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Appendix C. EPM System Services

EPM System Services and Processes

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Foundation Services Application Server
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Performance Management Architect Application Server
Performance Management Architect Data Synchronizer Application Server
Calculation Manager Application Server
Essbase Server
Administration Services Server
Essbase Studio Server
Provider Services Application Server
Hyperion Reporting and Analysis Framework - Agent Service
Reporting and Analysis Framework Application Server
Financial Reporting Application Server
Web Analysis Application Server
Planning Application Server
Financial Management Server
Financial Management Application Server
Strategic Finance Server
Strategic Finance Web Application
Profitability and Cost Management Application Server
Disclosure Management Application Server
Financial Close Management Application Server
Tax Management Application Server
Data Relationship Management
Data Relationship Management Analytics
FDMEE Application Server
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Google+ - https://plus.google.com/106915048672979407731/#106915048672979407731/posts
YouTube - https://www.youtube.com/user/EvolvingBI
About EPM System Products

Check the Oracle Help Center to see whether an updated version of this guide is available.

Oracle Enterprise Performance Management System products form a comprehensive Enterprise Performance Management system that integrates modular suites of financial management applications with the most comprehensive business intelligence capabilities for reporting and analysis. Major components of EPM System products:

- **Oracle Hyperion Foundation Services**
  - Foundation Services (includes Oracle Hyperion Shared Services and Oracle Hyperion Enterprise Performance Management Workspace)
  - Optionally, Oracle HTTP Server
  - Oracle WebLogic Server
  - Oracle Hyperion EPM Architect
  - Oracle Hyperion Calculation Manager
  - Oracle Smart View for Office

- **Oracle Essbase**
  - Oracle Essbase
  - Oracle Essbase Administration Services
  - Oracle Hyperion Provider Services
  - Oracle Essbase Studio

- **Oracle Hyperion Reporting and Analysis**
  - Oracle Hyperion Reporting and Analysis Framework
  - Oracle Hyperion Interactive Reporting
Oracle's Hyperion Financial Performance Management Applications
- Oracle Hyperion Planning (including Oracle Hyperion Capital Asset Planning, Oracle Hyperion Workforce Planning, and Oracle Hyperion Public Sector Planning and Budgeting)
- Oracle Hyperion Financial Management
- Oracle Hyperion Strategic Finance
- Oracle Hyperion Profitability and Cost Management
- Disclosure Management
- Oracle Hyperion Financial Close Management
- Oracle Hyperion Tax Governance
- Oracle Hyperion Tax Provision

Oracle’s Data Management
- Oracle Hyperion Financial Data Quality Management, Enterprise Edition
- Oracle Data Relationship Management

Assumed Knowledge
This guide is for administrators who install, configure, and manage EPM System products. It assumes the following knowledge:
- Security and server administration skills
- Windows administration skills and or UNIX/Linux administration skills
- Java web application server administration skills.
- A strong understanding of your organization’s security infrastructure, including authentication providers such as Oracle Internet Directory, LDAP, or Microsoft Active Directory, and use of SSL
- A strong understanding of your organization’s database and server environments
- A strong understanding of your organization’s network environment and port usage
About Middleware Home, EPM Oracle Home, and EPM Oracle Instance

Middleware Home

A Middleware home consists of the Oracle WebLogic Server home, and, optionally, one or more Oracle homes, including EPM Oracle home. A Middleware home can reside on a local file system or on a remote shared disk that is accessible through Network File System (NFS).

The Middleware home location is defined during the first product installation on the computer. Subsequent installations on the computer use the previously defined location. The default installation directory is Oracle/Middleware. The Middleware home location is referred to as MIDDLEWARE_HOME throughout this document.

EPM Oracle Home

An Oracle home contains installed files necessary to host a specific product, and resides within the directory structure of the Middleware home. The EPM Oracle home contains files for EPM System products.

Components of EPM System products are installed in the EPM Oracle home directory under the Middleware home. The default EPM Oracle home location is MIDDLEWARE_HOME/EPMSystem11R1. In addition, common internal components used by the products are installed in EPM Oracle home. Choose the location carefully to ensure that the location has enough disk space for all products that you are installing on the machine. You cannot change the location.

The EPM Oracle home location is defined in the system environment variable called EPM_ORACLE_HOME. The EPM Oracle home location is referred to as EPM_ORACLE_HOME throughout this document.

In a distributed environment, the EPM Oracle home directory structure must be the same on each machine.

EPM Oracle Instance

An EPM Oracle instance contains one or more system components such as Oracle HTTP Server, Essbase Server, as well as one or more Java web applications in one or more domains. The directory structure of an Oracle instance is separate from the directory structure of the Oracle home. It can reside anywhere; it need not be within the Middleware home directory.

The default location for the EPM Oracle instance is MIDDLEWARE_HOME/user_projects/epmsystem1. The EPM Oracle instance location is referred to as EPM_ORACLE_INSTANCE throughout this document.

Java web applications are deployed to MIDDLEWARE_HOME/user_projects/domains/ domainName.

Typically, if you are installing all products on a single machine, for the first product you configure, you create a new EPM Oracle instance. For each product after that, you modify the existing EPM Oracle instance. If you are installing in a distributed environment, create a new EPM Oracle instance on each machine.
In a UNIX environment, you can deploy to a shared drive by installing to a shared drive and then configuring each machine to deploy to a different EPM Oracle instance. See “Deploying to a Shared Drive Environment (UNIX)” on page 63.

**About the Shared Services Registry**

The Oracle Hyperion Shared Services Registry is part of the database that you configure for Foundation Services. Created the first time that you configure EPM System products, the Shared Services Registry simplifies configuration by storing and reusing the following information for most EPM System products that you install:

- Initial configuration values such as database settings and deployment settings
- The computer names, ports, servers, and URLs you use to implement multiple, integrated, EPM System products and components
- Essbase failover content

Configuration changes that you make for one product are automatically applied to other products used in the deployment.

You can view and manage the contents of the Shared Services Registry using Lifecycle Management in the Oracle Hyperion Shared Services Console. See the *Oracle Enterprise Performance Management System Lifecycle Management Guide*.

**Characters Supported for Installation and Configuration**

The following characters are supported during installation and configuration with Oracle Hyperion Enterprise Performance Management System Installer and Oracle Hyperion Enterprise Performance Management System Configurator.

<table>
<thead>
<tr>
<th>Fields</th>
<th>Supported Characters</th>
<th>Blocked Characters</th>
</tr>
</thead>
<tbody>
<tr>
<td>PATH</td>
<td>Alphanumeric, dash (-), underscores (_), periods ( . ), and tildes (~). Tildes are supported only on Microsoft Windows.</td>
<td>All others</td>
</tr>
<tr>
<td>Host name</td>
<td>Alphanumeric, dash (-), and dot( .). EPM System supports IPv6 addresses. However, during installation and configuration, you must enter the host name, not the IPv6 address.</td>
<td>All others</td>
</tr>
<tr>
<td>User name</td>
<td>Alphanumeric characters including non-English (extended and double-byte) characters, except for the blocked characters</td>
<td>+ * / # [ ] { } ( ) ; : , @ ! “-</td>
</tr>
<tr>
<td>Fields</td>
<td>Supported Characters</td>
<td>Blocked Characters</td>
</tr>
<tr>
<td>----------------------------------------------------------------------</td>
<td>-------------------------------------------------------------------------------------</td>
<td>-------------------------------------------------------------------------------------</td>
</tr>
<tr>
<td>Clusters, database names, and other general fields such as DSN names</td>
<td>Alphanumeric characters including non-English (extended and double-byte) characters, except for the blocked characters</td>
<td>+ . - * \ / # [{}()::@!*</td>
</tr>
<tr>
<td></td>
<td><strong>MIDDLEWARE_HOME, EPM_ORACLE_HOME and EPM_ORACLE_INSTANCE</strong></td>
<td>For MIDDLEWARE_HOME: Alphanumeric characters, &quot;_&quot;, &quot;,&quot;, and &quot;-<del>&quot; on Windows. For EPM_ORACLE_INSTANCE: Alphanumeric characters, &quot;,&quot;, &quot;,-</del>&quot; The first character in every folder in the EPM_ORACLE_INSTANCE path must be a-z, A-Z, or 0-9. Do not use any of the following symbols or symbol combinations in the directory that you specify for EPM_ORACLE_HOME or MIDDLEWARE_HOME during installation or EPM_ORACLE_INSTANCE during configuration: /\t \t \n .</td>
</tr>
</tbody>
</table>
About EPM System Architecture

EPM System is a multi-tier application environment that mainly utilizes thin-client architecture for end-user access, requiring only a supported browser on the client machine. Network traffic between the client and middle-tier server(s) generally does not exceed more than normal web traffic.

A middle-tier application server is required. WebLogic Server is provided with a default installation. You can also use another supported application server. See the Oracle Enterprise Performance Management System Certification Matrix (http://www.oracle.com/technetwork/middleware/ias/downloads/fusion-certification-100350.html) for a list of supported application servers.

The data tier is comprised of two components that store data differently. In Essbase environments, the data is stored and calculated in the database on the server file system. In Financial Management environments, the application framework, metadata, and textual data are stored in a relational repository.
Note: The *Oracle Enterprise Performance Management System Standard Deployment Guide* presents Oracle’s best-practice approach for deploying EPM System products. This approach is based on creating a base deployment of the products and then scaling out the services to handle the needed capacity. This document is available in the Oracle Help Center (Deployment and Installation tab) (https://docs.oracle.com/en/applications/?tab=8).

For information about using EPM System on the Oracle Exalytics In-Memory Machine, see the Oracle Enterprise Performance Management System (EPM System) / Business Intelligence White Papers Library (http://www.oracle.com/technetwork/middleware/bi-foundation/resource-library-090986.html).

Tip: For optimum viewing of the component architecture diagrams in PDF format, try increasing the view magnification to 120%.

## Disclosure Management Components

<table>
<thead>
<tr>
<th>Client Tier</th>
<th>Web Tier Front-ended by OHS</th>
<th>Services Tier</th>
<th>Database Tier</th>
</tr>
</thead>
<tbody>
<tr>
<td>Taxonomy Designer</td>
<td>Foundation Services</td>
<td>Disclosure Management Web Application</td>
<td>RDB</td>
</tr>
<tr>
<td>Smart View</td>
<td>Web Application (EPM Workspace and Shared Services)</td>
<td>Oracle Enterprise Manager Web Application</td>
<td></td>
</tr>
<tr>
<td>VIP Load Balancer</td>
<td>Web Server</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

To obtain information about the communication between EPM System components, see "Oracle Enterprise Performance Management System Communication Flows" in the EPM System Documentation Library (Deployment tab) at http://www.oracle.com/technology/documentation/epm.html
Essbase Components

To obtain information about the communication between EPM System components, see “Oracle Enterprise Performance Management System Communication Flows” in the EPM System Documentation Library (Deployment tab) at http://www.oracle.com/technology/documentation/epm.html

For additional information on VIP/Load Balancing technology, see “Scaling Out EPM System Products” in the “Oracle Enterprise Performance Management System Deployment Options Guide” in the EPM System Documentation Library (Deployment tab) at http://www.oracle.com/technology/documentation/epm.html
**FDMEE Components**

**Web Tier**
Front-ended by OHS

- Foundation Services
- Web Application (EPM Workspace and Shared Services)
- FDMEE Web Application (includes Oracle Data Integrator (ODI) Agent)
- Oracle Enterprise Manager Web Application

---

**Financial Close Management Components**

**Client Tier**

- Smart View
- VIP / Load Balancer
- Web Server

**Web Tier**
Front-ended by OHS

- Foundation Services
- Web Application (EPM Workspace and Shared Services)
- Financial Close Management Web Application
- FDMEE Web Application (includes Oracle Data Integrator (ODI) Agent)
- Oracle Enterprise Manager Web Application
- Oracle SOA Suite

---

**Services Tier**

**Database Tier**

RDB

**LEGEND**

- Java Web Application
- Microsoft Windows Only

---

To obtain information about the communication between EPM System components, see “Oracle Enterprise Performance Management System Communication Flows” in the EPM System Documentation Library (Deployment tab) at http://www.oracle.com/technology/documentation/epm.html
Stand-Alone Financial Close Management Deployment Requirements for Test and Production

A stand-alone version of Financial Close Management can be deployed independently of other EPM System products in a two-server deployment as specified below. The following specification supports 500 users (175 active).

**Table 2  Financial Close Management Deployment Specifications**

<table>
<thead>
<tr>
<th>Machine</th>
<th>Products</th>
<th>Processor/Memory</th>
</tr>
</thead>
<tbody>
<tr>
<td>Server 1</td>
<td>● WebLogic Admin Server</td>
<td>4 Core 2 CPU – 16GB</td>
</tr>
<tr>
<td></td>
<td>● Foundation Services Java Web application (EPM Workspace and Shared Services)</td>
<td></td>
</tr>
<tr>
<td></td>
<td>● Oracle SOA Suite</td>
<td></td>
</tr>
<tr>
<td></td>
<td>● Oracle HTTP Server</td>
<td></td>
</tr>
<tr>
<td>Server 2</td>
<td>● Financial Close Management Java Web application</td>
<td>4 Core 2 CPU – 16GB</td>
</tr>
<tr>
<td></td>
<td>● FDMEE Java Web application</td>
<td></td>
</tr>
</tbody>
</table>
Financial Management Components

Client Tier
- Financial Reporting Studio
- Financial Management Console
- Smart View

Web Tier
Front-ended by OHS
- Foundation Services
  - Web Application (EPM Workspace and Shared Services)
- Financial Reporting
  - Web Application (includes Financial Reporting Print Server)
- Web Analysis
  - Web Application
- Calculation Manager
  - Web Application
- Financial Management
  - Web Application (Web Application and Web Services)
- Reporting and Analysis Framework
  - Web Application
- Oracle Enterprise Manager
  - Web Application
- Performance Management Architect (see separate diagram)

Services Tier
- Reporting and Analysis Framework Services
- Financial Management Server

Database Tier
- RDB

LEGEND
- Java Web Application
- Microsoft Windows Only

To obtain information about the communication between EPM System components, see "Oracle Enterprise Performance Management System Communication Flows" in the EPM System Documentation Library (Deployment tab) at http://www.oracle.com/technology/documentation/epm.html
Performance Management Architect Components

To obtain information about the communication between EPM System components, see "Oracle Enterprise Performance Management System Communication Flows" in the EPM System Documentation Library (Deployment tab) at http://www.oracle.com/technology/documentation/epm.html.
Planning Components

Client Tier
- Financial Reporting Studio
- Essbase Administration Services Console
- Smart View
- Planning Offline Client

Web Tier
Front-ended by OHS
- Foundation Services Web Application (EPM Workspace and Shared Services)
- Planning Web Application
- Essbase Administration Services Web Application
- Essbase Provider Services Web Application
- Financial Reporting Web Application (includes Financial Reporting Print Server)
- Web Analysis Web Application
- Calculation Manager Web Application
- Reporting and Analysis Framework Web Application
- Oracle Enterprise Manager Web Application
- Performance Management Architect (see separate diagram)

Services Tier
- Reporting and Analysis Framework Services
- Planning RMI Registry
- Essbase Server
- Oracle Process Manager and Notification (OPMN) Server

Database Tier
- RDB

Legend
- Java Web Application
- Microsoft Windows Only

To obtain information about the communication between EPM System components, see "Oracle Enterprise Performance Management System Communication Flows" in the EPM System Documentation Library (Deployment tab) at http://www.oracle.com/technology/documentation/epm.html
Profitability and Cost Management Components

Client Tier
- Financial Reporting Studio
- Essbase Administration Services Console
- Smart View

Web Tier
Front-ended by OHS
- Foundation Services Web Application (EPM Workspace and Shared Services)
- Profitability Web Application
- Essbase Administration Web Application
- Essbase Provider Web Application
- Financial Reporting Web Application (includes Financial Reporting Print Server)
- Web Analysis Web Application
- Reporting and Analysis Framework Web Application
- Oracle Enterprise Manager Web Application

Services Tier
- Reporting and Analysis Framework Services
- Essbase Server
- Oracle Process Manager and Notification (OPMN) Server

Database Tier
- RDB

LEGEND
- Java Web Application
- Microsoft Windows Only

To obtain information about the communication between EPM System components, see “Oracle Enterprise Performance Management System Communication Flows” in the EPM System Documentation Library (Deployment tab) at http://www.oracle.com/technology/documentation/epm.html
Reporting and Analysis Components

Strategic Finance Components

To obtain information about the communication between EPM System components, see "Oracle Enterprise Performance Management System Communication Flows" in the EPM System Documentation Library (Deployment tab) at http://www.oracle.com/technology/documentation/epm.html
**Stand-Alone Strategic Finance Deployment Requirements for Test and Production**

A stand-alone version of Strategic Finance can be deployed independently of other EPM System products in a one-server deployment as specified below. The following specification supports 50 active users.

**Table 3  Strategic Finance Deployment Specifications**

<table>
<thead>
<tr>
<th>Machine</th>
<th>Products</th>
<th>Processor/Memory</th>
</tr>
</thead>
<tbody>
<tr>
<td>Server 1</td>
<td>• Shared Services Java Web application</td>
<td>4 Core 2 CPU – 16GB on Windows 2008 R2</td>
</tr>
<tr>
<td></td>
<td>• Strategic Finance Web application</td>
<td></td>
</tr>
<tr>
<td></td>
<td>• Strategic Finance Server</td>
<td></td>
</tr>
<tr>
<td></td>
<td>• Oracle HTTP Server</td>
<td></td>
</tr>
</tbody>
</table>

**Tax Governance Components**

To obtain information about the communication between EPM System components, see “Oracle Enterprise Performance Management System Communication Flows” in the EPM System Documentation Library (Deployment lab) at http://www.oracle.com/technology/documentation/epm.html
To obtain information about the communication between EPM System components, see “Oracle Enterprise Performance Management System Communication Flows” in the EPM System Documentation Library (Deployment tab) at http://www.oracle.com/technology/documentation/epm.html
Preparing Your Environment

Preparing Servers

Applying Windows Updates
For each server in the deployment, apply Windows updates and reboot before installing and configuring.

Resolving Port Conflicts
For information about default port numbers for EPM System products, including where the port can be configured, see Appendix A, “Ports.”

Disabling User Access Control
In Windows 2008 environments, disable User Access Control (UAC) on each server in the deployment. This can be done through User Accounts in the Control Panel by clicking on Change User Account Control Settings, and then dragging the slider to Never notify.

UAC must remain disabled in order for EPM System server components to function properly. UAC can be enabled on end-user client desktops.
Synchronizing Clocks

The clock on each server must be synchronized to within one second difference. To accomplish this, point each server to the same network time server. Refer to your operating system documentation for more information.

Resolving Host Names

The canonical host name of each server must be the same when accessed from within the server and from other servers in the deployment. You may want to create a local hosts file on each server to resolve host name issues.

EPM System uses Java’s canonical host name resolution for resolving host names. To validate host names as resolved by Java, EPM System provides a utility (epmsys_hostname.bat|sh). An archive of the utility (epmsys_hostname.zip) is available in EPM_ORACLE_HOME/common/config/11.1.2.0. Run the utility after installation and before configuration.

Disabling Anti-virus Software

Antivirus software can cause performance issues with EPM System products if, each time you access any resource on the server, the antivirus software tries to open and scan the object. To prevent these issues, exclude the EPM Oracle home directory from automatic antivirus scans and scan this directory only at scheduled times.

Shared File System

If you are configuring for high availability, you must set up a shared file system using UNC syntax that is accessible from all the servers in the deployment for the following:

- Oracle Hyperion Enterprise Performance Management System Lifecycle Management artifacts
- Reporting and Analysis Repository data
- Essbase Server (UNIX) application location (ARBORPATH)

Optionally, you can also use the shared file system for the following:

- Installation files downloaded from Oracle Software Delivery Cloud
- Oracle HTTP Server configuration files to simplify configuration in a distributed environment
- Strategic Finance data
- FDMEE application data
- Essbase Studio sample and customer data source text files
Preparing User Accounts

Windows:
- Do not use the Administrator user to install and configure. Run EPM System Installer and EPM System Configurator as a user with administrator rights. Install and configure as an administrator and as the same user for all EPM System products.
- Assign local policies if required by your product. For Windows, the user ID typically requires “Act as part of the OS, Bypass Traverse Checking, Log on as a batch job, and Log-on as a service.”
- The user installing EPM System must have full access to Drive:/Temp and Drive:/Windows/Temp.
- When you apply a maintenance release, or patch this server, use the same user account that was used to install and configure the earlier release.

UNIX
- Prepare a user account (not the root user). Install and configure as the same user for all EPM System products. On UNIX machines, for all Oracle products, the user that is installing must be part of the same group; the group must have write permission to the central inventory (oraInventory).
- If you have installed any other Oracle products, the user who will be installing EPM System products must be in the same group as the user who installed the other Oracle products. For example, both users must be part of oinstall.

The password for the account used to install and configure must conform to the following guidelines:
- Contain at least one uppercase letter
- Contain at least one numeral
- Be at least eight characters long
- Contain no special characters

Disk Space and RAM

This section describes client and server disk space and RAM requirements for EPM System products.

Client Disk Space and RAM

Disk space and RAM requirements are approximate. The installation program checks for twice the required disk space, based on your product installation choices.
The recommended RAM requirement for all clients is 1 GB.

**Note:** Web browser clients have no disk space requirements beyond those of the web browser.

<table>
<thead>
<tr>
<th>Product Family</th>
<th>Component</th>
<th>Disk Space (Minimum)</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>EPM System Installer</td>
<td>EPM System Installer and all EPM System product assemblies</td>
<td>16 GB</td>
<td>After installation, the installation files and assemblies can be removed.</td>
</tr>
<tr>
<td>Foundation Services</td>
<td>Common client components</td>
<td>400 MB</td>
<td></td>
</tr>
<tr>
<td>Smart View for Office</td>
<td></td>
<td>100 MB</td>
<td></td>
</tr>
<tr>
<td>Performance Management Architect</td>
<td></td>
<td>20 MB</td>
<td>File generator and batch client components only</td>
</tr>
<tr>
<td>Essbase</td>
<td>Essbase Runtime Client</td>
<td>150 MB</td>
<td></td>
</tr>
<tr>
<td>Administration Services Console</td>
<td></td>
<td>300 MB</td>
<td></td>
</tr>
<tr>
<td>Essbase Studio Console</td>
<td></td>
<td>80 MB</td>
<td></td>
</tr>
<tr>
<td>Reporting and Analysis</td>
<td>Oracle Hyperion Financial Reporting Studio</td>
<td>400 MB</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Oracle Hyperion Interactive Reporting Studio</td>
<td>700 MB</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Oracle Hyperion Dashboard Development Services</td>
<td>190 MB</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Oracle Hyperion SQR Production Reporting Studio</td>
<td>90 MB</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Oracle Hyperion SQR Production Reporting Activator</td>
<td>30 MB</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Production Reporting Remote</td>
<td>10 MB</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Production Reporting Viewer</td>
<td>40 MB</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Oracle Hyperion Web Analysis Studio</td>
<td>40 MB</td>
<td></td>
</tr>
<tr>
<td>Financial Performance Management Applications</td>
<td>Offline Planning</td>
<td>280 MB</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Financial Management Client</td>
<td>100 MB</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Strategic Finance Client</td>
<td>700 MB</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Disclosure Management</td>
<td>300 MB</td>
<td></td>
</tr>
</tbody>
</table>

1Disk space does not include the common client components installed on the machine with Foundation Services.
**Server Disk Space and RAM**

Disk space and RAM requirements are approximate and do not include additional possible requirements on the machine. The installation program checks for twice the required disk space, based on your product installation choices. Disk space estimates include documentation help files (if applicable) and EPM System components.

<table>
<thead>
<tr>
<th>Component</th>
<th>Disk Space (Minimum)</th>
<th>RAM (Minimum)</th>
</tr>
</thead>
<tbody>
<tr>
<td>WebLogic Server (includes WebLogic, JDK, utils, JRockit, and Modules)</td>
<td>1.4 GB</td>
<td>500 MB</td>
</tr>
<tr>
<td>Oracle HTTP Server (optional component)</td>
<td>1.2 GB</td>
<td>1 GB</td>
</tr>
<tr>
<td>Common Oracle libraries</td>
<td>900 MB</td>
<td>NA</td>
</tr>
<tr>
<td>Shared Services</td>
<td>800 MB(^1)</td>
<td>1.5 GB</td>
</tr>
<tr>
<td>Performance Management Architect</td>
<td>125 MB</td>
<td>1 GB</td>
</tr>
<tr>
<td>Calculation Manager</td>
<td>45 MB</td>
<td>256 MB</td>
</tr>
<tr>
<td>Essbase Server</td>
<td>2 GB</td>
<td>1 GB</td>
</tr>
<tr>
<td>Application Programming Interface</td>
<td>40 MB</td>
<td>256 MB</td>
</tr>
<tr>
<td>Administration Services</td>
<td>1 GB(^2)</td>
<td>32 MB multiplied by the number of concurrent Administration Services users For example, 32 MB * 10 users = 320 MB</td>
</tr>
<tr>
<td>Provider Services</td>
<td>680 MB</td>
<td>340 MB</td>
</tr>
<tr>
<td>Essbase Studio Server</td>
<td>120 MB</td>
<td>256 MB</td>
</tr>
<tr>
<td>Reporting and Analysis Framework</td>
<td>2 GB</td>
<td>1 GB</td>
</tr>
<tr>
<td>Financial Reporting</td>
<td>400 MB</td>
<td>1 GB</td>
</tr>
<tr>
<td>Interactive Reporting</td>
<td>1 GB</td>
<td>1 GB</td>
</tr>
<tr>
<td>Production Reporting</td>
<td>400 MB</td>
<td>256 MB</td>
</tr>
<tr>
<td>Web Analysis</td>
<td>2 GB</td>
<td>1 GB</td>
</tr>
<tr>
<td>Financial Management Server</td>
<td>64 GB (10 GB available)</td>
<td>4 GB</td>
</tr>
<tr>
<td>Database Server for Financial Management</td>
<td>24 GB</td>
<td>4 GB</td>
</tr>
<tr>
<td>Component</td>
<td>Disk Space (Minimum)</td>
<td>RAM (Minimum)</td>
</tr>
<tr>
<td>---------------------------------</td>
<td>----------------------</td>
<td>---------------</td>
</tr>
<tr>
<td>Financial Close Management ³</td>
<td>8 GB</td>
<td>4GB</td>
</tr>
<tr>
<td></td>
<td></td>
<td>A user base of 200 concurrent active users can be supported with a JVM memory allocation of 4GB. A small user base of 10 to 15 concurrent active users can be supported with a JVM memory allocation of only 650MB. For additional details, see the Oracle Hyperion Financial Close Management Performance Tuning Guide, which can be found on Oracle Support by searching for document ID 1575381.1</td>
</tr>
<tr>
<td>Tax Governance</td>
<td>8 GB</td>
<td>4GB</td>
</tr>
<tr>
<td></td>
<td></td>
<td>A user base of 200 concurrent active users can be supported with a JVM memory allocation of 4GB. A small user base of 10 to 15 concurrent active users can be supported with a JVM memory allocation of only 650MB. For additional details, see the Oracle Hyperion Financial Close Management Performance Tuning Guide, which can be found on Oracle Support by searching for document ID 1575381.1</td>
</tr>
<tr>
<td>Tax Provision</td>
<td>64 GB (10 GB available)</td>
<td>4 GB</td>
</tr>
<tr>
<td>Planning</td>
<td>8 GB (10 GB available)</td>
<td>2 GB</td>
</tr>
<tr>
<td>Strategic Finance Server</td>
<td>700 MB⁴</td>
<td>2 GB</td>
</tr>
<tr>
<td>Profitability and Cost Management</td>
<td>8 GB</td>
<td>2 GB</td>
</tr>
<tr>
<td>Disclosure Management</td>
<td>8 GB</td>
<td>4 GB</td>
</tr>
<tr>
<td>FDMEE</td>
<td>300 MB</td>
<td>2 GB</td>
</tr>
<tr>
<td>Data Relationship Management Database Server</td>
<td>15 GB</td>
<td>2 GB</td>
</tr>
<tr>
<td>Data Relationship Management Application Server</td>
<td>500 MB</td>
<td>2 GB</td>
</tr>
</tbody>
</table>

¹This number is for the base Shared Services installation. If using Lifecycle Management functionality, Oracle recommends that you significantly increase disk space because application artifacts are exported and stored in the Shared Services file system.
²Allow extra disk space for data files and outline files that are copied to Administration Services during data loading and outline editing, respectively.
³Requirements for Oracle SOA Suite are not included.
⁴Sufficient storage should be included to contain the entities, their backup archives, administrative and transaction files, and user background task logs, such as consolidation reports.

**Note:** For data storage and binary installation, Essbase supports the use of a disk array device.

### Preparing a Database

Before you install and configure most EPM System products, create a database using a supported RDBMS (Oracle Database, Microsoft SQL Server, or IBM DB2).
EPM System supports 32-bit as well as 64-bit versions of all supported databases; however, the version of the database should match the operating system. For example, a 64-bit database version can be used only on a 64-bit operating system.

In general, the database should be in the same data center as the EPM System deployment. To prevent timeout issues when configuring with EPM System Configurator, you cannot locate a database in a remote location where there is latency.

For simplicity and ease of deployment, you can use one database repository for all products (with the exceptions noted below). In some cases you might want to configure separate databases for products. Consider performance, rollback procedures for a single application or product, and disaster recovery plans.

Each Essbase Studio Server instance must have its own catalog database.

The following products and product components require unique databases:

- Performance Management Architect interface data source
- Extended Analytics for Financial Management and Extended Analytics for Strategic Finance
- Planning – Each Planning application should have its own repository.
- Data Relationship Management. See the Oracle Hyperion Data Relationship Management Installation Guide.

The following products must use the same database schema:

- Financial Close Management
- Tax Governance
- Account Reconciliation Manager
- Supplemental Data Manager
- Tax Supplemental Schedules

**Using an Oracle Database**

This section includes information about Oracle database installation, database creation, required roles and privileges, sizing guidelines, and configuration.

**Note:** EPM System Installer installs the Oracle Database client automatically if it is required on a machine (Windows only, Performance Management Architect only). To use an existing Oracle Database client, see “Using an Existing Oracle Database Client” on page 42.

**Oracle Database Creation Considerations**

The database must be created using Unicode Transformation Format UTF-8 encoding (character set). Oracle supports the following character sets with UTF-8 encoding:

- AL32UTF8 (UTF-8 encoding for ASCII platforms)
- UTF8 (backward-compatible encoding for Oracle)
Oracle Database Privileges

The following privileges must be granted to the owners of the database schemas:

- CREATE ANY SYNONYM
- CREATE CLUSTER
- CREATE INDEXTYPE
- CREATE PROCEDURE
- CREATE SEQUENCE
- CREATE SESSION
- CREATE TABLE
- CREATE TRIGGER
- CREATE TYPE
- CREATE VIEW
- DROP ANY SYNONYM

Tip: Optionally, you can specify unlimited quota for EPM schemas.

Oracle Database Sizing Guidelines

Oracle recommends that you set tablespaces with Auto Extend ON.

The following table describes the Oracle Database sizing guidelines.

<table>
<thead>
<tr>
<th>Product</th>
<th>Sizing Guideline</th>
</tr>
</thead>
<tbody>
<tr>
<td>Shared Services &amp; EPM Workspace</td>
<td>Start with 100 MB, and add more as the number of migrations with Lifecycle Management and the number of audit records increases.</td>
</tr>
<tr>
<td>Performance Management Architect</td>
<td>Oracle recommends starting with at least 250MB.</td>
</tr>
<tr>
<td>Administration Services</td>
<td>The amount of space needed depends on the metadata created; Oracle recommends starting with at least 32 MB.</td>
</tr>
<tr>
<td>Essbase Studio</td>
<td>The amount of space needed depends on the metadata created; Oracle recommends starting with at least 32 MB.</td>
</tr>
<tr>
<td>Reporting and Analysis</td>
<td>The amount of space needed depends on the aggregate size of the objects that you plan to store in the repository. Oracle recommends starting with at least 250 MB, which provides space to expand the Reporting and Analysis repository without having to increase the data file or tablespace. A shared pool size of 60 MB is used during configuration with EPM System Configurator.</td>
</tr>
</tbody>
</table>
## Oracle Database Configuration Considerations

### Tablespace Considerations

The following table describes the Oracle Database tablespace considerations.

<table>
<thead>
<tr>
<th>Product</th>
<th>Tablespace Considerations</th>
</tr>
</thead>
<tbody>
<tr>
<td>General—All products</td>
<td>- Consider a global view of tablespaces and allocate one or more tablespaces in order to spread out tables created by EPM System products.</td>
</tr>
<tr>
<td></td>
<td>- Tablespaces can be shared with other applications.</td>
</tr>
<tr>
<td></td>
<td>- Create a separate tablespace for indexes to improve performance. This action requires CREATE TABLESPACE system privileges.</td>
</tr>
<tr>
<td></td>
<td>- Ensure that the <code>SEGMENT SPACE MANAGEMENT</code> parameter is set to <code>AUTO</code> when you create tablespace, to improve performance.</td>
</tr>
<tr>
<td>Reporting and Analysis</td>
<td>Dedicate a tablespace to Reporting and Analysis. Determine the tablespaces to be used as the default tablespace and the temporary tablespace for this user. Do not use the SYSTEM tablespace.</td>
</tr>
<tr>
<td>Financial Management</td>
<td>Set up a temporary tablespace greater than 1GB.</td>
</tr>
<tr>
<td>Financial Close Management</td>
<td>See the Oracle Hyperion Financial Close Management Performance Tuning Guide, which can be found on Oracle Support by searching for document ID 1575381.1</td>
</tr>
</tbody>
</table>
### Tablespace Considerations

<table>
<thead>
<tr>
<th>Product</th>
<th>Tablespace Considerations</th>
</tr>
</thead>
<tbody>
<tr>
<td>Data Relationship Management</td>
<td>● Set the initial tablespace size to 1 GB</td>
</tr>
<tr>
<td></td>
<td>● Extents to 500 MB</td>
</tr>
<tr>
<td></td>
<td>● Turn Auto Extend ON</td>
</tr>
<tr>
<td></td>
<td>See the Oracle Hyperion Data Relationship Management Installation Guide</td>
</tr>
</tbody>
</table>

### Other Parameters

The following table describes other Oracle Database parameters.

<table>
<thead>
<tr>
<th>Product</th>
<th>Other Parameters</th>
</tr>
</thead>
<tbody>
<tr>
<td>General/AllProducts</td>
<td>Set <code>ALTER SYSTEM SET</code> as follows:</td>
</tr>
<tr>
<td></td>
<td><code>ALTER SYSTEM SET processes=1000 SCOPE=SPFILE;</code></td>
</tr>
<tr>
<td>Financial Management</td>
<td>Set Oracle <code>OPEN_CURSORS</code> to 5000.</td>
</tr>
</tbody>
</table>

### Operating System Configuration for Oracle Database

For Reporting and Analysis (UNIX/Linux), set the necessary environment variables:

- `ORACLE_HOME`
- `PATH`
- (Solaris/Linux) `LD_LIBRARY_PATH`
- (AIX) `LIBPATH`
- (HP) `SHLIB_PATH`

### Using an Existing Oracle Database Client

For a new installation, if you want to use your existing Oracle Database Client instead of the one installed with EPM System, during EPM System installation clear the selection from Oracle Database Client 32-bit and Oracle Database Client 64-bit under Foundation Services. Then, after installing and configuring Oracle EPM System, perform the following steps:

1. On the machine hosting Foundation Services, update the `TNS_ADMIN` environment variable to point to the location of the existing Oracle Database Client's `tnsnames.ora` file location.
2. Move TNS entries from `EPM_ORACLE_INSTANCE/user_projects/config/dbclient/tnsnames.ora` (which is populated during database configuration) to the existing `tnsnames.ora` file. Copy the entire file contents and append to the existing contents of the `tnsnames.ora` file.
Replacing the EPM System-Installed Oracle Database Client with A Different Oracle Database Client

If you want to use your existing Oracle Database Client instead of the one installed with EPM System, and you already installed the Oracle Database Client during installation of EPM System, then, after installing and configuring Oracle EPM System, perform the following steps. This procedure applies to new installations or maintenance installations.

1. On the machine hosting Foundation Services, update the TNS_ADMIN environment variable to point to the location of the existing Oracle Database Client's tnsnames.ora file location.

2. Move TNS entries from EPM_ORACLE_INSTANCE/user_projects/config/dbclient/tnsnames.ora to the existing tnsnames.ora file. Copy the entire file contents and append to the existing contents of your tnsnames.ora file.

3. Remove the following EPM System embedded Oracle Database Client BIN paths from the PATH environment variable in order to avoid conflicts:
   <MIDDLEWARE_HOME>/dbclient32\BIN;
   <MIDDLEWARE_HOME>/dbclient64\BIN;

Using a Microsoft SQL Server Database

This section includes information about SQL Server database creation, required roles and privileges, and sizing guidelines.

Microsoft SQL Server Database Creation Requirements

When creating a Microsoft SQL Server database for use as a repository, ensure that you set these options:

- Set **READ_COMMITTED_SNAPSHOT** = ON (not required for Financial Management).
- Set **ALLOW_SNAPSHOT_ISOLATION** = ON (not required for Financial Management).
- Select the SQL Server and Windows authentication option when you set the security properties for the database.
- All products support Latin Collation for SQL Server. Create a database that is case insensitive and use this statement: SQL_Latin1_General_CP1_CI_AS. Collation must also be set at the server level.

Microsoft SQL Server Roles and Privileges

Database users must be assigned ownership of the database, which provides DB_OWNER privileges, and **BULK_INSERT**.

Note:
Microsoft SQL Server Sizing Guidelines

The following table describes the Microsoft SQL Server sizing guidelines.

<table>
<thead>
<tr>
<th>Product</th>
<th>Sizing Guideline</th>
</tr>
</thead>
<tbody>
<tr>
<td>Shared Services</td>
<td>Start with 100 MB, and add more as the number of migrations with Lifecycle Management and the number of audit records increases.</td>
</tr>
<tr>
<td>EPM Workspace</td>
<td>The space needed depends on the aggregate size of the objects that you plan to store in the repository. Oracle recommends starting with at least 250 MB, which provides space to expand the EPM Workspace repository without having to increase the data file or tablespace. A shared pool size of 60 MB is used during configuration with EPM System Configurator.</td>
</tr>
<tr>
<td>Performance Management Architect</td>
<td>Oracle recommends starting with at least 250 MB.</td>
</tr>
<tr>
<td>Administration Services</td>
<td>The space needed depends on the metadata created; Oracle recommends starting with at least 32 MB.</td>
</tr>
<tr>
<td>Essbase Studio</td>
<td>The space needed depends on the metadata created; Oracle recommends starting with at least 32 MB.</td>
</tr>
</tbody>
</table>
| Planning and Calculation Manager | 100 MB for applications with 5,000 or fewer total members  
|                                 | 200 MB for applications with 15,000 or fewer total members  
|                                 | **Note:** You can adjust the size of the system table database to match the size of the application.                                                   |
| Financial Management and Calculation Manager | 100 MB for applications with 5,000 or fewer total members  
|                                 | 200 MB for applications with 15,000 or fewer total members  
|                                 | **Note:** You can adjust the size of the system table database to match the size of the application.                                                   |
| Financial Close Management     | See the Oracle Hyperion Financial Close Management Performance Tuning Guide, which can be found on Oracle Support by searching for document ID 1575381.1 |
| Tax Governance                 | See the Oracle Hyperion Financial Close Management Performance Tuning Guide, which can be found on Oracle Support by searching for document ID 1575381.1 |
| Tax Provision                  | 100 MB for applications with 5,000 or fewer total members  
|                                 | 200 MB for applications with 15,000 or fewer total members  
|                                 | **Note:** You can adjust the size of the system table database to match the size of the application.                                                   |
| Profitability and Cost Management | Oracle recommends starting with at least 250 MB.                                                                                                           |
| Data Relationship Management   | Set the initial file size to 1 GB  
|                                 | Turn on Auto Growth and set to 10%                                                                                                                        |

Using an IBM DB2 Database

This section includes information about IBM DB2 database installation, database creation, required roles and privileges, sizing guidelines, and configuration.
**IBM DB2 Installation Information**

During IBM DB2 installation, consider:

- When installing IBM DB2, clear the OLAP Starter Kit option.
- For Performance Management Architect, ensure that your DB2 database is installed on a different computer, and not on the Dimension Server machine where the DB2 9 Runtime Client and DB2 .NET Data Provider must be installed.

**Note:** If DB2 9 Runtime Client is installed on the Performance Management Architect computer, verify that an entry exists in the Global Assembly Cache.

- For Reporting and Analysis, ensure that the IBM DB2 Client Application Enabler is installed on the computers on which you install services. For Core Services and Job Factory Service, if you use an IBM DB2 RDBMS, and Reporting and Analysis Services are on separate machines, use the Client Application Enabler to create a client connection to the Reporting and Analysis database.

**IBM DB2 Database Creation Considerations**

For the best compatibility with non-ASCII character sets, an IBM DB2 database must be created using Unicode Transformation Format UTF-8 encoding (character set). Use of UTF-8 is required if you need multilingual support (multicharacter set support).

Use the Client Configuration Assistant to set up a database alias that enables the EPM System product to connect to the database. Be sure to select “Register this Database for ODBC and As a System Data Source.”

**IBM DB2 Roles and Privileges**

Database users must be assigned the following privileges:

- CREATE TABLE
- BIND ADD
- CONNECT

**IBM DB2 Sizing Guidelines**

The following table describes the IBM DB2 sizing guidelines.

<table>
<thead>
<tr>
<th>Product</th>
<th>Sizing Guideline</th>
</tr>
</thead>
<tbody>
<tr>
<td>Shared Services</td>
<td>Start with 100 MB, and add more as the number of migrations with Lifecycle Management and the number of audit records increases.</td>
</tr>
<tr>
<td>EPM Workspace</td>
<td>The space needed depends on the aggregate size of the objects that you plan to store in the repository. Oracle recommends starting with at least 250 MB, which provides space to expand the EPM Workspace repository without having to increase the data file or tablespace. A shared pool size of 60 MB is used during configuration with EPM System Configurator.</td>
</tr>
</tbody>
</table>
IBM DB2 Database Configuration Considerations

The following table describes IBM DB2 database configuration considerations.

<table>
<thead>
<tr>
<th>Product</th>
<th>Tablespace Considerations</th>
</tr>
</thead>
<tbody>
<tr>
<td>General—All products</td>
<td>Tablespace requirements:&lt;br&gt; Specify automatic storage for user and temporary tablespaces, as shown in the following example:&lt;br&gt; CREATE TABLESPACE &lt;name&gt; MANAGED BY AUTOMATIC STORAGE&lt;br&gt; CREATE TEMPORARY TABLESPACE TEMPTS&lt;br&gt; CREATE USER TEMPORARY TABLESPACE USRTMP MANAGED BY AUTOMATIC STORAGE&lt;br&gt; CREATE LONG TABLESPACE LONGTS&lt;br&gt; Change settings as follows:&lt;br&gt; UPDATE DB CFG FOR &lt;name&gt; USING AUTO_MAINT ON;&lt;br&gt; UPDATE DB CFG FOR &lt;name&gt; USING AUTO_TBL_MAINT ON;&lt;br&gt; UPDATE DB CFG FOR &lt;name&gt; USING AUTO_RUNSTATS ON;</td>
</tr>
<tr>
<td>Shared Services and Essbase Studio</td>
<td>Increase bufferpool to 32768.</td>
</tr>
</tbody>
</table>
### Tablespace Considerations

<table>
<thead>
<tr>
<th>Product</th>
<th>Tablespace Considerations</th>
</tr>
</thead>
</table>
| Performance Management Architect | - Increase the heap size:  
|                           |   - LOGFILSZ to 4096  
|                           |   - APPLHEAPSZ to 8192  
|                           |   - STMTHEAP to 10240  
|                           | - Ensure that the user has privileges to create tablespaces and buffer pools.  
|                           | - Ensure that the user has been granted the right to use the temporary tablespace. |

| Planning                  | Before you configure Planning, you must configure the database with a large enough tablespace (having a page size of at least 32 K) in order to support the Planning tables.  
|                           | The following sample SQL script creates the necessary buffer pool and tablespace. Change the names and the disk location to reflect your needs. By default, the tablespace is named HSPSPACE8_1 and is created in the C:\DB2DATA \HSPSPACE8_1 directory. The other settings are also defaults; the administrator should adjust the settings as appropriate for the environment.  
|                           | Example:  
|                           | CREATE BUFFERPOOL hsppool8_1 SIZE 250 PAGESIZE 32 K;  
|                           | CREATE REGULAR TABLESPACE hspspace8_1 PAGESIZE 32 K  
|                           | MANAGED BY SYSTEM USING ('c:\db2data\hspspace8_1')  
|                           | EXTENTSIZEx 32 OVERHEAD 24.1 PREFETCHSIZE 8  
|                           | TRANSFERRATE 0.9 BUFFERPOOL HSPPOOL8_1;  
|                           | The database administrator must ensure that the user who logs on to the Planning relational database has rights to use the new tablespace. |

### Preparing Java Web Application Servers

Many EPM System products require a Java web application server. To identify the products that require a Java web application server, see Chapter 2, “EPM System Architecture.”

### WebLogic Server

- Oracle provides a limited-use license of WebLogic Server for use with EPM System products. Typically, EPM System Installer installs WebLogic Server for you.

- However, if you have an existing WebLogic Server installation and want to use it instead of the WebLogic Server installed by EPM System Installer, note the Middleware home location for the WebLogic Server installation. During installation, you must install EPM System products to this same Middleware home. If EPM System Installer detects an existing WebLogic Server installation in the installation location, it does not install WebLogic Server.

For additional information about using WebLogic Server in a distributed environment, see “Installing EPM System Products in a Distributed Environment” on page 75.
Preparing Web Servers

Oracle HTTP Server

You can choose to install Oracle HTTP Server during the installation of Foundation Services, using the Oracle HTTP Server silent installer. You can also configure Oracle HTTP Server to a shared drive location to simplify configuration in a distributed environment.

Caution! Before you install EPM System products, ensure you meet the installation prerequisites for Oracle HTTP Server and review the Oracle HTTP Server installation documentation and Release Notes for details. For additional information, see “Web Server Installation Prerequisites” on page 72.

To limit the information the web server presents, make the following changes in httpd.conf:

<table>
<thead>
<tr>
<th>Table 4</th>
<th>httpd.conf Entries</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>ServerTokens Prod</strong></td>
<td>Configures the web server to not send any version numbers in the HTTP header.</td>
</tr>
<tr>
<td><strong>ServerSignature Off</strong></td>
<td>Configures the web server to hide the server version in the footer of server generated pages.</td>
</tr>
<tr>
<td><strong>Header always unset &quot;X-Powered-By&quot;</strong></td>
<td>Hides “X-Powered-By” and Server headers sent by downstream application servers.</td>
</tr>
<tr>
<td><code>&lt;IfModule headers_module&gt;</code></td>
<td>Secures the cookie.</td>
</tr>
<tr>
<td><code>Header edit Set-Cookie ^(.*)$ $1;HttpOnly;Secure</code></td>
<td>Secures the cookie.</td>
</tr>
</tbody>
</table>

Microsoft Internet Information Services (IIS)

The following products require IIS to be installed with ASP.NET support enabled before installation of the EPM System product:

- Performance Management Architect Service (Dimension Server)
- Strategic Finance
- Data Relationship Management

Notes about IIS:

- In Windows Server Manager, make sure the following options are selected for Roles for Web Server (IIS):
  - ASP.NET under Application Development
IIS Management Compatibility under Management Tools (for IIS 7 and IIS 8 only)

- If .NET is not detected, EPM System Installer installs the version required for your version of Windows.
- On Windows 2008 and Windows 2012, if you are configuring products that require IIS, EPM System Configurator automatically configures the required Windows server roles for IIS if they are not already installed.
- If IIS is chosen as the web server during configuration, you must allow all unknown ISAPI extensions through the Internet Information Services Manager.

Verifying the IIS Installation

To verify the IIS installation, ensure that the IIS services are running:

- IIS Admin Service
- World Wide Web Publishing Service

If you do not see the services for IIS, ensure that IIS is installed.

