

Agile Product Lifecycle Management

Deploying OVM Templates on Exalogic

v9.3.1.2



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CONTENTS

Copyright and Trademarks	2
Overview	7
Understanding the OVM Templates for Agile on Exalogic.....	7
Understanding Agile PLM Components.....	7
Planning for a Secure Agile PLM Implementation.....	8
Deploying Agile PLM in vServers Running on Exalogic	9
Prerequisites	9
Task 1: Obtaining the OVM Template for Agile on Exalogic from Oracle Software Delivery Cloud	11
Task 2: Preparing the Exalogic Environment.....	12
Understanding Oracle Exalogic Elastic Cloud.....	12
Planning the Exalogic Environment.....	12
Task 3: Planning the vServer Configuration.....	13
Task 4: Uploading the Agile template to Exalogic.....	14
Task 5: Creating the vServer.....	15
Task 6: Updating the Networking Files.....	16
Task 7: Configuring the vServer for Agile Deployment.....	17
Task 8: Completing Post-Deployment Activities.....	19
Troubleshooting.....	20
Tips	20
Logs	20
Known Issues.....	21
Security Guidelines for Agile PLM Systems	22
Recommended Deployment Topology.....	22
Prerequisites for Installing Agile PLM	24
Installing the Oracle Database Server.....	24
Installing Oracle WebLogic Server	25
Installing Agile PLM and Database: Recommended Practices.....	25
Configuring AutoVue (Optional)	26
Security Features in Use	26
Password Policy.....	26
Configuring and Using Authentication	26
Configuring and Using Access Control.....	27

Configuring and Using Security Audit	28
Related Information	30
How to Find Out the Version Number of the Base Template	30
How to Allocate a Static IP Address for a vServer	30

Preface

Oracle's Agile PLM documentation set includes Adobe® Acrobat PDF files. The [Oracle Technology Network \(OTN\) Web site](#) 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 9.0 or later. This program can be downloaded from the [Adobe Web site](#).

The [Oracle Technology Network \(OTN\) Web site](#) can be accessed through Help > Manuals in both Agile Web Client and Agile Java Client. If you need additional assistance or information, please contact My Oracle Support (<https://support.oracle.com>) 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 The [Oracle Technology Network \(OTN\) Web site](#).

Agile Training Aids

Go to the [Oracle University Web page](#) for more information on Agile Training offerings.

Accessibility of Code Examples in Documentation

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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This chapter includes the following:

- Understanding the OVM Templates for Agile on Exalogic..... 7
- Understanding Agile PLM Components..... 7
- Planning for a Secure Agile PLM Implementation 8

This document explains how to deploy the Agile PLM application in virtual servers running on Exalogic, using Oracle Virtual Machine (OVM) Templates for Agile.

Understanding the OVM Templates for Agile on Exalogic

The OVM Template for Agile includes:

- Agile Application Server
- An installation of a standalone Agile PLM 9.3.1.2 release supporting all Agile components except the RMW module
- Weblogic Middleware Version 10.3.6
- JDK Version 1.6.0_35 64-bit

The OVM Templates for Agile are developed for Exalogic on an Oracle Linux operating system with Unbreakable Enterprise Kernel (UEK).

Understanding Agile PLM Components

Agile Product Lifecycle Management (Agile PLM) is part of Oracle's Product Value Chain solutions, a comprehensive set of solutions to manage all product information, integrated product lifecycle processes, secure collaboration, data quality and knowledge management across the product value chain – design chain, supply chain and demand chain.

Solutions:

- Agile Product Collaboration—helps users, partners, and suppliers share product data and manage change securely across the global product network.
- Agile Customer Needs Management—captures ideas and categorizes them into requirements that can be prioritized for design and development
- Oracle Product Lifecycle Analytics—compiles product data into easily read and quickly accessed reports and executive dashboards to empower decision-makers at all business levels with ready access to accurate, actionable product information.
- Agile Product Quality Management—drives improved product quality and customer satisfaction by integrating customer, product, quality and regulatory information within a closed-loop corrective action system.
- Agile Product Cost Management—enables companies to better manage supplier relationships and

product costs with early and real-time cost visibility.

- Agile Product Portfolio Management—provides tightly synchronized program and product information, maximized resource utilization, and cross-program visibility and decision support throughout the product lifecycle.
- Agile Product Governance & Compliance—enables organizations to manage product, substance, material compliance against standards and regulatory requirements.
- Agile Engineering Collaboration—ensures that engineering processes are fully leveraged throughout the product lifecycle driving engineering best practices across the enterprise.
- Agile Variant Management—provides a best-practice approach to managing portfolios of related products and product variants across the life cycle
- AutoVue for Agile Visualization—enables companies to drive effective decision-making, optimize NPI/NPD and change management processes, and allows secure supplier collaboration by delivering best-in-class document and CAD (MCAD and ECAD) visualization and collaboration capabilities directly within Agile PLM.

