Oracle Utilities Meter Data Management
Installation Guide
Release 2.1.0 Service Pack 3
E38615-04

May 2015
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This guide provides an overview of installing Oracle Utilities Meter Data Management. This preface contains these topics:

- Audience
- Related Documents
- Conventions
- Acronyms

**Audience**

*Oracle Utilities Meter Data Management Database Installation Guide* is intended for system administrators installing Oracle Utilities Meter Data Management.

To use this document you should have:

- Experience installing and configuring application servers and other software
- Administrative privileges on the host where you are installing the software

**Related Documents**

The following documentation is included with this release.

**Installation, Configuration, and Release Notes**

- Oracle Utilities Meter Data Management Release Notes
- Oracle Utilities Meter Data Management Quick Install Guide
- Oracle Utilities Meter Data Management Installation Guide
- Oracle Utilities Meter Data Management Database Administrator’s Guide
- Oracle Utilities Meter Data Management Configuration Guide

**User Guides**

- Oracle Utilities Meter Data Management User’s Guide
- Oracle Utilities Service and Measurement Data Foundation User’s Guide

**Framework Documents**

- Oracle Utilities Application Framework Release Notes
- Oracle Utilities Application Framework Business Process Guide
Acronyms

The following acronyms and terms are used in this document:

<table>
<thead>
<tr>
<th>Acronym</th>
<th>Definition</th>
</tr>
</thead>
<tbody>
<tr>
<td>ADF</td>
<td>Oracle Application Development Framework</td>
</tr>
<tr>
<td>EAR</td>
<td>Enterprise Archive</td>
</tr>
<tr>
<td>EJB</td>
<td>Enterprise JavaBeans</td>
</tr>
<tr>
<td>HTML</td>
<td>HyperText Markup Language</td>
</tr>
<tr>
<td>JAR</td>
<td>Java Archive</td>
</tr>
<tr>
<td>JDBC</td>
<td>Java database connectivity</td>
</tr>
<tr>
<td>JMX</td>
<td>Java Management Extensions</td>
</tr>
<tr>
<td>JNDI</td>
<td>Java Naming and Directory Interface</td>
</tr>
<tr>
<td>JSP</td>
<td>JavaServer Pages</td>
</tr>
<tr>
<td>JVM</td>
<td>Java Virtual Machine</td>
</tr>
<tr>
<td>MPL</td>
<td>Multi Purpose Listener</td>
</tr>
<tr>
<td>OUAF</td>
<td>Oracle Utilities Application Framework</td>
</tr>
<tr>
<td>OAM</td>
<td>Oracle Access Manager</td>
</tr>
</tbody>
</table>

Conventions

The following text conventions are used in this document:

<table>
<thead>
<tr>
<th>Convention</th>
<th>Meaning</th>
</tr>
</thead>
<tbody>
<tr>
<td>boldface</td>
<td>Boldface type indicates graphical user interface elements associated with an action, or terms defined in text or the glossary.</td>
</tr>
<tr>
<td>italic</td>
<td>Italic type indicates book titles, emphasis, or placeholder variables for which you supply particular values.</td>
</tr>
<tr>
<td>monospace</td>
<td>Monospace type indicates commands within a paragraph, URLs, code in examples, text that appears on the screen, or text that you enter.</td>
</tr>
<tr>
<td>Acronym</td>
<td>Definition</td>
</tr>
<tr>
<td>-----------------</td>
<td>-------------------------------------</td>
</tr>
<tr>
<td>OIM</td>
<td>Oracle Identity Management</td>
</tr>
<tr>
<td>ONS</td>
<td>Oracle Notification Service</td>
</tr>
<tr>
<td>Oracle RAC FCF</td>
<td>Oracle Real Application Clusters Fast Connection Failover</td>
</tr>
<tr>
<td>RMI</td>
<td>Remote Method Invocation</td>
</tr>
<tr>
<td>SOAP</td>
<td>Simple Object Access Protocol</td>
</tr>
<tr>
<td>SOA</td>
<td>Service-oriented architecture</td>
</tr>
<tr>
<td>SPLEBASE</td>
<td>The location where the application will be installed.</td>
</tr>
<tr>
<td>SPLOUTPUT</td>
<td>This location is used for storing batch log files and output from batch jobs</td>
</tr>
<tr>
<td>WAR</td>
<td>Web application Archive</td>
</tr>
<tr>
<td>WAS</td>
<td>WebSphere</td>
</tr>
<tr>
<td>WASND</td>
<td>WebSphere Network Deployment</td>
</tr>
<tr>
<td>WLS</td>
<td>WebLogic</td>
</tr>
<tr>
<td>XAIApp</td>
<td>XML Application Integration</td>
</tr>
</tbody>
</table>
This chapter provides an overview of the installation of Oracle Utilities Meter Data Management.

- Installation Overview
- Application Architecture
- Installation Components
- Installation Types
- Media Pack Components
Installation Overview

Installing Oracle Utilities Meter Data Management involves the following steps:

1. Review the different tiers of the application architecture as described in the section Application Architecture of this chapter.

2. Understand the hardware requirements for installing the application and the supported platforms for the application and database servers as described in the Chapter 2: Supported Platforms and Hardware Requirements.

   **Note:** The installation and administration of the database server tier is described in detail in the document Oracle Utilities Meter Data Management Database Administrator's Guide.

3. Plan your installation as described in the Chapter 3: Planning the Installation. This chapter includes lists of the required software for each supported combination of operating system and application server.

4. Install the database as described in the document Oracle Utilities Meter Data Management Database Administrator's Guide.

5. Install all required third-party software as described in the Installing Prerequisite Software section in the Chapter 3: Planning the Installation.

6. Install the framework for the application.

7. Install the Oracle Utilities Service and Measurement Data Foundation for the application.

8. Install Oracle Utilities Meter Data Management.

9. Follow the installation guidelines described in the Chapter 7: Additional Tasks.
The following diagram provides an overview of the steps that need to be taken to install and configure Oracle Utilities Meter Data Management:

Refer to My Oracle Support for up-to-date additional information on Oracle Utilities Meter Data Management installation
Application Architecture

The Oracle Utilities Meter Data Management application is deployed on multiple tiers. Please see the Oracle Utilities Meter Data Management Server Administration Guide for a more detailed description of the application architecture and individual tiers.

Tier 1: Desktop/Client, or Presentation Tier

This tier is implemented in a browser-based client. Users use a desktop client Web browser to log in to and use the Oracle Utilities Meter Data Management application. Note also that a desktop machine running Microsoft Windows and the Oracle client is required to perform some of the Oracle Utilities Meter Data Management product installation steps.

Tier 2: Web Application Server, Business Application Server, Batch Server Tier

This tier is implemented in a Web application server, business application server, or the batch server. The business application component can be installed as part of the Web application server, or as a separate component. Except where explicitly noted, most of the Oracle Utilities Meter Data Management installation documentation assumes that the Web application and business application servers reside together. The batch infrastructure will also run within this tier. You can have multiple batch server instances that serve the application.

Tier 3: Database, or Persistence Tier

This tier is implemented in a database server. The database server stores data maintained by the Oracle Utilities Meter Data Management application. More specifically, the database tier contains the data server files and database executables that physically store the tables, indexes, and other database objects for your system.

Installation Components

The Oracle Utilities Meter Data Management product installation consists of the following components:

• Database Components:
  • Oracle Utilities Application Framework database
  • Oracle Utilities Service and Measurement Data Foundation database
  • Oracle Utilities Meter Data Management database

• Application Components:
  • Oracle Utilities Application Framework application
  • Oracle Utilities Service and Measurement Data Foundation application
  • Oracle Utilities Meter Data Management application

For a successful installation, you must install ALL of the above components.
Installation Types

The first step in the installation procedure is to determine the installation type that meets your business requirements. The following are the possible installation types:

- **Initial Installation** - A base installation, typically used for a production environment.
- **Demo Installation** - A base installation with pre-populated demo data, typically used for demonstration or training purposes.
- **Upgrade Installation** - An upgrade installation from version 2.0.1.9 or 2.1.0.1 or 2.1.0.2 to version 2.1.0.3.

Please see *Recommendations for Creating a Production Environment* for information about which installation type is appropriate for a production environment.

The following sections describe these installation types in detail.

**Initial Installation**

This installation type is applicable when installing Oracle Utilities Meter Data Management for the first time or from scratch. For an initial install, you must install all of the following components:

- **Database components:**
  
  Refer to the “Initial Install” section of the Oracle Utilities Meter Data Management *Database Administrator’s Guide* for more information.

- **Application components:**
  
  - Oracle Utilities Application Framework application
  - Oracle Utilities Application Framework Single Fix Pre-Requisite Rollup for Oracle Utilities Service and Measurement Data Foundation
  - Oracle Utilities Service and Measurement Data Foundation application
  - Oracle Utilities Meter Data Management application

Refer to chapter “Installing Oracle Utilities Meter Data Management - Initial Installation” for the steps involved in installing each of the above components.

**Demo Installation**

This installation type is applicable when installing a demo application of Oracle Utilities Meter Data Management for demonstration or training purposes. For a demo install, you must install all of the following components:

- **Demo Database components:**
  
  Refer to the “Demo Install” section of the Oracle Utilities Meter Data Management *Database Administrator’s Guide* for more information.

- **Application components:**
  
  - Oracle Utilities Application Framework application
  - Oracle Utilities Application Framework Single Fix Pre-Requisite Rollup for Oracle Utilities Service and Measurement Data Foundation
  - Oracle Utilities Service and Measurement Data Foundation application
  - Oracle Utilities Meter Data Management application

Refer to chapter “Installing Oracle Utilities Meter Data Management - Demo Installation” for the steps involved in installing each of the above components.
Upgrade Installation

This installation type is applicable when upgrading Oracle Utilities Meter Data Management from version 2.0.1.9 or 2.1.0.1 or 2.1.0.2 to 2.1.0.3.

Note: If you have a version prior to 2.0.1.9, you must install 2.0.1.9 before upgrading to 2.1.0.3. If you have version 2.1.0.0, you must upgrade to 2.1.0.1 and then to 2.1.0.3.

For an upgrade, you must upgrade all of the following components:

- Database components:
  Refer to the “Upgrade Install” section of the Oracle Utilities Meter Data Management Database Administrator’s Guide for more information.

- Application components:
  - Oracle Utilities Application Framework application
  - Oracle Utilities Application Framework Single Fix Pre-Requisite Rollup for Oracle Utilities Service and Measurement Data Foundation
  - Oracle Utilities Service and Measurement Data Foundation application
  - Oracle Utilities Meter Data Management application

Refer to chapter “Upgrading Oracle Utilities Meter Data Management” for the steps involved in upgrading each of the above components.

Recommendations for Creating a Production Environment

For a production environment, Oracle recommends that you use the Initial Installation installation type as described above.

If there is any custom configuration that needs to be migrated from a development or “gold” environment into production, the migration can be done by using the Configuration Migration Assistant (CMA). Please refer to the appendix “Configuration Migration Assistant” in the Oracle Utilities Meter Data Management Configuration Guide for more details about CMA.

Oracle does not recommend creating a production environment by using the Demo Installation installation type, or by cloning an existing Demo installation.
The Oracle Utilities Meter Data Management Media Pack consists of the following packages:

### Documentation Packages
- Oracle Utilities Meter Data Management V2.1.0.3.0 Release Notes
- Oracle Utilities Meter Data Management V2.1.0.3.0 Quick Install Guide
- Oracle Utilities Meter Data Management V2.1.0.3.0 Install Documentation
- Oracle Utilities Meter Data Management V2.1.0.3.0 User Documentation
- Oracle Utilities Meter Data Management V2.1.0.3.0 Supplemental Documentation

### Installation Packages
- Oracle Utilities Application Framework V4.2.0 Service Pack 3 Multiplatform
- Oracle Utilities Application Framework V4.2.0 Service Pack 3 Single Fix Prerequisite Rollup for SMDF V2.1.0.3.0
- Oracle Utilities Service and Measurement Data Foundation V2.1.0.3.0 Multiplatform
- Oracle Utilities Meter Data Management V2.1.0.3.0 Multiplatform
- Oracle Utilities Meter Data Management V2.1.0.3.0 Oracle Database
- Oracle Utilities Meter Data Management V2.1.0.3.0 Reports
- Oracle Utilities Meter Data Management V2.1.0.3.0 Bugs PFD
Chapter 2

Supported Platforms and Hardware Requirements

This section gives an overview of the tiers on which the product is implemented, and shows each of the operating system/server combinations that the product is certified for. It includes:

- Software and Hardware Considerations
- Operating Systems and Application Servers
- Hardware and Web Browser Requirements
- Application Server Memory Requirements
- Additional Notes on Supported Platforms
- Support for Software Patches and Upgrades
Software and Hardware Considerations

There are many factors that can influence software and hardware decisions. For example, your system may have to satisfy specific performance, availability, or scalability requirements, or to support running in a language other than English. These business requirements, together with the chosen system architecture, should be used in initial software and hardware planning.

Some of the questions that you should answer before beginning the installation include:

- On which hardware platform and operating system will Oracle Utilities Meter Data Management be deployed?
- On which Web server product will Oracle Utilities Meter Data Management deploy?
- On which database product will Oracle Utilities Meter Data Management deploy?
- Do you plan to deploy multiple Oracle Utilities Meter Data Management instances on the same physical server?
- How do you plan to deploy Oracle Utilities Meter Data Management?
  - Web/application/database on the same physical server
  - Web/application on one server and database on separate server
  - Each component on its own server

For detailed descriptions of various deployment architecture choices that may aid in planning, please see the document Oracle Utilities Application Framework Architecture Guidelines, available on My Oracle Support (Article ID 807068.1).