Using IIS in a Localized Environment

In a localized environment, the following conditions are required to successfully configure EPM System on IIS:

For IIS 8:

- The IIS site name should not be localized; it should be “Default Web Site” in English on any machine, localized or not
- IIS should have an application pool called “DefaultAppPool”
- The “DefaultAppPool” and “Default Web Site” must have ID = 1
- IIS8: The physical path for the default web site should be: %SystemDrive%\inetpub\wwwroot

For IIS 7:

- The IIS site name should not be localized; it should be “Default Web Site” in English on any machine, localized or not
- IIS should have an application pool called “DefaultAppPool”
- The “DefaultAppPool” and “Default Web Site” must have ID = 1
- The physical path for the default web site should be: %SystemDrive%\inetpub\wwwroot

Preparing Web Browsers

This section contains required browser settings and information about enabling ActiveX for Reporting and Analysis.
Browser Settings

Ensure that browser preferences and options are enabled:

- For Internet Explorer and Firefox:
  - Enable JavaScript.
  - Enable cookies. The preferred setting is to allow cookies to be stored on your computer. The minimum requirement is to allow per-session level cookies.
  - Allow pop-up windows.

- For Internet Explorer 9:
  1. Select Tools and then Compatibility View Settings.
  2. Make sure that the EPM Workspace URL is not enabled for Compatibility View. Also, uncheck all available options at the bottom of the pop-up window.

- For Internet Explorer (Reporting and Analysis only), enable ActiveX. See “Enabling ActiveX (Reporting and Analysis)” on page 51.

- Add the URL for EPM Workspace to the trusted zone:
  1. Select Tools, then Internet Options, and click the Security tab.
  2. Select Trusted Sites, and then click Sites.
  3. Add the EPM Workspace URL to the list.

- For Internet Explorer, customize security settings:
  1. In Internet Explorer, select Tools, then Internet Options, then the Security tab.
  2. Select the zone containing Oracle servers and click the Custom level button.
  3. In the Miscellaneous section, enable Access data sources across domains and Allow script-initiated windows without size or position constraints.

- If you are using Internet Explorer with EPM Workspace in Norwegian, you need to change the Language Preferences settings as follows:
  1. In Internet Explorer, select Tools, then Internet Options, and click the Languages button.
  2. In the Language Preferences dialog box, select each of the Norwegian settings, and then click Remove.
  3. Click Add, and then add a user-defined value called no and click OK.
  4. In the Language field, select the new User Defined [no] entry, and then click Move up to move this entry to the top of the list.
  5. Click OK.

You can now view EPM System products in Norwegian using Internet Explorer.

Note: After you click OK, the custom language setting in Language Preferences dialog box changes to Norwegian (Bokmal) [no], which is different from the default Norwegian (Bokmal) [ne-NO] setting.
**Enabling ActiveX (Reporting and Analysis)**

To enable EPM System Java web applications to function properly, Internet Explorer must be configured to enable support for ActiveX technologies.

EPM System products do not download ActiveX components to the browser. Instead, only HTML, JavaScript, and XML are sent to and by the client browser.

Guidelines to enable XML components:

- In the browser security settings, enable ActiveX controls and plug-in execution by setting “Run ActiveX controls and plug-ins” to “Enable.”
- Enable ActiveX controls and plug-in execution by adding the Project Reporting and Analysis site as a trusted site and changing the custom security settings for trusted sites.
- Provide group policies that define the controls required for handling XML (the MS XML parser and XMLHTTPRequest controls) and enable these administrator approved controls for all sites or for select trusted sites.
- All other ActiveX controls and plug-ins remain disabled. Group policies can be implemented by zone by enabling the controls for sites in the trusted zone.
- For Active X enabled controls, enable the setting “Script ActiveX controls marked safe for scripting.”

**Support Matrix for High Availability and Load Balancing**

The tables in this section list the supported clustering methodologies for EPM System components by product group and indicate whether high availability and load balancing are supported for each component. The tables also include notes and references to additional information. Use this table to help plan your environment.

Session failover is not supported for EPM System Java web applications.

EPM System components support vertical scaling as follows:

- Windows-based Java web applications except for Strategic Finance and Financial Management Java web applications
- Essbase Server
- UNIX-based components

The following components do not support vertical scaling:

- Oracle HTTP Server
- All Financial Management components
- Performance Management Architect Dimension Server
- Financial Close Management
- Disclosure Management
- All Strategic Finance components
<table>
<thead>
<tr>
<th>Product/Component</th>
<th>Supported Methodology</th>
<th>High Availability</th>
<th>Load Balancing</th>
<th>Notes</th>
<th>References</th>
</tr>
</thead>
</table>
| Foundation Services Managed Server (includes Shared Services and EPM Workspace Java Web applications) | WebLogic clustering with EPM System Configurator | Yes | Yes | To configure Lifecycle Management for high availability when Shared Services is set up for high availability, you must set up a shared disk. | ● Automatic deployment: “Clustering Java Web Applications Using EPM System Configurator” in the Oracle Enterprise Performance Management System Deployment Options Guide  
| Performance Management Architect Java Web Application | WebLogic clustering with EPM System Configurator | Yes | Yes | None | ● Automatic deployment: “Clustering Java Web Applications Using EPM System Configurator” in the Oracle Enterprise Performance Management System Deployment Options Guide  
| Performance Management Architect Data Synchronizer Java Web Application | WebLogic clustering with EPM System Configurator | Yes | Yes | None | ● Automatic deployment: “Clustering Java Web Applications Using EPM System Configurator” in the Oracle Enterprise Performance Management System Deployment Options Guide  
| Calculation Manager Java Web Application | WebLogic clustering with EPM System Configurator | Yes | Yes | None | ● Automatic deployment: “Clustering Java Web Applications Using EPM System Configurator” in the Oracle Enterprise Performance Management System Deployment Options Guide  
| Performance Management Architect Dimension Server and other processes | Oracle Clusterware clustering for failover | Yes | No | None | ● “Performance Management Architect Dimension Server Clustering and Failover” in the Oracle Enterprise Performance Management System Deployment Options Guide  
● Oracle Clusterware documentation |
<table>
<thead>
<tr>
<th>Product/Component</th>
<th>Supported Methodology</th>
<th>High Availability</th>
<th>Load Balancing</th>
<th>Notes</th>
<th>References</th>
</tr>
</thead>
<tbody>
<tr>
<td>Essbase Server</td>
<td>- Active-passive clustering with Microsoft Clustering Services (Windows)</td>
<td>Yes</td>
<td>Active-active clusters supported failover with write-back.</td>
<td>Active-active clusters configured with Provider Services support load-balancing.</td>
<td>Active-passive clustering (Windows): “Configuring Active-Passive Essbase Clusters (Windows)” in the Oracle Enterprise Performance Management System Deployment Options Guide</td>
</tr>
<tr>
<td></td>
<td>- Active-active clustering with Provider Services</td>
<td></td>
<td></td>
<td></td>
<td>Active-active clustering: “Configuring Active-Active Essbase Clusters” in the Oracle Enterprise Performance Management System Deployment Options Guide</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Administration</td>
<td>WebLogic clustering with EPM System Configurator</td>
<td>Yes</td>
<td>Yes</td>
<td></td>
<td>Automatic deployment: “Clustering Java Web Applications Using EPM System Configurator” in the Oracle Enterprise Performance Management System Deployment Options Guide</td>
</tr>
<tr>
<td>Product/Component</td>
<td>Supported Methodology</td>
<td>High Availability</td>
<td>Load Balancing</td>
<td>Notes</td>
<td>References</td>
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<tr>
<td>-------------------</td>
<td>-----------------------</td>
<td>-------------------</td>
<td>----------------</td>
<td>-------</td>
<td>------------</td>
</tr>
</tbody>
</table>
| Provider Services Java Web Application | WebLogic clustering with EPM System Configurator | Yes | Yes | None | - Automatic deployment: “Clustering Java Web Applications Using EPM System Configurator” in the *Oracle Enterprise Performance Management System Deployment Options Guide*  
| Essbase Studio | None | No | No | None | None |

**Table 7** Reporting and Analysis Clustering

<table>
<thead>
<tr>
<th>Product/Component</th>
<th>Supported Methodology</th>
<th>High Availability</th>
<th>Load Balancing</th>
<th>Notes</th>
<th>References</th>
</tr>
</thead>
</table>
| Reporting and Analysis Framework Java Web Application | WebLogic clustering with EPM System Configurator | Yes | Yes | None | - Automatic deployment: “Clustering Java Web Applications Using EPM System Configurator” in the *Oracle Enterprise Performance Management System Deployment Options Guide*  
| Web Analysis Java Web Application | WebLogic clustering with EPM System Configurator | Yes | Yes | None | - Automatic deployment: “Clustering Java Web Applications Using EPM System Configurator” in the *Oracle Enterprise Performance Management System Deployment Options Guide*  
<table>
<thead>
<tr>
<th>Product/Component</th>
<th>Supported Methodology</th>
<th>High Availability</th>
<th>Load Balancing</th>
<th>Notes</th>
<th>References</th>
</tr>
</thead>
<tbody>
<tr>
<td>Reporting and Analysis Framework Services and Common Libraries</td>
<td>Virtual clustering through EPM Workspace</td>
<td>Yes</td>
<td>Yes</td>
<td>None</td>
<td>“Clustering Reporting and Analysis” in the Oracle Enterprise Performance Management System Deployment Options Guide</td>
</tr>
<tr>
<td>Interactive Reporting Services</td>
<td>Virtual clustering through EPM Workspace</td>
<td>Yes</td>
<td>Yes</td>
<td>None</td>
<td>“Clustering Reporting and Analysis” in the Oracle Enterprise Performance Management System Deployment Options Guide</td>
</tr>
</tbody>
</table>

**Table 8** Financial Performance Management Applications Clustering

<table>
<thead>
<tr>
<th>Product/Component</th>
<th>Supported Methodology</th>
<th>High Availability</th>
<th>Load Balancing</th>
<th>Notes</th>
<th>References</th>
</tr>
</thead>
</table>
| Planning Java Web Application | WebLogic clustering with EPM System Configurator | Yes | Yes | None | *Automatic deployment:* “Clustering Java Web Applications Using EPM System Configurator” in the Oracle Enterprise Performance Management System Deployment Options Guide  
| Planning RMI Registry | None | No | No | None | None |
| Financial Management Server | Clustering with EPM System Configurator | Yes | Yes | None | “Clustering Financial Management Servers” in the Oracle Enterprise Performance Management System Deployment Options Guide |
| Financial Management Java Web Application | WebLogic clustering with EPM System Configurator | Yes | Yes | None | *Automatic deployment:* “Clustering Java Web Applications Using EPM System Configurator” in the Oracle Enterprise Performance Management System Deployment Options Guide  
| Profitability and Cost Management Java Web Application | WebLogic clustering with EPM System Configurator | Yes | Yes | None | *Automatic deployment:* “Clustering Java Web Applications Using EPM System Configurator” in the Oracle Enterprise Performance Management System Deployment Options Guide  
<table>
<thead>
<tr>
<th>Product/Component</th>
<th>Supported Methodology</th>
<th>High Availability</th>
<th>Load Balancing</th>
<th>Notes</th>
<th>References</th>
</tr>
</thead>
</table>
| Disclosure Management Java Web Application | WebLogic clustering with EPM System Configurator | Yes | Yes | None | • Automatic deployment: “Clustering Java Web Applications Using EPM System Configurator” in the Oracle Enterprise Performance Management System Deployment Options Guide  
| Financial Close Management | WebLogic clustering with EPM System Configurator | Yes | Yes | None | • Automatic deployment: “Clustering Java Web Applications Using EPM System Configurator” in the Oracle Enterprise Performance Management System Deployment Options Guide  
• Load balancing: “Configuring High Availability for Oracle Fusion Middleware SOA Suite” in the Oracle Fusion Middleware High Availability Guide |
| Tax Governance | WebLogic clustering with EPM System Configurator | Yes | Yes | None | • Automatic deployment: “Clustering Java Web Applications Using EPM System Configurator” in the Oracle Enterprise Performance Management System Deployment Options Guide  
• Load balancing: “Configuring High Availability for Oracle Fusion Middleware SOA Suite” in the Oracle Fusion Middleware High Availability Guide |
| Tax Provision | WebLogic clustering with EPM System Configurator | Yes | Yes | None | • Automatic deployment: “Clustering Java Web Applications Using EPM System Configurator” in the Oracle Enterprise Performance Management System Deployment Options Guide  
• Load balancing: “Configuring High Availability for Oracle Fusion Middleware SOA Suite” in the Oracle Fusion Middleware High Availability Guide |
<p>| Strategic Finance Server | None | No | No | None |  |</p>
<table>
<thead>
<tr>
<th>Product/Component</th>
<th>Supported Methodology</th>
<th>High Availability</th>
<th>Load Balancing</th>
<th>Notes</th>
<th>References</th>
</tr>
</thead>
</table>
| Strategic Finance Java Web Application | WebLogic clustering with EPM System Configurator | Yes               | Yes            | None                                 | - Automatic deployment: “Clustering Java Web Applications Using EPM System Configurator” in the Oracle Enterprise Performance Management System Deployment Options Guide  
| Strategic Finance IIS Web Application (IIS) | Clustering with a web server or third-party load balancer | Yes               | Yes            | None                                 | “Load Balancing Strategic Finance IIS Web Applications on IIS” in the Oracle Enterprise Performance Management System Deployment Options Guide |

**Table 9  Data Management Products Clustering**

<table>
<thead>
<tr>
<th>Product/Component</th>
<th>Supported Methodology</th>
<th>High Availability</th>
<th>Load Balancing</th>
<th>Notes</th>
<th>References</th>
</tr>
</thead>
</table>
| FDMEE                      | WebLogic clustering with EPM System Configurator   | Yes               | Yes            | None                                 | - Automatic deployment: “Clustering Java Web Applications Using EPM System Configurator” in the Oracle Enterprise Performance Management System Deployment Options Guide  
| Data Relationship Management IIS Web Application | Clustering with a web server or third-party load balancer | No                | Yes            | Multiple Microsoft IIS instances are deployed in an active-active configuration.  | - “Data Relationship Management Clusters” in the Oracle Enterprise Performance Management System Deployment Options Guide  
  - “Configuring Load Balancing for Data Relationship Management Web Applications” in the Oracle Data Relationship Management Installation Guide |
| Data Relationship Management Application Server | Clustering with Data Relationship Management proprietary load balancing | No                | Yes            | Multiple application servers are deployed in a primary-secondary configuration.  | - “Data Relationship Management Clusters” in the Oracle Enterprise Performance Management System Deployment Options Guide  
  - “Configuring Host Machines” in the Oracle Data Relationship Management Installation Guide |
4 Downloading Files for Installation

In This Chapter

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Downloading the Installation Files

To download the installation files:

1. **Create a directory to store the EPM System files.**
   
   You can download files to a shared drive, or to each machine in your deployment. If you are installing from a network drive, map this drive. This directory is referred to as `/download_location` in this procedure.

   **Tip:** Oracle recommends that you download files to a shared drive.

2. **Download the following files from the “Oracle Enterprise Performance Management System” media pack on the Oracle Software Delivery Cloud (http://edelivery.oracle.com/) site into `/download_location`. Note that some files are posted by platform; ensure that you download files for the platform you are using.**
   
   - EPM System Installer (in EPM System Release 11.1.2.4.0 for `platformName` (Part 1))
   - ZIP files for the products you purchased. ZIP files include installation `assemblies` (product plug-in installation files for EPM System Installer).

   Review the Media Pack Readme on the Oracle Software Delivery Cloud to see which ZIP files to download depending on the products you purchased. (To see the Media Pack Readme, once you have selected the media pack, click `Readme`.)

3. **Unzip the EPM System Installer into `/download_location`.**
   
   If you are prompted that any files already exist, click **Yes** to overwrite the files.

   **Tip:** Use a zip file extraction program that can handle long path names, such as 7-Zip.

   Unzip to a directory with no spaces in the name.

4. **Unzip the installation assemblies into the same directory (`/download_location`).**
If you are prompted that any files or common components already exist, click Yes to overwrite the files.

The assemblies are automatically unzipped into an /assemblies directory.

If you downloaded files to a central location, ensure that you unzip the following common files. If you downloaded files to multiple machines in your deployment, on each machine in the deployment, unzip the following common files. Unzip files for each operating system in a separate folder.

- EPM System Release 11.1.2.4.0 for platformName (Part 1)
- EPM System Release 11.1.2.4.0 for platformName (Part 2)
- EPM System Release 11.1.2.4.0 for platformName (Part 3)
- EPM System Release 11.1.2.4.0 for platformName (Part 4)

Note the following information about preparing files for a distributed environment:

- Even though you need these four ZIP files on each machine in the environment, install Foundation Services Java web applications on only one machine (unless multiple Java web applications are required for clustering).
- On the machine on which you plan to administer the WebLogic Server, you must install all Java web applications for all applications you plan to deploy on any machine in the environment. For more information, see “Installing EPM System Products in a Distributed Environment” on page 75.

The /assemblies directory should include a subdirectory for each product that you want to install on this machine. Ensure that the /assemblies directory looks as follows:

assemblies/
  product/
    version/
      assembly.dat

Note: ProductRef.inf might be in the /assemblies directory. It can remain without causing problems.

EPM System Installer can install a product only if the installation assembly files for the product are downloaded and unzipped to the correct location.
EPM System Installer installs web and services components. Additionally, when you configure EPM System products, you configure databases.

Clients are installed with standalone installers, with the exception of:

- Performance Management Architect Batch Client
- Production Reporting Studio, Viewer, and Activator

**Installation Checklist for a New Installation**

EPM System deployment follows this workflow. Each part of the workflow is described in the sections as noted in the table below:

**Note:** If you are installing Financial Close Management, follow the installation and configuration sequence described in “Financial Close Management and Tax Governance Installation Checklist” on page 64.

**Note:** If you are moving from Release 11.1.2.0, 11.1.2.1, 11.1.2.2, or 11.1.2.3 to Release 11.1.2.4, use the “Apply Maintenance Release” option in EPM System Installer, and see Chapter 9, “Performing a Maintenance Release Installation for EPM System Products.”
<table>
<thead>
<tr>
<th>Task</th>
<th>Reference</th>
</tr>
</thead>
<tbody>
<tr>
<td>2. Plan the installation and perform prerequisite tasks.</td>
<td>Chapter 3, “Preparing Your Environment”</td>
</tr>
<tr>
<td>3. Prepare the installation files.</td>
<td>Chapter 4, “Downloading Files for Installation”</td>
</tr>
<tr>
<td></td>
<td>Ensure that you meet any installation prerequisites that apply to your environment. “Installation Prerequisites and Requirements” on page 70.</td>
</tr>
<tr>
<td></td>
<td><strong>Tip:</strong> Before you begin, determine the type of installation you plan to perform:</td>
</tr>
<tr>
<td></td>
<td>● New installation</td>
</tr>
<tr>
<td></td>
<td>● Maintenance release installation</td>
</tr>
<tr>
<td></td>
<td>● Re-installation</td>
</tr>
<tr>
<td></td>
<td>For details on each installation type, see “Installation Type” on page 80.</td>
</tr>
<tr>
<td></td>
<td>Ensure that you meet any configuration prerequisites that apply to your environment. See “Configuration Prerequisites ” on page 93.</td>
</tr>
<tr>
<td></td>
<td><strong>Note:</strong> In a distributed environment, configure Foundation Services first. Foundation Services must be installed and configured in order for other products to configure successfully. Configure other EPM System products, and then configure the web server last: (Select the Foundation Services “Configure Web Server” task.) Then, restart the web server and refresh EPM Workspace. If you configured Oracle HTTP Server to a shared drive, you can simply restart the web server and refresh EPM Workspace; you do not have to reconfigure the web server. See “Refreshing EPM Workspace” on page 106. For more information about required configuration sequence, see “Configuration Sequence” on page 99.</td>
</tr>
<tr>
<td></td>
<td><strong>Note:</strong> If you are enabling SSL in your deployment, see the Oracle Enterprise Performance Management System Security Configuration Guide before you configure. Different SSL configurations have implications for the choices you make during configuration using EPM System Configurator. Also, there are additional post-configuration tasks when deploying an SSL configuration.</td>
</tr>
<tr>
<td>7. Any time you deploy additional products, reconfigure the web Server and then restart it (or simply restart it if you configured Oracle HTTP Server to a shared drive) on each machine hosting Foundation Services. Then, refresh EPM Workspace on each Foundation Services host machine in your deployment.</td>
<td>“Refreshing EPM Workspace” on page 106.</td>
</tr>
<tr>
<td>Task</td>
<td>Reference</td>
</tr>
<tr>
<td>----------------------------------------------------------------------</td>
<td>---------------------------------------------------------------------------------------------</td>
</tr>
<tr>
<td>8. Perform any required manual configuration tasks for your products.</td>
<td>Chapter 8, “Performing Manual Configuration Tasks in a New Deployment”</td>
</tr>
</tbody>
</table>

**Tip:** During installation, configuration, and validation, keep a list of all user names and passwords that you use to create or modify the system, including the applications with which they are associated and their purpose.

## Deploying to a Shared Drive Environment (UNIX)

For UNIX environments, you can deploy to a shared drive (not supported for Windows). When you deploy to a shared drive, you can:

- Install once, and configure on each machine
- Review the configuration for a distributed setup from a single machine
- Review logs for different machines from a single machine
- Enable patching in a single place
- Simplify disaster recovery setup

The following procedure describes an overview of the process of deploying EPM System products to a shared drive. Use this procedure along with the installation checklist. See the “Installation Checklist for a New Installation” on page 61 for details.

EPM System supports the following types of shared drives:

- Any SAN storage device with a shared disk file system supported on the installation platform
- Any NAS device over a supported network protocol

This procedure assumes that you perform the installation as the same user on all machines and that the user’s home directory is the same on all machines, for example an NFS share.

- Deploying to a shared drive environment:
  
  1. Map all the machines in the deployment to the same network share.
  2. Run EPM System Installer on one machine to install all EPM System components on the shared drive.

     During installation, on the **Destination/Middleware Home** page, specify a directory on the shared drive.
3 Run EPM System Configurator on each machine in the environment.

- For each machine, on the **Oracle Instance** configuration page, for **Home directory for EPM Oracle instances** specify the same EPM Oracle instance home, and for **EPM Oracle Instance name** specify a new EPM Oracle instance name. For example, after configuration, the directory structure for **EPM_ORACLE_INSTANCE** looks like:

```
/user_projects
/node1
/node2
/nodeN
domains/epmsystem
```

- For each machine, configure only the components to be run on the machine.

- Configure Foundation Services first, on the machine that is to be the WebLogic Administration Server.

- The **Set Up Shared Services and Registry Database Connection** configuration page displays only on the first machine.

4 Complete the configuration on each machine and close EPM System Configurator before moving on to configure another machine.

**Financial Close Management and Tax Governance Installation Checklist**

For Financial Close Management or Tax Governance, you must install Oracle SOA Suite and all its required patches. Use the checklist in this section to install either Financial Close Management or Tax Governance. Financial Close Management and Tax Governance are independent and do not need to be installed together.

**Note:** If you are applying the maintenance release to move from Financial Close Management Release 11.1.2.2 or Release 11.1.2.3 to Release 11.1.2.4, see “Financial Close Management Maintenance Release Installation Checklist” on page 163.

Note the following about Financial Close Management or Tax Governance installation:

- In a distributed environment, you must install Oracle SOA Suite on the following machines in the deployment, although you need to configure it on only one machine (the machine on which you want to run SOA Server): Financial Close Management or Tax Governance, WebLogic Administration Server, Foundation Services, and if you are integrating with these products: Financial Management (Java web application), Financial Reporting (Java web application).

- Oracle SOA Suite and EPM System must be deployed to the same WebLogic domain.

- If you have an existing Oracle SOA Suite installation you plan to use with Financial Close Management or Tax Governance, you must install EPM System products to this same Middleware home.
If you are installing Tax Governance in an environment where Oracle SOA Suite and Financial Close Management are already installed and configured, you need not follow the entire checklist. Simply install and configure Tax Governance using EPM System Installer and EPM System Configurator.

Typically, EPM System Installer installs WebLogic Server for you. If you have an existing WebLogic Server installation and want to use it instead of the WebLogic Server installed by EPM System Installer, it must be the version supported by EPM System. Note the Middleware home location for the WebLogic Server installation. During installation, you must install EPM System products to this same Middleware home. If EPM System Installer detects an existing WebLogic Server installation in the installation location, it does not install WebLogic Server.

If the existing WebLogic Server version is not the correct version for EPM System, you must either uninstall the current version, install the correct version, or upgrade to the correct version before running EPM System Installer.

The following tables provide an overview of the installation and configuration process for Oracle SOA Suite and Financial Close Management or Tax Governance in the following scenarios:

- In a new deployment, where you have not installed or configured any EPM System products.
- In an existing deployment, where you have already installed and configured some EPM System products and now want to extend the deployment to include Financial Close Management or Tax Governance and Oracle SOA Suite.

Table 10 Roadmap for Installing and Configuring Oracle SOA Suite and Financial Close Management or Tax Governance in a new EPM System Deployment

<table>
<thead>
<tr>
<th>Task</th>
<th>Reference</th>
</tr>
</thead>
<tbody>
<tr>
<td>Install EPM System products.</td>
<td>&quot;Installing EPM System Products&quot; on page 76. In addition, for a distributed environment, ensure that you review &quot;Installing EPM System Products in a Distributed Environment&quot; on page 75 for additional requirements.</td>
</tr>
<tr>
<td><strong>Note:</strong> In a distributed environment, on the machine on which you plan to administer the WebLogic Server, you must install all Java web applications for all applications you plan to deploy on any machine in the environment. If Oracle SOA Suite is to be installed on a machine separate from EPM System products, you must also install Foundation Services on the SOA machine. A default installation of EPM System installs WebLogic Server, which is required for Oracle SOA Suite. The WebLogic Administration Server is installed and deployed on the Foundation Services machine. <strong>Caution!</strong> After installation, do not proceed with configuring EPM System products using EPM System Configurator until you have completed the following Oracle SOA Suite configuration steps.</td>
<td></td>
</tr>
<tr>
<td>If you are using Microsoft SQL Server, review &quot;XA Configuration Required to Start the SOA Infrastructure on Microsoft SQL Server 2008 &quot; in the Oracle® Fusion Middleware Release Notes 11g Release 1 (11.1.1) for Microsoft Windows (32-Bit).</td>
<td><a href="http://download.oracle.com/docs/cd/E15523_01/relnotes.1111/e10132/soa.htm#CDEiFEAC">http://download.oracle.com/docs/cd/E15523_01/relnotes.1111/e10132/soa.htm#CDEiFEAC</a></td>
</tr>
<tr>
<td>Task</td>
<td>Reference</td>
</tr>
<tr>
<td>------</td>
<td>-----------</td>
</tr>
<tr>
<td>Note: In a distributed environment, you must install Oracle SOA Suite on the following machines in the deployment, although you need to configure it on only one machine (the machine on which you want to run SOA Server): Financial Close Management or Tax Governance, WebLogic Administration Server, Foundation Services, and if you are integrating with these products, Financial Management (web application), Financial Reporting (web application).</td>
<td></td>
</tr>
<tr>
<td>Configure Oracle SOA Suite, creating a new WebLogic domain. You must also install any required Oracle Fusion Middleware patches, available on My Oracle Support. Note: In a distributed environment note the following additional step:</td>
<td>&quot;Configuring and Starting Oracle SOA Suite&quot; on page 97 and Chapter 5, “Installing EPM System Products in a New Deployment”</td>
</tr>
<tr>
<td>● If Oracle SOA Suite is on a machine separate from EPM System products, you must also install Foundation Services on the SOA machine.</td>
<td>Tip: Review the SOA startup logs for any errors and resolve the errors before proceeding with EPM System Configurator. You can also view the status of SOA in Enterprise Manager Console.</td>
</tr>
<tr>
<td>● If Oracle SOA Suite is configured on a machine separate from the WebLogic Administration Server machine, use the pack command on the machine hosting the WebLogic Administration Server to pack the domain, and then use the unpack command to unpack it on the machine hosting the SOA Server. If you plan to configure SOA clusters, configure the clusters at this point. See “Configuring High Availability for Oracle Fusion Middleware SOA Suite” in the Oracle® Fusion Middleware High Availability Guide for information about configuring SOA clusters.</td>
<td></td>
</tr>
<tr>
<td>Stop the SOA managed server. Stop WebLogic Server if it is on the same machine as Foundation Services.</td>
<td>&quot;Configuring EPM System Products &quot; on page 103</td>
</tr>
<tr>
<td>Configure EPM System products, selecting all required configuration tasks except “Deploy to SOA”. During deployment, you must extend the WebLogic domain created during Oracle SOA Suite deployment. If you want to manually deploy the Java web applications, do so now. See Chapter 7, “Manually Deploying EPM System Java Web Applications.” Note: Note the following information about configuring in a distributed environment:</td>
<td></td>
</tr>
<tr>
<td>● You must configure Foundation Services first.</td>
<td></td>
</tr>
<tr>
<td>● When configuring Financial Close Management or Tax Governance in a distributed environment, ensure that the WebLogic Administration Server is running before you start EPM System Configurator.</td>
<td></td>
</tr>
<tr>
<td>● If you are deploying EPM System products to a domain hosted on another machine (and the domain was not created with EPM System Configurator), you must make manual updates to jps-config.xml and system-jazn.xml on the Administration Server box. See step 19 on page 137 and step 20 on page 141 of Chapter 7, “Manually Deploying EPM System Java Web Applications.”</td>
<td></td>
</tr>
<tr>
<td>Start WebLogic Administration Server and then the SOA managed server.</td>
<td>&quot;Configuring and Starting Oracle SOA Suite&quot; on page 97</td>
</tr>
<tr>
<td>Start EPM System Configurator and select “Deploy to SOA”. If you are deploying EPM System products to a domain hosted on another machine (and the domain was not created with EPM System Configurator), you must also select the “Configure Web Server” task.</td>
<td>&quot;Configuring EPM System Products &quot; on page 103</td>
</tr>
<tr>
<td>Task</td>
<td>Reference</td>
</tr>
<tr>
<td>---------------------------------------------------------------------</td>
<td>-----------------------------------------------</td>
</tr>
<tr>
<td>Restart WebLogic Administration Server.</td>
<td></td>
</tr>
<tr>
<td>If you change the configuration at any time to change the logical address of the Java web applications (using the “Update Logical Address for Web Applications” page of EPM System Configurator, you must perform the following tasks:</td>
<td>Chapter 6, “Configuring EPM System Products in a New Deployment”</td>
</tr>
<tr>
<td>1. Make sure there are no running tasks or alerts.</td>
<td></td>
</tr>
<tr>
<td>Make sure there are no open periods. If there are open periods, lock them. Make sure there are no running Data Loads.</td>
<td></td>
</tr>
<tr>
<td>Make sure there are no open schedules.</td>
<td></td>
</tr>
<tr>
<td>2. Start EPM System Configurator and from the Task Selection page, from the Financial Close, Financial Close Management section, select Deploy to SOA.</td>
<td></td>
</tr>
<tr>
<td>3. Click Next, continue with the configuration, and then click Finish.</td>
<td></td>
</tr>
<tr>
<td>4. Unlock any locked periods.</td>
<td></td>
</tr>
<tr>
<td>5. Connect to soainfra datasource and run the following query:</td>
<td></td>
</tr>
<tr>
<td>UPDATE WFTASKDISPLAY SET httpport = &lt;LWA Port&gt; , httpsport=0, hostname = &lt;LWA Host&gt; WHERE URI like '/workflow/%';</td>
<td></td>
</tr>
<tr>
<td>In a distributed environment, if Oracle SOA Suite is on a machine separate from EPM System products, ensure that you have installed Foundation Services on the SOA machine. Then, on the SOA machine, start EPM System Configurator and configure with the default selected configuration tasks (“Configure Common Settings,” “Configure Database.”) During database configuration, specify the Foundation Services database information you entered when you configured the Foundation Services machine. <strong>Tip:</strong> You can ignore any messages about Shared Services registration failing.</td>
<td></td>
</tr>
<tr>
<td>Stop the SOA server, and then start EPM System products, the SOA Server and Financial Close Management or Tax Governance in the order listed.</td>
<td>Chapter 10, “Starting and Stopping EPM System Products,” and “Financial Close Management Application Server” on page 228</td>
</tr>
<tr>
<td>Validate the installation and verify deployment.</td>
<td>Chapter 11, “Validating the Installation and Verifying Deployment”</td>
</tr>
</tbody>
</table>

If you have already installed and configured some EPM System products, you can add Financial Close Management or Tax Governance and Oracle SOA Suite to the existing deployment using the following roadmap:
### Table 11  Roadmap for Installing and Configuring Oracle SOA Suite and Financial Close Management or Tax Governance in an Existing EPM System Deployment

<table>
<thead>
<tr>
<th>Task</th>
<th>Reference</th>
</tr>
</thead>
<tbody>
<tr>
<td>Install Financial Close Management or Tax Governance.</td>
<td>“Installing EPM System Products” on page 76.</td>
</tr>
<tr>
<td><strong>Note:</strong> In a distributed environment, on the machine on which you</td>
<td>In addition, for a distributed environment, ensure that you review</td>
</tr>
<tr>
<td>plan to administer the WebLogic Server, you must install all Java</td>
<td>“Installing EPM System Products in a Distributed Environment” on page 75</td>
</tr>
<tr>
<td>web applications for all applications you plan to deploy on any</td>
<td>for additional requirements.</td>
</tr>
<tr>
<td>machine in the environment.</td>
<td></td>
</tr>
<tr>
<td>A default installation of EPM System installs WebLogic Server, which</td>
<td></td>
</tr>
<tr>
<td>is required for Oracle SOA Suite. The WebLogic Administration Server</td>
<td></td>
</tr>
<tr>
<td>is installed and deployed on the Foundation Services machine.</td>
<td></td>
</tr>
<tr>
<td><strong>Caution!</strong> After installation, do not proceed with configuring</td>
<td></td>
</tr>
<tr>
<td>EPM System products using EPM System Configurator until you have</td>
<td></td>
</tr>
<tr>
<td>completed the following Oracle SOA Suite configuration steps.</td>
<td></td>
</tr>
<tr>
<td>If you are using Microsoft SQL Server, review “XA Configuration</td>
<td><a href="http://download.oracle.com/docs/cd/E15523_01/relnotes.1111/e10132/soa.htm#CDEIFEAC">http://download.oracle.com/docs/cd/E15523_01/relnotes.1111/e10132/soa.htm#CDEIFEAC</a></td>
</tr>
<tr>
<td>Required to Start the SOA Infrastructure on Microsoft SQL Server</td>
<td></td>
</tr>
<tr>
<td>2008 * in the Oracle® Fusion Middleware Release Notes 11g Release 1</td>
<td></td>
</tr>
<tr>
<td>(11.1.1) for Microsoft Windows (32-Bit).</td>
<td></td>
</tr>
<tr>
<td>Run the Repository Creation Utility and install Oracle SOA Suite.</td>
<td>“Creating Infrastructure Schemas Using Repository Creation Utility” on</td>
</tr>
<tr>
<td>After SOA installation, apply SOA patch number 17014142. Then, apply</td>
<td>page 95 and “Installing Oracle SOA Suite” on page 97.</td>
</tr>
<tr>
<td>Patch 174401113 for SOA Release 11.1.1.1.7.1.</td>
<td></td>
</tr>
<tr>
<td><strong>Note:</strong> In a distributed environment, you must install Oracle SOA</td>
<td></td>
</tr>
<tr>
<td>Suite on the following machines in the deployment, although you</td>
<td></td>
</tr>
<tr>
<td>need to configure it on only one machine (the machine on which you</td>
<td></td>
</tr>
<tr>
<td>want to run SOA Server): Financial Close Management or Tax</td>
<td></td>
</tr>
<tr>
<td>Governance, WebLogic Administration Server, Foundation Services,</td>
<td></td>
</tr>
<tr>
<td>and if you are integrating with these products, Financial Management</td>
<td></td>
</tr>
<tr>
<td>(Web application), Financial Reporting (Web application).</td>
<td></td>
</tr>
<tr>
<td>From the WebLogic Administration Server machine, configure Oracle</td>
<td>“Configuring and Starting Oracle SOA Suite” on page 97 and Chapter 5,</td>
</tr>
<tr>
<td>SOA Suite.</td>
<td>“Installing EPM System Products in a New Deployment”</td>
</tr>
<tr>
<td><strong>Note:</strong> During configuration, you must extend the WebLogic</td>
<td>Tip: Review the SOA startup logs for any errors and resolve the errors</td>
</tr>
<tr>
<td>domain created during initial EPM System deployment.</td>
<td>before proceeding with EPM System Configurator. You can also view the</td>
</tr>
<tr>
<td>You must also install any required Oracle Fusion Middleware patches,</td>
<td>status of SOA in Enterprise Manager Console.</td>
</tr>
<tr>
<td>available on My Oracle Support.</td>
<td></td>
</tr>
<tr>
<td><strong>Note:</strong> In a distributed environment note the following additional</td>
<td></td>
</tr>
<tr>
<td>step:</td>
<td></td>
</tr>
<tr>
<td>● If Oracle SOA Suite is on a machine separate from EPM System</td>
<td></td>
</tr>
<tr>
<td>products, you must install Foundation Services on the SOA machine.</td>
<td></td>
</tr>
<tr>
<td>● If Oracle SOA Suite is configured on a machine separate from the</td>
<td></td>
</tr>
<tr>
<td>WebLogic Administration Server machine, use the pack command on the</td>
<td></td>
</tr>
<tr>
<td>machine hosting the WebLogic Administration Server to pack the</td>
<td></td>
</tr>
<tr>
<td>domain, and then use the unpack command to unpack it on the machine</td>
<td></td>
</tr>
<tr>
<td>hosting the SOA Server.</td>
<td></td>
</tr>
<tr>
<td><strong>Tip:</strong> You might need to restart the WebLogic Administration</td>
<td></td>
</tr>
<tr>
<td>Server prior to starting the SOA managed server.</td>
<td></td>
</tr>
<tr>
<td>If you plan to configure SOA clusters, configure the clusters at</td>
<td></td>
</tr>
<tr>
<td>this point. See “Configuring High Availability for Oracle Fusion</td>
<td></td>
</tr>
<tr>
<td>Middleware SOA Suite” in the Oracle® Fusion Middleware High</td>
<td></td>
</tr>
<tr>
<td>Availability Guide for information about configuring SOA clusters.</td>
<td></td>
</tr>
<tr>
<td>Stop the SOA managed server. Stop WebLogic Server if it is on the</td>
<td></td>
</tr>
<tr>
<td>same machine as Foundation Services.</td>
<td></td>
</tr>
<tr>
<td>Task</td>
<td>Reference</td>
</tr>
<tr>
<td>---------------------------------------------------------------------</td>
<td>----------------------------------------------------</td>
</tr>
<tr>
<td>Configure EPM System products, selecting all required configuration tasks except “Deploy to SOA”. During deployment, you must extend the WebLogic domain created during EPM System deployment. If you want to manually deploy the Java web applications, do so now. See Chapter 7, “Manually Deploying EPM System Java Web Applications.” You must also complete the Foundation Services “Configure Web Server” task. When configuring Financial Close Management or Tax Governance in a distributed environment, ensure that the WebLogic Administration Server is running before you start EPM System Configurator.</td>
<td>“Configuring EPM System Products ” on page 103</td>
</tr>
<tr>
<td>Start WebLogic Administration Server and then the SOA managed server.</td>
<td>“Configuring and Starting Oracle SOA Suite” on page 97</td>
</tr>
<tr>
<td>Start EPM System Configurator and select “Deploy to SOA”.</td>
<td>“Configuring EPM System Products ” on page 103</td>
</tr>
<tr>
<td>Restart WebLogic Administration Server.</td>
<td></td>
</tr>
<tr>
<td>In a distributed environment, if Oracle SOA Suite is on a machine separate from EPM System products, ensure that you have installed Foundation Services on the SOA machine. Then, on the SOA machine, start EPM System Configurator and configure with the default selected configuration tasks (“Configure Common Settings,” “Configure Database”). During database configuration, specify the Foundation Services database information you entered when you configured the Foundation Services machine. <strong>Tip:</strong> You can ignore any messages about Shared Services registration failing.</td>
<td>“Financial Close Management and Tax Governance Manual Configuration Tasks ” on page 152</td>
</tr>
<tr>
<td>Perform manual configuration tasks for Financial Close Management or Tax Governance.</td>
<td></td>
</tr>
<tr>
<td>Stop the SOA server, and then start EPM System products, the SOA Server and Financial Close Management or Tax Governance in the order listed.</td>
<td>Chapter 10, “Starting and Stopping EPM System Products,” and “Financial Close Management Application Server” on page 228</td>
</tr>
<tr>
<td>Restart EPM Workspace to access Financial Close Management or Tax Governance from EPM Workspace.</td>
<td></td>
</tr>
<tr>
<td>Validate the installation and verify deployment.</td>
<td>Chapter 11, “Validating the Installation and Verifying Deployment”</td>
</tr>
</tbody>
</table>
Installation Prerequisites and Requirements

Subtopics

- Web Server Installation Prerequisites
- Configuring X11 for Financial Reporting and Production Reporting (AIX and HP-UX)

Note the following installation prerequisites.

- See Chapter 3, “Preparing Your Environment” for installation prerequisites for preparing a database, preparing IIS for products that require it, and preparing web browsers.
- Download files required for installation. See Chapter 4, “Downloading Files for Installation”. Review the Media Pack Readme on the Oracle Software Delivery Cloud to see which products are required or optional for use with your products.
- For Tax Provision, you must also install all Financial Management components, although they do not need to be installed on the same machine as Tax Provision.
- For Calculation Manager to work on Internet Explorer and Firefox, you must install Adobe Flash Player.
- If you plan to deploy EPM System products in an SSL-enabled environment, review the Oracle Enterprise Performance Management System Security Configuration Guide before you install and configure. The SSL implementation you choose affects the options you choose during configuration. Optionally, you can deploy non SSL and reconfigure to use SSL. See the Oracle Enterprise Performance Management System Security Configuration Guide.
- If you are installing on Windows 2008, disable UAC before installing. UAC must be disabled to install, configure, and run EPM System products. UAC can be enabled on end-user client desktops.
- Ensure that there is 1 GB of temp space available. You can specify an alternate /tmp directory if needed.
- Before you install Essbase on a 32-bit or 64-bit Linux system, install the following packages:
  - compat-libstdc++-33-3.2.3-47.3 or higher
  - libaio-0.3.105-2 or higher
- For Planning on Red Hat Enterprise Linux AS Release 4, you must upgrade to glibc 2.5 on the Linux server. See the Linux documentation for details.
- If you are installing on the same machine on which Oracle Business Intelligence Enterprise Edition or Oracle Business Intelligence Publisher are installed, install into two different Middleware homes. Future patch sets for EPM System and Oracle BI EE will be released at different times, which would create constraints for the upgrades of a merged Fusion Middleware Home.

For information about Fusion Middleware, see http://www.oracle.com/technetwork/documentation/index.html#middleware.
• If you are installing and configuring FDMEE, Oracle Data Integrator is automatically
  installed and configured for you. The database for Oracle Data Integrator is in same database
  as FDMEE and the Oracle Data Integrator agent application is deployed in same JVM as
  FDMEE. Optionally, you can install ODI Studio using ODI_Studio_11124.zip.

• FDMEE is required for Account Reconciliation Manager in Financial Close Management.

• If you are installing any of the following products, you must also install the Financial
  Management SDK:
  - Web Analysis
  - Financial Reporting
  - Strategic Finance
  - FDMEE

EPM System Installer installs a Windows version of the driver on Windows machines. EPM
System Installer installs a UNIX version of the driver on all platforms for use with Oracle BI
EE.

• If you have an existing Oracle SOA Suite installation you plan to use with Financial Close
  Management, note the Middleware home location for the Oracle SOA Suite installation.
  During installation, you must install EPM System products to this same Middleware home.

• Typically, EPM System Installer installs WebLogic Server for you. If you have an existing
  WebLogic Server installation and want to use it instead of the WebLogic Server installed by
  EPM System Installer, it must be the version supported by EPM System. Note the
  Middleware home location for the WebLogic Server installation. During installation, you
  must install EPM System products to this same Middleware home. If EPM System Installer
  detects an existing WebLogic Server installation in the installation location, it does not install
  WebLogic Server.

  If the existing WebLogic Server version is not the correct version for EPM System, you must
  either uninstall the current version, install the correct version, or upgrade to the correct
  version before running EPM System Installer.

• For Financial Reporting, install the fonts that are used when designing a report in Financial
  Reporting Studio on the server that is hosting the Financial Reporting Java web application
  server. Because PDF generation can now be run on a UNIX server, the fonts used in report
  design in Financial Reporting Studio must be available on the Financial Reporting Java web
  application server, otherwise, the default system font on the Financial Reporting Studio Java
  web application server is used and results are not as expected.

• To prepare Interactive Reporting for printing on UNIX, ensure that Acrobat Reader is
  installed. If the installation location for Acrobat Reader is not in the PATH, set a new
  environment variable: PATH_TO_ACROREAD, where the path is the Acrobat Reader
  installation location.

• For AIX and HP-UX, configure X11 for Financial Reporting Print Server. For Production
  Reporting jobs with charts, you must also configure X11.

  You must also set the DISPLAY variable for Production Reporting in order to generate charts.
See “Configuring X11 for Financial Reporting and Production Reporting (AIX and HP-UX)” on page 73.

- Install Microsoft Office Professional before installing Disclosure Management. To use Disclosure Management Client, when you install Microsoft Office, you must select .NET programmability support for Word and Excel.
- If you are installing Strategic Finance using Terminal Services, switch your session to installation mode before you run EPM System Installer (change user /install).

### Web Server Installation Prerequisites

Optionally, EPM System Installer installs Oracle HTTP Server during the installation of Foundation Services, using the Oracle HTTP Server silent installer. If you choose not to install Oracle HTTP Server, for example in a development environment, EPM System Installer installs an embedded WebLogic HTTP Server as part of Foundation Services that acts as a proxy server. In a production environment, Oracle recommends that you install Oracle HTTP Server for use with WebLogic.

If you are installing Oracle HTTP Server, ensure that you meet the installation prerequisites for Oracle HTTP Server and review the Oracle HTTP Server installation documentation and Release Notes for details on certified operating systems and supported UNIX / Linux packages and important installation issues and workarounds.

- For Oracle HTTP Server installation information, see the Oracle HTTP Server installation documentation: http://download.oracle.com/docs/cd/E15523_01/webtier.htm and Release Notes (http://download.oracle.com/docs/cd/E15523_01/relnotes.htm).
- For Oracle HTTP Server installation issues and workarounds, see the readme for your platform: http://download.oracle.com/docs/cd/E15523_01/relnotes.htm.

On AIX, if you are using Oracle HTTP Server with Oracle Database, you must run rootpre.sh as the root user before you install Oracle HTTP Server. Run this script once on each machine in the deployment. The file is in SystemInstaller-11120-aix.zip. For details see the Oracle® Fusion Middleware Release Notes 11g Release 1 (11.1.1) for AIX Based Systems (64-Bit) (http://download.oracle.com/docs/cd/E15523_01/doc.1111/e14771/toc.htm).

On Windows, ensure that you have a paging file size of at least 512 MB. Do not select the option to automatically manage paging file size.

During installation with EPM System Installer, check the Installation status for information about Oracle HTTP Server installation status. If Oracle HTTP Server installation fails, check the logs for details. The logs report information from the Oracle HTTP Server silent installer. You can find the logs in:

- Windows: EPM_ORACLE_HOME/diagnostics/logs/ohs
- UNIX: EPM_ORACLE_HOME/diagnostics/logs/install/common-ohs-oui-out.log
You can also review the Oracle HTTP Server product logs. For more information about web server logs, see the Oracle Enterprise Performance Management System Installation and Configuration Troubleshooting Guide.

**Configuring X11 for Financial Reporting and Production Reporting (AIX and HP-UX)**

Financial Reporting Print Server uses Oracle Outside In Image Export technology. Outside In Image Export requires X11 for the AIX and HP-UX platforms, which is supported either with Xvfb or x11vnc.

**Note:** For information about Outside In prerequisites, see http://docs.oracle.com/cd/E29542_01/doc.1111/e14495/config.htm#INECM1665. For Linux variants, /lib/libz.so.1 is required.

**Enabling Xvfb for AIX 5L**

1. To enable Xvfb:

   1. Log on to the computer on which you are running the Reporting and Analysis Java web application server components as the root user.
   2. Determine whether Virtual Frame Buffer support is available on your computer by issuing the following command:
      ```
      lslpp -l X11.vfb
      ```
   3. If X11.vfb is not installed, install it from your AIX installation media. After installing the package, apply the latest PTF from:
      ```
      http://techsupport.services.ibm.com
      ```
   4. Start Xvfb:
      ```
      /usr/bin/X11/X -force -vfb :1
      ```
      where :1 is the a display number not already in use.