For complete information of Agile components, refer to Agile PLM documentation on the [Oracle Technology Network \(OTN\) Web site](#).

Planning for a Secure Agile PLM Implementation

The Agile PLM system in the OVM template is not pre-configured with security settings. Consider the following points:

- Which resources need to be protected?
 - Customer data, including part numbers, file attachments, and similar information
 - Internal data, including proprietary source code
 - Databases containing information that is accessed by the Agile PLM server
 - The availability, performance, applications, and the integrity of the website
 - System components that can be disabled by external attacks or intentional system overloads
- Who are you protecting this data from?

You need to protect your subscribers' data from other subscribers, while enabling select internal administrators to access the data to manage it.

You must analyze your workflows to determine who needs access to the data; and if it is possible for a system administrator to manage your system components without requiring access the system data.
- What will happen if protection measures on strategic resources fail?

In some cases, a fault in your security settings can simply be a minor inconvenience. In other cases, a fault can cause great damage to you or your customers. You must understand the security ramifications of each resource, to protect it properly.

Refer to [Appendix A](#) in this document for recommendations on deployment topologies, and guidelines to securely install and configure your Agile PLM system.

Deploying Agile PLM in vServers Running on Exalogic

This chapter includes the following:

▪ Prerequisites	9
▪ Task 1: Obtaining the OVM Template for Agile on Exalogic from Oracle Software Delivery Cloud	10
▪ Task 2: Preparing the Exalogic Environment.....	11
▪ Task 3: Planning the vServer Configuration	12
▪ Task 4: Uploading the Agile template to Exalogic	13
▪ Task 5: Creating the vServer	14
▪ Task 6: Updating the Networking Files	15
▪ Task 7: Configuring the vServer for Agile Deployment.....	16
▪ Task 8: Completing Post-Deployment Activities	18

Prerequisites

- Download the necessary files from Oracle Software Delivery Cloud before starting the deployment procedure.

Important Oracle recommends that users apply Critical Patch Updates and Security Patches for all Oracle components required in this VM Template, namely, Weblogic, Agile PLM, Autovue and any other if applicable.

- The OVM Template for Agile on Exalogic does not contain an Agile database. To create and use vServers from these templates, you should have a database already provisioned and available. The database must fulfill these requirements:
 - Oracle Database Server 11g Release 2 (11.2.0.1.0)
 - Agile instance created by the Agile database installer
 - The database can be a demo, development, or testing database. Do not run production databases on Exalogic.
 - Security guidelines for secure installation and configuration of the Agile PLM system, as detailed in [Appendix A](#) in this document.
- Ensure that sufficient virtual resources, such as disk space, RAM, and vCPUs, are available to run the required vServers. Refer to the section "[Planning the vServer Configuration](#)" on page 12 in this document.
- The deployment requires, at a minimum, users with the following roles:
 - An Exalogic user with the permissions to create the vServer and assign the network configuration to the vServer
 - Agile vServer root user

- A separate vServer user to serve as an administrator to manage the Agile environment on the vServer. This user is local to the vServer, and will configure the Agile components.
- While these are listed as separate roles, both sets of skills are needed to complete the deployment process in very close coordination.

Task 1: Obtaining the OVM Template for Agile on Exalogic from Oracle Software Delivery Cloud

Note The OVM Template for Agile on Exalogic on Oracle Software Delivery Cloud is based upon a specific release, typically the generally available (GA) release. It is not updated with patch releases.

To obtain the OVM Template for Agile on Exalogic:

1. Sign in to the Oracle Software Delivery Cloud portal for Oracle Linux and Oracle VM.
See <http://edelivery.oracle.com/linux>
2. On the Media Pack Search page, select Oracle VM templates from the *Select a Product Pack* drop-down list.
3. Select the operating system you are running on from the *Platform* drop-down list, and click *Go*.
4. Select the radio button for the Agile Application you want to deploy, and click *Continue*.
5. Download the template zip files:
 1. Download the OVM template for Agile on Exalogic, consisting of 3 zip files:
 - agile_R2_base_exa_2.0.1.1.0_64.tgz.gz.001.7z
 - agile_R2_base_exa_2.0.1.1.0_64.tgz.gz.002.7z
 - agile_R2_base_exa_2.0.1.1.0_64.tgz.gz.003.7z
 2. Unzip the files to a common directory to obtain the following files:
 - agile_R2_base_exa_2.0.1.1.0_64.tgz.gz.001
 - agile_R2_base_exa_2.0.1.1.0_64.tgz.gz.002
 - agile_R2_base_exa_2.0.1.1.0_64.tgz.gz.003
 3. Run the following script to combine the 3 files into a single file:

```
cat agile_R2_base_exa_2.0.1.1.0_64.tgz.gz.* >
agile_R2_base_exa_2.0.1.1.0_64.tgz.gz:
```
 4. Use the following link to download the unzip package for Linux:
<http://oss.oracle.com/el4/unzip/unzip.html>

Note The zip file is extremely sensitive to the version of Unzip used. To ensure you have the latest version, download the unzip utility from <http://oss.oracle.com/el4/unzip/unzip.html>

Task 2: Preparing the Exalogic Environment

This section discusses:

- Understanding Oracle Exalogic Elastic Cloud
- Planning the Exalogic Environment

Understanding Oracle Exalogic Elastic Cloud

For an introduction to Oracle Exalogic Elastic Cloud, refer to the following resources:

- The Oracle web site for data sheets, webcasts, and white papers on Exalogic, and [Oracle Exalogic Elastic Cloud Overview](#).
- Oracle Exalogic Release EL X2–2 and EL X3–2 [Documentation library](#) for product documentation, and [Oracle Exalogic Elastic](#).

Planning the Exalogic Environment

In planning the deployment of the OVM Template for Agile on Exalogic, consider the following:

- Create a database before deploying the OVM Template.
- Ensure that the Exalogic environment is set up.

The Exalogic environment must be fully configured and ready to create vServers created from the OVM Template for Agile on Exalogic.
- After setting up the virtual machines you will need to use a secure shell (SSH) client to log in to the vServers.

It is possible to combine one or more deployed Agile vServers with a conventional, typically non-virtual, installation. There are several possible combinations.

For example, you can connect to a traditional, non-virtual database instance residing outside Exalogic.

You may choose a demo or development database, depending on your requirements.

If you are familiar with working with the Oracle Exadata Database Machine, you can also connect to a database hosted in Exadata.
- To avoid potential conflicts, ensure that the administrator in charge of network configuration has a record of the host names and IP addresses associated with the vServers.

For more information, refer to Oracle Exalogic Release EL X2–2 and EL X3–2 [Documentation library](#).

Task 3: Planning the vServer Configuration

The default setup of Agile components in the OVM template requires the following resources:

- 4 GB RAM
- 4vCPUs

You may choose not to use the default Agile setup that comes with the template. Note that the sizing guidelines that accompany the template are suited for running a full Agile PLM application on the vServer. When you start working with these templates, it is recommended that you select the defaults and assign the stated values when creating your vServer.

For more information, refer to "[Configuring the vServer for Agile Deployment](#) on page 16" in this document. Also see "Examining the Default vDC" in [Oracle Exalogic Elastic Cloud Administrator's Guide](#).

Task 4: Uploading the Agile template to Exalogic

Refer to "Uploading and Registering a Server Template" section in the [Oracle Exalogic Elastic Cloud Administrator's Guide](#).

Task 5: Creating the vServer

Refer to "Creating vServers" and "Exalogic vDC Management — Basic" sections in [Oracle Exalogic Elastic Cloud Administrator's Guide](#).

After you create the vServer, it starts automatically. Refer to the instructions in section "[Configuring the vServer for the Agile Deployment](#)" on page 16" in this document.

The following Agile install directories are created in `/u02/agileplm/` post deployment:

<code>/u02/agileplm/jdk</code>	<code># JDK (64-bit recommended)</code>
<code>/u02/agileplm/wls1036</code>	<code># WebLogic Middleware home</code>
<code>/u02/agileplm/agile</code>	<code># Agile PLM Application home</code>
<code>/u02/agileplm/agilevault</code>	<code># Agile PLM file vault</code>
<code>/u02/agileplm/Agile</code>	<code># Agile product home</code>
<code>/u02/agileplm/bea</code>	<code># Bea product home</code>
<code>/u02/agileplm/envUtil</code>	<code># Post-scripts and sql files location</code>

Task 6: Updating the Networking Files

After you create the vServer, you must manually update the networking files. Edit each of the following files in a text-editing tool such as vi and make the required changes. Utilize the root user with default password "ovsroot".

