Agile Product Lifecycle Management

Installing Agile PLM for WebLogic

v9.2.2.7

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CONTENTS

Copyright and Trademarks ii

Chapter 1 Installation Checklists 1

Pre-Installation Checklist 1
Application Server Installation Checklist 2
Clustered Application Server Installation Checklist 2
File Manager Installation Checklist 3
Web Proxy Server Installation Checklist 3

Overview 4

Upgrading Agile Server Components 4
System Requirements for Upgrading 4
Checking Available Disk Space and Tablespace Size 5
Backing Up Files 5

Chapter 2 Upgrading to Agile PLM 9.2.2.4 7

Disabling Services 7
Upgrading Roles and Privilege Masks 7
Backing Up the Registry 8
Upgrading the Database 8
Upgrading the Agile PLM 9.2.2.4 Application 8
Upgrading the File Vault 9
Upgrading the Agile PLM ActiveX Control 9
Upgrading Roles and Privilege Masks 10

Chapter 3 Installing Agile PLM 11

Installation Process 11
Agile PLM System Requirements 12
Obtaining Software from Oracle MetaLink 13
Copying the Agile PLM Files 14
Starting the Agile PLM Installer 14
Installer Online Help 15
Installer Buttons 15
Agile PLM Components 15
Agile PLM Installation Modes 16
Agile PLM Installation Folders 16
Agile PLM Windows Services 17

Chapter 4 Configuring the Agile Application Server 19

Overview of the Agile Application Server 19
Application Server Installation Sequence 19
Testing the Agile Application Server Connection 19
Checking Your Agile PLM System 20
Checking Whether Agile Web Services Work 21
Checking Whether the Agile SDK Works 21

Chapter 5 Configuring Application Server Clusters 23

About Agile Application Server Clusters 23
Firewall Considerations for Clusters 23
Installing Agile PLM on the Administration and Managed Servers 24
Setting Up a WebLogic Cluster 24
Starting the WebLogic Administration Server 24
Configuring the WebLogic Managed Servers 25
Adding Managed Servers to the Cluster 25
Configuring the jndiurl.properties File 26
Configuring a Distributed JMS Cluster on BEA WebLogic 26
Starting the WebLogic Managed Servers 27
Deploying the Application 27
Configuring the Load Balancer 27

Chapter 6 Configuring the File Manager 29

About File Management 29
Distributed File Managers 29
Deployment Configurations 30
Configuring the File Manager 33
Reconfiguring File Manager After Setting Up a Web Proxy Server 35
Starting the File Manager 37
Validating the File Manager Installation 37

Chapter 7 Configuring a Web Proxy Server for Agile PLM 39

Overview 39
Agile Internet Security 39
Recommended Security Practices 39
Configuring Internet Information Server 40
Firewall Configuration 40
Deployment Scenarios in the DMZ 40
Testing the Agile Application Server Connection 42
Configuring IIS as a Proxy Server for Agile PLM 42

Testing the Configuration 44
Configuring IIS as a Proxy Server for Agile File Manager 45
Testing the Configuration 46
Configuring the Apache Web Server as a Proxy Server for Agile PLM and Agile File Manager 47
Configuring Apache Web Server on Solaris 47
Configuring Apache Web Server on Linux 49
Configuring Apache Web Server on AIX 50
Enabling Debugging Information for the Jakarta Tomcat Connector 52
Logging In to the Agile Web Client 52
Troubleshooting the Agile Web Client 53
Confirming Accessibility 53
URL Error Messages 53
Customized Virtual Path Does Not Work 53
Browser Shows A Proxy Timeout Message 53
Log Files (Disk Space) 54
Connection Refused or Server is Busy Error Message 54
Changing the Password for the Agile Domain 54

Chapter 8 Configuring the Microsoft Excel-based Client for Agile PG&C 55

Overview of the Microsoft Excel-based Client for Agile PG&C 55
JGPSSI Support 56
Substances and Weights Rollups 56
Client Software Requirements 57
Microsoft Excel-based Client FAQ 57
Configuration Sequence 59
Setting Privileges for Agile PG&C Objects 60
Enabling Attributes that are Required for Excel Rollups 61
Classes: Parts, Manufacturer Parts, and Documents 61
Classes: Parts and Documents 62
Restricting the Length of Declaration Names 62
Deploying License Files for the Agile PLM ActiveX Control 63
Using the Developer Version of the Microsoft Excel Integration License File 64
Digitally Signing the Agile PLM ActiveX Control 64
Enabling Downloading of Productivity Components 65
Installing the Agile PLM ActiveX Control 66
Testing the Microsoft Excel-based Client for Agile PG&C 66
Troubleshooting 68

Chapter 9 Configuring Agile Product Portfolio Management 73

Overview 73

PPM Post Upgrade Utility 73
Running the PPM Post Upgrade Utility 73

Chapter 10 Installing and Configuring Agile Java Client 75

Agile Java Client Requirements 75
Installing the Agile Java Client 75
Running Agile Java Client 9.0 and Agile Java Client 9.2.2.4 on the Same Computer 76
Reconfiguring Java Client JNLP Files 76
Modifying the JNLP Files 76
Opening Multiple Java Clients 78

Chapter 11 Integrating Agile PLM with Oracle AutoVue 19.3.2 79

Installing Oracle AutoVue 19.3.2 for Agile PLM 79
Configuring the AutoVue 19.3.2 Viewer Client Libraries with the Viewer Installer 79
Configuring the AutoVue 19.3.2 Viewer Client Libraries Manually 80
Gathering the Required AutoVue Binaries 80
Configuring the Agile Application Server 80
Configuring the File Manager 81

Appendix A Agile PLM Service Pack Installation 83

Install and Test Notice 83
Installing an Agile PLM Service Pack on Windows 83
Upgrade Requirements 83
Operating System 83
Supported Application Upgrade Path 83
Installation Workaround 84
Upgrading the File Manager 84
Upgrading the SDK Client 85
Upgrading the Application Server 85
Post-Installation Verification 85
Installing an Agile PLM Service Pack on UNIX 86
Upgrade Requirements 86
Operating System 86
Supported Application Upgrade Path 86
Installation Workaround 86
Upgrading the File Manager 87
Upgrading the SDK Client 87
Upgrading the Application Server 88
Post-Installation Verification 88

Appendix B Agile PLM Installer Panels 91

Common Agile PLM Installer Panels 91
Database Details Panel 92
Application Server Panels 92
Web Server Panels 94
Viewer Panels 95
File Manager Panels 95

Appendix C Agile Application Server Scripts 99

Installation and Configuration Scripts 99
Application Scripts 99
File Vault Utilities 100
iFSReorgV2 100
MetaFilesRemover 101
MetaItemGenerator 101
metaUtility 102
VaultSimulation 102
DeadFilesLocator 102
MissingFilesLocator 103
FixFileSize 103

Appendix D Agile System Maintenance 105

Using the Server as a Client 105
Performance Tuning 105
Tuning JVM Parameters 105
Tuning the Thread Count 107
Configuring Access to Objects using Agile Administrative Settings 107
Configuring Your Firewall 108
Color Settings 108
Checking Your TCP/IP Connection 108
Configuring Browsers on Client Computers 109
Uninstalling Agile PLM 109

Appendix E Tuning Memory for Java Applets 111

Java Control Panel 112
Frequently Asked Questions 112

Preface

The Agile PLM documentation set includes Adobe® Acrobat PDF files. The Oracle Technology Network (OTN) Web site http://www.oracle.com/technology/documentation/agile.html contains the latest versions of the Agile PLM PDF files. You can view or download these manuals from the Web site, or you can ask your Agile administrator if there is an Agile PLM Documentation folder available on your network from which you can access the Agile PLM documentation (PDF) files.

Note	To read the PDF files, you must use the free Adobe Acrobat Reader version 7.0 or later. This program can be downloaded from the Adobe Web site http://www.adobe.com.

The Oracle Technology Network (OTN) Web site http://www.oracle.com/technology/documentation/agile.html can be accessed through **Help** > **Manuals** in both Agile Web Client and Agile Java Client. If you need additional assistance or information, please contact support http://www.oracle.com/agile/support.html (http://www.oracle.com/agile/support.html) for assistance.

Note	Before calling Oracle Support about a problem with an Agile PLM manual, please have the full part number, which is located on the title page.

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Readme

Any last-minute information about Agile PLM can be found in the Readme file on the Oracle Technology Network (OTN) Web site http://www.oracle.com/technology/documentation/agile.html

Agile Training Aids

Go to the Oracle University Web page http://www.oracle.com/education/chooser/selectcountry_new.html for more information on Agile Training offerings.

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Screen readers may not always correctly read the code examples in this document. The conventions for writing code require that closing braces should appear on an otherwise empty line; however, some screen readers may not always read a line of text that consists solely of a bracket or brace.

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Chapter 1

Installation Checklists

This chapter includes the following:

- Pre-Installation Checklist 1
- Application Server Installation Checklist 2
- Clustered Application Server Installation Checklist 2
- File Manager Installation Checklist 3
- Web Proxy Server Installation Checklist 3

Pre-Installation Checklist

Before installing the Agile PLM software, you need to log in to your machine with local Administrator privileges and check the following:

- ☐ Can you ping all servers, including the database server, on which you plan to install Agile PLM components? For example, try pinging the database server from the application server.
- ☐ Have you verified the Domain Name System (DNS) host name of each server on which you plan to install Agile PLM components? In DNS, the fully qualified domain name consists of the hostname, then a period, then the domain name.

  Note When you are prompted by the Agile PLM installer to enter a host name, enter the fully qualified domain name of the server.

- ☐ If you are installing an application server cluster, have you ensured that all application servers and the load balancer are registered in the same domain?
- ☐ Is your Agile PLM database server installed and running?
- ☐ Is BEA WebLogic 8.1 SP6 installed on the machine where you are installing the Agile Application Server?
- ☐ Have you verified that you have read, write, and execute permissions for the computer on which you want to install Agile PLM?

  Additionally, if you are upgrading:

- ☐ Have you backed up the files on your File Manager server?
- ☐ Have you uninstalled the previous version of Agile PLM?

Note You must be able to complete this checklist before installing Agile PLM.

Application Server Installation Checklist

Follow these steps to install the Agile Application Server:

- ☐ Install BEA WebLogic 8.1 SP6.

  See the BEA product documentation at http://e-docs.bea.com/wls/docs81/index.html http://e-docs.bea.com/wls/docs81/index.html for installation instructions.

- ☐ Install the Agile PLM **Application Server** component.

  Make sure you select **Advanced Mode** during installation.

  See "Installing Agile PLM on page 11."

- ☐ **On Windows**: Restart the machine.

- ☐ Verify that the Agile Application Server is working properly.

  See "Testing the Agile Application Server Connection".

- ☐ (Optional) Configure a Web proxy server for your Agile PLM system.

  To install the BEA WebLogic plug-in and other files needed to use Microsoft Internet Information Services (IIS) as your Web proxy server, install the Agile PLM **Web Proxies** component on your Web server. See "Installing Agile PLM. on page 11"

  To configure your Web proxy server, "Configuring a Web Proxy Server for Agile PLM. on page 39"

Clustered Application Server Installation Checklist

Follow these steps to install an Agile Application Server cluster:

- ☐ Install BEA WebLogic 8.1 SP6 on each server.

  Important Make sure you install BEA WebLogic into the same directory structure on each server in the cluster. Also, all servers in the cluster must use the same operating system. Otherwise, you will be unable to deploy the Agile application to all servers in the cluster.

  See "About Agile Application Server Clusters on page 23".

- ☐ Install the Agile PLM **Application Server** component on the administration server.

  Make sure you select **Advanced Mode** during installation.

  See "Installing Agile PLM on page 11."

- ☐ Install the Agile PLM **Application Server** component on the managed servers.

  See "Installing Agile PLM. on page 11"

- ☐ Set up the cluster on the administration server.

  See "Setting Up a WebLogic Cluster".

- ☐ Add the managed servers to the cluster.
- ☐ Verify that the Agile cluster is working properly.

  See "Starting the WebLogic Administration Server on page 24".
- ☐ Configure a load balancer or a Web proxy server for your Agile PLM system.

  For information about configuring a load balancer, see "Configuring the Load Balancer on page 27".

  To install the BEA WebLogic plug-in and other files needed to use Microsoft Internet Information Services (IIS) as your Web proxy server, install the Agile PLM **Web Proxies** component on your Web server. See "Installing Agile PLM. on page 11"

  To configure your Web proxy server, see "Configuring a Web Proxy Server for Agile PLM. on page 39"

File Manager Installation Checklist

Follow these steps to install the File Manager:

- ☐ If you are upgrading to Agile PLM from a release prior to Agile PLM 9.2, back up and reorganize your file vault.

  See "Upgrading the File Vault".
- ☐ Install the Agile PLM **File Manager** component.

  See "Installing Agile PLM on page 11."
- ☐ Start the Agile Application Server.
- ☐ (Optional) Configure a Proxy Server for the File Manager.

  See "Configuring IIS as a Proxy Server for Agile File Manager" or "Configuring the Apache Web Server as a Proxy Server for Agile PLM and Agile File Manager on page 47".
- ☐ Configure the File Manager.

  See "Configuring the File Manager on page 29".
- ☐ Start the File Manager.

  See "Starting the File Manager on page 37".
- ☐ Verify that the File Manager is working properly.

  See "Validating the File Manager Installation on page 37.

Web Proxy Server Installation Checklist

Follow these steps to configure a Web proxy server in your company's DMZ for the Agile Application Server and Agile File Manager:

- ☐ Stop your Web server.

- ☐ Install the Agile PLM **Web Proxies** component.

  See "Installing Agile PLM on page 11."

- ☐ Configure your Web server to be a proxy server for either the Agile Application Server, the Agile File Manager, or both.

  See "Configuring a Web Proxy Server for Agile PLM. on page 39"

- ☐ Test the connection by logging into the Agile Web Client.

  See "Logging In to the Agile Web Client" .

Overview

Agile PLM 9.2.2.4 is a full install which can be distributed over a wide-area network with multiple servers, or it can be limited to a single server with several client computers.

Important Before upgrading to Agile PLM 9.2.2.4, read through this entire chapter and the Readme for the latest information. For information about optional upgrade services available from Agile, contact Agile Technical Support.

Note All folder names and paths show the default settings provided during installation. Your system structure may be different if folder names or paths were changed during the Agile PLM installation.

Upgrading Agile Server Components

Before you upgrade any components, you should make sure that all components in the Agile system work and communicate properly. Performing an upgrade on a system that is not functioning correctly will compound troubleshooting techniques.

Important Refer to the *Agile PLM Database Upgrade Guide* for schema upgrade requirements.

System Requirements for Upgrading

Additional hard disk space may be required to upgrade to Agile PLM 9.2.2.4 efficiently. Before you can install Agile server components, you must have at least 60 MB of available disk space available where the OS is installed. It is also recommended that you have at least 100 MB of available disk space for the upgrade.

Checking Available Disk Space and Tablespace Size

Be sure you have enough unused disk space available on the computer where the database is installed before upgrading—at least 100 MB plus an amount equal to 100 percent of your current database and at least twice the size of your user-data tablespace.

Important Refer to the *Agile PLM Database Upgrade Guide* for tablespace requirements.

Backing Up Files

Note Agile PLM 9.2.2.4 is a full install and installs into a new default location. If you accept this location, earlier Agile releases will not be overwritten.

Back up any existing ChangeCAST and other Agile-related folders to a safe location before upgrading any component to Agile PLM 9.2.2.4.

Chapter 2

Upgrading to Agile PLM 9.2.2.4

This chapter includes the following:

- Disabling Services 7
- Upgrading Roles and Privilege Masks 7
- Backing Up the Registry 8
- Upgrading the Database 8
- Upgrading the Agile PLM 9.2.2.4 Application 8
- Upgrading the File Vault 9
- Upgrading the Agile PLM ActiveX Control 9
- Upgrading Roles and Privilege Masks 10

Important If you are performing a new installation, skip this chapter and continue to the Installing Agile PLM on page 11 Chapter.

Disabling Services

To disable Agile services:

1. Ensure that all Agile services are stopped:
   a. Choose **Start** > **Settings** > **Control Panel**.
   b. double-click the **Administrative Tools** icon and then double-click the **Services** icon.
   c. For each Agile service in the Services dialog box, select the service, right-click and choose **Stop** in the shortcut menu. Also for each service, open the Properties dialog box and change the **Startup Type** to **Disabled**.
   d. You must also stop the IIS Admin service if it is running.
   e. Close the Services dialog box.
2. Restart all servers in the Agile system.

Upgrading Roles and Privilege Masks

When you upgrade your Agile PLM database, any existing Agile PLM roles and privilege masks that your company uses are not automatically updated to include new privileges and attributes. The Agile PLM administrator must update existing roles and privilege masks manually using the Agile Java Client.

Agile PLM includes a number of example roles that you can use to modify your own roles. They are stored under the Examples node folder in Java Client. Example roles are read-only and cannot be modified. However, you can use Save As to make a copy of an example role and modify the copy.

Example roles include example privilege masks. When you use Save As to create a copy of an example role, the system populates the new role with the privilege masks.

For more information on how to edit roles and privilege masks, see the *Agile PLM Administrator Guide*.

Backing Up the Registry

The registry contains information created by the Agile installation program. You can backup registry branches so that you can return your system to its previous state.

Note If you have disk space available, you can backup the entire registry (instead of specific branches) before upgrading to Agile PLM 9.2.2.4.

To use regedit to backup registry branches:

1. Choose **Start** > **Run**.
2. Type **regedit** in the **Open** field of the Run dialog box.

   The Registry window opens.
3. Expand the **HKEY_LOCAL_MACHINE > Software** tree and select the **Agile** registry branch.
4. Choose **Registry > Export Registry File**.

   The Export Registry File dialog box appears.
5. Make sure the Agile branch appears in the **Select Branch** field.
6. Name the branch **agilebranch**, and save it to a secure location.

In the event you do not want to continue using this release of Agile PLM 9.2.2.4, you can import these registry branches, and then restart the computer.

Upgrading the Database

The Agile database must be upgraded before installing the Agile Application Server. Refer to the *Agile PLM Database Upgrade Guide* for details about the Automated Upgrade Tool provided with Agile PLM 9.2.2.4.

Upgrading the Agile PLM 9.2.2.4 Application

Because it is a full install, you should uninstall your previous version of Agile PLM before installing Agile PLM 9.2.2.4.

Important Do not install into the same folder used by the previous installation of Agile. Choose a new installation location.

Upgrading the File Vault

In Agile PLM, the file vault structure must be reorganized. In previous versions of Agile, files were stored in the <iFS Root> or files directory. In the new design, files are stored in separate directories based on a file ID. All existing files must be reorganized to conform to the new design specifications. If you have an existing iFS or Distributed File Manager (DFM) configuration, you must reorganize the files on each file server.

To reorganize existing files:

1. Back up any existing Agile file vaults to a safe location before upgrading any component to Agile PLM 9.2.2.4. The default location for Agile iFS Files in Agile 8.5 is \\Program Files\Agile Product Collaboration\iFS\Files.

   If you have existing Distributed File Managers, you must also back up the files on all the DFMs.

2. After you have copied all files into a backup directory, install the new File Manager by following the instructions in "Starting the Agile PLM Installer on page 14", if it is not already installed.

3. Copy any files that you backed up earlier into the File Manager Storage Location you specified during the file manager installation.

4. Go to the **AGILE_HOME\AgileDomain\Tools** directory.

5. Run the iFSReorgV2 utility:

   Usage: java -jar iFSReorgV2.jar -basedir <*value*> **-oldFilePrefix** <*value*> **[-newFilePrefix** <*value*>**] [-logging <true/false>] [-simulate <true/false>]**

   where

   - **basedir** is the file vault location to be reorganized
   - **oldFilePrefix** is the old file name prefix for the existing files in the vault
   - **newFilePrefix** is the new file name prefix. All of the existing files will be renamed with this prefix. This is an optional argument. If it is not specified, the old file name prefix is used.
   - **logging** enables logging of warnings or errors if set to **true**. The log is saved to a file named ifsReorg.log.
   - **simulate** simulates the reorganization process without actually moving or renaming the files.

6. After the program completes, the reorganization summary information displays.

7. Go to "Configuring the File Manager on page 29" to configure the new file manager with the upgraded vault information and to validate the installation was successful.

Upgrading the Agile PLM ActiveX Control

If you used the Microsoft Excel-based client to open Agile PLM 9.2 Declarations in Microsoft Excel, you have the Agile PLM ActiveX Control (version 1.0.313.1) installed on your client computer. Agile PLM 9.2.2.4 uses a later version (1.0313.8) of the Agile PLM ActiveX Control.

Optionally, you can uninstall the older Agile PLM ActiveX Control. If the Agile PLM preference **Allow Downloading of Productivity Components** is set to Yes, the next time you use the Agile Web Client to open a Declaration in Microsoft Excel, the latest version of the Agile PLM ActiveX Control will be

downloaded and installed automatically.

Note Before uninstalling the Agile PLM ActiveX Control, close Microsoft Excel.

Upgrading Roles and Privilege Masks

When you upgrade your Agile PLM database, any existing Agile PLM roles and privilege masks that your company uses are not automatically updated to include new privileges and attributes. The Agile PLM administrator must update existing roles and privilege masks manually using the Agile Java Client.

Agile PLM includes a number of example roles that you can use to modify your own roles. They are stored under the Examples node folder in Java Client. Example roles are read-only and cannot be modified. However, you can use Save As to make a copy of an example role and modify the copy.

Example roles include example privilege masks. When you use Save As to create a copy of an example role, the system populates the new role with the privilege masks.

For more information on how to edit roles and privilege masks, see the *Agile PLM Administrator Guide*.

Chapter 3

Installing Agile PLM

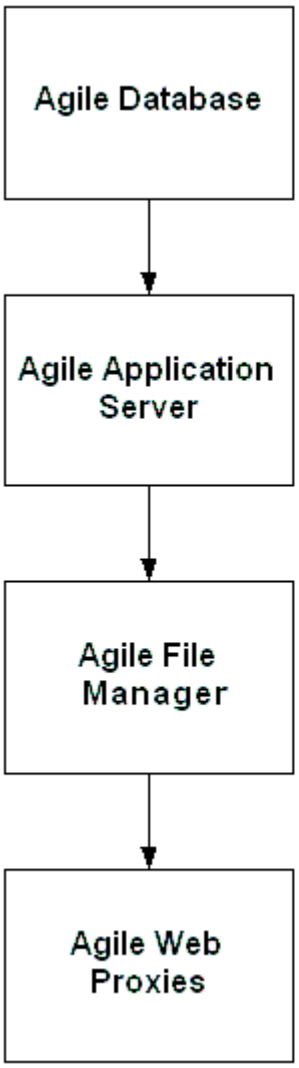
This chapter includes the following:

- Installation Process 11
- Agile PLM System Requirements 12
- Obtaining Software from Oracle MetaLink 13
- Copying the Agile PLM Files 14
- Starting the Agile PLM Installer 14
- Agile PLM Components 15
- Agile PLM Installation Modes 16
- Agile PLM Installation Folders 16
- Agile PLM Windows Services 17

Installation Process

Agile PLM is designed to run optimally on multiple computers. This guide is presented with separate chapters for certain Agile PLM components. To set up an Agile PLM system, you should install the main components in the following order:

Note If the Application Server, File Manager and Web Server components will be installed on one machine, then they can be installed at the same time.