The final hardware and software decisions must comply with the specific requirements of Oracle Utilities Meter Data Management, as described in the rest of this chapter.
Operating Systems and Application Servers

The following table details the operating system and application server combinations on which this version of Oracle Utilities Meter Data Management is supported.

<table>
<thead>
<tr>
<th>Operating System (Client)</th>
<th>Operating System (Server)</th>
<th>Chipset</th>
<th>Application Server</th>
<th>Database</th>
</tr>
</thead>
<tbody>
<tr>
<td>Windows 7 (Internet Explorer 8.x, 9.x, or 10.x, 11 in Compatibility Mode)</td>
<td>AIX 7.1 TL01</td>
<td>POWER 64-bit</td>
<td>WebLogic 10.3.6</td>
<td>Oracle 11.2.0.1+</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>WebLogic 12.1.3.0+*</td>
<td>Oracle 12.1.0.1+</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>WebSphere 8.5/8.5.5</td>
<td></td>
</tr>
<tr>
<td>Windows 8.1 (Internet Explorer 11 in Compatibility Mode)</td>
<td>Oracle Linux 5.x, 6.x, 7.x (64-bit) (based on Red Hat Enterprise Linux (64-bit))**</td>
<td>x86_64</td>
<td>WebLogic 10.3.6</td>
<td>Oracle 11.2.0.1+</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>WebLogic 12.1.3.0+*</td>
<td>Oracle 12.1.0.1+</td>
</tr>
<tr>
<td></td>
<td>Oracle Solaris 10</td>
<td>SPARC</td>
<td>WebLogic 10.3.6</td>
<td>Oracle 11.2.0.1+</td>
</tr>
<tr>
<td></td>
<td>Oracle Solaris 11</td>
<td></td>
<td>WebLogic 12.1.3.0+*</td>
<td>Oracle 12.1.0.1+</td>
</tr>
<tr>
<td></td>
<td>(64-bit)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Windows Server 2008 R2</td>
<td></td>
<td>x86_64</td>
<td>WebLogic 10.3.6</td>
<td>Oracle 11.2.0.1+</td>
</tr>
<tr>
<td></td>
<td>Windows Server 2012 R2</td>
<td></td>
<td>WebLogic 12.1.3.0+*</td>
<td>Oracle 12.1.0.1+</td>
</tr>
<tr>
<td></td>
<td>(64-bit)</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

* A plus sign (+) after the fourth digit in the version number indicates that this and all higher versions of WebLogic are supported. For example, 12.1.3.0+ means that 12.1.3.0 and any higher 12.1.3.x.x versions are supported.

** Oracle Utilities Meter Data Management is supported on the versions of Oracle Linux specified. Because Oracle Linux is 100% userspace-compatible with Red Hat Enterprise Linux, Oracle Utilities Meter Data Management also is supported on Red Hat Enterprise Linux for this release.

The platforms listed above are current at the time of release. For the most current supported platforms, please refer to Oracle Utilities Product Matrix on My Oracle Support (MOS) Knowledge Article (Doc ID 1454143.1).
Hardware and Web Browser Requirements

Client Side Hardware Requirements

<table>
<thead>
<tr>
<th>Configuration</th>
<th>Processor</th>
<th>Memory (RAM)</th>
<th>Monitor (Display)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Minimum</td>
<td>Pentium IV - 2.0 GHz</td>
<td>1024 MB</td>
<td>1024X768** 16-bit Color</td>
</tr>
<tr>
<td>Recommended*</td>
<td>Pentium IV -3.0+ GHz, (or) any Core 2 Duo (or) any Athlon X2</td>
<td>2048 MB</td>
<td>1280X1024** 32-bit Color</td>
</tr>
</tbody>
</table>

* The Recommended configuration supports better performance of the client.

** To reduce the amount of scrolling required for pages that are longer than 768 or 1024 pixels, consider placing a monitor into vertical position (with narrow side on the bottom).

Web Browser Requirements

The following operating system / web browser software is supported:
- Windows 7 (32-bit or 64-bit) with Internet Explorer 8.x, 9.x, or 10.x, 11
- Windows 8.1 with Internet Explorer 11

Note: Internet Explorer 8.x, 9.x, 10.x and 11 must have Compatibility Mode enabled.

Application Server Memory Requirements

For each application server environment a minimum of 4 GB of real memory is required, plus 6 GB of swap space.

Disk Space Requirements

The approximate disk space requirements in a standard installation are as follows:

<table>
<thead>
<tr>
<th>Location</th>
<th>Size</th>
<th>Usage</th>
</tr>
</thead>
<tbody>
<tr>
<td>$SPLEBASE</td>
<td>5 GB minimum</td>
<td>This is the location where the application and framework get installed. Startup, shutdown and other online log files are stored here. The size and space that is used should be monitored because various debugging options can significantly affect the size of log files.</td>
</tr>
<tr>
<td>$SPLAPP</td>
<td>2 GB minimum</td>
<td>This location is used for storing batch log files and output from batch jobs. The size of this space should be influenced by which batches are run and how often, and the amount of debugging information that is collected.</td>
</tr>
</tbody>
</table>
Support for Software Patches and Upgrades

Additional Notes on Supported Platforms

**Oracle Database Server** - This version of Oracle Utilities Meter Data Management is certified on Oracle Database Server 11.2.0.1+ and 12.1.0.1+ and on the operating systems listed in the section above. The following version of the database is supported:

* Oracle Database Enterprise Edition

  **Note:** Oracle Database Enterprise Edition and the Partitioning and Advanced Compression options are strongly recommended in all situations.

**Oracle VM Support** - This version of Oracle Utilities Meter Data Management is supported on Oracle VM Server for x86 for supported releases of Oracle Linux and Microsoft Windows operating systems.

**Oracle Support Policy on VMWare** - Refer to My Oracle Support knowledge base article 249212.1 for Oracle’s support policy on VMWare.

Support for Software Patches and Upgrades

Due to the ongoing nature of software improvement, vendors will periodically issue patches and service packs for the operating systems, application servers and database servers on top of specific versions that Oracle products have already been tested against.

If it is necessary to apply an upgrade, please do so in a test environment that is running on the same platform as your production environment prior to updating the production environment itself.

The exception from this rule is Hibernate software version 4.1.0. This version should not be upgraded.

Always contact Oracle Support prior to applying vendor updates that do not guarantee backward compatibility.
This chapter provides information for planning an Oracle Utilities Meter Data Management installation, including:

- Before You Install
- Prerequisite Software List
- Installing Prerequisite Software
- Readiness Checklist
Before You Install

Refer to My Oracle Support for up-to-date additional information on Oracle Utilities Meter Data Management installation.

Application Server Clustering

If you are considering application server clustering, refer to the following whitepapers, available on My Oracle Support, for additional information:

- Implementing Oracle ExaLogic and/or Oracle WebLogic Clustering (Doc Id: 1334558.1)
- IBM WebSphere Clustering for Oracle Utilities Application Framework (Doc Id: 1359369.1)

Additional information about Weblogic clustering can be found at http://docs.oracle.com/cd/E17904_01/web.1111/e13709/toc.htm

Prerequisite Software List

Before you install Oracle Utilities Meter Data Management, you must install prerequisite software.

Refer to the respective installation documentation of the software for instructions on downloading and installing.

Prerequisite Software for Database Server

The prerequisite software for the database component of Oracle Utilities Meter Data Management is as follows:

**Oracle Database Server 11.2.0.1+ or 12.1.0.1+:** This is required for installing the database component of the Oracle Utilities Meter Data Management product. The following version of the database server is supported:

- Oracle Database Enterprise Edition

The following database feature is required:

- Oracle Locator

**Note:** Oracle Spatial is not required.

Prerequisite Software for Application Server

The prerequisite software for the application component of Oracle Utilities Meter Data Management is as follows:

- Oracle Database 11g Release 2 Client
- JDK 1.6.0_25+ (64-bit)
- JDK 1.7.0_55+ (64-bit) required for Weblogic 12c (12.1.3.0+)
- Oracle Web Logic 11gR1 (10.3.6) and Oracle Web Logic 12c (12.1.3.0+)
- Hibernate 4.1.0 Final

Web Browser Requirements

The following operating system / web browser software is supported:

- Windows 7 (32-bit or 64-bit) with Internet Explorer 8.x, 9.x, or 10.x, 11
- Windows 8.1 with Internet Explorer 11
Notes: Internet Explorer 8.x, 9.x, 10.x and 11 must have Compatibility Mode enabled.

- JDK 1.6.0_25+
- JDK 1.7.0_55+ (64-bit) required for Weblogic 12c (12.1.3.0+)
Installing Prerequisite Software

This section describes the software that needs to be installed for each of the supported operating system and application server combinations, including:

- AIX 7.1 TL01 Application Server
- Oracle Linux 5.x, 6.x, 7.x or Red Hat Linux 5.x, 6.x, 7.x Operating System
- Oracle Solaris 11 Application Server
- Windows Server 2008/2012 R2 Application Server

AIX 7.1 TL01 Application Server

This section describes the software requirements for operating the application using the AIX application server.

Supported Application Servers

<table>
<thead>
<tr>
<th>Operating System</th>
<th>Chipset</th>
<th>Application Server</th>
</tr>
</thead>
<tbody>
<tr>
<td>AIX 7.1 TL01</td>
<td>POWER 64-bit</td>
<td>Oracle WebLogic 11gR1 (10.3.6) or Oracle WebLogic 12c (12.1.3.0+) 64-bit version WebSphere Basic (8.5.5) 64-bit version</td>
</tr>
</tbody>
</table>

Web/Application Server Tier

AIX 7.1 TL01 Operating System Running on Power5 and Power6 Architecture

UNIX Administrator User ID

The following user groups and accounts have to be created to install and administer the application.

<table>
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<tr>
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<td>Oracle Utilities Meter Data</td>
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<td></td>
</tr>
<tr>
<td>Management Administrator User ID</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Oracle Utilities Meter Data</td>
<td>cisusr</td>
<td></td>
</tr>
<tr>
<td>Management User Group</td>
<td></td>
<td></td>
</tr>
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Note: It is recommended that you change the default values for security reasons.

Throughout this document the administrator user id is often referred to as the "cissys" user id. You should substitute that with the customer defined user id when not using the default value. After the initial install, the software should always be managed using that user id.

By default, the cissys userid is the only one given access to the installed files.

1. Create a group called cisusr (user group).
2. Create a user called cissys, and a primary group cisusr. Set the primary shell for the cissys user to Korn Shell.

The shell scripts use the ">" to overwrite shell functionality. Your operating system may be configured to not allow this functionality by default in the users shell.

To avoid file access permission problems when executing scripts, consider placing the following command into cissys profile script:
set +o noclobber

Security Configuration

Various options exist to secure a system. In this application all files will be created with the minimum permissions required to ensure that group-readable, group-writable and group-executable files will have the correct user groups and to restrict the permissions available to legitimate users. In this way, a low privileged end user cannot directly edit configuration files and thereby bypass application security controls.

The following users and group categories must be defined to implement this security. For demonstration purposes the following users and groups will be used. These users must be created according to industry standards (including password policies). All users should be created with a default umask of 022 to ensure files created during normal operation have the correct permissions.

Please replace these users and groups for your installation defaults:

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<td>cissys</td>
<td>cisusr</td>
<td>This user will be used to install the application and to apply patches. This user will own all the application files. The same care should be taken with this user ID as if it is 'root'. This user will be able to add, delete and modify files within the application.</td>
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<tr>
<td>cisadm</td>
<td>cisusr</td>
<td>Administrative and Operation functions will be available to this user. This user will be able to stop and start the application and batch processes, but will not have access to modify any file other than generated log files</td>
</tr>
<tr>
<td>cisoper</td>
<td>------</td>
<td>Low level operator. This user will only be able to read logs files and collect information for debugging and investigative purposes. Care should be taken in production to disable debugging as debugging information could contain potential sensitive data which this user should not have privy to.</td>
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</tbody>
</table>

Note: The Oracle Client and WebLogic should be installed as the user who will stop and start the application. For example, if you plan to run the application as the install user these components must belong to cissys.

Oracle Client 11.2.0.x/ 12.1.0.1 — Runtime Option

Install the Oracle Client as described in the Oracle Client installation documentation. Use the cissys account to install the Oracle Client. If another user installs the Oracle Client, make sure the cissys user ID has the proper execute permissions.

For the cissys user ID, ensure that the environment variable ORACLE_CLIENT_HOME is set up, and that ORACLE_CLIENT_HOME/perl/bin is the first Perl listed in the cissys account’s PATH variable.


Installation of Java is a prerequisite for using Oracle WebLogic and IBM WebSphere as a web application server.

At the time of release, AIX Java packages could be obtained from: http://www.ibm.com/developerworks/java/jdk/aix/service.html

The web server requires the 64-bit Java platform in order to function. The main prerequisite for the web server is the version of Java mentioned above.

For the Administrator userid (cissys), ensure that the environment variable JAVA_HOME is set up, and that "java" can be found in cissys’ PATH variable.
**Hibernate 4.1.0 FINAL**

You must install Hibernate 4.1.0 before installing Oracle Utilities Meter Data Management.

To install Hibernate:

1. Create a Hibernate jar external depot:
   
   ```
   export HIBERNATE_JAR_DIR=<Hibernate 3rd party jars depot>
   ```

2. Download the hibernate-release-4.1.0.Final.zip file from
   

   Click the “4.1.0.Final” link to download the zip file.