▫ /etc/resolv.conf

Update the file with the name server information (DNS) - the IP address or host name.

```
search domain_name
nameserver xxx.xxx.xxx.xxx
```

For example:

```
search .us.oracle.com
nameserver 100.100.123.456
```

▫ /etc/sysconfig/network

Ensure that the HOSTNAME attribute value matches the host name corresponding to the assigned IP address. If the host name is not correct, contact your network administrator to get the correct host name matching the assigned IP address, and update it.

From an environment outside the vServer, you can also run the command `nslookup ip-address` to get the corresponding host name for the assigned IP address.

Note Static IP allocation ensures that the HOSTNAME attribute is correct. Refer to "How to Allocate a Static IP Address for a vServer" in the [Appendix](#) on page 30.

▫ /etc/hosts

If the file does not contain information relating to the IP address and host name, add the following data to the file:

```
192.168.1.103 testbox.us.oracle.com
```

Note You may need to reboot the machine for the changes to take effect. You do not need to reboot the machine if you are updating only the /etc/resolv.conf file.

Task 7: Configuring the vServer for Agile Deployment

In order to access the vServer after it has started, you must connect to the vServer via Secure Shell (ssh). Utilize the root user when you connect to the vServer for the first time.

Note Limit your use of the root user to only those operations that require root access. Perform all other operations with non-root users.

Note Change the default passwords of root and non-root users in the OVM template when you login to the vServer for the first time.

1. Login to the vServer as the user agile with password agilesz, using Secure Shell (SSH).
2. Update the Agile configuration file "setAgileCfg.properties" in the directory /u02/agileplm/envUtil with the following info:

```

HOSTNAME=
DBURL=
DBUSER=
USERPWD=
DOMAIN=
SUPERADMINWLSPWD=
AGILELOGINPWD=
WEBFSPWD=

```

Note Use lowercase for all inputs as uppercase might cause some issues in current implementation.

Note Passwords are encrypted when used in Agile installations.

Description of all configuration parameters:

HOSTNAME	VM hostname
DBURL	Database connection URL. Use the jdbc format like jdbc:oracle:thin:@oracledbhostname.domain:1521:SID or jdbc:oracle:thin:@DB_IP_ADDRESS:1521:SID
DBUSER	Database user in Agile instance
USERPWD	Password of the database user
DOMAIN	VM Domain
SUPERADMINWLSPWD	Password of the Agile superadmin user
AGILELOGINPWD	Password of the Agile login user

WEBFSPWD Password of the Agile file server user

3. Run the following script in the same directory to deploy the Agile installation:

```
./setAgileEnv.sh > deploy.log
```

When you execute the script, the file "UpdateTable.sql" is generated in the directory /u02/agileplm/envUtil/sql

4. Update the database

- To access the database server or database client, use SQLPLUS and connect to the database user

```
Sqlplus DBUSER/USRPWD@SERVICENAME
```

- Run the sql command

```
SQL>@UpdateTable.sql
```

Note The following backup files are used by post-scripts. DO NOT update or delete them in the installation:

- /u02/agileplm/agile/agile931/agileDomain/config/agile.properties.bak
- /u02/agileplm/agile/agile931/agileDomain/config/jdbc/CP-AgileContentPool-jdbc.xml.bak
- /u02/agileplm/agile/agile931/agileDomain/config/config.xml.bak
- /u02/agileplm/agile/agile931/agileDomain/bin/startAgile.sh.bak
- /u02/agileplm/agile/agile931/agileDomain/bin/stopAgile.sh.bak
- /u02/agileplm/agile/agile931/agileDomain/applications/application.ear.bak
- /u02/agileplm/agile/agile931/agileDomain/applications/webfs.war.bak
- /u02/agileplm/agile/agile931/agileDomain/applications/webdav.war.bak
- /u02/agileplm/agile/agile931/apache-tomcat-6.0.18/lib/agile-sso.jar.bak
- /u02/agileplm/agile/agile931/AutoVue/AVS/bin/jvueserver.properties.bak
- /u02/agileplm/envUtil/updatedata.sql.bak

Task 8: Completing Post-Deployment Activities

After you have configured and started the vServer with Agile deployment, you may choose to execute the following tasks depending on your choice of configuration.

1. Start Agile application server.

```
cd /u02/agileplm/agile/agile931/agileDomain/bin
./startAgile.sh &
```

The Weblogic server will start and automatically deploy Agile applications on it.