Refer to the *Agile PLM Database Installation Guide*.

This applies to both a standalone application server or application server clusters.

Important If you are upgrading from a previous version of Agile PLM, first read " Upgrading to Agile PLM 9.2.2.4 on page 7".

Agile PLM System Requirements

Agile PLM may be deployed in different configurations. The amount of time required to complete an installation depends on the complexity of your Agile PLM implementation.

Note Make sure you have installed all Windows updates, especially for the DirectX component.

For installations using a certified localized language, all server components must be installed on computers running the same localized OS. Clients can be running on the same localized OS or English OS. For detailed information about using Agile PLM with international operating systems, contact the Agile support Web site.

The general recommended configuration for Agile PLM components is one computer for each of the following server components:

- Agile database
- Agile Application Server

Note Before installing Agile PLM 9.2.2.4, BEA WebLogic 8.1 SP6 must be installed on the computer where you plan to install the Agile Application Server

It is acceptable to install multiple server components on the same computer if the additional resources are not available. However, the minimum hardware requirements must be increased based on the number of server components installed on a single computer. For specific hardware and software requirements, see the *Capacity Planning and Deployment Guide*.

Network service and TCP/IP protocol must be enabled before you install Agile PLM.

On Windows, if you receive the error message “Failed to retrieve domain name from registry. Please enter the domain name in the TCP/IP properties and try again later” and the installation aborts, then you must setup Network service, as follows:

1. From the Control Panel window, double-click the **Network and Dial-up** icon.
2. right-click on the **Local Area Connection** icon and choose **Enable** from the shortcut menu.

Obtaining Software from Oracle MetaLink

Oracle minor release products are distributed as a Patchset/Minipack. A Patchset/Minipack is an electronic version of the software. To download the Product Patchset/Minipack, go to the Oracle MetaLink Web site (https:// mlrepau.us.oracle.com/) and search for the product. Refer to the Patchset/Minipack description and view the Readme. After you review the Readme, download the Product Patchset/Minipack.

There will be one zip file which contains all Product binaries, documentation, and database files. Follow the installation instructions from the Install Guide to install the product.

All Oracle MetaLink Web site files have been archived using Info-ZIP's highly portable Zip utility. After downloading one or more of the archives, you will need the UnZip utility or a WinZip utility to extract the files. You must unzip the archive on the platform for which it was intended. Verify that the file size of your downloaded file matches the file size displayed on MetaLink. Unzip each Zip file to its own temporary directory.

Copying the Agile PLM Files

Before installing Agile PLM, the contents of the media packs should be copied to a local directory with the same file structure used by the Installer. The Platforms directory must be copied into the same directory as the setup file.

Note Be sure to check the size of the media packs after copying the files to verify that all files have been copied.

Starting the Agile PLM Installer

Important Install and test this release on a designated test server before installing it on your production environment. Your test environment should mirror your production environment as closely as possible to provide accurate testing results. It is important to validate the installation of this release and confirm your integrations are working correctly as part of your minimum due diligence. Any problems or questions noted during your system testing should be resolved before installing this release on your production environment.

The Agile PLM installer is a Java program. The installation of all components follows the same initial process up through the panel where you select the components to install.

Before running the installer, make sure

- You have read and completed the pre-installation checklist. You should also read and follow the installation checklist for each Agile PLM component you plan to install. See "Installation Checklists on page 1."
- You have enough available disk space.

  Windows: at least 500MB of available disk space

  UNIX: at least 1700MB of available disk space on the drive where your default Temp directory is located.
- You have disabled virus protection.

  If virus protection is enabled, components used in the installer can be falsely identified as being infected and lock up the installation. You can enable virus protection after the installation is complete.

To start the Agile PLM installer on Windows:

Log in to the computer using a login with local Administrator permissions.

1. In the Disk1\Windows directory, double-click the **setup_win.exe** file.

   Note If there is insufficient TEMP disk space available to complete the installation, you will be prompted for another location. Click **Choose**, select another drive, Click **OK**, and the installer will start.

   After a few moments, the Welcome screen appears.

2. For information about any screen in the installer, click **Help**.

To start the Agile PLM installer on UNIX:

1. Log into the system.

   Note If you are installing the Agile Application Server, make sure you log in as the same user that installed BEA WebLogic Server.

2. Open a terminal window.
3. Go to the directory where you copied the Agile PLM files. Locate the **setup**_<*OS*>**.bin** file, and run the program by typing the following:

   AIX: **./setup_aix.bin**
   Linux: **./setup_lin.bin**
   Solaris (SPARC): **./setup_sol.bin**
   Solaris (X86): **./setup_solx86.bin**

   After a few moments, the Welcome screen appears.

4. For information about any screen in the installer, click **Help**.

Installer Online Help

Each installation panel has online help. At any time during installation, you can click **Help** for more information about the panel's options.

Note If you leave the online help window open, it will be updated when you proceed through the installer panels. Otherwise, click **Close** at the bottom of the help window.

Installer Buttons

Agile PLM installation panels have the following buttons:

- **Cancel** — Exits from the installation program.
- **Help** — Displays online help.
- **Previous** — Returns to the previous step.
- **Next** — Proceeds to the next step.
- **Install** — Starts installing. The **Install** button appears only on the Pre-Installation Summary panel, after you have specified installation options.
- **Done** — Exits from the installation program. On Windows, after installing certain components you can choose whether to restart the computer when you click **Done**. The **Done** button appears only on the Install Complete panel, after you have finished installing.

Agile PLM Components

During Agile PLM installation, you must select components to install. Choose from the following components.

Component	Platform	Installation/Configuration Documentation
Application Server	Windows/Solaris/Linux/AIX	Configuring the Agile Application Server on page 19"and Configuring Application Server Clusters on page 23
File Manager	Windows/Solaris/Linux/AIX	Chapter 6, "Configuring the File Manager"
Web Proxies	Windows/Solaris/Linux/AIX	Chapter 7, "Configuring a Web Proxy Server for Agile PLM"
ChangeCAST Client (Upgrade only)	Windows	See online help for the Agile PLM installer.
Portlet Services	Windows/Solaris/Linux/AIX	See the separate *Agile Portlet Services Installation and Configuration Guide*.
API	Windows/Solaris/Linux/AIX	See online help for the Agile PLM installer.

Agile PLM Installation Modes

When installing Agile PLM, you can install in Basic or Advanced mode. Basic mode should be selected to install a standalone system on Oracle Application Server with the following system defaults:

- Agile Application Server Virtual Path (default:Agile)
- File Manager User Authentication (default:ifsuser/agile)
- File Manager Virtual Path (default:Filemgr)

If you prefer to use values different from these defaults, then select Advanced mode. In Advanced mode, you can install a standalone or cluster system on Oracle Application Server or BEA WebLogic and change the defaults above, if desired.

Agile PLM Installation Folders

After you install Agile PLM, the following folders appear in the AGILE_HOME folder.

Note This list includes the folders for all Agile PLM components, although it is not necessary that you install them all on one computer.

Folder	Description
agileDomain	Agile Application Server
AgileProxies	Web proxy configuration files
changecast	ChangeCAST client
install	Installation and configuration scripts

Folder	Description
integration	Agile Integration Framework (AIF) products such as Agile Integration Services (AIS) and Agile SDK
jdk	Java Development Kit 1.5.0_06
Portlet_51	Agile Portlet Services for WebSphere Portal 5.1.0.2
Tomcat	Tomcat 5.0.30
Uninstaller	Agile PLM uninstaller

Agile PLM Windows Services

After you install Agile PLM on BEA WebLogic for Windows, the following Windows services are added to your system:

Service	Description
Agile ChangeCAST	Agile ChangeCAST service
Apache Tomcat	Apache Tomcat service. Start this service to start Agile File Manager.

Chapter 4

Configuring the Agile Application Server

This chapter includes the following:

- Overview of the Agile Application Server 19
- Application Server Installation Sequence 19
- Testing the Agile Application Server Connection 19
- Checking Your Agile PLM System 20

Overview of the Agile Application Server

The Agile Application Server is the center of the Agile system, the base for the PLM platform, where all common services and business logic reside for the entire solution. The installation of the Agile Application Server also includes Agile Content Service.

The Agile Application Server runs on either Oracle Application Server 10g or BEA WebLogic 8.1 SP6. All client servers including Portal Server, Viewer, and users connect to the Application Server either directly or indirectly through a proxy web server.

Application Server Installation Sequence

Follow these steps to install the Agile Application Server:

1. Install BEA WebLogic 8.1 SP6.

   See the BEA product documentation at http://e-docs.bea.com/wls/docs81/index.html http://e-docs.bea.com/wls/docs81/index.html for installation instructions.

2. Install the Agile Application Server.

   See "Installing Agile PLM on page 11."

3. Verify that the Agile Application Server is working properly.

   See "Testing the Agile Application Server Connection".

Testing the Agile Application Server Connection

You can now test the connection over the specified ports to the Agile Application Server.

Important It is important that you do not provide users with this URL. The port you specified during the Application Server installation is not standard and should not be used by external or remote Agile Web clients. This URL is a direct connection to the Application Server, and it should be used only for testing and troubleshooting purposes.

To test the Agile Application Server connection:

1. Start the Agile Server.
   a. **Windows**: Choose **Start > All Programs > Agile > Agile 9.2.2.4 > Start Agile Server** to start the Agile server, if it is not installed as a Windows service.

      UNIX: Run the StartAgile.sh script located in the /opt/Agile/Agile9224/agileDomain/bin directory
   b. A Command Prompt window appears. This window must remain open, but can be minimized, for users to access Agile Web client.
2. When starting the Agile Server for the first time, the following prompt appears:

```
  1) Encrypt protected attributes in config.xml that are not
encrypted and then delete the config.xml.original with protected
attributes in clear-text.
  2) Encrypt protected attributes in config.xml that are not
encrypted and overwrite config.xml.original with the new config.xml
  3) Encrypt protected attributes in config.xml that are not
encrypted but leave config.xml.original with protected attributes
still in clear-text.
```

   Enter the value that meets your system requirement.

   Wait until the following message appears in the command window: “Agile PLM Server Starting Up”.
1. Open your browser and use the following URL to test the Agile Web client setup:

   http://application_server:port/virtual_path/PLMServlet

   Note The URL is case-sensitive.

   A login window appears.
2. Enter the username and password.

   The first time you log in to the Agile Web client, it may take a while to load the information.

Checking Your Agile PLM System

Before using Agile Integration Framework (AIF) products such as Agile Integration Services (AIS) or the Agile SDK, you must ensure that the system is properly configured.

For more information about using AIS and the Agile SDK to develop custom solutions for Agile PLM, see the separate *Agile Integration Services Developer Guide* and the *Agile SDK Developer Guide*, respectively.

Checking Whether Agile Web Services Work

Before trying to compile and run the sample AIS web service clients, or developing custom web service extensions to the Agile PLM system, make sure your server is working properly. First, try accessing the following URLs to see if they correctly return WSDL from the server.

1. http://agileserver/virtualPath/integration/ws/Importer?wsdl
2. http://agileserver/virtualPath/integration/ws/Export?wsdl
3. http://agileserver/virtualPath/integration/ws/ResponseService?wsdl

All three URLs should return WSDL. If any do not, contact Customer Support.

Checking Whether the Agile SDK Works

If you purchased a license to the Agile SDK, Agile PLM provides both server-side and client-side components that allow you to develop Java programs and web services that extend the functionality of Agile PLM and help you integrate it with other applications. Before beginning to develop Agile SDK programs, make sure your system is working properly. You should be able to establish a connection with the Agile Application Server or the proxy web server used for the Agile PLM system. You should also be able to create an Agile PLM session and download classes from the server.

Checking Your Connection

To check your connection, access the following servlet URL that is installed with Agile PLM:

http://<servername>.<domain>:<port>/<virtualPath>/ServerAPIProperties

For example, the URL might look something like this:

http://plm.yourcompany.com/Agile/ServerAPIProperties

The servlet should return the following information:

- Minimum Agile API version needed to connect to the server
- Current Agile PLM server version
- Current Agile PLM release
- Agile PLM session class
- Agile PLM authenticator class
- Agile PLM application server type
- name/value pairs for environment variables

If the page cannot be found, you are unable to connect to the server. There are several possible causes for the problem:

- You typed the URL incorrectly.
- The server may be down temporarily.

- You may be experiencing problems with your network.

Whatever the cause, you must fix the problem before you can run an Agile SDK client. If you need help, contact your company's Help Desk or your Agile PLM administrator.

Granting Write Permission to the AgileSDK.cache and sdk.extensions.lib Folders

When you run an Agile SDK client program, it connects to the Agile Application Server and automatically downloads the classes it needs into a local cache folder named AgileSDK.cache. Similarly, when you run a process extension from one of the Agile PLM clients or invoke a web service extension, the server automatically copies any updated libraries into a folder named sdk.extensions.lib before loading them. On Windows, these folders are created automatically in the c:\Documents and Settings\<*username*> folder and there is never any need to modify them. However, on Unix-based operating systems such as Solaris and Linux, the system administrator must create the /tmp/AgileSDK.cache and /tmp/sdk.extensions.lib folders and grant users write access to them.

Important If you don't have write access to the /tmp/AgileSDK.cache and /tmp/sdk.extensions.lib folders, you won't be able to run Agile SDK client programs, use process extensions from Agile PLM clients, or use Agile PLM web service extensions. Please see your system administrator and make sure you have proper access to those folders.

Setting the sdk.extensions Property

If your company uses the Agile SDK to develop process extensions or web service extensions, the finished programs are copied to the AGILE_HOME\integration\sdk\extensions folder located on the Agile Application Server. From there, the server uses special-purpose class loaders to load the programs when they are invoked.

The agile.properties file located in AGILE_HOME\agileDomain\config contains an sdk.extensions property that specifies the location of the extensions folder. If process extensions, web service extensions, or the Agile File Management Server (which is actually a web service extension) don't run successfully, it could be because the sdk.extensions property is set incorrectly and does not match the location where the programs have been placed.

Note Ordinarily, you should never need to edit the agile.properties file. The sdk.extensions property should be set correctly when you install Agile PLM. If you modify the sdk.extensions property, you must restart the server.

Chapter 5

Configuring Application Server Clusters

This chapter includes the following:

- About Agile Application Server Clusters 23
- Firewall Considerations for Clusters 23
- Installing Agile PLM on the Administration and Managed Servers 24
- Setting Up a WebLogic Cluster 24
- Configuring the jndiurl.properties File 26
- Configuring a Distributed JMS Cluster on BEA WebLogic 26
- Deploying the Application 27
- Configuring the Load Balancer 27

About Agile Application Server Clusters

Agile takes advantage of clustering capability provided by the supported application servers. A cluster is a group of servers that work together to provide a more scalable, more reliable application platform than a single server. A cluster appears to its clients as a single server, but is actually a group of servers acting as one. A cluster provides two key advantages over a single server:

- Scalability: The capacity of a cluster is not limited to a single server or a single machine. New servers can be added to the cluster dynamically to increase capacity. If more hardware is needed, a new server on a new machine can be added. If a single server cannot fully utilize an existing machine, additional servers can be added to that machine. But this is not a supported configuration unless you are using a product like VMWare or partitions or containers.
- High-Availability: A cluster uses the redundancy of multiple servers to insulate clients from failures. The same service can be provided on multiple servers in the cluster. If one server fails, the surviving members can continue to serve the application. The ability to fail over from a failed server to a functioning server increases the availability of the application to clients.

Traffic to multiple application servers needs to be managed or balanced by some device in-between the server cluster and the clients. There are two main components that provide this capability; reverse-proxy web servers or load balancing hardware.

Firewall Considerations for Clusters

In any cluster architecture that uses one or more firewalls, it is critical to identify all Application Server instances using publicly available DNS names, rather than IP addresses. Using DNS names avoids problems associated with address translation policies used to mask internal IP addresses from untrusted clients. However, most security policies involve hiding (and denying access to) internal IP addresses.

To avoid problems in all cases, bind Application Server instances to DNS names and use the same DNS names both inside and outside the firewall. An alternative to using DNS names is to use identical IP addresses inside and outside of the firewall. However, publicizing IP addresses is not

recommended as it may compromise the security of the Web application.

Installing Agile PLM on the Administration and Managed Servers

Install the Agile Application Server by starting the Agile PLM installer and following the instructions in online help. See "Installing Agile PLM on page 11." Make sure you select **Advanced Mode** as the Installation Mode and **Cluster Installation** as the Installation Type. The directory structure should be the same on all of the servers in the cluster.

Setting Up a WebLogic Cluster

A WebLogic Server cluster is a group of WebLogic servers that work together to provide a scalable, more reliable application platform than a single server. A typical cluster configuration contains one WebLogic domain administration server and one or more WebLogic Managed servers. BEA recommends that all the WebLogic servers should be located in the same subnet to ensure the multicast messages are reliably transmitted.

The following are assumptions that the Agile PLM 9.2.2.4 installer has performed successfully:

- The necessary files are installed (the cluster version of config.xml and the application.ear files) on the WebLogic Domain Administration server only
- The config.xml file is populated with the cluster name and cluster IP multicast address.
- Agile PLM 9.2.2.4 is installed on each WebLogic Managed server, and each instance includes the WebLogic Managed server startup script, which contains the administration server name.

The cluster setup includes configuring the number of WebLogic Managed servers in a cluster, adding them to the cluster, and targeting a JMS server to one of the newly created WebLogic Managed Servers.

Starting the WebLogic Administration Server

To start WebLogic Administration Server, go to the <*Agile_dir*>\agileDomain\bin folder on the computer where Administration Server is installed and run the startAgile script.

When starting the server for the first time, the following prompt appears:

```
 1) Encrypt protected attributes in config.xml that are not
encrypted and then delete the config.xml.original with protected
attributes in clear-text.
  2) Encrypt protected attributes in config.xml that are not
encrypted and overwrite config.xml.original with the new config.xml
  3) Encrypt protected attributes in config.xml that are not
encrypted but leave config.xml.original with protected attributes
still in clear-text.
```

Enter the value that meets your system requirements.

Configuring the WebLogic Managed Servers

The following steps are used to configure each WebLogic Managed server on the Administration server:

1. Start WebLogic Administration server by running the startAgile script.
2. Open the Administration console by typing the following:

   http://localhost:<port_number>/console

   This URL should be protected to prevent access from other users.
3. The default user login is **superadmin**, and the password is **agile**.
4. On the left pane, click **Console > AgileDomain > Servers**.
5. right-click on the list of servers, then choose **Configure a new Server**.
6. Type the values for the following attribute fields:
   - Name - The name of the managed server. This name is case-sensitive.
   - Listen Port - This should be same for all WebLogic Managed servers.
   - Listen Address - Enter the IP address of the WebLogic Managed Server.
   - Cluster - Select **AgileCluster** from the drop-down list.
7. Click **Create** to create the new WebLogic Managed server.
8. Repeat steps 4 through 7 for each WebLogic Managed server.
9. Restart the Administration Server.

Adding Managed Servers to the Cluster

The following steps are used to add WebLogic Managed servers to the cluster.

1. Open the Administration console if it is not already opened.
2. Click the **Clusters** node.
3. Click the **AgileCluster** link in the right pane.
4. Enter a value for the **Cluster Address** attribute:

   This address can be either a DNS host name that maps to multiple IP addresses or a comma separated list of single address host names or IP addresses of the managed servers. Make sure there are no spaces between the comma and the IP address or host name. For example, if the IP address of the managed server 1 is 10.10.5.84 and the IP address of managed server 2 is 10.10.5.91, the cluster address value should be 10.10.5.84,10.10.5.91.
5. Click **Apply**.
6. Restart the Administration server.

   Note Whenever modifying an attribute with an exclamation point next to it, it is required to restart the Administration server.
7. After the Administration server is started, open the Administration console.
8. Click the **Cluster** node.

9. Click **AgileCluster**.
10. Click the **Servers** tab.
11. Verify the WebLogic Managed server is listed in the Chosen list. If not, select the WebLogic Managed server under the Available list and click the arrow button.
12. Click **Apply**.

Configuring the jndiurl.properties File

To configure the jndiurl.properties file:

1. Stop the Web proxy server.
2. Stop the WebLogic Administration Server.
3. Stop all of the Managed servers in the cluster.
4. In a text editor on the WebLogic Administration Server, open the \AGILE_HOME\agileDomain\application\application.ear\APP-INF\classes\jndiurl.properties file.
5. Add all of the Managed server URLs as follows:

   ```
   server1=t3://<managed_server1_hostname>.<domain>:<port>
   server2=t3://<managed_server1_hostname>.<domain>:<port>
   ```

   where

   - <managed_server1_hostname> and <managed_server2_hostname> are the hostnames of the managed servers.
   - <domain> is the fully qualified domain name.
   - <port> is the t3 port number (default port: 7001).
6. Save the jndiurl.properties file.
7. Start the WebLogic Administration Server.
8. Start all of the Managed servers in the cluster.
9. Start the Web proxy server.

Configuring a Distributed JMS Cluster on BEA WebLogic

In Agile PLM, a WebLogic cluster has one JMS server on each managed server in the cluster. The JMS queues and topics are configured as distributed destinations with each JMS server hosting a member of the destination. This configuration facilitates JMS load balancing and failover support for the cluster.

To configure a JMS cluster:

1. Start the WebLogic Administration Server for the cluster and log in to the Admin console:

   http://<adminservername>:<adminserverport>/console
2. On the left pane, click **Services > JMS > Servers.**

3. right-click the **Server** tab in the right pane, then select **Configure New JMS Server**.
4. Type a unique name for the new JMS Server in the **Name** field, then click **Create**.
5. Click the **Targets** tab and select a managed server that has not been associated with a JMS server from the drop-down list.
6. Click **Apply**.
7. Repeat steps 2 through 6 to create JMS servers for all other managed servers in the cluster.
8. On the left pane, click **Services > JMS > Distributed Destinations**.
9. double-click one of the distributed destination components, then click the **Auto Deploy** tab.
10. Click the **Create members on the selected Servers (and JMS Servers)** link.
11. Select the cluster from the drop-down list as the target for the distributed destination component, then click **Next**.
12. Select all of the managed servers to create the members for the component., then click **Next**.
13. Select all of the JMS Servers to create the previously selected members, then click **Next**.
14. Click **Apply**.
15. Repeat steps 9 through 14 for the remaining distributed destination components.
16. Restart the WebLogic Administration Server.