3. Extract the contents of the archive file:
   
   ```
   jar xvf hibernate-release-4.1.0.Final.zip
   ```

   **Note:** You must have Java JDK installed on the machine to use the jar command. Be sure to install the JDK that is supported for your platform.

4. Copy the jar files to your Hibernate jar directory (`$HIBERNATE_JAR_DIR`) using the following commands:

   ```
   copy hibernate-release-4.1.0.Final/lib/optional/
   ehcache/ehcache-core-2.4.3.jar $HIBERNATE_JAR_DIR
   copy hibernate-release-4.1.0.Final/lib/optional/
   ehcache/hibernate-ehcache-4.1.0.Final.jar $HIBERNATE_JAR_DIR
   copy hibernate-release-4.1.0.Final/lib/required/
   hibernate-commons-annotations-4.0.1.Final.jar $HIBERNATE_JAR_DIR
   copy hibernate-release-4.1.0.Final/lib/required/
   hibernate-core-4.1.0.Final.jar $HIBERNATE_JAR_DIR
   copy hibernate-release-4.1.0.Final/lib/required/
   hibernate-jpa-2.0-api-1.0.1.Final.jar $HIBERNATE_JAR_DIR
   copy hibernate-release-4.1.0.Final/lib/required/
   javassist-3.15.0-GA.jar $HIBERNATE_JAR_DIR
   copy hibernate-release-4.1.0.Final/lib/required/
   jboss-logging-3.1.0.CR2.jar $HIBERNATE_JAR_DIR
   copy hibernate-release-4.1.0.Final/lib/required/
   jboss-transaction-api_1.1_spec-1.0.0.Final.jar $HIBERNATE_JAR_DIR
   ```

**IBM WebSphere Basic (8.5.5) 64-bit**

WebSphere must be purchased and downloaded from IBM. It must be installed and configured prior to the MDM installation. This web application server will run as a 64-bit application.

A single WebSphere server represents a single Oracle Utilities Meter Data Management environment. You can install multiple environments on a single WebSphere Installation by creating additional WebSphere servers.

The following section describes tasks that you should complete before you install the Oracle Utilities Application Framework. It also describes configuration tasks you should complete after installing Oracle Utilities Meter Data Management. It includes the following:

**Configuring WebSphere Application Server**

**Note:** This section applies only to installations using WebSphere as an application server. This section describes tasks that you should complete before you install the Oracle Utilities Application Framework. It also describes configuration tasks you should complete after installing Oracle Utilities Meter Data Management.

**Preinstallation Tasks**

This section describes tasks that you should complete to configure a WebSphere Basic application server before you install the Oracle Utilities Application Framework.
When working within the WebSphere console make sure to apply and save your changes to the Master Configuration when appropriate.

**Setting of WebSphere Security**

There are several security configuration options within WebSphere. In a production environment you must use the security implementation appropriate for your security requirements. During the QA cycle we used the User account repository of the Federated repository. The following procedures describe how to apply these security settings.

*Note:* Refer to the IBM WebSphere Application Server documentation for more details.

1. Start the WebSphere Administrative Console and log in.
2. Go to **Security, Global security**.
   - Check **Enable administrative security**.
   - Check **Enable application security**.
   - Select **Federated repositories** from the Available realm definitions
3. Click **Apply**.

**Setting WebSphere Application Groups**

1. Start the WebSphere Administrative Console and log in.
2. Go to **Users and Groups - Manage Groups**.
   Create the group name of cisusers (default group).
3. Click **Create**.

**Setting WebSphere Application Users**

1. Start the WebSphere Administrative Console and log in.
2. Go to **Users and Groups - Manage Users**.
   - Create the user Id of SYSUSER (example user)
   - Add the Group Membership of cisusers (created in the previous step) to the user.
3. Click **Create**.

**Setting WebSphere JNDI Users**

1. Start the WebSphere Administrative Console and log in.
2. Go to **Users and Groups, Manage Users**.
   - Create the user id of JNDI (example user).
3. Click **Create**.

**Setting WebSphere JNDI Users - CORBA Naming Service Users**

1. Start the WebSphere Administrative Console and log in.
2. Go to **Environment, Naming, CORBA Naming Service Users**.
   - Add the user id of JNDI (example user).
   - Highlight all of the Roles (Cos Naming Read, Cos Naming Write, Cos Naming Create, Cos Naming Delete)
3. Click **Apply**.

*Note:* Prior to this step you will need to restart the server1 since when adding CORBA Naming Service Users, the User is not recognized.
4. Note the values for JNDI User and Password. The Oracle Utilities Application Framework will prompt you for this information during the installation.

**Creation of Additional Servers in WebSphere - Sample Script**

You must also provide the name of servers during OUAF installation. You can use the following sample script to create additional servers using the wsadmin.sh tool.

*Note:* There are several other ways to accomplish this task.

1. Initialize a wsadmin.sh session:

   ```bash
   <$WAS_HOME>/bin/wsadmin.sh -host localhost -port <SoapConnectorPort> -conntype SOAP -username <webSphereUserName> -password <webSphereUserPassword>
   ```

   *Note:* Substitute $WAS_HOME, webSphereUserName, SoapConnectorPort, webSphereUserPassword, with values that are appropriate for your installation.

   For example:
   ```bash
   /ouaf/IBM/WebSphere70/AppServer/bin/wsadmin.sh -host localhost -port 8889 -conntype SOAP
   ```

2. Create the server instance:

   ```bash
   <wsadmin> $AdminTask createApplicationServer <nodeName> {-name <serverName>}
   ```

**Setting General Server Properties**

1. Connect to the WebSphere administrative console.

2. Select **Servers**, **Server Types**, **WebSphere application servers**, and then select **Application Servers**.

3. Select your server name.

4. Under the section **General Properties**.
   - Deselect **Parallel start**.
   - Deselect **Run in development mode**.

5. Click **OK**.

6. Click **Save** to commit the setting.

**Enabling SOAP Communication with WebSphere**

The OUAF configuration scripts communicate with WebSphere as a SOAP client by using Jython commands to perform environment maintenance (for example, stop, start, deploy, undeploy).

To enable SOAP communication with WebSphere:

1. In a text editor, open the following file:

   ```bash
   $WAS_HOME/profiles/<PROFILE_NAME>/properties/soap.client.props
   ```

   Edit the property lines as follows:

   ```properties
   com.ibm.SOAP.requestTimeout=0
   com.ibm.SOAP.loginUserid=<WebSphere_User_Id>
   com.ibm.SOAP.loginPassword=<WebSphere_Password>
   ```

   *Note:* Refer to IBM WebSphere Application Server documentation for more details.
2. If you want to encode the password in the soap.client.props file, then run the 
PropFilePasswordEncoder command from the $WAS_HOME/profiles/
<PROFILE_NAME>/bin directory.

This command is specific to IBM WebSphere Application Server. It encodes passwords 
located in plain-text property files.

3. Save and close the file.

**Creation of Additional Servers in WebSphere - Sample Script**

You must also provide the name of servers during the installation. You can use the following 
sample script to create additional servers using the wsadmin.sh tool.

**Note:** There are several other ways to accomplish this task.

1. Initialize a wsadmin.sh session:

   `<$WAS_HOME>/bin/wsadmin.sh -host localhost -port <SoapConnectorPort> -conntype SOAP -username <webSphereUserName> -password <webSphereUserPassword>

   **Note:** Substitute $WAS_HOME, webSphereUserName, SoapConnectorPort, 
webSphereUserPassword, with values that are appropriate for your installation:

   For example: /ouaf/IBM/WebSphere70/AppServer/bin/wsadmin.sh -host localhost -port 8889 -conntype SOAP

2. Create the server instance:

   `wsadmin> $AdminTask createApplicationServer <nodeName> {-name <serverName>}

**Obtaining the Bootstrap Port and WC_defaulthost**

You must also provide these port numbers during OUAF installation. Obtain the bootstrap port 
number and the WC_defaulthost by using the WebSphere administrative console.

**Note:** The WebSphere application server1 must be running to obtain the 
bootstrap port number and the WC_defaulthost port number.

To view the bootstrap port number and the WC_defaulthost:

1. Log on to the WebSphere administrative console.

2. Select Servers, Server Types, WebSphere application servers, <server_name> and then select Ports under Communications.

   The bootstrap port is displayed as BOOTSTRAP_ADDRESS.

   The WC_defaulthost is displayed as WC_defaulthost.

3. Note the values for WC_defaulthost and BOOTSTRAP_ADDRESS. The Oracle Utilities 
Application Framework will prompt you for this information during the installation.

**Set Up a Virtual Host for the Server**

1. Select Environment, Virtual Host, default_host, and then select Host Alias.

2. Click New.

Enter the following:

- **Host Name:** *
- **Port:** WC_defaulthost Port Number

**Obtaining the WebSphere Node Name**

You must also provide the node name during the installation. Obtain the node name by using the 
WebSphere administrative console.
**Note:** The WebSphere application server must be running to obtain the
bootstrap port number.

To obtain the node name:

1. Connect to the WebSphere administrative console.
2. Select **Servers, Server Types, WebSphere application servers, <server_name>**.
   
   **Note:** Take note of the value for the Node Name.

**Installing Oracle Utilities Application Framework as a Non-Root User with IBM WebSphere Installed as Root**

Installing Oracle Utilities Application Framework as a non-root user on a WebSphere application server running on AIX requires certain permissions. Prior to the installation, verify that the operating system user account installing the framework has write and execute permissions on the directories in which WebSphere will be installed.

**Postinstallation Tasks**

This section describes tasks that you should complete after you have installed Oracle Utilities Meter Data Management on a WebSphere application server.

**Setting Environment Entries**

1. Connect to the WebSphere administrative console.
2. Select **Servers, Server Types, WebSphere application servers**.
3. Select the server name.
4. Go to **Server Infrastructure**, and then click **Java and Process Management**.
5. Select **Process Definition**.
6. Go to **Environment Entries**.
7. Click **New** and add the following Environment Entries:
   
   **Name:** SPLENVIRON
   **Value:** <$SPLENVIRON>
   
   **Note:** Substitute $SPLENVIRON with appropriate values for your installation.

   **Name:** SPLEBASE
   **Value:** < $SPLEBASE >
   
   **Note:** Substitute $SPLEBASE with appropriate values for your installation.

   **Name:** LIBPATH
   **Value:** <$SPLEBASE >/runtime
   
   **Note:** Substitute $SPLEBASE with appropriate values for your installation.

   **Note:** You will need to restart the server_name before you attempt to start the application on the server.
8. Click **OK**.
9. Click **Save** to commit the setting.

**Setting JVM Memory and Arguments**

For Oracle Utilities Application Framework, JVM memory settings must be changed for production environments and/or when processing large volume in a nonproduction environment.

Perform the following steps to set the JVM memory size. The WebSphere application server must be running to set the memory size.
To set the JVM memory size:
1. Connect to the WebSphere administrative console.
2. Select Servers, Server Types, WebSphere application servers.
3. Select the server name.
4. Go to Server Infrastructure, and then click Java and Process Management.
5. Select Process Definition.
6. Go to Additional Properties, and then click Java Virtual Machine.
7. Enter 1024 for Minimum Heap Size.
8. Enter 1024 for Maximum Heap Size.
9. Enter -Djava.security.auth.login.config=<$SPLEBASE>/splapp/config/java.login.config for Generic JVM arguments.
   Note: Substitute $SPLEBASE with appropriate values for your installation.
   You will need to restart the server_Name before you attempt to start the application on the server.
10. Click OK.
11. Click Save to commit the setting.

**Setting Server Custom Properties**
The following custom properties have been need in the past to enable WebSphere Classloader to load the correct xalan.jar file.

To set the Custom Properties:
1. Connect to the WebSphere administrative console.
2. Select Servers, Server Types, WebSphere application servers.
3. Select the server name.
4. Go to Server Infrastructure, and then click Java and Process Management.
5. Select Process Definition.
6. Go to Additional Properties, and then click Java Virtual Machine.
7. Go to Additional Properties, and then click Custom Properties.
8. Click New.
   Enter the following information:
   • Name: javax.xml.transform.TransformerFactory
   • Value: org.apache.xalan.processor.TransformerFactoryImpl
9. Click OK.
10. Click Save to commit the setting.

**Setting the Web Container Custom Properties**
To set the Web Container Custom Properties:
1. Connect to the WebSphere administrative console.
2. Select Servers, Server Types, WebSphere application servers.
3. Select the server name.
4. Go to Container Settings, and then click Web Container Settings.
5. Select **Web container**.
6. Go to **Additional Properties**, and then click **Custom properties**.
7. Click **New**.
   Enter the following information:
   - **Name**: com.ibm.ws.webcontainer.invokefilterscompatibility
   - **Value**: true
8. Click **OK**.
9. Click **Save** to commit the setting.

**Starting and Stopping WebSphere Servers**

To start WebSphere on AIX use the `$WAS_HOME/profiles/<profile_name>/bin/startServer.sh` script. For example, run:

```
$WAS_HOME/profiles/<profile_name>/bin/startServer.sh <server_name>
```

To stop WebSphere on AIX, use the `$WAS_HOME/profiles/<profile_name>/bin/stopServer.sh` script. For example, run:

```
$WAS_HOME/profiles/<profile_name>/bin/stopServer.sh <server_name>
```

**Note:** The Oracle Utilities Application Framework script `spl.sh` does not stop or start the IBM WebSphere servers. It only stops and starts the Oracle Utilities Application Framework-based applications.