**Enabling Xvfb for HP-UX**

1. To enable Xvfb:

   1. Log on to the computer on which you are running the Reporting and Analysis Java web application server components as the root user.
   2. Determine whether Virtual Frame Buffer support is available on your computer by issuing the following command:
      ```
      swlist -l product | grep 'Xserver cumulative patch'
      ```
Ensure that the patch level installed on your system corresponds with HP's recommended level (currently PHSS_31293).

Copy /etc/X11/X0screens to /etc/X11/X1screens, where 1 is a display number not already in use; for example:

```bash
cp /etc/X11/X0screens /etc/X11/X1screens
```

Edit /etc/X11/X1screens by adding these lines to the end of the file:

```
ServerOptions
ServerMode XVfb
```

Start Xvfb:

```bash
nohup /usr/bin/X11/Xvfb :1 -screen 0 1024x800x8 \\
```

where :1 is the display number not already in use.

**Setting the DISPLAY Variable**

Prior to starting the Reporting and Analysis Java web application server components on UNIX, set the `DISPLAY` environment variable to an available physical or virtual (Xvfb) graphics device address; for example:

```bash
DISPLAY=hostname:0.0 ; export DISPLAY
```

For the sake of convenience, it is recommended that `DISPLAY` be initialized automatically by editing the Reporting and Analysis Java web application server components start scripts.

You can set display for Financial Reporting by editing `setCustomParamsFinancialReporting.bat|.sh` in `EPM_ORACLE_INSTANCE/bin/deploymentScripts`.

**Note:** Only the Financial Reporting Java web application server component and Production Reporting require `DISPLAY` to be set. Production Reporting requires `DISPLAY` in order to generate charts using the New Graphics feature.

**Installation Sequence**

EPM System Installer enables you to install, configure, and deploy multiple products on a machine at one time. EPM System Installer installs components in the correct order, so you can select as many products as you want to install on a machine at one time.

Note that EPM System Installer installs WebLogic Server on each machine where you install a web tier or Service tier component, including Essbase Server. The `.jar` files that are installed as part of WebLogic Server and Oracle common directory are used by EPM System Configurator as well as common services. Note that WebLogic Server does not need to run on the Essbase Server.

OPMN is installed with Foundation Services on all machines where EPM System Configurator is used because OPMN is used to create the EPM Oracle instance structure.
Installing EPM System Products in a Distributed Environment

You typically install EPM System products in a distributed environment. The number of computers you need depends on several factors, including:

- The size of the applications
- The number of users
- The frequency of concurrent use by multiple users
- Any requirements your organization has for high availability
- Your organization’s security requirements

See Chapter 2, “EPM System Architecture” for sample architecture diagrams to help plan your deployment.

EPM System Installer simplifies the task of installing components in a distributed computing environment. You can install, configure, and validate any components you want on any computer. Once you have installed, configured, and validated the components on that machine, you can repeat the process on another machine.

Note the following information about installing and configuring in a distributed environment.

Installation considerations in a distributed environment:

- In a distributed environment, EPM Oracle home must be the same on each machine. For example, if the path for EPM Oracle home is `/Oracle/Middleware` on the first machine you configure, it must be `/Oracle/Middleware` on all the machines in the deployment.

- Foundation Services is required on only one machine in the deployment, unless multiple Java web application instances are required for clustering, or if you are using Financial Close Management, if Oracle SOA Suite is on a machine separate from EPM System products, you must also install Foundation Services on the SOA machine.

- Optionally, Oracle HTTP Server is installed with Foundation Services.

- On the machine on which you plan to administer the WebLogic Server, you must install all Java web applications for all applications you plan to deploy on any machine in the environment. (The WebLogic Administration Server is installed and deployed on the Foundation Services machine.)

- On each remote machine in a distributed environment, install the Java web applications you plan to run on that machine and then use EPM System Configurator to deploy the Java web applications automatically, or manually deploy the Java web applications.

Note that EPM System Installer installs WebLogic Server on each machine (for web tier and Service tier components) in a distributed environment.

- If you are using IIS as the web server, install each IIS application so that it is co-located with an IIS Web server.

- If you are installing in multiple environments (for example, Development, Test, and Production), install Foundation Services products in each environment.
Web Analysis supports connectivity to Financial Management data sources only for Financial Management servers that are registered in the same Shared Services Registry as Web Analysis.

**Integrating Oracle BI EE with EPM System**

- If you are installing EPM System on the same machine on which Oracle BI EE or BI Publisher are installed, install into two different Middleware homes. Future patch sets for EPM System and Oracle BI EE will be released at different times, which would create constraints for the upgrades of a merged Fusion Middleware Home. For information about Fusion Middleware, see [http://www.oracle.com/technetwork/documentation/index.html#middleware](http://www.oracle.com/technetwork/documentation/index.html#middleware).

- If you plan to integrate Oracle BI EE or BI Publisher with EPM Workspace, after installation, see the *Oracle Enterprise Performance Management System Deployment Options Guide*.

- To integrate EPM Workspace Release 11.1.2.4 with Oracle BI EE Release 11.1.1.7, see “Configuring for Integration with EPM Workspace” in the Oracle® Fusion Middleware System Administrator’s Guide for Oracle Business Intelligence Enterprise Edition ([http://docs.oracle.com/cd/E28280_01/bi.1111/e10541/toc.htm](http://docs.oracle.com/cd/E28280_01/bi.1111/e10541/toc.htm)). If you used the EPM Workspace integration with Oracle BI EE Release 10g, then you can upgrade to Oracle BI EE Release 11.1.1.7, but the integration with EPM Workspace is not upgraded. You must reconfigure for the integration using the procedures that are described in Oracle® Fusion Middleware System Administrator’s Guide for Oracle Business Intelligence Enterprise Edition ([http://docs.oracle.com/cd/E28280_01/bi.1111/e10541/toc.htm](http://docs.oracle.com/cd/E28280_01/bi.1111/e10541/toc.htm)).

- (UNIX) If you are using Oracle BI EE as the data source for Essbase, after configuration you must set additional environment variables for the Oracle BI EE driver before launching Essbase. See the *Oracle Enterprise Performance Management System Deployment Options Guide*.

- For Oracle BI EE integration with Financial Management, after installing Oracle BI EE, before you can import from or set up a connection to Financial Management data sources, you must ensure that the Financial Management SDK is installed on the system running the Oracle BI JavaHost process. See the *Oracle Enterprise Performance Management System Deployment Options Guide*.

**Installing EPM System Products**

You can install EPM System products using the graphical user interface, using the console mode interface, or using a silent mode installation response file.

When you install EPM System products, choose which type of installation to perform:

- New installation.
- Apply maintenance release, if you are moving from Release 11.1.2.0, 11.1.2.1, 11.1.2.2, or 11.1.2.3 to Release 11.1.2.4.
- Re-install this release
Note the following about installation:

- If you have already installed SOA Suite and WebLogic Server, but have not yet installed EPM System products, during installation, select **Apply Maintenance Release** first to install the latest WebLogic Server, and then select **New Installation** to continue with the installation of EPM System products.

- On Windows machines, do not use the **Administrator** user to install and configure. Run EPM System Installer and EPM System Configurator as a user with administrator rights. Install, configure and run EPM System Diagnostics as the same user for all EPM System products. If you are using Windows 2008, install with UAC disabled. UAC must be disabled to install, configure, and run EPM System products. UAC can be enabled on end-user client desktops.

- On UNIX machines, do not use the **root** user to install and configure. Install, configure and run EPM System Diagnostics as the same user for all EPM System products. On UNIX machines, for all Oracle products, the user that is installing must be part of the same group; the group must have write permission to the central inventory (oraInventory).

- You cannot run EPM System Installer at the same time that you are running another instance of an Oracle Universal Installer (such as the installer for Oracle Database).

- Run EPM System Installer from a mapped drive, not from a UNC address.

To install EPM System products:

1. **Choose a method:**
   - (Windows) Double-click `installTool.cmd` in the root directory to which you extracted the EPM System Installer files.
   - (Windows) From a Windows console, change to the root directory to which you extracted the EPM System Installer files and enter `installTool.cmd -console`.
   - Create a silent installation response file. See “Performing Silent Installations” on page 82.
   - (UNIX) Change to the root directory to which you extracted the EPM System Installer files and enter `./installTool.sh`.
   - (UNIX) Change to the root directory to which you extracted the EPM System Installer files and enter `./installTool.sh -console`.

You can specify an alternate `tmp` directory by using the `-tmp` parameter. For example: `./installTool.sh -tmp /templocation`.

EPM System Installer performs some initial checks while launching. If you see a message that User Account Control (UAC) is enabled on Windows 2008 systems, disable UAC, reboot, and then restart EPM System Installer.

EPM System Installer launches.

**Tip:** The first page of EPM System Installer might open hidden behind other windows if you navigate away from the EPM System Installer window or try to reposition the initial window. Press Alt+Tab to switch to the first page of the wizard.
2 Select a language.
Throughout EPM System Installer, if a component is not available for installation in the language you selected, it is shaded in color and marked with an asterisk (*).

3 Review and complete each page of EPM System Installer, clicking or selecting Next to move to the next page.
In console mode, enter the number beside the selection you want.

**Tip:** EPM System Installer starts to display the progress indicator after it has prepared the list of assemblies to install. This might take several minutes, depending on how many products you selected. EPM System Installer displays progress incrementally as each assembly's installation is complete.

The following table provides links where you can find more details about each page of EPM System Installer.

<table>
<thead>
<tr>
<th>Table 12</th>
<th>EPM System Installer Pages</th>
</tr>
</thead>
<tbody>
<tr>
<td>Page</td>
<td>Reference</td>
</tr>
<tr>
<td>Welcome</td>
<td>“Welcome” on page 78</td>
</tr>
<tr>
<td>Destination/MiddleWare Home</td>
<td>“Destination/Middleware Home” on page 79</td>
</tr>
<tr>
<td>Installation Type</td>
<td>“Installation Type” on page 80</td>
</tr>
<tr>
<td>Product Selection</td>
<td>“Product Selection” on page 81</td>
</tr>
<tr>
<td>Confirmation</td>
<td>“Confirmation” on page 82</td>
</tr>
</tbody>
</table>

4 When installation is complete, click or select Configure to configure the products using EPM System Configurator, or click or select Finish to close EPM System Installer.

**Note:** If you are installing Financial Close Management, note that it requires additional steps before you configure with EPM System Configurator. See the “Financial Close Management and Tax Governance Installation Checklist” on page 64 for the process to follow.

**Welcome**

- Review the prerequisites carefully before you continue the installation. When you have confirmed that your system meets the prerequisites to run EPM System Installer, click or select Next to continue the installation.

EPM System Installer checks for the following:

- Whether the computer host name resolves to an IP address. If the machine host name resolves to an IP address, EPM System Installer provides a warning. Oracle recommends

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that you resolve this issue and provide a host name instead of an IP address before proceeding.

- Whether your system has a supported operating system.
- Whether your system meets minimum memory requirements to run the installation.
- Whether the user installing has administrator privileges (Windows only).
- Whether your system meets environment variable prerequisites.
- Whether the inventory is writable.
- Whether there is 1 GB of temp space available.
- Basic pre-installation checks for WebLogic Server.

A check mark indicates that your system meets EPM System Installer prerequisites. If any of the prerequisite items do not display a check mark, and you choose to continue, the installation might not succeed.

**Tip:** If you are using a `hosts` file to resolve your host name, the host name resolves to the first entry in your `hosts` file. To prevent potential communication problems in a distributed environment, ensure that the first entry in your `hosts` file is the machine's fully qualified domain name so that the fully qualified name is stored in the Shared Services Registry.

### Destination/Middleware Home

Specify the destination for the installation location, or browse to a location and select it, and then click or select **Next**. The default location is Oracle/Middleware.

The destination you specify becomes the Middleware home. By default EPM System Installer creates a default EPM Oracle home under the Middleware home. The default location is Oracle/Middleware/EPMSystem11R1.

See “About Middleware Home, EPM Oracle Home, and EPM Oracle Instance” on page 17.

Do not use any of the following symbol combinations in the directory that you specify for `EPM_ORACLE_HOME` during installation:

/\t
\t
\b

Note the following information about the Middleware home:

- Ensure that this destination has enough disk space to install all the products that you want to install on this machine.

  See “Disk Space and RAM” on page 35 for disk space requirements.

- You select a Middleware home for each machine in your environment.
In a distributed environment, EPM Oracle home must be the same on each machine. For example, if the path for EPM Oracle home is /Oracle/Middleware on the first machine you configure, it must be /Oracle/Middleware on all the machines in the deployment.

- If you are reinstalling EPM System products on this machine, adding products to your installation, or applying the maintenance release, the existing location for the Middleware home is listed as the default installation destination, and you cannot change it.
- The destination path cannot contain spaces; for example, c:\Program Files is not acceptable (unless you use short path notation).
- The first character must be an alphanumeric character.

Note: If you previously used EPM System Installer, and you saved the installation selections to a file, you can load the selections to prepopulate the installation destination and the products to install. Doing so is useful if you are installing the same products on multiple machines. Click Load, browse to the saved selections file, and click Open.

**Installation Type**

Select an installation type, and then click or select Next. If an installation type is not applicable on this machine, the option is unavailable.

You cannot combine installation types in one session. For example, you cannot perform a new installation of one product at the same time you perform a reinstallation of another product.

Choose from the following installation types:

- **“New installation”**
  - Choose this option if you are installing an EPM System product for the first time on this computer.
  - Choose this option if you want to install additional components that you did not initially install.
- **“Re-install this release”**
  Choose this option if you already installed this version of this EPM System product and want to reinstall it, for example if you need to repair an existing installation.
  If you are reinstalling EPM System products, you must first stop all EPM System services.
- **“Apply maintenance release”**
  This option is selected for you if you already installed Release 11.1.2.0, 11.1.2.1, 11.1.2.2, or Release 11.1.2.3.
  If you are applying the maintenance release, you must first stop all EPM System services.
  If you are applying the maintenance release, EPM System Installer applies the release to all installed 11.1.2.0, 11.1.2.1, 11.1.2.2, or 11.1.2.3 products. You cannot apply the maintenance release to only some products in your deployment.
Product Selection

Select the products and product components to install, and then click or select Next.

When “Apply Maintenance Release” is the installation type, EPM System Installer applies the release to all installed Release 11.1.2.0, 11.1.2.1, 11.1.2.2, or Release 11.1.2.3 products. You cannot apply the maintenance release to only some products in your deployment. On the Product Selection page, you cannot make any selections or deselections.

The following table describes the options for product selection.

<table>
<thead>
<tr>
<th>Action</th>
<th>Details</th>
</tr>
</thead>
<tbody>
<tr>
<td>Select the products</td>
<td>You can expand and collapse the entries to select or clear specific options for each product and component.</td>
</tr>
<tr>
<td>components to install.</td>
<td></td>
</tr>
<tr>
<td>Uncheck all / Check all</td>
<td>Select “Check all” to select all the products, or “Uncheck all” to clear all the products. This option is not available if you are applying a maintenance release.</td>
</tr>
<tr>
<td>Hide/Show unavailable</td>
<td>To see only products for which installation assemblies are available, select Hide Unavailable Product Components.</td>
</tr>
<tr>
<td>products.</td>
<td>To see all products, select Show Unavailable Product Components.</td>
</tr>
<tr>
<td></td>
<td>Generally, you can install any combination of components on any computer. Note the following about product selection:</td>
</tr>
<tr>
<td></td>
<td>Products are available for installation only if the assemblies are downloaded to the correct location and the selected component is supported on the platform on which you are installing. If a product is unavailable on the Product Selection page, ensure that the assemblies are in the correct location.</td>
</tr>
<tr>
<td></td>
<td>Select a product component to see information and status about it in the lower portion of the screen. If Microsoft Internet Information Server (IIS) is required for your installation, and it is not installed, a warning is noted in the lower portion of the screen, and you cannot proceed until you install IIS. If you are installing on an unsupported platform, a warning is displayed.</td>
</tr>
<tr>
<td></td>
<td>The Shared Services and EPM Workspace Java web applications are installed when you install the Foundation Services Java web applications.</td>
</tr>
<tr>
<td></td>
<td>If you selected “New Installation” and you have already installed this release of a product, the product is unavailable in the Product Selection page.</td>
</tr>
<tr>
<td></td>
<td>In some cases, a component is selected, but is unavailable (you can’t clear it), because it is required for another selected component.</td>
</tr>
</tbody>
</table>
**Confirmation**

- Review the summary of products to be installed. If necessary, click or select **Back** and make corrections. Click or select **Next** to begin the installation.

EPM System Installer warns you if there is insufficient disk space.

The **Install Type** column notes one of the following:

- **Install** if this is a new installation.
- **Re-install** if this is a reinstallation of the same release of this EPM System product.
- **Maintenance** if this is a maintenance installation to move from EPM System Release 11.1.2.0, 11.1.2.1, 11.1.2.2, or 11.1.2.3 to Release 11.1.2.4.

To save your installation selections to perform the same installation on another computer, or to use as the basis for a response file for silent installation, see “Saving Installation Selections” on page 82.

**Saving Installation Selections**

If you plan to install this same set of components on another computer, you can save the installation selections in a file. You can then load the selections on another computer during installation to prepopulate EPM System Installer pages for **Destination** and **Product Selection**.

- To save the installation selections, click or select **Save**, browse to a location, specify a file name, and click or select **Save**.

This procedure creates an editable file that can be used as the basis for a response file for silent installation. For information about using a response file, see “Loading Saved Selections” on page 83.

**Performing Silent Installations**

Silent installations automate the installation process so that you can install EPM System products on multiple computers without manually specifying installation settings on each machine.

To enable silent installation, record your installation settings in a response file. You can then run a silent installation from the command line, using the installation options that were saved in the response file.

- To record installation settings and run a silent installation:
  1. Navigate to the directory that contains EPM System Installer.
  2. From a command line, run a command:
     ```
     installTool.cmd -record filename
     ```
     for Windows or
installTool.sh -record filename

for UNIX,

where filename includes an absolute path or file name for the response file.

The file is saved in XML format, but you do not have to save the file with a .xml extension.

EPM System Installer launches.

3 Proceed through EPM System Installer, specifying the options that you want to record.

   Installation options are recorded in the response file. You can modify the response file later to change installation options.

   You are now ready to run the installation in silent mode.

4 Copy the response file to the machine on which you want to run the installation. You can also copy the file to a network drive that is accessible from the machines on which you want to install.

5 From the command line, enter a command:

   installtool.cmd -silent filename

   for Windows or

   installtool.sh -silent filename

   for UNIX.

   The installation runs in the background.

Silent response files are not compatible between EPM System Release 11.1.1.0, Release 11.1.2.1, 11.1.2.2, 11.1.2.3 and Release 11.1.2.4. If you created silent response files for use with any earlier release of EPM System products, you must re-create them for use with EPM System Release 11.1.2.4.

### Loading Saved Selections

You can also record installation settings from within EPM System Installer.

To record installation settings, during installation, on the Installation Confirmation page, click or select **Save**, browse to a location, specify a file name, and click or select **Save**. The file is saved in the same format as for silent installations.

To play back the installation using the same installation destination and product component selections, start EPM System Installer, and on the Destination page, click or select **Load**, browse to the saved selections file, and click or select **Open**.

### Modifying Response Files

After you create a response file, you can modify it to customize the installation options for certain machines. For example, you might create a master silent file for all products, and then for each machine, change the location of the Middleware home and keep only the product components that you want to install on this machine.
To modify a response file:

1. Open the response file in any text editor. The file is in XML format.

2. Edit the file using the following options:
   - `<HyperionHome>` — Location of the Middleware home.
   - `<SelectedProducts>` — Product components to install to specific tiers. Make changes in `<Product name>, <ProductComponent name>, <InstallTier>, and <Component>`.
   - `<Product name>` — The name of the product. Enclose product names in quotes, as they are XML attributes.
   - `<ProductComponent name>` — The component of the product. Enclose component names in quotes, because they are XML attributes.
   - `<InstallTier>` — The installation tier for the component installation (Client, Service, WebApplication).
   - `<Component>` — The services to install.

3. Save the file in XML format.

## Installing EPM System Clients

Subtopics

- Client Installation Prerequisites
- Downloading and Extracting Client Installers
- Installing EPM System Clients
- (Optional) Preparing an Alternate Installation Location for Smart View
- Installing EPM System Clients from EPM Workspace
- Installing EPM System Clients From EPM System Installer
- Installing Multiple Versions of Financial Reporting Studio on a Client Machine
- Installing EPM System Clients From the Command Line
- Installing and Updating Smart View Extensions

### Client Installation Prerequisites

Review these prerequisites before installing EPM System clients:

- **Planning Offline Client**: Install Microsoft Excel and Smart View on the same machine.

  The Planning Java web application need not be installed on the same machine, but it must be running.

  Although Planning Offline is supported for 64-bit operating systems, it is not supported for 64-bit Smart View installations. If you use Planning Offline with Smart View, you must use the 32-bit version of Microsoft Office.
- **Predictive Planning**: Install Microsoft Excel and Smart View on the same machine, with access to Planning.

- **Smart View**: Smart View must be installed on a machine that already has Microsoft Office 32-bit or Office 64-bit and .NET Framework 4.5 installed. Install Microsoft Excel with the Visual Basic option.

- **Strategic Finance**: To enable use of Smart View with Strategic Finance, install the Smart View client before installing the Strategic Finance client.

- **Performance Management Architect File Generator**: Install Microsoft Excel with "Visual Basic for Applications" to use Performance Management Architect File Generator from the Excel File menu.

- **Interactive Reporting**: After a user has installed Interactive Reporting client (with the ability to use for all users), subsequent users should run the `regServers.bat` script (located in `EPM_ORACLE_HOME\products\biplus\bin`) in order to run Dashboard Studio and Dashboard Architect applications.

- **Financial Reporting Studio**: Install Financial Reporting Studio as an Administrator on Windows 8. If you download the installer from EPM Workspace, close all browser windows before installing. Financial Reporting Studio must be uninstalled, downloaded, and re-installed every time the Financial Reporting server components are patched.

---

### Downloading and Extracting Client Installers

You use client installers when Installing EPM System Clients and when Installing EPM System Clients from EPM Workspace.

1. **To download and extract the EPM System client installers:**
   1. **On your local computer, create** client installer folder, **for example**, `EPM_Clients_unzipped`.
   2. **From Oracle Software Delivery Cloud, download** `ClientInstallers-11124.zip`.
   3. **Extract the contents of downloaded file into the folder that you created in step 1**.

   Extracting the contents of the downloaded file creates subfolders in *client installer folder* that contain the installer files, as follows:

   - DisclosureManagement/DiscManAddIn/DiscManSetup.msi
   - DisclosureManagement/taxodesigner/TaxonomyDesigner.msi
   - EPMAClients/EPMAClients.exe
   - EssbaseAdministrationServicesConsole/EASConsole.exe
   - EssbaseClient/EssbaseClient.exe
   - EssbaseStudio/EssbaseStudioConsole.exe
   - FinancialManagementClient/HFMClient.exe and HFMClientx64.exe
   - FinancialReportingStudio/FinancialReportingStudio.exe
Installing EPM System Clients

The following EPM System clients have their own Windows installers:

- Disclosure Management
- Performance Management Architect (File Generator)
  - Batch Client is installed by EPM System Installer whenever “EPMA Web Tier” is selected for installation.
- Essbase Administration Services Console
- Essbase Client
  - The Essbase Client installer is Windows only. On UNIX, Essbase Client is installed with Essbase Server.
- Essbase Studio Console
- Financial Management Console
- Financial Reporting Studio
- Interactive Reporting (Oracle Hyperion Interactive Reporting Studio and Dashboard Development Services)
- Planning Offline Client
- Predictive Planning (module of Planning)
- Production Reporting Remote Client
  - Production Reporting Activator, Oracle Hyperion SQR Production Reporting Developer, and Production Reporting Viewer are installed always with the Production Reporting engine.
- Smart View. To ensure that users install the latest version of Smart View, the Smart View installer is available only on Oracle Technology Network.
- Strategic Finance Client

If you have installed a client in a previous release using a Windows installer, you do not need to uninstall the earlier release of the client.

If you have installed a client in a previous release using EPM System Installer, you must uninstall the client before using a Windows installer to install the new version if the client.
Installing EPM System Clients Using the Installer

**Note:** If you are using terminal services to install clients, switch your session to installation mode (change user /install) before running any EPM System client installer.

To install EPM System clients using the Installer:

1. From the client installer folder, open the subfolder for the client installer and then double-click the client installer file name.

   See “Downloading and Extracting Client Installers” on page 85 for the subfolders and installer names.

   Note that Financial Management, Predictive Planning, and Strategic Finance have both 32-bit and 64-bit installers. For Financial Management, the 64-bit installer installs some client components that are 64-bit, but Financial Management and its dependent files are 32-bit.

2. Proceed through the installation wizard, and click Finish when the installation is complete.

**Note:** To enable Function Grids in Smart View, install Financial Reporting Smart View Provider:

   Navigate to `EPM_ORACLE_HOME/common/epmstatic/reporting_analysis/client` and run `FRSVProvider.msi`, and then restart Microsoft Excel.

(Optional) Preparing an Alternate Installation Location for Smart View

By default, when you install Smart View from EPM Workspace, the Install link launches Oracle Technology Network (OTN), where you download and install the latest version of Smart View. This ensures that users have the most recent version of Smart View for installation.

You can define an alternate location for Smart View download, for example if you want users to install it from a location on your company network. Perform this procedure on only one machine in the deployment.

To define an alternate location for Smart View download and installation:

1. Access EPM Workspace using the following URL:

   `http://epm.mycompany.com:19000/workspace/index.jsp`

2. To enable Smart View download from a Web Server that you specify, select Navigate, then Administer, then Workspace Settings, then Server Settings, and then, in Smart View URI, enter the URL for the Smart View installer:

   `http://yourServer.domain.com/SmartView.exe`

   Use this option if you want users to download from a specific location in your company’s network.

3. Log out of EPM Workspace and then log in again.
Installing EPM System Clients from EPM Workspace

If you have installed and configured EPM Workspace, you can download and launch installers for the following clients from EPM Workspace:

- Disclosure Management Taxonomy Designer
- Financial Management Client
- Offline Planning
- Planning Admin Extension
- Predictive Planning
- Smart View. By default, when you install Smart View from EPM Workspace, the Install link launches Oracle Technology Network (OTN), where you download and install the latest version of Smart View. This ensures that users have the most recent version of Smart View for installation. If you want users to download from a location on your company network, see “(Optional) Preparing an Alternate Installation Location for Smart View” on page 87.
- Strategic Finance Client

To install EPM System clients from EPM Workspace:

1. Copy the client installer from client installer folder and place it in a folder on the EPM Workspace server.

   See “Downloading and Extracting Client Installers” on page 85 for information on client installer folder.

   See Table 14 for information on where to place client installers in EPM Workspace.

   This step is not necessary for Smart View.

### Table 14 Where to Place Client Installers in EPM Workspace

<table>
<thead>
<tr>
<th>EPM System Client</th>
<th>Client Installer</th>
<th>Location in EPM Workspace</th>
</tr>
</thead>
<tbody>
<tr>
<td>Disclosure Management Taxonomy</td>
<td>DisclosureManagement/taxodesigner/TaxonomyDesigner.msi</td>
<td>EPM_ORACLE_HOME/common/epmstatic/</td>
</tr>
<tr>
<td>Designer</td>
<td></td>
<td>wspace/disclosure_mgmt/taxodesigner/TaxonomyDesigner.msi</td>
</tr>
<tr>
<td>Financial Management Client</td>
<td>FinancialManagementClient/HFMClient.exe</td>
<td>EPM_ORACLE_HOME/common/epmstatic/</td>
</tr>
<tr>
<td></td>
<td></td>
<td>wspace/hfm/HFMClient.exe</td>
</tr>
<tr>
<td></td>
<td><strong>Note</strong>: You cannot install the 64-bit version of</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Financial Management Client from EPM Workspace.</td>
<td></td>
</tr>
<tr>
<td>Offline Planning</td>
<td>Planning/OfflinePlanning.exe</td>
<td>EPM_ORACLE_HOME/common/epmstatic/</td>
</tr>
<tr>
<td></td>
<td></td>
<td>wspace/OfflinePlanning/Client/</td>
</tr>
<tr>
<td></td>
<td></td>
<td>OfflinePlanning.exe</td>
</tr>
<tr>
<td>Planning Admin Extension</td>
<td>Planning/PlanningSVExtensions.msi</td>
<td>EPM_ORACLE_HOME/common/epmstatic/</td>
</tr>
<tr>
<td></td>
<td></td>
<td>wspace/PlanningSmartviewExtension/</td>
</tr>
<tr>
<td></td>
<td></td>
<td>PlanningSVExtension.msi</td>
</tr>
<tr>
<td>EPM System Client</td>
<td>Client Installer</td>
<td>Location in EPM Workspace</td>
</tr>
<tr>
<td>-------------------</td>
<td>------------------</td>
<td>--------------------------</td>
</tr>
<tr>
<td>Predictive Planning</td>
<td>PredictivePlanning/predictiveplanning.exe</td>
<td>EPM_ORACLE_HOME/common/epmstatic/wspace/predictive_planning/predictiveplanning.exe</td>
</tr>
<tr>
<td>Note: You cannot install the 64-bit version of Predictive Planning from EPM Workspace.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Strategic Finance Client</td>
<td>StrategicFinanceClient/HSFClient.exe</td>
<td>EPM_ORACLE_HOME/common/epmstatic/wspace/hsf/Client/HSFClient.exe</td>
</tr>
<tr>
<td>Note: You cannot install the 64-bit version of Strategic Finance Client from EPM Workspace.</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

2 Launch EPM Workspace and log in:
http://epm.mycompany.com:19000/workspace/index.jsp

3 Select Tools, then Install, and then select the product to install. Follow the onscreen prompts.

For Smart View, unless you changed the location for installation, the Oracle Technology Network page for Smart View launches:

a. From Oracle Technology Network, select Oracle Hyperion Smart View for Office, accept the license agreement, click Download Now, and then click Save to save the file locally.

b. Unzip the file, launch SmartView.exe, and then follow the onscreen prompts.

### Installing EPM System Clients From EPM System Installer

You can use EPM System Installer to install EPM System clients that do not have their own Windows installer.

➢ To install EPM System clients from EPM System Installer:

1 Launch EPM System Installer.

2 On the Product Selection panel, select the client(s) to install.

3 Continue through the panels in EPM System Installer.

### Installing Multiple Versions of Financial Reporting Studio on a Client Machine

You can install more than one version of Financial Reporting Studio (for example a test and a development version) on a client machine for versions 11.1.2.3 and later only. The installed versions of Financial Reporting Studio are displayed in the Microsoft Windows Start menu folder and shortcuts, as well as in the Uninstall panel.
Note: Each Financial Reporting Studio version installed on a client machine must be installed in a different directory. The two instances cannot be PSE or PSU versions from the same major release. Financial Reporting client version discordance can be resolved by installing the Financial Reporting Studio test instance and production instance on separate client machines.

To install Financial Reporting Studio:

1. In EPM Workspace, select **Tools**, then **Install**, and then **Financial Reporting Studio**.
2. After the download is complete, close all browsers and then run the Financial Reporting Studio installer as an administrator.

Note: If a machine has multiple versions of Financial Reporting Studio installed, only one release can be accessed at a time.

To access a Financial Reporting Studio version:

1. From the Microsoft Windows Start menu, select **Oracle**, then **Financial Reporting Studio <version number>**, and then **Register Financial Reporting Studio <version number>**, where <version number> is the Financial Reporting Studio release to use.
2. To launch the Financial Reporting Studio version registered in the previous step, from the Microsoft Windows Start menu, select **Oracle**, then the folder **Financial Reporting Studio <version number>**, and then **Financial Reporting Studio <version number>**.

### Installing EPM System Clients From the Command Line

You can run an EPM System client installer from the command line using the following parameters:

<table>
<thead>
<tr>
<th>Table 15</th>
<th>Command Line Options for Client Installations</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Option</strong></td>
<td><strong>Usage</strong></td>
</tr>
<tr>
<td>/v&quot;command line options&quot;</td>
<td>Specifies command line options to be passed to the client installer.</td>
</tr>
<tr>
<td>/s</td>
<td>Runs the client installer as a silent installer.</td>
</tr>
<tr>
<td>/qn</td>
<td>Makes the installation non-interactive.</td>
</tr>
<tr>
<td>INSTALLDIR=</td>
<td>Specifies the installation directory.</td>
</tr>
</tbody>
</table>

**Note:** If the **EPM_ORACLE_HOME** environment variable is defined, the client installation ignores the **INSTALLDIR** value and install the clients in **EPM_ORACLE_HOME**.

| l*v log file path and name | Logs installation information in the specified file. |
Performing Silent Client Installations

Administrators can enable silent installations. When silent installations are enabled, you can include the silent installation command in scripts to automate the process, so that you do not need to specify settings each time you perform an installation.

To perform a silent installation of any EPM System client other than Disclosure Management, use this command:

```
installer file name /s /v"/qn INSTALLDIR=installation directory /l*v log file path and name"
```

To perform a silent installation of Disclosure Management, use this command:

```
DiscManSetup.msi /qn INSTALLDIR=installation directory /l*v log file name
```

Note: For installer file names, see “Downloading and Extracting Client Installers” on page 85.

Installing and Updating Smart View Extensions

Smart View supports provider extensions for the following EPM System products:

- Disclosure Management
- Financial Reporting
- Strategic Finance
- The Predictive Planning extension for Planning
- The Planning Admin extension for Planning

For information about installing and updating Smart View Extensions, see the Oracle Smart View for Office User’s Guide.

If you are an administrator, see the Oracle Smart View for Office User’s Guide for information about administering extension installations and updates.
About EPM System Configurator

EPM System Configurator is installed with the first EPM System product installed on a computer and is used to configure all products installed on the computer. Use EPM System Configurator on each computer on which EPM System products are installed. (EPM System clients do not require configuration.)

Use the configuration worksheets throughout this chapter to plan your configuration and to document the configuration steps for your company if required for disaster recovery.

Configuration Prerequisites

Subtopics

- Ensuring that Host Names Resolve
- Creating Infrastructure Schemas Using Repository Creation Utility
- Configuration Prerequisites for Financial Close Management

Configuration prerequisite notes:
When you are deploying on a machine other than the machine hosting Foundation Services, ensure that WebLogic Server Administration Server is running on the Foundation Services host machine (FNDHOST1): On the Foundation Services host machine, start WebLogic Server Administration Server by selecting Start, then All Programs, then Oracle WebLogic, then User Projects, then EPMSystem, and then Start Admin Server for WebLogic Server.

Ensure that host names resolve properly for each machine in the deployment. See “Ensuring that Host Names Resolve” on page 94.

If you want to deploy Java web applications to a single managed server, you must be using WebLogic Server and have a 64-bit operating system.

For database configuration tasks, ensure that the database is running.

On UNIX systems, ensure that ulimit is 4096. You can query for the current ulimit setting with the following command:

ulimit -n.

If you plan to deploy EPM System products in an SSL-enabled environment, review the Oracle Enterprise Performance Management System Security Configuration Guide before you configure. The SSL implementation that you choose affects the options that you select during configuration. Optionally, you can deploy non SSL and reconfigure to use SSL. See the Oracle Enterprise Performance Management System Security Configuration Guide.

If you are using one of the following products, see “Creating Infrastructure Schemas Using Repository Creation Utility” on page 95.

- Financial Close Management
- Tax Governance
- Profitability and Cost Management, and plan to use Oracle Web Services Manager to automate Profitability and Cost Management tasks
- FDMEE, and plan to use the RuleService/SetupService or plan to integrate FDMEE with Account Reconciliation Manager, Peoplesoft Commitment Control for Budget Write-back and Validation, or Fusion Financials for Budget Write-back.
- Financial Management if you are using Web Services.
- Tax Provision, if you are using Web Services.
- Provider Services, if you plan to use Essbase Web Services.

If you are using Financial Close Management or Tax Governance, see “Configuration Prerequisites for Financial Close Management” on page 96.

## Ensuring that Host Names Resolve

Before configuring, ensure that the host name resolves properly for each machine in the deployment. EPM System uses Java’s canonical host name resolution for resolving host names. To validate host names as resolved by Java, EPM System provides a utility (epmsys_hostname.bat).
To ensure that host names resolve:

1. Set the `JAVA_HOME` variable. From a command prompt, enter `set JAVA_HOME=pathToJAVA`. For example, for the default location that EPM System Installer uses for Java, enter the following command: `set JAVA_HOME=c:\oracle\middleware\jdk160_35`.

2. Unzip `epmsys_hostname.zip`, in `EPM_ORACLE_HOME/common/config/11.1.2.0`.

3. From a command prompt, change to the directory to which you unzipped the utility, and then enter the following command:
   `epmsys_hostname.bat hostName`

4. Review the results in the command line.
   For example:
   
   InetAddress details of host hostNameAddress is xx.xxx.xxx.xxxName is hostNameCanonical Name is hostName.mycompany.com

5. If you see the error “Unable to determine the host details”, to resolve the host name, create a local hosts file and add an entry for this server.

Creating Infrastructure Schemas Using Repository Creation Utility

The Repository Creation Utility (RCU) is used to create multiple schemas to support different Oracle Fusion Middleware products such as Oracle SOA Suite (SOA) and Oracle Web Services Manager (OWSM). Some EPM System products use these Middleware technologies, so you must use RCU to create the required schemas to support the Middleware infrastructure.

If you will be using Oracle Web Services Manager for use with Financial Close Management, Tax Governance, Profitability and Cost Management, FDMEE, Financial Management, Tax Provision, Provider Services, or Data Relationship Management, you must install the Repository Creation Utility (RCU) before configuring these EPM System products. The RCU creates the required schemas to work with Oracle Web Services Manager (OWSM). Oracle Web Services Manager is automatically installed, but not configured, with EPM Workspace.

In addition, Financial Close Management relies on SOA technology and requires RCU to create the SOA schemas. Use the following procedure to create the required infrastructure for SOA and OWSM.

To create schemas using the Repository Creation Utility:

1. Download the Repository Creation Utility from the “Oracle Enterprise Performance Management System” Media Pack on Oracle EDelivery.

2. Navigate to the Installer-RCU folder.

3. Copy `rcuHome.zip` to the location in which you want to install the Repository Creation Utility, and extract the contents.

4. From `rcuHome/bin`, run the Repository Creation Utility using the appropriate file for your operating system:
   - For Windows, run `rcu.bat`
For UNIX, run `./rcu`

**Note:** Ignore any messages about using a non-AL32UTF8 database.

The new database schema is required for “Metadata Services” and does not reflect the EPM System product databases.

5. **Click Create, and then click Next.**

6. On the **Database Connection Details** page, specify a user with DBA or SYSDBA privileges, such as `sys`.

7. On the **Select Components** page, perform these tasks:
   - For Financial Close Management, Profitability and Cost Management, FDMEE, Financial Management, Provider Services, or Data Relationship Management: Expand **AS Common Schemas** and select **Metadata Services**, if it is not already selected.
   - Additionally, for Financial Close Management: Expand **SOA and BPM Infrastructure** and select the following SOA infrastructure components: **SOA Infrastructure** and **User Messaging Service**. (You need not select **Business Activity Monitoring** (BAM).)
     For Identity Management, **OID** is selected by default. Do not select **Oracle Identity Federation**.
   - Make a note of the **Schema Owner** names for all the components because you need them to configure Oracle Web Services Manager.

8. On the **Schema Passwords** page, Oracle recommends that you select **Use same passwords for all schemas**. Make a note of this password.

9. On the **Summary** page, review the selections, and then click **Create**.

10. On the **Completion Summary** page, click **Close**.

For additional information on the Repository Creation Utility, see the *Oracle® Fusion Middleware Repository Creation Utility User’s Guide 11g Release 1 (11.1.1).*

**Configuration Prerequisites for Financial Close Management**

**Subtopics**
- Installing Oracle SOA Suite
- Configuring and Starting Oracle SOA Suite

Before you can configure Financial Close Management, you must install, configure, and start Oracle SOA Suite.
Installing Oracle SOA Suite

The following procedure provides an overview of the Oracle SOA Suite installation procedure. For more information about this procedure, see the Oracle® Fusion Middleware Installation Guide for Oracle SOA Suite 11g Release 1.

To install Oracle SOA Suite:

1. Ensure that you meet all the prerequisites and system requirements described in the Oracle® Fusion Middleware Installation Guide for Oracle SOA Suite 11g Release 1.

   **Note:** Oracle SOA Suite requires WebLogic Server, which is installed with a default installation of EPM System.

2. Ensure that you have installed and run the Repository Creation Utility (RCU) to create the required schemas for Oracle SOA Suite. See “Creating Infrastructure Schemas Using Repository Creation Utility” on page 95.

3. Download Oracle SOA Suite from the “Oracle Enterprise Performance Management System” Media Pack on Oracle EDelivery, and then install it using the default options. If you have already installed EPM System products, install to the same Middleware home, for example: Oracle/Middleware.

   During installation, use the JDK in the EPM System installation (MIDDLEWARE_HOME/JDK160_35).

4. When the installation is complete, configure Oracle SOA Suite. See “Configuring and Starting Oracle SOA Suite” on page 97.

Configuring and Starting Oracle SOA Suite

Ensure that you have installed Oracle SOA Suite as described in “Installing Oracle SOA Suite” on page 97. Before you configure Financial Close Management, you must configure and start Oracle SOA Suite.

The following procedure provides an overview of the Oracle SOA Suite configuration procedure. For more information about this procedure, see the “Configuring Oracle SOA Suite” chapter of the Oracle® Fusion Middleware Installation Guide for Oracle SOA Suite 11g Release 1.

To configure Oracle SOA Suite:

1. From the WebLogic Administration Server machine, run the Oracle Fusion Middleware Configuration Wizard to configure a WebLogic domain, and choose the products that you want to configure in that domain. To start the Configuration Wizard, from SOA_ORACLE_HOME/common/bin (or MIDDLEWARE_HOME/oracle_common/common/bin), run config.sh (UNIX) or config.cmd (Windows).

   Note that EPM System and Oracle SOA Suite must be deployed to the same domain. The choice you make for the domain depends on your deployment scenario:
   
   - In a new deployment, where you have not yet configured EPM System products, you must create a new WebLogic domain.
In an existing deployment, where you have already configured EPM System products and now want to extend the deployment to include Financial Close Management and Oracle SOA Suite, you must extend the existing WebLogic domain created during EPM System deployment.

Note the following additional details for this step. Note that not all steps are listed, only those that require specific selections for Financial Close Management.

- During creating/extending domain, select the following products: Oracle SOA Suite and all common Oracle components, including Oracle Enterprise Manager, Oracle WSM Policy Manager, Oracle JRF WebServices Asynchronous Services, and Oracle JRF, if they are not already selected.

- Select the default JDK. Oracle recommends that you select Production Mode. (When using Production Mode, when you start WebLogic Administration Server, when you are prompted to enter a user name and password, enter the user name and password that you entered during the configuration of the Administration Server domain.)

- When you configure the JDBC datasources, enter the database details that you entered when you ran RCU.

- Use the default settings for the server port. By default, the Administration Server port is 7001 and the soa_server1 port is 8001.

2 Start WebLogic Administration Server and the Oracle SOA Suite managed servers using the WebLogic Administration Console.

- To start the WebLogic Administration Server, run the following command:
  
  ```plaintext
  MIDDLEWARE_HOME/user_projects/domains/domainName/
  startWebLogic.cmd
  ```

- To start the SOA Managed Server, run the following command: 
  ```plaintext
  MIDDLEWARE_HOME/
  user_projects/domains/domainName/bin/startManagedWebLogic.cmd
  soa_server1.
  ```

The Oracle SOA Server must be running before you can configure Financial Close Management.

Tip: SOA setup usually runs on two servers - an Admin Server running on port 7001, which hosts the Enterprise Management application, and a managed server running on port 8001, which hosts the SOA infrastructure. Log in to http://host:7001/em with your domain user name and password and check the status of both servers.

See the “Financial Close Management and Tax Governance Installation Checklist” on page 64 for the process to follow next.

You must configure EPM System products according to the configuration sequence noted in “Financial Close Management and Tax Governance Installation Checklist” on page 64. Then, perform manual configuration tasks.
Configuration Sequence

Foundation Services must be installed and configured for other products to configure successfully. In general, for a new deployment, Oracle recommends that for each machine, you configure all EPM System products at the same time for the products installed on the machine. By default, EPM System Configurator preselects all products for you.

Configuration sequence notes:

- Configure Foundation Services first. Foundation Services must be installed and configured for other products to configure successfully. Then, for each machine in the deployment, configure all EPM System products at one time for the products installed on the machine.

- Configure the web server last. (Select the Foundation Services “Configure Web Server” task.) Then, restart the web server and refresh EPM Workspace. If you configured Oracle HTTP Server to a shared drive, you can simply restart the web server and refresh EPM Workspace; you do not have to reconfigure the web server. See “Refreshing EPM Workspace” on page 106.

- Complete the configuration on each machine and close EPM System Configurator before launching EPM System Configurator on another machine.

- When you configure in a distributed environment, you configure the Shared Services database on every machine. On the first machine, you are setting up the Shared Services Registry. For configurations on subsequent machines, choose “Connect to a previously configured Shared Services database,” which lets the machine know the location of the Shared Services Registry.

- If you deploy any additional products, reconfigure the web Server and then restart it (or simply restart it if you configured Oracle HTTP Server to a shared drive) on each machine hosting Foundation Services.

  Then, refresh EPM Workspace on each Foundation Services host machine in your deployment.

  See “Refreshing EPM Workspace” on page 106.

- You must perform the “Configure Database” task at the same time as or before you perform the “Deploy to Application Server” task.

- If you are configuring Financial Close Management, there is a required configuration sequence. See “Financial Close Management and Tax Governance Installation Checklist” on page 64.

- Automatic web server configuration with EPM System Configurator is supported only for the web server installed by EPM System Installer (Oracle HTTP Server or the proxy web Server) or IIS.

- After you have completed configuration, perform any required manual configuration tasks required for your product.

For information about clustering or scaling EPM System, see the Oracle Enterprise Performance Management System Deployment Options Guide.
Configure Data Relationship Management after you have completed all the configuration tasks using EPM System Configurator: See the Oracle Data Relationship Management Installation Guide.

**Configuring Products in a Distributed Environment**

Ensure that you meet installation requirements in a distributed environment. See “Installing EPM System Products in a Distributed Environment” on page 75. For information about clustering and high availability, see the Oracle Enterprise Performance Management System Deployment Options Guide.

Configuration considerations in a distributed environment:

- You must configure Foundation Services first. Foundation Services must be installed and configured for other products to configure successfully. Configure the web server last.
- Create a new EPM Oracle instance on each machine.
- If you are deploying Java web applications on a machine other than the WebLogic Administration Server machine, WebLogic Administration Server must be running.
- Deploy all EPM System products to a single WebLogic domain.
  
  The exceptions to this requirement are documented in “Deploying Financial Management, Financial Reporting, and Web Analysis on Windows in a UNIX-Based EPM System Deployment ” on page 133.
- During configuration with EPM System Configurator, the web server machine needs connectivity to the machine hosting the Shared Services Registry.
- If you are using more than one web server in a deployment for load balancing and failover, configure the web server on every machine on which you want to run the web server. If you have more than one web server, you must use a load balancer (hardware or software) to route traffic to the servers, and the logical web address for the Java web application cluster should be the load balancer. If you have only one web server, the logical web address for the Java web application cluster can be the web server.
- When configuring EPM System for high availability where multiple instances of services are running, and for using Lifecycle Management in a distributed environment, you must point to the same location on a shared disk in these fields in EPM System Configurator:
  - Lifecycle Management LCM Export Import Location. To enable data migration across distributed environments, specify a shared file system path defined using UNC syntax that is accessible from all the servers in the deployment.
    
    If you are using Financial Management in a distributed environment, configure the LCM Export Import folder with Read/Write access for all the Financial Management Application Servers in the environment.
  - Reporting and Analysis Framework Repository Directory
    
    For example, `\SharedHost\SharedLocation\data\RM1`
  - Essbase Server (UNIX) Full path to application location (ARBORPATH)
For example, `\SharedHost\SharedLocation\data\Essbase`

- Optionally, you can configure Oracle HTTP Server to a shared drive to simplify the configuration process.
- For Financial Reporting linked reports to work, configure Financial Reporting so that the logical address of the Financial Reporting component is same as web server port (for example, 19000).

### Configuring Products in an SSL-Enabled Environment

If you are configuring EPM System products for SSL, the configuration sequence and selections that you make during configuration depend on the type of SSL implementation you choose. See the *Oracle Enterprise Performance Management System Security Configuration Guide* for more information. Optionally, you can deploy non SSL and reconfigure to use SSL. See the *Oracle Enterprise Performance Management System Security Configuration Guide*.