2. Start the Agile file management server.

```
cd /u02/agileplm/agile/agile931/apache-tomcat-6.0.18/bin
./startup.sh
```

The Tomcat server will start and the Agile file management server will be deployed on it.

3. Start the AutoVue Server.

Starting the AutoVue Server starts a Java console, which requires Graphical User Interface (GUI) support on the vServer. The Agile OVM template supports VNC.

1. Start a VNC server session with agile user

```
vncserver
```

2. Access GUI using a VNC viewer

3. Open an terminal

```
cd /u02/agileplm/agile/agile931/AutoVue/AVS/bin
./jvueserver &
```

Note The procedure here is a common method used to start Agile PLM applications. For other ways to start the server, refer to Agile PLM documentation on the [Oracle Technology Network \(OTN\) Web site](#).

Chapter 3

Troubleshooting

This chapter includes the following:

▪ Tips	20
▪ Logs	20
▪ Known Issues	21

This chapter lists resources to solve problems that you may encounter during the deployment of the OVM Template for Agile on Exalogic.

Tips

- Verify that you have enough resources such as disk space and memory on the Exalogic node that is running the vServer.
For more information, refer to "Planning the vServer Configuration" section in this document, and "Task Overviews and Basic Concepts" section in [Oracle Exalogic Elastic Cloud Administrator's Guide](#).
- If an error status was reported immediately after starting the virtual machine, it may be due to insufficient resources on the host computer.
- If your vServer is communicating with an external host, ensure that the network communication between the hosts is functioning.
- For information on checking the vServer status, refer to "Exalogic vDC Management - Basic" section in [Oracle Exalogic Elastic Cloud Administrator's Guide](#).

Logs

For detailed information on tasks, refer to the following logs.

- OVM configuration: `/var/log/ovm*.log`
- Agile installation deployment: `/u02/agileplm/envUtil/deploy.log`

For Agile application startup information:

- Agile server: `/u02/agileplm/agile/agile931/agileDomain/servers/<hostname>-AgileServer/logs`
- File management server: `/u02/agileplm/agile/agile931/apache-tomcat-6.0.18/logs`
- AutoVue server: `/u02/agileplm/agile/agile931/AutoVue/AVS/bin/logs`

For other information related with using Agile PLM product, refer to Agile PLM documentation on the [Oracle Technology Network \(OTN\) Web site](#).

Known Issues

Test links for deployed applications display incorrect IP address in Weblogic console.

This template is created from a vServer with a single IP address. After it is deployed on Exalogic vServer which supports multiple IP addresses, the test link deployed on Weblogic for each application randomly selects an IP address, which might not be consistent with the actual hostname of the vServer.

This issue does not affect the Agile PLM application functionality, except that the test link will not redirect to the correct application link.

Appendix A

Security Guidelines for Agile PLM Systems

This chapter includes the following:

- Recommended Deployment Topology 22
- Prerequisites for Installing Agile PLM 24
- Installing Agile PLM and Database: Best Practices 25
- Security Features in Use 26

This chapter recommends a deployment topology for secure installation, and guidelines for secure configuration and implementation of your Agile PLM system.

Recommended Deployment Topology

This section details the general topology that is recommended for a secure Agile PLM installation.

- Agile PLM Web and Java Clients - Agile PLM includes two clients, a Web client and a Java client. The Web client is a thin HTML client that uses firewall-friendly protocols (HTTP/S). The Java client is a Java-based client that can use application server-specific protocols, such as T3 for Oracle WebLogic, to connect to the server.
- (optional) Proxy - The hardware load balancer/proxy brokers client communications without compromising the security of your internal network. Clients communicate through the load balancer with the application server. There are no Agile software components running on the hardware load balancer. They are usually deployed in the Demilitarized Zone (DMZ) where it proxies requests from outside the corporate firewall to the application server in the Safe Zone.

Important Oracle recommends communication using HTTP over SSL (HTTPS) for the most secure deployment.
For standalone application server deployments, both the load-balancer and web server components are optional.
For deployments where the application server is clustered/redundant, a load-balancer is required and the web server is optional.

Refer to the documentation for your proxy server to determine the most secure configurations.

- Agile PLM 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 Agile Application Server runs on industry-leading J2EE application servers. As the System Configuration Overview figure illustrates, all client servers and users connect to the Application Server either directly or indirectly. The application server connects to the components in a persistence layer where product content is stored.