Starting the WebLogic Managed Servers

To start the WebLogic Managed Servers, go to the <*Agile_dir*>\agileDomain\bin folder on each computer where a Managed Server is installed and run the startAgileCluster script.

Deploying the Application

The following steps ensure that the necessary applications are deployed correctly.

1. Open the Administration console.
2. Click the **Deployments > Applications > Agile** nodes.
3. For each file listed,
   a. Select the file name, then click the **Targets** tab on the right pane.
   b. Click the checkbox, if not already checked, for all of the servers where you are deploying the application.
   c. Click **Apply**.
4. Restart the WebLogic Administration Server.

Configuring the Load Balancer

A load balancer is deployed to balance user load across a cluster. When external users need access to Agile, this device is deployed in the DMZ. Load balancers can be used with the Java client and the Web client.

To configure a load balancer:

- Configure three virtual IP addresses, one for the application server web client (port 7001), one for the application server Java client (port 23791, internal users only), and one for the File Manager (port 8080 by default).
- Set the load balancer policy to Round-robin.

To access the system after you have configured the load balancer, use an alias for the virtual IP address of the load balancer in the Agile web and Java client URLs. The following URL is an example:

http://loadbalancer.mydomain.com/Agile/PLMServlet

or

t3://loadbalancer.mydomain.com/Agile

Chapter 6

Configuring the File Manager

This chapter includes the following:

- About File Management 29
- Configuring the File Manager 33
- Starting the File Manager 37
- Validating the File Manager Installation 37

About File Management

The File Manager manages files in a repository or vault in the file system. A File Manager provides a place to store and retrieve files locally or remotely. The File Manager can be installed on the same machine as the Agile Application Server or on a separate machine. The server can also be installed in a cluster or distributed across geographic regions.

The Agile Viewer communicates with the File Manager which in turn makes calls to the Agile Application server using the HTTP protocol. Because of this, if Agile View Server is licensed, it is recommended that the Agile View Server be installed on the same machine as the Agile File Manager, if sufficent resources are available.

In the preferred clustered environment, File Managers run on each application server node managing a shared drive. In a distributed environment, files are stored locally for efficient downloads and uploads. If a file is not found on a local file manager, the file is replicated from the primary file manager. The primary file manager is the file manager that is local to the application server.

Distributed File Managers

Multiple Agile File Managers can be deployed in a distributed configuration with or without a reverse-proxy web server (Microsoft IIS or Apache HTTP Server) in the DMZ. A Distributed File Manager configuration allows you to install additional file managers at remote locations so that remote sites can store and retrieve files locally, while still making the files available to the Agile PLM system. This can reduce the download time by placing file managers close to remote clients.

The determination for using distributed file management is based on your Agile end-user locations and network configuration. In general, the following criteria can help you to determine if you need additional file managers:

- Multiple remote locations

  If you have multiple remote sites connected over a WAN, clients at remote locations who need to store and retrieve files from the main file manager can experience large time delays.

- Reducing inter-network traffic

  If your network is divided into subnets to reduce network traffic, then you should consider putting a file manager in each subnet that contains Agile users to reduce your intersubnet

network traffic.

The usage model for a distributed file manager configuration is as follows:

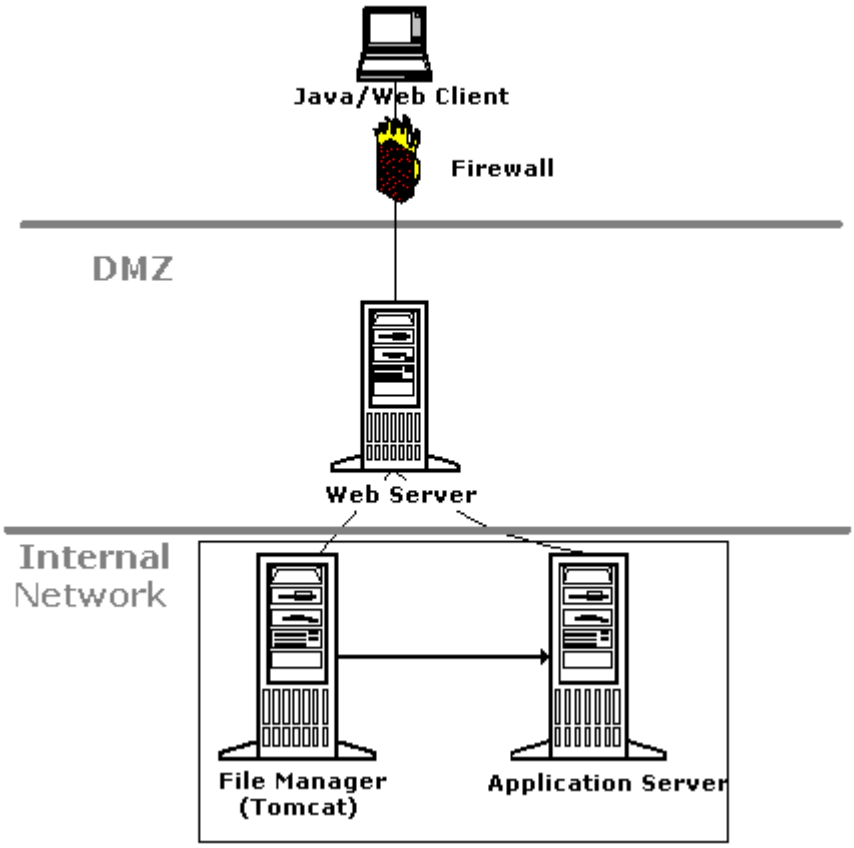
- The File Manager located nearest to the application server should be designated the primary File Manager.
- Users upload and download files from their preferred File Manager.
- File replication between File Managers is on-demand. When a remote user requests a file that does not exist on their preferred File Manager, the system copies the file to the remote user's preferred File Manager.
- Checking out and checking in files is the same as adding and getting files.
- Viewing a file or viewing a redline file is similar to getting a file.
- Redlining a file is the same as adding a file.
- Deleting a file only removes references to the file. Use the vault utility to clean up additional files on non-primary file managers.

Deployment Configurations

You can deploy the File Manager in either a standalone or cluster configuration.

Standalone

The following figure shows a single server standalone deployment configuration. The web server in the DMZ forwards calls to the Application Server as well as the File Manager.

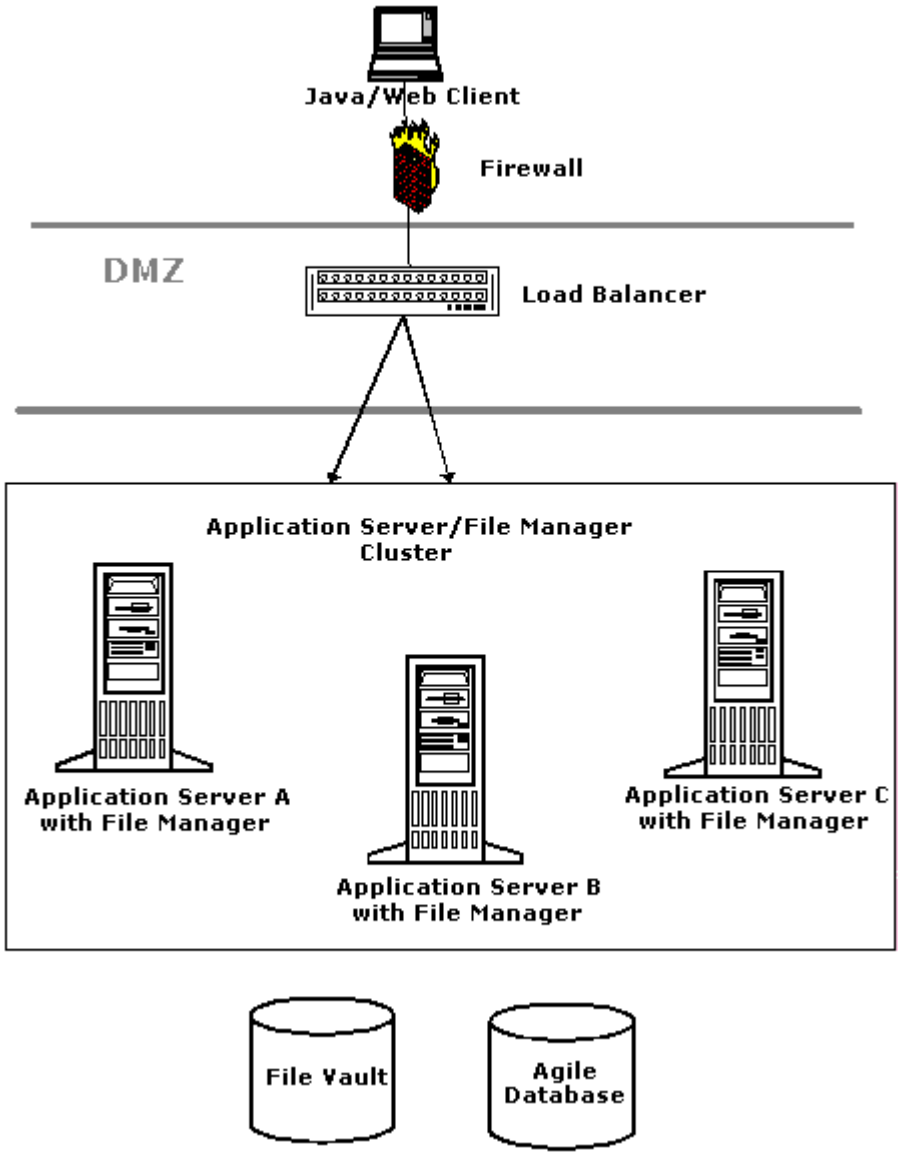


If you plan to install the Application Server and File Manager on the same box (co-deploy), choose both components during Agile PLM installation.

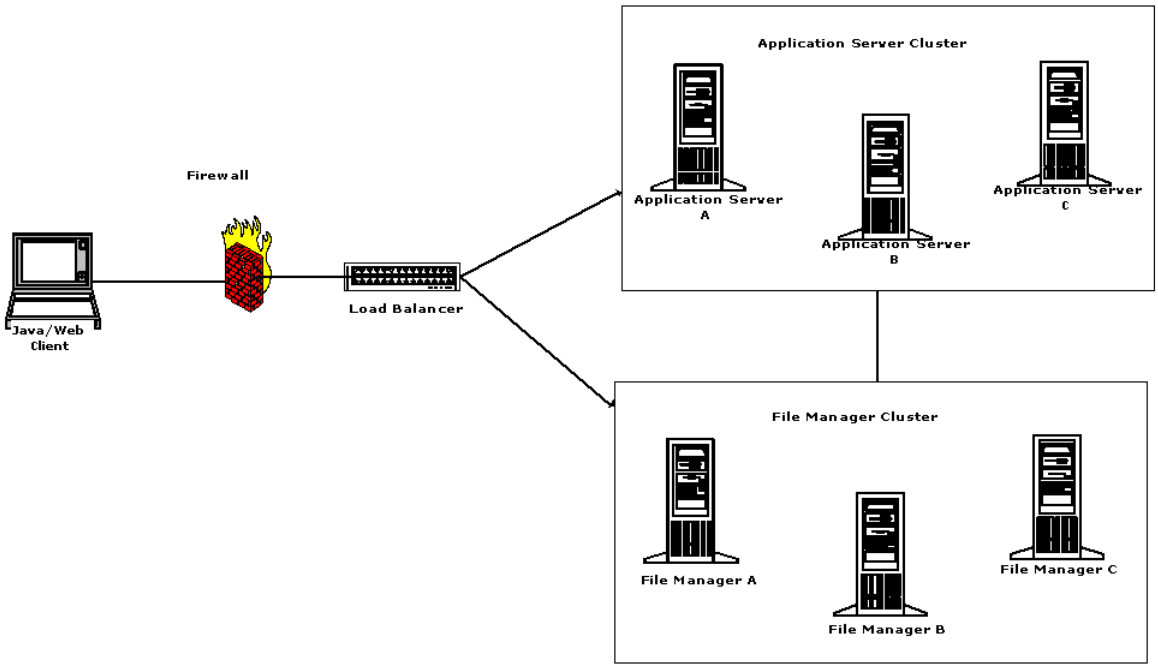
Cluster

The preferred cluster deployment configuration is shown in the following figure. Each node in the cluster has the Application Server and File Manager deployed. File Managers have a shared disk for file vaults. Each File Manager communicates with the local application server for optimized performance. The File Managers join in a Tomcat cluster to support failovers. The Load Balancer exposes two virtual IP addresses, one for the application server and one for the File Manager.

When installing this type of cluster, choose both the Application Server and File Manager components during Agile PLM installation before selecting the Cluster configuration.



You can also choose to deploy the File Manager cluster and Application Server cluster on separate machines, but that configuration requires more hardware. If you choose to install this type of setup, the Application Servers and File Managers should be installed separately before configuring and validating.



Configuring the File Manager

After installing the File Manager and setting up a load balancer or reverse-proxy server for it, you must configure the File Manager settings in the Java Client.

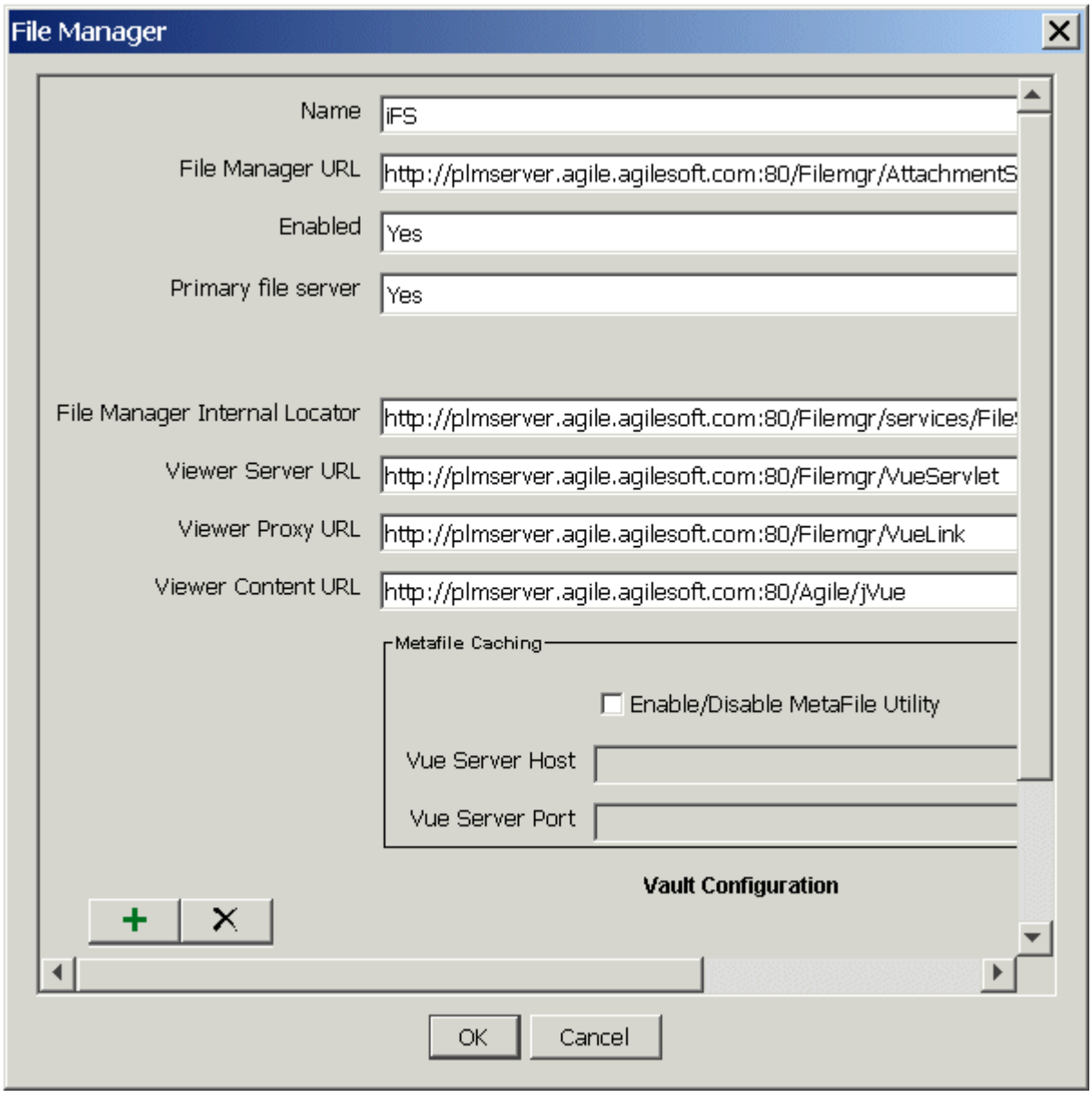
> **Note** Before configuring the File Manager, make sure you set up a load balancer or reverse-proxy server.

To configure File Manager settings:

1. Start the Agile Application Server.
   a. **Windows:** Choose **Start > All Programs > Agile > Agile 9.2.2.4 > Start Agile Server.**

      UNIX: Run the StartAgile.sh script located in the /opt/Agile/Agile9224/agileDomain/bin directory
   b. A Command Prompt window appears. This window must remain open, but can be minimized. Wait until the message, “Agile PLM Server Starting Up”, appears in the window.
2. Start the Agile Java Client, as described in “Installing and Configuring Agile Java Client on page 75”.
3. Log in as an Agile Administrator user.
4. Click the **Admin** tab.

5. Choose **Server Settings > Locations**. The Server Location window appears.
6. Click the **File Manager** tab to bring it forward.
7. double-click the entry to display the File Manager dialog box.
8. Click the **Advanced** button and check the Viewer Content URL.



9. Enter the value of the **File Manager URL**.

The **File Manager URL** is the URL the Agile Web Client connects to. The format is:

http://<proxy/loadbalancer>:<port>/<fileserver_virtual_path>/AttachmentServlet

10. Click the Standard Vault Type to display the drop-down list.

    You can choose to have **Standard** or **Custom** vault. A standard vault is the default vault type that contains the new files and redlines, while a custom vault allows you to attach a disk of data to Agile PLM as-is without reorganizing the files. A custom vault is always set up as read-only.

    You can attach an arbitrary file structure to the File Manager without the files being uploaded. Refer to the *Agile PLM Import and Export Guide* for more information on how to configure FileLoad for custom vaults.

11. Enter a description of the vault in the **Description** field.

12. Verify that the primary location where the files are stored in the **Base Storage Directory** field is the same location you entered during installation. The default location is \files. The location can be a shared network storage directory, such as a Storage Area Network (SAN).

Important Do not specify a mapped drive which may not be mapped automatically after a reboot. Instead, specify a local drive or UNC name include directory path, like this:

\\fileserver\filevault

13. Enter a location where the purged (deleted) files are automatically moved in the **Purge Directory** field. The default location is AGILE_HOME\files\purge. The location can be a shared network storage directory, such as a Storage Area Network (SAN).

Important Do not specify a mapped location. Instead, specify a local drive or UNC name including directory path, like this:

\\fileserver\filevault\purge

14. Set the vault as **Read-Write** or **Read-Only** from the Category drop-down list. Each File Manager can have only one Read-Write vault.

    If you have multiple vaults, then the additional vaults should be defined as Read-Only.

15. Click the plus-sign to add additional vaults.

16. Click **OK** when done.

17. Start the File Manager (Tomcat). For instructions, see the next section, “Starting the File Manager.”

There are additional configuration settings used to fully configure File Manager through the Java Client. These settings are:

- Filename Prefix (Preferences)
- Checksum computation (Preferences)
- DFM Optimized Replications (Preferences)

For more information on these additional settings, see the *Agile PLM Administrator Guide*.

Reconfiguring File Manager After Setting Up a Web Proxy

Server

If you set up a Web proxy server for Agile File Manager that is different from the server or port you specified when you installed Agile PLM, you must make sure that File Manager points to the proxy server on the correct port. Otherwise, File Manager may not start successfully and Agile PLM clients won't be able to access file attachments.

For instructions on setting up a Web proxy server for File Manager, see "Configuring a Web Proxy Server for Agile PLM on page 39."

To configure File Manager after setting up a Web proxy server:

1. Configure File Manager locations in Java Client. See "Configuring the File Manager on page 29".
2. Stop the File Manager.
3. Backup the existing File Manager configuration:
   a. Change to the *AGILE_HOME*\Tomcat\webapps directory.
   b. Verify there is a directory named Filemgr under the webapps directory.
   c. If the Filemgr directory exists, then perform the following:

      ```
      cd ..
      mkdir webapps.old
      ```

      Windows: `move webapps\Filemgr webapps.old`
      UNIX: `mv webapps/Filemgr webapps.old`
4. Create a backup of the AGILE_HOME\agileDomain\applications\webfs.war file.
5. Create an empty temporary directory. Make sure there are no spaces in the path to the temporary directory.
6. Copy the webfs.war file to the temporary directory.
7. From a command line, change to the temporary directory and run the following commands:

   ```
   set PATH=\AGILE_HOME\jdk\bin;%PATH%
   jar -xvf webfs.jar
   ```
8. After the files are extracted, change to the WEB-INF\classes\com\agile\webfs\configuration directory.
9. Using a text editor, open the server.conf file for File Manager.
10. Find the file.server.url entry, and update it to reflect the proxy server hostname or alias and port number. After you modify the file.server.url entry, it should look something like this:

    file.server.url =http://webserver.company.com:80/Filemgr/services/FileServer

    Note The file.server.url entry must match the File Manager Internale Locator entry (definied in Java client: Server Settings > Locations) or the File Manager will not initialize successfully.
11. Save the server.conf file.
12. Delete the webfs.war file from the temporary directory.
13. From a command line, run the following command to recreate the webfs.war file:

```
jar -cvf webfs.war *
```

14. Copy the newly created webfs.war file to the *AGILE_HOME*\agileDomain\applications directory.
15. Perform steps 4-14 on the *AGILE_HOME*\Tomcat\server\lib\agile-sso.jar file. Make sure you create a backup of the agile-sso.jar file.
16. Copy the newly created agle-sso.jar file to the *AGILE_HOME*\tomcat\server\lib directory.
17. Restart the File Manager (Tomcat).

Starting the File Manager

After you have configured the File Manager, you can start the server.

To start the File Manager on Windows:

1. Choose **Start > Administrative Tools > Services**.
2. Start the Apache Tomcat service.

   You can check for errors in the stdout and stderr logs in the *AGILE_HOME*\Tomcat\logs directory.