**Deployment Using Supplied Script**

The application deployment script is `initialSetup.sh`, located in `$SPLEBASE/bin` (this script deploys both the SPLService.ear and SPLWeb.ear)

**Note:** Before running the script ensure you have initialized the environment by running `splenviron.sh`

**Deployment via the Admin Console**

Follow these steps to deploy the application using the Admin Console:

**Deployment Overview**

The application needs to be deployed in the following order:

1. SPLService.ear
2. SPLWeb.ear

**Note:** The SPLService.ear must be successfully deployed before deploying SPLWeb.ear

**Deploy SPLService.ear**

1. Select the ear file to deploy.
   - Select **Applications, Install New Application**.
   - Select **Remote file system**.
   - Browse to the SPLService.ear or enter the full path to the file.
   - The ear files can be found under `$SPLEBASE/splapp/applications`.
   - Click **Next**.
2. Select **Option Fast Path - Prompt only when additional information is required**. Click **Next**.
3. On the Select installation options page ensure that **Deploy enterprise beans** is checked. Click **Next**.

4. Assign the module to the WebSphere server instance.
   When deploying an application from the console make sure you select the correct server and click **Apply**.

5. Review the summary page. Review the installation options.

6. Click **Finish**. The application will then deploy. The deployment process takes about 5 minutes.

7. Click **Save**. The save process can take more than 20 minutes.

**Deploying SPLWeb.ear**
1. Select the ear file to deploy.
   - Select **Applications, Install New Application**.
   - Select **Remote file system**.
   - Browse to the SPLWeb.ear or enter the full path to the file.
   - The ear files can be found under $SPLEBASE/splapp/applications.
   - Click **Next**.

2. Select **Option Fast Path - Prompt only when additional information is required**. Click **Next**.

3. Assign the module to the WebSphere server instance.
   When deploying an application from the console make sure you select the correct server and click Apply.

4. Review the summary page. Review the installation options.

5. Click **Finish**. The application will then deploy. The deployment process takes about 5 minutes.

6. Click **Save**. The save process can take about more than 20 minutes.

**Configure the Applications**
You need to apply these steps to both the SPLWeb and SPLService applications unless specified.

1. Set the startup order of the applications (this applies only to SPLWeb):
   - Select the SPLWeb application from **Applications, Enterprise Applications**.
   - Select **Startup behavior**.
   - Change the startup order to 2.
   - Click **OK**.
   - Click **OK** and Save directly to master configuration.

2. Set the class loading order (for both SPLService.ear and SPLWeb.ear): Select Class loading and update detection.
   - Set Polling interval to 0.
   - Under Class loader order select Classes loaded with application class loader first. Click **OK** and Save to master configuration.

3. Set the module starting weight:
   - **SPLService only**: Set the Starting weight to 1.
• **SPLWeb only**: For each module (.war) set the Starting weight to 10000 and change the Class loader order to Classes loaded with application class loader first

4. Set EJB JNDI names (this applies only to SPLService). Select Enterprise Java Bean Properties and enter the following values:

   • **EJB module**: SPLServiceBean
   • **JNDI name for all interfaces**
   • **Target Resource JNDI Name**: [Web Context Root ]/servicebean
   • **EJB module**: TUGBULiteServiceBean
   • **JNDI name for all interfaces**
   • **Target Resource JNDI Name**: [Web Context Root ]/liteservicebean

5. Click **OK**.

**Configure Application Security**

After using the supplied script to deploy the application to WebSphere you will need to configure each application’s security before starting the application.

Using the WebSphere administration console select **Applications, Application Types, WebSphere enterprise applications, <Business Server Application Name>, <server name>** (for example, SPLService-server2), **Security role to user/group mapping**.

For role cisusers:

   • Check **Select** and the click **Map Users**:
   • Search for SYSUSER and add to the Selected users list.
   • Click **OK**.

   **Note:** Repeat the process for <Web Server Application Name>-<server name> (for example, SPLWeb-server2).

**Restart the WebSphere Server**

It is recommended to stop and then restart the WebSphere server.

If the application is deployed in server1 you can use the admin console to stop and start the server. If the application is deployed in another server you will need to use the scripts that are supplied with WebSphere (stopServer.sh, startServer.sh).

   **Note:** WebSphere admin console runs under server1.

**Application URL**

The Web link to the WebSphere application will be:

http://<hostname>:\<WC_default_port>/<context_root>/loginPage.jsp

For example, http://oracle.test:9081/ouaf/loginPage.jsp
Oracle Linux 5.x, 6.x, 7.x or Red Hat Linux 5.x, 6.x, 7.x Operating System

This section describes the software requirements for operating the application using the Oracle Linux or Red Hat Linux application server.

Supported Application Servers

<table>
<thead>
<tr>
<th>Operating System</th>
<th>Chipset</th>
<th>Application Server</th>
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<tr>
<td>Oracle Enterprise Linux 5.x, 6.x, 7.x (64-bit) (based on Red Hat Enterprise Linux (64-bit))</td>
<td>x86_64</td>
<td>Oracle WebLogic 11gR1 (10.3.6) or Oracle WebLogic 12c (12.1.3.0+) 64-bit version</td>
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Oracle Linux or Red Hat Enterprise Linux Operating System Running on x86_64 64-bit Architecture

UNIX Administrator User ID

The following user groups and accounts have to be created to install and administer the application:

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Note: It is recommended that you change the default values for security reasons.

Throughout this document the administrator user id is often referred to as the "cissys" user id. You should substitute that with the customer defined user id when not using the default value. After the initial install, the software should always be managed using that user id.

By default, the cissys userid is the only one given access to the files installed.

1. Create a group called cisusr (user group)
2. Create a user called cissys. Primary group cisusr. Set the primary shell for the cissys user to Korn Shell.

The shell scripts use the ">" to overwrite shell functionality. Your operating system may be configured to not allow this functionality by default in the users shell.

To avoid file access permission problems when executing scripts, consider placing the following command into cissys profile script:

```
set +o noclobber
```

Security Configuration

Various options exists to secure a system. In this application all files will be created with the minimum permissions required to ensure that group-readable, group-writable and group-executable files will have the correct user groups and to restrict the permissions available to legitimate users. In this way, a low privileged end user cannot directly edit configuration files and thereby bypass application security controls.
The following users and group categories must be defined to implement this security. For demonstration purposes the following users and groups will be used. These users must be created according to industry standards (including password policies). All users should be created with a default umask of 022 to ensure files created during normal operation have the correct permissions.

Please replace these users and groups for your installation defaults:

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<td>cisusr</td>
<td>This user will be used to install the application and to apply patches. This user will own all the application files. The same care should be taken with this user ID as if it is 'root'. This user will be able to add, delete and modify files within the application.</td>
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<td>cisadm</td>
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<td>Administrative and Operation functions will be available to this user. This user will be able to stop and start the application and batch processes, but will not have access to modify any file other than generated log files</td>
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<tr>
<td>cisoper</td>
<td>------</td>
<td>Low level operator. This user will only be able to read logs files and collect information for debugging and investigative purposes. Care should be taken in production to disable debugging as debugging information could contain potential sensitive data which this user should not have privy to.</td>
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Note: The Oracle Client and WebLogic should be installed as the user who will stop and start the application. For example, if you plan to run the application as the install user these components must belong to cissys.

**Oracle Client 11.2.0.x/ 12.1.0.1 — Runtime Option**
Install the Oracle Client as described in the Oracle Client installation documentation. Use the cissys account to install the Oracle Client. If another user installs the Oracle Client, make sure the cissys user ID has the proper execute permissions.

For the cissys user ID, ensure that the environment variable ORACLE_CLIENT_HOME is set up, and that ORACLE_CLIENT_HOME/perl/bin is the first Perl listed in the cissys account’s PATH variable.

**Oracle Java Development Kit Version 6.0 Update 25+ and 7.0 Update 55+, 64-bit**
At time of release, Oracle Java packages could be obtained from:
http://www.oracle.com/technetwork/java/archive-139210.html
The Oracle WebLogic Server requires the 64-bit version. The main prerequisite for the web server is the version of Java mentioned above.

For the userid cissys, ensure that the environment variable JAVA_HOME is setup, and that java_home/bin and java_home/lib can be found in cissys' PATH variable.

Note: JDK 7.0 Update 55 or higher version is required for Weblogic12c (12.1.3.0+).

**Hibernate 4.1.0 FINAL**
You must install Hibernate 4.1.0 before installing Oracle Utilities Meter Data Management.
To install Hibernate:
1. Create a Hibernate jar external depot:
   
   ```
   export HIBERNATE_JAR_DIR=<Hibernate 3rd party jars depot>
   ```
2. Download the hibernate-release-4.1.0.Final.zip file from

Click the “4.1.0.Final” link to download the zip file.

3. Extract the contents of the archive file:
   `jar xvf hibernate-release-4.1.0.Final.zip`

   **Note:** You must have Java JDK installed on the machine to use the jar command. Be sure to install the JDK that is supported for your platform.

4. Copy the jar files to your Hibernate jar directory (`$HIBERNATE_JAR_DIR`) using the following commands:

   `copy hibernate-release-4.1.0.Final/lib/optional/ehcache/ehcache-core-2.4.3.jar $HIBERNATE_JAR_DIR`
   `copy hibernate-release-4.1.0.Final/lib/optional/ehcache/hibernate-ehcache-4.1.0.Final.jar $HIBERNATE_JAR_DIR`
   `copy hibernate-release-4.1.0.Final/lib/required/hibernate-commons-annotations-4.0.1.Final.jar $HIBERNATE_JAR_DIR`
   `copy hibernate-release-4.1.0.Final/lib/required/hibernate-core-4.1.0.Final.jar $HIBERNATE_JAR_DIR`
   `copy hibernate-release-4.1.0.Final/lib/required/hibernate-jpa-2.0-api-1.0.1.Final.jar $HIBERNATE_JAR_DIR`
   `copy hibernate-release-4.1.0.Final/lib/required/javassist-3.15.0-GA.jar $HIBERNATE_JAR_DIR`
   `copy hibernate-release-4.1.0.Final/lib/required/jboss-logging-3.1.0.CR2.jar $HIBERNATE_JAR_DIR`
   `copy hibernate-release-4.1.0.Final/lib/required/jboss-transaction-api_1.1_spec-1.0.0.Final.jar $HIBERNATE_JAR_DIR`

**Oracle WebLogic 11gR1 (10.3.6) or WebLogic 12c (12.1.3.0+) 64-bit**

Oracle WebLogic software can be downloaded from the Oracle web site. This application server will run as a 64-bit application.

- Download and install 64-bit Java (as documented above) before installing WebLogic.
- Download and install WebLogic Server 11gR1 (10.3.6) or WebLogic Server 12c (12.1.3.0+).
Installing Prerequisite Software

Planning the Installation

Oracle Solaris 11 Application Server

This section describes the software requirements for operating the application using the Oracle Solaris 11 application server.

Supported Application Servers

<table>
<thead>
<tr>
<th>Operating System</th>
<th>Chipset</th>
<th>Application Server</th>
</tr>
</thead>
<tbody>
<tr>
<td>Oracle Solaris 11 (64-bit)</td>
<td>SPARC</td>
<td>Oracle WebLogic 11gR1 (10.3.6) or Oracle WebLogic 12c (12.1.3.0+) 64-bit version</td>
</tr>
</tbody>
</table>

Oracle Solaris 11 Operating System Running on SPARC-based 64-bit Architecture

UNIX Administrator User ID

The following user groups and accounts have to be created to install and administer the application:

<table>
<thead>
<tr>
<th>Description</th>
<th>Default Value</th>
<th>Customer Defined Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Oracle Utilities Meter Data Management Administrator User ID</td>
<td>cissys</td>
<td></td>
</tr>
<tr>
<td>Oracle Utilities Meter Data Management User Group</td>
<td>cisusr</td>
<td></td>
</tr>
</tbody>
</table>

Note: It is recommended that you change the default values for security reasons.

Throughout this document the administrator user id is often referred to as the "cissys" user id. You should substitute that with the customer defined user id when not using the default value. After the initial install, the software should always be managed using that user id.

By default, the cissys userid is the only one given access to the files installed.

1. Create a group called cisusr (user group)
2. Create a user called cissys. Primary group cisusr. Set the primary shell for the cissys user to Korn Shell.

The shell scripts use the ">" to overwrite shell functionality. Your operating system may be configured to not allow this functionality by default in the users shell.

To avoid file access permission problems when executing scripts, consider placing the following command into cissys profile script:

```
set +o noclobber
```

Security Configuration

Various options exists to secure a system. In this application all files will be created with the minimum permissions required to ensure that group-readable, group-writable and group-executable files will have the correct user groups and to restrict the permissions available to legitimate users. In this way, a low privileged end user cannot directly edit configuration files and thereby bypass application security controls.

The following users and group categories must be defined to implement this security. For demonstration purposes the following users and groups will be used. These users must be created according to industry standards (including password policies). All users should be created with a default umask of 022 to ensure files created during normal operation have the correct permissions.
Please replace these users and groups for your installation defaults:

<table>
<thead>
<tr>
<th>User</th>
<th>Group</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>cissys</td>
<td>cisusr</td>
<td>This user will be used to install the application and to apply patches. This user will own all the application files. The same care should be taken with this user ID as if it is 'root'. This user will be able to add, delete and modify files within the application.</td>
</tr>
<tr>
<td>cisadm</td>
<td>cisusr</td>
<td>Administrative and Operation functions will be available to this user. This user will be able to stop and start the application and batch processes, but will not have access to modify any file other than generated log files</td>
</tr>
<tr>
<td>cisoper</td>
<td>-------</td>
<td>Low level operator. This user will only be able to read logs files and collect information for debugging and investigative purposes. Care should be taken in production to disable debugging as debugging information could contain potential sensitive data which this user should not have privy to.</td>
</tr>
</tbody>
</table>

Note: The Oracle Client and WebLogic should be installed as the user who will stop and start the application. For example, if you plan to run the application as the install user these components must belong to cissys.