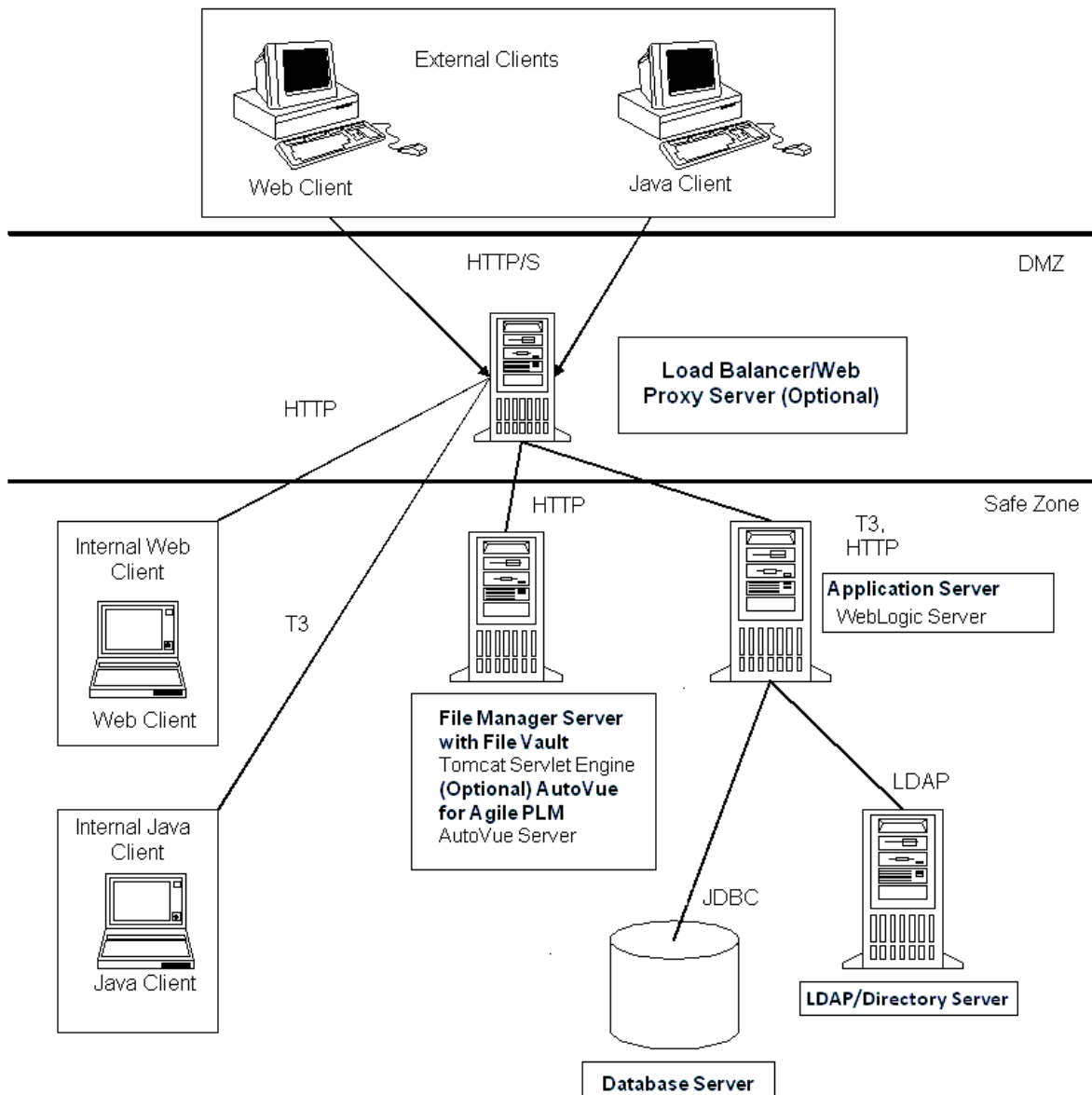
Important Oracle recommends communication using HTTP over SSL (HTTPS) for the most secure deployment.

- Agile PLM Database Server - The Agile Database Server persists or stores all product content and system settings. Agile's database server runs on Oracle 11g or 12c.
- (optional) LDAP / Directory Server - In an effort to better support the industry standard authentication schemes, Agile PLM supports Lightweight Directory Access Protocol (LDAP) based authentication. LDAP support enables you to integrate Agile with existing directory servers so user accounts can be managed in one place. Integrating with LDAP is optional. Users can be managed within Agile without a directory server. There are no Agile software components deployed on the Directory Server.

Important Oracle recommends communication using LDAPS for the most secure deployment.