To start the File Manager on UNIX:

1. Open a terminal window.
2. Change to the **/opt/AGILE_HOME/Tomcat/bin** directory.
3. Set and export the **JAVA_HOME** variable on the command line:

   > JAVA_HOME=/opt/AGILE_HOME/jdk

   > export JAVA_HOME
4. Start the File Manager:

   > ./startup.sh

Validating the File Manager Installation

To verify that the File Manager installed successfully, check the following URL:

http://<fileserver_host>:<port>/<fileserver_virtual_path>/Configuration

For example, you might type the following URL:

http://filevault.mycompany.com:8080/Filemgr/Configuration

If you are using a Web proxy server for File Manager, the URL might look like this:

http://webproxy.mycompany.com:80/Filemgr/Configuration

After a moment, the File Manager Configuration page should display. This page tests the File Manager and Application Server connections. If Success is listed in the Status column for all connections, your installation was successful.

Chapter 7

Configuring a Web Proxy Server for Agile PLM

This chapter includes the following:

- Overview 39
- Testing the Agile Application Server Connection 42
- Configuring IIS as a Proxy Server for Agile PLM 42
- Configuring IIS as a Proxy Server for Agile File Manager 45
- Configuring the Apache Web Server as a Proxy Server for Agile PLM and Agile File Manager 47
- Logging In to the Agile Web Client 52
- Troubleshooting the Agile Web Client 53

Note It is recommended that you install the Agile Web proxy files on the Web server in the DMZ. Agile Viewer should be installed on its own computer within the corporate firewall. For information about configuring Agile Viewer, see "Configuring Agile Viewer."

Overview

The Agile Web client is a fully functional Web interface that allows Agile-enabled manufacturers to securely provide internal users and trusted supply chain partners access to Agile PLM.

To connect to the Agile Web Client on a Web proxy server, Agile Web proxy files must be installed on the Web server. Agile Web Client uses Microsoft Internet Information Services (IIS) or Apache Web Server. The Agile Web client connects to an Agile Application Server in the same manner as all other Agile Application Server clients. Secure access is maintained using SSL encryption with HTTPS and is recommended for the Internet. Standard firewall configurations are supported by the Web server.

Agile Internet Security

A Web browser uses the Agile Web client to communicate with the Agile Application Server over the Internet using the HTTPS protocol, which uses the Secure Sockets Layer (SSL) protocol. SSL is a standard Internet connection-based protocol for secure communications.

Recommended Security Practices

It is important that you change all default passwords for both Agile PLM and the database. In addition, users should change their passwords at least every 30 days.

Configuring Internet Information Server

Before you install Agile Web proxy files on Windows, a Microsoft Internet Information Server (IIS) must be installed on the same computer. In addition, IIS must be configured as follows:

1. Choose **Start > Administrative Tools > Internet Information Services (IIS) Manager**, and create a new web site called Agile PLM Web Site. For more information on how to create a web site, see the Internet Information Server documentation online at the Microsoft TechNet: http://technet.microsoft.com/

   Note Due to security vulnerabilities, we recommend that you don't use the Default Web Site installed with Internet Information Server. You can either delete or disable the Default Web Site.

2. right-click the **Agile PLM Web Site**, and choose **Properties** from the shortcut menu.
3. Select the **Directory Security** tab and click **Edit** for Anonymous Access and Authentication Control.
4. Make sure **Enable Anonymous Access** is checked.
5. Uncheck **Integrated Windows authentication**.
6. Click **OK**.

Also, search the \\winnt\system32 folder for the wininet.dll file. The file must be at least version 5.00.2919.6305 or later. Install at least Internet Explorer version 5.00.2919.6305 to update the DLL file.

For security reasons, Agile recommends installing Agile Web proxy files on a server separate from other Agile PLM servers.

Firewall Configuration

An external user typically runs the Agile Web client in a browser from outside the corporate network. The client typically communicates over the Internet to the Agile servers behind a corporate firewall.

If you want to use HTTPS, firewalls must be configured to allow for connectivity from the Agile Web clients to the DMZ reverse-proxy web server or load balancer and from the DMZ reverse-proxy web server or load balancer to the Agile PLM Application Servers and File Managers.

The corporate firewall on the Agile application side must be configured to allow:

- Incoming HTTPS connections from the Internet to the Web server
- Outgoing TCP/IP connections from the Web server to the Application Server

Important On Windows, encryption is supported only between IIS and the client's browser, not between IIS and the Application Server. Do not put a certificate on the Application Server.

Deployment Scenarios in the DMZ

This section contains deployment scenarios. For deployment diagrams, see the *Capacity Planning*

and Deployment Guide.

Single Firewall

In the first scenario, there is only one firewall between the DMZ and internet.

In this setup, the computers in the intranet are referenced by a single IP address. There is no network address translation (NAT) between the DMZ and intranet. Only the Web server in the DMZ is referenced by two IPs or hostnames. Agile Web clients are deployed in this environment as follows:

- The Web server resides on one computer in the DMZ with the Agile Application Server, Agile Viewer, and the database residing in the Safe Zone.

  When the Application Server and Agile Web proxy files are installed, you must open application server-specific HTTP/HTTPS ports from the DMZ to the intranet. This enables communication between the IIS Web server proxies and the Agile Application Server. The application server-specific ports must be dedicated and bidirectional between the Web server in DMZ and application server in the intranet.

  You are not required to open any other ports from the DMZ to the intranet.

  Advantages:

  - Firewall friendly and secure without exposing Agile in the DMZ.
  - Modest performance boost because Agile Web proxies reside with other Agile Application Server components

  Disadvantages:

  - An additional computer is needed.
  - Additional configuration requirements.

1. Install the Agile Web proxy files on the IIS computer in the DMZ.
2. Set up the IIS folder as specified in this chapter.
3. Copy the Agile Viewer jVue applet folder (located in the \\inetpub\wwwroot folder) from the computer where IIS is installed (either the Agile Web client computer or the Viewer computer) to the same folder location on the IIS computer in the DMZ.

Two Firewalls

In the second scenario, there are two firewalls—one between the DMZ and the internet, and one between the DMZ and the intranet. In this setup, the computers in the intranet are referenced by two IP addresses. There is IP address translation or network address translation between the DMZ and intranet to enable mapping external IP addresses to internal IPs of the computers. However, in such environments, third-party vendor applications typically encounter problems with firewall configuration.

- The IIS Web server resides on one computer in the DMZ, and the Agile Application Server resides on another computer in the intranet with Agile Viewer and the database.

  Advantages:

  - Firewall friendly and secure without exposing Agile in the DMZ.
  - Modest performance boost because Agile Web proxies reside with other Agile Application

Server components

Disadvantages:

- An additional computer is needed.
- Additional configuration requirements.

Testing the Agile Application Server Connection

You can now test the connection over the specified ports to the Agile Application Server.

> It is important that you do not provide users with this URL. The port you specified during the Application Server installation is not standard and should not be used by external or remote Agile Web clients. This URL is a direct connection to the Application Server, and it should be used only for testing and troubleshooting purposes.

To test the Agile Application Server connection:

1. Start the Agile Server.
   a. **Windows**: Choose **Start > All Programs > Agile > Agile 9.2.2.4 > Start Agile Server** to start the Agile server, if it is not installed as a Windows service.

      UNIX: Run the StartAgile.sh script located in the /opt/Agile/Agile9224/agileDomain/bin directory
   b. A Command Prompt window appears. This window must remain open, but can be minimized, for users to access Agile Web client.

      Wait until the following message appears in the command window: “Agile PLM Server Starting”.
2. Open your browser and use the following URL to test the Agile Web client setup:

   http://webserver_host:port/virtual_path/PLMServlet

   Note The URL is case-sensitive.

   A login window appears.
3. If you have not added Agile users, type **admin** for the user and **agile** for the password.

   The first time a user logs in to the Agile Web client, it may take a moment to load the information.

Configuring IIS as a Proxy Server for Agile PLM

When you install Agile Web proxies, the setup program creates the AGILE_HOME\AgileProxies folder. For example, if you accepted the default installation location at D:\Agile\Agile9224, the AgileProxies folder appears in that folder.

The AGILE_HOME\AgileProxies folder contains the following proxy files that enable communication between the IIS Web server and the WebLogic server:

- iisproxy.dll

- iisforward.dll
- iisproxy.ini or iisproxy_cluster.ini (initialization file to direct the proxy filters where to route the HTTP/HTTPS traffic specific to Agile from IIS)

To set up an Agile Web proxy on IIS for BEA WebLogic:

1. On the Web server computer, Choose **Start > Administrative Tools > Internet Information Services (IIS) Manager**.

   The Internet Information Services Manager window appears.

2. Expand the folder for **Internet Information Services > servername**.
3. right-click the **Agile PLM Web Site**, and choose **Properties** from the shortcut menu.

   The Agile PLM Web Site Properties dialog box appears.

   Note Due to security vulnerabilities, we recommend that you don't use the Default Web Site installed with Internet Information Server and instead create a new Web site named Agile PLM Web Site. For more information, see "Configuring Internet Information Server on page 40".

4. Click the **Home Directory** tab.
5. Set the permissions to **Scripts and Executables**.
6. Click **Configuration**.

   The Application Configuration dialog box appears.

7. Click **Add**.

   The Add/Edit Application Extension Mapping dialog box appears.

8. Click **Browse** and locate the **iisproxy.dll** file from the AGILE_HOME\AgileProxies folder. After you select the **iisproxy.dll** file, click **Open** to close the dialog box.
9. Type **.wlforward** in the **Extension** field.
10. Uncheck the **Script engine** and **Verify that file exists** boxes, and then Click **OK**.

    The Application Configuration dialog box appears.

    Notice the .wlforward extension appears in the **Application Extensions** list.

11. Click **OK**.

    The Agile PLM Web Site Properties dialog box appears.

12. Select the **ISAPI Filters** tab.
13. Click **Add**.

    The Add/Edit Filter Properties dialog box appears.

14. Type **iisforward** in the **Filter Name** field.
15. Click **Browse** and locate the **iisforward.dll** file from the AGILE_HOME\AgileProxies folder. After you select the **iisforward.dll** file, click **Open** to close the dialog box.
16. In the Add/Edit Filter Properties dialog box, Click **OK**.

    The Agile PLM Web Site Properties dialog box appears.

17. Click **Apply**.
18. If the Inheritance Overrides dialog box appears, select **IISADMIN** and **Scripts** (you can select non-contiguous options by pressing Ctrl when you click the option). You can select all nodes in the event of problems. Click **OK**.
19. Click **OK** to close the Agile PLM Web Site Properties dialog box.
20. Select the **Web Service Extensions** folder.
21. Select **All Unknown ISAPI Extensions**.
22. Click **Allow**.
23. Close IIS Manager.
24. Restart IIS.

> **Note** To restart IIS, stop all of the IIS services through the control panel and then restart them, or restart the computer. This ensures that the .dll is reloaded. Do not use IIS Manager to restart IIS.

Testing the Configuration

After you set up the iisforward ISAPI filter, you should test whether the filter loads successfully.

To make sure the iisforward filter added to ISAPI Filters tab is loaded properly on the Web server:

1. Type the Application Server PLMServlet URL into a browser (using the reverse-proxy web server alias or hostnme and listen port) and make sure the Agile PLM login page loads successfully.
2. In the IIS Manager, right-click the **Agile PLM Web Site**, and choose **Properties** from the shortcut menu.

   The Agile PLM Web Site Properties dialog box appears.
3. Select the **ISAPI Filters** tab.

   The status for the iisforward filter shows an arrow pointing up, indicating that it is loaded on the IIS Web server and ready to proxy all external HTTP/HTTPS requests to the Agile Web client server.

The IIS Web server is now ready to accept all external Agile Web clients using HTTP/HTTPS requests on standard ports 80 and 443. The IIS Web server provides a proxy to the application server running Agile Web clients on the port you specified during the Agile Application Server installation.

If the arrow is not pointing up, the filter is not loaded properly.

To correct a filter that is not loading properly:

1. Open the **Control Panel** and double-click the **Services** icon.
2. Stop the **IIS Admin Service** (this also stops the **World Wide Web Publishing** service) and then restart it.
3. Start the **World Wide Web Publishing** service.

4. Go back to the ISAPI Filters tab in the Agile PLM Web Site Properties dialog box.

   The iisforward filter arrow should now point up.

Configuring IIS as a Proxy Server for Agile File Manager

When you install Agile Web proxies, the setup program creates the AGILE_HOME\AgileProxies folder. For example, if you accepted the default installation location at D:\Agile\Agile9224, the AgileProxies folder appears in that folder.

The AGILE_HOME\AgileProxies folder contains the following files that enable communication between the IIS Web server and the File Manager (Tomcat):

- **isapi_redirect.dll** - The IIS server plugin.
- **workers.properties** - A file that describes the hosts and ports used by Tomcat processes.
- **uriworkermap.properties** - A file that maps URL-Path patterns to Tomcat processes.

Note If you set up a Web proxy server for Agile File Manager that is different from the server or port you specified when you installed Agile PLM, you must make sure that File Manager points to the proxy server on the correct port. For more information, see "Reconfiguring File Manager After Setting Up a Web Proxy Server on page 35".

To configure IIS as a proxy server for File Manager:

1. On the File Manager computer, open the AGILE_HOME\Tomcat\conf/jk2.properties file.
2. Add the following entry, replacing @AJP-PORT@ with the actual AJP port number:

   `channelSocket.port=@AJP-PORT@`

   Note To see which AJP port number to enter, open the AGILE_HOME\Tomcat\conf\server.xml file and look for the following section: <!-- Define a Coyote/JK2 AJP 1.3 Connector on port 8009 -->

   Note <Connector port="8009" enableLookups="false" redirectPort="8443" debug="0"

   Note protocol="AJP/1.3" />

3. On the Web server computer, Choose **Start > Administrative Tools > Internet Information Services (IIS) Manager**.

   The Internet Information Services Manager window appears.
4. Expand the folder for **Internet Information Services > servername**.
5. right-click the **Agile PLM Web Site**, and choose **Properties** from the shortcut menu.

   The Agile PLM Web Site Properties dialog box appears.

   Note Due to security vulnerabilities, we recommend that you don't use the Default Web Site installed with Internet Information Server and instead create a new Web site named Agile PLM Web Site. For more information, see "Configuring Internet Information Server on page 40".

6. Select the **ISAPI Filters** tab.
7. Click **Add**.

   The Add/Edit Filter Properties dialog box appears.
8. Type **Jakarta IIS Connector** in the **Filter Name** field.
9. Click **Browse** and locate the **isapi_redirect.dll** file from the AGILE_HOME\AgileProxies folder. After you select the file, click **Open** to close the dialog box.
10. In the Add/Edit Filter Properties dialog box, Click **OK**.

    The Agile PLM Web Site Properties dialog box appears.
11. Click **OK** to close the Agile PLM Web Site Properties dialog box.
12. right-click the **Agile PLM Web Site**, and choose **New > Virtual Directory** from the shortcut menu.

    The Virtual Directory Creation Wizard appears.
13. Click **Next**.
14. On the Virtual Directory Alias page, type **Jakarta** as the alias name. Click **Next**.
15. On the Web Site Content Directory page, type the path where the isapi_redirect.dll file is located. Click **Next**.
16. On the Access Permissions page, make sure the **Execute** checkbox is checked. Click **Next**.
17. Click **Finish**.
18. Close IIS Manager.
19. Open the workers.properties file in the AGILE_HOME\AgileProxies folder.
20. Make sure the File Manager host name is correct in the following entry:

    worker.ajp13w.host=<*File Manager fully-qualified host name*>

    Note Make sure you can successfully ping the File Manager using the fully-qualified host name and that the AJP port is not blocked by a firewall.
21. Save and close the file.
22. Restart IIS.

    Note To restart IIS, stop all of the IIS services through the control panel and then restart them, or restart the computer. This ensures that the .dll is reloaded. Do not use IIS Manager to restart IIS.

Testing the Configuration

After you set up the Jakarta IIS Connector ISAPI filter, you should test whether the filter loads successfully.

To make sure the isapi_redirect filter added to ISAPI Filters tab is loaded properly on the Web server:

1. Type the File Manager Configuration URL into a browser (using the reverse-proxy web server alias or hostname and listen port) and make sure the Configuration page loads successfully.

2. In the IIS Manager, right-click the **Agile PLM Web Site**, and choose **Properties** from the shortcut menu.

   The Agile PLM Web Site Properties dialog box appears.

3. Select the **ISAPI Filters** tab.

   The status for the Jakarta IIS Connector filter shows an arrow pointing up, indicating that it is loaded on the IIS Web server and ready to proxy all requests to the File Manager.

Configuring the Apache Web Server as a Proxy Server for Agile PLM and Agile File Manager

On UNIX operating systems, you can use Apache Web Server as the Web proxy server for Agile PLM. If you choose the Apache Web Server when you install Agile PLM, you must specify the Apache Home Directory.

Note If you set up a Web proxy server for Agile File Manager that is different from the server or port you specified when you installed Agile PLM, you must make sure that File Manager points to the proxy server on the correct port. For more information, see "Reconfiguring File Manager After Setting Up a Web Proxy Server on page 35".

Configuring Apache Web Server on Solaris

This section shows how to configure an Apache Web Server 2.0.55 proxy for Agile PLM and Agile File Manager on Solaris.

Apache Http Server 2.0.x for Solaris:
http://archive.apache.org/dist/httpd/binaries/ http://archive.apache.org/dist/httpd/binaries/

Mod_Jk Connector for Apache 2.0:
Download the connector from http://www.apache.org/dist/tomcat/tomcat-connectors/jk/binaries/solaris/jk-1.2.6/ http://www.apache.org/dist/tomcat/tomcat-connectors/jk/binaries/solaris/jk-1.2.6/ or copy the mod_jk-1.2.15-sparc-Solaris8-Apache20.so file from the AGILE_HOME\AgileProxies directory.

To configure Apache Web Server to be a Web proxy server for Agile PLM and Agile File Manager on Solaris:

1. Download, build, and install Apache Web Server for Solaris. For installation instructions, refer to the Apache documentation.

```
./configure --prefix=/opt/apache2 -enable-mods-shared=all
make
make install
```

2. After installing Apache Web Server, install the proxy plug-in:
   a. Go to the following directory:

      $Apache/modules/proxy

   b. Run the following commands:

$Apache/bin/apxs -i -a -c proxy_connect.c
$Apache/bin/apxs -i -a -c proxy_http.c

3. Download the Mod_Jk Tomcat Connector from the URL listed above or copy the mod_jk-1.2.15-sparc-Solaris8-Apache20.so file from the AGILE_HOME\AgileProxies directory. Save the connector as $Apache/modules/**mod_jk.so**.

4. Create a Mod_Jk configuration file ($Apache/conf/workers.properties) with the following entries:

```
worker.list=default
worker.default.type=ajp13
worker.default.host=<File Manager host name>
worker.default.port=8009
```

5. Add the following lines to the $Apache/conf/httpd.conf file:

```
#Enable Mod_proxy for Application Server Proxying
LoadModule proxy_connect_module modules/mod_proxy_connect.so
LoadModule proxy_http_module modules/mod_proxy_http.so
#Enable Mod_Jk for File Manager proxying
LoadModule jk_module modules/mod_jk.so

# Add the proxy forward path.Replace appropriately with actual Virtual
# path and server host/port
ProxyPass /Agile http://server:7777/Agile
ProxyPassReverse /Agile http://server:7777/Agile
#Entries for File mgr proxying
JkWorkersFile conf/workers.properties

#Filemgr is virtual path for Agile File Manager
JkMount /Filemgr default
JkMount /Filemgr/* default
```

6. If mod_proxy was not compiled into httpd, add the following to the $Apache/conf/httpd.conf file:

```
LoadModule proxy_module modules/mod_proxy.so
```

Open $Tomcat/conf/jk2.properties and add the following entry: `channelSocket.port=8009`

The AJP Port specified above must match the AJP port specified in $Tomcat/conf/server.xml.

```
<Connector port="8009"
  maxThreads="150" minSpareThreads="25" maxSpareThreads="75"
  enableLookups="false" redirectPort="8443" debug="0"
```

```
protocol="AJP/1.3" />
```

7. Restart Apache Tomcat.
8. Restart Apache Web Server.

```
$apache/bin/apachectl stop
$apache/bin/apachectl start
```

Configuring Apache Web Server on Linux

This section shows how to configure an Apache Web Server 2.0.x proxy for Agile PLM and Agile File Manager on Linux.

Generally, when you install Red Hat Linux it includes Apache Web Server 2.0 and the MOD_PROXY Connector. If your Linux server does not have Apache Web Server, you can download it from the following location:

Apache Http Server 2.0.x for Linux:
http://archive.apache.org/dist/httpd/binaries/ http://archive.apache.org/dist/httpd/binaries/

The Mod Jk Connector for Apache Http Server, which is necessary for using Apache as a proxy for Agile File Manager (Tomcat), can be installed using Red Hat RPM. You can also download the source from the following location and compile it.

Mod_Jk Connector for Apache 2.0:
http://www.apache.org/dist/tomcat/tomcat-connectors/jk/binaries/linux/jk-1.2.14/
http://www.apache.org/dist/tomcat/tomcat-connectors/jk/binaries/linux/jk-1.2.14/ or contact Agile Support.

To configure Apache Web Server to be a Web proxy server for Agile PLM and Agile File Manager on Linux:

1. Open the Apache Web Server $Apache/conf/httpd.conf file and ensure that the following modules are uncommented:

```
LoadModule proxy_module modules/mod_proxy.so
LoadModule proxy_connect_module modules/mod_proxy_connect.so
LoadModule proxy_http_module modules/mod_proxy_http.so
```

2. At the end of the $Apache/conf/httpd.conf file, add the following ProxyPass and ProxyPassReverse commands. Replace the hostname, port, and Agile virtual path with appropriate values for your server.

```
ProxyPass /Agile http://server:7777/Agile
ProxyPassReverse /Agile http://server:7777/Agile
```

3. Copy the workers.properties and uriworkermap.properties files from the AGILE_HOME/AgileProxies directory to the $Apache/conf directory.
4. Replace the following tokens in the workers.properties and uriworkermap.properties files:

```
@FILE_SERVER_VIRTUAL_PATH@ = File Manager Virtual Path
@FILE-SERVER-HOST@ = Tomcat hostname or IP address
@AJP-PORT@ = Tomcat AJP Protocol port (This port can be found in
Tomcat's server.xml file)
```

5. Add the following lines to the $Apache/conf/httpd.conf file:

```
LoadModule jk_module modules/mod_jk-1.2.14-apache-2.0.54.so
JkWorkersFile conf/workers.properties
JkMount conf/uriworkermap.properties
```

6. Open $Tomcat/conf/jk2.properties and add the following entry:

```
channelSocket.port=8009
```

The AJP Port specified above must match the AJP port specified in $Tomcat/conf/server.xml.

```
<Connector port="8009"
  maxThreads="150" minSpareThreads="25" maxSpareThreads="75"
  enableLookups="false" redirectPort="8443" debug="0"
  protocol="AJP/1.3" />
```

7. Restart Apache Tomcat.
8. Restart Apache Web Server.

```
$apache/bin/apachectl stop
$apache/bin/apachectl start
```

Configuring Apache Web Server on AIX

This section describes how to configure Apache HTTP Server 2.0.x on AIX as a reverse proxy for Agile PLM with BEA WebLogic and Agile File Manager with Apache Tomcat.