**Oracle Client 11.2.0.x/ 12.1.0.1 — Runtime Option**

Install the Oracle Client as described in the Oracle Client installation documentation. Use the cissys account to install the Oracle Client. If another user installs the Oracle Client, make sure the cissys user ID has the proper execute permissions.

For the cissys user ID, ensure that the environment variable ORACLE_CLIENT_HOME is set up, and that ORACLE_CLIENT_HOME/perl/bin is the first Perl listed in the cissys account’s PATH variable.

Note: JDK 7.0 Update 55 or higher version is required for Weblogic12c (12.1.3.0+).

**Oracle Java Development Kit Version 6.0 Update 25+ and 7.0 Update 55+, 64-bit**

This software is only required for Oracle WebLogic installations.

At the time of release, the Oracle Java packages used in the test cycle were downloaded from:

http://www.oracle.com/technetwork/java/archive-139210.html

The Oracle WebLogic Server requires the 64-bit version. The main prerequisite for the web server is the version of Java mentioned above.

For the userid cissys, ensure that the environment variable JAVA_HOME is setup, and that java_home/bin and java_home/lib can be found in cissys' PATH variable.

Note: JDK 7.0 Update 55 or higher version is required for Weblogic12c (12.1.3.0+).

**Hibernate 4.1.0 FINAL**

You must install Hibernate 4.1.0 before installing Oracle Utilities Meter Data Management.

To install Hibernate:

1. Create a Hibernate jar external depot:

   export HIBERNATE_JAR_DIR=<Hibernate 3rd party jars depot>

2. Download the hibernate-release-4.1.0.Final.zip file from


   Click the “4.1.0.Final” link to download the zip file.
3. Extract the contents of the archive file:
   ```
jar xvf hibernate-release-4.1.0.Final.zip
   ```
   **Note:** You must have Java JDK installed on the machine to use the jar command. Be sure to install the JDK that is supported for your platform.

4. Copy the jar files to your Hibernate jar directory (`$HIBERNATE_JAR_DIR`) using the following commands:
   ```
copy hibernate-release-4.1.0.Final/lib/optional/
    ehcache/ehcache-core-2.4.3.jar $HIBERNATE_JAR_DIR

copy hibernate-release-4.1.0.Final/lib/optional/
    ehcache/hibernate-ehcache-4.1.0.Final.jar $HIBERNATE_JAR_DIR

copy hibernate-release-4.1.0.Final/lib/required/
    hibernate-commons-annotations-4.0.1.Final.jar $HIBERNATE_JAR_DIR

copy hibernate-release-4.1.0.Final/lib/required/
    hibernate-core-4.1.0.Final.jar $HIBERNATE_JAR_DIR

copy hibernate-release-4.1.0.Final/lib/required/
    hibernate-jpa-2.0-api-1.0.1 Final.jar $HIBERNATE_JAR_DIR

copy hibernate-release-4.1.0.Final/lib/required/
    javassist-3.15.0-GA.jar $HIBERNATE_JAR_DIR

copy hibernate-release-4.1.0.Final/lib/required/
    jboss-logging-3.1.0.CR2.jar $HIBERNATE_JAR_DIR

copy hibernate-release-4.1.0.Final/lib/required/
    jboss-transaction-api_1.1_spec-1.0.0.Final.jar $HIBERNATE_JAR_DIR
   ```

**Oracle WebLogic 11gR1 (10.3.6) or WebLogic 12c (12.1.3.0+) 64-bit**

Oracle WebLogic software can be downloaded from the Oracle web site. This application server will run as a 64-bit application.

- Download and install 64-bit Java (as documented above) before installing WebLogic.
- Download and install WebLogic Server 11gR1 (10.3.6) or WebLogic Server 12c (12.1.3.0+).
Windows Server 2008/2012 R2 Application Server

This section describes the software requirements for operating the application using the Windows application server.

Supported Application Servers

<table>
<thead>
<tr>
<th>Operating System</th>
<th>Chipset</th>
<th>Application Server</th>
</tr>
</thead>
<tbody>
<tr>
<td>Windows Server 2008/2012 R2 (64-bit)</td>
<td>x86_64</td>
<td>Oracle WebLogic 11gR1 (10.3.6) or Oracle WebLogic 12c (12.1.3.0+) 64-bit version</td>
</tr>
</tbody>
</table>

Oracle Client 11.2.0.x/ 12.1.0.1 — Runtime Option

Install the Oracle Client as described in the Oracle Client installation documentation. Use the cissys account to install the Oracle Client. If another user installs the Oracle Client, make sure the cissys user ID has the proper execute permissions.

For the cissys user ID, ensure that the environment variable ORACLE_CLIENT_HOME is set up, and that ORACLE_CLIENT_HOME/perl/bin is the first Perl listed in the cissys account’s PATH variable.

Oracle Java Development Kit Version 6.0 Update 25+ and 7.0 Update 55+

This software is required for the Oracle WebLogic Installation.

At time of release, Oracle Java packages could be obtained from: http://www.oracle.com/technetwork/java/archive-139210.html

The Oracle WebLogic Server requires the 64-bit version. The main prerequisite for the web server is the version of java mentioned above.

For the userid cissys, ensure that the environment variable JAVA_HOME is setup, and that java_home/bin and java_home/lib can be found in cissys' PATH variable.

Note: JDK 7.0 Update 55 or higher version is required for Weblogic12c (12.1.3.0+).

Hibernate 4.1.0 FINAL

You must install Hibernate 4.1.0 before installing Oracle Utilities Meter Data Management.

To install Hibernate:

1. Create a Hibernate jar external depot:
   export HIBERNATE_JAR_DIR=<Hibernate 3rd party jars depot>

   Click the “4.1.0.Final” link to download the zip file.

3. Extract the contents of the archive file:
   jar xvf hibernate-release-4.1.0.Final.zip

   **Note:** You must have Java JDK installed on the machine to use the jar command. Be sure to install the JDK that is supported for your platform.

4. Copy the jar files to your Hibernate jar directory ($HIBERNATE_JAR_DIR) using the following commands:
   copy hibernate-release-4.1.0.Final/lib/optional/ehcache/ehcache-core-2.4.3.jar $HIBERNATE_JAR_DIR
Installing Prerequisite Software

Planning the Installation

Oracle WebLogic 11gR1 (10.3.6) or WebLogic 12c (12.1.3.0+) 64-bit
Oracle WebLogic software can be downloaded from the Oracle web site. This application server will run as a 64-bit application.

- Download and install 64-bit Java (as documented above) before installing WebLogic.

Download and install WebLogic Server 11gR1 (10.3.6) or WebLogic Server 12c (12.1.3.0+).
Readiness Checklist

The following checklist guides you through the installation process of Oracle Utilities Meter Data Management. The details for each step are presented in subsequent chapters.

1. Confirm that the recommended hardware is ready. Refer to Supported Platforms and Hardware Requirements for more details.

2. Install prerequisite software. Refer to the Prerequisite Software List for more details.

3. Ensure that you have downloaded the Oracle Utilities Meter Data Management V2.1.0.3 components.

4. Go through the Installation and Configuration Worksheets to understand the configuration menu.

5. Determine the type of the installation:
   - **Initial Installation** - For initial installation follow the instructions mentioned in chapter Installing Oracle Utilities Meter Data Management - Initial Installation.
   - **Demo Installation** - For demo installation follow the instructions mentioned in chapter Installing Oracle Utilities Meter Data Management - Demo Installation.
   - **Upgrade Installation** - For upgrade installation to V2.1.0.3, follow the instructions mentioned in chapter Upgrading Oracle Utilities Meter Data Management.

Chapter 4

Installing Oracle Utilities Meter Data Management - Initial Installation

This chapter provides instructions for installing Oracle Utilities Meter Data Management from scratch. This chapter includes:

• Before You Install
• Initial Installation Procedure
• After the Installation
• Operating the Application

Before You Install

Refer to My Oracle Support for up-to-date additional information on Oracle Utilities Meter Data Management.

Initial Installation Procedure

The initial installation procedure consists of:

• Database Component Installation
• Application Components Installation

Database Component Installation

Installation of the database component of Oracle Utilities Meter Data Management must be complete before you can proceed with the following sections. Refer to the section “Initial Install” of the Oracle Utilities Meter Data Management Database Administrator’s Guide, which provides instructions on installing the database component.
Application Components Installation

A successful installation consists of the following steps:

- Installing the Oracle Utilities Application Framework V4.2.0 Service Pack 3 (4.2.0.3) Application Component
- Installing Oracle Utilities Application Framework V4.2.0.3 Single Fix Prerequisite Rollup for SMDF V2.1.0.3
- Installing Oracle Utilities Service and Measurement Data Foundation V2.1.0.3 Application Component
- Installing the Oracle Utilities Meter Data Management V2.1.0.3 Application Component

Installing the Oracle Utilities Application Framework V4.2.0 Service Pack 3 (4.2.0.3) Application Component

This section describes how to install the application component of Oracle Utilities Application Framework V4.2.0 Service Pack 3, including:

- Copying and Decompressing Install Media
- Setting Permissions for the cistab file in UNIX
- Installing the Application Component

Copying and Decompressing Install Media

The Oracle Utilities Application Framework V4.2.0 Service Pack 3 installation file is delivered in jar format for both UNIX and Windows platforms. If you are planning to install multiple Oracle Utilities Application Framework V4.2.0 Service Pack 3 environments operated by different Oracle Utilities administrator user ids, you must complete each of the following installation steps for each administrator userid.

To copy and decompress the install media, follow these steps:

1. Log in to the application server host with the Oracle Utilities Application Framework administrator user ID.
2. Download the Oracle Utilities Application Framework V4.2.0.3 Multiplatform from Oracle Software Delivery Cloud.
3. Create a temporary directory such as c:\ouaf\temp or /ouaf/temp. (Referred to below as <TEMPDIR>.)

   **Note:** This directory must be located outside any current or other working Oracle Utilities application environment. All files that are placed in this directory as a part of the installation can be deleted after completing a successful installation.

4. Copy the file FW-V4.2.0.3.0-MultiPlatform.jar from the delivered package to the <TEMPDIR>. If you are using FTP to transfer this file, remember to use the BINARY option for the FTP transfer.
5. Decompress the file:

   ```
   cd <TEMPDIR>
   jar -xvf FW-V4.2.0.3.0-MultiPlatform.jar
   ```

   **Note:** You will need to have Java JDK installed on the machine used to (un)jar the application server installation package. Please install the JDK that is supported for the install on your platform to be able to use the jar command. This is the location of Java packages: http://www.oracle.com/technetwork/java/archive-139210.html

A sub-directory named “FW.V4.2.0.3” is created. It contains the installation software for the Oracle Utilities framework application server.
Setting Permissions for the cistab file in UNIX

Every Oracle Utilities Application Framework environment installed on a server must be registered in the /etc/cistab file located on that server. On UNIX servers, generally only the root user ID has write permissions to the /etc directory. Since the installation process is run by the Oracle administrator user ID (cissys), this user ID may not be able to write to /etc/cistab table.

The install utility checks permissions and if it identifies a lack of the necessary permissions, it generates a script in the <TEMPDIR>/FW.V4.2.0.3.0 directory named cistab_<SPLENVIRON>.sh. Run the generated script using the root account before continuing with the installation process. The script initializes the cistab file in /etc directory (if it is the first Oracle Utilities Framework application environment on the server) and registers a new environment.

The generated script also changes the owner of /etc/cistab file to the Oracle Utilities Framework administrator user ID, so that the next time a new environment is created by the same Oracle Utilities Framework administrator user ID, you do not need to run the generated script with the root user ID. Instead the install utility itself proceeds with the registration.

If you are reinstalling an existing environment, only the validation of /etc/cistab entry is done by the install utility, no new registration occurs. The install utility interactively instructs you about every step that needs to occur in each specific case.

If you are planning to upgrade an existing environment it is your responsibility to take a backup prior to the installation process. The installation utility does not create a backup of existing environment.

Installing the Application Component

This section outlines the steps for installing the application component of Oracle Utilities Application Framework V4.2.0 Service Pack 3.

1. Login to the Application Server host as administrator (the default is cissys on UNIX) or as a user with Administrator privileges (on Windows).

