:/usr/openwin/bin`
All others	Include the path to the X11R6 bin directory; for example, `$PATH:/usr/bin/X11`

c **For Solaris only:** You may need to set the environment variables OPENWINHOME, LD_LIBRARY_PATH, and XFILESEARCHPATH as indicated below.

For this shell ...	Use this syntax ...

C	`setenv OPENWINHOME openwindows_directory`
	`setenv LD_LIBRARY_PATH $OPENWINHOME/lib:$LD_LIBRARY_PATH`
	`setenv XFILESEARCHPATH $OPENWINHOME/lib/%T/%N/%S`

Korn or Bourne	`OPENWINHOME=openwindows_directory`
	`export OPENWINHOME`
	`LD_LIBRARY_PATH=$OPENWINHOME/lib`
	`export LD_LIBRARY_PATH`
	`XFILESEARCHPATH=$OPENWINHOME/lib/%T/%N/%S export XFILESEARCHPATH`

where *openwindows_directory* is the OpenWindows installation directory.

d If you are using an X Windows console to view Version Manager:

- In setuid mode and the console is physically connected to the system that is running Version Manager, then execute the command:

  `xhost +local:`

- Running on another UNIX system, then execute the command:

  `xhost +`

From the UNIX system that is physically connected to the console.

This procedure is necessary to ensure that Version Manager has the ability to access your screen. Otherwise, the X Windows subsystem will report "Connection refused by server" messages similar to the following example:

```
$ pvcsvmux
$ Xlib: connection to ":0.0" refused by server
Xlib: Client is not authorized to connect to Server
Exception in thread "main" java.lang.InternalError: Can't connect
to X11 window server using ':0' as the value of the DISPLAY
variable.
```

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