**Note:** Essbase supports only one-way SSL using self-signed certificates by default. Using default certificates is recommended for use only in a test environment. Oracle recommends that you use certificates from well-known third party CAs in a production environment. See the *Oracle Enterprise Performance Management System Security Configuration Guide* for details.

### Configuring Products for Manual Deployment

If you plan to manually deploy EPM System Java web applications, launch EPM System Configurator with the `/configtool-manual.bat|.sh` command. Perform required configuration tasks except for the “Deploy to Application Server” task and the “Configure Web Server” task. Then, perform additional manual steps.

See “Configuring EPM System Products” on page 103 and then Chapter 7, “Manually Deploying EPM System Java Web Applications.”

### Product Configuration Task Summary

Configuration notes:

- EPM System Configurator performs pre-configuration tasks and registers products with Shared Services during configuration. You need not select these tasks; they are automatically performed when needed.
- Shared Services Registry database configuration appears once on each machine that you configure.
- Clients do not require configuration and are not included in these tables.
The following table summarizes the configuration options available for Foundation Services products.

<table>
<thead>
<tr>
<th>Table 16</th>
<th>Foundation Services Configuration Task Summary</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Configure Database</strong></td>
<td><strong>Deploy to Application Server</strong></td>
</tr>
</tbody>
</table>
| Foundation Services | X | X | ● Configure Common Settings  
| | | | ● Set up Connection to Oracle BI and Publisher (Optional)  
| | | | ● Configure Web Server  
| | | | ● Configure Logical Address for Web Applications (Optional)  
| | | | ● Scale out single managed server on this machine  
| Performance Management Architect | X (Windows only) | X | X  
| | | | Configure Dimension Server  
| Calculation Manager | X | X | |

The following table summarizes the configuration options available for Essbase products.

<table>
<thead>
<tr>
<th>Table 17</th>
<th>Essbase Configuration Task Summary</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Configure Database</strong></td>
<td><strong>Deploy to Application Server</strong></td>
</tr>
</tbody>
</table>
| Essbase | | X  
| | | Configure Essbase Server  
| Administration Services | X | X | |
| Provider Services | | X | |
| Essbase Studio | X (Required for Essbase Studio catalog) | | X  
| | | Essbase Studio - Default data files location  

The following table summarizes the configuration options available for Reporting and Analysis products.

<table>
<thead>
<tr>
<th>Table 18</th>
<th>Reporting and Analysis Configuration Task Summary</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Configure Database</strong></td>
<td><strong>Deploy to Application Server</strong></td>
</tr>
</tbody>
</table>
| Reporting and Analysis | X | X | ● Configure Reporting and Analysis Services  
| | | | ● Configure Framework Services  
| | | | ● Configure Financial Reporting RMI Ports  

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Table 19  Financial Performance Management Applications Product Configuration Task Summary

<table>
<thead>
<tr>
<th>Configure Database</th>
<th>Deploy to Application Server</th>
<th>Product-specific Configuration Tasks</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Financial Management</strong></td>
<td></td>
<td>X</td>
</tr>
<tr>
<td>X</td>
<td>X</td>
<td><strong>Configure Server</strong></td>
</tr>
<tr>
<td></td>
<td></td>
<td><strong>Configure Application Cluster</strong></td>
</tr>
<tr>
<td><strong>Planning</strong></td>
<td></td>
<td>X</td>
</tr>
<tr>
<td>X</td>
<td>X</td>
<td><strong>Configure RMI Server</strong></td>
</tr>
<tr>
<td><strong>Profitability and Cost Management</strong></td>
<td></td>
<td>X</td>
</tr>
<tr>
<td>X</td>
<td>X</td>
<td></td>
</tr>
<tr>
<td><strong>Strategic Finance</strong></td>
<td></td>
<td>X</td>
</tr>
<tr>
<td></td>
<td></td>
<td><strong>Configure Port and Data Folder</strong></td>
</tr>
<tr>
<td></td>
<td></td>
<td><strong>WebServices Configuration</strong></td>
</tr>
<tr>
<td><strong>Disclosure Management</strong></td>
<td></td>
<td>X</td>
</tr>
<tr>
<td>X</td>
<td>X</td>
<td></td>
</tr>
<tr>
<td><strong>Financial Close Management</strong></td>
<td></td>
<td>X</td>
</tr>
<tr>
<td>X</td>
<td>X</td>
<td><strong>Deploy to SOA</strong></td>
</tr>
<tr>
<td></td>
<td></td>
<td><strong>Configure Content Management System Location (Optional)</strong></td>
</tr>
<tr>
<td><strong>Tax Management</strong></td>
<td></td>
<td>X</td>
</tr>
<tr>
<td>X (Required only for Tax Governance )</td>
<td></td>
<td>X</td>
</tr>
<tr>
<td></td>
<td></td>
<td><strong>Deploy to SOA (Required only for Tax Governance)</strong></td>
</tr>
</tbody>
</table>

The following table summarizes the configuration options available for Data Management products.

Table 20  Data Management Product Configuration Task Summary

<table>
<thead>
<tr>
<th>Configure Database</th>
<th>Deploy to Application Server</th>
<th>Product-specific Configuration Tasks</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>FDMEE</strong></td>
<td></td>
<td>X</td>
</tr>
<tr>
<td>X</td>
<td>X</td>
<td></td>
</tr>
</tbody>
</table>

**Configuring EPM System Products**

Run EPM System Configurator on each machine hosting the products to configure or reconfigure.
For a list of characters supported during configuration with EPM System Configurator, see “Characters Supported for Installation and Configuration” on page 18.

**Note:** On Windows machines, do not use the Administrator user to install and configure. Run EPM System Installer and EPM System Configurator as a user with administrator rights. Install, configure and run EPM System Diagnostics as the same user for all EPM System products. If you are using Windows 2008, configure with UAC disabled. UAC must be disabled to install, configure, and run EPM System products. UAC can be enabled on end-user client desktops.

**Note:** On UNIX machines, do not use the root user to install and configure. Install and configure as the same user for all EPM System products. On UNIX machines, for all Oracle products, the user that is installing must be part of the same group; the group must have write permission to the central inventory (oraInventory).

**Note:** When you apply the maintenance release, install and configure using the same user that was used to install and configure the earlier release.

To configure EPM System products:

1. **Choose a method to launch EPM System Configurator:**
   - On the last page of EPM System Installer, click or select **Configure**.
   - From the **Start** menu, select **Programs**, then **Oracle EPM System**, and then **EPM System Configurator (all instances)**.
   - Change to `EPM_ORACLE_HOME/common/config/version_number` and then launch `configtool.bat (.sh)`.
   - To run EPM System Configurator in console mode, launch it from the command line using the `-console` parameter. For example `EPM_ORACLE_HOME/common/config/version_number/startconfigtool.bat -console`.
   - For silent configurations, see “Performing Silent Configurations” on page 131.
   - If you are manually deploying Java web applications, launch EPM System Configurator from the command line using `EPM_ORACLE_HOME/common/config/version_number/configtool-manual.bat (.sh)`.

After configuration is complete, see Chapter 7, “Manually Deploying EPM System Java Web Applications” for more information.

**Tip:** If you launch EPM System Configurator from `EPM_ORACLE_INSTANCE`, EPM System Configurator configures the existing EPM Oracle instance and does not display the “Configure Oracle Instance” page.

EPM System Configurator performs initial checks, checking for the following:
- Environment variables are set
- `.oracle.products` is present
- All required `.jars` are present
- Windows system32 is in the PATH
- There is a valid EPM Oracle home
- When Essbase is installed, that OPMN is also installed on the machine

2 Review and complete each page of EPM System Configurator, clicking or selecting Next to move to the next page.

In console mode, enter the number beside the selection you want.

The following table provides links where you can find more details about each page of EPM System Configurator.

<table>
<thead>
<tr>
<th>Page</th>
<th>Reference</th>
</tr>
</thead>
<tbody>
<tr>
<td>Oracle Instance</td>
<td>“Configure Oracle Instance” on page 107</td>
</tr>
<tr>
<td>Task selection</td>
<td>“Task Selection” on page 108</td>
</tr>
<tr>
<td>Set Up Shared Services and Registry Database Connection</td>
<td>Ensure that the database is started and that you have created a database. If you have not already created the database, see “Preparing a Database” on page 38. Enter the information as described in “Set Up Shared Services and Registry Database Connection” on page 116.</td>
</tr>
<tr>
<td>Configure database</td>
<td>Ensure that the database is started and that you have created a database. If you have not already created the database, see “Preparing a Database” on page 38. Enter the information as described in “Configure Database” on page 108.</td>
</tr>
<tr>
<td>Application server deployment</td>
<td>Enter the information as described in “Deploy to Application Server: Oracle WebLogic” on page 112.</td>
</tr>
<tr>
<td>Product-specific configuration tasks</td>
<td>For detailed procedures to configure each product, see the sections:</td>
</tr>
<tr>
<td>- “Foundation Configuration Tasks” on page 114</td>
<td></td>
</tr>
<tr>
<td>- “Performance Management Architect Configuration Tasks” on page 121</td>
<td></td>
</tr>
<tr>
<td>- “Essbase Configuration Tasks” on page 122</td>
<td></td>
</tr>
<tr>
<td>- “Reporting and Analysis Configuration Tasks” on page 125</td>
<td></td>
</tr>
<tr>
<td>- “Planning Configuration Tasks” on page 126</td>
<td></td>
</tr>
<tr>
<td>- “Financial Management Configuration Tasks” on page 127</td>
<td></td>
</tr>
<tr>
<td>- “Strategic Finance Configuration Tasks” on page 129</td>
<td></td>
</tr>
<tr>
<td>- “Financial Close Management Configuration Tasks” on page 129</td>
<td></td>
</tr>
<tr>
<td>- “Tax Management Configuration Tasks” on page 131</td>
<td></td>
</tr>
</tbody>
</table>

3 (Optional) To save the configuration selections in a response file for silent configuration, click or select Save, browse to a location, specify a file name, and click or select Save.
This procedure creates an editable file that can be used as a response file for silent configuration. See “Performing Silent Configurations” on page 131.

4 **Confirm the configuration tasks to complete, and then click or select Next.**

EPM System Configurator displays the status of the configuration process.

Configuration time depends on the products and tasks that you selected. Progress is recorded in *EPM_ORACLE_INSTANCE/diagnostics/logs/config/configtool.log*.

When configuration finishes, the status of each task is displayed. Configuration results are noted in *EPM_ORACLE_INSTANCE/diagnostics/logs/config/configtool_summary.log*.

5 **Click or select Task Panel to return to the Task Selection page to complete additional configuration tasks.**

6 **Configure the web Server last.**

7 **Click or select Finish.**

If configuration is successful, perform any required manual configuration tasks, start services, and validate service startup.


Terminating configuration for a particular product does not terminate the entire process. Configuration continues for the other products. EPM System Configurator displays error messages on a summary page after the configuration process completes.

If errors are displayed, perform these tasks:

- Review the log files.
- See the *Oracle Enterprise Performance Management System Installation and Configuration Troubleshooting Guide* for information about resolving configuration issues.
- If you see errors related to the Oracle HTTP Server installation, ensure that you have met the Oracle HTTP Server installation prerequisites. See “Web Server Installation Prerequisites” on page 72.

8 **Refresh EPM Workspace.**

If you are using Financial Close Management, see the “Financial Close Management and Tax Governance Installation Checklist” on page 64 for the process to follow next.

**Refreshing EPM Workspace**

If you deploy any additional products, reconfigure the web Server and then restart it (or simply restart it if you configured Oracle HTTP Server to a shared drive) on each machine hosting Foundation Services.

Then, refresh EPM Workspace on each Foundation Services host machine in your deployment.
To refresh EPM Workspace:

1. Start a browser session.

2. Access EPM Workspace by accessing the following URL:
   
   http://FNDHOST1:9000/workspace/refresh
   
   In this URL, use port 9000, which is the managed server port where EPM Workspace is available, not the Oracle HTTP Server port.

3. At the Login screen, enter admin and the deployment password.
   
   You should get a success message.

4. Repeat these steps on each Foundation Services host machine in your deployment.

### EPM System Configurator Task Reference

Subtopics

- Configure Oracle Instance
- Task Selection
- Configure Database
- Deploy to Application Server — Specify WebLogic Domain Information
- Deploy to Application Server: Oracle WebLogic
- Foundation Configuration Tasks
- Performance Management Architect Configuration Tasks
- Essbase Configuration Tasks
- Reporting and Analysis Configuration Tasks
- Planning Configuration Tasks
- Financial Management Configuration Tasks
- Strategic Finance Configuration Tasks
- Financial Close Management Configuration Tasks
- Tax Management Configuration Tasks

### Configure Oracle Instance

Specify a new or an existing EPM Oracle instance for the deployment.

EPM System Configurator deploys dynamic components of EPM System products (components that can change during run-time) in the EPM Oracle instance directory. The default EPM Oracle instance location is MIDDLEWARE_HOME/user_projects/epmsystem1.

Typically, if you are installing all products on a single machine, for the first product you configure, create a new EPM Oracle instance. For each product after that, modify the existing EPM Oracle instance.

If you are installing in a distributed environment, create a new EPM Oracle instance on each machine.
You can scale up or scale out by installing and configuring additional instances. See the *Oracle Enterprise Performance Management System Deployment Options Guide*.

The following table describes options for EPM Oracle Instance configuration.

<table>
<thead>
<tr>
<th>EPM System Configurator</th>
<th>Description</th>
<th>Your Information</th>
</tr>
</thead>
<tbody>
<tr>
<td>Home directory for EPM Oracle instances</td>
<td>Specify the directory in which to create the EPM Oracle instance. The default EPM Oracle instance location is MIDDLEWARE_HOME/user_projects. To modify an existing EPM Oracle instance, browse to the EPM Oracle instance location.</td>
<td></td>
</tr>
<tr>
<td>EPM Oracle Instance name</td>
<td>Specify a name for the EPM Oracle instance. The default EPM Oracle instance name is epmsystem1. To modify an existing EPM Oracle instance, specify the EPM Oracle instance name.</td>
<td></td>
</tr>
</tbody>
</table>

**Task Selection**

- Select the products and tasks to configure for this machine, or click or select Next to select all the required tasks.

Task selection notes:

- In a new installation, all required tasks are selected by default.
- You can clear tasks that you want to perform later.
- Select “Check All” or “Uncheck All” to select or clear all tasks.
- You cannot clear mandatory tasks, which are selected by default. If the task is unavailable (grey) and selected (checked), the task is performed and you cannot clear it.
- EPM System Configurator automatically performs common tasks the first time you configure any component of a product, such as Shared Services registration. EPM System Configurator uses the Shared Services Registry to locate Shared Services.
- The EPM Workspace Java web application and the Shared Services Java web application are deployed when you select the Hyperion Foundation Deploy to Application Server task.

**Configure Database**

- Specify the database settings to use for the products that you selected on the Task Selection page. You can specify database connection information for each product separately, or use the same settings for multiple selected products.

For ease of deployment and simplicity, for a new installation, you can use one database for all products. In some cases, you might want to configure separate databases for products. Consider performance, roll-back procedures for a single application or product, and disaster recovery plans.

Database configuration notes:
- Ensure that the database is set up.
  If you have not already created the database, see “Preparing a Database” on page 38.
- A database type might not be available if one of the selected products doesn’t support it. In this case, configure this product separately. See the Oracle Enterprise Performance Management System Certification Matrix (http://www.oracle.com/technetwork/middleware/ias/downloads/fusion-certification-100350.html) for a list of supported databases for each product.
- If you are configuring an additional instance of Performance Management Architect or FDMEE for scaleout purposes, during database configuration, when you are prompted whether to drop and re-create the tables or reuse the existing database, select Reuse the existing database.
- Each Essbase Studio Server instance must have its own catalog database.
- If you are configuring an Oracle database, EPM System Configurator checks that the database was created with the correct character set. If not, you are prompted to correct it.

The following table describes options for database configuration.

<table>
<thead>
<tr>
<th>EPM System Configurator Fields</th>
<th>Description</th>
<th>Your Information</th>
</tr>
</thead>
<tbody>
<tr>
<td>Database Type</td>
<td>Select the database type.</td>
<td></td>
</tr>
<tr>
<td>Product Name</td>
<td>Select the product or products for which to specify database connection information. Changes you make apply to all selected products.</td>
<td></td>
</tr>
<tr>
<td>Server</td>
<td>For each product, specify the name of the computer or server hosting the database. For Oracle RAC, specify the VIP name or one of the node names as the server name.</td>
<td></td>
</tr>
<tr>
<td>Port</td>
<td>For each product, select the default or specify a custom server port number on which the database listens.</td>
<td></td>
</tr>
<tr>
<td>Service Name or SID, or Database Name</td>
<td>For each product, specify the name of the database. If you are using an Oracle RAC database, specify the RAC service name. During configuration of Financial Management with Oracle Database, EPM System Configurator configures Financial Management to use the Oracle Database clients that were installed with EPM System Configurator and updates the tnsnames.ora entry using a fixed name.</td>
<td></td>
</tr>
<tr>
<td>User Name</td>
<td>For each product, enter the database user name.</td>
<td></td>
</tr>
<tr>
<td>Password</td>
<td>For each product, enter the database user password.</td>
<td></td>
</tr>
<tr>
<td>Advanced database options for selected rows (Optional)</td>
<td>Click or select to specify additional information for selected products. See “Advanced Options for Database Configuration (Optional)” on page 110. You can use this option to configure Oracle RAC or to use an LDAP-based JDBC URL. Any values you enter on the Advanced Database Options page override the values entered on the main Database Configuration page.</td>
<td></td>
</tr>
</tbody>
</table>

When you configure EPM System products to use a database, EPM System Configurator ensures that the database is connected and is a supported database type. For a list of supported databases
for this release, see the Oracle Enterprise Performance Management System Certification Matrix (http://www.oracle.com/technetwork/middleware/ias/downloads/fusion-certification-100350.html).

You can use Windows Authentication for SQL Server connections if you use Microsoft SQL Server database. See “Setting Up Microsoft SQL Server Windows Authentication” on page 110.

Setting Up Microsoft SQL Server Windows Authentication

To set up Windows authentication for a SQL Server connection:

1. Configure SQL Server to use Windows authentication.
2. Grant your Windows account appropriate access to your database.
3. From the configuration task list, select Configure Database.
4. From the database list, select SQL Server.
5. Specify all database information except for Username and Password.

You must also specify a domain user for Windows services on the “Common Settings” page of EPM System Configurator, in Run Windows Services as non-local system account. See “Configure Common Settings” on page 114.

Advanced Options for Database Configuration (Optional)

The following table describes advanced options for database configuration.

<table>
<thead>
<tr>
<th>EPM System Configurator Fields</th>
<th>Description</th>
<th>Your Information</th>
</tr>
</thead>
<tbody>
<tr>
<td>Edit and use modified JDBC URL</td>
<td>Select to specify a JDBC URL for the database connection.</td>
<td></td>
</tr>
<tr>
<td>JDBC URL</td>
<td>Enter additional attributes for the database connection. If you enter a JDBC URL, it overrides the values that you entered in the Configure Database page. For an Oracle database, you can enter an LDAP-based JDBC URL. See Appendix B, “JDBC URL Attributes” for more information.</td>
<td></td>
</tr>
<tr>
<td>Use secure connection to the database (SSL)</td>
<td>Select to enable secure communication to the database. To use an SSL-enabled JDBC connection, you must also enter specific parameters. See Appendix B, “JDBC URL Attributes” for more information. See the Oracle Enterprise Performance Management System Security Configuration Guide to see whether selecting this option is appropriate for your SSL implementation.</td>
<td></td>
</tr>
<tr>
<td>Trusted Keystore</td>
<td>Enter or browse to the location of the keystore.</td>
<td></td>
</tr>
</tbody>
</table>
### Deploy to Application Server — Specify WebLogic Domain Information

Specify information about the WebLogic domain to which to deploy the Java web applications.

**Note:** If you are using Financial Close Management, EPM System and Oracle SOA Suite must be deployed to the same domain. If you have already configured Oracle SOA Suite, deploy EPM System products to the same domain.

If you are deploying EPM System products to a domain hosted on another machine and the domain was not created with EPM System Configurator, you must make manual updates to `jps-config.xml` and `system-jazn.xml` on the Administration Server box. See step 19 on page 137 and step 20 on page 141 of Chapter 7, “Manually Deploying EPM System Java Web Applications.”

The following table describes options to define the WebLogic Server domain.

<table>
<thead>
<tr>
<th>EPM System Configurator Fields</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Trusted Keystore Password</td>
<td>Enter the password for the keystore.</td>
</tr>
<tr>
<td>Data Tablespace</td>
<td>Enter the name of an existing tablespace used to store table data. The data tablespace is the logical portion of the database used to allocate storage for table data.</td>
</tr>
<tr>
<td>Index Tablespace</td>
<td>To specify the database tablespaces in which the indexes are created, select the index location.</td>
</tr>
<tr>
<td>Deploy web applications to an existing domain/Deploy web applications to a new domain</td>
<td>Specify whether to deploy Java web applications to an existing domain or to a new domain. If you create a new domain, the WebLogic Administration Server for this domain is created on this machine.</td>
</tr>
<tr>
<td>Domain Name</td>
<td>To define a new domain, enter a domain name. The default domain name is EPMSystem. To deploy to an existing domain, specify the domain to use for deployment.</td>
</tr>
<tr>
<td>Administration Server Host</td>
<td>For an existing domain, specify the Administration Server Host.</td>
</tr>
<tr>
<td>Administration Server Port</td>
<td>Accept the default port; or, to change the default, enter a port number that does not conflict with other applications installed on your machine.</td>
</tr>
<tr>
<td>EPM System Configurator Fields</td>
<td>Description</td>
</tr>
<tr>
<td>-------------------------------</td>
<td>-------------</td>
</tr>
<tr>
<td>Administrator User</td>
<td>Enter the Administrator user name for the domain. By default, EPM System Configurator uses <code>epm_admin</code>.</td>
</tr>
<tr>
<td>Administrator Password</td>
<td>Enter the Administrator password or enter a new password for a new domain. <strong>Tip:</strong> Make a note of this password.</td>
</tr>
<tr>
<td>Confirm Administrator Password</td>
<td>If you are defining a new domain, confirm the Administrator password.</td>
</tr>
</tbody>
</table>

### Deploy to Application Server: Oracle WebLogic

➢ Specify the application server options, or click or select **Next** to accept the default entries.

Deploy all EPM System products to a single WebLogic domain. The exceptions to this requirement are documented in “Deploying Financial Management, Financial Reporting, and Web Analysis on Windows in a UNIX-Based EPM System Deployment” on page 133.

The following table describes options for WebLogic application server deployment configuration.

<table>
<thead>
<tr>
<th>EPM System Configurator Fields</th>
<th>Description</th>
<th>Your Information</th>
</tr>
</thead>
</table>
| Deploy the web applications to a single managed server | Select this option for a deployment to a single managed server. If you select this option, all selected Java web applications are deployed to a single managed server in WebLogic. This option is available only:
  - When you are creating a new domain or extending an existing domain created in EPM System Configurator Release 11.1.2.4 on the machine hosting WebLogic Administration Server.
  - When you are vertically scaling to the same machine and the same domain and there is an existing single managed server.
  - When you are applying a maintenance release installation, unless you deployed to a single managed server in the earlier release, you must redeploy the Java web applications on all machines in the deployment. Then, you can restart EPM System Configurator and select this option.

To add products to a single managed server on a machine other than the machine hosting Foundation Services, select **Scale out single managed server on this machine**.

Deploying Java web applications to a single managed server reduces memory requirements and reduces startup time. You can have only one single managed server in an EPM System deployment. You can scale out the single managed server.

When you select this option, all managed server names are changed to `EPMServer0`, and all ports are changed to 9000 or 9443 (SSL). If you change a port, it is reflected in all the rows.

If you deselect this option after it is selected, the port values revert to the default individual ports; and if already configured to a different port, the values revert to the user-provided ports.
<table>
<thead>
<tr>
<th><strong>EPM System Configurator Fields</strong></th>
<th><strong>Description</strong></th>
<th><strong>Your Information</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td>Ear/War</td>
<td>Select the components to deploy.</td>
<td></td>
</tr>
<tr>
<td>Managed Server Name</td>
<td>Displays the WebLogic Managed Server name.</td>
<td></td>
</tr>
<tr>
<td>Port</td>
<td>Accept the default port; or, to change the default, enter a port number that does not conflict with other applications installed on your machine. See Appendix A, “Ports.”</td>
<td></td>
</tr>
<tr>
<td>SSL Port</td>
<td>Accept the default port or specify the SSL port to use for deployment. Specifying this port sets up SSL using the Java application server's default certificates. See the <em>Oracle Enterprise Performance Management System Security Configuration Guide</em> for recommendations on updating the Java application server with a valid certificate. If you are using SSL, you must disable the non-SSL port (or redirect it to the SSL port) in your Java application server after configuration to ensure secure communication.</td>
<td></td>
</tr>
<tr>
<td>Status</td>
<td>Indicates the deployment status</td>
<td></td>
</tr>
</tbody>
</table>

**Deployment notes:**

- To specify the logical address the products use to connect to the Java web application server, use the “Update Logical Address for Web Applications” task. Select this task when the Java web applications do not communicate with the Java web application server directly, as in the following scenarios:
  - You have set up a cluster with a load balancer.
  - You are using an SSL offloader.

  See “Configure Logical Address for Web Applications” on page 118.

- By default, EPM System Configurator deploys 32-bit binaries to 32-bit application servers on 32-bit operating systems, and 64-bit binaries to 64-bit application servers on 64-bit operating systems.

- The EPM Workspace Java web application and the Shared Services Java web application are deployed when you select the Hyperion Foundation Deploy to Application Server task.

- If you are implementing a custom authentication module, you must include its Java archive (**.jar) in the EPM Product classpath. See the *Oracle Enterprise Performance Management System Security Configuration Guide* for detailed procedures to implement a custom authentication module.

**What Happens During Deployment: WebLogic Server**

**Deployment notes:**

- EPM System Configurator deploys each application to the WebLogic Server domain you specified. For a new domain, the domain is created when the first application is deployed. Each application runs in a separate JVM, except for Shared Services, and EPM Workspace,
which run together and are deployed to the same managed server, or if you deploy multiple Java web applications to a single managed server.

- EPM System Configurator deploys the applications to `MIDDLEWARE_HOME`/user_projects/domains/domainName.
- EPM System Configurator deploys Oracle Enterprise Manager automatically when it deploys the first Java web application.
- Start and stop scripts are created in `EPM_ORACLE_INSTANCE/bin/`.
- For each application, in `EPM_ORACLE_INSTANCE/bin/deploymentScripts` there is a `setCustomParamsProduct.bat` file (.sh extension for UNIX), where you can change `JAVA_OPTIONS` when using start scripts.
- EPM System Configurator creates a cluster for each managed server.

**Foundation Configuration Tasks**

**Subtopics**

- Configure Common Settings
- Set Up Shared Services and Registry Database Connection
- Configure Logical Address for Web Applications
- Set up Connection to Oracle BI EE and Publisher
- Set Shared Services Admin User and Password
- Scale Out Single Managed Server on This Machine
- Configure Web Server

**Configure Common Settings**

➤ Specify settings for all products on all machines that have been identified in the Shared Services Registry so far, or click or select **Next** to accept the default values.

The “Configure Common Settings” page appears once per EPM System deployment.

If you configure on another machine and change any of these options, your new selections apply for all products and machines that you have not configured. If you reconfigure on a machine, the new settings apply to any products that you reconfigure and to future configurations.

The following table describes options for common settings configuration.

<table>
<thead>
<tr>
<th>EPM System Configurator Fields</th>
<th>Description</th>
<th>Your Information</th>
</tr>
</thead>
<tbody>
<tr>
<td>Create Windows Services for configured components (Windows only)</td>
<td>Select to configure each service as a Windows service that starts automatically when you start Windows.</td>
<td></td>
</tr>
<tr>
<td><strong>EPM System Configurator Fields</strong></td>
<td><strong>Description</strong></td>
<td><strong>Your Information</strong></td>
</tr>
<tr>
<td>----------------------------------</td>
<td>-----------------</td>
<td>---------------------</td>
</tr>
</tbody>
</table>
| Run Windows Services as non-local system account | Select to specify a non-local system account to configure Windows services, and then specify a user name and password. This user should be a member of the Administrators group.  
**Note:** Oracle recommends that you select this option. If you are using Reporting and Analysis in a distributed environment, you must update the service to run as a user who has read-write access to the shared data folder.  
If you do not select this option, EPM System Configurator creates Windows services using the local system account. Before you start the services, change them to use the appropriate domain account | |
| User name | Enter the user name for the user to launch the Windows services. If you leave this field blank, EPM System Configurator creates the services using the local system account. | |
| Password | Enter the password for the user used to launch Windows services. | |
| Use SSL for Web application server communications (requires manual configuration) | Depending on your SSL implementation, select to use SSL communication for all Java web applications. If this option is selected, URLs are in the form https.  
**Note:** Selecting this option does not enable secure communication for the Java web application server and does not create and load certificates into JREs and JDKs. See Oracle Enterprise Performance Management System Security Configuration Guide for more information.  
Optionally, you can deploy non SSL and reconfigure to use SSL. See the Oracle Enterprise Performance Management System Security Configuration Guide. | |
<p>| Mail Server Host | For products that integrate an e-mail feature, which uses standard Simple Mail Transfer Protocol (SMTP) protocol, specify the outgoing mail (SMTP) server. To enable e-mail alerts, you must specify the SMTP server name. | |
| Outgoing Port | Specify the mail server port number or accept the default value. If you are using SSL to communicate with the mail server, enter an SSL port. | |
| Incoming Port | Specify the mail server port number or accept the default value. If you are using SSL to communicate with the mail server, enter an SSL port. | |
| Administrator's Email Address | Specify the administrator's e-mail address to use for notifications. | |
| Use SSL to communicate with mail server | Select to use SSL communication for all e-mail communication. | |
| Use authentication to send email | Specify whether the mail server requires authentication, and then specify a user name and password. | |
| User Name | Specify the user name for the SMTP server. | |
| Password | Specify the password for the SMTP server. | |</p>
<table>
<thead>
<tr>
<th>EPM System Configurator Fields</th>
<th>Description</th>
<th>Your Information</th>
</tr>
</thead>
<tbody>
<tr>
<td>LCM Export Import Location</td>
<td>Enter the location from which to export and import Lifecycle Management artifacts. If you have a clustered environment and plan to use Lifecycle Management to migrate artifacts, specify a shared drive location. The shared location must be accessible to all Shared Services instances. When artifacts are exported using Lifecycle Management, the content is exported to a path on a shared disk; when imported, the content is read from the exported location on the shared disk. To enable data migration across distributed environments, specify a shared file system path defined using UNC syntax that is accessible from all the servers in the deployment. For example, to specify a shared drive location on Windows, enter <code>\sharedHost\sharedLocation</code>; on UNIX, enter: <code>/sharedHost/sharedLocation</code>. <strong>Note:</strong> If you are using Financial Management in a distributed environment, configure the folder with Read/Write access for all the Financial Management Application Servers in the environment. After configuration, restart all instances of Shared Services. For each instance, start Shared Services as a service using the login of a domain user who has access to the shared disk/folder.</td>
<td></td>
</tr>
<tr>
<td>Enable SSL Offloading</td>
<td>Select this option if you are using an SSL Offloader. See Oracle Enterprise Performance Management System Security Configuration Guide for more information.</td>
<td></td>
</tr>
<tr>
<td>External URL Host</td>
<td>Specify the host name for the external URL.</td>
<td></td>
</tr>
<tr>
<td>External URL Port</td>
<td>Port number for the external URL.</td>
<td></td>
</tr>
</tbody>
</table>

### Set Up Shared Services and Registry Database Connection

- Specify the settings for the Shared Services and Registry database.

When you initially configure EPM System products, you configure a database for use by Foundation Services, which includes the Shared Services Registry.

When you configure the Shared Services and Registry database, EPM System Configurator ensures that the database is connected and is a supported database type. If a database is detected, you may be prompted to choose whether to use the detected database or create a database.

If you are configuring an Oracle database, EPM System Configurator checks that the database was created with the correct character set. If not, you are prompted to correct it.

For a list of supported databases, see the Oracle Enterprise Performance Management System Certification Matrix (http://www.oracle.com/technetwork/middleware/ias/downloads/fusion-certification-100350.html).

For database prerequisites for this release, see “Preparing a Database” on page 38.

You can use Windows Authentication for SQL Server connections if you use Microsoft SQL Server database. See “Setting Up Microsoft SQL Server Windows Authentication” on page 110.

For more information about the Shared Services Registry, see “About the Shared Services Registry” on page 18.
**Note:** This task assumes that you have created the database. If you have not created a database, see “Preparing a Database” on page 38.

If you uninstall EPM System products and then reinstall into the same location, you cannot reuse the Shared Services and Registry database.

If you are applying the maintenance release to move from Release 11.1.2.0, 11.1.2.1, 11.1.2.2, or 11.1.2.3 to Release 11.1.2.4, select **Connect to a previously configured Shared Services database.**

The following table describes options for Shared Services and Registry Database configuration.

<table>
<thead>
<tr>
<th><strong>EPM System Configurator Fields</strong></th>
<th><strong>Description</strong></th>
<th><strong>Your Information</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td>Connect to a previously configured Shared Services database/Perform first-time configuration of Shared Services database</td>
<td>When you first configure the Shared Services and Registry database, choose <strong>Perform first-time configuration of Shared Services database.</strong> This database includes the Shared Services Registry, which is used to store common information for all products. When you configure in a distributed environment, you must configure the Shared Services database on every machine. On the first machine, you are setting up the Shared Services Registry. For configurations on subsequent machines, choose <strong>Connect to a previously configured Shared Services database.</strong> In this case, you are letting the machine know the location of the Shared Services Registry. For some products, you can use this same database to store product information. In this case, each product has its own table in this database. If you are applying the maintenance release to move from Release 11.1.2.0, 11.1.2.1, 11.1.2.2, or 11.1.2.3 to Release 11.1.2.4, select <strong>Connect to a previously configured Shared Services database</strong> and select a release number.</td>
<td></td>
</tr>
<tr>
<td>Database Type</td>
<td>Select the database type.</td>
<td></td>
</tr>
<tr>
<td>Server</td>
<td>Specify the name of the database server where the Shared Services database should be created. For Oracle RAC, specify the VIP name or one of the node names as the server name.</td>
<td></td>
</tr>
<tr>
<td>Port</td>
<td>Select the default or specify a custom Shared Services server port number on which the database listens.</td>
<td></td>
</tr>
<tr>
<td>Service Name or SID, or Database Name</td>
<td>Specify the name of the Shared Services database. If you are using an Oracle RAC database, specify the RAC service name.</td>
<td></td>
</tr>
<tr>
<td>User Name</td>
<td>Enter the name of the database user.</td>
<td></td>
</tr>
<tr>
<td>Password</td>
<td>Enter the password of the database user.</td>
<td></td>
</tr>
<tr>
<td>Advanced options (Optional)</td>
<td>Click or select to specify additional information. For more information on these options, see &quot;Advanced Options for Database Configuration (Optional)&quot; on page 110. You can use this option to configure Oracle RAC or an LDAP-based JDBC URL.</td>
<td></td>
</tr>
</tbody>
</table>
**Configure Logical Address for Web Applications**

Specify the logical address details to use for Java web applications, or click or select **Next** to accept the defaults:

Use this option to change the logical address for a deployed Java web application, for example if you are using a load balancer. This task lets you change the logical address without redeploying the Java web application. You can select this task during initial Java web application deployment.

For Financial Reporting linked reports to work, configure Financial Reporting so that the logical address of the Financial Reporting component is same as web server port (for example, 19000).

**Note:** You need to perform this task on only one machine in the deployment.

The following table describes options for configuring the logical addresses to use for Java web applications.

<table>
<thead>
<tr>
<th>EPM System Configurator Fields</th>
<th>Description</th>
<th>Your Information</th>
</tr>
</thead>
<tbody>
<tr>
<td>Set the logical web address for all the web applications to / Set the logical web address for each web application individually to</td>
<td>Select whether to apply the same address to all Java web applications or to apply a different address to each Java web application</td>
<td></td>
</tr>
<tr>
<td>Product Component</td>
<td>Shows the components for which a Java web application is deployed</td>
<td></td>
</tr>
<tr>
<td>Host</td>
<td>For each enabled module, review the host name to which this web server proxies requests.</td>
<td></td>
</tr>
<tr>
<td>Port</td>
<td>Review or update the port numbers for the application server listen ports for the applications. The port here must match the listen port of the deployed application.</td>
<td></td>
</tr>
<tr>
<td>SSL Port</td>
<td>Review or update the SSL port of the logical web address. If you are using SSL, you should disable the non-SSL port (or redirect it to the SSL port) in your Java application server after configuration to ensure secure communication.</td>
<td></td>
</tr>
<tr>
<td>Context</td>
<td>Review the context path. The context path is the part of the URL that accesses the deployed Java web application. For example, in the following URL, workspace is the context path: <a href="http://webserverhost.example.com:19000/workspace">http://webserverhost.example.com:19000/workspace</a></td>
<td></td>
</tr>
</tbody>
</table>

**Note:** Use fully qualified host names for all entries. For example, webserverhost.example.com.
Set up Connection to Oracle BI EE and Publisher

Use this task for integrating EPM Workspace with Oracle BI EE Release 10.1.3.4.2+. Before performing this configuration task, see the Oracle Enterprise Performance Management System Deployment Options Guide for prerequisite tasks and manual configuration tasks.


Specify the configuration information for EPM Workspace to work with Oracle BI EE and BI Publisher.

You must reconfigure the web server after you perform this task. If the web server is on this machine, select Configure Web Server at the same time you select Connection to Oracle BI EE and Publisher.

The following table describes options for configuring EPM Workspace to work with Oracle BI EE and BI Publisher.

<table>
<thead>
<tr>
<th>EPM System Configurator Fields</th>
<th>Description</th>
<th>Your Information</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Set up Oracle BI EE</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Host</td>
<td>Specify the host where Oracle BI EE is installed.</td>
<td></td>
</tr>
<tr>
<td>Port</td>
<td>Specify the port on which Oracle BI EE listens.</td>
<td></td>
</tr>
<tr>
<td>SSL Port</td>
<td>If you are using SSL, specify the SSL port.</td>
<td></td>
</tr>
<tr>
<td>URL Context</td>
<td>Review the context path. The context path is the part of the URL that accesses the deployed Java web application. The default value is /analytics.</td>
<td></td>
</tr>
<tr>
<td><strong>Set up Oracle BI Publisher</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Host</td>
<td>Specify the host where BI Publisher is installed.</td>
<td></td>
</tr>
<tr>
<td>Port</td>
<td>Specify the port on which Oracle Business Intelligence Publisher listens.</td>
<td></td>
</tr>
<tr>
<td>SSL Port</td>
<td>If you are using SSL, specify the SSL port.</td>
<td></td>
</tr>
<tr>
<td>URL Context</td>
<td>Review the context path. The context path is the part of the URL that accesses the deployed Java web application. The default value is /xmlpserver.</td>
<td></td>
</tr>
</tbody>
</table>

Set Shared Services Admin User and Password

For hardened security, reset the password for the Shared Services admin user. Optionally, specify an admin name other than the default, admin.

EPM System Configurator creates a preprovisioned user (called admin by default), which enables you to log on to Shared Services after configuration to create and provision users. EPM System
Configurator requires you to specify a new admin password during configuration. After configuration, make subsequent changes to the admin user password in the Shared Services Console. See the *Oracle Enterprise Performance Management System Security Configuration Guide*.

The following table describes options for resetting the Shared Services admin user password.

<table>
<thead>
<tr>
<th>EPM System Configurator Fields</th>
<th>Description</th>
<th>Your Information</th>
</tr>
</thead>
<tbody>
<tr>
<td>Admin Name</td>
<td>Optionally, specify a name other than the default name <code>admin</code> for the Shared Services administrator user.</td>
<td></td>
</tr>
<tr>
<td>Password</td>
<td>Enter a new password for the Shared Services admin user.</td>
<td></td>
</tr>
<tr>
<td></td>
<td><strong>Tip:</strong> Make a note of this password.</td>
<td></td>
</tr>
<tr>
<td>Re-type Password</td>
<td>To confirm the new password, re-enter the password for the Shared Services admin user.</td>
<td></td>
</tr>
</tbody>
</table>

**Scale Out Single Managed Server on This Machine**

If you have deployed EPM System Java web applications to a single managed server, use this option to scale out the server.

The *Scale out single managed server on this machine* option is only available when the following are true:

- The WebLogic Administration Server is not installed on the current machine.
- The single managed server is deployed on the WebLogic Administration Server.
- The single managed server is not already scaled out on the machine.


**Configure Web Server**

Specify web server information, or click or select **Next** to accept the defaults.

Information in this page comes from applications already deployed and recorded in the Shared Services Registry and applications you are deploying in this configuration sequence.

If you deploy any additional products, reconfigure the web Server and then restart it (or simply restart it if you configured Oracle HTTP Server to a shared drive) on each machine hosting Foundation Services.

Then, refresh EPM Workspace on each Foundation Services host machine in your deployment. See “Refreshing EPM Workspace” on page 106.
Note: Enabling SSL for the web server requires manual configuration. See the *Oracle Enterprise Performance Management System Security Configuration Guide*.

The following table describes options for the web server configuration.

<table>
<thead>
<tr>
<th>EPM System Configurator Fields</th>
<th>Description</th>
<th>Your Information</th>
</tr>
</thead>
<tbody>
<tr>
<td>Web Server Type</td>
<td>Select the web server. To manually configure a web server, select Setup Registry for manual web server configuration. See &quot;Manually Configuring Oracle HTTP Server&quot; on page 145 for details on manually configuring a web server.</td>
<td></td>
</tr>
<tr>
<td>Web Server Port</td>
<td>Specify the web server port. If you use SSL, ensure that the port number that you enter is a secure port.</td>
<td></td>
</tr>
<tr>
<td>HTTP Server Location</td>
<td>Specify or browse to the location of the web server. If you are using Oracle HTTP Server, you can configure to a shared drive location to simplify configuration in a distributed environment. Click Advanced Options and then specify the shared drive location. This shared location must be accessible from all web servers in the deployment and must be a UNC path, not a mapped drive. <strong>Note:</strong> If you are deploying components to both Windows and UNIX, and if Oracle HTTP Server is on both, you cannot configure to a shared drive; you must configure to a local drive.</td>
<td></td>
</tr>
<tr>
<td>Set the logical web address for the web applications to this web server</td>
<td>Select this option if you want EPM System Configurator to set the logical web address for all Java web applications to the web server. Use this option if you want to use the web server as the load balancer. If you do not select this option, EPM System Configurator uses the address of the physical Java web application as the logical address.</td>
<td></td>
</tr>
<tr>
<td>Component</td>
<td>Review the components for which the web server is being configured.</td>
<td></td>
</tr>
</tbody>
</table>

**Performance Management Architect Configuration Tasks**

**Configure Dimension Server**

- Specify the following options to configure Dimension Server ports, or click or select Next to accept the defaults.

The following table describes options for Dimension Server port configuration.

<table>
<thead>
<tr>
<th>EPM System Configurator Fields</th>
<th>Description</th>
<th>Your Information</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dimension Server Port</td>
<td>Specify the port to use, or click or select Next to keep the default port.</td>
<td></td>
</tr>
<tr>
<td>Dimension Server .JNI Bridge Port</td>
<td>Specify the port to use, or click or select Next to keep the default port.</td>
<td></td>
</tr>
</tbody>
</table>
Essbase Configuration Tasks

Subtopics

- Configure Essbase Server
- Essbase Studio Default Data Files Location

Configure Essbase Server

Specify the configuration information for Essbase Server, or click or select Next to accept the default settings. In general, Oracle recommends that you keep the default settings.

During configuration, EPM System Configurator automatically registers Essbase with Shared Services and writes the Shared Services connection information to `essbase.cfg` (in `ARBORPATH/bin`). In addition, it specifies environment variables in a file used to launch Essbase Server.

The following table describes the configuration options for Essbase Server.

<table>
<thead>
<tr>
<th>EPM System Configurator Fields</th>
<th>Description</th>
<th>Your Information</th>
</tr>
</thead>
<tbody>
<tr>
<td>Essbase Cluster Name</td>
<td>Specify a cluster name to create a cluster to provide active-passive Essbase failover support with write-back capabilities. You can include only two Essbase instances in a cluster. When you configure the first instance of Essbase on the first machine, you define the cluster. When you configure the second instance of Essbase on the second machine, select Assign to Existing Cluster, select the cluster, and then click OK to add this Essbase Server to the cluster you created on the first machine. The Essbase cluster name must be unique in a deployment environment. It cannot contain special characters or spaces. See “Configuring Active-Passive Essbase Clusters (Windows)” or “Configuring Active-Passive Essbase Clusters (UNIX)” in the Oracle Enterprise Performance Management System Deployment Options Guide.</td>
<td></td>
</tr>
<tr>
<td>Agent Port Number</td>
<td>Accept the default port number on which the Essbase listens for client requests. If you change the default value, enter a port number that is not used by other programs. Select Active to enable the agent to listen on this port.</td>
<td></td>
</tr>
<tr>
<td>SSL Agent Port Number</td>
<td>Specify the SSL port on which Essbase listens for client requests. Select Active to enable the agent to listen on this port.</td>
<td></td>
</tr>
<tr>
<td>Start Port</td>
<td>Accept the default number or enter the first port number on which the Essbase Server listens for client requests. The port value is stored in <code>essbase.cfg</code> (in <code>ARBORPATH/bin</code>).</td>
<td></td>
</tr>
<tr>
<td>EPM System Configurator Fields</td>
<td>Description</td>
<td>Your Information</td>
</tr>
<tr>
<td>-------------------------------</td>
<td>-------------</td>
<td>------------------</td>
</tr>
<tr>
<td>End Port</td>
<td>Enter the greatest port number that Essbase Server can use to connect. Essbase uses at least two ports for each application. For a large number of applications, you need a larger port range.</td>
<td></td>
</tr>
<tr>
<td>Full path to application location (ARBORPATH)</td>
<td>The location for applications. You can specify the path using universal naming convention (UNC) format. Oracle recommends using UNC if you are configuring Essbase for high availability on UNIX. <strong>Note:</strong> Previous versions of Essbase used ARBORPATH to refer to the installation location. If you are setting up an Essbase cluster on UNIX, the application location must be a shared drive or a UNC path. When you configure the second machine in the cluster, the location must match the location you specified for the first machine in the cluster.</td>
<td></td>
</tr>
<tr>
<td>Set the language to be used by Essbase (ESSSLANG)</td>
<td>The ESSLANG variable is a locale definition. For example, to support American English, set ESSLANG to English_UnitedStates.Latin1@Binary. Based on the value you specify, EPM System Configurator updates setEssbaseEnv.bat (in EPM_ORACLE_INSTANCE/EssbaseServer/essbaseserver1/bin) with the ESSLANG value and Essbase uses this value. Verify the operating system locale setting on your computer and select the matching ESSLANG value. The ESSLANG setting for a computer must agree with the locale setting of the computer's operating system. In addition, on a Windows machine, the ESSLANG value and the system locale must match the language of the Planning application that you plan to take offline. You must choose the correct ESSLANG setting for Essbase products to start successfully. The ESSLANG setting can affect the function of applications and databases. On Windows, if ESSLANG is already set on the computer (for example, if you have already installed Essbase), the current value is selected by default. On UNIX platforms, the ESSLANG setting defaults to English (Latin 1) regardless of the setting in the operating system. For more details about ESSLANG, see “ESSSLANG Variable” on page 123. For the full list of supported ESSLANG values, see Oracle Essbase Database Administrator's Guide.</td>
<td></td>
</tr>
<tr>
<td>Binding Host Name</td>
<td>Specify a Binding Host Name to have Essbase bind only to the IP address for the specified Binding Host Name. Otherwise, at startup, Essbase binds on all available IP addresses.</td>
<td></td>
</tr>
</tbody>
</table>

**ESSSLANG Variable**

Each Essbase Server installation requires that you set an ESSLANG value. See the topic on managing file encoding in the Oracle Essbase Database Administrator’s Guide.

The default value for ESSLANG is English (Latin1). For examples of ESSLANG values for non-English languages, see the list of supported locales in the Unicode-mode applications topic in the Oracle Essbase Database Administrator’s Guide.

During configuration, EPM System Configurator writes the ESSLANG value that you specify to the Shared Services Registry and to the launch file used to start Essbase.
For Administration Services and Provider Services, there is no prompt to specify the `ESSLANG` value; it is set to the default value “English_UnitedStates.Latin1@Binary.”