Download the Apache HTTP Server 2.0.x distribution:

Download the Apache Http Server 2.0.x distribution:
http://archive.apache.org/dist/httpd/

Alternatively, you may be able to find a pre-compiled version of the HTTP server for AIX here:
http://archive.apache.org/dist/httpd/binaries/aix/

Download the Apache Tomcat connector module (mod_jk) for Apache 2.0.x:
http://www.apache.org/dist/tomcat/tomcat-connectors/jk/

Alternatively, you may be able to find a pre-compiled version of the connector for AIX here:
http://www.apache.org/dist/tomcat/tomcat-connectors/jk/binaries/aix/

To configure an Apache HTTP Server on AIX as a reverse proxy server for Agile PLM and Agile File Manager:

1. Download and install (and if necessary, build) Apache HTTP Server for AIX. For instructions, refer to the documentation included in the Apache distribution.
2. After installing Apache HTTP Server, install the proxy plug-in:
   a. Change to the following directory:

      ```
      $APACHE_HOME/modules/proxy
      ```

   b. Run the following commands:

```
$APACHE_HOME/bin/apxs -i -a -c procy_connect.c
$APACHE_HOME/bin/apxs -i -a -c procy_http.c
```

3. Download (and if necessary, build) the Apache Tomcat connector (mod_jk) from the URL previously listed. Save the connector as `$APACHE_HOME/modules/`**`mod_jk.so`**.
4. Create a configuration file ($APACHE_HOME/conf/workers.properties) for the Apache Tomcat connector with the following entries:

```
worker.list=default
worker.default.type=ajp13
worker.default.host=<File Manager host name>
worker.default.port=8009
```

5. Add the following lines to the $APACHE_HOME/conf/httpd.conf file:

```
#Enable Mod_proxy for Application Server Proxying
LoadModule proxy_connect_module modules/mod_proxy_connect.so
LoadModule proxy_http_module modules/mod_proxy_http.so
#Enable Mod_Jk for File Manager proxying
LoadModule jk_module modules/mod_jk.so
#Add the proxy forward path.Replace appropriately with actual Virtual
#path and server host/port
ProxyPass /Agile http://<application server hostname>:7777/Agile
ProxyPassReverse /Agile http://<application server
hostname>:7777/Agile
#Entries for File Mgr proxying
JkWorkersFile conf/workers.properties
#Filemge is the virtual path for Agile File Manager
JkMount /Filemgr default
JkMount /Filemgr/* default
```

6. If mod_proxy was not compiled into httpd, add the folliwng line to the $APACHE_HOME/conf/httpd.conf file:

```
LoadModule proxy_module modules/mod_proxy.so
```

7. Edit the file $TOMCAT_HOME/conf/jk2.properties and add the following entry for the AJP port:

```
channelSocket.port=8009
```

   The AJP Port specified above must match the AJP port specified in $TOMCAT_HOME/conf/server.xml.

```
<Connector port="8009"
  maxThreads="150" minSpareThreads="25" maxSpareThreads="75"
  enableLookups="false" redirectPort="8443" debug="0"
  protocol="AJP/1.3" />
```

8. Restart Apache Tomcat.

9. Restart Apache HTTP Server.

```
$APACHE_HOME/bin/apachectl stop
$APACHE_HOME/bin/apachectl start
```

Enabling Debugging Information for the Jakarta Tomcat Connector

To troubleshoot problems with the Apache Web Server proxy for Agile File Manager, you can save debugging information for the Jakarta Tomcat Connector.

To save debugging information for the Jakarta Tomcat Connector:

1. Open the $Apache/conf/httpd.conf, and add the following lines (after the JkMount setting):

```
JkLogFile "logs/mod_jk.log"
JkLogLevel debug
```

2. Save the file.
3. Restart Apache Web Server.

Open the log file and check for errors.

Logging In to the Agile Web Client

Use the following URL to test the Agile Web client setup:

1. Start the Agile Server.
   a. **Windows**: Choose **Start > All Programs > Agile > Agile 9.2.2.4 > Start Agile Server** to start the Agile server, if it is not installed as a Windows service.

      UNIX: Run the StartAgile.sh script located in the /opt/Agile/Agile9224/agileDomain/bin directory
   b. A Command Prompt window appears. This window must remain open, but can be minimized, for users to access the Agile Web client.

      Wait until the following message appears in the command window: “Agile PLM Server Starting Up”.
2. Open your browser and go to the following URL to test the Agile Web client setup:

   http://WebServer_hostname:port/virtual_path/PLMServlet

   Note The URL is case-sensitive. The default virtual path name is Agile.

   The login window for the Agile Web client appears in the browser.

   Note If you need to stop the Application Server, close the Command Prompt window or choose **Start > All Programs > Agile > Agile 9.2.2.4 > Stop Agile Server**.

Troubleshooting the Agile Web Client

This section provides the basics for troubleshooting the Agile Web client and Web server issues.

Confirming Accessibility

Confirm that the following connections are valid:

- Ping the Agile Application Server computer to make sure it is accessible from the Agile Web proxy computer and that the specified port is available.
- Make sure the web server is up and running on the specified ports, and that the specified DNS hostname is valid and registered for external accessibility by the Agile Web client browsers.

URL Error Messages

If you specify this URL in the browser and receive the message “Page not found,” check the following:

- Make sure that the IIS Web server is accessible.
- Open the iisproxy.ini file and make sure the client virtual path name is the same as the login URL for the Agile Web client.
- Make sure the Agile Viewer has started on the host computer.

If the following error message appears:

“Servlet tunneling to AgileViewServerHost:5099 (IP=x.x.x.x) Connection state: ERROR”

- Check to see if the Agile Viewer hostname specified during the installation is correct and the port number is available. The information on the Agile Viewer hostname and port number is specified in the web.xml file.
- Make sure the Agile Viewer-specific ports are open from DMZ firewall to the internal firewall.

Customized Virtual Path Does Not Work

Check the iisforward.dll and iisproxy.dll files in the AGILE_HOME\AgileProxies folder where the iisproxy.ini file is located. You may need to delete the settings you specified in “Configuring IIS as a Proxy Server for Agile PLM” and set them up again. Then stop and restart the IIS Admin and Worldwide Web services.

Browser Shows A Proxy Timeout Message

The proxy has a timeout default value of 1500 seconds. If you frequently see this message, you should increase the timeout value to a larger value.

To change the proxy timeout:

1. Open the AGILE_HOME\AgileProxies\iisproxy.ini file.
2. Change or add the following line:

ConnectTimeoutSecs=1500

ConnectRetrySecs=*value must equal ConnectTimeoutSecs*

HungServerRecoverSecs=*value greater than ConnectTimeoutSecs*

Log Files (Disk Space)

There are two log files for the Agile Web client:

- Proxy log
- Web client log

If all log files are on, disk space can fill quickly. You may need to clean up the log files or turn logging off.

For the proxy log file:

Open the AGILE_HOME\iis\iisproxy.ini file and remove either of the following lines:

Debug=on

Debug=ALL

For the Agile Web client log file:

1. Open the AGILE_HOME\agileDomain\config\log.xml file.
2. Change the <priority value="debug" /> line to <priority value="error" />.
3. Delete all files with a LOG extension appearing in the AGILE_HOME\agileDomain\config folder.

Connection Refused or Server is Busy Error Message

TCP connections can be buffered in a wait queue, which has a default value of 50. To increase this value, open AGILE_HOME\agileDomain\config\config.xml and increase the wait queue attribute value by 25 percent until the messages no longer appear.

Changing the Password for the Agile Domain

Changing the password from console changes only the WebLogic password. The Agile Web client uses a password that is specified during installation. This password cannot be changed in WebLogic.

Chapter 8

Configuring the Microsoft Excel-based Client for Agile PG&C

This chapter includes the following:

- Overview of the Microsoft Excel-based Client for Agile PG&C 55
- Microsoft Excel-based Client FAQ 57
- Configuration Sequence 59
- Setting Privileges for Agile PG&C Objects 60
- Enabling Attributes that are Required for Excel Rollups 61
- Restricting the Length of Declaration Names 62
- Deploying License Files for the Agile PLM ActiveX Control 63
- Using the Developer Version of the Microsoft Excel Integration License File 64
- Digitally Signing the Agile PLM ActiveX Control 64
- Enabling Downloading of Productivity Components 65
- Installing the Agile PLM ActiveX Control 66
- Testing the Microsoft Excel-based Client for Agile PG&C 66
- Troubleshooting 68

Overview of the Microsoft Excel-based Client for Agile PG&C

Important Configuration steps described in this chapter apply only to customers who have purchased Agile Product Governance & Compliance.

Agile Product Governance & Compliance (PG&C), one of the Agile PLM product solutions, is designed to help manufacturers audit the presence and amount of regulated substances used in their products, and to demonstrate that they responsibly dispose of, recycle, or reuse parts containing those substances. Agile PG&C includes built-in support for the Microsoft Excel-based client for OEM manufacturing regulations, including the Japan Green Procurement Survey Standardization Initiative (JGPSSI), and substances and weights rollups.

Important Although Agile provides two Microsoft Excel templates for Agile PG&C, the solution is extensible. You can develop other Microsoft Excel templates to handle other Declaration classes your company has defined. For information about how to develop Microsoft Excel templates for use with Agile PG&C, contact your Agile Solutions Delivery representative.

Important After installing Agile PLM, if any of the changes detailed in this chapter are required for your Excel integration, the correct sequence is: **(a)** stop the application server(s); **(b)** undeploy; **(c)** make the changes in **<standard Agile PLM Install folder> > application.ear**; **(d)** re-deploy; and **(e)** re-start the servers.

JGPSSI Support

JGPSSI has created a standardized digital form that companies can use to inquire about the chemical substances contained in parts and materials they procure in Asia. For more information about JGPSSI, see the Japan Electronics and Information Technology Industries Association Web site:

http://home.jeita.or.jp/eps/greenTOP-eg.html http://home.jeita.or.jp/eps/greenTOP-eg.html

JGPSSI uses Microsoft Excel tools for collecting information about substances contained in assemblies for Japanese Green Procurement. Agile provides a flexible and reusable integration between Agile PG&C and Microsoft Excel that allows customers to use the JGPSSI spreadsheet without modification, and then upload the information to Agile PG&C after validation.

Note Agile PLM supports the JGPSSI survey tool (a Microsoft Excel template) version 2.02.

Agile PLM supports a Japanese-language template of the JGPSSI spreadsheet. The Japanese-language templates are only available to customers who have purchased the Japanese Server License. Also, the administrator must set users' Language and Encode user preferences to the appropriate setting to work in that language in the Agile clients' user interfaces. Please contact Agile Solutions Delivery for more information.

Substances and Weights Rollups

You can use Microsoft Excel to perform analysis of the Bill of Substances (BOS) information for an assembly. Using the Actions menu command **Rollup in Excel**, the integrated Excel spreadsheet can roll up the substances and weights for the top-level assembly.

Note Agile PLM supports a Japanese-language template of the Substances and Weights spreadsheet.

PLM also supports localized versions in Chinese, French, and German of the Substances and Weights Rollup feature used in Microsoft Excel-base Client. However, the localized template does not work for these languages out-of-the-box, the template must be adjusted by Oracle Consulting-Agile Practice.

The Japanese-language templates are only available to customers who have purchased the Japanese Server License. Localized versions also need appropriate License Key. Also, the administrator must set users' Language and Encode user preferences to the appropriate setting to work in that language in the Agile clients' user interfaces. Please

contact Oracle Consulting-Agile Practice for more information.

Client Software Requirements

The Microsoft Excel-based client for Agile PG&C requires the following client-side software:

Operating System

- Windows 2000 Pro SPX
- Windows XP Pro SP2
- Windows 2003 Pro SP1

Client Applications

- Microsoft Excel 2000, Microsoft Excel XP, or Microsoft Excel 2003 Pro SP1
- Microsoft Internet Explorer 6.0

For complete Agile PLM software requirements, see the *Agile PLM Capacity Planning and Deployment Guide*.

Microsoft Excel-based Client FAQ

This section answers some common questions about the Microsoft Excel-based client for Agile PG&C.

How does the Microsoft Excel-based client work? What is the underlying technology used to integrate with Agile PG&C?

The Microsoft Excel-based client uses the following technology:

- **Agile PLM Process Extensions** – Agile Web Client launches the Microsoft Excel-based client through process extensions (PX), which are programs that extend the functionality of the client interface.
- **Agile PLM ActiveX Control** – an Internet Explorer plugin that monitors use of the Microsoft Excel-based client and downloads and uploads data from the Agile PLM server as requested by the client.
- **HTTP, HTTPS, or SMTP** – standard protocols used to move data between the server and the client
- **Microsoft Excel** – spreadsheet client with its own client-side business logic.

Other than Microsoft Excel, is any other client software required for the Microsoft Excel-based client?

The Agile PLM ActiveX Control, an Internet Explorer plugin, is required. It's downloaded and installed automatically the first time a user launches the Microsoft Excel-based client from Agile Web Client. Of course, Internet Explorer 6.0 is also required, as well as a Windows operating system.

What Microsoft Excel templates does Agile PG&C provide by default?

There are two Excel applications provided out-of-the-box with Agile P&C:

- **JGPSSI Declaration application** – supports Japanese Green Procurement
- **Rollup In Excel application** – calculates substances and weights rollups for top-level assemblies

Can I create new Microsoft Excel templates for use with Agile PG&C?

Yes, the solution is extensible. For information on how to develop Microsoft Excel templates for Agile PG&C, contact your Agile Solutions Delivery representative.

Can I create Microsoft Excel templates for use with other Agile PLM solutions, such as Product Collaboration?

No. Currently, only Declaration classes and their subclasses are supported. Other classes may be supported in future Agile PLM releases.

Can I use the Firefox browser to launch the Microsoft Excel-based client?

No. Only Microsoft Internet Explorer 6.0 is supported.

Must I be logged into Agile Web Client to use the Microsoft Excel-based client for Agile PG&C?

No. You can use the Microsoft Excel-based client synchronously (that is, by opening a spreadsheet from Agile Web Client) or asynchronously (that is, by opening a spreadsheet attached to an email message).

How do I launch the Microsoft Excel-based client from Agile Web Client?

Process extensions are used to launch the Microsoft Excel-based client. The process extension for launching JGPSSI-in-Excel is initiated from the **Actions** menu of JGPSSI declarations. The process extension for launching Substances and Weights rolllup in Excel is initiated from the **Actions** menu of items. For information about developing process extensions, see the *Agile SDK Developer Guide*.

Can I sign the Agile PLM ActiveX Control with my company's certificate?

Yes. See "Digitally Signing the Agile PLM ActiveX Control on page 64".

Does the Microsoft Excel-based client require any special authentication?

The Microsoft Excel-based Client uses the same credentials that you use to log into Agile Web Client, and it prompts you to log into a separate Agile PLM session when you choose **Agile > Submit Response** or **Agile > Open Request**.

Where does the client-side business logic for the Microsoft Excel-based client reside?

Client-side business logic resides entirely in the Microsoft Excel template.

How does the Microsoft Excel-based client handle notifications for Declarations?

Agile PLM provides four system-generated notifications related to the Microsoft Excel-based client:

- **Declaration Excel Submit Success Supplier Notification** – notification sent to the supplier to confirm successful submission of a Declaration.
- **Declaration Excel Submit Import Failure** – notification sent to the compliance manager or originator to inform him that the submitted Declaration failed to be processed on the server due to import problems.
- **Declaration Excel Submit Failure** – notification sent to the compliance manager or originator to

inform him that the submitted Declaration failed to be processed on the server due to an exception.

- **Declaration Excel Submit Failure Supplier Notification** – notification sent to the supplier to inform him that the Declaration failed to be submitted due to import errors.

Each notification includes text for the subject and body of a message. The Agile PLM administrator can modify these notification messages.

To customize these notifications, start the Agile Java Client and log in as an administrator user. Click the **Admin** tab, and choose **System Settings > Notifications > Declaration Notifications**. Microsoft Excel-based client notifications are listed under "Declaration Miscellaneous Notifications."

For more information about Agile PLM notifications, see the *Agile PLM Administrator Guide*.

What languages does the Microsoft Excel-based client support?

The JGPSSI and Rollup in Excel standard templates support English only. Other templates can be developed to support other languages.

Microsoft Excel-based client messages and captions support all languages supported by Agile PLM 9.2.2.4. Additionally, the menus of Microsoft Excel templates can be customized for different languages.

Does the Microsoft Excel-based client use VBA macros?

The Microsoft Excel templates provided for Agile PG&C do not use VBA macros. Although you are not prevented from developing a Microsoft Excel template that uses VBA macros, antivirus software may prevent the macros from running, and you should set the security level in Microsoft Excel to at least Medium (choose **Tools > Macro > Security**).

Configuration Sequence

To enable support for the Microsoft Excel-based client for Agile PG&C, you must perform the following manual configuration steps after Agile PLM has been installed:

1. Set up privileges for Agile PG&C objects (such as Substances and Declarations).
2. Enable specific attributes in PG&C-related classes to ensure the Microsoft Excel-based client functions correctly.
3. Restrict Declaration names to 50 characters for every class that you are enabling the Microsoft Excel-based client.
4. Obtain a production license for the Agile PLM ActiveX Control from your Agile Account Executive and deploy the related files on the Agile Application Server.
5. Optionally, digitally sign the Agile PLM ActiveX Control.
6. Use Agile Java Client to set the **Allow Download of Productivity Components** preference to Yes. This allows Agile Web Client users to download the Agile PLM ActiveX Control from the server.
7. Install the Agile PLM ActiveX Control.
8. Test that the Microsoft Excel-based client for Agile PG&C works properly.

Setting Privileges for Agile PG&C Objects

This section describes how to set privileges for Agile PG&C objects. If you don't ensure that privileges are properly set, you may not be able to move data from the JGPSSI spreadsheet into Agile PLM and vice versa.

To set privileges for Agile PG&C objects:

1. Log into Agile Java Client as a user with Administrator privileges.
2. Click the **Admin** tab.
3. Choose **User Settings > Privileges**.
4. Open the following privilege masks, and for each one click the drop-down arrow next to the **Applied To** field and add the following attributes:

Privilege Mask	Attributes to Add to the Applied To Field
Read Substances	Substances.Page Two.Text01
Modify Substances	Substances.Page Two.Text25
Modify Supplier Created Declarations	Declarations.Page Two.Text02, Text03, Text08 – Text10, Text14, Text19 – Text21
Read Declarations	Declarations.Items.Date01
Read My Open and Submitted Declarations	Declarations.Items.List01 - List03
Read Supplier Created Declarations	Declarations.Items.Text01 - Text09
Modify Declarations	Declarations.Manufacturer Parts.Date01
	Declarations.Manufacturer Parts.List01 - List03
	Declarations.Manufacturer Parts.Text01 - Text09
	Declarations.Part Groups.Date01
	Declarations.Part Groups.List01 - List03
	Declarations.Part Groups.Text01 - Text09

Privilege Mask	Attributes to Add to the Applied To Field
Modify My Open Declarations	Declarations.Page Two.Text14, Text19 – Text21 Declarations.Items.Date01 Declarations.Items.List01 - List03 Declarations.Items.Text01 - Text09 Declarations.Manufacturer Parts.Date01 Declarations.Manufacturer Parts.List01 - List03 Declarations.Manufacturer Parts.Text01 - Text09 Declarations.Part Groups.Date01 Declarations.Part Groups.List01 - List03 Declarations.Part Groups.Text01 - Text09

5. After modifying the **Applied To** field for each of the privilege masks listed above, Click **OK**.
6. To save the privilege mask, click **Save**.
7. Click **Close.**
8. Click **Close**.

Enabling Attributes that are Required for Excel Rollups

The following attributes must be enabled (Visible property is set to Yes for each attribute) at the class level for the Microsoft Excel-based client to function correctly.

Classes: Parts, Manufacturer Parts, and Documents

Compliance Tab > Composition Table

- Specification Name
- Declaration Name
- Declared Weight
- Supplier

Compliance Tab > Substances Table

- Child Level
- Substance Name
- Substance Type

- Mass
- Declared PPM
- CAS Number
- Conversion Factor

Classes: Parts and Documents

BOM Tab

- Item Number
- Item Description
- Item Rev (Item Revision)
- Qty (Quantity)

Manufacturers Tab

- Mfr. Part Number
- Mfr. Part Description
- Mfr. Name

Restricting the Length of Declaration Names

Agile's Microsoft Excel-based client requires Declaration names to not exceed 50 characters. If a Declaration has a name longer than 50 characters, you might not be able to open it in Microsoft Excel.

To avoid potential problems opening Declarations with long names, you should restrict Declaration names to 50 characters for every class that you are enabling the Microsoft Excel-based client. You can do this by making autonumbers required (assuming that each number in the autonumber sequence does not exceed 50 characters) or by adjusting the maximum length of the **Cover Page > Reference Number** attribute.

To make autonumbers required for a Declaration subclass:

1. Log into the Agile Java Client as an administrator.
2. Click the **Admin** tab.
3. Under **Data Settings**, double-click **Classes**.
4. Open a Declaration subclass that has enabled the Microsoft Excel-based client (for example, JGPSSI Declaration).
5. Select the **General Information** tab.
6. In the **Autonumber Required** list, select Yes.
7. In the **Autogenerate** list, select Yes.

8. Click **Save**.

To adjust the maximum length of Declaration names:

1. Log into the Agile Java Client as an administrator.
2. Click the **Admin** tab.
3. Under **Data Settings**, double-click **Classes**.
4. Open a Declaration class that has subclasses that have enabled the Microsoft Excel-based client (for example, JGPSSI Declarations).
5. Click the **User Interface Tabs** tab.
6. double-click **Cover Page**.
7. Click the **Attributes: Cover Page** tab.
8. double-click the **Reference Number** attribute.
9. Set the **MaxLength** property to 50 or less.
10. Click **Save**.