2. Change directory to the <TEMPDIR>/FW.V4.2.0.3.0 directory.

3. Set the ORACLE_CLIENT_HOME and PATH variables as Oracle Client Perl is required to run the installer.

   UNIX:
   
   ```
   export PATH=/usr/java6_64/bin:$PATH
   ``
   
   **Note:** The above command is only applicable for WebSphere8.5.5 on AIX7.1.

   ```
   export ORACLE_CLIENT_HOME=<ORACLE CLIENT INSTALL LOCATION>
   export PERL_HOME=${ORACLE_CLIENT_HOME}/perl
   export PATH=${PERL_HOME}/bin:$PATH
   export PERL5LIB=${PERL_HOME}/lib:${PERL_HOME}/lib/site_perl:<OUAF Installer Decompressed location/bin/perlib>
   export PERLLIB=${PERL_HOME}/lib:${PERL_HOME}/lib/site_perl:<OUAF Installer Decompressed location/bin/perlib>
   export LD_LIBRARY_PATH=${ORACLE_CLIENT_HOME}/lib:${LD_LIBRARY_PATH}
   ```

   Windows:

   ```
   set ORACLE_CLIENT_HOME=<ORACLE CLIENT INSTALL LOCATION>
   set PERL_HOME=%ORACLE_CLIENT_HOME%\perl
   set PATH=%PERL_HOME%\bin;%PATH%
   ```

4. Start the application installation utility by executing the appropriate script:

   UNIX:

   ```
   ksh ./install.sh
   ```
5. The Oracle Utilities Application Framework specific menu appears.

6. Follow the messages and instructions that are produced by the application installation utility.

7. Select each menu item to configure the values. For detailed description of the values, refer to Appendix B: Installation and Configuration Worksheets.

8. Below are the mandatory list of configurable items along with descriptions for a few items. Where you see <Mandatory>, enter values suitable to your environment. You can assign default values to the rest of the menu items.

************************************
* Environment Installation Options *
************************************
1. Third Party Software Configuration
   Oracle Client Home Directory: <Mandatory>
   Web Java Home Directory: <Mandatory>
   Child JVM Home Directory:
   COBOL Home Directory:
   Hibernate JAR Directory: <Mandatory>
   ONS JAR Directory:
   Web Application Server Home Directory: <Mandatory>
   ADF Home Directory:
   OIM OAM Enabled Environment:

2. Keystore Options
   Store Type: JCEKS
   Alias: ouaf.system
   Alias Key Algorithm: AES
   Alias Key Size: 128
   HMAC Alias: ouaf.system.hmac
   Padding: PKCS5Padding
   Mode: CBC

50. Environment Installation Options
   Environment Mount Point: <Mandatory> - Install Location
   Log Files Mount Point: <Mandatory> - ThreadPoolWorker Logs Location
   Environment Name: <Mandatory>
   Web Application Server Type: WLS
   Install Application Viewer Module: true

Each item in the above list should be configured for a successful install.
Choose option (1,2,50, <P> Process, <X> Exit):

9. Once you enter 'P' after entering mandatory input values in the above menu, the system populates another configuration menu.

***********************************************************
* Environment Configuration *
***********************************************************
1. Environment Description
   Environment Description: <Mandatory>

2. Business Application Server Configuration
   Business Server Host: <Mandatory> - Hostname on which application being installed
   WebLogic Server Name: myserver
Business Server Application Name: SPLService
MPL Admin Port Number:      <Mandatory> - Multipurpose Listener Port
MPL Automatic startup:      false

3. Web Application Server Configuration
Web Server Host:            <Mandatory>
Web Server Port Number:     <Mandatory>
Web Context Root:           ouaf
WebLogic JNDI User ID:      <Mandatory>
WebLogic JNDI Password:     <Mandatory>
WebLogic Admin System User ID:    <Mandatory>
WebLogic Admin System Password:    <Mandatory>
WebLogic Server Name:       myserver
Web Server Application Name: SPLWeb
Application Admin User ID:    <Mandatory>
Application Admin Password:       <Mandatory>
Expanded Directories:        false
Application Viewer Module:    true

4. Database Configuration
Application Server Database User ID:     <Mandatory>
Application Server Database Password:    <Mandatory>
MPL Database User ID:      <Mandatory>
MPL Database Password:      <Mandatory>
XAI Database User ID:      <Mandatory>
XAI Database Password:      <Mandatory>
Batch Database User ID:     <Mandatory>
Batch Database Password:     <Mandatory>
Database Name:              <Mandatory>
Database Server:           <Mandatory>
Database Port:             <Mandatory>
ONS Server Configuration: Database Override Connection String:
Oracle Client Character Set NLS_LANG:

5. General Configuration Options
Batch RMI Port:                           <Mandatory> - RMI port for batch
Batch Mode:                               <Mandatory> - CLUSTERED or DISTRIBUTED
Coherence Cluster Name:                   <Mandatory> - Unique name for batch
Coherence Cluster Address:                 <Mandatory> - Unique Multicast address
Coherence Cluster Port:                   <Mandatory> - Unique port for batch cluster
Coherence Cluster Mode:                   <Mandatory> - prod

Each item in the above list should be configured for a successful install.

Choose option (1,2,3,4,5, <P> Process, <X> Exit):

10. When you are done with the parameter setup, proceed with the option P. The utility writes the configured parameters and their values into the configuration file.

11. Once the install has finished, the installation log location appears on the screen. If the log does not list any error messages, the installation of the application component of Oracle Utilities Application Framework is complete. You can now install Oracle Utilities Service and Measurement Data Foundation as described in the following section.
Installing Oracle Utilities Application Framework V4.2.0.3 Single Fix Prerequisite Rollup for SMDF V2.1.0.3

1. Create a <TEMPDIR> directory on the host server that is independent of any current or other working application environment.

2. Copy the file 'MDM-V2.1.0.3.0-FW-SP3-PREREQ-Multiplatform.zip' in the delivered package to <TEMPDIR>.
   If you are using FTP to transfer this file, remember to use the BINARY option for the FTP transfer.

3. Upon extracting the zip, file 'Application-Server-Multiplatform' sub-directory will be created.

4. Refer to the Readme.txt inside 'Application-Server-Multiplatform' file for instructions on installing the Oracle Utilities Application Framework 4.2.0 Service Pack 3 Prerequisite Single Fixes.

These patches are also available for download separately from My Oracle Support.
See Appendix E for a list of the patches contained in the rollup.

Installing Oracle Utilities Service and Measurement Data Foundation V2.1.0.3 Application Component

This section describes how to install the application component of Oracle Utilities Service and Measurement Data Foundation, including:

• Copying and Decompressing Install Media
• Installing Oracle Utilities Service and Measurement Data Foundation V2.1.0.3

Copying and Decompressing Install Media
The installation file is delivered in jar format for both UNIX and Windows platforms.

The Oracle Utilities Service and Measurement Data Foundation is delivered as a separate installation package. Please refer to the chapter Supported Platforms and Hardware Requirements for installation details regarding the database and operating system versions supported for the Service and Measurement Data Foundation. Also see the section Installing Prerequisite Software for prerequisite third-party software installation instructions.

Download the installation package and proceed as follows:

1. Log in to the host server as the Oracle Utilities Application Framework administrator user ID (default cissys). This is the same user ID that was used to install the Oracle Utilities Application Framework.

2. Create a <TEMPDIR> directory on the application server, which is independent of any current or other working Oracle Utilities Meter Data Management application environment. This can be the same <TEMPDIR> used during the installation of the Oracle Utilities Application Framework.

3. Copy the file SMDF-V2.1.0.3.0-MultiPlatform.jar in the delivered package to a <TEMPDIR> on your application server. If you are using FTP to transfer this file, remember to use the BINARY option for the FTP transfer.

4. Decompress the file:
   ```
   cd <TEMPDIR>
   jar -xvf SMDF-V2.1.0.3.0-MultiPlatform.jar
   ```
   For Windows installations, include the location of the JDK in your path before you execute the jar command.

   For both Unix and Windows platforms, a sub-directory named MDF.V2.1.0.3.0 is created. The contents of the installation directory are identical for both platforms. The directory contains the install software for the application product.
Installing Oracle Utilities Service and Measurement Data Foundation V2.1.0.3

This section outlines the steps for installing the Service and Measurement Data Foundation:

Preparing for the Installation

1. Log on as Oracle Utilities Service and Measurement Data Foundation Administrator (default cissys).

2. Initialize the Framework environment that you want to install the product into.

   **UNIX:**
   
   $$SPLEBASE/bin/splenviron.sh -e $SPLENVIRON
   
   **Windows:**
   
   %SPLEBASE%\bin\splenviron.cmd -e %SPLENVIRON%

3. Stop the environment if running.

   **UNIX:**
   
   $$SPLEBASE/bin/spl.sh stop
   
   **Windows:**
   
   %SPLEBASE%\bin\spl.cmd stop

Installing the Application

1. Change to the `<TEMPDIR>/MDF.V2.1.0.3.0` directory.

2. Execute the script:

   **UNIX:**
   
   ksh ./install.sh

   **Windows:**
   
   install.cmd

   **Note:** On UNIX, ensure that you have the proper execute permission on install.sh

   The configuration menu for the Oracle Utilities Service and Measurement Data Foundation Application appears.

3. Select menu item 8 to configure OSB.

   Use the completed OSB configuration worksheet to assist you in this step. See the Appendix B: Installation and Configuration Worksheets.

4. Select menu item 9 to configure SOA.

   Use the completed SOA configuration worksheet to assist you in this step. See the Appendix B: Installation and Configuration Worksheets.

5. Select menu item 10 to configure the SOA Configuration Plan.

   Use the completed SOA Configuration Plan (MDF) worksheet to assist you in this step. See the Appendix B: Installation and Configuration Worksheets.

6. When you are done with the parameter setup, choose option P to proceed with the installation.

7. Change to the `<TEMPDIR>/MDF.V2.1.0.3.0` directory.

8. Execute the following command:

   **UNIX:**
ksh ./postinstall.sh

**Windows:**
postinstall.cmd

**Note:** On UNIX, ensure that you have the proper execute permission on postinstall.sh

Installation of Oracle Utilities Service and Measurement Data Foundation Application Server is complete if no errors occurred during installation.

### Installing the Oracle Utilities Meter Data Management V2.1.0.3 Application Component

This section describes how to install the application component of Oracle Utilities Meter Data Management, including:

- **Installation Prerequisite**
- **Copying and Decompressing Install Media**
- **Installing the Application Component**

To proceed with the Oracle Utilities Meter Data Management installation you need to be connected to the target Oracle Utilities Service and Measurement Data Foundation application environment. See the detailed installation instructions in the following section.

You must initialize the Service and Measurement Data Foundation environment. For detailed instructions see the Preparing for the Installation section.

#### Installation Prerequisite

Oracle Utilities Service and Measurement Data Foundation 2.1.0.3 must be installed prior to installing Oracle Utilities Meter Data Management 2.1.0.3.

#### Copying and Decompressing Install Media

The Oracle Utilities Meter Data Management installation file is delivered in jar format for both UNIX and Windows platforms.

To copy and decompress the install media, follow these steps:

1. Log in to the application server host as the Oracle Utilities Application Framework administrator user ID (default cissys). This is the same user ID that was used to install the Oracle Utilities Application Framework.
2. Download the Oracle Utilities Meter Data ManagementV2.1.0.3.0 Multiplatform from Oracle Software Delivery Cloud.
3. Create a `<TEMPDIR>` directory on the host server, which is independent of any current or other working Oracle Utilities Meter Data Management application environment. This can be the same `<TEMPDIR>` used during the installation of the Oracle Utilities Application Framework.
4. Copy the file MDM-V2.1.0.3.0-MultiPlatform.jar in the delivered package to a `<TEMPDIR>` on your host server. If you are using FTP to transfer this file, remember to use the BINARY option for the FTP transfer.
5. Decompress the file:
   ```
   cd <TEMPDIR>
   jar -xvf MDM-V2.1.0.3.0-MultiPlatform.jar
   ```

   For Windows installations, include the location of the JDK in your path before you execute the jar command.

   For both Unix and Windows platforms, a sub-directory named MDM.V2.1.0.3.0 is created. The contents of the installation directory are identical for both platforms. The directory contains the install software for the application product.
Installing the Application Component

Follow the steps below to install Oracle Utilities Meter Data Management application component:

1. Log in to the application server host as Oracle Utilities Meter Data Management Administrator (default cissys).

2. Change directory:
   
   `cd <install_dir>/bin`

   where `<install_dir>` is the location where the Oracle Utilities Service and Measurement Data Foundation application component is installed.

3. Initialize the environment by running the appropriate command:
   
   **UNIX:**
   
   `./splenviron.sh -e <ENV NAME>`

   **Windows:**
   
   `splenviron.cmd -e <ENV NAME>`

4. If the environment is running, stop it by running the appropriate command:
   
   **UNIX:**
   
   `./spl.sh stop`

   **Windows:**
   
   `spl.cmd stop`

5. Change to the `<TEMPDIR>/MDM.V2.1.0.3.0` Directory.

6. Execute the install script:
   
   **Note:** On UNIX, ensure that you have the proper execute permission on install.sh.

   **UNIX:**
   
   `ksh ./install.sh`

   **Windows:**
   
   `install.cmd`

   Choose option P to proceed with the installation.

7. Change to the `<TEMPDIR>/MDMV2.1.0.3.0` directory.

8. Execute the following command:
   
   **UNIX:**
   
   `ksh ./postinstall.sh`

   **Windows:**
   
   `postinstall.cmd`

   **Note:** On UNIX, ensure that you have the proper execute permissions on postinstall.sh.

   Installation of Oracle Utilities Oracle Utilities Meter Data Management Server is complete if no errors occurred during the installation.

9. Start up the environment. Run the following command:
Operating the Application

UNIX:

```
spl.sh start
```

Windows:

```
spl.cmd start
```

Follow the message on the screen and review the logs in $SPLSYSTEMLOGS directory to ensure that the environment was started successfully.

If the startup failed, identify the problem by reviewing the logs. Resolve any issues before attempting to restart the environment.

Note: The first time you start Oracle Utilities Meter Data Management, you need to log into the Weblogic console and give system access to cisusers role.

The Weblogic console application can be accessed through the following URL:

http://<hostname>:<portname>/console

---

After the Installation

After completing the installation, verify the following:

1. Verify installation logs created under decompressed installer location for any errors.
2. Confirm installation logs do not contain any errors.
3. Confirm all the configurations are correct. Refer to Appendix B: Installation and Configuration Worksheets for details.
4. Confirm that the database is ready.
5. Start the application server. For instructions, refer to Appendix C: Common Maintenance Activities.
6. To operate the application, refer to the following section.

---

Operating the Application

At this point your installation and custom integration process is complete. Be sure to read the Oracle Utilities Meter Data Management Server Administration Guide for more information on further configuring and operating the system.
Chapter 5

Installing Oracle Utilities Meter Data Management - Demo Installation

This chapter provides instructions for setting up a demo application of Oracle Utilities Meter Data Management useful for demonstration or training purposes. This chapter includes:

- Before You Install
- Demo Installation Procedure
- Operating the Application

Before You Install

Refer to My Oracle Support for up-to-date additional information on Oracle Utilities Meter Data Management.

Demo Installation Procedure

The demo installation procedure consists of:

- Database Component Installation
- Application Components Installation

Database Component Installation

Installation of the database component of Oracle Utilities Meter Data Management must be complete before you can proceed with the following sections. Refer to the section “Demo Install” of the Oracle Utilities Meter Data Management Database Administrator’s Guide, which provides instructions on installing the database component with pre-populated demo data.

Application Components Installation

A successful installation consists of the following steps:

- Installing the Oracle Utilities Application Framework V4.2.0 Service Pack 3 (4.2.0.3) Application Component
- Installing Oracle Utilities Application Framework V4.2.0.3 Single Fix Prerequisite Rollup for SMDF V2.1.0.3
- Installing Oracle Utilities Service and Measurement Data Foundation V2.1.0.3 Application Component
Installing the Oracle Utilities Application Framework V4.2.0 Service Pack 3 (4.2.0.3) Application Component

This section describes how to install the application component of Oracle Utilities Application Framework, including:

- Copying and Decompressing Install Media
- Setting Permissions for the cistab file in UNIX
- Installing the Application Component

Copying and Decompressing Install Media

The Oracle Utilities Application Framework 4.2.0 Service Pack 3 installation file is delivered in jar format for both UNIX and Windows platforms. If you are planning to install multiple Oracle Utilities Application Framework environments operated by different Oracle Utilities administrator user ids, you must complete each of the following installation steps for each administrator userid.

To copy and decompress the install media, follow these steps:

1. Log in to the application server host with the Oracle Utilities Application Framework administrator user ID.
2. Create a temporary directory such as \ouaf\temp or /ouaf/temp. (Referred to below as <TEMPDIR>.)
   
   **Note:** This directory must be located outside any current or other working Oracle Utilities application environment. All files that are placed in this directory as a part of the installation can be deleted after completing a successful installation.
3. Copy the file FW-V4.2.0.3.0-MultiPlatform.jar from the delivered package to the <TEMPDIR>. If you are using FTP to transfer this file, remember to use the BINARY option for the FTP transfer.
4. Decompress the file:

   ```
   cd <TEMPDIR>
   jar -xvf FW-V4.2.0.3.0-MultiPlatform.jar
   ```
   
   **Note:** You will need to have Java JDK installed on the machine used to (un)jar the application server installation package. Please install the JDK that is supported for the install on your platform to be able to use the jar command. This is the location of Java packages: http://www.oracle.com/technetwork/java/archive-139210.html

   A sub-directory named “FW.V4.2.0.3.0” is created. It contains the installation software for the Oracle Utilities framework application server.

Setting Permissions for the cistab file in UNIX

Every Oracle Utilities Application Framework environment installed on a server must be registered in the /etc/cistab file located on that server. On UNIX servers, generally only the root user ID has write permissions to the /etc directory. Since the installation process is run by the Oracle administrator user ID (cissys), this user ID may not be able to write to /etc/cistab table.

The install utility checks permissions and if it identifies a lack of the necessary permissions, it generates a script in the <TEMPDIR>/FW.V4.2.0.3.0 directory named cistab_<SPLENVIRON>.sh. Run the generated script using the root account before continuing with the installation process. The script initializes the cistab file in /etc directory (if it is the first Oracle Utilities Framework application environment on the server) and registers a new environment.
The generated script also changes the owner of /etc/cistab file to the Oracle Utilities Framework administrator user ID, so that the next time a new environment is created by the same Oracle Utilities Framework administrator user ID, you do not need to run the generated script with the root user ID. Instead the install utility itself proceeds with the registration.

If you are reinstalling an existing environment, only the validation of /etc/cistab entry is done by the install utility, no new registration occurs. The install utility interactively instructs you about every step that needs to occur in each specific case.

If you are planning to upgrade an existing environment it is your responsibility to take a backup prior to the installation process. The installation utility does not create a backup of existing environment.

Installing the Application Component
This section outlines the steps for installing the application component of Oracle Utilities Application Framework V4.2.0 Service Pack 3.

1. Login to the Application Server host as administrator (the default is cissys on UNIX) or as a user with Administrator privileges (on Windows).

2. Change directory to the <TEMPDIR>/FW.V4.2.0.3.0 directory.

3. Set the ORACLE_CLIENT_HOME and PATH variables as Oracle Client Perl is required to run the installer.

   UNIX:
   
   ```
   export PATH=/usr/java6_64/bin:$PATH
   ```

   Note: The above command is only applicable for WebSphere8.5.5 on AIX7.1.

   ```
   export ORACLE_CLIENT_HOME=<ORACLE CLIENT INSTALL LOCATION>
   export PERL_HOME=${ORACLE_CLIENT_HOME}/perl
   export PATH=${PERL_HOME}/bin:$PATH
   export PERL5LIB=${PERL_HOME}/lib:${PERL_HOME}/lib/site_perl:<OUAF Installer Decompressed location/bin/perlib>
   export PERLLIB=${PERL_HOME}/lib:${PERL_HOME}/lib/site_perl:<OUAF Installer Decompressed location/bin/perlib>
   export LD_LIBRARY_PATH=${ORACLE_CLIENT_HOME}/lib:$LD_LIBRARY_PATH
   ```

   Windows:

   ```
   set ORACLE_CLIENT_HOME=<ORACLE CLIENT INSTALL LOCATION>
   set PERL_HOME=%ORACLE_CLIENT_HOME%\perl
   set PATH=%PERL_HOME%\bin;%PATH%
   ```

4. Start the application installation utility by executing the appropriate script:

   UNIX:

   ```
   ksh ./install.sh
   ```

   Windows:

   ```
   install.cmd
   ```

5. The Oracle Utilities Application Framework specific menu appears.

6. Follow the messages and instructions that are produced by the application installation utility.

7. Select each menu item to configure the values. For detailed description of the values, refer to Appendix B: Installation and Configuration Worksheets.
8. Below are the mandatory list of configurable items along with descriptions for a few items. Where you see <Mandatory>, enter values suitable to your environment. You can assign default values to the rest of the menu items.

**************************************************************
* Environment Installation Options *
**************************************************************

1. Third Party Software Configuration
   - Oracle Client Home Directory: <Mandatory>
   - Web Java Home Directory: <Mandatory>
   - Child JVM Home Directory:
   - COBOL Home Directory:
   - Hibernate JAR Directory: <Mandatory>
   - ONS JAR Directory:
   - Web Application Server Home Directory: <Mandatory>
   - ADF Home Directory:
   - OIM OAM Enabled Environment:

2. Keystore Options
   - Store Type: JCEKS
   - Alias: ouaf.system
   - Alias Key Algorithm: AES
   - Alias Key Size: 128
   - HMAC Alias: ouaf.system.hmac
   - Padding: PKCS5Padding
   - Mode: CBC

50. Environment Installation Options
   - Environment Mount Point: <Mandatory> - Install Location
   - Log Files Mount Point: <Mandatory> - ThreadPoolWorker Logs Location
   - Environment Name: <Mandatory>
   - Web Application Server Type:
   - Install Application Viewer Module:

Each item in the above list should be configured for a successful install.
Choose option (1, 2, 50, <P> Process, <X> Exit):

9. Once you enter 'P' after entering mandatory input values in the above menu, the system populates another configuration menu.

**************************************************************
* Environment Configuration *
**************************************************************

1. Environment Description
   - Environment Description: <Mandatory>

2. Business Application Server Configuration
   - Business Server Host: <Mandatory> - Hostname on which application being installed
   - WebLogic Server Name: myserver
   - Business Server Application Name: SPLService
   - MPL Admin Port Number: <Mandatory> - Multipurpose Listener Port
   - MPL Automatic startup: false

3. Web Application Server Configuration
   - Web Server Host: <Mandatory>
   - Web Server Port Number: <Mandatory>
   - Web Context Root: ouaf
   - WebLogic JNDI User ID: <Mandatory>
WebLogic JNDI Password: <Mandatory>
WebLogic Admin System User ID: <Mandatory>
WebLogic Admin System Password: <Mandatory>
WebLogic Server Name: myserver
Web Server Application Name: SPLWeb
Application Admin User ID: <Mandatory>
Application Admin Password: <Mandatory>
Expanded Directories: false
Application Viewer Module: true

4. Database Configuration
Application Server Database User ID: <Mandatory>
Application Server Database Password: <Mandatory>
MPL Database User ID: <Mandatory>
MPL Database Password: <Mandatory>
XAI Database User ID: <Mandatory>
XAI Database Password: <Mandatory>
Batch Database User ID: <Mandatory>
Batch Database Password: <Mandatory>
Database Name: <Mandatory>
Database Server: <Mandatory>
Database Port: <Mandatory>
ONS Server Configuration:
Database Override Connection String:
Oracle Client Character Set NLS_LANG:

5. General Configuration Options
Batch RMI Port: <Mandatory> - RMI port for batch
Batch Mode: <Mandatory> - CLUSTERED or DISTRIBUTED
Coherence Cluster Name: <Mandatory> - Unique name for batch
Coherence Cluster Address: <Mandatory> - Unique multicast address
Coherence Cluster Port: <Mandatory> - Unique port for batch cluster
Coherence Cluster Mode: <Mandatory> - prod

Each item in the above list should be configured for a successful install.

Choose option (1,2,3,4,5, <P> Process, <X> Exit):

10. When you are done with the parameter setup, proceed with the option P. The utility writes the configured parameters and their values into the configuration file.

11. Once the install has finished, the installation log location appears on the screen. If the log does not list any error messages, the installation of the application component of Oracle Utilities Application Framework is complete. You can now install Oracle Utilities Service and Measurement Data Foundation as described in the following section.

Installing Oracle Utilities Application Framework V4.2.0.3 Single Fix Prerequisite Rollup for SMDF V2.1.0.3

1. Create a <TEMPDIR> directory on the host server that is independent of any current or other working application environment.

2. Copy the file 'MDM-V2.1.0.3.0-FW-SP2-PREREQ-Multiplatform.zip' in the delivered package to <TEMPDIR>.

If you are using FTP to transfer this file, remember to use the BINARY option for the FTP transfer.
3. Upon extracting the zip file 'Application-Server-Multiplatform' sub-directory will be created.

4. Refer to the Readme.txt inside 'Application-Server-Multiplatform' file for instructions on installing the Oracle Utilities Application Framework 4.2.0 Service Pack 3 Prerequisite Single Fixes.

These patches are also available for download separately from My Oracle Support.

See Appendix E for a list of the patches contained in the rollup.

**Installing Oracle Utilities Service and Measurement Data Foundation V2.1.0.3 Application Component**

This section describes how to install the application component of Oracle Utilities Service and Measurement Data Foundation, including:

- Copying and Decompressing Install Media
- Installing Oracle Utilities Service and Measurement Data Foundation

**Copying and Decompressing Install Media**

The Oracle Utilities Service and Measurement Data Foundation Base installation file is delivered in jar format for both UNIX and Windows platforms. Oracle Utilities Service and Measurement Data Foundation is delivered as a separate installation package. Please refer to the Supported Platforms section for installation details regarding the database and operating system versions supported by the product. Also see the section Installing for prerequisite third-party software installation instructions.

1. Log in to the application server as the Oracle Utilities Application Framework administrator user ID (default cissys). This is the same user ID that was used to install the Oracle Utilities Application Framework.

2. Create a `<TEMPDIR>` directory on the application server, which is independent of any current or other working Oracle Utilities Meter Data Management application environment. This can be the same `<TEMPDIR>` used during the installation of the Oracle Utilities Application Framework.

3. Copy the file SMDF-V2.1.0.3.0-MultiPlatform.jar in the delivered package to a `<TEMPDIR>` on your application server. If you are using FTP to transfer this file, remember to use the BINARY option for the FTP transfer.

4. Decompress the file:

   cd `<TEMPDIR>`
   jar -xvf SMDF-V2.1.0.3.0-MultiPlatform.jar

   For Windows installations, include the location of the JDK in your path before you execute the jar command.

   For both Unix and Windows platforms, a sub-directory named MDF.V2.1.0.3.0 is created. The contents of the installation directory are identical for both platforms. The directory contains the install software for the application product.

**Installing Oracle Utilities Service and Measurement Data Foundation**

Follow the steps below to install the application component of Oracle Utilities Service and Measurement Data Foundation Base:

**Preparing for the Installation**

1. Log on as Oracle Utilities Service and Measurement Data Foundation Administrator (default cissys).

2. Initialize the Framework environment that you want to install the product into.

   UNIX:

   `$SPLEBASE/bin/splenviron.sh -e $SPLENVIRON`
Demo Installation Procedure

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Windows:

%SPLEBASE%\bin\splenviron.cmd -e %SPLENVIRON%