**Managing ESSLANG Settings**

The `ESSLANG` environment variable on the Essbase Server computer must retain the locale value of an application for as long as that application is in use.

**Note:** If the `ESSLANG` variable is changed after applications are created on an Essbase Server computer, those applications cannot be started.

To avoid possible database corruption, the `ESSSLANG` locale specification must be the same on client and Essbase Server in the following situations:

- The client is not Unicode-enabled.
- A Unicode-enabled client saves an outline over an existing outline on a version of the Essbase Server that is not Unicode-enabled.
- A Unicode-enabled client saves an outline to a non-Unicode application on a Unicode-enabled Essbase Server.

The `ESSSLANG` locale specifications on clients and Essbase Server computers can be different when a Unicode-enabled client views and updates an outline belonging to a Unicode-mode application.

For products that use Essbase RTC in a non-English environment, you must set `ESSSLANG` manually on the client.

**Essbase Studio Default Data Files Location**

- Specify the default location to be used for data files, or click or select **Next** to accept the default.

The following table describes options for Essbase Studio default data files location.

<table>
<thead>
<tr>
<th>EPM System Configurator Fields</th>
<th>Description</th>
<th>Your Information</th>
</tr>
</thead>
<tbody>
<tr>
<td>Default Data Files Location</td>
<td>Specify the default location for data files. By default the location is <code>EPM_ORACLE_INSTANCE/BPMS/bpms1/datafiles</code>.</td>
<td></td>
</tr>
</tbody>
</table>
Reporting and Analysis Configuration Tasks

Subtopics

- Configure Reporting and Analysis Framework Services
- Configure Reporting and Analysis Services
- Configure Financial Reporting RMI Ports
- Configure Reporting and Analysis Framework Agent Ports
- SQR Production Reporting

Configure Reporting and Analysis Framework Services

➤ Specify the following Reporting and Analysis Framework service information, or click or select Next to accept the defaults:

The following table describes options for Reporting and Analysis Framework Services configuration.

<table>
<thead>
<tr>
<th>EPM System Configurator Fields</th>
<th>Description</th>
<th>Your Information</th>
</tr>
</thead>
<tbody>
<tr>
<td>Repository Directory</td>
<td>Specify the directory where the Reporting and Analysis repository data is stored; for example: EPM_ORACLE_INSTANCE/ReportingAnalysis/data/RM1. If you are configuring for high availability, the repository directory must be a writable shared drive. All Reporting and Analysis instances must use the same shared file system location, for example: \SharedHost\SharedLocation\data\RM1. <strong>Note:</strong> If you are running this service as a Windows service, use a UNC path instead of a mapped drive. Doing so prevents potential permissions errors than can occur when Windows attempts to create a mapped drive at startup.</td>
<td></td>
</tr>
<tr>
<td>Port Range</td>
<td>Specify the port range to use for Reporting and Analysis Framework services.</td>
<td></td>
</tr>
</tbody>
</table>

Configure Reporting and Analysis Services

➤ Specify the following options to configure Interactive Reporting services, or click or select Next to accept the defaults.

The following table describes options for Interactive Reporting service configuration.

<table>
<thead>
<tr>
<th>EPM System Configurator Fields</th>
<th>Description</th>
<th>Your Information</th>
</tr>
</thead>
<tbody>
<tr>
<td>Port Range</td>
<td>Specify the range of ports to use, or click or select Next to keep the default port ranges.</td>
<td></td>
</tr>
</tbody>
</table>
Configure Financial Reporting RMI Ports

Specify the following options to configure the Financial Reporting RMI port range, or click or select Next to accept the defaults.

The following table describes options for Financial Reporting RMI port configuration.

<table>
<thead>
<tr>
<th>EPM System Configurator Fields</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Port Range</td>
<td>Specify the range of ports to use, or click or select Next to keep the default port ranges.</td>
</tr>
</tbody>
</table>

Configure Reporting and Analysis Framework Agent Ports

Specify the following options to configure Reporting and Analysis Agent ports, or click or select Next to accept the defaults.

The following table describes options for Reporting and Analysis Framework Agent port configuration.

<table>
<thead>
<tr>
<th>EPM System Configurator Fields</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Agent Port</td>
<td>Specify the port to use, or click or select Next to keep the default port ranges.</td>
</tr>
<tr>
<td>Agent RMI Port</td>
<td>Specify the port to use, or click or select Next to keep the default port ranges.</td>
</tr>
</tbody>
</table>

SQR Production Reporting

Select SQR Production Reporting from the Task Selection page and proceed through EPM System Configurator.

This task creates shortcuts for Production Reporting; however, no EPM System Configurator page appears, and you need not enter information.

Planning Configuration Tasks

Configure Planning RMI Server

Specify the following options to configure the Planning RMI Server port, or click or select Next to accept the defaults.

The following table describes options for Planning RMI Server port configuration.
### EPM System Configurator Fields

<table>
<thead>
<tr>
<th>EPM System Configurator Fields</th>
<th>Description</th>
<th>Your Information</th>
</tr>
</thead>
<tbody>
<tr>
<td>Port</td>
<td>Specify the port to use, or click or select Next to keep the default port.</td>
<td></td>
</tr>
<tr>
<td>SSL Port</td>
<td>Review or change the SSL port on which Financial Management listens for client requests. If you change the default value, enter a port number that is not used by other programs. Select Active to enable the server to listen on this port.</td>
<td></td>
</tr>
<tr>
<td>Max App Server Delay</td>
<td>Accept the default value or enter the time interval in seconds between when a change is made to an application and when the change is visible to users accessing the application through another application server.</td>
<td></td>
</tr>
<tr>
<td>Max Data Sync Delay</td>
<td>Accept the default value or enter the time interval in seconds between when a change is made to data and when the change is visible to users accessing the data through another application server.</td>
<td></td>
</tr>
<tr>
<td>Database Connection Pool Size</td>
<td>Specify the number of maximum pooled relational database connections for the application. Financial Management requires approximately 25 relational database connections per application.</td>
<td></td>
</tr>
<tr>
<td>Start Port</td>
<td>Accept the default number or enter the first port number in the range for the datasource connection.</td>
<td></td>
</tr>
<tr>
<td>End Port</td>
<td>Accept the default number or enter the last port number in the range for the datasource connection.</td>
<td></td>
</tr>
</tbody>
</table>

### Financial Management Configuration Tasks

#### Subtopics

- Financial Management — Configure Server
- Financial Management — Configure Cluster

You must run EPM System Configurator as an administrator to configure Financial Management.

### Financial Management — Configure Server

Specify the server information, or click or select Next to accept the defaults.
Financial Management — Configure Cluster

Specify the names of the application servers that participate in the cluster.

An application server cluster is a set of application servers running the same application. Clustered application servers provide load balancing and failover capability and enable the servers to be transparently maintained while applications remain available for users.

The following table describes options for Financial Management cluster configuration.

<table>
<thead>
<tr>
<th>EPM System Configurator Fields</th>
<th>Description</th>
<th>Your Information</th>
</tr>
</thead>
<tbody>
<tr>
<td>Defined Clusters</td>
<td>Select the cluster for which you want to specify servers. This list displays all clusters you have specified on any machine in the installation. You can also add, edit, or remove a cluster. When you add a cluster, specify the cluster name, and select <strong>Use Sticky Server</strong> if you want to direct all requests for a specific session to the same server.</td>
<td></td>
</tr>
<tr>
<td>Available Servers</td>
<td>Select the server that you want to include in the cluster, and click or select <strong>Add</strong>. The list displays all available servers. If there is only one server, it is listed here. Servers already in a cluster are not available and are not listed.</td>
<td></td>
</tr>
<tr>
<td>Servers in the Cluster</td>
<td>The list displays all servers in the currently selected cluster. To remove a server from the list, select it and click or select <strong>Remove</strong>.</td>
<td></td>
</tr>
</tbody>
</table>

If you use multiple application servers connected to one database server, you must ensure that the system clocks on the application servers are synchronized. If the clocks are not synchronized, the data being viewed might not be current.

**Note:** The synchronization between Financial Management application servers is based on system time. Changing the clock can affect this synchronization. For the time change to and from Daylight Savings Time, Oracle recommends that you stop the servers before the time change and restart them afterward.
Strategic Finance Configuration Tasks

Subtopics

- Strategic Finance Configure Port and Data Folder
- Strategic Finance Configure Web Services

Strategic Finance Configure Port and Data Folder

Specify the location of the Strategic Finance data directory, or click or select Next to accept the default.

The following table describes options for Strategic Finance configuration.

<table>
<thead>
<tr>
<th>EPM System Configurator Fields</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Data Directory Location</td>
<td>Accept the default, or specify the location for Strategic Finance data.</td>
</tr>
<tr>
<td>Service Port</td>
<td>Accept the default port, or specify a Strategic Finance service port.</td>
</tr>
</tbody>
</table>

Strategic Finance Configure Web Services

Specify the following options to configure the Strategic Finance Web server:

The following table describes options for Strategic Finance Web server configuration.

<table>
<thead>
<tr>
<th>EPM System Configurator Fields</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Enable Web Service</td>
<td>Select to activate the Strategic Finance Web services Application Programming Interface for the web.</td>
</tr>
<tr>
<td>Strategic Finance Server</td>
<td>Accept the default, or specify the Strategic Finance server to associate with.</td>
</tr>
</tbody>
</table>

Financial Close Management Configuration Tasks

Subtopics

- Configure Content Management System Location (Optional)
- Deploy to SOA

Configure Content Management System Location (Optional)

If you have an existing content management system, you can configure Financial Close Management to link to the documents stored in it.
Specify the location of a Document Management System to use.

The following table describes options for Financial Close Management custom settings configuration.

<table>
<thead>
<tr>
<th>EPM System Configurator Fields</th>
<th>Description</th>
<th>Your Information</th>
</tr>
</thead>
<tbody>
<tr>
<td>URL</td>
<td>Enter the URL of the system hosting the Document Management system.</td>
<td></td>
</tr>
<tr>
<td></td>
<td>For example for Release 10g, enter:</td>
<td></td>
</tr>
<tr>
<td></td>
<td><a href="http://host:port/">http://host:port/</a></td>
<td></td>
</tr>
<tr>
<td></td>
<td>For example for Release 11g, enter:</td>
<td></td>
</tr>
<tr>
<td></td>
<td><a href="http://host:port/_dav/cs/">http://host:port/_dav/cs/</a></td>
<td></td>
</tr>
</tbody>
</table>

**Deploy to SOA**

Note that this configuration task has a required configuration sequence.

See “Financial Close Management and Tax Governance Installation Checklist” on page 64 for more information.

Select **Deploy to SOA** from the Task Selection page and proceed through EPM System Configurator. You must restart WebLogic Administration Server after completing this task.

Note that there is no EPM System Configurator page for this task and you need not enter information.

For Financial Close Management, during the execution of this task, EPM System Configurator performs the following tasks:

- EPM System Configurator embeds information about these products in the SOA component and then deploys the SOA composites:
  - Financial Management
  - Financial Reporting
- If you configured a mail server host on the Common Settings page of EPM System Configurator, EPM System Configurator uses that information to configure the SOA email driver.
- For Financial Close Management, EPM System Configurator creates the following new users — fccSysAdmin, armSysAdmin, sdmSysAdmin, taxSysAdmin.

If you must redeploy SOA at any point, note the following:

- Make sure there are no running tasks or alerts.
- Make sure there are no open periods. If there are open periods, lock them.
- Make sure there are no running DataLoads.
- Make sure there are no open schedules.

**Tax Management Configuration Tasks**

**Deploy to SOA**

Note that this configuration task has a required configuration sequence.

See “Financial Close Management and Tax Governance Installation Checklist” on page 64 for more information.

Select **Deploy to SOA** from the Task Selection page and proceed through EPM System Configurator. You must restart WebLogic Administration Server after completing this task.

Note that there is no EPM System Configurator page for this task and you need not enter information.

**Performing Silent Configurations**

Silent configurations automate the configuration process so that you can configure EPM System products on multiple computers without manually specifying configuration settings on each machine.

To enable silent configurations, record your configuration settings in a response file. You can then run a silent configuration from the command line, using the configuration options that were saved in the response file.

**Note:** If you are performing a silent configuration using Remote Desktop, run it using an admin console session. (Launch Remote Desktop using `mstsc /admin`).

To record configuration settings and run a silent configuration:

1. **Navigate to the directory that contains EPM System Configurator. By default, the directory is**
   `EPM_ORACLE_HOME/common/config/version_number`.
2. **From a command line prompt, enter configtool.bat -record filename or ./configtool.sh -record filename, where filename includes an absolute path or file name.**
   The file is saved in XML format, but you need not save the file with a `.xml` extension.
   EPM System Configurator launches.
   If you do not specify a file name, EPM System Configurator creates the file for you:
   `EPM_ORACLE_HOME/common/config/version_number/configResponse.xml`.
3. **Proceed through the EPM System Configurator, specifying the options that you want to record.**
Note: When you are recording silent configurations, you can proceed through EPM System Configurator only one time. (You cannot select go back to the Product Selection page to continue with more configuration tasks.) If you return to the Task Selection page, the response file is rerecorded.

Configuration options are recorded in the response file, which is in XML format. Passwords are saved in encrypted format in the response file.

You are now ready to configure products in silent mode.

4 Copy the response file to the machine on which you configure products. You can also copy the file to a network drive that is accessible from the machines you want to configure.

5 From the command line, enter a command:

```
configtool.bat -silent filename
```
or
```
./configtool.sh -silent filename
```

The configuration runs in the background.

You can also record configuration settings from within EPM System Configurator. To record configuration settings, during configuration, on the Configuration Confirmation page, click or select Save, browse to a location, specify a file name, and click or select Save. The file is saved in the same format as for silent configurations.

Silent response files are not compatible between earlier releases and Release 11.1.2.4. If you created silent response files for use with any earlier release of EPM System, you must re-create them for use with EPM System Release 11.1.2.4.

You can modify the response file later to change configuration options.

If you are configuring a vertically scaled environment, you do not need separate silent response files with unique ports if you add the following entry to the response file:

```
<auto_port_tick>true</auto_port_tick>
```

You can use the same silent response file in different environments even when each environment has a different set of passwords for the database, WebLogic, and the Shared Services Admin user. For security reasons, in the generated silent file, password values are stored in encrypted format but EPM System Configurator also supports unencrypted format. Oracle recommends that you change the password properties for Database, WebLogic, and Shared Services in the silent file to the following format:

Database Password
```
<property name="password" encrypt="true">clearTextPassword</property>
```

Weblogic Admin Password in applicationServerDeployment section
```
<property name="adminUser">epm_admin</property>
<property name="adminPassword" encrypt="true">clearTextPassword</property>
```

Shared Services Admin Password in bean name="customConfiguration" for Foundation
```
<property name="adminUserName">admin</property>
<property name="adminPassword" encrypt="true">clearTextPassword</property>
```

Copy a version of the file for each environment and replace clearTextPassword with the appropriate password for that environment. After executing the silent file for each environment,
for security reasons, if the file is writable by EPM System Configurator, the password is stored in the file in an encrypted format.

**Deploying Financial Management, Financial Reporting, and Web Analysis on Windows in a UNIX-Based EPM System Deployment**

All Java web applications in an EPM System deployment must be deployed on either all Windows machines or on all UNIX machines. However, if your Java web applications are deployed on UNIX, you can deploy Financial Management, Financial Reporting, and Web Analysis Java web applications on Windows using EPM System Configurator, deploying to a separate domain on Windows.

**What Happens During Configuration**

During product configuration, EPM System Configurator completes these actions:

- Performs the configuration tasks that you selected
- Configures each product to start as a Windows service, if you select this option on the “Configure Common Settings” page during configuration
- Creates a default Shared Services Administrator role in Native Directory when you configure Foundation Services. This is the only preprovisioned user created. Subsequently, when you use EPM System Configurator to register products with Shared Services, the Shared Services Administrator role is provisioned with the product administrator role.
- If you are configuring products on Windows 2008 or Windows 2012 that require IIS, EPM System Configurator automatically installs Windows server roles for IIS if they are not already installed.

**Troubleshooting Configuration**

Configuration results are noted in `EPM_ORACLE_INSTANCE/diagnostics/logs/config/configtool_summary.log`.

If you encounter errors, perform these tasks:

- Configure products individually.
- See the *Oracle Enterprise Performance Management System Installation and Configuration Troubleshooting Guide* for information about configuration checks, debugging using logs, troubleshooting methodology, and solutions to common configuration issues.
Tip: EPM System Configurator provides a script, `ziplogs`, in `EPM_ORACLE_INSTANCE/bin`. You can run this script to provide files to Support for troubleshooting installation and configuration issues. This tool collects all log files, including logs for installation, configuration, and validation and registry reports if you have used those tools, and saves them in ZIP file in `EPM_ORACLE_INSTANCE/diagnostics/ziplogs`. 
Manually Deploying EPM System Java Web Applications

In This Chapter

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For detailed information about managing Java web applications with WebLogic Server, see http://download.oracle.com/docs/cd/E15523_01/wls.htm.

Assumptions and Prerequisites

- You are an experienced Java web application server administrator. If you are not an experienced Java web application server administrator, you should automatically configure and deploy EPM System Java web applications using EPM System Configurator.
- You have installed EPM System products using EPM System Installer on all machines in the environment.

Manually Deploying Java Web Applications

Deployment notes:

To manually deploy EPM System Java web applications:

1. Launch EPM System Configurator using the following command, and perform all required configuration tasks except for the “Configure Web Server” task. Note that the “Deploy to Application Server” task is not available.

   Windows:
   EPM_ORACLE_HOME/common/config/version_number/configtool-manual.bat

   UNIX:
   EPM_ORACLE_HOME/common/config/version_number/configtool-manual.sh
Launching EPM System Configurator with this command hides the Java web application deployment tasks and skips the product registration with Shared Services task.

See Chapter 6, “Configuring EPM System Products in a New Deployment.”

2 Repeat step 1 on each machine in a distributed environment.

3 Launch the Fusion Middleware Configuration Wizard: From the command line, change the directory to `MIDDLEWARE_HOME/oracle_common/common/bin` and launch `config.cmd` (Windows) or `config.sh` (UNIX).

4 Select Create a New WebLogic Domain, and then click Next.

   **Note:** All EPM System products must be deployed to the same domain. If you have already deployed EPM System products, select “Extend an Existing WebLogic Domain.” Additionally, if you are using Financial Close Management or Tax Governance, EPM System and Oracle SOA Suite must be deployed to the same domain. If you have already configured Oracle SOA Suite, deploy EPM System products to the same domain by selecting “Extend an Existing WebLogic Domain.”

A list displays all the Java web applications installed in the Middleware home. For EPM System products, the list is generated from the configuration templates that were installed during installation with EPM System Installer.

5 Select Generate a domain configured automatically to support the following products, then select the EPM System Java web applications you want to deploy, and then click Next.

Oracle recommends that you simultaneously configure all Java web applications.

6 Enter the domain name and location, and then click Next.

   By default, the domain location is `MIDDLEWARE_HOME/user_projects/domains`.

7 Enter a user name and password for the domain administrator, and a domain description, and then click Next.

8 Select a WebLogic domain startup mode (Development or Production), specify which JDK to use, and then click Next.

   You must select Production mode. Oracle recommends that you select the default JDK.

9 Configure the JDBC data sources, and then click Next.

   For each Java web application, specify the database connection information that you entered during database configuration with EPM System Configurator.

   If you configured different databases for different products, enter database connection information separately for each Java web application. Select the Java web application, and then enter the connection information.

   **Tip:** EPMSystemRegistry is the Shared Services and Registry database.

The Configuration Wizard tests the database connection.
10 Review the Connection Result log, and then click Next.

11 For Managed Servers, Clusters and Machines, on the Configure Managed Servers panel, review the default listen ports and optionally change them. See Appendix A, “Ports” for a list of default ports.

Note: If you change the ports from the defaults, you must also change them in the stop scripts located in MIDDLEWARE_HOME/user_projects/domains/EPMSYSTEM/bin.

12 For a distributed deployment, for Managed Servers, Clusters and Machines, on the Configure Machines panel, create a machine for each machine in the deployment.

13 For each managed server, assign the managed server to a machine.

14 (Optional) For Managed Servers, Clusters and Machines, on the Configure Clusters panel, you can set up a cluster. You can also set up a cluster after you've completed the deployment. For details on Java web application server clustering, see “Clustering Java Web Applications in a WebLogic Manual Deployment” in the Oracle Enterprise Performance Management System Deployment Options Guide.

15 Review the Configuration Summary, and then click Create to create the domain and deploy the Java web applications.

Java web applications are deployed in offline mode.

16 For a distributed deployment:

   a. Start the Node Manager on each machine in the deployment.
   b. On the WebLogic Administration Server machine, pack the domain that you created.
   c. Copy the pack to each machine in the deployment.
   d. Unpack on each machine in the deployment.

   WebLogic Server unpacks all Java web applications on each machine in the deployment. On each machine, it runs the managed servers that you associated with the machine.

17 In a distributed deployment, on each machine other than the machine hosting WebLogic Administration Server, navigate to the domain location and change the current the EPM Oracle instance name (for example, epmsystem1) to the actual EPM Oracle instance name for that instance (for example, epmsystem2) in all files.

18 On the machine hosting WebLogic Administration Server, start WebLogic Administration Server and navigate to the WebLogic Administration Console. Check that the Node Manager for each machine in the deployment is reachable. If not: synchronize Node Managers using `nmEnroll` command.

19 Open MIDDLEWARE_HOME/user_projects/domains/domainName/config/fmwconfig/system-jazn-data.xml in a text editor, and after the last `<grant>` line in the file, add the following: (Note that these changes are also required if you deployed EPM System products to a domain hosted on another machine, and the domain was not created with EPM System Configurator.)

Oracle provides EPM_ORACLE_HOME/common/config/11.1.2.0/resources/deployment/xml/custom-jazn-data.xml.
<grantee>
  <codesource>
    <url>file:${EPM_ORACLE_HOME}/common/CSS/11.1.2.0/lib/css.jar</url>
  </codesource>
</grantee>
<permissions>
  <permission>
    <class>oracle.security.jps.service.policystore.PolicyStoreAccessPermission</class>
    <name>context=APPLICATION, name=*</name>
    <actions>getApplicationPolicy</actions>
  </permission>
</permissions>
</grant>
<grant>
  <grantee>
    <codesource>
      <url>file:${EPM_ORACLE_HOME}/common/jlib/11.1.2.0/lib/registry-api.jar</url>
    </codesource>
  </grantee>
  <permissions>
    <permission>
      <class>oracle.security.jps.service.credstore.CredentialAccessPermission</class>
      <name>context=SYSTEM, mapName=epm_sys_reg_cred_map, keyName=*</name>
      <actions>read, write, update, delete</actions>
    </permission>
  </permissions>
</grant>
<grant>
  <grantee>
    <codesource>
      <url>file:${EPM_ORACLE_HOME}/common/raframeworkrt/11.1.2.0/lib/annotation.jar</url>
    </codesource>
  </grantee>
  <permissions>
    <permission>
      <class>oracle.security.jps.service.credstore.CredentialAccessPermission</class>
      <name>context=SYSTEM, mapName=repository_cred_map, keyName=*</name>
      <actions>read, write, update, delete</actions>
    </permission>
  </permissions>
</grant>
<grant>
  <grantee>
    <codesource>
      <url>file:${EPM_ORACLE_HOME}/products/Essbase/eas/server/lib/eascsf.jar</url>
    </codesource>
  </grantee>
  <permissions>
    <permission>
      <class>oracle.security.jps.service.credstore.CredentialAccessPermission</class>
      <name>context=APPLICATION, name=*</name>
      <actions>getApplicationPolicy</actions>
    </permission>
  </permissions>
</grant>
<permission>
  <class>oracle.wsm.security.WSIdentityPermission</class>
  <name>resource=SHAREDSERVICES</name>
  <actions>assert</actions>
</permission>
</permissions>
</grant>
<grant>
  <grantee>
    <codesource>
      <url>file:${common.components.home}/modules/oracle.wsm.agent.common_11.1.1/wsm-agent-core.jar</url>
    </codesource>
  </grantee>
  <permissions>
    <permission>
      <class>oracle.wsm.security.WSIdentityPermission</class>
      <name>resource=SHAREDSERVICES(11.1.2.0)</name>
      <actions>assert</actions>
    </permission>
  </permissions>
</grant>
<grant>
  <grantee>
    <codesource>
      <url>file:${common.components.home}/modules/oracle.wsm.agent.common_11.1.1/wsm-agent-core.jar</url>
    </codesource>
  </grantee>
  <permissions>
    <permission>
      <class>oracle.wsm.security.WSIdentityPermission</class>
      <name>resource=FCCTaskExecutionComposite</name>
      <actions>assert</actions>
    </permission>
  </permissions>
</grant>
<grant>
  <grantee>
    <codesource>
      <url>file:${common.components.home}/modules/oracle.wsm.agent.common_11.1.1/wsm-agent-core.jar</url>
    </codesource>
  </grantee>
  <permissions>
    <permission>
      <class>oracle.wsm.security.WSIdentityPermission</class>
      <name>resource=FCCTaskExecutionComposite</name>
      <actions>assert</actions>
    </permission>
  </permissions>
</grant>
<grant>
  <grantee>
    <codesource>
      <url>file:${common.components.home}/modules/oracle.wsm.agent.common_11.1.1/wsm-agent-core.jar</url>
    </codesource>
  </grantee>
  <permissions>
    <permission>
      <class>oracle.wsm.security.WSIdentityPermission</class>
      <name>resource=FCCTaskExecutionComposite</name>
      <actions>assert</actions>
    </permission>
  </permissions>
</grant>
<grant>
  <grantee>
    <codesource>
      <url>file:${common.components.home}/modules/oracle.wsm.agent.common_11.1.1/wsm-agent-core.jar</url>
    </codesource>
  </grantee>
  <permissions>
    <permission>
      <class>oracle.wsm.security.WSIdentityPermission</class>
      <name>resource=FCCTaskExecutionComposite</name>
      <actions>assert</actions>
    </permission>
  </permissions>
</grant>
<grant>
<grantee>
<codesource>
<url>file:${common.components.home}/modules/oracle.wsm.agent.common_11.1.1/wsm-agent-core.jar</url>
</codesource>
</grantee>
<permissions>
<permission>
<class>oracle.wsm.security.WSIdentityPermission</class>
<name>resource=FinancialClose</name>
<actions>assert</actions>
</permission>
</permissions>
</grant>
<grant>
<grantee>
<codesource>
<url>file:${common.components.home}/modules/oracle.wsm.agent.common_11.1.1/wsm-agent-core.jar</url>
</codesource>
</grantee>
<permissions>
<permission>
<class>oracle.wsm.security.WSIdentityPermission</class>
<name>resource=FINANCIALCLOSE</name>
<actions>assert</actions>
</permission>
</permissions>
</grant>
<grant>
<grantee>
<codesource>
<url>file:${common.components.home}/modules/oracle.wsm.agent.common_11.1.1/wsm-agent-core.jar</url>
</codesource>
</grantee>
<permissions>
<permission>
<class>oracle.wsm.security.WSIdentityPermission</class>
<name>resource=AccountReconciliation</name>
<actions>assert</actions>
</permission>
</permissions>
</grant>
<grant>
<grantee>
<codesource>
<url>file:${common.components.home}/modules/oracle.wsm.agent.common_11.1.1/wsm-agent-core.jar</url>
</codesource>
</grantee>
<permissions>
<permission>
<class>oracle.wsm.security.WSIdentityPermission</class>
<name>resource=ACCOUNTRECONCILIATION</name>
<actions>assert</actions>
</permission>
</permissions>
</grant>
<url>file:${soa.oracle.home}/soa/modules/oracle.soa.workflow_11.1.1/bpm-services.jar</url>
</codesource>
</grantee>
<permissions>
<permission>
<class>oracle.security.jps.JpsPermission</class>
<name>IdentityAssertion</name>
<actions>*</actions>
</permission>
</permissions>
</grant>
<grant>
<grantee>
<codesource>
<url>file:${soa.oracle.home}/soa/modules/oracle.soa.workflow_11.1.1/bpm-services.jar</url>
</codesource>
</grantee>
<permissions>
<permission>
<class>oracle.security.jps.JpsPermission</class>
<name>VerificationService.createInternalWorkflowContext</name>
<actions>read,write,update,delete</actions>
</permission>
</permissions>
</grant>
<grant>
<grantee>
<codesource>
<url>file:${soa.oracle.home}/soa/modules/oracle.soa.workflow_11.1.1/bpm-services.jar</url>
</codesource>
</grantee>
<permissions>
<permission>
<class>oracle.security.jps.service.credstore.CredentialAccessPermission</class>
<name>credstoressp.credstore.BPM-CRYPTO.BPM-CRYPTO</name>
<actions>read,write</actions>
</permission>
</permissions>
</grant>
</jazn-policy>
</custom-jazn-data>

20 Open MIDDLEWARE_HOME/userProjects/domains/domainName/config/fmwconfig/jps-config.xml in a text editor and make the following changes. (Note that these changes are also required if you deployed EPM System products to a domain hosted on another machine and the domain was not created with EPM System Configurator.

- To the <serviceInstances> set in the document, add the following:

  <serviceInstance provider="jaas.login.provider" name="idstore.loginmodule">
    <description>Identity Store Login Module</description>
    <property
      value="oracle.security.jps.internal.jaas.module.idstore.IdStoreLoginModule"
      name="loginModuleClassName" />
  </serviceInstance>
Modify the existing `<serviceInstances> "idstore.ldap"` to add the virtualize property:

```xml
<serviceInstance provider="idstore.ldap.provider" name="idstore.ldap">
  ...
  <property name="virtualize" value="true"/>
</serviceInstance>
</serviceInstances>
```

To the `<jpsContexts default="default">` section, add the following:

```
<serviceInstanceRef ref="idstore.loginmodule" />
```

21 (Optional) To simplify the startup of WebLogic servers, edit the `boot.properties` file on every server in the domain to provide the domain user and password. This file is located in `MIDDLEWARE_HOME/user_projects/domains/domainName/servers/product/security`.

Oracle provides `processBootProperties.*` scripts to generate boot properties for all managed servers.

**Note:** Note that these inputs are stored in clear text until the servers are started, after which this data is encrypted by WebLogic.

22 Create symlinks using the following commands:

**UNIX:**

```
"ln -s SOURCE_FILE TARGET_FILE"
```

**Windows 2008:**

```
"cmd /c mklink TARGET_FILE SOURCE_FILE"
```

For the following files:

- "`EPM_ORACLE_HOME/common/SharedServices/11.1.2.0/lib/audit-client.jar`" to "`EPM_DOMAIN_HOME/lib/audit-client.jar`"
- "`EPM_ORACLE_HOME/common/SharedServices/11.1.2.0/lib/wlpool.jar`" to "`EPM_DOMAIN_HOME/lib/wlpool.jar`"
- "`EPM_ORACLE_HOME/common/CSS/11.1.2.0/lib/css.jar`" to "`EPM_DOMAIN_HOME/lib/css.jar`"
- "`EPM_ORACLE_HOME/common/CSS/11.1.2.0/lib/ldapbp.jar`" to "`EPM_DOMAIN_HOME/lib/ldapbp.jar`"
- "`EPM_ORACLE_HOME/common/jlib/11.1.2.0/registry-api.jar`" to "`EPM_DOMAIN_HOME/lib/registry-api.jar`"
- "`EPM_ORACLE_HOME/common/jlib/11.1.2.0/ctg_custom.jar`" to "`EPM_DOMAIN_HOME/lib/ctg_custom.jar`"
- "`EPM_ORACLE_HOME/common/misc/11.1.2.0/opencsv-1.8.jar`" to "`EPM_DOMAIN_HOME/lib/opencsv-1.8.jar`"
23 **Start the WebLogic Administration Console, and then start the managed servers.**

Note that when you manually deploy Java web applications, use the start scripts in `DOMAIN_HOME/bin`.

You can start Java web applications on all machines using the WebLogic Administration Console. To do so, you must first run `MIDDLEWARE_HOME/oracle_common/common/bin/setNMProps.sh(cmd)` to modify `nodemanager.properties`.

Additionally, `StartScriptEnabled` must be set to `true` (for example, `StartScriptEnabled=true`) in `MIDDLEWARE_HOME/wlserver_10.3/common/nodemanager/nodemanager.properties` to start Java web applications on all machines.

During the managed server startup, the Shared Services Registry is updated with values for the EPM System Java web applications you deployed.

24 **Stop all EPM System Java web applications.**

25 **Perform manual steps for Financial Close Management and Tax Governance:**

Go to `EPM_ORACLE_INSTANCE/bin` and run the following commands:

```
epmsys_registry.bat addproperty #APP_SERVER_ID/@adminUser ADMIN_USER
epmsys_registry.bat addencryptedproperty #APP_SERVER_ID/@adminPassword ADMIN_PASSWORD
```

Where `APP_SERVER_ID` is the ID of the WebLogic AppServer component in the Shared Services Registry.

For more information about editing the Shared Services Registry, see “Updating the Shared Services Registry” in the *Oracle Enterprise Performance Management System Deployment Options Guide*.

26 **Launch EPM System Configurator using the following command and select the “Configure Web Server” task.**

Windows:

```
EPM_ORACLE_HOME/common/config/
version_number/configtool-manual.bat
```

UNIX:

```
EPM_ORACLE_HOME/common/config/
version_number/configtool-manual.sh
```

EPM System Configurator performs the registration with Shared Services and “Configure Web Server ” tasks.

If you are also want to configure Essbase while you are manually deploying Java web applications, when you first ran `configtool-manual.sh`, the **Configure Essbase Server** task was not available. It is available in this second pass of configuration. If needed, select it now.

27 **For Financial Close Management and Tax Governance: Start WebLogic Administration Server and then the SOA managed server. Then, start EPM System Configurator and select Deploy to SOA.**

28 **If you are using FDMEE, perform additional manual steps. See “Additional Postdeployment Steps for FDMEE” on page 144.**
If you are manually deploying FDMEE, perform the following procedures after you deploy to configure Oracle Data Integrator with FDMEE.

To complete the FDMEE deployment:

1. Stop all EPM System Java web applications.
2. Start the WebLogic Administration Console and log in.
3. Target odiMasterRepository and odiWorkRepository data sources to ErpIntegrator.
4. Save changes.
5. Navigate to MIDDLEWARE_HOME/oracle_common/common/bin and launch wlst.cmd|sh.
6. Execute the following commands:

```java
connect(adminUser, adminPassword, adminUrl)
cREATEcred(map="oracle.odi.credmap", key="SUPERVISOR", user="SUPERVISOR", password="SUNOPSIS", desc="ODI SUPERVISOR Credential")
cREATEcred(map="oracle.odi.credmap", key="ODI-DOMAIN", user=adminUser, password=adminPassword, desc="ODI-DOMAIN Credential")
```

For information about clustering Java web applications in a manual deployment, see the Oracle Enterprise Performance Management System Deployment Options Guide.
Where adminUser and adminPassword are the WebLogic administrator user and password and adminUrl is the WebLogic Admin URL.

7 Start the FDMEE Java web application.

## Configuring JMS Servers

If you are using Financial Management Web Services, FDMEE, Financial Close Management, or Tax Governance, you must configure JMS Servers when you manually deploy web applications.

➢ To configure JMS Servers:

1 Stop all managed servers.

2 From a command prompt, navigate to `MIDDLEWARE_HOME/wlserver_10.3/server/bin` and run `setWLSEnv.cmd|.sh`.

3 Run the following command:

```
MIDDLEWARE_HOME/oracle_common/webservices/bin/jrfws-async-createUDDs.py --domain_home domain_home_directory --cluster your_cluster_name
```

Where `your_cluster_name` is the cluster name for the HFMWeb managed server.

4 Repeat step 3 for the ERPIntegrator managed server and the FinancialClose managed server.

## Extending a Deployment

If you have deployed only some EPM System Java web applications, you can extend the deployment by deploying additional Java web applications. For example, if you previously deployed Planning, you can extend the deployment to deploy Profitability and Cost Management. Use the manual deployment steps in this chapter, however, instead of selecting “Create a New WebLogic Domain,” select “Extend an Existing WebLogic Domain.”

## Manually Configuring Oracle HTTP Server

You can choose to manually configure the Oracle HTTP Server installed by EPM System Installer instead of configuring it with EPM System Configurator.

If you are using a supported web server other than the Oracle HTTP Server that is installed by EPM System Installer, you must manually configure the web server.

Manual web server configuration notes:

Manual configuration of IIS is not supported.

This section assumes you have already used EPM System Configurator to configure EPM System components and deployed Java web applications manually or by using EPM System Configurator.
To manually configure Oracle HTTP Server:

1. Launch EPM System Configurator: Change to `EPM_ORACLE_INSTANCE\BIN` and then launch `configtool.bat|sh`.

2. In EPM System Configurator, on the Task Selection panel, select Uncheck All, expand Hyperion Foundation, select Configure Web Server, and then click Next.

3. In Configure Web Server, from Web Server Type, select Setup Registry for manual web server configuration, and then click Next.

4. Complete the steps in EPM System Configurator and, when configuration is complete, click Finish.

   EPM System Configurator creates autogenerated files in `EPM_ORACLE_INSTANCE/httpConfig/autogenerated/ohs` to simplify manual web server configuration.

5. Copy the autogenerated files to a location of your choice related to your installation of Oracle HTTP Server.

6. If you configured Oracle HTTP Server and EPM System components to use SSL, update files as follows:
   - Update the port in `ssl.conf` in the “Listen” directive and in the `<VirtualHost>` tree-directive.
   - Update the port in `httpd.conf` in the “Listen” directive to any port other than the SSL port.
   - Update the port in `HYSL-WebLogic-autogenerated.conf` in the `<VirtualHost>` tree-directive to any port other than the SSL port.

7. Update `HYSL-WebLogic-autogenerated.conf` as follows:
   - If necessary, update all “LoadModule” directives so that the `${ORACLE_HOME}` environment variable is correct.
   - Update the `OHS_LISTEN_PORT` alias and replace it with the actual value, for example `<VirtualHost *:OHS_LISTEN_PORT>` would be `<VirtualHost *:19000>.
   - Update the following lines with the actual file location:
     - Include "conf/epm_online_help.conf"
     - Include "conf/epm_rewrite_rules.conf"
     - Include "conf/epm.conf"

   For example:
   - Include "path_to_conf_files/epm_online_help.conf"
   - Include "path_to_conf_files/epm_rewrite_rules.conf"
   - Include "path_to_conf_files/epm.conf"

8. In the Oracle HTTP Server installation folder, browse to `httpd.conf`, open it in a text editor, and make the following changes:
   - Comment all the lines that contain `ssl.conf` and `mod_wl_ohs.conf`.
   - Add the following lines to the end of the file:
Include path_to_modified_conf_files/HYSL-WebLogic-autogenerated.conf

Include path_to_modified_conf_files/ssl.conf

where ssl.conf is the autogenerated file

You can use UNC-style paths on Windows only if the Oracle HTTP Server Windows Service is running as a user account that has network access and has "Logon as a service" rights.

c. Update the “Listen” directive with the actual web server's port.

9 If you are using Financial Close Management or Tax Governance, perform the following tasks:

a. On the machine hosting the web server, copy the autogenerated file
   EPM_ORACLE_INSTANCE/httpConfig/autogenerated/soa/mod_wl_ohs.conf,
   and rename it to mod_wl_soa_ohs.conf.

b. Open mod_wl_soa_ohs.conf in a text editor and replace
   soa_server_host: soa_server_port and
   admin_server_host: admin_server_port with the actual values for the SOA host
   and port and the WebLogic Administration Server host and port.

c. Copy the modified mod_wl_soa_ohs.conf to EPM_ORACLE_INSTANCE/
   httpConfig/ohs/config/OHS/ohs_component/conf.

d. Open EPM_ORACLE_INSTANCE/httpConfig/ohs/config/OHS/ohs_component/
   httpd.conf in a text editor and add the following line inside of the <VirtualHost>
   tag:
   Include "conf/mod_wl_soa_ohs.conf"

   For example:
   
   <VirtualHost *:19000>
     include "conf/mod_wl_ohs.conf"
     Include "conf/epm_online_help.conf"
     Include "conf/epm_rewrite_rules.conf"
     Include "conf/epm.conf"
     Include "conf/mod_wl_soa_ohs.conf"
   </VirtualHost>

e. Restart Oracle HTTP Server.

10 Update the WEB_SERVER component in the Shared Services Registry so that the port property is the
actual value of the port on which Oracle HTTP Server is running. For example, to change the actual port
to 19000:

a. Generate a registry report by launching EPM_ORACLE_INSTANCE/bin/
   epmsys_registry.bat. Enter the Shared Services database password when prompted.

b. Look for the WEB_SERVER component with properties "type" = MANUAL, "port" =
   -1, and "instance_home" with the EPM_ORACLE_INSTANCE that is configured.

c. Look for the object id for the WEB_SERVER component, and copy it into following
   command:
For example:

```
EPM_ORACLE_INSTANCE/bin/epmsys_registry.bat updateproperty
#object_id/
@property_name property_value
```

11 **Restart Oracle HTTP Server and EPM System servers.**
After configuration, you must configure user directories, provision the functional administrator, and deactivate the default administrator (admin) account. See Oracle Enterprise Performance Management System User Security Administration Guide.

To set up EPM System components to work with Oracle Web Services Manager, see the Oracle Enterprise Performance Management System Deployment Options Guide.

See the Oracle Enterprise Performance Management System Deployment Options Guide for additional optional tasks you can perform to customize your deployment.

See your product’s Administration Guide for additional tasks to perform.

Performance Management Architect Manual Configuration Tasks

The following table describes Performance Management Architect manual configuration tasks.

<table>
<thead>
<tr>
<th>Task</th>
<th>Reference</th>
</tr>
</thead>
<tbody>
<tr>
<td>If you are using Performance Management Architect in an environment that includes Oracle Web Services Manager, and both are deployed to the same domain, manually target WSM-PM AND MDS-OWSM datasources to Performance Management Architect.</td>
<td>“Targeting WSM-PM and MDS-OWSM to Performance Management Architect” on page 150</td>
</tr>
</tbody>
</table>
Targeting WSM-PM and MDS-OWSM to Performance Management Architect

If you are using Performance Management Architect in an environment that includes Oracle Web Services Manager, and both are deployed to the same domain, manually target WSM-PM and MDS-OWSM datasources to Performance Management Architect.

**Note:** Do not remove any existing targets.

To target WSM-PM AND MDS-OWSM to Performance Management Architect:

1. Start WebLogic Administration Server if it is not started, and log in to WebLogic Administration Server Console if you are not already logged in.
2. In the domain structure, select Services and then Data Sources.
3. Select the mds-owsm datasource.
4. Select the Targets tab.
5. Click Lock & Edit at Change Center.
6. Select EpmaDataSync and EpmaWebReports, and then click Save.
7. Select wsm-pm from Deployments.
8. Select the Targets tab.
9. Select the Component checkbox to select all components.
10. Click Change Targets.
11. Select EpmaDataSync and EpmaWebReports, and then click Yes.
12. Click Activate Changes from Change Center.
13. In Windows Services, restart the Oracle Hyperion EPMA Data Synchronizer and Oracle Hyperion EPMA Web Tier services.

To verify that the datasources are targeted properly, launch the following URLs, providing the WebLogic administrator credentials:

- [http://machineName:EpmaWebReports_Port/wsm-pm/validator](http://machineName:EpmaWebReports_Port/wsm-pm/validator)
- [http://machineName:EpmaDataSync_Port/wsm-pm/validator](http://machineName:EpmaDataSync_Port/wsm-pm/validator)

### Essbase Manual Configuration Tasks

**Subtopics**

- Setting User Limits on 64-bit AIX
- Enabling Client Lookup by Cluster Name

The following table describes Essbase manual configuration tasks.
Table 23  Essbase Manual Configuration Tasks

<table>
<thead>
<tr>
<th>Task</th>
<th>Reference</th>
</tr>
</thead>
<tbody>
<tr>
<td>(UNIX) Set User Limits on 64-bit AIX.</td>
<td>&quot;Setting User Limits on 64-bit AIX&quot; on page 151</td>
</tr>
<tr>
<td>Enable clients to look up Essbase by cluster name instead of URL.</td>
<td>&quot;Enabling Client Lookup by Cluster Name&quot; on page 151</td>
</tr>
<tr>
<td>If you are using Essbase on the Oracle Exalytics In-Memory Machine, edit Essbase.cfg to set OracleHardwareAcceleration TRUE.</td>
<td></td>
</tr>
</tbody>
</table>

**Setting User Limits on 64-bit AIX**

When running Essbase Server on a 64-bit AIX platform, you must change the user limits to increase the size of a data segment. The following table lists suggested values:

<table>
<thead>
<tr>
<th>User Limit</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>time (seconds)</td>
<td>unlimited</td>
</tr>
<tr>
<td>file (blocks)</td>
<td>unlimited</td>
</tr>
<tr>
<td>data (kbytes)</td>
<td>unlimited</td>
</tr>
<tr>
<td>stack (kbytes)</td>
<td>No higher than 128 MB for 64-bit and 64 MB for 32-bit</td>
</tr>
<tr>
<td>memory (kbytes)</td>
<td>unlimited</td>
</tr>
<tr>
<td>coredump (blocks)</td>
<td>unlimited</td>
</tr>
<tr>
<td>nofiles (descriptors)</td>
<td>4096, with a maximum of less than 32,000</td>
</tr>
</tbody>
</table>

**Enabling Client Lookup by Cluster Name**

Essbase clients can use a URL to connect to an Essbase cluster, in the form: http(s):// host:port/aps/Essbase?ClusterName=clusterName. To simplify login, Essbase clients can use the cluster name directly instead of the URL. If you want to enable client login using the cluster name, you must first specify a property to configure Provider Services. The cluster name is resolved by the Provider Services servers specified in configuration files:

> To enable lookup by cluster name:

1. **Modify essbase.cfg and essbase.properties as follows:**
   - For server-to-server communication, modify essbase.cfg to specify the Provider Services server to use, in the following format, separating each URL with a semicolon:
     
     ```
     ApsResolver http(s)://host:port/aps
     ```
   - For client-to-server communication, modify essbase.properties to specify the Provider Services server to use, in the following format:
Reporting and Analysis Manual Configuration Tasks

The following table describes Reporting and Analysis manual configuration tasks.

<table>
<thead>
<tr>
<th>Task</th>
<th>Reference</th>
</tr>
</thead>
<tbody>
<tr>
<td>For Reporting and Analysis Framework on IPV6 systems, update default-domain.cfg, in EPM_ORACLE_HOME/common/raframeworkrt/11.1.2.0/lib, to include the following entry at the end of the file: policies:iiop:server_address_mode_policy:publish_hostname=&quot;true&quot;</td>
<td></td>
</tr>
</tbody>
</table>

Financial Close Management and Tax Governance Manual Configuration Tasks

Subtopics

- Setting Up the Keystore for Message Protection
- Configuring the WebLogic Domain to OID, MSAD, SunOne
- Start Managed Servers
- Raising the Maximum Capacity in the Connection Pool
- Increasing the Connection Pool of the External LDAP Provider
- Assigning Email Addresses to System Users
- Configuring Actionable Emails

This section describes additional tasks required to configure Financial Close Management and Tax Governance. Perform these tasks after you install and configure Oracle SOA Suite and Financial Close Management or Tax Governance.

Caution! You must perform these tasks before you can start and run Financial Close Management or Tax Governance. Perform the tasks in the order in which they are listed.

The following table describes Financial Close Management and Tax Governance manual configuration tasks.