Deploying License Files for the Agile PLM ActiveX Control

To enable support for the Microsoft Excel-based client for Agile PG&C, you must obtain a valid license for the Agile PLM ActiveX Control, an Internet Explorer plugin. This license is specific to the server on which the Agile Application Server is installed. To obtain the license file (license.xml) and a properties file (properties.js), contact your Agile Account Executive.

After you obtain the license file and properties file, you need to deploy the files on the Agile Application Server.

> **Note** If you have an application server cluster, you must deploy the Agile PLM ActiveX Control license files on the Respository Host server for Oracle Application Server or the Administration Server for WebLogic Server. The application server will then propagate the license files to other servers in the cluster.

To deploy license files for the Agile PLM ActiveX Control:

1. Stop the Web proxy server.
2. Stop the Agile Application Server.
3. **Windows:** On the application server computer, open a command prompt window.

   UNIX: On the application server computer, open a terminal window and log on as the user who installed the Agile Application Server.
4. Expand the Agile application.ear file:

   Windows: \AGILE_HOME\install\bin\ExtractArchive.cmd

   UNIX: /AGILE_HOME/install/bin/ExtractArchive.sh
5. Copy the **license.xml** and **properties.js** files that you received from Agile to the following location:

\AGILE_HOME\agileDomain\applications\ExpandedEar\ExpandedWar\ambassador

6. Repack the Agile application.ear file:

   Windows: \AGILE_HOME\install\bin\RepackArchive.cmd

   UNIX: /AGILE_HOME/install/bin/RepackArchive.sh

7. Undeploy the Agile application, and then redeploy it.

   Windows:

   \AGILE_HOME\agileDomain\bin\UnDeployAgilePLM.cmd

   \AGILE_HOME\agileDomain\bin\DeployAgilePLM.cmd

   UNIX:

   /AGILE_HOME/agileDomain/bin/UnDeployAgilePLM.sh

   /AGILE_HOME/agileDomain/bin/DeployAgilePLM.sh

8. Start the Agile Application Server.
9. Start the Web proxy server.

Using the Developer Version of the Microsoft Excel Integration License File

If you are developing or testing Microsoft Excel templates for Agile PLM Declaration classes, you can use the developer version of the Microsoft Excel integration license file that is installed with the Agile PLM server. The developer license for the Agile PLM ActiveX Control provides the same functionality as the production license. However, when you install it, a warning message appears: "An UNTRUSTED web site is trying to use Agile PLM ActiveX Control to control your desktop." Click **Yes** in the warning dialog box to continue installing the control.

Digitally Signing the Agile PLM ActiveX Control

The first time you choose one of the commands that launch the Microsoft Excel-based client (such as **Actions > Open In Excel**) in Agile Web Client, the Agile PLM ActiveX Control is automatically downloaded and installed on your computer. For security reasons, Internet Explorer requires that software it downloads must have a digital signature. A digital signature lets you verify the contents of a file and ensures that it comes from a trusted source.

When you install Agile PLM, the Agile PLM ActiveX Control is already digitally signed from Agile Software. You can choose to use your company's own digital signature for the control instead. If you use your company's digital signature, each time a user of your Agile PLM system downloads the Agile PLM ActiveX Control it will be recognized as coming from your company and not from Agile Software.

You provide a digital signature by purchasing a certificate from a certificate authority. A certificate authority is an entity that issues digital certificates for use by other parties. Examples of certificate authorities are Verisign (http://www.verisign.com/ http://www.verisign.com/) and CAcert (http://www.cacert.org/ http://www.cacert.org/).

For more information about digital signatures, go to the MSDN site (http://msdn.microsoft.com/ http://msdn.microsoft.com/) and search for “Digitally Signing ActiveX Components”.

To digitally sign the Agile PLM ActiveX Control:

1. Stop the Web proxy server.
2. Stop the Agile Application Server.
3. **Windows:** On the application server computer, open a command prompt window.

   UNIX: On the application server computer, open a terminal window and log on as the user who installed the Agile Application Server.
4. Expand the Agile application.ear file

   Windows: \AGILE_HOME\install\bin\ExtractArchive.cmd

   UNIX: /AGILE_HOME/install/bin/ExtractArchive.sh
5. Digitally Sign the agileambassador.cab file found in the following location:

   \AGILE_HOME\agileDomain\applications\ExpandedEar\ExpandedWar\ambassador
6. Repack the Agile application.ear file

   Windows: \AGILE_HOME\install\bin\RepackArchive.cmd

   UNIX: /AGILE_HOME/install/bin/RepackArchive.sh
7. Undeploy the Agile application, and then redeploy it.

   Windows:

   \AGILE_HOME\agileDomain\bin\UnDeployAgilePLM.cmd

   \AGILE_HOME\agileDomain\bin\DeployAgilePLM.cmd

   UNIX:

   /AGILE_HOME/agileDomain/bin/UnDeployAgilePLM.sh

   /AGILE_HOME/agileDomain/bin/DeployAgilePLM.sh
8. Start the Agile Application Server.
9. Start the Web proxy server.

Enabling Downloading of Productivity Components

The Agile PLM ActiveX Control is a plugin for Microsoft Internet Explorer that users can download to their client machines. To enable downloading of the Agile PLM ActiveX Control from the server, the Agile PLM administrator must log into the Agile Java Client and make sure the Agile PLM preference named **Allow Download of Productivity Components** is set to Yes. Otherwise, users won’t be able to download the ActiveX control and use the Microsoft Excel-based client.

Note	The Agile PLM ActiveX Control is supported only on the Microsoft Internet Explorer browser. You cannot use it with other browsers, such as Firefox.

To enable downloading of the Agile PLM ActiveX Control:

1. Log into Agile Java Client as a user with Administrator privileges.
2. Click the **Admin** tab.
3. Choose **Server Settings > Preferences**.
4. For the **Allow Download of Productivity Components** preference, select Yes.
5. Click **Save**.

For more information about setting Agile PLM preferences, see the *Agile PLM Administrator Guide*.

Installing the Agile PLM ActiveX Control

If you enable downloading of the Agile PLM ActiveX Control (see the previous section), the plugin is installed automatically on the client computer when you choose a command (such as **Actions** > **Open In Excel**) that launches the Microsoft Excel-based client. Separate installation of the plugin is unnecessary.

Some companies have strict security procedures that prohibit users from installing ActiveX controls automatically onto their desktop computers. If that is the case with your company, your IT department can install the Agile PLM ActiveX Control by downloading an installer for the plugin from the Agile Support site (http://support.agilesoft.com http://support.agile.com).

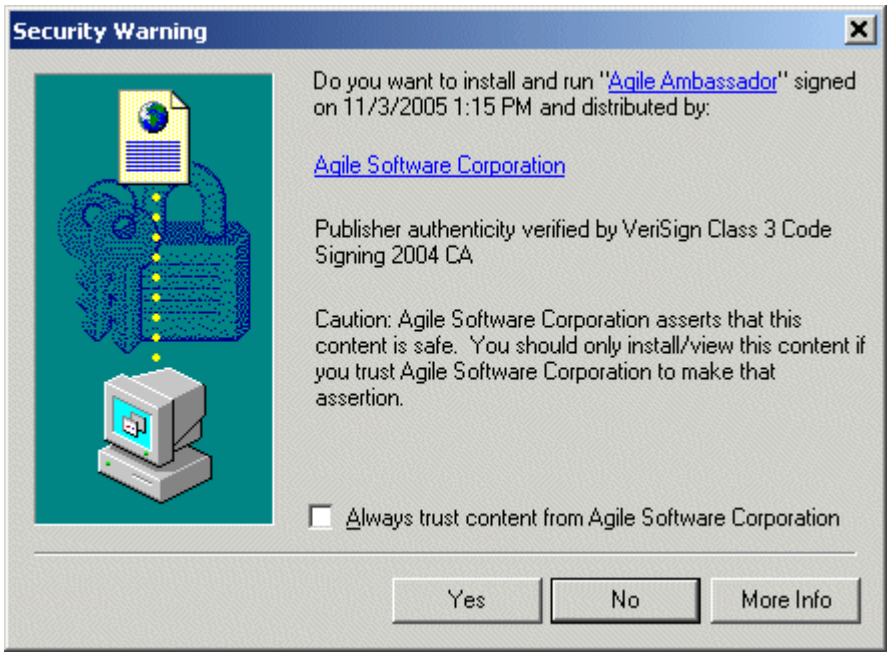
Testing the Microsoft Excel-based Client for Agile PG&C

This section describes how to test whether the Microsoft Excel-based client works properly.

To test JGPSSI Declarations:

1. In Agile Web Client, choose **Create > Declarations > JGPSSI Declarations**.
2. Specify a supplier. Also, make sure the **Continue Creation in Wizard** box is checked. Click **Continue**.
3. In the **Compliance Manager** field, select a user who is a compliance manager.
4. In the **Workflow** field, select Default Declarations. Click **Next**.
5. On the Add Specifications page, click **Next**.
6. On the Add Items page, click **Add** to add an item. Type an existing item number and Click **OK**.
7. Click **Finish**.

8. Choose **Actions > Open in Excel**. After a moment, a Security Warning dialog box appears.



9. Make sure the **Always trust content from Agile Software Corporation box** is checked. Click **Yes** to install and run the Agile PLM ActiveX Control (also called Agile Ambassador).
10. After a moment, Microsoft Excel is launched and a file with the name *declaration_number*.xls is opened. You are prompted to save the file to a folder on your desktop called Agile Spreadsheet Files. Click **Save**.
11. Close Microsoft Excel and return to Agile Web Client.
12. For the new JGPSSI Declaration you created, click **Next Status** to open it to the supplier.
13. Select users to notify, and Click **OK**.
14. Click the **Exit** button to log out.
15. Click **Login**. Log in as a contact user for the supplier associated with the JGPSSI Declaration.
16. Click the link to the JGPSSI Declaration to open it.
17. In the Navigation pane, click **Open In Excel**.
18. After a moment, Microsoft Excel is again launched and the same file as earlier is opened. You are prompted to save the file to a folder on your desktop called Agile Spreadsheet Files. You already saved it earlier, so click **Cancel**.
19. Fill in a one or more fields on the sheet. For example, change the value of the Parts Mass field.
20. Save the Microsoft Excel file.
21. Choose **Agile > Submit Response**. You need to log in at this point. The Submit Response window appears.
22. Type your approval password, and click **Submit**.

23. After your response is uploaded, a message box appears: “The declaration has been submitted for processing. Updates may not be immediately visible in the Agile system.” Click **OK**.

To test Substances and Weights Rollups:

1. In Agile Web Client, open a part that is a top-level assembly with multiple substances.
2. Choose **Actions > Rollup in Excel**.
3. Select the specification that is used for the composition, and Click **OK**. The Excel file with the same filename as the part number appears.
4. In the Excel file, choose **Agile > Run Scenario**. The rolled-up amounts for materials and substances used in the assembly are displayed.

Troubleshooting

This section provides solutions to problems you may encounter in configuring the Microsoft Excel-based client for Agile PG&C.

Import and Error Logs

Import and error logs for the Microsoft Excel-based client can be found in the server's Temp folder.

On Windows 2000/2003 servers, the Temp folder is usually found at

C:\Documents and Settings\<current_logged_in_user>\Local Settings\Temp\AgileEITemp

or

C:\Winnt\Temp\AgileEITemp

If you are unsure where to find the Temp folder, open a Command Prompt window and type the following command:

```
cd %temp%\AgileEITemp
```

On UNIX servers, the Temp directory is usually found at

/var/tmp/AgileEITemp

The most recent folder under AgileEITemp contains data and import or error logs of the last submission done in Excel

Runtime error

When you choose any command that launches the Microsoft Excel-based client (such as **Actions > Open In Excel**) in Agile Web Client, a Runtime Error window appears.

Solution:

The license files for the Agile PLM ActiveX Control, which are located on the Agile Application Server, are invalid. Please contact Agile Support to request new license files. Once you receive the files, you must deploy them on the application server. See “Deploying License Files for the Agile

PLM ActiveX Control on page 63”.

This feature has not been enabled by the application administrator

When you choose an **Action** that launches the Microsoft Excel-based client in Agile Web Client, the popup window reads, “This feature has not been enabled by the application administrator.” Consequently, the Agile PLM ActiveX Control could not be downloaded.

Solution:

In the Agile Java Client, set the Agile PLM preference **Allow Downloading of Productivity Components** to Yes. See “Enabling Downloading of Productivity Components on page 65”.

The page cannot be displayed

When you choose an **Action** that launches the Microsoft Excel-based client in Agile Web Client, the popup window reads, “The page cannot be displayed.”

Solution:

Make sure the Web proxy server is running.

Instead of opening a Microsoft Excel file, Agile Web Client login page appears in another window

When you choose an **Action** that launches the Microsoft Excel-based client in Agile Web Client, the Microsoft Excel file doesn’t appear and instead a new browser window opens with Agile Web Client login page.

Solution:

- Make sure Agile Web Client login page you’re using has the fully qualified domain name for the server in the URL. For example, if the fully qualified domain name of the server is “plm.mycompany.com”, Agile Web Client login page URL should look like this:

  http://plm.mycompany.com/Agile/PLMServlet

- Make sure the Agile PLM ActiveX Control license file (license.xml) uses a fully qualified domain name for the Agile Application Server.

The Open In Excel pop-up window appears and then closes, but Microsoft Excel doesn’t launch

When you choose an **Action** that launches the Microsoft Excel-based client in Agile Web Client, the Open In Excel pop-up window appears for a few seconds, and then it closes without launching Microsoft Excel.

Solution:

The Declaration you’re trying to open has a very long name. Choose **Actions > Save As** to save the Declaration with a name that is 50 characters or less.

To avoid this problem, restrict Declaration names to 50 characters. See “Restricting the Length of Declaration Names on page 62”.

The Actions menu does not include commands to launch the Microsoft Excel-based client

When you open an Item in Agile Web Client, the **Rollup in Excel** command isn’t available on the **Actions** menu. When you open a JGPSSI Declaration in Agile Web Client, the **Open In Excel**, **Import**

JGPSSI, and **Export JGPSSI** commands aren't available on the **Actions** menu.

Solution:

The Agile PG&C process extensions have not been assigned to Agile PLM classes. The Agile PG&C process extensions are assigned automatically to classes when Agile PLM is installed, but perhaps the Administrator modified the classes and inadvertently unassigned the Agile PG&C process extensions.

Here is how the Agile PG&C process extensions should be assigned:

- The **Rollup In Excel** process extension must be manually assigned to the Items classes, that is, Parts and Documents.
- The **Open In Excel**, **Import JGPSSI**, and **Export JGPSSI** process extensions should be automatically assigned to the JGPSSI Declarations class. Please verify that this was accomplished; if they did not load, it needs to be done manually.

For information on how to assign process extensions to classes, see the *Agile PLM Administrator Guide*.

The cell or chart you are trying to change is protected and therefore read-only

When you open a JGPSSI Declaration in Microsoft Excel and try to edit one of the cells, you see the following error message: "The cell or chart you are trying to change is protected and therefore read-only. To modify a protected cell or chart, first remove protection using the Unprotect Sheet command (Tools menu, Protection submenu). You may be prompted for a password."

Solution:

The colored cells of the JGPSSI template (such as headings) are protected and cannot be edited. You should edit only unshaded (white) cells.

Microsoft VBScript runtime error 1B6: Object doesn't support this property or method

When you choose any command that launches the Microsoft Excel-based client (such as **Actions > Open in Excel**) in Agile Web Client, an error message appears: "Microsoft VBScript runtime error 1B6: Object doesn't support this property or method."

Solution:

Internet Explorer had problems downloading the digital certificate for the Agile PLM ActiveX Control. Click **OK** in the error message box to continue.

The problem may be due to a comma in the Company field of the digital certificate. If there isn't a comma in the Company field, you may need to update your Internet Explorer browser with the latest patch from Microsoft.

You must restart your computer before the new settings will take effect

When you choose any command that launches the Microsoft Excel-based client (such as **Actions > Open in Excel**) in Agile Web Client, a message box appears: "You must restart your computer before the new settings will take effect. Do you want to restart your computer now?"

Solution:

You have a previous version of the Agile PLM ActiveX Control installed, and Microsoft Excel is

currently open, so the control cannot be updated. To install the new control, close Excel, and then click **No** in the message box (to not restart the computer). Choose **Actions > Open in Excel** again.

Chapter 9

Configuring Agile Product Portfolio Management

This chapter includes the following:

- Overview 73
- PPM Post Upgrade Utility 73
- Running the PPM Post Upgrade Utility 73

Overview

Agile Product Portfolio Management (PPM) gives you powerful capabilities to define, analyze, and manage all aspects of a project or program. In Agile PLM 9.2.2.4, some of the business rules have been changed. These changes impact the data you have already created because the computations were based on previous rules. During an upgrade from a previous version of PPM, data migration is necessary in order for the existing data to comply with the new business rules.

To facility the data migration, a post upgrade utility has been developed.

Note The PPM post upgrade utility is NOT supported on WebSphere Application Server.

PPM Post Upgrade Utility

The PPM Post Upgrade utility was developed to address the following changes in Agile PLM:

- Identifies all resource pool assignments where actual hours are greater than zero and sets the actual hours value to zero.
- Identifies the leaf tasks that have an incorrect percent complete value, corrects the value, and then correctly rolls up the value on the parent task.
- Identifies the tasks where estimated dates should be corrected based on the new business rules:
  a. If one of the estimated dates for a leaf task is null, it will be automatically populated, based on the other estimated date, only if the other date is not null.
  b. The estimated date is rolled up to the parent task considering the schedule date of the child task, if the child's estimated date is null.
- Identifies all tasks that have an incorrect value for Actual Time and corrects them.

Running the PPM Post Upgrade Utility

The utility is installed after you have upgraded your system to Agile PLM 9.2.2.4. The files are

located at AGILE_HOME/agileDomain/tools/922PPMPostUpgradeUtility.zip

This utility should be run on the machine where Agile PLM 9.2.2.4 is installed.

To run the PPM Post Upgrade Utility:

1. Unzip the utility files to a temporary directory.
2. Change to the directory where you have unzipped the files and locate the upgrade.properties file.
3. Edit the following entries in the upgrade.properties file to match your environment:

Server Settings	
server.url	URL of the Agile PLM 9.2.2.4 application The format is <protocol>://<machine_name>/<application_name>. On OAS, the protocol should be ormi. On WebLogic, the protocol should be t3.
server.login.id	Login ID of the Agile user who has PPM-related privileges to run the utility, typically the admin user.
server.login.password	Password of the Agile user.
pe.weekend.days	Weekends configured in the server. This value should be the same as the setting in the agile.properties files.
Database Settings	
db.url	JDBC this driver URL of the database. The format is jdbc.oracle:thin@<db_machine_name>:<port>:<instance_name>
db.username	Agile database username
db.password	Agile database password
Application Server Settings	
agile.dir	The parent directory where the library files for the Agile application are located.
oc4j.dir	Location of the Oracle Application Server, if installed.
wls.dir	Location of the BEA WebLogic Application Server, if installed.

4. Verify that the Agile PLM 9.2.2.4 application is running.
5. On a command line, make sure that the JAVA_HOME environment variable points to the location of the JDK. If it does not, set the value to the correct location.
6. In the directory where you unzipped the utility files, run install.cmd to start the utility.

Important If you configured the PPM Post Upgrade Utility in Agile PLM 9.2.2 and are upgrading to Agile PLM 9.2.2.4, run install upgrade-actualtime.cmd, NOT install.cmd to start the utility.

7. Restart the Agile application server.

Chapter 10

Installing and Configuring Agile Java Client

This chapter includes the following:

- Agile Java Client Requirements 75
- Installing the Agile Java Client 75
- Reconfiguring Java Client JNLP Files 76
- Opening Multiple Java Clients 78

Agile Java Client Requirements

All users need to install JRE 6.0 to use Agile Java Client. JRE 6.0 is available at:

http://java.sun.com/javase/downloads/index.jsp http://java.sun.com/javase/downloads/index.jsp

The server-side deployment files for Agile Java Client are installed with the Agile Application Server.

> **Note** The Agile PLM administrator must send users the URL to connect to the Agile Java Client.

Installing the Agile Java Client

To use the Agile Java Client, you must have the Java Runtime Environment (JRE) version 6 installed on your client computer. Agile Java Client uses Java Web Start technology to download the software and keep it updated.

To install the Agile Java Client:

1. Open your browser and type the following:

   http://Web Server.<*domain*>:<*port*>/JavaClient/start.html

   For example, the URL might look something like this:

   http://plmserver.mycompany.com/JavaClient/start.html

2. Click **Launch**.

   Java Web Start proceeds to download Java Client files and install them on your computer. This may take a few minutes.

3. If a Security Warning dialog box appears, click **Start**.

4. If the Agile 9.2.2.4 Desktop Integration dialog box appears, click **Yes** to integrate the Agile Java Client with your desktop.

   You are prompted to log in to the Agile server.

5. Enter your Agile PLM username and password, and then Click **OK**.

The main Agile Java Client window opens.

Running Agile Java Client 9.0 and Agile Java Client 9.2.2.4 on the Same Computer

Agile Java Client 9.0 and Agile Java Client 9.2.2.4 require different versions of the Java Runtime Environment (JRE). Agile Java Client 9.0 requires JRE 1.4.2, whereas Agile Java Client 9.2.2.4 requires JRE 6.0.

If you have both JRE 1.4.2 and JRE 6.0 installed on the same computer, you need to configure the Agile 9.0 application in Java Web Start to disable JRE 6.0. Otherwise, you will experience problems. For example, you won't be able to add files to the Attachments tab of an object.

To force Agile Java Client 9.0 to use JRE 1.4.2:

1. Go to the directory where JRE 1.4.2 is installed (such as **D:\Program Files\Java\j2re1.4.2_09**), and open the **javaws** subfolder.
2. Run Java Web Start (**javaws.exe**).
3. Choose **View > Downloaded Applications**.
4. Select the **Agile 9.0** application.
5. Choose **File > Preferences**.
6. Click the **Java** tab.
7. In the **Platform Version** column, select 1.6. Make sure the **Enabled** checkbox is unchecked.
8. Click **OK**.

Reconfiguring Java Client JNLP Files

When you install the Agile Application Server, the following two JNLP files are configured for the Agile Java Client. These files are embedded with the application.ear file and deployed with the application:

- pcclient.jnlp
- ext.jnlp

A JNLP file is an XML document that describes a Java application to be launched by Java Web Start. Ordinarily, the JNLP files are configured correctly during installation of Agile PLM. However, if you have an application server cluster and are unable to start Java Client and download its classes, you may need to reconfigure the JNLP files to point to the right servers.