- PLM File Manager / AutoVue Server - The Agile PLM File Manager component provides file upload/download functionality for the Agile PLM application. We recommend communication using HTTP over SSL (HTTPS) for the most secure deployment. The AutoVue Server component provides file viewing functionality for the Agile PLM application.
- PLM File Vault - The Agile PLM File Vault is comprised of one or more file system(s) on which the Agile PLM File Manager component stores and retrieves files uploaded/downloaded in the Agile PLM application.

Note Oracle suggests that you create a similar Network Diagram to illustrate your deployment's specific network topology, including servers, routers, firewalls, etc. This document may be requested by Oracle Support should a network connectivity issue arise.



Prerequisites for Installing Agile PLM

You must install and configure Oracle Database Server and Oracle WebLogic Server.

Installing the Oracle Database Server

For the latest information on installing Oracle Database Server in a secure manner, refer to the *Oracle Database Security Guide*. Make configuration changes as necessary.

For additional information, refer to the "Installing Oracle Database Server" chapter in the *Oracle*

Agile Product Lifecycle Management Database Installation Guide.

Installing Oracle WebLogic Server

The OVM template contains an Oracle WebLogic Server. For information on WebLogic Security Service, refer to following documents:

- *Understanding Security for Oracle WebLogic Server* - Summarizes the features of the WebLogic Security Service, including an overview of its architecture and capabilities. It is the starting point for understanding WebLogic security.
- *Securing Oracle WebLogic Server* - This document explains how to configure security for WebLogic Server and how to use Compatibility security.
- *Securing a Production Environment for Oracle WebLogic Server* - This document highlights essential security measures for you to consider before you deploy WebLogic Server into a production environment.

Important Oracle recommends the following actions:

1. Deploy WebLogic Server using SSL.
2. After installation, change the WebLogic administrator username and password.
3. Secure WebLogic Server by placing it behind a proxy server.

Installing Agile PLM and Database: Best Practices

The following users are created out-of-box for the application to start up correctly and function as expected: admin, agileuser, etluser, ifuser, propagation, and superadmin.

Note These OOB users should not be dropped or modified without consulting Oracle Support, as this will affect the functionality of the product.

Note Change the default passwords of root and non-root users in the OVM template when you login to the vServer for the first time.

Post-scripts allow you to change the password for the following users: superadmin, agileuser and ifuser.

For information on running these post-scripts, refer to [Task 7: Configuring the vServer for Agile Deployment](#) in this document.

For information on changing user passwords in Agile PLM, refer to chapter 'Users' in the *Oracle Agile PLM Administrator Guide*.

For more information on installing the Agile PLM database schema, refer to the *Oracle Agile Database Installation Guide*.

Important Oracle recommends the following actions:

1. Use strong passwords.
2. Deploy with SSL.
3. Use the Agile PLM system for authentication.
4. Use Oracle Platform Components such as OID or OAM for authentication requirements

Configuring AutoVue (Optional)

To ensure a secure configuration, Oracle recommends AutoVue as an optional component. Refer to the *AutoVue Security Guide* for information about configuring AutoVue securely.

Security Features in Use

This section describes the security features used to provide data protection in Agile PLM.

- Authentication - allows only permitted individuals to get access to the system and data.
- Access Control (Authorization) - provides authorized individuals access control to system privileges and data.
- Audit - allows Administrators to detect attempted breaches of authorization and attempted (or successful) breaches of access control.

Password Policy

A password policy comprises of rules that dictate password usage, such as:

- The maximum length of time a password is valid
- The minimum number of characters required in a password are present

Password policies play an important role when attempting to access a directory. The directory server ensures that the password entered adheres to the password policy.

Configuring and Using Authentication

Agile PLM supports the Lightweight Directory Access Protocol (LDAP), Single Sign-On (SSO), and database authentication configurations.

The three supported authentication configurations are discussed below.

LDAP-based Authentication

Agile PLM supports LDAP authentication through the Agile Directory Server Integration Module. You can integrate Agile with your existing directory server to manage your users in one place. This approach can be fully integrated into Agile PLM for the supported directory servers listed here:

- Oracle Internet Directory Server
- Microsoft Active Directory Server
- Sun Java System Directory Server

If you chose to manage your user accounts through a directory server (instead of the database) during installation, then all new users are added, and certain user attributes are configured, only through the directory server. You need to sync users from the LDAP system to the Agile PLM database.

For more information, refer to the "LDAP" chapter in the *Agile PLM Administrator Guide*.

SSO-based Authentication

Agile PLM allows you the possibility of integrating aspects of your PLM system with Single Sign-On (SSO) capability. SSO is a Web-based solution that can be enabled only for Agile Web Client.