Note: For the procedures that follow, note that if you selected Production Mode when you created the WebLogic domain, to make changes in the WebLogic Administration Console you must first click Lock & Edit in the Change Center. After you make the changes, click Activate Changes in the Change Center.
<table>
<thead>
<tr>
<th>Task</th>
<th>Reference</th>
</tr>
</thead>
<tbody>
<tr>
<td>Set up the keystore for message protection.</td>
<td>“Setting Up the Keystore for Message Protection” on page 154</td>
</tr>
<tr>
<td>Configure the SOA Server to connect to Oracle Internet Directory, Microsoft Active Directory (MSAD), or SunOne.</td>
<td>“Configuring the WebLogic Domain to OID, MSAD, SunOne” on page 155</td>
</tr>
<tr>
<td>Start managed servers in order.</td>
<td>“Start Managed Servers” on page 156</td>
</tr>
<tr>
<td>If you are using Microsoft SQL Server, remove EDNLocalTxDataSource and EDNDataSource.</td>
<td></td>
</tr>
<tr>
<td>In some cases, SOA contexts are configured with EPM System Configurator. If SOA contexts are not automatically configured, you must manually configure the SOA contexts.</td>
<td>step 9 in “Manually Configuring Oracle HTTP Server” on page 145</td>
</tr>
<tr>
<td>Manual configuration is required in the following cases:</td>
<td></td>
</tr>
<tr>
<td>• If you manually deployed the Java web applications.</td>
<td></td>
</tr>
<tr>
<td>• You configured the web server in a different instance than Financial Close Management or Tax Governance.</td>
<td></td>
</tr>
<tr>
<td>• The SOA and the WSM-PM Java web applications are deployed to different managed servers/clusters.</td>
<td></td>
</tr>
<tr>
<td>If you change the configuration at any time to change the logical address of the Java web applications (using the “Update Logical Address for Web Applications” page of EPM System Configurator, you must perform the following tasks:</td>
<td></td>
</tr>
<tr>
<td>1. Make sure there are no running tasks or alerts.</td>
<td></td>
</tr>
<tr>
<td>Make sure there are no running DataLoads.</td>
<td></td>
</tr>
<tr>
<td>Make sure there are no running DataLoads.</td>
<td></td>
</tr>
<tr>
<td>2. Start EPM System Configurator and from the Task Selection page, from the Financial Close, Financial Close Management section, select Deploy to SOA.</td>
<td></td>
</tr>
<tr>
<td>3. Click Next, continue with the configuration, and then click Finish.</td>
<td></td>
</tr>
<tr>
<td>4. Unlock any locked periods.</td>
<td></td>
</tr>
<tr>
<td>5. Connect to soainfra datasource and run the following query:</td>
<td></td>
</tr>
<tr>
<td>UPDATE WFTASKDISPLAY SET httpport = <code>&lt;LWA Port&gt;</code> , httpsport=0, hostname = <code>&lt;LWA Host&gt;</code> WHERE URI like '/ workflow/%';</td>
<td></td>
</tr>
<tr>
<td>Raise the maximum capacity of the connection pool.</td>
<td>“Raising the Maximum Capacity in the Connection Pool” on page 156</td>
</tr>
<tr>
<td>Increase the connection pool of the external LDAP provider.</td>
<td>“Increasing the Connection Pool of the External LDAP Provider” on page 157</td>
</tr>
<tr>
<td>If you are working in a clustered environment with Financial Close Management or Tax Governance and SOA, to ensure that the email password is configured for all servers, the password used to authenticate email (as entered on the “Common Settings” configuration task panel), must be of the type “Use Clear Text Password”. To change the password type, use Enterprise Manager.</td>
<td>Enterprise Manager documentation</td>
</tr>
</tbody>
</table>
After performing these steps you can also configure Account Reconciliation Manager to work with FDMEE and create and manage Integration Types. See the Oracle Hyperion Financial Close Management Administrator’s Guide. You can download integration xml files from My Oracle Support.

Setting Up the Keystore for Message Protection

To set up the keystore for message protection:

1 First, create a keystore using the keytool command:

   Go to /Oracle/Middleware/user_projects/$DOMAIN_HOME/config/fmwconfig in the server running the WebLogic Administration Server hosting your EPM System domain and execute the following command:

   keytool -genkeypair -keyalg RSA -alias aliasName -keypass password -keystore keystoreName.jks -storepass password -validity 3600

   Note: If the keytool command is not recognized, the Path environmental variable might not include JDK. Add the JDK to the Path variable using the following command: set PATH=%PATH%;C:\Oracle\Middleware\JDK160_35\bin;..

   For additional information, see “How to Create and Use a Java Keystore” in the “Setting up the Keystore for Message Protection” section of the Oracle Fusion Middleware Security and Administrator’s Guide for Web Services 11g Release 1 (11.1.1). (http://download.oracle.com/docs/cd/E14571_01/web.1111/b32511/setup_config.htm#BABJHIBI).

2 Next, set up message protection for Web Services:


   b. Expand WebLogic Domain and then select EPMSystem (or the domain name used for the EPM System deployment).

   c. Right-click EPMSystem, select Security, and then select Security Provider Configuration.

   d. Scroll to the Keystore section, expand the section, and then click Configure.

   e. For Keystore Path, enter the path and name for the keystore that you created, for example ./EPMKeystore.jks).

   f. Enter the keystore password that you used when creating the keystore and confirm it.
g. Enter an alias and password for both Signature Key and Encryption Key, using the alias and password that you used when creating the keystore. Confirm the passwords, and then click OK. The alias and password for the signature and encryption keys define the string alias and password used to store and retrieve the keys.

3 Log out and restart Oracle Enterprise Manager Fusion Middleware Control so the changes take effect, and then restart EPM System managed servers.

For details about setting up message protection, see http://docs.oracle.com/cd/E17904_01/web.1111/b32511/setup_config.htm#BABHIBHA in the Oracle® Fusion Middleware Security and Administrator’s Guide for Web Services 11g Release 1 (11.1.1).

**Configuring the WebLogic Domain to OID, MSAD, SunOne**

This procedure is required to configure the WebLogic domain, or in the case of Financial Close Management, Tax Governance, or the SOA Server, to communicate with an external provider, such as OID, MSAD, or SunOne. Shared Services must also be configured to work with this external provider. Follow the sections specific to your provider.


➢ To connect OID, MSAD, or SunOne to the SOA Server:

1 Log in to the WebLogic Administration Console if you are not already logged in.

2 Click Security Realms on the left, click myrealm, and then click the Providers tab.

3 Click Add, enter the following details, and then click OK.

For OID:

- Name - OID
- Type - OracleIntenetDirectoryAuthenticator

For MSAD:

- Name - MSAD
- Type - ActiveDirectoryAuthenticator

For SunOne:

Name - SunOne

You can ignore the prompt to restart the server; you will be restarting at the end of this procedure.
4. Click the provider you just added, click the **Provider Specific** tab, enter the following details for your provider, and then click **OK**.

- Host
- Port
- Principal
- Credential
- User Base DB
- Group Base DB
- User from Name Filter (MSAD only)
- User Name Attribute (MSAD only)

You can leave the rest of the default values unchanged.

5. Click **OID**, **MSAD**, or **SunOne**, and for **Control Flag**, select **SUFFICIENT**.


---

**Start Managed Servers**

- Start each managed server in the following order:
  - WebLogic Administration Server
  - Hyperion Foundation Services Managed Server
  - Oracle HTTP Server - Oracle Process Manager (ohsInstanceInstanceNumber)
  - In any order:
    - Financial Close Management Java web application, if you are using Financial Close Management
    - Tax Governance Java web application, if you are using Tax Governance
    - Financial Management Web Services Managed Server, if you are using Financial Management with Financial Close Management
    - Financial Reporting Java web application, if you are using Financial Reporting with Financial Close Management
    - FDMEE, if you are using Account Reconciliation Manager
  - Oracle SOA managed server

---

**Raising the Maximum Capacity in the Connection Pool**

If necessary, fine tune the data source to size the connection pool.
To raise the maximum capacity in the connection pool:

1. In the WebLogic Administration Console (http://WebLogic_Admin_Host:WebLogic_Admin_Port/console), select Services, then JDBC, and then Datasources.

2. Select your data source, then Connection Pool, and then Maximum Capacity.

3. Edit settings to increase capacity as follows:

   financialclose_datasource—150

If resource errors specific to these data sources are logged, increase their capacity:

- EDNDataSource (Oracle Database only)
- EDNLocalTxDataSource (Oracle Database only)
- mds-owsm
- mds-soa
- EPMSYSTEMRegistry
- OraSDPMDatasource
- SOADatasource
- SOALocalTxDataSource

**Note:** You can increase the capacity for each data source by a different amount, depending on the needs for your installation.

If the Financial Close Management or Tax Governance log includes this error message:

```
java.sql.SQLException: Could not retrieve datasource via JNDI url jdbc/data source' weblogic.jdbc.extensions.PoolDisabledSQLException: weblogic.common.resourcepool.ResourceDisabledException: Pool data source is Suspended, cannot allocate resources to applications..]
```

then you have exceeded the maximum connections allowed in the connection pool for the specified data source, and you need to increase the capacity of the connection pool.

### Increasing the Connection Pool of the External LDAP Provider

1. Shut down all servers (Admin with all managed server) if they are running.
2. Go to domain_home\config\fmwconfig\ovd\default.
3. Make a backup of adapters.os_xml.
4. Open adapters.os_xml and find <ldap id="XYZ" version="0">, where XYZ is the name of the external LDAP provider configured from WebLogic Administration Console.
5. Change <maxPoolSize> from 10 to 100 or 150. For example:
Assigning Email Addresses to System Users

During configuration, EPM System Configurator creates system users for use in Financial Close Management or Tax Governance — fccSysAdmin, armSysAdmin, sdmSysAdmin, taxSysAdmin. In case of system errors with background processes, email notifications are sent to these Financial Close Management or Tax Governance system users. You specify which email addresses you want to associate with each system user.

➢ To assign email addresses to Financial Close Management and Tax Governance system users:

1. Log in to the WebLogic Administration Console.
2. Select Security Realms, then myrealm, and then Users and Groups.
3. Search for a user (fccSysAdmin, armSysAdmin, sdmSysAdmin, taxSysAdmin), and then click the user name to modify its properties.
4. Click the Attributes tab, and for the Mail attribute, click the Value cell, enter the email address you want to assign for this user in the text box, and then press Enter.
5. Repeat these steps for each of the Financial Close Management and Tax Governance system users.

Configuring Actionable Emails

Configure actionable emails so that links in email notifications allow users to perform Submit, Approve, and Reject actions.

➢ To configure actionable emails:

1. Log in to Enterprise Manager Console.
2. Expand the soa folder.
3. Right-click soa-infra, select Administration, and then System MBean Browser.
4. In the System Mbean Browser, expand the Application Defined MBeans folder, then oracle.as.soainfra.config, and then expand each of the Servers:soa_server(x) folders.
5. In each of the soa_server(x) folders, expand WorkflowConfig and then select human-workflow bean.
In the Attributes tab of the Application Defined MBeans:WorkflowConfig:human-workflow, select the attribute named WorkflowCustomClasspathURL and set its value to file:///MIDDLEWARE_HOME/EPMSystem11R1/products/FinancialCloseManagement-Common/lib/fcm-wf-custom.jar. For example:


Click Apply.

FDMEE Manual Configuration Tasks

The following table describes FDMEE manual configuration tasks.

<table>
<thead>
<tr>
<th>Task</th>
<th>Reference</th>
</tr>
</thead>
<tbody>
<tr>
<td>For FDMEE used with Account Reconciliation Manager: If you change the configuration at any time to change the logical address of the Java web applications (using the “Update Logical Address for Web Applications” page of EPM System Configurator, you must perform the following tasks:</td>
<td></td>
</tr>
<tr>
<td>1. Make sure there are no running DataLoads.</td>
<td></td>
</tr>
<tr>
<td>2. Start EPM System Configurator and from the Task Selection page, from the Financial Close, Account Reconciliation section, select Deploy to SOA.</td>
<td></td>
</tr>
<tr>
<td>3. Click Next, continue with the configuration, and then click Finish.</td>
<td></td>
</tr>
<tr>
<td>4. Connect to soainfra datasource and run the following query:</td>
<td></td>
</tr>
<tr>
<td>UPDATE WFTASKDISPLAY SET httpport = &lt;LWA Port&gt; , httpsport=0, hostname = &lt;LWA Host&gt; WHERE URI like '/workflow/%';</td>
<td></td>
</tr>
</tbody>
</table>
Performing a Maintenance Release Installation for EPM System Products

In This Chapter

- Supported Paths to Release 11.1.2.4 ................................................................. 161
- About Maintenance Release Installations ............................................................. 162
- Maintenance Release Installation Checklist ........................................................... 162
- Financial Close Management Maintenance Release Installation Checklist .................... 163
- Downloading and Extracting Installation Files ......................................................... 164
- Performing Maintenance Release Installation Prerequisite Tasks ............................... 165
- Installing and Configuring EPM System Products in a Maintenance Installation ............... 171
- Performing Manual Configuration Tasks in a Maintenance Installation .......................... 174
- Validating the Deployment and Generating a Deployment Report ............................... 179
- Performing a Maintenance Release Installation for EPM System Clients ....................... 180

Supported Paths to Release 11.1.2.4

You can move to EPM System Release 11.1.2.4 from the following releases:

Table 27  Supported paths

<table>
<thead>
<tr>
<th>Path From Release . . .</th>
<th>To Release 11.1.2.4</th>
</tr>
</thead>
<tbody>
<tr>
<td>11.1.2.x</td>
<td>Apply the maintenance release to move to Release 11.1.2.4.</td>
</tr>
<tr>
<td></td>
<td><strong>Note:</strong> For Financial Close Management, applying the maintenance release is supported only from Release 11.1.2.2 or 11.1.2.3.</td>
</tr>
<tr>
<td></td>
<td>For Financial Management, applying the maintenance release is supported only from Release 11.1.2.1, 11.1.2.2 or 11.1.2.3.</td>
</tr>
<tr>
<td></td>
<td>When you apply the maintenance release, you must install to the same machine as the previous installation. Out of place installations are not supported. To move to a new environment, first apply the maintenance release to move to Release 11.1.2.4, and then use Lifecycle Management to migrate the deployment to a new environment.</td>
</tr>
<tr>
<td>11.1.1.4.x</td>
<td>Upgrade to Release 11.1.2.3, and then apply the maintenance release to move to Release 11.1.2.4.</td>
</tr>
<tr>
<td>11.1.1.0.x to 11.1.1.3.x</td>
<td>Apply the maintenance release to move to Release 11.1.1.4, upgrade to Release 11.1.2.3, and then apply the maintenance release to move to Release 11.1.2.4.</td>
</tr>
</tbody>
</table>
About Maintenance Release Installations

If you are applying the maintenance release to move from EPM System Release 11.1.2.0, 11.1.2.1, 11.1.2.2, or 11.1.2.3 to Release 11.1.2.4, use the procedures in this chapter.

Maintenance installation notes:

- You cannot configure Oracle HTTP Server to a shared drive when you apply a maintenance release installation, unless you configured Oracle HTTP Server to a shared drive in Release 11.1.2.3.
- If you deployed Java web applications to a single managed server, you must deploy in the same way in this release. If you deployed Java web applications to separate managed servers, you must deploy in the same way in this release.
- When you apply the maintenance release, you must install to the same machine as the previous installation. Out of place installations are not supported.
- If your previous release deployment spanned two domains across Windows and UNIX to support Financial Management, maintain those deployments when you apply the maintenance release.
- You must log in as the same user that installed and configured the previous release.

Maintenance Release Installation Checklist

**Note:** If you are applying the maintenance release to Financial Close Management, follow the installation and configuration sequence described in “Financial Close Management Maintenance Release Installation Checklist” on page 163.

<table>
<thead>
<tr>
<th>Table 28</th>
<th>Maintenance release installation checklist</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Task</strong></td>
<td><strong>Reference</strong></td>
</tr>
<tr>
<td>Meet the system requirements. If your database environment needs to be upgraded, perform the database upgrade before you proceed. See the database documentation for details.</td>
<td><em>Oracle Enterprise Performance Management System Certification Matrix</em> (<a href="http://www.oracle.com/technetwork/middleware/ias/downloads/fusion-certification-100350.html">http://www.oracle.com/technetwork/middleware/ias/downloads/fusion-certification-100350.html</a>)</td>
</tr>
<tr>
<td>Download and extract the installation files.</td>
<td>“Downloading and Extracting Installation Files” on page 164</td>
</tr>
<tr>
<td>Perform the maintenance release installation prerequisite tasks.</td>
<td>“Performing Maintenance Release Installation Prerequisite Tasks” on page 165</td>
</tr>
<tr>
<td>Install and configure EPM System products.</td>
<td>“Installing and Configuring EPM System Products in a Maintenance Installation” on page 171</td>
</tr>
<tr>
<td>Perform any required manual configuration tasks for your products.</td>
<td>“Performing Manual Configuration Tasks in a Maintenance Installation” on page 174</td>
</tr>
<tr>
<td>Validate the installation using EPM System Diagnostics and generate a deployment report.</td>
<td>“Validating the Deployment and Generating a Deployment Report” on page 179</td>
</tr>
</tbody>
</table>
Financial Close Management Maintenance Release Installation Checklist

The following table provides an overview of the installation and configuration process for Oracle SOA Suite and Financial Close Management if you are moving from Financial Close Management Release 11.1.2.2 or 11.1.2.3 to Release 11.1.2.4.

Note the following about applying the maintenance release to Financial Close Management:

- The maintenance release installation option is supported only from Financial Close Management Release 11.1.2.2 or 11.1.2.3.
- Before you apply the maintenance release, make sure there are no schedules with an Open status.
- Before you apply the maintenance release, make sure to lock all open and closed periods. After applying the maintenance release, open all the locked periods and again close the periods that were previously closed.
- If .NET Framework is not installed, EPM System Installer installs it for you.

Table 29  Roadmap for Applying the Maintenance Release to Financial Close Management

<table>
<thead>
<tr>
<th>Task</th>
<th>Reference</th>
</tr>
</thead>
<tbody>
<tr>
<td>The following products must all use the same database schema. If you are adding any products to the installation, make sure to configure using the existing database schema. If you installed any of these products using different database schemas in the previous release, before you install and configure Release 11.1.2.4, reconfigure the products to use a single database schema. See “Reconfiguring EPM System Components to Use a Single Database Schema” in the Oracle Enterprise Performance Management System Deployment Options Guide.</td>
<td></td>
</tr>
<tr>
<td>- Financial Close Management</td>
<td></td>
</tr>
<tr>
<td>- Tax Governance</td>
<td></td>
</tr>
<tr>
<td>- Account Reconciliation Manager</td>
<td></td>
</tr>
<tr>
<td>- Supplemental Data Manager</td>
<td></td>
</tr>
<tr>
<td>- Tax Supplemental Schedules</td>
<td></td>
</tr>
<tr>
<td><strong>Note:</strong> You can apply the maintenance release from Release 11.1.2.2 to Release 11.1.2.3 with separate database schemas; but to go from Release 11.1.2.2 or Release 11.1.2.3 to Release 11.1.2.4, you must merge the database schemas.</td>
<td></td>
</tr>
<tr>
<td>Shut down all EPM System, WebLogic, and SOA services.</td>
<td></td>
</tr>
<tr>
<td>Install Financial Close Management Release 11.1.2.4 on the machine hosting the earlier Financial Close Management release.</td>
<td></td>
</tr>
<tr>
<td><strong>Note:</strong> During installation, <strong>Apply Maintenance Release</strong> is selected for you. EPM System Installer selects all available products; you must apply the maintenance release to all EPM System products in the deployment.</td>
<td></td>
</tr>
<tr>
<td><strong>Caution!</strong> After installation, do not proceed with configuring EPM System products using EPM System Configurator until you have completed the following Oracle SOA Suite upgrade steps. SOA upgrade steps are not required if you are applying the maintenance release from EPM System Release 11.1.2.3.</td>
<td></td>
</tr>
<tr>
<td>Task</td>
<td>Reference</td>
</tr>
<tr>
<td>----------------------------------------------------------------------</td>
<td>---------------------------------------------------------------------------</td>
</tr>
<tr>
<td>Perform this step if you are applying the maintenance release from EPM System Release 11.1.2.2.</td>
<td>Oracle® Fusion Middleware Patching Guide 11g Release 1 oracle</td>
</tr>
<tr>
<td>Before upgrading Oracle SOA Suite, back up the SOA database.</td>
<td>Tip: Review the SOA startup logs for any errors and resolve the errors before proceeding with EPM System Configurator. You can also view the status of SOA in Enterprise Manager Console.</td>
</tr>
<tr>
<td>1. Upgrade the existing Oracle SOA Suite 11.1.1.6 components to Oracle SOA Suite 11.1.1.7 using Oracle SOA Suite 11g Patch Set 6 (11.1.1.7.0) assemblies V37380-01 parts 1 &amp; 2.</td>
<td></td>
</tr>
<tr>
<td>2. Apply Oracle SOA Suite patch 17014142.</td>
<td></td>
</tr>
<tr>
<td>3. Apply Oracle SOA Suite patch 17440113.</td>
<td></td>
</tr>
<tr>
<td>4. If you are using Microsoft SQL Server, apply patch number 16400937 for Release 11.1.1.7.0.</td>
<td></td>
</tr>
<tr>
<td>5. Upgrade the RCU schemas. For more information, see “Starting the Patch Set Assistant” in the Oracle® Fusion Middleware Patching Guide 11g Release 1. During this step, the following schemas are upgraded: _SOAINFRA, _MDS, and _ORASDPM.</td>
<td></td>
</tr>
<tr>
<td>6. Run the SOA Upgrade Script to upgrade the WebLogic domain. For more information see “Run soa-upgrade.py to Update the Policy Store and Deploy a Shared Library ” in the Oracle® Fusion Middleware Patching Guide 11g Release 1.</td>
<td></td>
</tr>
</tbody>
</table>

Configure EPM System products, selecting all required configuration tasks except for “Deploy to SOA”, including database configuration and Java web application deployment for Shared Services and Financial Close Management.

Perform this step if you are applying the maintenance release from EPM System Release 11.1.2.3.

1. Apply Oracle SOA Suite patch 17014142.
2. Apply Oracle SOA Suite patch 17440113.

Start WebLogic Administration Server, and then start the SOA managed server.

Start EPM System Configurator and select “Deploy to SOA”.

Shut down all the servers and restart them (SOA Server, WebLogic Administration Server).

Stop the SOA server, and then start EPM System products, the SOA Server, and Financial Close Management in the order listed.

Update product integration types by importing the Release 11.1.2.4 versions of all product integration files. The product integration files are posted on My Oracle Support.

After applying the maintenance release, the attribute “Do Not Display To Users” assigned to Task and Task Type is hidden in the Task Actions dialog box and dashboards.

### Downloading and Extracting Installation Files

Download the EPM System files from the “Oracle Enterprise Performance Management System” media pack on the Oracle Software Delivery Cloud (http://edelivery.oracle.com/). Oracle recommends that you download files to a shared drive. See Chapter 4, “Downloading Files for Installation” for details on downloading and extracting installation files.
Performing Maintenance Release Installation Prerequisite Tasks

Subtopics
- Essbase Maintenance Release Installation Prerequisites
- Integration Services Maintenance Release Installation Prerequisites
- Business Rules Maintenance Release Installation Prerequisites
- Financial Reporting Maintenance Release Installation Prerequisites
- Maintenance Release Installation Prerequisites if You Are Using Oracle Web Services Manager

If you are applying the maintenance release to move from EPM System Release 11.1.2.0, 11.1.2.1, 11.1.2.2, or 11.1.2.3 to Release 11.1.2.4, perform the following tasks before you install and configure:

1. Prior to applying the maintenance release, Oracle recommends that you review the PSEs available on My Oracle Support and apply those that correct issues you have encountered.

   To review the list of defects fixed between earlier releases, use the Defects Fixed Finder. This tool enables you to identify the products you own and your current implementation release. With a single click, the tool quickly produces a customized report of fixed-defect descriptions with their associated platforms and patch numbers. This tool is available here:
   https://support.oracle.com/oip/faces/secure/km/DocumentDisplay.jspx?id=1292603.1

2. Stop all EPM System services and processes, and restart IIS.

   Check to make sure that all processes are stopped; some processes, such as CASSecurity, are left running even after Windows services are all stopped.

3. Back up the Shared Services Registry database.

4. Generate a deployment report:
   a. Open a command line window and navigate to EPM_ORACLE_INSTANCE/bin.
   b. Run the command epmsys_registry.bat|.sh report deployment.

      By default, the report is saved as EPM_ORACLE_INSTANCE/diagnostics/reports/deployment_report_YYYYMMDD_HHMMSS.html.

5. If you have disabled or deleted any of the global roles (in particular the Shared Services Global roles) that are in the Shared Services Registry, they must be restored and provisioned to the Admin user for the maintenance configuration process to work correctly.

6. Ensure that the external authentication provider is online before you start EPM System Configurator.

7. If you are applying the maintenance release to move from Essbase Release 11.1.2.0 to Release 11.1.2.4, you must first export linked reporting object information from the earlier release database, and then delete the linked reporting objects. After applying the maintenance release, import the exported linked reporting objects. See “Essbase Maintenance Release Installation Prerequisites” on page 166.

8. If you are using Essbase in a clustered environment for failover, apply the maintenance release to all machines in the environment before you configure failover.
9 For Essbase, make a backup copy of opmn.xml and essbase.cfg if you have set up failover or made any configuration changes to essbase.cfg.

10 If you were using Oracle Essbase Integration Services in an earlier release, migrate to Essbase Studio before applying the maintenance release. See “Integration Services Maintenance Release Installation Prerequisites” on page 167.

11 If you are using Oracle Hyperion Business Rules in Release 11.1.2.0 or 11.1.2.1, you must migrate to Calculation Manager rules in Release 11.1.2.4. Before migrating business rules, you must perform prerequisite tasks. See “Business Rules Maintenance Release Installation Prerequisites” on page 169. If you are applying a maintenance installation from Release 11.1.2.2 or Release 11.1.2.3, you can skip this step.

12 If you are moving from Financial Close Management Release 11.1.2.2 or 11.1.2.3, see “Financial Close Management Maintenance Release Installation Checklist” on page 163.

13 If you are applying the maintenance release to move from Strategic Finance Release 11.1.2.0 or 11.1.2.1 to Release 11.1.2.4, you must convert the Strategic Finance database using a conversion utility. Oracle recommends that you back up the database before converting it. Apply Strategic Finance Release 11.1.2.1.000 Patch Set Exception (PSE): 13776302 and then run the conversion utility.

14 Perform this step only if you are applying the maintenance release from EPM System Release 11.1.2.2. This step is not required if you were previously working in Release 11.1.2.3.

If you are using Oracle Web Services Manager with EPM System products, upgrade the OWSM MDS schema. See “Maintenance Release Installation Prerequisites if You Are Using Oracle Web Services Manager” on page 170.

15 Stop all the services for EPM System products.

Do not start services for a product until the product's configuration tasks are complete.

**Essbase Maintenance Release Installation Prerequisites**

If you are applying the maintenance release to move from Essbase Release 11.1.2.0 to Release 11.1.2.4, you must first export linked reporting object (LRO) information from the earlier-release database, and then delete the linked reporting objects. After installing and configuring, you import the exported linked reporting objects.

➢ To export linked reporting objects from Essbase Release 11.1.2.0:

1 On the machine hosting the earlier-release installation, back up the application linked reporting object data to a specified directory by using the following MAXL command:

   \begin{verbatim}
   EXPORT database DBS-NAME LRO to server directory 'directoryName';
   \end{verbatim}

   For example:

   MAXL> EXPORT database Sample.Basic LRO to server directory 'V1';

   In this example, Sample.Basic LRO data is exported to Sample-Basic-V1 in ARBORPATH/app.

2 Remove the application linked reporting object data with the following MAXL command:

   \begin{verbatim}
   ALTER database DBS-NAME delete LRO all
   \end{verbatim}
For example:

```
MAXL> ALTER database sample.basic delete LRO all;
```

3 Shut down the earlier-release Essbase server.

You must perform additional steps after installing and configuring Essbase Release 11.1.2.4.

### Integration Services Maintenance Release Installation Prerequisites

If you were using Integration Services in an earlier release, migrate to Essbase Studio before applying the maintenance release. Integration Services is no longer available.

**Note:** The Essbase Studio migration tool may not work for migration of complex Integration Services models. In some cases, you must migrate manually by rebuilding your models in Essbase Studio with your existing relational source tables. Oracle recommends that you take this into account when you plan your migration.

The Integration Services catalog you want to migrate to Essbase Studio does not have to reside on the same machine as Essbase Studio. The Integration Services catalog can be anywhere in an Integration Services-supported database on your network.

Even if the Integration Services catalog resides on the same machine as Essbase Studio, you must create an ODBC DSN to the Integration Services catalog. This DSN must point to the database where the Integration Services catalog resides.

For additional details about the migration, and limitations, see *Oracle Essbase Studio User’s Guide*.

> To migrate Integration Services models and metaoutlines from Integration Services to Essbase Studio:

1. **Access the EIS Catalog Migration dialog box:**
   
   Access the **Tools** menu in the Essbase Studio Console and then left-click **EIS Catalog Migration**.

2. **In the EIS Catalog DSN text box,** enter the ODBC DSN which points to the Integration Services catalog you want to migrate.

   **Note:** If the ODBC DSN to the Integration Services catalog does not exist, you must create the ODBC DSN. If the Integration Services catalog does not reside on the same machine as Essbase Studio, you must create an ODBC DSN on the machine where the Essbase Studio client is running. This DSN must point to the database where the Integration Services catalog resides.

3. **In the User text box,** enter the user name for the EIS catalog; for example, tbc.

4. **Enter your password for the EIS catalog.**
5 Click the Fetch Models button.

Essbase Studio accesses the Integration Services catalog and lists the models and metaoutlines in the catalog. Metaoutlines are grouped under their respective models.

6 In the Models and Data Sets column, select the Integration Services models and metaoutlines you want to migrate.

**Note:** You can migrate multiple models and metaoutlines.

7 Click in the Data Source Connection column and, from the drop-down list, select the target relational database.

**Note:** The target relational database should match the Integration Services target data source.

Optional: You can create a target data source by clicking New Data Source and entering the name of the data source.

**Note:** If you are migrating multiple models, you must select a target relational database in Essbase Studio for each model you are migrating.

8 Click in the Catalog column and, from the drop-down list, select an Integration Services catalog.

**Note:** If your relational database is Oracle, selecting a catalog is not required.

9 Click in the Schema column and, from the drop-down list, select a schema.

**Note:** If you are migrating multiple models, you must select a schema for each model you are migrating.

10 In the Select Folder text box, enter the target folder in Essbase Studio.

Optional: Click the Browse button to quickly find the target folder.

Optional: You can create a folder by entering the name of the folder in the Select Folder text box.

The target folders are also listed in the Metadata Navigator in Essbase Studio.

11 Click the Migrate button.

View the migration progress in the Progress Information dialog box.

12 Optional: To cancel the migration:

   a. Press Cancel.

   b. Delete any objects that are present in the target directory you specified.

Your OLAP models and metaoutlines are migrated from the Oracle Essbase Integration Services catalog to the Essbase Studio catalog. When the migration is complete, the model is displayed
in the Metadata Navigator. If you created a data source, the name of the data source is displayed in the Data Source Navigator.

Business Rules Maintenance Release Installation Prerequisites

If you are applying the maintenance release to move from Release 11.1.2.0 or Release 11.1.2.1 to Release 11.1.2.4, and if you have been using Business Rules in the earlier release, you must migrate to Calculation Manager rules in Release 11.1.2.4. Before migrating business rules, you must perform prerequisite tasks.

If you are applying a maintenance installation from Release 11.1.2.2 or 11.1.2.3, you can skip this step.

To prepare to migrate Business Rules, perform the following tasks in your current Business Rules environment before installing Release 11.1.2.4:

1. In Business Rules, within the Rule Editor, remove the associated outline (that is, the design time location) from each business rule. After you do this, the Associated Outline drop-down list should display the text, Select Outline.

2. On the Locations tab of the Rule Editor, ensure that each business rule has a valid launch location, which must be an absolute location. Although “All Locations” is valid in Business Rules, when you migrate business rules, you must provide the details of a specific launch location (that is, the application type—Planning or Essbase—, the server name, the application name, and the database or plan type). If you want a business rule to be valid for multiple launch locations, you must provide the details for each location. The locations must be in different applications; you cannot migrate the same business rule to different plan types in the same application within Calculation Manager.

   If the rule is a part of a sequence, then the launch location of the rule within the sequence must be one of the launch locations listed in the Locations tab of the rule.

3. On the Access Privileges tab of the Rule Editor, ensure that each business rule has security defined for a specific location or locations and not “All Locations.” If multiple locations are defined for a business rule on its Locations tab, you must add security for each location individually.

4. Do not modify rules in Calculation Manager until migration is completed.

5. If you are using Business Rules with Planning, as a precaution, create a backup of the rules: Use Administration Services to export the rules to XML in Business Rules format.

6. If you are an Essbase-only Business Rules user, you must export business rules. To export the Essbase rule from Business Rules:
   a. From Administration Services Console, right-click the Business Rules node and select Export.
   b. Export the rules in Business Rules format and then select all of the Essbase rules in the repository.
   c. Specify the location to save the XML file, and then click OK.

   Make a note of the location. You import the file later in the process.
During configuration with EPM System Configurator, rules are prepared for migration when you perform the “Configure Database” task.

After configuration, you perform additional tasks to import and migrate business rules.

Financial Reporting Maintenance Release Installation Prerequisites

It is no longer necessary to install Financial Reporting Print Server separately; it is included by default with the Financial Reporting Java web Application on all platforms. No separate Financial Reporting Print Server service is created. However, before installing Financial Reporting, if you were working in Release 11.1.2.0 or Release 11.1.2.1, meet the following prerequisites:

- If you were working in Release 11.1.2.0:
  2. Delete the HRPrinter drivers from the Printers list using the Windows Control Panel.
  3. Disable “Hyperion Financial Reporting - Print Service” in Windows Services Microsoft Management Console, and then delete the following Windows registry entries (back up the registry before you proceed):
     
     - HKEY_LOCAL_MACHINE\SYSTEM\CurrentControlSet\Enum\Root\LEGACY_FRPRINTSERVICE
     - HKEY_LOCAL_MACHINE\SYSTEM\CurrentControlSet\Services\EventLog\Application\FRPrintService
     - HKEY_LOCAL_MACHINE\SYSTEM\CurrentControlSet\Services\FRPrintService

- If you were working in Release 11.1.2.1:
  1. Remove “Hyperion Financial Reporting - Print Service” using FRRemovePrintServer.cmd in /Program Files [(x86)]/Oracle/FinancialReportingStudio/products/financialreporting/install/bin. This removes both the Windows service and the HRPrinter drivers.
  3. Delete the folder /Program Files/Oracle/FinancialReportingStudio.

Maintenance Release Installation Prerequisites if You Are Using Oracle Web Services Manager

Perform this step only if you are applying the maintenance release from EPM System Release 11.1.2.2. This step is not required if you were previously working in Release 11.1.2.3.

If you are using Profitability and Cost Management, Financial Close Management, FDMEE, Financial Management, Provider Services, or Data Relationship Management with Oracle Web Services Manager, upgrade the OWSM MDS schema and update Oracle Web Services Manager to Release 11.1.1.7.1.
1. Update the _MDS_ Schema. For more information see “Starting the Patch Set Assistant” and “Checking for Invalid Database Objects” in the *Oracle® Fusion Middleware Patching Guide 11g Release 1*.

2. Update configurations and stores. For more information, see the *Oracle® Fusion Middleware Patching Guide 11g Release 1*.

3. Update the Oracle Web Services Manager repository. See “Adding New OWSM Pre-Defined Policies” in the *Oracle® Fusion Middleware Patching Guide 11g Release 1*.

You can find *Oracle® Fusion Middleware Patching Guide 11g Release 1* on the Fusion Middleware page of the Oracle Documentation Library.

### Installing and Configuring EPM System Products in a Maintenance Installation

When you apply the maintenance release, install and configure using the same user who was used to install and configure the earlier release.

To install EPM System products in a maintenance installation:

1. **Launch EPM System Installer:**
   - (Windows) Double-click `installTool.cmd` in the root directory to which you extracted the EPM System Installer files.
   - (UNIX) Change to the root directory to which you extracted the EPM System Installer files and enter `./installTool.sh`.

2. **Step through EPM System Installer, making the following selections:**
   a. On the Destination screen, click **Next**. You cannot change the destination. You must apply the maintenance release on top of your existing EPM System installation.
   b. **Apply Maintenance Release** is selected for you; click **Next**.
   c. In Product Selection, click **Next**. You cannot change the product selection.

   You must apply the maintenance release to all EPM System products in the deployment. You cannot apply the maintenance release to only some products.

   On the Product Selection page, you cannot make any selections or deselections.

   If you are applying the maintenance release to an existing deployment, and you plan to add new EPM System products to the existing deployment, install and configure existing products first. After configuration is complete, install any new products.

   If you are installing any of the following products, you must also install the Financial Management SDK:
   - Web Analysis
   - Financial Reporting
   - Strategic Finance
EPM System Installer installs a Windows version of the driver on Windows machines. EPM System Installer installs a UNIX version of the driver on all platforms for use with Oracle Business Intelligence Enterprise Edition.

3 When installation is complete, click or select Finish.

**Note:** If you are installing Financial Close Management, note that additional steps are required before you configure with EPM System Configurator. See “Financial Close Management Maintenance Release Installation Checklist” on page 163.

4 Repeat the installation steps on each machine in the deployment.

5 On the machine hosting Foundation Services, launch EPM System Configurator: From the Start menu, select All Programs, then Oracle EPM System, then EPM System Configurator (all instances).

6 In Oracle Instance, specify the existing EPM Oracle instance to which to apply the configuration.

7 In Task Selection, clear the selection (uncheck) from Uncheck All, select the top node of Foundation Services, and then click Next.

   This option selects only the preconfiguration tasks for Foundation Services.

8 On the Shared Services and Registry Database Connection screen, ensure that Connect to a previously configured Shared Services database is selected, and then review the database connection information for Shared Services Registry and the user name and password of the database account to use for accessing the database.

9 Continue through the panels, and when the configuration is complete, click Finish.

10 Run the Shared Services Registry repair script from the machine hosting Foundation Services to help avoid problems during configuration:

   a. Run the repair script using the preview option to detect any problems:

      From a command prompt, change to EPM_ORACLE_INSTANCE/bin and run the following command:

      `epmsys_registry.bat|.sh preview`

      Any errors are reported to the console but no changes are made to the Shared Services Registry. If there are no errors, skip to step 12 on page 173.

   b. If the repair script detects any problems, run the script again in repair mode:

      `epmsys_registry.bat|.sh repair`

11 Generate another deployment report so that it reflects any changes the repair script made in the Shared Services Registry.

   a. Open a command line window and navigate to EPM_ORACLE_INSTANCE/bin.

   b. Run the command `epmsys_registry.bat|.sh report deployment`.

      By default, the report is saved as EPM_ORACLE_INSTANCE/diagnostics/reports/deployment_report_YYYYMMDD_HHNMMSS.html.
Consult with Oracle Support if the report does not match the actual configuration of your deployment environment.

12 Launch EPM System Configurator again: On the machine hosting Foundation Services, from the Start menu, select All Programs, then Oracle EPM System, then EPM System Configurator (all instances).

In a distributed environment, you must configure Foundation Services first. Foundation Services must be installed and configured for other products to configure successfully.

13 In Oracle Instance, specify the existing EPM Oracle instance to which to apply the configuration.

14 On the Shared Services and Registry Database Connection screen, select Connect to a previously configured Shared Services database, and then review the database connection information for Shared Services Registry and the user name and password of the database account to use for accessing the database.

15 On the component configuration page, make selections as needed, and then click Next. You must complete all Pending tasks in EPM System Configurator.

- EPM System Configurator preselects all required configuration tasks for the products in this EPM Oracle instance.

- Optional: You can clear the selection from the Foundation “Configure Web Server” task.

If you want to validate Foundation Services immediately after configuration, retain the selection for “Configure Web Server”. Otherwise, configure the web server after all other EPM System products have been configured.

- If some products were deployed to a single managed server in the earlier release, they are deployed the same way in this release. If you want to change how products are deployed, after the maintenance deployment is complete, you can redeploy.

- You cannot configure Oracle HTTP Server to a shared drive when you apply a maintenance release installation, unless you configured Oracle HTTP Server to a shared drive in Release 11.1.2.3.

- Optional: You can manually deploy EPM System Java web applications. See Chapter 7, “Manually Deploying EPM System Java Web Applications.”

16 Step through the remaining pages in EPM System Configurator.

Oracle recommends that you maintain existing configuration settings during the maintenance configuration. After the deployment is complete, you can reconfigure if required to make any configuration changes.

If you need information about any of the pages, click Help, or see Chapter 6, “Configuring EPM System Products in a New Deployment.”

- On the Database Configuration page, you need to make changes only if the database connection details need to be updated.

- Do not start services for a product until the product’s configuration tasks are complete.

17 Repeat the configuration steps for each EPM Oracle instance or server in the deployment.
After you have configured all other EPM System products, configure the web server last: On the machine hosting Foundation Services, launch EPM System Configurator and select “Configure Web Server” from the Foundation tasks.

Start EPM System products. On each machine in the deployment, select **Start**, then **All Programs**, then **Oracle EPM System**, **EPM_ORACLE_INSTANCE**, then **Foundation Services**, and then **Start EPM System**.

For clients that have a client installer in Release 11.1.2.4, applying the maintenance release installation option does not update the client software. You must install the client using the client installer. See “Installing EPM System Clients” on page 84.

During the maintenance configuration process for Profitability and Cost Management, Stage Object Calculation artifacts from Release 11.1.2.2 applications are replaced with Calculation Rules of type Calculated Measure in Release 11.1.2.4.

### Performing Manual Configuration Tasks in a Maintenance Installation

**Subtopics**

- General Manual Configuration Tasks in a Maintenance Installation
- EPM Workspace Manual Configuration Tasks in a Maintenance Installation
- Performance Management Architect Manual Configuration Tasks in a Maintenance Installation
- Essbase Manual Configuration Tasks in a Maintenance Installation
- Essbase Studio Manual Configuration Tasks in a Maintenance Installation
- Planning Manual Configuration Tasks
- Profitability and Cost Management Manual Configuration Tasks
- Strategic Finance Manual Configuration Tasks
- FDMEE Manual Configuration Tasks

### General Manual Configuration Tasks in a Maintenance Installation

- If you applied the maintenance release to move to Release 11.1.2.4, after you configure, clear cached files from the web browser. This ensures that the browser uses the correct Javascript files.

- Delete the contents of `MIDDLEWARE_HOME/user_projects/domains/EPMSYSTEM/precompiled` and `MIDDLEWARE_HOME/user_projects/domains/EPMSYSTEM/precompiledJSPs` folders.
EPM Workspace Manual Configuration Tasks in a Maintenance Installation

After applying a maintenance release, newly supported languages appear in the list of possible languages; however you must manually add any new languages to the Assigned Languages list. Select Navigate, then Administer, and then WorkspaceServerSettings. Select Supported Locales and add the desired locales.

Performance Management Architect Manual Configuration Tasks in a Maintenance Installation

If you applied the maintenance release to move from Release 11.1.2.0 or 11.1.2.1 to Release 11.1.2.4, and if a Financial Management application contains shared dimensions, right-click the application in the Application View pane, and then select Activate All Associations. This is required to support the dynamic properties that were introduced in Release 11.1.2.2 for Extended Dimensionality.

Essbase Manual Configuration Tasks in a Maintenance Installation

Subtopics

- Importing Linked Reporting Objects
- Importing Business Rules to Calculation Manager for use with Essbase

Apply any failover settings from the backup version of opmn.xml to the new opmn.xml, and apply any custom configuration settings from the backup version of essbase.cfg to the new essbase.cfg.

Importing Linked Reporting Objects

If you are applying the maintenance release to move from Essbase Release 11.1.2.0, you must import linked reporting objects from the earlier release.

Before you complete this step, you must have exported the linked reporting objects from Release 11.1.2.0. See “Essbase Maintenance Release Installation Prerequisites” on page 166.

To import linked reporting objects:

1. Start Essbase Server.
2. Run the following MAXL command to import the linked reporting object data from the earlier release backup directory:

   ```
   IMPORT database DBS-NAME LRO from server directory 'directoryName'
   ```
For example:

```
MAXL> IMPORT database Sample.Basic LRO from server directory 'Sample-Basic-V1';
```

**Importing Business Rules to Calculation Manager for use with Essbase**

If you are applying the maintenance release to move from Essbase Release 11.1.2.0 or 11.1.2.1 to Release 11.1.2.4, and you are an Essbase-only Business Rules user, you must migrate Business Rules rules to Calculation Manager.

Ensure that you exported rules as described in “Performing Maintenance Release Installation Prerequisite Tasks” on page 165.

To import Business Rules to Calculation Manager for use with Essbase:

1. From Calculation Manager, select **File**, and then **Import**.
2. Browse to the XML file that you exported and then click **Import**.

**Essbase Studio Manual Configuration Tasks in a Maintenance Installation**

If you used the “Apply Maintenance Release” option to move from Essbase Studio Release 11.1.2.0, 11.1.2.1, 11.1.2.2 or 11.1.2.3 to this release, you must update the Essbase Studio catalog after installation and configuration.

You update the catalog by issuing the `reinit` command in the Essbase Studio command line client, which updates the catalog with the latest release procedures.

To update the Essbase Studio catalog:

1. **Ensure that Essbase Studio Server is running.**
2. From the `EPM_ORACLE_INSTANCE/bin` directory, run one of the following scripts: `start_BPMS_bpms1_CommandLineClient.bat|sh`
   
   A command window called the CPL Shell is displayed.
3. **At the prompt, enter a valid Essbase Studio host name, administrator user name, and password.**

   **Note:** You must have Essbase Studio administrator privileges to use the `reinit` command.
4. **At the prompt, enter the following command:**
   
   `reinit`

5. **Enter exit to close the CPL Shell.**

   The Essbase Studio catalog is now ready for use.
Planning Manual Configuration Tasks

If you are working in Oracle Project Financial Planning or Oracle Hyperion Public Sector Planning and Budgeting, before you upgrade applications, you must perform additional steps.

Upgrading Applications

If you applied the maintenance release to move from Planning Release 11.1.2.0, 11.1.2.1, 11.1.2.2, or 11.1.2.3, you must run the Upgrade Wizard and use the Upgrade Applications page. From EPM Workspace, select Navigate, then Assistant, then Planning Administration, and then click Upgrade Wizard. On the Upgrade Applications page, select one or more applications and from the Action menu, select Upgrade, and then click OK to proceed.

Migrating Applications to Enable The Sandbox Dimension

To make Planning applications sandbox-enabled, perform the following tasks.

Migrating Business Rules to Calculation Manager for Use with Planning

If you applied the maintenance release to move from Planning Release 11.1.2.0, or Release 11.1.2.1, and you were using Business Rules rules, you must migrate the rules to Calculation Manager rules, and then migrate rules security.

Before you migrate, ensure that user directories and native users with the same SID are available when you upgrade Shared Services.

Ensure that the Planning applications are upgraded to the current release and are available in Calculation Manager under SYSTEM View.

➢ To migrate Business Rules rules to Calculation Manager rules:

1. In Calculation Manager, select the migrated Planning application, and then select Migrate. The data that was exported during database configuration with EPM System Configurator is imported to Calculation Manager.

2. Repeat for each Planning application.

3. Deploy the rules from Calculation Manager to Planning. See the Oracle Hyperion Calculation Manager Designer’s Guide.

After migrating business rules and rules security, if any of the rules had multiple launch locations, and you migrated to more than one location, Calculation Manager creates a rule for the first migration, and shortcuts for all subsequent migrations. If the rule had rule-level variables, for the shortcuts that are created in the application in the new environment, its variables are moved to the Plan level. In this scenario, test rules in your environment to ensure that they work as expected.
Migrating Business Rules Security for use with Planning

If your upgraded application used Business Rules, administrators can migrate launch access permissions on business rules and their projects from Business Rules to Calculation Manager business rules in Planning using the HBRMigrateSecurity.cmd utility.

The HBRMigrateSecurity.cmd utility:

- Overwrites launch access permissions that are already assigned to business rules in the specified Planning application.
- Migrates access permissions only for users and groups that are provisioned for the specified Planning application in Shared Services Console.

To migrate access permissions on business rules and their folders:

1. **Before running** HBRMigrateSecurity.cmd:
   - Ensure that you have migrated business rules from Oracle Hyperion Business Rules to Calculation Manager.
   - Ensure that you have deployed the business rules to Planning.

2. **At the command line, from the planning1 directory, enter this command and its parameters,** separating each by a space:

   ```
   ```

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Purpose</th>
<th>Required?</th>
</tr>
</thead>
<tbody>
<tr>
<td>[-f:passwordFile]</td>
<td><strong>Optional:</strong> If an encrypted password file is set up, use as the first parameter in the command line to read the password from the full file path and name specified in <code>passwordFile</code>.</td>
<td>No</td>
</tr>
<tr>
<td>/A:appname</td>
<td>Specify the Planning application to which to migrate launch access permissions for business rules</td>
<td>Yes</td>
</tr>
<tr>
<td>/U:admin</td>
<td>Specify the administrator's user name</td>
<td>Yes</td>
</tr>
<tr>
<td>/F:output file</td>
<td>Specify the name of the XML output file, including its full path if it is not in the planning1 directory. This file contains a log of the transaction, and helps with troubleshooting.</td>
<td>Yes</td>
</tr>
<tr>
<td>/?</td>
<td>Print the syntax and options for HBRMigrateSecurity.cmd</td>
<td>No</td>
</tr>
</tbody>
</table>

3. If prompted, enter your password.

For example:

```plaintext
HBRMigrateSecurity.cmd /A:appname /U:admin /F:C:\temp \HBRExportedSecurity.xml
```
Profitability and Cost Management Manual Configuration Tasks

To install Profitability and Cost Management sample applications, first complete the maintenance release installation and configuration. Next, rerun EPM System Installer. Then, from the Product Selection panel, in the Profitability and Cost Management section, select Profitability and Cost Management Samples.