Modifying the JNLP Files

In the AGILE_HOME\install\bin folder, Agile provides two utilities for unpacking the JNLP files from the application.ear file and repacking them again after you've modified them:

Windows Scripts	UNIX Scripts

Windows Scripts	UNIX Scripts
ExtractJNLPFiles.cmd	ExtractJNLPFiles.sh
RepackJNLPFiles.cmd	RepackJNLPFiles.sh

To extract and modify the Java Client JNLP files:

1. Stop the Web proxy server or load balancer.
2. Stop the Agile Application Server.
3. On the application server computer, open a command prompt window.
4. Run the **ExtractJNLPFiles** script to extract the JNLP files from the application.ear file.

   AGILE_HOME\install\bin\ExtractJNLPFiles

   Important If you have an WebLogic Server cluster, extract the JNLP files only on the Administration Server. When you redeploy the Agile application, the updated JNLP files will be propagated to all servers in the cluster.
5. Open the **pcclient.jnlp** file in a text editor. The file is located in the AGILE_HOME\agileDomain\applications folder.
6. Find the following tags and edit the values listed below:

   jnlp:

   <jnlp spec="1.0+" codebase="http://<proxy/loadbalancer>.<domain>:<port>/JavaClient">

   serverURL:

   <argument>serverURL=<*protocol*>://<*appserver/loadbalancer*>.<*domain*>:<*port*>/

   <*appserver_virtual_path*></argument>

   webserverName:

   <argument>webserverName=<*proxy/loadbalancer*>.<*domain*>:<*port*></argument>

   where

   - <*protocol*> is the protocol used by the application server. Enter **t3** for BEA WebLogic Server.
   - <*proxy/loadbalancer*> is the Web proxy server hostname or the alias for the load balancer
   - <*domain*> is the fully qualified domain name
   - <*port*> is the Web proxy server port or virtual port for the load balancer.
   - <*appserver_virtual_path*> is the Agile Application Server virtual path. The default is “Agile”.
7. Save the file.
8. Open the **ext.jnlp** file in a text editor. The file is located in the WebLogic subfolder beneath the AGILE_HOME\agileDomain\applications folder.
9. Find the following tag and edit the values listed below:

   jnlp:

   <jnlp spec="1.0+" codebase="http://<proxy/loadbalancer>.<domain>:<port>/JavaClient">

where

- <*proxy/loadbalancer*> is the Web proxy server hostname or the alias for the load balancer
- <*domain*> is the fully qualified domain name
- <*port*> is the Web proxy server port or virtual port for the load balancer.

10. Save the file.
11. Run the **RepackJNLPFiles** script to repack the JNLP files into the application.ear file.

    AGILE_HOME\install\bin\RepackJNLPFiles

12. Start the Agile application Server..
13. Start the Web proxy server or load balancer.

Opening Multiple Java Clients

If you wish to have the ability to open multiple Java Clients on one machine, perform the following steps before deploying Agile PLM 9.2.2.4 on your application server:

Back up the application.ear file before proceeding.

1. On the application server computer, open a command prompt window.
2. Run the **ExtractJNLPFiles** script to extract the JNLP files from the application.ear file.

   AGILE_HOME\install\bin\ExtractJNLPFiles

   If you have a WebLogic Server cluster, extract the JNLP files only on the Administration Server. When you redeploy the Agile application, the updated JNLP files will be propagated to all servers in the cluster.

3. Open the **pcclient.jnlp** file in a text editor. The file is located in the AGILE_HOME\agileDomain\applications folder.
4. Find the following tag:

   application-desc main-class:

   <application-desc main-class="com.agile.ui.pcclient.PCClient">

5. Add the following tag to this class:

   <argument>singleSession=no</argument>

6. Save the file.
7. Run the **RepackJNLPFiles** script to repack the JNLP files into the application.ear file.

   AGILE_HOME\install\bin\RepackJNLPFiles

Chapter 11

Integrating Agile PLM with Oracle AutoVue 19.3.2

This chapter includes the following:

- Installing Oracle AutoVue 19.3.2 for Agile PLM 79
- Configuring the AutoVue 19.3.2 Viewer Client Libraries with the Viewer Installer 79
- Configuring the AutoVue 19.3.2 Viewer Client Libraries Manually 80

Installing Oracle AutoVue 19.3.2 for Agile PLM

To install Oracle AutoVue 19.3.2 for Agile PLM (Agile Viewer), you must first download the Oracle AutoVue 19.3 for Agile PLM media pack as described in "Obtaining Software from Oracle E-delivery." Then, follow the instructions in the *Oracle AutoVue for Agile PLM Installation and User Guide*.

If you are installing Oracle AutoVue 19.3.2 on Linux:

1. Run the Red Hat Update Agent, up2date, to download the latest Xvfb and Mesa files.

   Note AutoVue Server installer does not detect whether Mesa or Xvfb are installed.

2. Install Xvfb version 6.8.2 or later.

   Make sure you install Xvfb with XRender and GLX extensions.

3. Install the latest Mesa package (recommended version is 6.5.2 or later).
4. Install the libsane package, if not already installed.
5. Install the libXp package, if not already installed.
6. Install the Wine RPM package "wine-av-20040914-15.i386.rpm" from Oracle AutoVue Open Source Components http://oss.oracle.com/AutoVue.
   - If you have an older version of Wine, you will need to uninstall it and then install the package that is certified with AutoVue 19.3.1.
   - Install Wine as a root user by running the following command:

     ```
     #rpm -i wine-av-20040914-15.i386.rpm
     ```

     Note This version of Wine is installed at the `/usr/av` location.
7. Follow the instructions in the *Oracle AutoVue for Agile PLM Installation and User Guide* to install AutoVue for Agile Version 19.3.2 on Linux.

Configuring the AutoVue 19.3.2 Viewer Client

Libraries with the Viewer Installer

Follow the instructions in the *Oracle AutoVue for Agile PLM Installation and User Guide* to configure the Viewer client libraries.

Note The following instructions are required ONLY if you are integrating Agile PLM on Solaris x86 with Oracle AutoVue 19.3.2.

Configuring the AutoVue 19.3.2 Viewer Client Libraries Manually

Gathering the Required AutoVue Binaries

1. Copy the html folder from the AGILE_HOME\AVS directory on the Viewer system to a temporary location.
2. Rename the folder to **jVue**.
3. Copy the vueServlet.jar file from the AGILE_HOME\AVS\bin directory on the Viewer system to a temporary location.
4. Copy the jVue.jar, jogl.jar, and gluegen-rt.jar files from the AGILE_HOME\AVS\html directory on the Viewer system to a temporary location.
5. Copy the **com** folder from the AGILE_HOME\agileDomain\deployment\tomcat\applet on the system where the Agile Application Server is installed to the jVue folder previously created.

Configuring the Agile Application Server

1. Stop the application server.
2. Delete the Agile deployed folders located at AGILE_HOME\agileDomain\<AppSvrName>
3. Use the ExtractArchive utility, located in the AGILE_HOME\Install directory, to unpack the AGILE_HOME\agileDomain\applications\application.ear file.
4. Add the jVue folder, created in the previous section, to the ExpandedWar directory of the application.war file, located inside of the application.ear file.

   The path should be as follows:
   AGILE_HOME\agileDomain\applications\ExpandedEar\ExpandedWar.
5. Add the vueservlet.jar, jVue.jar, jogl.jar, and gluegen-rt.jar files,copied in the previous section, to the \WEB-INF\lib directory of the application.war file's ExpandedWar directory.
6. Use the RepackArchive utility, located in the AGILE_HOME\install directory, to repack the application.ear file.
7. Start the Agile Application server.

Configuring the File Manager

1. Stop the Tomcat Service.
2. Delete the deployed folder of your file manager, located at AGILE_HOME\Tomcat\webapps. The name of this deployed folder is equivalent to the name of the Virtual Path entered for File Manager during installation. The default folder name is Filemgr.
3. Add the jVue folder, created the previous section, to the webfs.war file, located at AGILE_HOME\agileDomain\applications.
4. Add the vueServlet.jar, jVue.jar, jogl.jar, and gluegen-rt.jar files copied in the previous section to the \WEB-INF\lib directory, located inside the AGILE_HOME\agileDomain\application\webfs.war file.
5. Set the Agile Viewer Host Name and Port Number in the web.xml file, located inside the AGILE_HOME\agileDomain\applications\webfs.war at the \WEB-INF\ path.

```
<servlet-name>VueServlet</servlet-name>
        <servlet-class>com.cimmetry.servlet.VueServlet</servlet-class>
        <init-param>
            <param-name>JVueServer</param-name>
            <!--<param-value>hcmweb:5099</param-value>-->
            <param-value>view_server_host_name:port</param-value>
        </init-param>
```

6. Start the File Manager.
7. Check the VueServer Connection on the File Server Configuration page with the following URL: http://<fileserver_host>:<port>/<fileserver_virtual_path>/Configuration

Note Repeat the steps in this section on ALL File Managers.

Appendix A

Agile PLM Service Pack Installation

This Appendix includes the following:

- Install and Test Notice 83
- Installing an Agile PLM Service Pack on Windows 83
- Installing an Agile PLM Service Pack on UNIX 86

Install and Test Notice

Important Install and test this release on a designated development server before installing it on your production environment. Your development environment should mirror your production environment as closely as possible to provide accurate testing results. It is important to validate the installation of this release, and confirm your integrations are working correctly as part of your minimum due diligence. Any problems or questions noted during your development system testing should be resolved before installing this release on your production environment.

Installing an Agile PLM Service Pack on Windows

Upgrade Requirements

Before you install an Agile PLM service pack, make sure your system meets the following requirements:

Operating System

- Windows 2003 SP1 and later

Supported Application Upgrade Path

The Agile PLM application upgrade path is from the following release:

- Agile PLM 9.2.2.4 and all supported hot fixes and service packs

Installation Workaround

Important If you are upgrading in a language other than English, you must perform the following workaround before installing the service pack.

1. In the AGILE_HOME\Install\config folder, backup all the existing .cfg files (Examples: agile_app.cfg, agile_api.cfg, agile_dfm.cfg, agile_ws.cfg etc.).
2. Manually add the following server configuration information in English to the head of the agile_app.cfg, agile_api.cfg, agile_dfm.cfg, agile_ws.cfg..etc files:

```
Application Server Type=wls
Application Server Host=@APP_SERVER_HOST_NAME@
Application Server Virtual
Path=@APP_SERVER_VIRTUAL_PATH@ Application Server Virtual Patch
Clustered=@CLUSTER_INSTALLED@
BEA Home=@BEA_HOME@ Where you installed BEA
application server Listen Port=@BEA_LISTEN_PORT@
Web Server Host=@WEB_SERVER_HOST_NAME@
Web Server Port=@WEB_SERVER_PORT_NUMBER@
```

Upgrading the File Manager

1. If there is no distributed file server network, stop here and go to Upgrading the Application Server on page 85. Otherwise, continue with the following steps.
2. Stop the file server and any additional Agile services.
3. Back up the existing deployed application, Filemgr, if present:
   a. Change to the AGILE_HOME\Tomcat\webapps directory.
   b. Verify there is a directory named Filemgr under the webapps directory.
   c. If the Filemgr directory exists, then perform the following:

```
cd ..
mkdir webapps.old
mv webapps\Filemgr webapps.old
```

4. Download Agile922*x*_Win.exe to a temporary folder.
5. Download and extract the contents of the 9.2.2.*x*_Platforms.zip file to the same location as the Agile922x_Win.exe file.
6. In the temporary file, double-click Agile922x_Win.exe.

   The Install Window appears.
7. Click **Done** to finish the installation.

Note If you are using AutoVue, see the AutoVue for Agile PLM documentation.

8. Repeat the steps in this section on each distributed file server.

Upgrading the SDK Client

1. If the SDK Client is installed on the same machine as the application server, stop here and go to Upgrading the Application Server on page 85. Otherwise, continue with the following steps.
2. On the system where the SDK Client is installed, download Agile922*x*_Win.exe to a temporary folder.
3. Download and extract the contents of the 9.2.2.x_Platforms.zip file to the same location as the Agile922*x*_Win.exe file.
4. In the temporary folder, double-click Agile922*x*_Win.exe.

   The Install window appears.
5. Click **Done** to finish the installation.

Upgrading the Application Server

1. Follow the instructions in this guide to stop the Agile application server.
2. Verify that the application server, the IIS Admin Service, and any additional Agile services are stopped.
3. On the system where the application server is installed, download Agile922*x*_Win.exe to a temporary folder.
4. Download and extract the contents of the 9.2.2.*x*_Platforms.zip file to the same location as the Agile922*x*_Win.exe file.
5. In the temporary folder, double-click Agile922*x*_Win.exe.

   The Install window appears.
6. Click **Done** to finish the installation.

   Note If you are using AutoVue, see the AutoVue for Agile PLM documentation.
7. Start the IIS Admin service.

   Note Make sure the database schema is compatible with Agile PLM 9.2.2.x before starting the application server. See the *Database Upgrade Guide* for the schema version.
8. Start the Agile application server.
9. If you are running in a clustered environment, repeat these steps on each application server.

Post-Installation Verification

Application Server

9.2.2.7:

In the application menu under Help | About Agile, Update Versions should contain 9.2.2.7 and Agile

Version should contain 9.2.2.7.14.

File Manager

Start the File Manager before performing the following steps:

1. Type http://<localhost:8080>/<fileserver_virtual_path>/Configuration to display the File Manager Configuration page.
2. Confirm all lines show success.

Installing an Agile PLM Service Pack on UNIX

Upgrade Requirements

Before you install an Agile PLM service pack, make sure your system meets the following requirements:

Operating System

- Solaris 9 or 10
- Red Hat Linux 4
- IBM AIX 5.3

Supported Application Upgrade Path

The Agile PLM application upgrade path is from the following release:

- Agile PLM 9.2.2.4 and all supported hot fixes and service packs

Installation Workaround

Important If you are upgrading in a language other than English, you must perform the following workaround before installing the service pack.

1. In the AGILE_HOME/Install/config folder, backup all the existing .cfg files (Examples: agile_app.cfg, agile_api.cfg, agile_dfm.cfg, agile_ws.cfg etc.).
2. Manually add the following server configuration information in English to the head of the agile_app.cfg, agile_api.cfg, agile_dfm.cfg, agile_ws.cfg..etc files:

```
Application Server Type=wls
Application Server Host=@APP_SERVER_HOST_NAME@
Application Server Virtual
Path=@APP_SERVER_VIRTUAL_PATH@ Application Server Virtual Patch
Clustered=@CLUSTER_INSTALLED@
BEA Home=@BEA_HOME@ Where you installed BEA
```

```
application server Listen Port=@BEA_LISTEN_PORT@
Web Server Host=@WEB_SERVER_HOST_NAME@
Web Server Port=@WEB_SERVER_PORT_NUMBER@
```

Upgrading the File Manager

1. If there is no distributed file server network, stop here and go to Upgrading the Application Server. Otherwise, continue with the following steps.
2. Stop the file server and any additional Agile processes.
3. Back up the existing deployed application, Filemgr, if present:
   a. Change to the AGILE_HOME/Tomcat/webapps directory.
   b. Verify there is a directory named Filemgr under the webapps directory.
   c. If the Filemgr directory exists, then perform the following:

   ```
   cd ..
   mkdir webapps.old
   mv webapps/Filemgr webapps.old
   ```
4. Download the upgrade file to a temporary directory.

   Solaris (SPARC): Agile922*x*_Sol.bin

   Solaris (X86): Agile922*x*_Solx86.bin

   Linux: Agile922*x*_Lin.bin

   AIX: Agile922*x*_AIX.bin
5. Download and extract the contents of the 9.2.2.*x*_Platforms.zip file to the same location as the upgrade file.
6. From the temporary directory, run the upgrade file.

   The Install Window appears.
7. Click **Done** to finish the installation.

Note If you are using AutoVue, see the AutoVue for Agile PLM documentation.

8. Repeat the steps in this section on each distributed file server.

Upgrading the SDK Client

1. If the SDK Client is installed on the same machine as the application server, stop here and go to Upgrading the Application Server. Otherwise, continue with the following steps.
2. On the system where the SDK Client is installed, download the upgrade file to a temporary directory.

   Solaris (SPARC): Agile922*x*_Sol.bin

   Solaris (x86): Agile922*x*_Solx86.bin

   Linux: Agile922*x*_Lin.bin

   AIX: Agile922*x*_AIX.bin

3. Download and extract the contents of the 9.2.2.*x*_Platforms.zip file to the same location as the upgrade file.
4. From the temporary directory, run the upgrade file.

   The Install window appears.
5. Click **Done** to finish the installation.

Upgrading the Application Server

1. Follow the instructions in this guide to stop the Agile application server.
2. Verify that the application server, the Apache web server, and any additional Agile processes are stopped.
3. On the system where the application server is installed, download the upgrade file to a temporary directory.

   Solaris (SPARC): Agile922*x*_Sol.bin

   Solaris (X86): Agile922*x*_Solx86.bin

   Linux: Agile922*x*_Lin.bin

   AIX: Agile922*x*_AIX.bin
4. Download and extract the contents of the 9.2.2.*x*_Platforms.zip file to the same location as the upgrade file.
5. From the temporary folder, run the upgrade file.

   The Install window appears.
6. Click **Done** to finish the installation.

Note	If you are using AutoVue, see the AutoVue for Agile PLM documentation.

7. If the web server is installed on the same machine as the application server, restart the web server.

Note	Make sure the database schema is compatible with Agile PLM 9.2.2.x before starting the application server. See the *Database Upgrade Guide* for the schema version.

8. Start the Agile application server.
9. If you are running in a clustered environment, remove the previous deployment cache located at AGILE_HOME/agileDomain/applications/<wlnotdelete_servername> and AGILE_HOME/agileDomain/<managed_server> on each managed server, then repeat these steps on each application server.

Post-Installation Verification

Application Server

9.2.2.7:

In the application menu under Help | About Agile, Update Versions should contain 9.2.2.7 and Agile

Version should contain 9.2.2.7.14.

File Manager

Start the File Manager before performing the following steps:

1. Type http://<localhost:8080>/<fileserver_virtual_path>/Configuration to display the File Manager Configuration page.
2. Confirm all lines show success.

Appendix B

Agile PLM Installer Panels

This Appendix includes the following:

- Common Agile PLM Installer Panels 91
- Database Details Panel 92
- Application Server Panels 92
- Web Server Panels 94
- Viewer Panels 95
- File Manager Panels 95

Common Agile PLM Installer Panels

The following Agile PLM installer panels are common to all components:

Panel	Step(s) to Perform
Welcome	Click **Next**.
License Agreement	Read the Agile PLM license agreement, and then select **I accept the terms of the license agreement**.
Customer Information	Enter your user name and company name.
Choose Install Component(s)	Select the components to install. When you select each component, a description of it appears in the Description box.
Installation Mode	Select Basic Mode (default) or Advanced Mode installation. Basic mode installs a standalone application server on Oracle Application Server only with minimal user input. Advanced Mode allows you to install a standalone or cluster system on Oracle Application Server or BEA WebLogic.
Installation Location	Enter the directory where you want to install Agile PLM components. This directory is also referred to as the Agile_Home.
Choose Shortcut Folder	Depending on your operating system, select where you would like to create links or product icons for Agile PLM. These shortcuts allow you to quickly launch Agile PLM programs. **Windows users:** To create Agile PLM icons for all users, make sure the **Create Icons for All Users** box is checked.
Pre-Installation Summary	Review the information you provided in previous panels to make sure it's correct before you install. If the information is correct, click **Install**. If you need to make any changes, click **Previous** to go to a previous panel.

Panel	Step(s) to Perform
Install Complete	You have finished Agile PLM installation. Click **Done** to close the installer. **Windows users:** Depending on the components you installed, your computer may restart when you click **Done**.

Database Details Panel

The following Agile PLM installer panel appears to obtain database details:

Panel	Step(s) to Perform
Agile PLM Database Details	Enter your Agile PLM database information. If you do not know these values, see the database administrator responsible for your Agile PLM database server. Agile Database Host Name The fully qualified domain name of the computer where the Agile PLM database server is installed. Agile Database Port For Oracle, the default TNS Listener port is **1521**. Agile Database SID Enter the Oracle System Identifier that refers to the instance of the Oracle database running on the server. The default SID is **agile9**. Agile Database User Enter the database user. The default user is **agile**. Agile Database User Password Enter the password for the Agile PLM database user. The default password is **tartan**. **Note** If your Agile PLM database is configured to use different values from the defaults listed above, specify that information instead.

Application Server Panels

The following Agile PLM installer panels appear when you install the Application Server:

Panel	Step(s) to Perform

Panel	Step(s) to Perform
Application Server Type	Select the type of application server you are using. Agile PLM supports Oracle Application Server 10g (10.1.2.0.2) and BEA WebLogic Server 8.1 SP6. **Important** The application server you select should be installed BEFORE you install Agile PLM.
Installation Type	Select **Standalone Installation** or **Cluster Installation**. **Note:** If you are installing Application Server and File Manager on the same computer, selecting **Cluster Installation** will cause both to be clustered.A standalone installation requires only a single server, and therefore may not be as scalable or as reliable. A cluster is a group of servers that work together to provide a more scalable, more reliable application platform than a single server. A cluster appears to its clients as a single server, but is actually a group of servers acting as one. A cluster can provide two key advantages over a single server: ▫ **Scalability:** The capacity of a cluster is not limited to a single server or a single machine. New servers can be added to the cluster dynamically to increase capacity. If more hardware is needed, a new server on a new machine can be added. ▫ **High-Availability:** A cluster uses the redundancy of multiple servers to insulate clients from failures. The same service can be provided on multiple servers in the cluster. If one server fails, the surviving members can continue to serve the application. The ability to fail over from a failed server to a functioning server increases the availability of the application to clients.
Server Type	Select the type of server to install, **Administration Server** or **Managed Server**. A typical cluster configuration contains one Administration server and one or more Managed servers. BEA recommends that all the WebLogic servers should be located in the same subnet to ensure the multicast messages are reliably transmitted.
Administration Server Details	Enter details for the computer where the BEA WebLogic Administration Server is installed. Administration Server Host Name Enter the fully qualified domain name of the Administration Server. Administration Server Listen Port Enter the port number on which Administration Server listens. The default is 7001. You should accept the default unless you know that this port is unavailable.