Single Sign-On integrates with the centralized security management system, other business and training applications, and improves user productivity in the Agile Web Client environment. With SSO configured and enabled for your PLM system, a user that has signed in to the system once (for instance, through the corporate portal) is not prompted again by a "login" dialog.

Agile PLM is certified on the following Single Sign-On solutions:

- Oracle Access Manager (OAM)
- NT LAN Manager (NTLM)

Note	<ol style="list-style-type: none">1. Agile SDK code cannot connect to an Agile application URL protected by SSO.2. Users cannot develop Java Web Service client code and connect to an Agile Web Service protected by SSO.3. Webdav cannot connect to an Agile Application Server URL protected by SSO.4. Web Service clients or SDK code must connect directly to Agile server nodes with actual WebLogic ports or set up an alternate proxy that is not protected by SSO.
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For more information, refer to the "Configuring Single Sign-On" chapter in the Agile PLM Administrator Guide. The chapter also includes a helpful diagram of the Agile SSO Plug-in Architecture.

URL PX-based SSO

Customers use Process Extensions (PX) to extend Agile UI or business logic. Agile PLM has an SSO mechanism that allows the PX to access the Agile server without the user having to re-authenticate.

Database-supported Authentication

Customers can also use the Agile Database authentication, instead of the LDAP or SSO authentication mechanisms. For more information, see the "Account Policy" section in the *Agile PLM Administrator's Guide*.

Configuring and Using Access Control

Authorization primarily includes two processes:

1. Permitting only certain users to access, process, or alter data.
2. Applying varying limitations on user access or actions. The limitations placed on (or removed from) users can apply to objects, such as schemas, tables, or rows; or to resources, such as time (CPU, connect, or idle times).

Before creating a new Agile PLM user, make sure you answer the following questions:

- What does this user need to be able to do in Agile PLM? What default roles are required for this user?
- What should this user be prevented from doing in Agile PLM?
- Will this user need to have separate Login and Approval passwords?
- On which Agile PLM lists will the user's name appear?
- Which Agile PLM searches should the user be able to use?
- Is the user a Power User? A Power User can log in at any time and is not counted as a member of the concurrent user pool.

Important Oracle recommends the following actions:

1. Do not assign too many users and designated escalation persons to user groups.
2. Only assign users based on the requirements of each user group.
3. Update user groups regularly.

For more information about access control using roles and privileges, refer to the following sections in the *Agile PLM Administrator Guide*.

- *Overview of Roles and Privileges in Agile PLM*
- *Guidelines for Working with Roles*
- *Securing and Maintaining Roles and Privilege Masks*

Configuring and Using Security Audit

Agile PLM allows you to audit your system using the data collected in an object's History Tab, through the User Monitor window, and using log files.

User Monitor

The User Monitor window lists the users that are presently logged in to the Agile PLM system. It displays the following information about each logged-in user.

Table column	Description
User Name	The first and last name of the logged in user.
User ID	The login username of the user.
Host	Indicates the user's host.
Login Time	The time the user logged in.

For more information, see the "User Monitor" section in the *Agile PLM Administrator Guide*.

History Tab

The History tab shows a summary of actions taken against an object. History is recorded for all objects in your Agile PLM system's database, and shows all actions by users and administrators. The History tab automatically populates.

The types of actions recorded for items are:

- Creation of the item
- Attachment actions: view, open, add, delete, get, check in, check out, cancel checkout, incorporate, unincorporate, and field modifications on the Attachments tab.
- Save As
- Send
- Print
- Modification of the subclass or any field of a released item
- Subscription modification and sharing

For more information see:

- *Getting Started with Agile PLM*
- *"History Tab" in the Agile Product Lifecycle Management Product Collaboration User Guide*

Log Files

An additional source of audit information is log files. You can enable logging controls in Agile or in the WebLogic Server so that you can get more security-related information.

For more information about enabling logging, refer to the section "Logging Configuration" in the *Agile PLM Administrator Guide*.

For more information about enabling logging scripts in WebLogic, see "Application Logging and WebLogic Logging Services" in the WebLogic Server documentation.

Appendix B

Related Information

How to Find Out the Version Number of the Base Template

```
[root@vm ~]# cat /usr/lib/init-exalogic-node/.template_version  
exalogic_version='2.0.1.1.0'
```

How to Allocate a Static IP Address for a vServer

https://blogs.oracle.com/ATeamExalogic/entry/exalogic_2_0_1_tea3

https://blogs.oracle.com/ATeamExalogic/entry/exalogic_2_0_1_tea3