To set up Profitability and Cost Management to work with Oracle Web Services Manager, see the Oracle Enterprise Performance Management System Deployment Options Guide.

Strategic Finance Manual Configuration Tasks

After configuring the maintenance release, move transaction logs to a new location: Copy the logs from EPM_ORACLE_HOME/logs/hsf/userlogs to EPM_ORACLE_INSTANCE/diagnostics/logs/hsf/userlogs.

FDMEE Manual Configuration Tasks

If you were using Oracle Hyperion Financial Data Quality Management Release 11.1.2.x, and you want migrate data from Oracle Hyperion Financial Data Quality Management to FDMEE, see the Oracle Hyperion Financial Data Quality Management, Enterprise Edition Migration Guide.

Validating the Deployment and Generating a Deployment Report

Validate the deployment. When the validation report shows no errors, generate a deployment report.

1. To validate the deployment and generate a deployment report:
   1. From the Start Menu, choose Programs, then Oracle EPM System, then InstanceName, then Foundation Services and then EPM System Diagnostics.
   2. To view results, navigate to EPM_ORACLE_INSTANCE/diagnostics/reports, and then open instance_report_date_time.html.
   3. Resolve any errors, and then run the report again.
   See the Oracle Enterprise Performance Management System Installation and Configuration Troubleshooting Guide for help resolving errors.

4. In a distributed environment, run EPM System Diagnostics on each machine in the deployment.

5. Generate a deployment report:
   a. Open a command line window and navigate to EPM_ORACLE_INSTANCE/bin.
b. Run the command `epmsys_registry.bat`. By default, the report is saved as `EPM_ORACLE_INSTANCE/diagnostics/reports/deployment_report_YYYYMMDD_HHMMSS.html`.

**Performing a Maintenance Release Installation for EPM System Clients**

If you are applying the maintenance release to move to Release 11.1.2.4, you must uninstall the earlier release of the client before you install the new release. For Financial Reporting Studio, additional prerequisites are required. See “Financial Reporting Maintenance Release Installation Prerequisites” on page 170.

For clients that have a client installer in Release 11.1.2.4, applying the maintenance release installation option in EPM System Installer does not update the client software. You must install the client using the client installer.

For details about client installers, see “Installing EPM System Clients” on page 84.
This chapter describes how to start and stop EPM System services and applications and provides default URLs for EPM System clients.

Before you start any services or processes, start all databases used as repositories. Once the databases are started, there is no required start order for EPM System with the exception of Financial Close Management.

Caution! If you started the SOA Server to configure Financial Close Management, stop it before starting EPM System services. If you are using Financial Close Management, see the required service startup order in “Financial Close Management Application Server” on page 228.

Note: If you selected Run Windows Services as non-local system account and specified a user name and password on the “Configure Common Settings” panel of EPM System Configurator, Windows services are started using the specified user name. If you do not specify a user name and password, EPM System Configurator creates Windows services using the local system account. Before you start the services, change them to use the appropriate domain account.

Using a Single Script to Start Services

EPM System Installer installs a single start script in EPM_ORACLE_INSTANCE/bin, called start.bat|sh. Running the single start script on a machine in your EPM System deployment starts all EPM System services installed on that machine. The single start script works by calling the individual start scripts for every product.

The user running the start script should be a member of the Administrators group.

To start EPM System services:

1. Select Start, then Programs, then Oracle EPM System, then EPM_ORACLE_INSTANCE_NAME, then Foundation Services, and then Start EPM System.
2 Run this start script on each machine in your environment.

After the single start script completes, you can run EPM System Diagnostics to determine which services on a machine are running. See Chapter 11, “Validating the Installation and Verifying Deployment.”

A single stop script, stop.bat|sh is also installed in \texttt{EPM\_ORACLE\_INSTANCE/bin}. Running the stop script on a machine in your EPM System deployment stops all EPM System products on that machine.

## Launching Clients

This section describes how to launch EPM System clients. It lists default URLs and script names as appropriate. Most clients can also be started using the Windows Start menu.

The following table describes the URLs and scripts for launching EPM System clients.

To connect from a server or client to a Java web application, you must use the web server port (\texttt{machine\_name:web\_server\_port}) in the URL. For example, \texttt{machine\_name:19000} is the default for Oracle HTTP Server and \texttt{machine\_name:9000} is the default for the proxy server.

### Table 31 Launching Clients

<table>
<thead>
<tr>
<th>Client</th>
<th>URL</th>
<th>Script or Other Launch Method</th>
</tr>
</thead>
<tbody>
<tr>
<td>Oracle Hyperion Shared Services</td>
<td><a href="http://WebServer:Port/interop/">http://WebServer:Port/interop/</a></td>
<td>From the Start menu, select All Programs, then Oracle EPM System, then \texttt{EPM_ORACLE_INSTANCE}, then Foundation Services, and then Shared Services URL.</td>
</tr>
<tr>
<td>Console</td>
<td></td>
<td>\textbf{Note}: The Start menu item is available only on the machine on which you installed the web server.</td>
</tr>
<tr>
<td>EPM Workspace</td>
<td><a href="http://WebServer:Port/workspace/">http://WebServer:Port/workspace/</a></td>
<td>From the Start menu, select All Programs, then Oracle EPM System, then \texttt{EPM_ORACLE_INSTANCE}, then Workspace, and then Workspace URL.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>\textbf{Note}: The Start menu item is available only on the machine on which you installed the web server.</td>
</tr>
<tr>
<td>Data Relationship Management</td>
<td>http://drm_web_server_name/drm-web-client</td>
<td>From the Start menu, select All Programs, then Oracle EPM System, then \texttt{EPM_ORACLE_INSTANCE}, then Data Relationship Management, and then Web Client.</td>
</tr>
<tr>
<td>Web Client</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Data Relationship Management</td>
<td>http://drm_web_server_name/drm-migration-client</td>
<td>From the Start menu, select All Programs, then Oracle EPM System, then \texttt{EPM_ORACLE_INSTANCE}, then Data Relationship Management, and then Migration Utility.</td>
</tr>
<tr>
<td>Migration Utility</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Batch Client</td>
<td>N/A</td>
<td>From a Windows command line prompt, run \texttt{EPM_ORACLE_HOME/products/DataRelationshipManagement/client/batch-client/drm-batch-client.exe}</td>
</tr>
<tr>
<td>Disclosure Management</td>
<td>N/A</td>
<td>N/A</td>
</tr>
</tbody>
</table>

182
<table>
<thead>
<tr>
<th>Client</th>
<th>URL</th>
<th>Script or Other Launch Method</th>
</tr>
</thead>
<tbody>
<tr>
<td>Administration Services Console</td>
<td><a href="http://WebServer:port/easconsole/console.html">http://WebServer:port/easconsole/console.html</a></td>
<td>From the Start menu, select All Programs, then Oracle EPM System, then Essbase, then Essbase Administration Services, and then Start Administration Services Console.</td>
</tr>
<tr>
<td>Essbase Client</td>
<td>NA</td>
<td>From the Start menu, select All Programs, then Oracle EPM System, then EPM_ORACLE_INSTANCE, then Essbase, and then Essbase Client.</td>
</tr>
</tbody>
</table>
| Essbase Studio Console          | NA                                       | From the Start menu, select All Programs, then Oracle EPM System, then Essbase, then Essbase Studio, and then Essbase Studio Console.                        
<p>|                                 |                                          | Or                                                                                                                                                        |
|                                 |                                          | EPM_ORACLE_HOME/products/Essbase/EssbaseStudio/Console/startStudio.bat                                                                                   |
| Financial Management Client     | N/A                                      | From the Start menu, select All Programs, then Oracle EPM System, then EPM_ORACLE_INSTANCE, then Financial Management, and then Financial Management.          |
|                                 |                                          | Or                                                                                                                                                        |
|                                 |                                          | For 32-bit: EPM_ORACLE_HOME/products/FinancialManagement/Client/HFM.exe                                                                                  |
|                                 |                                          | For 64-bit: EPM_ORACLE_HOME/products/FinancialManagement/Client/32bit/HFM.exe                                                                            |
| Financial Reporting Studio      | N/A                                      | From the Start menu, select All Programs, then Oracle, then Financial Reporting Studio, and then Financial Reporting Studio.                              |
|                                 |                                          | Or                                                                                                                                                        |
|                                 |                                          | %ProgramFiles%/Oracle/FinancialReportingStudio/HReports.exe                                                                                        |
| Interactive Reporting           | N/A                                      | From the Start menu, select All Programs, then Oracle EPM System, then EPM_ORACLE_INSTANCE, then Reporting and Analysis, then Interactive Reporting, and then Dashboard Architect. |
|                                 |                                          | From the Start menu, select Programs, then Oracle EPM System, then EPM_ORACLE_INSTANCE, then Reporting and Analysis, then Interactive Reporting, and then Dashboard Studio. |
|                                 |                                          | From the Start menu, select Programs, then Oracle EPM System, then EPM_ORACLE_INSTANCE, then Reporting and Analysis, then Interactive Reporting, and then Studio. |
| Interactive Reporting Studio    | N/A                                      | From the Start menu, select All Programs, then Oracle EPM System, then EPM_ORACLE_INSTANCE, then Reporting and Analysis, then Interactive Reporting, and then Studio. |
|                                 |                                          | Or                                                                                                                                                        |
|                                 |                                          | EPM_ORACLE_HOME/products/biplus/bin/brioqry.exe                                                                                                       |</p>
<table>
<thead>
<tr>
<th>Client</th>
<th>URL</th>
<th>Script or Other Launch Method</th>
</tr>
</thead>
</table>
| Performance Management Architect | N/A                 | File Generator: From the Start menu, select All Programs, then Oracle EPM System, then\  
|                                 |                      | \_EPM\_ORACLE\_INSTANCE, then Performance Management Architect Clients, and then Start EPMA File \  
|                                 |                      | Generator. Or \_EPM\_ORACLE\_HOME\_products\_Foundation\_BPMA\_EPMAFileGenerator\_bin\_\  
|                                 |                      | EPMAFileGenerator.exe \_EPM\_ORACLE\_HOME\_products\_Foundation\_BPMA\_EPMAFileGenerator\_bin\_\  
|                                 |                      | EPMAFileGenerator.exe Batch Client: From the Start menu, select Programs, then Oracle EPM System, \  
|                                 |                      | then \_EPM\_ORACLE\_INSTANCE, then Performance Management Architect, and then Start EPMA Batch \  
|                                 |                      | Client. Or \_EPM\_ORACLE\_HOME\_products\_Foundation\_BPMA\_EPMAFileGenerator\_bin\_\  
|                                 |                      | EPMAFileGenerator.exe | |
| Planning Offline                | N/A                 | None                                                                                           |
| Predictive Planning             | N/A                 | From Smart View, open a valid Planning form, select the Planning ribbon, and then click Predict. |
| Production Reporting            | N/A                 | From the Start menu, select All Programs, then Oracle EPM System, then \_EPM\_ORACLE\_\  
|                                 |                      | INSTANCE, then Reporting and Analysis, and then Production Reporting Studio or Production Reporting Viewer. |
| Smart View                      | NA                  | Use the Smart View menu or Oracle Smart View for Office ribbon in Microsoft Excel, Microsoft Word, or Microsoft PowerPoint. |
| Strategic Finance Client        | NA                  | From the Start menu, select All Programs, then Oracle EPM System, then Strategic Finance, and then Client. |
| Strategic Finance Server \  
| Administration                 |                      | From the Start menu, select All Programs, then Oracle EPM System, then Strategic Finance, and \  
|                                 |                      | then Server Administration. Or \_EPM\_ORACLE\_HOME\_products\_hsf\_bin\_HSFAdmin.exe |
| Oracle Hyperion Web Analysis \  
| Studio                         | The Sun Java plug-in is installed when Web Analysis Studio is first used. To start Web Analysis \  
|                                 | Studio URL \_EPM\_ORACLE\_\  
|                                 |                      | INSTANCE, then Reporting and Analysis, and then Web Analysis URL. |

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Validating the Installation and Verifying Deployment

In This Chapter

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Verifying Deployment .................................................................................... 188
Validating a Financial Close Management Deployment .............................................. 190

Validating the Installation

EPM System Diagnostics tests the connectivity of installed and configured EPM System components. Run EPM System Diagnostics on each machine in the deployment. The results of the tests are saved in HTML format.

You must install, configure, and run EPM System Diagnostics as the same user.

Prerequisites

Before using EPM System Diagnostics, complete these prerequisites:

- Install EPM System products. See Chapter 5, “Installing EPM System Products in a New Deployment.”
- Use EPM System Configurator to perform all configuration tasks required for each product. See Chapter 6, “Configuring EPM System Products in a New Deployment.”
- Perform manual configuration tasks. See Chapter 8, “Performing Manual Configuration Tasks in a New Deployment.”
- Start EPM System services. See Chapter 10, “Starting and Stopping EPM System Products.”

Using EPM System Diagnostics

To run EPM System Diagnostics:

1. Choose a method:
   - (Windows) In $EPM_ORACLE_INSTANCE/bin, double-click validate.bat.
From the Start Menu, choose Programs, then Oracle EPM System, then instanceName, then Foundation Services, and then EPM System Diagnostics.

(UNIX) From a console, change to EPM_ORACLE_INSTANCE/bin, and then enter validate.sh.

Progress is shown in the command window.

2 To view results, navigate to EPM_ORACLE_INSTANCE/diagnostics/reports and open instance_report_date_time.html.

3 Look for failed tests, and diagnose and fix problems.

EPM System Diagnostics creates a ZIP file of all the logs in EPM_ORACLE_INSTANCE/ logszips for your convenience.

For more information about logs, see Oracle Enterprise Performance Management System Installation and Configuration Troubleshooting Guide.

4 Run EPM System Diagnostics again and view the report to verify that problems are solved.

Note: Clicking Refresh in the browser does not refresh the report output.

5 In a distributed environment, run EPM System Diagnostics on each machine in the deployment.

The report captures the following information:

- Test date and time
- Test Status: Passed or Failed for each test
- Service: Type of test for each test
- Test Description: A detailed description of each test
- Duration: Duration of each test
- Test start time
- Test end time
- Total test duration

Diagnostics Performed

The following list highlights the Oracle Hyperion Enterprise Performance Management System Diagnostics tests performed for EPM System products.

- CFG: Configuration - Checks whether all configuration tasks have been completed
- DB: Database - Checks connection to database host:port;databaseName
- EXT: External Authentication - Checks Native Directory external authentication provider configuration
- HTTP: http - Checks availability of HTTP context for all components configured for the web server.
- SSO:
Checks status of Shared Services security (Native Directory as well as external directories)

Checks availability of login to Shared Services, Taskflows, Audit, Shared Services Java web application, and Oracle Hyperion Enterprise Performance Management System Lifecycle Management

- WEB: Web application - Checks availability of Java web application on host:port
- Additional product-specific tests

**Generating a Deployment Report**

After completing an EPM System deployment, you can generate a deployment report that lists this information:

- EPM Deployment Topology Report
  - Logical Web Addresses — all logical Java web applications and all web servers that are configured
  - Application Tier Components — the components configured for each EPM Instance in this deployment, including the Java web application URL and domain name for each Java web application
  - Database Connections — all databases configured for EPM System products
  - User Directories — user directories used by EPM System products; configured security providers are listed in the same order as configured in Shared Services
  - Data Directories — data directories used by EPM System products, indicating the directories that need to be on a shared file system

- EPM Deployment History Report — configuration history of activities on the specified date for each server in the deployment

This report can help you to resolve any issues that might arise in your deployment. For example, you can use the report to verify that there is only one WebLogic domain and that the deployment points to the correct number of database schemas. The deployment report is created from the Shared Services Registry database. You can generate the report from any server in the deployment, and it does require EPM System services to be running.

The report has additional sections that show deployment history.

To generate a deployment report:

1. **Open a command line window and navigate to** `EPM_ORACLE_INSTANCE/bin`
2. **Run the command** `epmsys_registry.bat|.sh report deployment`

   By default, the report is saved as `EPM_ORACLE_INSTANCE/diagnostics/reports/deployment_report_YYYYMMDD_HHMMSS.html`.
You can add an optional file name argument to the command to save the HTML report with a different file name or location. For example, this command saves the report as c:/epm_setup/epm_deployment.html:

```
epmsys_registry.bat|.sh report deployment c:/epm_setup/
epm_deployment
```

**Verifying Deployment**

Subtopics

- Verifying Shared Services Deployment
- Verifying EPM Workspace Deployment and Products in EPM Workspace
- Additional Verification for Financial Close Management
- Verifying Administration Services Deployment
- Verifying Provider Services Deployment

**Verifying Shared Services Deployment**

To verify deployment:

1. From the Start menu, select **Programs**, then **Oracle EPM System**, then **instanceName**, then **Foundation Services**, and then **Shared Services URL**. Or, using a web browser, open:
   
   ```
   ```

2. Log on to Shared Services.

3. Review the output for the WebLogic managed server in **MIDDLEWARE_HOME/user_projects/domains/EPMSystem/servers/SERVER_NAME/logs**.

4. Review the product logs in **EPM_ORACLE_INSTANCE/diagnostics/logs**. You can also review the diagnostics reports in **EPM_ORACLE_INSTANCE/diagnostics/reports**.

**Verifying EPM Workspace Deployment and Products in EPM Workspace**

To verify deployment:

1. From the Start menu, select **Programs**, then **Oracle EPM System**, then **instanceName**, then **Workspace**, and then **Workspace URL**. Or, using a web browser, open:
   
   ```
   ```

2. Review the output for your WebLogic managed server in **MIDDLEWARE_HOME/user_projects/domains/EPMSystem/servers/SERVER_NAME/logs**.

3. Review the product logs in **EPM_ORACLE_INSTANCE/diagnostics/logs**. You can also review the diagnostics reports in **EPM_ORACLE_INSTANCE/diagnostics/reports**.
From the EPM Workspace Help menu, select About and in the Details section verify the list of installed products.

Launch each listed product from EPM Workspace. The following products can be launched from EPM Workspace:
- Reporting and Analysis Framework
- Financial Reporting
- Oracle Hyperion SQR Production Reporting
- Web Analysis
- Planning
- Financial Management
- Profitability and Cost Management

Before you can access Profitability and Cost Management in EPM Workspace and verify deployment, you must perform some initial tasks. See the Oracle Hyperion Profitability and Cost Management Administrator's Guide.
- Performance Management Architect
- Calculation Manager
- FDMEE
- Financial Close Management. To perform additional verification for Financial Close Management, see "Additional Verification for Financial Close Management" on page 189.

Additional Verification for Financial Close Management

To verify that the Oracle SOA Server and Financial Close Management are communicating:

1. After you launch Financial Close Management, create a schedule with a range that includes today's date.
2. Create a task using the Basic Task Type on today's date, but set the start time to be earlier than the current time.
3. Go to Manage Schedules, highlight the schedule, run Set Status, and then change status to Open.
4. Click Open and open the schedule in the Task List view.

The task should go from a pending to a running state (green triangle), because the task is past its scheduled start time.

Verifying Administration Services Deployment

To verify deployment:

1. Using a web browser, open:
Verify Provider Services Deployment

- To verify deployment:
  1. Using a web browser, open:
     ```
     ```
  2. Review the output for your WebLogic managed server in `MIDDLEWARE_HOME/user_projects/domains/EPMSystem/servers/SERVER_NAME/logs`.
  3. Review the product logs in `EPM_ORACLE_INSTANCE/diagnostics/logs`. You can also review the diagnostics reports in `EPM_ORACLE_INSTANCE/diagnostics/reports`.

Validating a Financial Close Management Deployment

Financial Close Management Validation Tool scans the system configuration settings needed for successful functioning of Financial Close Management. Oracle recommends that you run Financial Close Management Validation Tool after you complete the installation and configuration steps to test that the components for Financial Close Management are correctly deployed and configured.

- To use Financial Close Management Validation Tool:
  1. From a web browser, open the following URL:
     ```
     FCMHOST:FCMPORT/fcc/faces/oracle/apps/epm/fcc/ui/page/FCCValidation.jspx
     ```
     where `FCMHOST` is the machine where Financial Close Management is configured and `FCMPORT` is port 8700. You can find this information from WebLogic Administration Console. To view this information, log in to the Administration Console and navigate to `Environment`, and then `Servers`.
  2. Log in to the Financial Close Management Validation Tool with a user from the external provider. If there are issues with the external provider configuration, log on with any seeded user (seeded both on WebLogic Server and Shared Services native directory) and run the tool to identify issues with the external provider configuration.
  3. Review the status for each of the following:
<table>
<thead>
<tr>
<th>Validation Item</th>
<th>Results</th>
</tr>
</thead>
<tbody>
<tr>
<td>Admin Server</td>
<td>Host</td>
</tr>
<tr>
<td></td>
<td>Port</td>
</tr>
<tr>
<td></td>
<td>Status (running/shutdown)</td>
</tr>
<tr>
<td>Foundation Services Server</td>
<td>Host</td>
</tr>
<tr>
<td></td>
<td>Port</td>
</tr>
<tr>
<td></td>
<td>Status</td>
</tr>
<tr>
<td></td>
<td>Data Sources targeted</td>
</tr>
<tr>
<td>Financial Close Managed Server</td>
<td>Host</td>
</tr>
<tr>
<td></td>
<td>Port</td>
</tr>
<tr>
<td></td>
<td>Status</td>
</tr>
<tr>
<td></td>
<td>Data Sources targeted</td>
</tr>
<tr>
<td>SOA Server</td>
<td>Host</td>
</tr>
<tr>
<td></td>
<td>Port</td>
</tr>
<tr>
<td></td>
<td>Status</td>
</tr>
<tr>
<td></td>
<td>Data Sources targeted</td>
</tr>
<tr>
<td></td>
<td>SOA-infra status</td>
</tr>
<tr>
<td>FCM Web Application</td>
<td>Version</td>
</tr>
<tr>
<td></td>
<td>Status</td>
</tr>
<tr>
<td></td>
<td>DB Type</td>
</tr>
<tr>
<td>Foreign JNDI</td>
<td>EDN JMS (for SQL Server)</td>
</tr>
<tr>
<td></td>
<td>SOA JMS</td>
</tr>
<tr>
<td>Authentication Providers</td>
<td>EPM Identity Asserter Provider information</td>
</tr>
<tr>
<td></td>
<td>Lib OVD configuration status</td>
</tr>
<tr>
<td>External Idstores</td>
<td>Lists the external Identity store configuration. The tool lists the values used for the configuration. You must ensure that the entered values are correct.</td>
</tr>
<tr>
<td>SOA composites</td>
<td>List of SOA composites with their status</td>
</tr>
<tr>
<td>OWSM Keystore</td>
<td>The keystore referenced in jps-config.xml and if it actually exists.</td>
</tr>
</tbody>
</table>

4. **Look for failed tests, diagnose, and fix problems.**

5. **Run Financial Close Management Validation Tool again until all tests pass.**

The second half of the Financial Close Management Validation Tool has a utility that generates a test Main Orchestration Process, deploys it to a SOA server, and starts a test task. A table displays the status for each task, the possible cause of any errors, and the steps to fix it. Before proceeding, verify that the user logged in to the Financial Close Management Validation Tool is also a user in Shared Services.
6 Click Validate Test Schedule. The Validate Test Schedule button is enabled only if all the required configuration tests in Table 32 pass without errors.

7 Review the status of the following tasks:
   - SOA Composite Deployment
   - Business Event
   - Composite Instance
   - FCM Basic Task
   - Human Workflow

   In case of any errors, the test SOA Composite and the test FCCTaskExecutionComposite instance are not deleted and you can see more details of the error from the Enterprise Manager console. If all the validation items are successful, then the test composite and instance are deleted.

To use Account Reconciliation Manager Validation Tool:

1 From a web browser, open the following URL to run the Account Reconciliation Manager Validation Tool.

   $FCMHOST:FCMPORT/arm/faces/oracle/apps/epm/arm/ui/page/common/ARMValidation.jspx$

   where $FCMHOST$ is the machine where Financial Close Management is configured and $FCMPORT$ is the listening port of the FinancialClose0 managed Server in the WebLogic Administration Console. You can find this information from WebLogic Administration Console. To view this information, log in to the Administration Console and navigate to Environment, and then Servers.

2 Log in to the Account Reconciliation Manager Validation Tool with the Shared Services Admin user.

3 Click Validate Account Reconciliation Manager Configuration.

4 Review the status for each of the following:

   Table 33 Validation tests for Financial Close Management

<table>
<thead>
<tr>
<th>Validation Item</th>
<th>Results</th>
</tr>
</thead>
<tbody>
<tr>
<td>Admin Server</td>
<td>Host</td>
</tr>
<tr>
<td></td>
<td>Port</td>
</tr>
<tr>
<td></td>
<td>Status (running/shutdown)</td>
</tr>
<tr>
<td>Foundation Services</td>
<td>Host</td>
</tr>
<tr>
<td>Server</td>
<td>Port</td>
</tr>
<tr>
<td></td>
<td>Status</td>
</tr>
<tr>
<td></td>
<td>Data Sources targeted</td>
</tr>
<tr>
<td>Validation Item</td>
<td>Results</td>
</tr>
<tr>
<td>---------------------------------------</td>
<td>-------------------------------------------------------------------------</td>
</tr>
<tr>
<td>Financial Close Managed Server</td>
<td>Host, Port, Status, Data Sources targeted</td>
</tr>
<tr>
<td>SOA Server</td>
<td>Host, Port, Status, Data Sources targeted, SOA-infra status</td>
</tr>
<tr>
<td>ARM Web Application</td>
<td>Version, Status, DB Type</td>
</tr>
<tr>
<td>Authentication Providers</td>
<td>Provider (Configured/Not), Control Flag (Sufficient/Not)</td>
</tr>
<tr>
<td>External Authenticators</td>
<td>Lists the authentication providers</td>
</tr>
<tr>
<td>SOA Composites</td>
<td>List of SOA composites with their status</td>
</tr>
<tr>
<td>Foreign JNDI</td>
<td>EDN JMS (for SQL Server), SOA JMS</td>
</tr>
<tr>
<td>OWSM Keystore</td>
<td>Lists the external identity store configuration. The tool only lists the values used for the configuration. It is the responsibility of the customer to make sure that the entered values are correct. Warning can be ignored.</td>
</tr>
</tbody>
</table>

5. Look for failed tests, diagnose, and fix problems.

6. Run Account Reconciliation Manager Validation Tool again until all tests pass.
This appendix contains information about default port numbers for EPM System products including where the port can be configured.

**Caution!** These ports are not meant to be used to access a product. For information on starting a product, see Chapter 10, “Starting and Stopping EPM System Products.”

**Default Ports and Shared Services Registry**

During the configuration process, default port numbers for most EPM System products are automatically populated in Oracle Hyperion Shared Services Registry. During configuration using EPM System Configurator, you can change the default numbers. Each port number on the machine must be unique. (The same product on different machines can have the same port number.) If an error message similar to “port already in use” or “bind error” is displayed, a port number conflict may exist.

If the default port is already in use on the machine, or if there is a conflict, EPM System Configurator will not continue. If the default port number is not changed, the software is configured with the default values.
WebLogic Administration Server Port

Table 34 WebLogic Administration Server Port

<table>
<thead>
<tr>
<th>Default Port Number</th>
<th>Where Configurable</th>
</tr>
</thead>
<tbody>
<tr>
<td>7001</td>
<td>The WebLogic Administration Server port is specified during configuration. To change the default port, use the WebLogic Administration Console.</td>
</tr>
</tbody>
</table>

Oracle Enterprise Manager Java Web Application Port

Table 35 Oracle Enterprise Manager Java Web Application Port

<table>
<thead>
<tr>
<th>Default Port Number</th>
<th>Where Configurable</th>
</tr>
</thead>
<tbody>
<tr>
<td>7001</td>
<td>The Oracle Enterprise Manager Java Web Application port is configured when you create the domain in EPM System Configurator.</td>
</tr>
</tbody>
</table>

SOA Server Port

Table 36 SOA Server Port

<table>
<thead>
<tr>
<th>Default Port Number</th>
<th>Where Configurable</th>
</tr>
</thead>
<tbody>
<tr>
<td>8001</td>
<td>WebLogic Server Admin Console</td>
</tr>
</tbody>
</table>

SSL Ports

For more information about configuring SSL ports, see Oracle Enterprise Performance Management System Security Configuration Guide.

Foundation Services Ports

See these sections for information about Foundation Services ports:

- “Foundation Services Ports” on page 196
- “Performance Management Architect Ports” on page 197
- “Calculation Manager Java Web Application Ports” on page 198

Foundation Services Ports

The following table describes the Foundation Services Managed Server Java web application ports and where you can configure them. Foundation Services Managed Server includes Shared Services, EPM Workspace, and Foundation Web Service.
Table 37  Foundation Services Java Web Application Ports

<table>
<thead>
<tr>
<th>Port Type</th>
<th>Default Port Number</th>
<th>Where Configurable</th>
</tr>
</thead>
<tbody>
<tr>
<td>Listen port</td>
<td>28080</td>
<td>EPM System Configurator</td>
</tr>
<tr>
<td>SSL listen port</td>
<td>28443</td>
<td>EPM System Configurator</td>
</tr>
</tbody>
</table>

Table 38  Web Server Ports

<table>
<thead>
<tr>
<th>Server</th>
<th>Default Server Port</th>
<th>Where Configurable</th>
</tr>
</thead>
<tbody>
<tr>
<td>Oracle HTTP Server</td>
<td>19000</td>
<td>MIDDLEWARE_HOME/user_projects/epmsystem1/httpConfig/ohs/config/ohs/ohs_component/httpd.conf configurable in the EPM System Configurator.</td>
</tr>
<tr>
<td>IIS</td>
<td>80</td>
<td>443 (SSL)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Microsoft Internet Information Services (IIS) Manager Console. Change the TCP port value setting.</td>
</tr>
</tbody>
</table>

Performance Management Architect Ports

Table 39  Performance Management Architect Java Web Application Ports

<table>
<thead>
<tr>
<th>Port Type</th>
<th>Default Port Number</th>
<th>Where Configurable</th>
</tr>
</thead>
<tbody>
<tr>
<td>Performance Management Architect Java Web Application</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Listen port</td>
<td>19091 (can be configured for SSL)</td>
<td>EPM System Configurator</td>
</tr>
<tr>
<td>SSL listen port</td>
<td>19047</td>
<td>EPM System Configurator</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Data Synchronizer Java Web Application (Performance Management Architect)</th>
<th>Default Port Number</th>
<th>Where Configurable</th>
</tr>
</thead>
<tbody>
<tr>
<td>Listen port</td>
<td>19101 (can be configured for SSL)</td>
<td>EPM System Configurator</td>
</tr>
<tr>
<td>SSL listen port</td>
<td>19145</td>
<td>EPM System Configurator</td>
</tr>
</tbody>
</table>

Table 40  Performance Management Architect Server Ports

<table>
<thead>
<tr>
<th>Services</th>
<th>Default Port Number</th>
<th>Where Configurable</th>
</tr>
</thead>
<tbody>
<tr>
<td>Performance Management Architect Dimension Server</td>
<td>5251</td>
<td>EPM System Configurator</td>
</tr>
<tr>
<td>Net JNI Bridge</td>
<td>5255</td>
<td>EPM System Configurator</td>
</tr>
</tbody>
</table>

Table 41  Performance Management Architect Web Services (IIS) Port

<table>
<thead>
<tr>
<th>Default Web Server Port</th>
<th>Where Configurable</th>
</tr>
</thead>
<tbody>
<tr>
<td>80 (HTTP) or 443 (when SSL is enabled)</td>
<td>Microsoft Internet Information Services (IIS) Manager Console. Change the TCP port value setting.</td>
</tr>
</tbody>
</table>
Calculation Manager Java Web Application Ports

Table 42  Calculation Manager Java Web Application Ports

<table>
<thead>
<tr>
<th>Port Type</th>
<th>Default Port Number</th>
<th>Where Configurable</th>
</tr>
</thead>
<tbody>
<tr>
<td>Listen port</td>
<td>8500</td>
<td>EPM System Configurator</td>
</tr>
<tr>
<td>SSL listen port</td>
<td>8543</td>
<td>EPM System Configurator</td>
</tr>
</tbody>
</table>

Essbase Ports

See these sections for information about Essbase ports:

- “Essbase Ports” on page 198
- “Administration Services Ports” on page 199
- “Provider Services Ports” on page 199
- “Essbase Studio Ports” on page 199

Table 43  Essbase Default Service Ports

<table>
<thead>
<tr>
<th>Service</th>
<th>Default Port Number</th>
<th>Where Configurable</th>
</tr>
</thead>
<tbody>
<tr>
<td>Essbase Agent</td>
<td>1423</td>
<td>EPM System Configurator</td>
</tr>
<tr>
<td>Essbase server applications (ESSSVR)</td>
<td>32768-33768 (two ports per process)</td>
<td>EPM System Configurator</td>
</tr>
<tr>
<td>Essbase SSL Agent</td>
<td>6423</td>
<td>EPM System Configurator</td>
</tr>
</tbody>
</table>

Note: Starting in release 11.1.1, if you do not specify Essbase port numbers in EPM System Configurator, the default ports are used.

Table 44  OPMN (Oracle Process Manager and Notification Server) Default Ports

<table>
<thead>
<tr>
<th>Service</th>
<th>Default Port Number</th>
<th>Where Configurable</th>
</tr>
</thead>
<tbody>
<tr>
<td>Oracle Notification Server Local Port</td>
<td>6711</td>
<td>Open the opmn.xml file and modify the “local” parameter. Then save the file.</td>
</tr>
<tr>
<td>Oracle Notification Server Remote Port</td>
<td>6712</td>
<td>Open the opmn.xml file and modify the “remote” parameter. Then save the file.</td>
</tr>
</tbody>
</table>
Administration Services Ports

Table 45  Administration Services Java Web Application Ports

<table>
<thead>
<tr>
<th>Port Type</th>
<th>Default Port Number</th>
<th>Where Configurable</th>
</tr>
</thead>
<tbody>
<tr>
<td>Listen port</td>
<td>10080</td>
<td>EPM System Configurator</td>
</tr>
<tr>
<td>SSL listen port</td>
<td>10083</td>
<td>EPM System Configurator</td>
</tr>
</tbody>
</table>

Provider Services Ports

Table 46  Provider Services Java Web Application Ports

<table>
<thead>
<tr>
<th>Port Type</th>
<th>Default Port Number</th>
<th>Where Configurable</th>
</tr>
</thead>
<tbody>
<tr>
<td>Listen port</td>
<td>13080</td>
<td>EPM System Configurator</td>
</tr>
<tr>
<td>SSL listen port</td>
<td>13083</td>
<td>EPM System Configurator</td>
</tr>
</tbody>
</table>

Essbase Studio Ports

Table 47  Essbase Studio Server Ports

<table>
<thead>
<tr>
<th>Port Type</th>
<th>Default Port Number</th>
<th>Where Configurable</th>
</tr>
</thead>
</table>
| Listen port     | 5300                | $EPM_ORACLE_HOME/products/Essbase/EssbaseStudio/Server/server.properties$  
Parameters: transport.port=new port number |
| HTTP listen port| 12080               | $EPM_ORACLE_HOME/products/Essbase/EssbaseStudio/Server/server.properties$  
Parameters: server.httpPort=new port number |

Reporting and Analysis Ports

See these sections for information about Oracle Hyperion Reporting and Analysis ports:

- “Reporting and Analysis Framework Ports” on page 200
- “Financial Reporting Ports” on page 200
- “Interactive Reporting Ports” on page 201
- “Web Analysis Ports” on page 201
Reporting and Analysis Framework Ports

Table 48 Reporting and Analysis Framework Java Web Application Ports

<table>
<thead>
<tr>
<th>Port Type</th>
<th>Default Port Number</th>
<th>Where Configurable</th>
</tr>
</thead>
<tbody>
<tr>
<td>Listen port</td>
<td>45000</td>
<td>EPM System Configurator</td>
</tr>
<tr>
<td>SSL listen port</td>
<td>45043</td>
<td>EPM System Configurator</td>
</tr>
</tbody>
</table>

Table 49 Reporting and Analysis Framework Default Service Ports

<table>
<thead>
<tr>
<th>Service</th>
<th>Default Port Number</th>
<th>Where Configurable</th>
</tr>
</thead>
<tbody>
<tr>
<td>Reporting and Analysis Framework Agent</td>
<td>6860</td>
<td>EPM System Configurator</td>
</tr>
<tr>
<td>Reporting and Analysis Framework Agent RMI</td>
<td>6861</td>
<td>EPM System Configurator</td>
</tr>
<tr>
<td>Reporting and Analysis Framework Services</td>
<td>6800–6805</td>
<td></td>
</tr>
<tr>
<td>- Global Services Manager (GSM)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>- Core Service</td>
<td></td>
<td></td>
</tr>
<tr>
<td>- Service Broker</td>
<td></td>
<td></td>
</tr>
<tr>
<td>- Job Service</td>
<td></td>
<td></td>
</tr>
<tr>
<td>- Event Service</td>
<td></td>
<td></td>
</tr>
<tr>
<td>- Repository Service</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Each service listed in this table is assigned a port within the range, either the default range 6800–6805 or the range specified during configuration.

- Use EPM System Configurator when you are installing or configuring Reporting and Analysis Framework Services for the first machine.
- To change a port number or find out the exact port used by a particular component: from EPM Workspace, select Navigate, then Administer, then Reporting and Analysis, then Services, and then the Properties dialog box of Reporting and Analysis Framework Services.

Financial Reporting Ports

Table 50 Financial Reporting Java Web Application Ports

<table>
<thead>
<tr>
<th>Port Type</th>
<th>Default Port Number</th>
<th>Where Configurable</th>
</tr>
</thead>
<tbody>
<tr>
<td>Listen port</td>
<td>8200</td>
<td>EPM System Configurator</td>
</tr>
<tr>
<td>SSL listen port</td>
<td>8243</td>
<td>EPM System Configurator</td>
</tr>
</tbody>
</table>

Table 51 Financial Reporting Default Service Ports

<table>
<thead>
<tr>
<th>Service</th>
<th>Default Port Number</th>
<th>Where Configurable</th>
</tr>
</thead>
<tbody>
<tr>
<td>RMI Services and Remote ADM Server</td>
<td>8205-8228</td>
<td>EPM System Configurator</td>
</tr>
</tbody>
</table>

Each Financial Reporting Java Web Application uses two ports, one for RMI services and one for Remote ADM Server (e.g., first Financial Reporting Java Web Application uses ports 8205 and 8206).
Interactive Reporting Ports

Table 52 Interactive Reporting Default Service Ports

<table>
<thead>
<tr>
<th>Service</th>
<th>Default Port Number</th>
<th>Where Configurable</th>
</tr>
</thead>
<tbody>
<tr>
<td>Interactive Reporting Logging Service</td>
<td>6810, 6811 (Log Service) 6812, 6813 (Intelligence Service): 6814, 6815 (Data Access Service) 6816, 6817 (Job Service)</td>
<td>Use EPM System Configurator when you are installing or configuring Reporting and Analysis Framework Services for the first machine. To change a port number or find out the exact port used by a particular component: from EPM Workspace, select Navigate, then Administer, then Reporting and Analysis, then Services, and then the Properties dialog of Reporting and Analysis Framework Services</td>
</tr>
<tr>
<td>Interactive Reporting Intelligence Service</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Data Access Service (DAS)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Interactive Reporting Job Service</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Web Analysis Ports

Table 53 Web Analysis Java Web Application Ports

<table>
<thead>
<tr>
<th>Port Type</th>
<th>Default Port Number</th>
<th>Where Configurable</th>
</tr>
</thead>
<tbody>
<tr>
<td>Listen port</td>
<td>16000</td>
<td>EPM System Configurator</td>
</tr>
<tr>
<td>SSL listen port</td>
<td>16043</td>
<td>EPM System Configurator</td>
</tr>
</tbody>
</table>

Financial Performance Management Applications Ports

See these sections for information about Oracle's Hyperion Financial Performance Management Applications ports:

- "Financial Management Ports" on page 201
- "Financial Close Management Ports" on page 202
- "Planning Ports" on page 202
- "Strategic Finance Ports" on page 203
- "Profitability and Cost Management Ports" on page 203
- "Disclosure Management Ports" on page 204

Financial Management Ports

Table 54 Financial Management Java Web Application Port

<table>
<thead>
<tr>
<th>Port Type</th>
<th>Default Port Number</th>
<th>Where Configurable</th>
</tr>
</thead>
<tbody>
<tr>
<td>Listen port</td>
<td>7363</td>
<td>EPM System Configurator</td>
</tr>
<tr>
<td>Port Type</td>
<td>Default Port Number</td>
<td>Where Configurable</td>
</tr>
<tr>
<td>-----------------</td>
<td>---------------------</td>
<td>------------------------</td>
</tr>
<tr>
<td>SSL listen port</td>
<td>7365</td>
<td>EPM System Configurator</td>
</tr>
</tbody>
</table>

Table 55  Financial Management Server Port

<table>
<thead>
<tr>
<th>Port Type</th>
<th>Default Port Number</th>
<th>Where Configurable</th>
</tr>
</thead>
<tbody>
<tr>
<td>Port</td>
<td>9091</td>
<td>EPM System Configurator</td>
</tr>
<tr>
<td>SSL Port</td>
<td>9092</td>
<td>EPM System Configurator</td>
</tr>
<tr>
<td>Datasource Start Port</td>
<td>10001</td>
<td>EPM System Configurator</td>
</tr>
<tr>
<td>Datasource End Port</td>
<td>10020</td>
<td>EPM System Configurator</td>
</tr>
</tbody>
</table>

Financial Close Management Ports

The following table describes the Financial Close Management ports and where you can configure them.

Table 56  Financial Close Management Java Web Application Ports

<table>
<thead>
<tr>
<th>Type of Port</th>
<th>Default Port Number</th>
<th>Where Configurable</th>
</tr>
</thead>
<tbody>
<tr>
<td>Listen port</td>
<td>8700</td>
<td>EPM System Configurator</td>
</tr>
<tr>
<td>SSL listen port</td>
<td>8743</td>
<td>EPM System Configurator</td>
</tr>
</tbody>
</table>

Tax Management Ports

Table 57  Tax Management Java Web Application Port

<table>
<thead>
<tr>
<th>Port Type</th>
<th>Default Port Number</th>
<th>Where Configurable</th>
</tr>
</thead>
<tbody>
<tr>
<td>Tax Governance Port</td>
<td>22200</td>
<td>EPM System Configurator</td>
</tr>
<tr>
<td>Tax Governance SSL Port</td>
<td>23243</td>
<td>EPM System Configurator</td>
</tr>
<tr>
<td>Tax Provision Port</td>
<td>22200</td>
<td>EPM System Configurator</td>
</tr>
<tr>
<td>Tax Provision SSL Port</td>
<td>23243</td>
<td>EPM System Configurator</td>
</tr>
</tbody>
</table>

Planning Ports

Table 58  Planning Java Web Application Ports

<table>
<thead>
<tr>
<th>Port Type</th>
<th>Default Port Number</th>
<th>Where Configurable</th>
</tr>
</thead>
<tbody>
<tr>
<td>Listen port</td>
<td>8300</td>
<td>EPM System Configurator</td>
</tr>
</tbody>
</table>
Strategic Finance Ports

Table 60 Strategic Finance Default Service Port

<table>
<thead>
<tr>
<th>Service</th>
<th>Default Port Number</th>
<th>Where Configurable</th>
</tr>
</thead>
<tbody>
<tr>
<td>Strategic Finance Server</td>
<td>7750</td>
<td>EPM System Configurator</td>
</tr>
</tbody>
</table>

**Note:** If you change this port, you must also change it for each Strategic Finance client in the Connection dialog box.

Table 61 Strategic Finance Web Server Port

<table>
<thead>
<tr>
<th>Default Web Server Port</th>
<th>Where Configurable</th>
</tr>
</thead>
<tbody>
<tr>
<td>80 (HTTP) or 443 (when SSL is enabled)</td>
<td>Microsoft Internet Information Services (IIS) Manager Console. (Change the TCP port value setting.)</td>
</tr>
</tbody>
</table>

Table 62 Strategic Finance Web Application Port

<table>
<thead>
<tr>
<th>Port Type</th>
<th>Default Port Number</th>
<th>Where Configurable</th>
</tr>
</thead>
<tbody>
<tr>
<td>Listen port</td>
<td>8900</td>
<td>EPM System Configurator</td>
</tr>
<tr>
<td>SSL listen port</td>
<td>8943</td>
<td>EPM System Configurator</td>
</tr>
</tbody>
</table>

Profitability and Cost Management Ports

Table 63 Profitability and Cost Management Java Web Application Ports

<table>
<thead>
<tr>
<th>Port Type</th>
<th>Default Port Number</th>
<th>Where Configurable</th>
</tr>
</thead>
<tbody>
<tr>
<td>Listen port</td>
<td>6756</td>
<td>EPM System Configurator</td>
</tr>
<tr>
<td>SSL listen port</td>
<td>6743</td>
<td>EPM System Configurator</td>
</tr>
</tbody>
</table>
Disclosure Management Ports

Table 64  Disclosure Management Java Web Application Ports

<table>
<thead>
<tr>
<th>Type of Port</th>
<th>Default Port Number</th>
<th>Where Configurable</th>
</tr>
</thead>
<tbody>
<tr>
<td>Listen port</td>
<td>8600</td>
<td>EPM System Configurator</td>
</tr>
<tr>
<td>SSL listen port</td>
<td>8643</td>
<td>EPM System Configurator</td>
</tr>
</tbody>
</table>

Data Management Ports

See these sections for information about Oracle’s Data Management ports.

- “FDMEE Ports” on page 204
- “Data Relationship Management Ports” on page 204

FDMEE Ports

The following table describes the FDMEE Java web application ports and where you can configure them.

Table 65  FDMEE Java Web Application Ports

<table>
<thead>
<tr>
<th>Port Type</th>
<th>Default Port Number</th>
<th>Where Configurable</th>
</tr>
</thead>
<tbody>
<tr>
<td>Listen port</td>
<td>6550</td>
<td>EPM System Configurator</td>
</tr>
<tr>
<td>SSL listen port</td>
<td>6553</td>
<td>EPM System Configurator</td>
</tr>
</tbody>
</table>

Data Relationship Management Ports

The following table describes the Data Relationship Management default service ports and where you can configure them.

Table 66  Data Relationship Management Default Service Port

<table>
<thead>
<tr>
<th>Service</th>
<th>Default Port Number</th>
<th>Where Configurable</th>
</tr>
</thead>
<tbody>
<tr>
<td>Data Relationship Management server applications</td>
<td>5200–5400</td>
<td>drm-config.xml using the Data Relationship Management Console.</td>
</tr>
</tbody>
</table>

The following table describes the Data Relationship Management Web server ports and where you can configure them.
<table>
<thead>
<tr>
<th>Default Web Server Ports</th>
<th>Where Configurable</th>
</tr>
</thead>
<tbody>
<tr>
<td>80 (HTTP) or 443 (when SSL is enabled)</td>
<td>Microsoft Internet Information Services (IIS) Manager Console. (Change the TCP port value setting.)</td>
</tr>
</tbody>
</table>
In This Appendix

JDBC Drivers

JDBC Drivers

During configuration, on the Configure Database page, click Advanced to specify additional JDBC parameters, which are used by EPM System JDBC drivers to connect to the database.

The following table describes the format to use to enter the parameters if you are using JDBC drivers.

<table>
<thead>
<tr>
<th>Database</th>
<th>Format</th>
</tr>
</thead>
<tbody>
<tr>
<td>Oracle Database</td>
<td>jdbc:oracle:thin:@hostname:port:SID</td>
</tr>
<tr>
<td>SQL Server</td>
<td>jdbc:weblogic:sqlserver://hostname:port;databaseName=databaseName</td>
</tr>
<tr>
<td>DB2</td>
<td>jdbc:weblogic:db2://hostname:port;databaseName=databaseName;DynamicSections=3000</td>
</tr>
</tbody>
</table>

The following table describes additional information about the parameters:

<table>
<thead>
<tr>
<th>Property</th>
<th>SQL Server</th>
<th>DB2</th>
</tr>
</thead>
<tbody>
<tr>
<td>LOADLIBRARYPATH</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>MAXPOOLEDSTATEMENTS</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>ALTERNATESERVERS</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>CONNECTIONRETRYCOUNT</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>CONNECTIONRETRYDELAY</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>LOADBALANCING</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>DYNAMICSECTIONS</td>
<td></td>
<td>Yes</td>
</tr>
<tr>
<td>CREATEDEFAULTPACKAGE</td>
<td></td>
<td>Yes</td>
</tr>
<tr>
<td>REPLACEPACKAGE</td>
<td></td>
<td>Yes</td>
</tr>
</tbody>
</table>
For Oracle Database parameters, see the Oracle Thin JDBC Driver documentation.
For more information, see the Oracle® Database JDBC Developer’s Guide 11g Release 2 (11.2):
http://docs.oracle.com/cd/E11882_01/java.112/e16548/urls.htm#BEIJFHHB.