Panel	Step(s) to Perform
Cluster Details	Enter the cluster name and the IP multicast address for the Administration server. Cluster Name Enter the name of the cluster. IP Multicast Address Enter an IP multicast address in the range from 224.0.0.0 to 239.255.255.255 that enables multiple applications to subscribe to a given IP address and port number and listen for messages. **Note** For a successful cluster installation, all the components of the cluster need to be installed in the same directory structure on each machine in the cluster.
Managed Server Information	Enter information of one of the Managed Server. Host Name Enter the fully qualified domain name (for example, computername.company.com)
BEA Home Directory	Type the location of the BEA WebLogic Server Home Directory, or click **Choose** to browse to it. The BEA Home directory is a repository for common files that are used by multiple BEA products installed on the same machine.
BEA Product Directory	Type the location of the BEA Product Directory, or click **Choose** to browse to it. The BEA Product directory is the location where BEA WebLogic Server is installed (for example, c:\bea\weblogic81).
BEA WebLogic Server Ports	Enter WebLogic Server listen ports. BEA WebLogic Server Listen Port Enter WebLogic Server listen port. The default port is 7001. BEA WebLogic Server Secure (SSL) Listen Port Enter the WebLogic Server secure listen port. The default port is 7002. **Note** You should accept the default ports unless you know they are unavailable.
Windows Service	Select whether to run Agile PLM as a Windows service. Choose **Yes** or **No**.

Web Server Panels

The following Agile PLM installer panels appear when you install Agile Proxies:

Panel	Step(s) to Perform
Apache Home Directory	Enter the Apache Web Server home directory. You can click **Choose** to browse to the Apache home directory. **Note** If you are installing Agile PLM on Oracle Application Server (OAS), **DON'T** select the home directory for Oracle HTTP Server, a version of Apache Web Server that is included with OAS.
Web Server Information	Enter information for the Web server used to proxy Agile PLM. If you are using a load balancer, specify the alias and virtual port for it instead. Host Name Enter the fully qualified domain name (for example, computer-name.company.com) of the Web server. If you are using a load balancer, specify the alias for the load balancer virtual IP address. Port Number Enter the HTTP or HTTPS port used by the Web server. General Web access is typically available on port 80, but your deployment may use a different port. If you are using a load balancer, specify the virtual port number of the load balancer.

Viewer Panels

The following Agile PLM installer panel appears when you install the File Manager:

Panel	Step(s) to Perform
Agile Viewer	Enter Agile Viewer information. **Host Name** Enter the fully qualified domain name (for example, computer-name.company.com) of the Viewer. **Port Number** Enter the port used by the Viewer. The default port is 5099, but your deployment may use a different port if 5099 is not available.

File Manager Panels

The following Agile PLM installer panels appear when you install File Manager:

Panel	Step(s) to Perform

Panel	Step(s) to Perform
File Manager User Authentication	A user account is used by the File Manager to communicate with the Application Server and its peers. You can use the default internal account or create a separate user account. Choose the type of user account you want to use for authentication.
File Manager User Account	The File Manager user account is used by the File Manager to communicate with the Application Server and its peers. The default user account is ifsuser. **File Manager User Name** Enter the user account used to communicate with the Application Server (default:ifsuser). **File Manager User Password** Enter the File Manager user password (default:agile).
File Manager Storage Location	Enter the directory where the File Manager files are stored. Click **Choose** to browse to the path. **Note** Make sure the directory you specify is one to which you have write access. For clustered File Managers, you must specify a network location.
File Manager Virtual Path	Enter the virtual path used to connect to the Agile File Manager. The default virtual path is "Filemgr", but you can change it to something appropriate for your company. The complete path for your Agile File Manager will be http://<web_server>:<port>/<file_manager_virtual_path>/AttachmentServlet. Important: The virtual path for Agile File Manager should be different from the virtual path for the Agile Application Server, especially if they use the same proxy server. The virtual paths should also have a different prefix. For example, if the Agile Application Server Virtual Path is "Agile", the name of the Agile File Manager Virtual Path must start with something other than "Agile".
Agile File Manager	Enter the machine name where File Manager is installed as well as the port number. **Agile File Manager Host Name** Enter the fully qualified domain name of the machine where you are installing the File Manager. **Agile File Manager Port Number** Enter the port number on which other Agile PLM applications will connect to the File Manager. The default port is 8080. If the File Manager is accessed through a proxy server or load balancer, enter the host name and port number of that machine.

Panel	Step(s) to Perform
Application Server Virtual Path	Enter the virtual path used to connect to the Agile Application Server. The default virtual path is “Agile”, but you can change it to something appropriate for your company. The complete path for your Agile Application Server will be http://<web_server>:<port>/<appserver_virtual_path>/PLMServlet. The virtual path for Agile Application Server should be different from the virtual path for the Agile File Manager, especially if they use the same proxy server.

Appendix C

Agile Application Server Scripts

This Appendix includes the following:

- Installation and Configuration Scripts 99
- Application Scripts 99
- File Vault Utilities 100

Installation and Configuration Scripts

Agile provides several scripts that can be used during installation and configuration of the Agile Application Server. The scripts are installed into the AGILE_HOME\install\bin directory:

Windows Script	UNIX Script	Description
ExtractArchive.cmd	**ExtractArchive.sh**	Extracts all of the files in the Agile application.ear file.
ExtractConfigFiles.cmd	**ExtractConfigFiles.sh**	Extracts configuration files from the Agile application.ear file.
ExtractJavaClient-Files.cmd	**ExtractJavaClient-Files.sh**	Extracts all of the Java Client files from the Agile application.ear file.
ExtractJNLPFiles.cmd	**ExtractJNLPFiles.sh**	Extracts JNLP files for Java Client from the Agile application.ear file. A JNLP file is an XML document that describes a Java application to be launched by Java Web Start. To successfully download and install Java Client using Java Web Start, you must configure the JNLP MIME type for your server.
RepackArchive.cmd	**RepackArchive.sh**	Repacks all of the files into the Agile application.ear file. After you run this script, you are ready to redeploy the Agile application.
RepackConfigFiles.cmd	**RepackConfigFiles.sh**	Repacks configuration files into the Agile application.ear file. After you run this script, you are ready to redeploy the Agile application.
RepackJavaClient-Files.cmd	**RepackJavaClient-Files.sh**	Repacks all Java Client files into JavaClient.war, and then updates the JavaClient.war file contained in the Agile application.ear file. After you run this script, you are ready to redeploy the Agile application.
RepackJNLPFiles.cmd	**RepackJNLPFiles.sh**	Repacks JNLP files for Java Client into the Agile application.ear file. After you run this script, you are ready to redeploy the Agile application.

Application Scripts

Agile provides several scripts for deploying and starting the Agile application. The scripts are installed into the AGILE_HOME\agileDomain\bin directory:

Windows Script	UNIX Script	Description
checkLDAPConfig.cmd	**checkLDAPConfig.sh**	Tries to connect to the Directory Server and verify whether LDAP configuration is correct.
encryptpwd.cmd	**encryptpwd.sh**	Encrypts a password.
installService.cmd	**n/a**	Installs Agile PLM as a Windows service.
installServicemanaged-server.cmd	**n/a**	Installs Agile PLM as a Windows service for a BEA WebLogic Managed server.
migrateUsersToDB.cmd	**migrateUsersToDB.sh**	Migrates users from the Directory Server to the Agile PLM database. After you run this script, make sure to restart your application server.
setEnv.cmd	**setEnv.sh**	Sets common environment variables used to run other Agile scripts.
startAgile.cmd	**startAgile.sh**	Starts the Agile application on BEA WebLogic Server.
startAgileCluster.cmd	**startAgileCluster.sh**	Starts the Agile cluster on BEA WebLogic Server.
stopAgile.cmd	**stopAgile.sh**	Stops the Agile application on BEA WebLogic Server.

File Vault Utilities

Agile provides several utilities to use with the File Vault. The utilities are installed in the AGILE_HOME\agileDomain\tools directory.

iFSReorgV2

Used to restructure the file vault during an upgrade from a version prior to Agile PLM 9.2.1.

Usage: java -jar iFSReorgV2.jar -basedir <*value*> **-oldFilePrefix** <*value*> **[-newFilePrefix** <*value*>**] [-logging <true/false>] [-simulate <true/false>]**

where

- **basedir** is the file vault location to be reorganized
- **oldFilePrefix** is the old file name prefix for the existing files in the vault
- **newFilePrefix** is the new file name prefix. All of the existing files will be renamed with this prefix. This is an optional argument. If it is not specified, the old file name prefix is used.
- **logging** enables logging of warnings or errors if set to **true**. The log is saved to a file named ifsReorg.log.
- **simulate** simulates the reorganization process without actually moving or renaming the files.

MetaFilesRemover

Used to periodically remove metafiles from the file vault based on the last used date or size. This utility should be used when upgrading the Agile Viewer.

Note A user-created .cmf file should not be listed or removed from the file vault.

Usage: java -jar MetaFilesRemover.jar [-delete <*value*>**] [-age** <*value*>**] [-size** <*value*>**] -basedir** <*value*> **-prefix** <*value*> **-serverURL** <*value*> **-username** <*value*> **-password** <*value*>

where

- **delete** deletes the metafiles.
- **age** specifies the last access time (day).
- **size** specifies file size (KB).
- **basedir** is the file vault location where the metafiles are removed.
- **prefix** is the file name prefix.
- **serverURL** is the location of the DMS service, for example, http://server.company.com:80/Agile/services/DmsService.
- **username** is the DMS service username.
- **password** is the DMS service password.

MetaItemGenerator

Used to generate new metafiles for a file vault and should be used when upgrading Agile PLM or the Agile Viewer. The utility simulates offline metafile generation from all of the files in the vault and supports the primary file server, but not structured files.

Usage: java -jar MetaItem.jar -basedir <*value*> **-filePrefix** <*value*> **-serverURL** <*value*> **-defaultUser** <*value*> **-defaultPassword** <*value*> **[-logging <true/false>]**

where

- **basedir** is the file vault location where the metafiles are generated.
- **filePrefix** is the file prefix of the files in the vault.
- **serverURL** is the URL of the server where the metafiles are persisted.
- **defaultUser** is the default userid of the Agile system.
- **defaultPassword** is the password of the default Agile user.
- **logging** enables logging. All information is saved in the metaItem.log file. By default, logging is disabled.

metaUtility

Displays the number of files in the meta generation queue through a graphical user interface.

Usage: java -jar metaUtility.jar

VaultSimulation

Used to create a virtual vault from a database.

Usage: java -jar VaultSimulation.jar -VaultLoc <*value*> **-URL** <*value*> **-userid** <value> **-password** <*value*> **[-prefix** <*value*>**]**

where

- **VaultLoc** is the file vault location.
- **URL** is the database location.
- **userid** is the database userid.
- **password** is the database password.
- **prefix** is the file name prefix. The default is Agile.

DeadFilesLocator

Used to locate dead files, including markups, in a file vault and shows how many files are missing in a specific distributed file management server. Dead files are automatically moved from the file vault to an archive folder.

Usage: java -jar DeadFilesLocator.jar -attachmentPrefix <*value*> **-vaultRoot** <*value*> **[-moveProblemFiles <Y/N>] [-archiveFileDest** <*value*>**] [-db_url** <*value*>**] [-db_user** <*value*>**] [-db_password** <*value*>**] [-file** <*value*>**] [-VERBOSE <true/false>]**

where

- **attachmentPrefix** is the file name prefix.
- **vaultRoot** is the absolute path of the vault root.
- **moveProblemFiles** determines the action for the dead files.
- **archiveFileDest** is the fully qualified path to an existing directory where you want to move the dead files.
- **db_url** is the URL of the database.
- **db_user** is the name of the database user.
- **db_password** is the password of the database user.
- **file** is the absolute path to the agile.properties file.

MissingFilesLocator

Used to locate missing files, including redlined files, in a file vault, but not limited to a specific distributed file management server.

Usage: java -jar MissingFilesLocator.jar -dburl <*value*> **-dbuserid** <*value*> **-dbpassword** <*value*> **-ifsuser** <*value*> **-ifspassword** <*value*> **[-force** <*value*>**]**

where

- **dburl** is the URL of the database.
- **dbuserid** is the name of the database user.
- **dbpassword** is the password of the database user.
- **ifsuser** is the name of the file vault user
- **ifspassword** is the password of the ifs user.
- **force** forces the utility to continue even if the file server is offline.

FixFileSize

Corrects the file sizes in the database. The file size is determined based on the actual files in the vault, then corrects the size in the database. If the file size equals zero during an upgrade, the file size is returned to its original value after running this utility.

Usage: java -jar FixFileSizeUtility.jar -dburl <*value*> **-dbuserid** <*value*> **-dbpassword** <*value*> **-ifsuser** <*value*> **-ifspassword** <*value*> *[***-log***]*

where.

- **dburl** is the URL of the database.
- **dbuserid** is the name of the database user.
- **dbpassword** is the password of the database user.
- **ifsuser** is the name of the file system user.
- **ifspassword** is the password of the file system user.

Appendix D

Agile System Maintenance

This Appendix includes the following:

- Using the Server as a Client 105
- Performance Tuning 105
- Configuring Access to Objects using Agile Administrative Settings 107
- Configuring Your Firewall 108
- Color Settings 108
- Checking Your TCP/IP Connection 108
- Configuring Browsers on Client Computers 109
- Uninstalling Agile PLM 109

Using the Server as a Client

After installation, test Agile PLM on the server to make sure that client systems can start Agile products. You may also need to test Agile administration modifications as well. For best results, apart from this testing, do *not* use the Agile PLM server to perform data-related tasks such as creating and modifying Items and Changes.

Performance Tuning

This section provides some information on how to tune the application server to improve the performance of Agile PLM.

Tuning JVM Parameters

BEA WebLogic Server requires a Java virtual machine (JVM) to run. You can fine-tune your system's JVM settings to improve memory management and garbage collection.

The following table provides recommended JVM settings for the Agile Application Server:

Parameter	Description	Windows	UNIX	Comments
Xms	Minimum Heap Size	1024m	1024m	The Minimum and Maximum Heap Sizes should be set to the same value. On Windows, the maximum value that can be safely set is 1536m. On UNIX, there is often a higher limit, but the typical recommendation is to have a heap sized at 2048m.

Parameter	Description	Windows	UNIX	Comments
Xmx	Maximum Heap Size	1024m	1024m	
XX:MaxPermSize	Maximum space for permanent objects	256m	256m	
XX:NewSize	Initial memory size for new objects	256m	256m	
XX:MaxNewSize	Maximum memory size for new objects	256m	256m	
VMType	Hotspot or server	hotspot	server	On Windows, -hotspot option gives the best results. On UNIX, -server option gives the best results

Note The Agile PLM installer adjusts JVM parameters to the following values if available physical memory of the machine exceeds 1.5Gb:

-Xms1024m -Xmx1024m -XX:MaxPermSize=256m -XX:NewSize=256m -XX:MaxNewSize=256m

To modify the JVM parameters on Windows:

1. Shutdown the application server.
2. If the application server is started as a Windows server, perform the following steps:
   a. Open the AGILE_HOME\agileDomain\bin folder.
   b. Run the UninstallService.cmd script.
   c. Modify the InstallService.cmd file with the appropriate JVM parameters.
   d. Run the InstallService.cmd script.
3. If the application server is started from the Start Menu or by using either the startAgile.cmd script or the startAgileCluster.cmd script, then modify the JVM parameters in those files located in the AGILE_HOME\agileDomain\bin directory.

   Note Edit the startAgileCluster.sh script on each managed server in the cluster.

4. Restart the application server.

To modify the JVM parameters on UNIX:

1. Shut down the application server.
2. If the application server is started with the startAgile.sh script or the startAgileCluster.sh script, then modify the JVM parameters in those files located in the AGILE_HOME/agileDomain/bin directory.

   Note Edit the startAgileCluster.sh script on each managed server in the cluster.

3. Restart the application server.

Tuning the Thread Count

On BEA WebLogic Server, the **ThreadCount** parameter sets the number of simultaneous operations that can be performed by the Agile application. Agile recommends a **ThreadCount** value of 35. To modify the **ThreadCount** parameter, open the AGILE_HOME\agileDomain\config.xml file.

To set ThreadCount in a standalone environment:

1. Shutdown the application server.
2. Edit the following line in the AGILE_HOME\agileDomain\config.xml file:

   <ExecuteQueue Name="default" **ThreadCount="35"**/>
3. Restart the application server.

To set the ThreadCount in a clustered environment:

1. Shutdown the administration server and all managed servers.
2. Edit the following line in the AGILE_HOME\agileDomain\config.xml file:

   <ExecuteQueue Name="default" **ThreadCount="35"**/>
3. Restart the administration server and all managed servers.

Configuring Access to Objects using Agile Administrative Settings

Access to Agile objects is controlled through the roles and privileges you grant users using the Agile web client administrative settings. Before allowing any external access to your Agile servers, you must first consider who needs access and what they need to access.

The list of potential external users may include, but is not limited to:

- Contract manufacturers
- Suppliers
- Customers
- Licensees
- Remote manufacturing facilities
- Field service personnel
- Traveling employees

Allowing access to third-party companies, such as contract manufacturers, may require special consideration. Most likely, you do not want these users to have access to *all* of your product information. Instead, you may want to grant them access to only a small subset of your data. For instance, they may need access only to data about products that they build for you.

Agile recommends that you create a role using the Agile Java client administrative settings for each

different type of external user. Once the role is defined, users can be assigned to the role. All users assigned to the role will inherit the privileges that are assigned to the role.

The Agile Web client administrative settings includes with a role called Example - Subcontractor that can be used as a template for setting up access for external users. For more information, see the *Agile Administrator Guide*.

You can take this one step further, and create a **Page Two** field on all Items and Changes called External User. This field can be filled with any external usernames that are allowed to access each Item or Change. A privilege can then be created for each role that allows access only to objects based on the value of this field. For instance, privileges can be created and granted so that Acme CEM employees can read only objects that have the value Acme in the **External User** field.

Note In previous releases, there was criteria containing users' names. If a user's name no longer exists in the database or if the administrator has changed a user's name, failure criteria will exist in the agile.log file the first time you start WebLogic. The invalid query must be modified or deleted before restarting WebLogic without errors.

Configuring Your Firewall

Most likely, your Agile servers are located behind your corporate firewall. An important part of system security is allowing incoming connections from the Agile web client to Agile Application Server and Agile Viewer, while restricting access to other parts of your system.

Color Settings

For best support of the current Agile PLM color-coded user interface, set client computers to display more than 256 colors.

Checking Your TCP/IP Connection

To verify that the client computer has a TCP/IP connection to the Web server:

1. Open a Command Prompt window.
2. In the Command Prompt window, ping the Web server by typing:

   ping servername

   The system returns a statement similar to the following:

   Pinging server_name [10.1.1.160] with 32 bytes of data:
   Reply from 10.1.1.160: bytes=32 time =1ms TTL=128

   This response verifies that your TCP/IP connection is working.

Configuring Browsers on Client Computers

Agile recommends that all browsers are set to check for newer versions of stored pages every visit to the page.

To set Internet Explorer to check for newer versions of stored pages every visit to the page:

1. Open **Start > Settings > Control Panel > Internet Options**.
2. On the **General** tab of the Internet Properties dialog box, click **Settings** in the Temporary Internet files section.
3. Select **Check for newer versions of stored pages: Every visit to the page**, then Click **OK**.
4. Click **OK** to close the Properties dialog box.

Uninstalling Agile PLM

Follow these instructions to remove Agile PLM.

To remove Agile PLM on Windows:

1. Stop the following services:
   - IIS Admin Service
   - World Wide Web Publishing Service
   - AgileService (if you installed the Application Server as a service)
   - Tomcat

   Note If Trend Micro anti-virus software is running on the same computer where Agile PLM is installed, stop the Trend Micro service before stopping AgileService.
2. Uninstall Tomcat, if applicable.
3. Choose **Start > All Programs > Agile > Agile 9.2.2.4 > Uninstall Agile 9.2.2.4**.
4. Click **Uninstall** on the Uninstall Agile window.
5. Click **Done** when finished.
6. Restart the computer.

Appendix E

Tuning Memory for Java Applets

This Appendix includes the following:

- Java Control Panel 112
- Frequently Asked Questions..... 112

The Agile Web Client uses Java applets for advanced functionality. Examples include the Gantt Chart and the Agile Viewer. These applets use the Java Plug-in to run inside your browser.

The amount of memory an applet requires depends on the content it attempts to load. If you experience memory problems while running the Gantt Chart, the Agile Viewer, or other Java applets, you should increase the amount of memory available to Java applets. To configure Java applet runtime parameters, use the Java Control Panel.

To adjust Java applet runtime parameters on Windows:

1. From the Windows Control Panel, run **Java** to open the Java Control Panel.
2. Click the **Java** tab.
3. In the **Java Applet Runtime Settings** box, click **View**. The Java Runtime Settings dialog box appears.
4. In the **Java Runtime Parameters** box, add the following:

   -Xmx<*memory-limit*>

   For example, to set maximum available memory to 256Mb, enter -Xmx256M.
5. Click **OK** to close the Java Runtime Settings dialog box.
6. Click **OK** to close the Java Control Panel.
7. Restart the browser.

To adjust Java applet runtime parameters on UNIX:

1. Determine which version of the Java Plug-in the browser is using.
2. Run the script <*java-dir*>/jre/bin/ControlPanel to open the Java Control Panel.
3. Click the **Java** tab.
4. In the **Java Applet Runtime Settings** box, click **View**. The Java Runtime Settings dialog box appears.
5. In the **Java Runtime Parameters** box, add the following:

   -Xmx<*memory-limit*>

   For example, to set maximum available memory to 256Mb, enter -Xmx256M.
6. Click **OK** to close the Java Runtime Settings dialog box.
7. Click **OK** to close the Java Control Panel.
8. Restart the browser.

To adjust Java applet runtime parameters on Mac OS X:

1. Determine which version of the Java Plug-in the browser is using.
2. In Finder, run the **Applications > Utilities > Java > Java <java-version> > Plugin Settings** command.
3. In the **Java Runtime Parameters** box, add the following:

   -Xmx<*memory-limit*>

   For example, to set maximum available memory to 256Mb, enter -Xmx256M.
4. Click **Apply**.
5. Close the control panel, and restart the browser.

Java Control Panel

For more information about the Java Control Panel and how to configure Java runtime settings on your client computer, go to http://java.sun.com http://java.sun.com and search for “Java Control Panel”.

Frequently Asked Questions

How much physical available memory do I need to run Agile PLM applets?
Please see the *Agile PLM Capacity Planning and Deployment Guide* for all Agile PLM hardware and software requirements.

In general, you will need at least 256Mb free available memory to use for Java applets. If the machine does not have that much memory available, a RAM upgrade is recommended to achieve the best performance.

On Windows, you can see the free available memory by opening the Windows Task Manager and clicking the Performance tab.

Do you need Administrator privileges on the client machine to modify Java runtime settings?
It depends on who installed Java on the machine. If the Administrator installed it, only he will have permission to modify Java runtime settings.

What is the -Xmx Java runtime parameter?
It sets the maximum size of the heap. The default value is 64Mb.

Are there other Java runtime parameters?
Yes, there are several other Java runtime parameters that you can configure. For a complete list, see the Java Control Panel documentation.