**URL for Oracle RAC**

To provide client-side failover and load-balancing for Oracle RAC, enter the URL in the form of:

```java
jdbc:oracle:thin:@(DESCRIPTION=
  (LOAD_BALANCE=on)
  (ADDRESS=(PROTOCOL=TCP)(HOST=host1) (PORT=1521))
  (ADDRESS=(PROTOCOL=TCP)(HOST=host2)(PORT=1521))
  (CONNECT_DATA=(SERVICE_NAME=service_name)))
```

**LDAP-Based URL for Oracle Database**

Oracle Database supports authentication using an LDAP server. To use LDAP-based database authentication, enter the URL in the following format:

```java
jdbc:oracle:thin:@ldap://oid:5000/mydb1,cn=OracleContext,dc=myco,dc=com
```

**URL for SSL**

To enable SSL for the JDBC connections, during configuration, on the Configure Database page, click Advanced and select “Use secure connection to the database (SSL).”

Use the following additional parameters when JDBC SSL is selected and you are using DB2 or Microsoft SQL Server.

- **ENCRYPTIONMETHOD=SSL**
- **TRUSTSTORE=Path to trust store**
- **TRUSTSTOREPASSWORD=trust store password**
- **VALIDATESERVERCERTIFICATE="true"**

Use the following URL format when JDBC SSL is selected and you are using Oracle Database.

```java
jdbc:oracle:thin:@(DESCRIPTION=(ADDRESS=(PROTOCOL=tcps)
  (HOST=host1)(PORT=1521))
  (CONNECT_DATA=(SERVICE_NAME=service_name))
)
This appendix provides details about start menus, service names, and start and stop scripts for each EPM System component.

Note that Start menu items for Java web applications are available only on the machine on which the web server is installed.

You can monitor the health and performance of the EPM System Java web applications using Oracle Enterprise Manager, which is automatically deployed with Oracle Hyperion Enterprise Performance Management System Configurator if you deploy Java web applications with Oracle WebLogic Server. You can see the status of the servers and the Java web applications running, the servers they are running on, and the ports they are listening on. See “Using Enterprise Manager to Monitor EPM System Java Web Applications” in the Oracle Enterprise Performance Management System Deployment Options Guide.
EPM System Services and Processes

Subtopics

- Web Server
- Foundation Services Application Server
- Performance Management Architect Dimension Server Services
- Performance Management Architect Application Server
- Performance Management Architect Data Synchronizer Application Server
- Calculation Manager Application Server
- Essbase Server
- Administration Services Server
- Essbase Studio Server
- Provider Services Application Server
- Hyperion Reporting and Analysis Framework - Agent Service
- Reporting and Analysis Framework Application Server
- Financial Reporting Application Server
- Web Analysis Application Server
- Planning Application Server
- Financial Management Server
- Financial Management Application Server
- Strategic Finance Server
- Strategic Finance Web Application
- Profitability and Cost Management Application Server
- Disclosure Management Application Server
- Financial Close Management Application Server
- Tax Management Application Server
- Data Relationship Management
- Data Relationship Management Analytics
- FDMEE Application Server

If you deploy components to a single managed server, the managed server name is **EPMServerN**, where **N** is 0 for the managed server, and 1 or higher if you scale out the single managed server.

**Web Server**

The following table describes the services and processes for the web server if you used the Oracle HTTP Server installed by EPM System Installer.

The Oracle HTTP Server service is managed with OPMN.

For information about OPMN, see the Oracle® Fusion Middleware Oracle Process Manager and Notification Server Administrator’s Guide Release 11g (11.1.1.2.0) ([http://download.oracle.com/docs/cd/E15523_01/doc.1111/e14007/toc.htm](http://download.oracle.com/docs/cd/E15523_01/doc.1111/e14007/toc.htm))
Table 68  Web Server Services and Processes

<table>
<thead>
<tr>
<th>Information Type</th>
<th>Details</th>
</tr>
</thead>
</table>
| **Display Name in Windows Services Control Panel** | - Oracle Process Manager (ohsInstanceInstanceNumber)  
- IIS: IIS Admin Service  
- IBM HTTP Server 7.0 |
| **Description** | - OPMN Service for OHS  
- IIS: Enables this server to administer web and FTP services. If this service is stopped, the server will be unable to run web, FTP, NNTP, or SMTP sites or configure IIS. If this service is disabled, any services that explicitly depend on it will fail to start.  
- IHS: IBM_HTTP_Server/7.0.0.17 (Win32) |
| **Windows Startup Script (For Oracle HTTP Server installed by EPM System Installer only)** | `EPM_ORACLE_INSTANCE/bin/startOHS.bat`  
Note that this start script redirects Oracle HTTP Server to start using OPMN. The OPMN start script `opmnctl.bat` is located in `EPM_ORACLE_INSTANCE/httpConfig/ohs/bin`. |
| **UNIX Startup Script (For Oracle HTTP Server installed by EPM System Installer only)** | `EPM_ORACLE_INSTANCE/bin/startOHS.sh`  
Note that this start script redirects Oracle HTTP Server to start using OPMN. The OPMN start script `opmnctl` is located in `EPM_ORACLE_INSTANCE/httpConfig/ohs/bin`. |
| **Windows Stop Script (For Oracle HTTP Server installed by EPM System Installer only)** | `EPM_ORACLE_INSTANCE/bin/stopOHS.bat` |
| **UNIX Stop Script (For Oracle HTTP Server installed by EPM System Installer only)** | `EPM_ORACLE_INSTANCE/bin/stopOHS.sh` |

**Foundation Services Application Server**

The following table describes the services and processes for the Oracle Hyperion Foundation Services application server, which includes Oracle Hyperion Shared Services, and Oracle Hyperion Enterprise Performance Management Workspace Java web applications.
Table 69  Foundation Services Application Server Services and Processes

<table>
<thead>
<tr>
<th>Information Type</th>
<th>Details</th>
</tr>
</thead>
<tbody>
<tr>
<td>Windows Start Menu Command</td>
<td>Select Start, then Programs, then Oracle EPM System, then <strong>EPM_ORACLE_INSTANCE_NAME</strong>, then Foundation Services, and then Start FoundationServices</td>
</tr>
<tr>
<td>Registered Service Name</td>
<td><strong>HyS9FoundationServices_instanceName</strong></td>
</tr>
<tr>
<td>Display Name in Windows Services Control Panel</td>
<td><strong>Oracle Hyperion Foundation Services - Managed Server (instanceName)</strong></td>
</tr>
<tr>
<td>Description</td>
<td>Hyperion Foundation Services support Hyperion applications, including authentication, user provisioning, task flow management, data and metadata synchronization</td>
</tr>
<tr>
<td>Windows Startup Script</td>
<td><strong>EPM_ORACLE_INSTANCE/bin/startFoundationServices.bat</strong></td>
</tr>
<tr>
<td>UNIX Startup Script</td>
<td><strong>EPM_ORACLE_INSTANCE/bin/startFoundationServices.sh</strong></td>
</tr>
<tr>
<td>Windows Stop Script</td>
<td><strong>EPM_ORACLE_INSTANCE/bin/stopFoundationServices.bat</strong></td>
</tr>
<tr>
<td>UNIX Stop Script</td>
<td><strong>EPM_ORACLE_INSTANCE/bin/stopFoundationServices.sh</strong></td>
</tr>
</tbody>
</table>

Performance Management Architect Dimension Server Services

The following table describes the services and processes for the Performance Management Architect services.

**Note:** When the Dimension Server and the database are hosted on different servers, startup time can take several minutes, because Performance Management Architect makes calls to the database during startup.

Table 70  Performance Management Architect Services

<table>
<thead>
<tr>
<th>Information Type</th>
<th>Details</th>
</tr>
</thead>
<tbody>
<tr>
<td>Windows Start Menu Command</td>
<td>N/A</td>
</tr>
<tr>
<td>Registered Service Name</td>
<td><strong>HyS9EPMAServer_instanceName</strong></td>
</tr>
<tr>
<td>Display Name in Windows Services Control Panel</td>
<td><strong>Oracle Hyperion EPMA Server (instanceName)</strong></td>
</tr>
<tr>
<td>Description</td>
<td>Hyperion EPM Architect Dimension Server provides the back services needed by the EPMA Web Tier, including dimensionality, applications, and the jobs console.</td>
</tr>
<tr>
<td>Windows Startup Script</td>
<td><strong>EPM_ORACLE_INSTANCE/bin/StartEpmaServer.bat</strong></td>
</tr>
</tbody>
</table>

214
Information Type | Details
---|---
UNIX Startup Script | NA
Windows Stop Script | Process Manager: `EPM_ORACLE_INSTANCE/bin/stopEpmaServer.bat`
UNIX Stop Script | NA

**Performance Management Architect Application Server**

The following table describes the services and processes for the Performance Management Architect application server.

<table>
<thead>
<tr>
<th>Information Type</th>
<th>Details</th>
</tr>
</thead>
<tbody>
<tr>
<td>Windows Start Menu Command</td>
<td>Select Start, then Programs, then Oracle EPM System, then <code>EPM_ORACLE_INSTANCE_NAME</code>, then Foundation Services, then Performance Management Architect, and then <code>startEpmaWebReports</code></td>
</tr>
<tr>
<td>Registered Service Name</td>
<td><code>HyS9EPMAWebTier_instanceName</code></td>
</tr>
<tr>
<td>Display Name in Windows Services Control Panel</td>
<td>Oracle Hyperion EPMA Web Tier - Java Web Application (instanceName)</td>
</tr>
<tr>
<td>Description</td>
<td>Provide access service to EPMA Web Server</td>
</tr>
<tr>
<td>Windows Startup Script</td>
<td><code>EPM_ORACLE_INSTANCE/bin/startEpmaWebReports.bat</code></td>
</tr>
<tr>
<td>UNIX Startup Script</td>
<td><code>EPM_ORACLE_INSTANCE/bin/startEpmaWebReports.sh</code></td>
</tr>
<tr>
<td>Windows Stop Script</td>
<td><code>EPM_ORACLE_INSTANCE/bin/stopEpmaWebReports.bat</code></td>
</tr>
<tr>
<td>UNIX Stop Script</td>
<td><code>EPM_ORACLE_INSTANCE/bin/stopEpmaWebReports.sh</code></td>
</tr>
</tbody>
</table>

In addition, Performance Management Architect has a web tier component that runs in IIS.

**Performance Management Architect Data Synchronizer Application Server**

The following table describes the services and processes for the Oracle Hyperion EPM Architect Data Synchronizer application server.

<table>
<thead>
<tr>
<th>Information Type</th>
<th>Details</th>
</tr>
</thead>
<tbody>
<tr>
<td>Windows Start Menu Command</td>
<td>Select Start, then Programs, then Oracle EPM System, then <code>EPM_ORACLE_INSTANCE_NAME</code>, then Foundation Services, then Performance Management Architect, and then <code>startEPMADataSync</code></td>
</tr>
<tr>
<td>Information Type</td>
<td>Details</td>
</tr>
<tr>
<td>-------------------------------</td>
<td>-------------------------------------------------------------------------</td>
</tr>
<tr>
<td>Registered Service Name</td>
<td>HyS9EPMADataSynchronizer_instanceName</td>
</tr>
<tr>
<td>Display Name in Windows Services Control Panel</td>
<td>Oracle Hyperion EPMA Data Synchronizer - Java Web Application (instanceName)</td>
</tr>
<tr>
<td>Description</td>
<td>Provide access service to EPMA Data Synchronizer Web Server</td>
</tr>
<tr>
<td>Windows Startup Script</td>
<td>EPM_ORACLE_INSTANCE/bin/startEPMADataSync.bat</td>
</tr>
<tr>
<td>UNIX Startup Script</td>
<td>EPM_ORACLE_INSTANCE/bin/startEPMADataSync.sh</td>
</tr>
<tr>
<td>Windows Stop Script</td>
<td>EPM_ORACLE_INSTANCE/bin/stopEPMADataSync.bat</td>
</tr>
<tr>
<td>UNIX Stop Script</td>
<td>EPM_ORACLE_INSTANCE/bin/stopEPMADataSync.sh</td>
</tr>
</tbody>
</table>

### Calculation Manager Application Server

The following table describes the services and processes for Oracle Hyperion Calculation Manager.

**Table 73  Calculation Manager Services and Processes**

<table>
<thead>
<tr>
<th>Information Type</th>
<th>Details</th>
</tr>
</thead>
<tbody>
<tr>
<td>Windows Start Menu Command</td>
<td>Select Start, then Programs, then Oracle EPM System, then EPM_ORACLE_INSTANCE_NAME, then Calculation Manager, and then Start CalcMgr</td>
</tr>
<tr>
<td>Registered Service Name</td>
<td>HyS9CALC_instanceName</td>
</tr>
<tr>
<td>Display Name in Windows Services Control Panel</td>
<td>Oracle Hyperion CALC Manager - Java Web Application (instanceName)</td>
</tr>
<tr>
<td>Description</td>
<td>Provide access service to CALC Manager Web Server</td>
</tr>
<tr>
<td>Windows Startup Script</td>
<td>EPM_ORACLE_INSTANCE/bin/startCalcMgr.bat</td>
</tr>
<tr>
<td>UNIX Startup Script</td>
<td>EPM_ORACLE_INSTANCE/bin/startCalcMgr.sh</td>
</tr>
<tr>
<td>Windows Stop Script</td>
<td>EPM_ORACLE_INSTANCE/bin/stopCalcMgr.bat</td>
</tr>
<tr>
<td>UNIX Stop Script</td>
<td>EPM_ORACLE_INSTANCE/bin/stopCalcMgr.sh</td>
</tr>
</tbody>
</table>

### Essbase Server

During installation, Oracle Hyperion Enterprise Performance Management System Installer installs OPMN and registers Essbase Server for OPMN. OPMN manages the Essbase Agent, which manages the Essbase Server.
Navigate to `EPM_ORACLE_INSTANCE/bin` and use the following commands to start and stop Essbase Server:

- `opmnctl startall`
- `opmnctl stopall`

If you are using Essbase in a clustered environment, there are additional steps required to set up Essbase failover on both nodes of the cluster. See “Editing OPMN.XML for Active-Passive Essbase Clusters” in the Oracle Enterprise Performance Management System Deployment Options Guide.

The following table describes additional methods for starting and stopping Essbase Server. Note that the Essbase Server start and stop scripts redirect to OPMN.

For information about OPMN, see the Oracle® Fusion Middleware Oracle Process Manager and Notification Server Administrator’s Guide Release 11g (11.1.1.2.0) (http://download.oracle.com/docs/cd/E15523_01/doc.1111/e14007/toc.htm)

**Table 74  Starting and Stopping Essbase Server**

<table>
<thead>
<tr>
<th>Information Type</th>
<th>Details</th>
</tr>
</thead>
</table>
| **Windows Start Menu Command** | Select Start, then Programs, then Oracle EPM System, then `EPM_ORACLE_INSTANCE_NAME`, then Essbase, then Essbase Server, and then Start Essbase  
This command launches `startEssbase.bat` (and redirects to OPMN). |
| **Registered Service Name** | Oracle Process Manager_`InstanceName` |
| **Display Name in Windows Services Control Panel** | Oracle Process Manager_`InstanceName` |
| **Description** | OPMN service for Essbase (`instanceName`) |
| **Windows Startup Script** | **Essbase Server** – `EPM_ORACLE_INSTANCE/bin/startEssbase.bat` (redirects to OPMN)  
Each instance of Essbase Server has its own startup script. If you configured an additional instance of Essbase, `startEssbase.bat` is located in `additionalInstanceLocation/bin`. Launch the start script from this location to launch this instance of Essbase.  
**ESSCMD** – `EPM_ORACLE_INSTANCE/EssbaseServer/EssbaseServerInstanceName/bin/startEsscmd.bat` (also available in the `/EssbaseClient` directory)  
**essmsh** – `EPM_ORACLE_INSTANCE/EssbaseServer/EssbaseServerInstanceName/bin/startMaxl.bat` (also available in the `/EssbaseClient` directory)  
All the scripts call `setEssbaseEnv.bat` to set up `ESSBASEPATH`, `ARBORPATH`, and `PATH` before starting. |
Information Type | Details
--- | ---
UNIX Startup Script | - Essbase Server — `EPM_ORACLE_INSTANCE/bin/startEssbase.sh` (redirects to OPMN)
  
  Each instance of Essbase Server has its own startup script. If you configured an additional instance of Essbase, `startEssbase.bat|sh` is located in `additionalInstanceLocation/bin`. Launch the start script from this location to launch this instance of Essbase.

  - ESSCMD — `EPM_ORACLE_INSTANCE/EssbaseServer/EssbaseServerInstanceName/bin/startEsscmd.sh` (also available in the /EssbaseClient directory)
  
  - essmsh — `EPM_ORACLE_INSTANCE/EssbaseServer/EssbaseServerInstanceName/bin/startMaxl.sh` (also available in the /EssbaseClient directory)

  All the scripts call `setEssbaseEnv.sh` to set up `ESSBASEPATH`, `ARBORPATH`, and `PATH` before starting.

  When running Essbase manually from a console, the console cannot be set to UTF-8 encoding.

Windows Stop Script | Server:
  
  Essbase Server — `EPM_ORACLE_INSTANCE/bin/stopEssbase.bat` (redirects to OPMN)

UNIX Stop Script | Server:
  
  Essbase Server — `EPM_ORACLE_INSTANCE/bin/stopEssbase.sh` (redirects to OPMN)

Stopping Essbase Server can take some time, depending on how many Essbase applications are running on the server. To stop Essbase Server, you need Administrator permissions.

See the Oracle Essbase Database Administrator’s Guide for more information about shutting down Essbase Server.

For more information about stopping Oracle Essbase Server, see the Oracle Essbase Database Administrator’s Guide and the Oracle Essbase Technical Reference.

**Administration Services Server**

The following table describes the services and processes for the Oracle Essbase Administration Services server.

<table>
<thead>
<tr>
<th>Information Type</th>
<th>Details</th>
</tr>
</thead>
<tbody>
<tr>
<td>Windows Start Menu Command</td>
<td>Select Start, then Programs, then Oracle EPM System, then <code>EPM_ORACLE_INSTANCE_NAME</code>, then Essbase, then Essbase Administration Services, and then Start EssbaseAdminServices</td>
</tr>
<tr>
<td>Registered Service Name</td>
<td>Hys9eas_instanceName</td>
</tr>
<tr>
<td>Display Name in Windows Services Control Panel</td>
<td>Oracle Hyperion Administration Services - Java Web Application (instanceName)</td>
</tr>
<tr>
<td>Description</td>
<td>Hys9eas - Controls the running of an Applications Server</td>
</tr>
</tbody>
</table>
### Essbase Studio Server

The following table describes the services and processes for the Essbase Studio server.

<table>
<thead>
<tr>
<th>Information Type</th>
<th>Details</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Windows Start Menu Command</strong></td>
<td>Select Start, then Programs, then Oracle EPM System, then EPM_ORACLE_INSTANCE_NAME, then Essbase, then Essbase Studio, and then Start Server</td>
</tr>
<tr>
<td>Registered Service Name</td>
<td>HYS9EssbaseStudio_instanceName</td>
</tr>
<tr>
<td>Display Name in Windows Services Control Panel</td>
<td>Oracle Hyperion Essbase Studio Server (instanceName)</td>
</tr>
<tr>
<td>Description</td>
<td>NA</td>
</tr>
<tr>
<td><strong>Windows Startup Script</strong></td>
<td>EPM_ORACLE_INSTANCE/BPMS/bin/startServer.bat</td>
</tr>
<tr>
<td><strong>UNIX Startup Script</strong></td>
<td>EPM_ORACLE_INSTANCE/BPMS/bin/startServer.sh</td>
</tr>
<tr>
<td><strong>Windows Stop Script</strong></td>
<td>EPM_ORACLE_INSTANCE/BPMS/bin/stopServer.bat</td>
</tr>
<tr>
<td><strong>UNIX Stop Script</strong></td>
<td>EPM_ORACLE_INSTANCE/BPMS/bin/stopServer.sh</td>
</tr>
</tbody>
</table>

By default, Essbase Studio Server runs in the background on UNIX. This behavior is controlled by a combination of an Essbase Studio Server property (server.runInBackground), EPM System environment variables, and startServer.sh.

1. **To start Essbase Studio Server in the foreground on UNIX:**
   1. In the Essbase Studio server.properties file, set the server.runInBackground property to “false” or comment it out.
      - The server.properties file is located in EPM_ORACLE_HOME/products/Essbase/EssbaseStudio/Server/server.properties. See Oracle Essbase Studio User’s Guide for information on this property. Note that the file might be empty, which is normal.
   2. Set these variables in the environment where you plan to run startServer.sh:
3 Edit the Essbase Studio startServer.sh shell as follows:

startServer.sh is located in EPM_ORACLE_INSTANCE/BPMS/bin/startServer.sh.

- Locate the last line of the file:
  ```
  nohup "${JAVA_HOME}/bin/java" -Xms128m -Xmx768m $JAVA_OPTIONS –jar "${EPM_ORACLE_HOME}/products/Essbase/EssbaseStudio/Server/server.jar" >/dev/null &
  ```

- Remove nohup from the beginning of the line, the STDOUT to null direction (>/dev/null), and the background processing command (&) from the line; for example:
  ```
  "${JAVA_HOME}/bin/java" -Xms128m -Xmx768m $JAVA_OPTIONS -jar "${EPM_ORACLE_HOME}/products/Essbase/EssbaseStudio/Server/server.jar"
  ```

4 Start Oracle Essbase Studio Server by running the following statement: ./startServer.sh.

### Provider Services Application Server

The following table describes the services and processes for the Oracle Hyperion Provider Services application server.

<table>
<thead>
<tr>
<th>Information Type</th>
<th>Details</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Windows Start Menu Command</strong></td>
<td>Select Start, then Programs, then Oracle EPM System, then EPM_ORACLE_INSTANCE_NAME, then Essbase, then Provider Services, and then Start AnalyticProviderServices</td>
</tr>
<tr>
<td><strong>Registered Service Name</strong></td>
<td>HyS9aps_instanceName</td>
</tr>
<tr>
<td><strong>Display Name in Windows Services Control Panel</strong></td>
<td>Oracle Hyperion Provider Services - Java Web Application (instanceName)</td>
</tr>
<tr>
<td><strong>Description</strong></td>
<td>Provide access service to Hyperion Provider Services</td>
</tr>
<tr>
<td><strong>Windows Startup Script</strong></td>
<td>EPM_ORACLE_INSTANCE/bin/startAnalyticProviderServices.bat</td>
</tr>
<tr>
<td><strong>UNIX Startup Script</strong></td>
<td>EPM_ORACLE_INSTANCE/bin/startAnalyticProviderServices.sh</td>
</tr>
<tr>
<td><strong>Windows Stop Script</strong></td>
<td>EPM_ORACLE_INSTANCE/bin/stopAnalyticProviderServices.bat</td>
</tr>
<tr>
<td><strong>UNIX Stop Script</strong></td>
<td>EPM_ORACLE_INSTANCE/bin/stopAnalyticProviderServices.sh</td>
</tr>
</tbody>
</table>
Hyperion Reporting and Analysis Framework - Agent Service

The following table describes the services and processes for the Reporting and Analysis Framework Agent.

Table 78  Reporting and Analysis Framework Agent

<table>
<thead>
<tr>
<th>Information Type</th>
<th>Details</th>
</tr>
</thead>
<tbody>
<tr>
<td>Windows Start Menu Command</td>
<td>Select Start, then Programs, then Oracle EPM System, then EPM_ORACLE_INSTANCE_NAME, then Reporting and Analysis, and then Start RA Framework Agent</td>
</tr>
<tr>
<td>Registered Service Name</td>
<td>HyS9RaFrameworkAgent_instanceName</td>
</tr>
<tr>
<td>Display Name in Windows Services Control Panel</td>
<td>Oracle Hyperion Reporting and Analysis Framework (instanceName)</td>
</tr>
<tr>
<td>Description</td>
<td>HyS9RaFrameworkAgent - Hyperion Reporting and Analysis Framework Agent</td>
</tr>
<tr>
<td>Windows Startup Script</td>
<td>EPM_ORACLE_INSTANCE/bin/startRaFrameworkAgent.bat</td>
</tr>
<tr>
<td>UNIX Startup Script</td>
<td>EPM_ORACLE_INSTANCE/bin/startRaFrameworkAgent.sh</td>
</tr>
<tr>
<td>Windows Stop Script</td>
<td>EPM_ORACLE_INSTANCE/bin/stopRaFrameworkAgent.bat</td>
</tr>
<tr>
<td>UNIX Stop Script</td>
<td>EPM_ORACLE_INSTANCE/bin/stopRaFrameworkAgent.sh</td>
</tr>
</tbody>
</table>

Services and Processes Started with Reporting and Analysis Framework Agent Service

When the Reporting and Analysis Framework Agent is started, these additional services and processes are started:

- Oracle Hyperion Interactive Reporting process.
- Reporting and Analysis Framework common services and processes

Reporting and Analysis Framework Application Server

The following table describes the services and processes for the Reporting and Analysis Framework application server.
Table 79  Reporting and Analysis Framework Application Server

<table>
<thead>
<tr>
<th>Information Type</th>
<th>Details</th>
</tr>
</thead>
</table>
| Windows Start Menu Command| Select Start, then Programs, then Oracle EPM System, then \texttt{EPM\_ORACLE\_INSTANCE\_NAME}, then Reporting and Analysis, then Start RA Framework.  
This menu item starts:
- Reporting and Analysis Framework Java web application  
- Oracle Hyperion Reporting and Analysis Framework Agent Service |
| Registered Service Name   | \texttt{HyS9RaFramework\_instanceName}                                                                                                     |
| Display Name in Control Panel | Oracle Hyperion Reporting and Analysis Framework - Java Web Application (\texttt{instanceName})                                                                 |
| Description               | \texttt{HyS9RaFramework} - Hyperion Reporting and Analysis Framework web application                                                                 |
| Windows Startup Script    | \texttt{EPM\_ORACLE\_INSTANCE/bin/startRaFramework.bat}                                                                                   |
| UNIX Startup Script       | \texttt{EPM\_ORACLE\_INSTANCE/bin/startRaFramework.sh}                                                                                   |
| Windows Stop Script       | \texttt{EPM\_ORACLE\_INSTANCE/bin/stopRaFramework.bat}                                                                                   |
| UNIX Stop Script          | \texttt{EPM\_ORACLE\_INSTANCE/bin/stopRaFramework.sh}                                                                                   |

Financial Reporting Application Server

The following table describes the services and processes for the Financial Reporting application server, which includes the Financial Reporting Print Server.

Table 80  Financial Reporting Application Server Services and Processes

<table>
<thead>
<tr>
<th>Information Type</th>
<th>Details</th>
</tr>
</thead>
<tbody>
<tr>
<td>Windows Start Menu Command</td>
<td>Select Start, then Programs, then Oracle EPM System, then \texttt{EPM_ORACLE_INSTANCE_NAME}, then Reporting and Analysis, and then Start FinancialReporting</td>
</tr>
<tr>
<td>Registered Service Name</td>
<td>\texttt{HyS9FRReports_instanceName}</td>
</tr>
<tr>
<td>Display Name in Control Panel</td>
<td>Oracle Hyperion Financial Reporting - Java Web Application (\texttt{instanceName})</td>
</tr>
<tr>
<td>Description</td>
<td>Provide access service to Hyperion Financial Reporting Web Server</td>
</tr>
<tr>
<td>Windows Startup Script</td>
<td>\texttt{EPM_ORACLE_INSTANCE/bin/startFinancialReporting.bat}</td>
</tr>
<tr>
<td>UNIX Startup Script</td>
<td>\texttt{EPM_ORACLE_INSTANCE/bin/startFinancialReporting.sh}</td>
</tr>
</tbody>
</table>
### Web Analysis Application Server

The following table describes the services and processes for the Oracle Hyperion Web Analysis application server.

<table>
<thead>
<tr>
<th>Information Type</th>
<th>Details</th>
</tr>
</thead>
<tbody>
<tr>
<td>Windows Stop Script</td>
<td><code>EPM_ORACLE_INSTANCE/bin/stopFinancialReporting.bat</code></td>
</tr>
<tr>
<td>UNIX Stop Script</td>
<td><code>EPM_ORACLE_INSTANCE/bin/stopFinancialReporting.sh</code></td>
</tr>
</tbody>
</table>

#### Table 81  Web Analysis Application Server Services and Processes

<table>
<thead>
<tr>
<th>Information Type</th>
<th>Details</th>
</tr>
</thead>
<tbody>
<tr>
<td>Windows Start Menu Command</td>
<td>Select Start, then Programs, then Oracle EPM System, then <code>EPM_ORACLE_INSTANCE_NAME</code>, then Reporting and Analysis, and then Start Reporting and Analysis Web Analysis</td>
</tr>
<tr>
<td>Registered Service Name</td>
<td><code>HyS9WebAnalysis_instanceName</code></td>
</tr>
<tr>
<td>Display Name in Windows Control</td>
<td>Oracle Hyperion Web Analysis - Java Web Application (<code>instanceName</code>)</td>
</tr>
<tr>
<td>Description</td>
<td>Provide access service to Hyperion Web Analysis - Web Application</td>
</tr>
<tr>
<td>Windows Startup Script</td>
<td><code>EPM_ORACLE_INSTANCE/bin/startWebAnalysis.bat</code></td>
</tr>
<tr>
<td>UNIX Startup Script</td>
<td><code>EPM_ORACLE_INSTANCE/bin/startWebAnalysis.sh</code></td>
</tr>
<tr>
<td>Windows Stop Script</td>
<td><code>EPM_ORACLE_INSTANCE/bin/stopWebAnalysis.bat</code></td>
</tr>
<tr>
<td>UNIX Stop Script</td>
<td><code>EPM_ORACLE_INSTANCE/bin/stopWebAnalysis.sh</code></td>
</tr>
</tbody>
</table>

### Planning Application Server

The following table describes the services and processes for the Planning application server.

<table>
<thead>
<tr>
<th>Information Type</th>
<th>Details</th>
</tr>
</thead>
<tbody>
<tr>
<td>Windows Start Menu Command</td>
<td>Select Start, then Programs, then Oracle EPM System, then <code>EPM_ORACLE_INSTANCE_NAME</code>, then Planning, and then Start Planning</td>
</tr>
<tr>
<td>Registered Service Name</td>
<td><code>HyS9Planning_instanceName</code></td>
</tr>
<tr>
<td>Display Name in Windows Services Control Panel</td>
<td>Oracle Hyperion Planning - Java Web Application (<code>instanceName</code>)</td>
</tr>
</tbody>
</table>
In addition, Oracle Hyperion Planning uses the Hyperion RMI Registry.

### Table 83  Hyperion RMI Registry Application Server Services and Processes

<table>
<thead>
<tr>
<th>Information Type</th>
<th>Details</th>
</tr>
</thead>
<tbody>
<tr>
<td>Windows Start Menu Command</td>
<td>N/A</td>
</tr>
<tr>
<td>Registered Service Name</td>
<td>Hyperion RMI Registry_instanceName</td>
</tr>
<tr>
<td>Display Name in Windows Services Control Panel</td>
<td>Oracle Hyperion RMI Registry (instanceName)</td>
</tr>
<tr>
<td>Description</td>
<td>N/A</td>
</tr>
<tr>
<td>Windows Startup Script</td>
<td><code>EPM_ORACLE_INSTANCE/startRMI.bat</code></td>
</tr>
<tr>
<td>UNIX Startup Script</td>
<td><code>EPM_ORACLE_INSTANCE/common/RMI/11.1.2.0/HyperionRMIService</code></td>
</tr>
<tr>
<td>Windows Stop Script</td>
<td><code>EPM_ORACLE_INSTANCE/stopRMI.bat</code></td>
</tr>
<tr>
<td>UNIX Stop Script</td>
<td>N/A</td>
</tr>
</tbody>
</table>

### Financial Management Server

The following table describes the services and processes for Financial Management.

### Table 84  Financial Management Server

<table>
<thead>
<tr>
<th>Information Type</th>
<th>Details</th>
</tr>
</thead>
<tbody>
<tr>
<td>Windows Start Menu Command</td>
<td></td>
</tr>
<tr>
<td>Registered Service Name</td>
<td>HyS9FinancialManagementJavaServer_instanceName</td>
</tr>
<tr>
<td>Display Name in Windows Services Control Panel</td>
<td>Oracle Hyperion Financial Management - Java Server (instanceName)</td>
</tr>
<tr>
<td>Description</td>
<td>Oracle Hyperion Financial Management - Java Server</td>
</tr>
<tr>
<td>Windows Startup Script</td>
<td><code>EPM_ORACLE_INSTANCE/bin/startHFMJavaServer.bat</code></td>
</tr>
<tr>
<td>UNIX Startup Script</td>
<td><code>EPM_ORACLE_INSTANCE/bin/startHFMJavaServer.sh</code></td>
</tr>
<tr>
<td>Windows Stop Script</td>
<td><code>EPM_ORACLE_INSTANCE/bin/stopHFMJavaServer.bat</code></td>
</tr>
</tbody>
</table>
UNIX Stop Script

\texttt{EPM\_ORACLE\_INSTANCE/bin/stopHFMJavaServer.sh}

\textbf{Note:} The synchronization between Financial Management application servers is based on system time. Changing the clock can affect this synchronization. For the time change to and from Daylight Savings Time, Oracle recommends that you stop the servers before the time change and restart them afterward.

\section*{Financial Management Application Server}

The following table describes the services and processes for the Financial Management Java web application server, which includes FM Web services and FM ADF Java web application.

\begin{table}[h]
\centering
\begin{tabular}{|l|l|}
\hline
Information Type & Details \\
\hline
\textbf{Windows Start Menu Command} & Select Start, then Programs, then Oracle EPM System, then \texttt{EPM\_ORACLE\_INSTANCE\_NAME}, then Financial Management, and then Start HFMWeb \\
\hline
\textbf{Registered Service Name} & HyS9FinancialManagementWeb\_instanceName \\
\hline
\textbf{Display Name in Windows Services Control Panel} & Oracle Hyperion Financial Management - Web Tier (instanceName) \\
\hline
\textbf{Description} & Provides JEE support to Financial Management. \\
\hline
\textbf{Windows Startup Script} & \texttt{EPM\_ORACLE\_INSTANCE/bin/startHFMWeb.bat} \\
\hline
\textbf{UNIX Startup Script} & \texttt{EPM\_ORACLE\_INSTANCE/bin/startHFMWeb.sh} \\
\hline
\textbf{Windows Stop Script} & \texttt{EPM\_ORACLE\_INSTANCE/bin/stopHFMWeb.bat} \\
\hline
\textbf{UNIX Stop Script} & \texttt{EPM\_ORACLE\_INSTANCE/bin/stopHFMWeb.sh} \\
\hline
\end{tabular}
\caption{Financial Management Java Web Application Services and Processes}
\end{table}

\section*{Strategic Finance Server}

The following table describes the services and processes for Strategic Finance.

\begin{table}[h]
\centering
\begin{tabular}{|l|l|}
\hline
Information Type & Details \\
\hline
\textbf{Windows Start Menu Command} & Select Start, then Programs, then Oracle EPM System, then \texttt{EPM\_ORACLE\_INSTANCE\_NAME}, then Strategic Finance, then Server, and then Start Strategic Finance Service \\
\hline
\textbf{Registered Service Name} & HYS9HsfSrv\_instanceName \\
\hline
\end{tabular}
\caption{Strategic Finance Services and Processes}
\end{table}
### Strategic Finance Web Application

The following table describes the services and processes the Strategic Finance web application.

<table>
<thead>
<tr>
<th>Information Type</th>
<th>Details</th>
</tr>
</thead>
<tbody>
<tr>
<td>Display Name in Windows Services Control Panel</td>
<td>Oracle Hyperion Strategic Finance - Server (instanceName)</td>
</tr>
<tr>
<td>Description</td>
<td>Provides Oracle Hyperion Strategic Finance, Fusion Edition services including entity repository management, authentication, access control, consolidation, data and metadata management</td>
</tr>
<tr>
<td>Windows Startup Script</td>
<td><code>EPM_ORACLE_INSTANCE/bin/startStrategicFinanceService.bat</code></td>
</tr>
<tr>
<td>UNIX Startup Script</td>
<td>NA</td>
</tr>
<tr>
<td>Windows Stop Script</td>
<td><code>EPM_ORACLE_INSTANCE/bin/stopStrategicFinanceService.bat</code></td>
</tr>
<tr>
<td>UNIX Stop Script</td>
<td>NA</td>
</tr>
</tbody>
</table>

In addition, Oracle Hyperion Strategic Finance has a web tier component that runs in IIS.

### Profitability and Cost Management Application Server

The following table describes the services and processes for Oracle Hyperion Profitability and Cost Management.
Table 88  Profitability and Cost Management Services and Processes

<table>
<thead>
<tr>
<th>Information Type</th>
<th>Details</th>
</tr>
</thead>
<tbody>
<tr>
<td>Windows Start Menu Command</td>
<td>Select Start, then Programs, then Oracle EPM System, then EPM_ORACLE_INSTANCE_NAME, then Profitability, and then Start Profitability</td>
</tr>
<tr>
<td>Registered Service Name</td>
<td>HyS9HyS9PftWeb_instanceName</td>
</tr>
<tr>
<td>Display Name in Windows Services Control Panel</td>
<td>Oracle Hyperion Profitability - Java Web Application (instanceName)</td>
</tr>
<tr>
<td>Description</td>
<td>Provides a Workspace module for Profitability.</td>
</tr>
<tr>
<td>Windows Startup Script</td>
<td>EPM_ORACLE_INSTANCE/bin/startProfitability.bat</td>
</tr>
<tr>
<td>UNIX Startup Script</td>
<td>EPM_ORACLE_INSTANCE/bin/startProfitability.sh</td>
</tr>
<tr>
<td>Windows Stop Script</td>
<td>EPM_ORACLE_INSTANCE/bin/stopProfitability.bat</td>
</tr>
<tr>
<td>UNIX Stop Script</td>
<td>EPM_ORACLE_INSTANCE/bin/stopProfitability.sh</td>
</tr>
</tbody>
</table>

Disclosure Management Application Server

The following table describes the services and processes for Disclosure Management.

Table 89  Disclosure Management Services and Processes

<table>
<thead>
<tr>
<th>Information Type</th>
<th>Details</th>
</tr>
</thead>
<tbody>
<tr>
<td>Windows Start Menu Command</td>
<td>Select Start, then Programs, then Oracle EPM System, then EPM_ORACLE_INSTANCE_NAME, then Disclosure Management, and then Start Disclosure Management</td>
</tr>
<tr>
<td>Registered Service Name</td>
<td>HyS9Disclosure_instanceName</td>
</tr>
<tr>
<td>Display Name in Windows Services Control Panel</td>
<td>Oracle Hyperion Disclosure Management - Java Web Application (instanceName)</td>
</tr>
<tr>
<td>Description</td>
<td>Provide access service to Disclosure Management</td>
</tr>
<tr>
<td>Windows Startup Script</td>
<td>EPM_ORACLE_INSTANCE/bin/startDisclosureManagement.bat</td>
</tr>
<tr>
<td>UNIX Startup Script</td>
<td>EPM_ORACLE_INSTANCE/bin/startDisclosureManagement.sh</td>
</tr>
<tr>
<td>Windows Stop Script</td>
<td>EPM_ORACLE_INSTANCE/bin/stopDisclosureManagement.bat</td>
</tr>
<tr>
<td>UNIX Stop Script</td>
<td>EPM_ORACLE_INSTANCE/bin/stopDisclosureManagement.sh</td>
</tr>
</tbody>
</table>
Financial Close Management Application Server

The following table describes the services and processes for the Financial Close Management application server.

**Note:** Ensure that you complete the post-configuration tasks before you start Financial Close Management. See “Financial Close Management and Tax Governance Manual Configuration Tasks” on page 152.

**Caution!** If you started the SOA Server to configure Financial Close Management, stop it before starting Oracle Enterprise Performance Management System services.

**Note:** Before you start Financial Close Management, note the following server startup order:

- WebLogic Administration Server
- Hyperion Foundation Services Managed Server
- Oracle HTTP Server - Oracle Process Manager (ohsInstanceInstanceNumber)
- In any order:
  - Financial Close Management Java web application
  - Financial Management Web Services Managed Server, if you’re using Financial Management with Financial Close Management
  - Financial Reporting Java web application, if you’re using Oracle Hyperion Financial Reporting with Oracle Hyperion Financial Close Management
  - FDMEE, if you are using Account Reconciliation Manager.
- Oracle SOA managed server

**Table 90  Financial Close Management Services and Processes**

<table>
<thead>
<tr>
<th>Information Type</th>
<th>Details</th>
</tr>
</thead>
<tbody>
<tr>
<td>Windows Start Menu Command</td>
<td>Select Start, then Programs, then Oracle EPM System, then $EPM_ORACLE_INSTANCE_NAME$, then Financial Close, and then Start FinancialClose</td>
</tr>
<tr>
<td>Registered Service Name</td>
<td>$HyS9FinancialClose_{instanceName}$</td>
</tr>
<tr>
<td>Display Name in Windows Services Control Panel</td>
<td>Oracle Hyperion Financial Close Management - Java Web Application ($instanceName$)</td>
</tr>
<tr>
<td>Description</td>
<td>Provide access service to Financial Close Manager Java Web Application</td>
</tr>
<tr>
<td>Windows Startup Script</td>
<td>$EPM_ORACLE_INSTANCE$/bin/startFinancialClose.bat</td>
</tr>
<tr>
<td>UNIX Startup Script</td>
<td>$EPM_ORACLE_INSTANCE$/bin/startFinancialClose.sh</td>
</tr>
</tbody>
</table>
### Tax Management Application Server

The following table describes the services and processes for Tax Management.

For Oracle Hyperion Tax Provision, Oracle Hyperion Financial Management must also be running.

If you are using Oracle Hyperion Tax Governance, start services in the order listed in “Financial Close Management Application Server” on page 228.

<table>
<thead>
<tr>
<th>Information Type</th>
<th>Details</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Windows Start Menu Command</strong></td>
<td>Select Start, then Programs, then Oracle EPM System, then <em>EPM_ORACLE_INSTANCE_NAME</em>, then Tax Management, and then Start TaxManagement</td>
</tr>
<tr>
<td><strong>Registered Service Name</strong></td>
<td>HyS9TaxManagement_instanceName</td>
</tr>
<tr>
<td><strong>Display Name in Windows Services Control Panel</strong></td>
<td>Oracle Hyperion Tax Management - Java Web Application <em>(instanceName)</em></td>
</tr>
<tr>
<td><strong>Description</strong></td>
<td>Provides access service to Tax Management Java Web Application.</td>
</tr>
<tr>
<td><strong>Windows Startup Command</strong></td>
<td><em>EPM_ORACLE_INSTANCE</em>/bin/startTaxManagement.bat</td>
</tr>
<tr>
<td><strong>UNIX Startup Script</strong></td>
<td><em>EPM_ORACLE_INSTANCE</em>/bin/startTaxManagement.sh</td>
</tr>
<tr>
<td><strong>Windows Stop Command</strong></td>
<td><em>EPM_ORACLE_INSTANCE</em>/bin/stopTaxManagement.bat</td>
</tr>
<tr>
<td><strong>UNIX Stop Script</strong></td>
<td><em>EPM_ORACLE_INSTANCE</em>/bin/stopTaxManagement.sh</td>
</tr>
</tbody>
</table>

### Data Relationship Management

The following table describes the services and processes for Data Relationship Management.

<table>
<thead>
<tr>
<th>Information Type</th>
<th>Details</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Windows Start Menu Command</strong></td>
<td>From the Start menu, select Programs, then Oracle EPM System, then Data Relationship Management, then Configuration Console or <em>EPM_ORACLE_HOME</em>/products/DataRelationshipManagement/server/bin/drm-server-console.exe</td>
</tr>
</tbody>
</table>

---

Table 92 Data Relationship Management Services and Processes

<table>
<thead>
<tr>
<th>Information Type</th>
<th>Details</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Windows Start Menu Command</strong></td>
<td>From the Start menu, select Programs, then Oracle EPM System, then Data Relationship Management, then Configuration Console or <em>EPM_ORACLE_HOME</em>/products/DataRelationshipManagement/server/bin/drm-server-console.exe</td>
</tr>
</tbody>
</table>
### Oracle DRM Server Processes

<table>
<thead>
<tr>
<th>Information Type</th>
<th>Details</th>
</tr>
</thead>
<tbody>
<tr>
<td>Registered Service Name</td>
<td>Oracle DRM Server Processes</td>
</tr>
<tr>
<td>Display Name in Windows Services Control Panel</td>
<td>Oracle DRM Server Processes</td>
</tr>
<tr>
<td>Description</td>
<td>Handles starting and stopping of required server applications in the Oracle DRM environment</td>
</tr>
<tr>
<td>Windows Startup Command</td>
<td>Net start &quot;Oracle DRM Server Processes&quot;</td>
</tr>
<tr>
<td>UNIX Startup Script</td>
<td>NA</td>
</tr>
<tr>
<td>Windows Stop Command</td>
<td>Net stop &quot;Oracle DRM Server Processes&quot;</td>
</tr>
<tr>
<td>UNIX Stop Script</td>
<td>NA</td>
</tr>
</tbody>
</table>

In addition, Oracle Data Relationship Management has a web tier component that runs in IIS.

### Data Relationship Management Analytics

The following table describes the services and processes for Oracle Data Relationship Management Analytics.

<table>
<thead>
<tr>
<th>Information Type</th>
<th>Details</th>
</tr>
</thead>
<tbody>
<tr>
<td>Windows Start Menu Command</td>
<td></td>
</tr>
<tr>
<td>Registered Service Name</td>
<td>Oracle DRM Managed Server (DRMServer)</td>
</tr>
<tr>
<td>Display Name in Windows Services Control Panel</td>
<td>Oracle DRM Managed Server (DRMServer)</td>
</tr>
<tr>
<td>Description</td>
<td></td>
</tr>
<tr>
<td>Windows Startup Command</td>
<td>net start &quot;Oracle DRM Managed Server (DRMServer)&quot;</td>
</tr>
<tr>
<td>UNIX Startup Script</td>
<td>startStopDRMServer.sh start</td>
</tr>
<tr>
<td>Windows Stop Command</td>
<td>net stop &quot;Oracle DRM Managed Server (DRMServer)&quot;</td>
</tr>
<tr>
<td>UNIX Stop Script</td>
<td>startStopDRMServer.sh stop</td>
</tr>
</tbody>
</table>

### FDMEE Application Server

The following table describes the services and processes for Oracle Hyperion Financial Data Quality Management, Enterprise Edition.
<table>
<thead>
<tr>
<th>Information Type</th>
<th>Details</th>
</tr>
</thead>
<tbody>
<tr>
<td>Windows Start Menu Command</td>
<td>Select Start, then Programs, then Oracle EPM System, then <code>EPM_ORACLE_INSTANCE_NAME</code>, then FDM Enterprise Edition, and the Start ErpIntegrator</td>
</tr>
<tr>
<td>Registered Service Name</td>
<td>HyS9aifWeb_instanceName</td>
</tr>
<tr>
<td>Display Name in Windows Services Control Panel</td>
<td>Oracle Hyperion FDM Enterprise Edition - Java Web Application (<code>instanceName</code>)</td>
</tr>
<tr>
<td>Description</td>
<td>Provides a Workspace module for ERPI</td>
</tr>
<tr>
<td>Windows Startup Script</td>
<td><code>EPM_ORACLE_INSTANCE/bin/startERPIntegrator.bat</code></td>
</tr>
<tr>
<td>UNIX Startup Script</td>
<td><code>EPM_ORACLE_INSTANCE/bin/startERPIntegrator.sh</code></td>
</tr>
<tr>
<td>Windows Stop Script</td>
<td><code>EPM_ORACLE_INSTANCE/bin/stopERPIntegrator.bat</code></td>
</tr>
<tr>
<td>UNIX Stop Script</td>
<td><code>EPM_ORACLE_INSTANCE/bin/stopERPIntegrator.sh</code></td>
</tr>
</tbody>
</table>