3. Stop the environment if running.

UNIX:

$SPLEBASE/bin/spl.sh stop

Windows:

%SPLEBASE%\bin\spl.cmd stop

Installing the Application

1. Change to the <TEMPDIR>/MDF.V2.1.0.3.0 directory.

2. Execute the script:

UNIX:

ksh ./install.sh

Windows:

install.cmd

Note: On UNIX, ensure that you have the proper execute permission on install.sh

The configuration menu for the Oracle Utilities Service and Measurement Data Foundation Application appears.

3. Select menu item 8 to configure OSB.

Use the completed OSB configuration worksheet to assist you in this step. See the Appendix B: Installation and Configuration Worksheets.

4. Select menu item 9 to configure SOA.

Use the completed SOA configuration worksheet to assist you in this step. See the Appendix B: Installation and Configuration Worksheets.

5. Select menu item 10 to configure the SMDF SOA Configuration Plan.

Use the completed SOA Configuration Plan (SMDF) worksheet to assist you in this step. See the Appendix B: Installation and Configuration Worksheets.

6. When you are done with the parameter setup, choose option P to proceed with the installation.

7. Change to the <TEMPDIR>/MDF.V2.1.0.3.0 directory.

8. Execute the following command:

UNIX:

ksh ./postinstall.sh

Windows:

postinstall.cmd

Note: On UNIX, ensure that you have the proper execute permission on postinstall.sh

Installation of Oracle Utilities Service and Measurement Data Foundation Application Server is complete if no errors occurred during installation.

Installing Service Packs and Patches

Periodically, Oracle Utilities releases a service pack of single fixes for its products. A service pack is an update to an existing release that includes solutions to known problems and other product enhancements. A service pack is not a replacement for an installation, but a pack consisting of a collection of changes and additions for it. The service pack may include changes to be applied to
the application server, the database, or both. The service pack includes all files necessary for installing the collection of changes, including installation instructions.

Between services packs, Oracle Utilities releases patches to fix individual bugs. For information on installing patches, refer to knowledge base article ID 974985.1 on My Oracle Support.

Service packs and patches can be downloaded from My Oracle Support (https://support.oracle.com/).

**Installing the Oracle Utilities Meter Data Management V2.1.0.3 Application Component**

This section describes how to install the application component of Oracle Utilities Meter Data Management, including:

- Installation Prerequisite
- Copying and Decompressing Install Media
- Preparing for the Installation
- Installing the Application

To proceed with the Oracle Utilities Meter Data Management installation you need to be connected to the target Oracle Utilities Service and Measurement Data Foundation application environment. See the detailed installation instructions in the following section.

You **must** initialize the Service and Measurement Data Foundation environment. For detailed instructions see the Preparing for the Installation section.

**Installation Prerequisite**

The Oracle Utilities Service and Measurement Data Foundation 2.1.0.3 application must be installed prior to installing Oracle Utilities Meter Data Management 2.1.0.3.

**Copying and Decompressing Install Media**

The installation file is delivered in jar format for both UNIX and Windows platforms.

Oracle Utilities Meter Data Management is delivered as a separate installation package. Please refer to the Supported Platforms and Hardware Requirements chapter for versions and installation details regarding the database and operating system. Also see the Installing Prerequisite Software section in the Chapter 3: Planning the Installation for prerequisite third-party software installation instructions.

Download the installation package and proceed as follows:

1. Log in to the host server as the Oracle Utilities Service and Measurement Data Foundation administrator user ID (default cissys). This is the same user ID that was used to install the Oracle Utilities Service and Measurement Data Foundation.
2. Create a `<TEMPDIR>` directory on the host server, which is independent of any current or other working Oracle Utilities Meter Data Management application environment. This can be the same `<TEMPDIR>` used during the installation of the Oracle Utilities Service and Measurement Data Foundation.
3. Copy the file MDM-V2.1.0.3.0-MultiPlatform.jar in the delivered package to a `<TEMPDIR>` on your host server. If you are using FTP to transfer this file, remember to use the BINARY option for the FTP transfer.
4. Decompress the file:

   ```
cd `<TEMPDIR`
jar -xvf MDM-V2.1.0.3.0-MultiPlatform.jar
```

   For Windows installations, include the location of the JDK in your path before you execute the jar command.
For both Unix and Windows platforms, a sub-directory named MDM.V2.1.0.3.0 is created. The contents of the installation directory are identical for both platforms. The directory contains the install software for the application product.

Preparing for the Installation

1. Log on as Oracle Utilities Meter Data Management Administrator (default cissys).
2. Initialize the Framework environment that you want to install the product into.
   
   **UNIX:**
   
   `$SPLEBASE/bin/splenviron.sh -e $SPLENVIRON`
   
   **Windows:**
   
   `%SPLEBASE%\bin\splenviron.cmd -e %SPLENVIRON%`

3. Stop the environment if running.
   
   **UNIX:**
   
   `$SPLEBASE/bin/spl.sh stop`
   
   **Windows:**
   
   `%SPLEBASE%\bin\spl.cmd stop`

Installing the Application

1. Change to the `<TEMPDIR>/MDM.V2.1.0.3.0` directory.
2. Execute the install script:

   **Note:** On UNIX, ensure that you have the proper execute permission on `install.sh`.

   **UNIX:**
   
   `ksh ./install.sh`
   
   **Windows:**
   
   `install.cmd`

Choose option P to proceed with the installation.

3. Change to the `<TEMPDIR>/MDMV2.1.0.3.0` directory.

4. Execute the following command:
   
   **UNIX:**
   
   `ksh ./postinstall.sh`
   
   **Windows:**
   
   `postinstall.cmd`

   **Note:** On UNIX, ensure that you have the proper execute permissions on `postinstall.sh`

Installation of Oracle Utilities Oracle Utilities Meter Data Management Server is complete if no errors occurred during the installation.

5. Start up the environment. Run the following command:

   **UNIX:**
   
   `spl.sh start`
   
   **Windows:**
   
   `spl.cmd start`

Follow the message on the screen and review the logs in `$SPLSYSTEMLOGS` directory to ensure that the environment was started successfully.
If the startup failed, identify the problem by reviewing the logs. Resolve any issues before attempting to restart the environment.

**Note:** The first time you start Oracle Utilities Meter Data Management, you need to log into the Weblogic console and give system access to cisusers role. The Weblogic console application can be accessed through the following URL:

http://<hostname>:<portname>/console

---

**Operating the Application**

At this point your installation and custom integration process is complete.

Be sure to read the *Oracle Utilities Meter Data Management Server Administration Guide* for more information on further configuring and operating the system.
Chapter 6

Upgrading Oracle Utilities Meter Data Management

This release supports the following upgrade paths:

• Oracle Utilities Meter Data Management version 2.1.0.2 to version 2.1.0.3
• Oracle Utilities Meter Data Management version 2.1.0.1 to version 2.1.0.3
• Oracle Utilities Meter Data Management version 2.0.1.9 to version 2.1.0.3

Note: If you have a version prior to 2.0.1.9, you must install 2.0.1.9 before upgrading to 2.1.0.3. If you have version 2.1.0.0, you must upgrade to 2.1.0.1 and then to 2.1.0.3.

This chapter includes:

• Before You Upgrade
• Upgrade Procedure
• Operating the Application

Before You Upgrade

Review the list of operating system, application server and database server combinations that this version of Oracle Utilities Meter Data Management is certified to operate on, in the Chapter 2: Supported Platforms and Hardware Requirements.

For further assistance, contact My Oracle Support before you upgrade.

Note: If you are upgrading a previously installed application server, it is recommended that you make a backup before you start the upgrade procedure. The upgrade installation will remove your existing environment including your configurations.

Upgrade Procedure

The upgrade installation procedure consists of:

• Database Component Upgrade
• Application Components Upgrade
Upgrade Procedure

Database Component Upgrade

Upgrade of the database component of Oracle Utilities Meter Data Management must be complete before you can proceed with the following sections. Refer to the section “Upgrade Install” of the Oracle Utilities Meter Data Management Database Administrator's Guide, which provides instructions on upgrading the database component.

Application Components Upgrade

A successful upgrade consists of the following steps:

- Upgrading the Oracle Utilities Application Framework Application Component to V4.2.0 Service Pack 3 (4.2.0.3)
- Installing Oracle Utilities Application Framework V4.2.0.3 Single Fix Prerequisite Rollup for SMDF V2.1.0.3
- Upgrading the Oracle Utilities Service and Measurement Data Foundation Application Component to V2.1.0.3
- Upgrading the Oracle Utilities Meter Data Management Application Component to V2.1.0.3

Upgrading the Oracle Utilities Application Framework Application Component to V4.2.0 Service Pack 3 (4.2.0.3)

This section describes how to upgrade the application component of Oracle Utilities Application Framework, including:

- Copying and Decompressing Install Media
- Setting Permissions for the cistab file in UNIX
- Upgrading the Application Component Over Oracle Utilities Meter Data Management V2.0.1.9
- Upgrading the Application Component on Top of Oracle Utilities Meter Data Management V2.1.0.1 or V2.1.0.2

Copying and Decompressing Install Media

The Oracle Utilities Application Framework installation file is delivered in jar format for both UNIX and Windows platforms. If you are planning to install multiple Oracle Utilities Application Framework environments operated by different Oracle Utilities administrator user ids, you must complete each of the following installation steps for each administrator userid.

To copy and decompress the install media, follow these steps:

1. Log in to the application server host with the Oracle Utilities Application Framework administrator user ID.
2. Download the Oracle Utilities Application Framework V4.2.0.3 Multiplatform from Oracle Software Delivery Cloud.
3. Create a temporary directory such as c:\ouaf\temp or /ouaf/temp. (Referred to below as <TEMPDIR>.)

   **Note:** This directory must be located outside any current or other working Oracle Utilities application environment. All files that are placed in this directory as a part of the installation can be deleted after completing a successful installation.

4. Copy the file FW-V4.2.0.3.0-MultiPlatform.jar from the delivered package to the <TEMPDIR>. If you are using FTP to transfer this file, remember to use the BINARY option for the FTP transfer.
5. Decompress the file:
cd <TEMPDIR>
jar -xvf FW-V4.2.0.3.0-MultiPlatform.jar

Note: You will need to have Java JDK installed on the machine used to (un)jar the application server installation package. Please install the JDK that is supported for the install on your platform to be able to use the jar command. This is the location of Java packages: http://www.oracle.com/technetwork/java/archive-139210.html

A sub-directory named “FW.V4.2.0.3.0” is created. It contains the installation software for the Oracle Utilities framework application server.

Setting Permissions for the cistab file in UNIX

Every Oracle Utilities Application Framework environment installed on a server must be registered in the /etc/cistab file located on that server. On UNIX servers, generally only the root user ID has write permissions to the /etc directory. Since the installation process is run by the Oracle administrator user ID (cissys), this user ID may not be able to write to /etc/cistab table.

The install utility checks permissions and if it identifies a lack of the necessary permissions, it generates a script in the <TEMPDIR>/FW.V4.2.0.3.0 directory named cistab_<SPLENVIRON>.sh. Run the generated script using the root account before continuing with the installation process. The script initializes the cistab file in /etc directory (if it is the first Oracle Utilities Framework application environment on the server) and registers a new environment.

The generated script also changes the owner of /etc/cistab file to the Oracle Utilities Framework administrator user ID, so that the next time a new environment is created by the same Oracle Utilities Framework administrator user ID, you do not need to run the generated script with the root user ID. Instead the install utility itself proceeds with the registration.

If you are reinstalling an existing environment, only the validation of /etc/cistab entry is done by the install utility, no new registration occurs. The install utility interactively instructs you about every step that needs to occur in each specific case.

If you are planning to upgrade an existing environment it is your responsibility to take a backup prior to the upgrade process. The installation utility does not create a backup of existing environment.

Upgrading the Application Component Over Oracle Utilities Meter Data Management V2.0.1.9

This section outlines the steps for upgrading the application component of Oracle Utilities Application Framework over Oracle Utilities Meter Data Management 2.0.1.9.

Note: Customers who have a version prior to 2.0.1.9 must install 2.0.1.9 before upgrading to 2.1.0.3.

1. Login to the Application Server host as administrator (the default is cissys on UNIX) or as a user with Administrator privileges (on Windows).

2. Change directory to the bin folder.
   cd <install_dir>/bin

   where <install_dir> is the location where the Oracle Utilities Service and Measurement Data Foundation Base application component is installed.

3. Initialize the environment by running the appropriate command:

   UNIX:
   ./splenviron.sh -e <ENV NAME>

   Windows:
   splenviron.cmd -e <ENV NAME>
4. Stop the environment, if running:
   **UNIX:**
   
   ```
   $SPLEBASE/bin/spl.sh stop
   ```
   
   **Windows:**
   
   ```
   %SPLEBASE%/bin/spl.cmd stop
   ```
   
5. Change directory to the `<TEMP_DIR>/FWV4.2.0.3.0` directory.
   
   **NOTE:** While installing the FW V4.2.0.3 from the previous environment
   V2.0.1.9, the install utility removes the existing environment and re-creates
   the environment. Take a backup before you proceed with installing FW V4.2.0.3 to
   retain any configurations for future reference.
   
6. Start the application installation utility by executing the appropriate script:
   **UNIX:**
   
   ```
   export PATH=/usr/java6_64/bin:$PATH
   ksh ./install.sh
   ```
   
   **Windows:**
   
   ```
   install.cmd
   ```
   
7. The Oracle Utilities Application Framework specific menu appears.
8. Follow the messages and instructions that are produced by the application installation utility.
9. Select each menu item to configure the values. For detailed description of the values, refer to
   **Appendix B: Installation and Configuration Worksheets.**
10. Below is the mandatory list of configurable items along with descriptions for a few items.
    Where you see `<Mandatory>`, enter values suitable to your environment. You can assign
    default values to the rest of the menu items.

```
* Environment Installation Options *
1. Third Party Software Configuration
   Oracle Client Home Directory: <Mandatory>
   Web Java Home Directory: <Mandatory>
   Child JVM Home Directory:
   COBOL Home Directory:
   Hibernate JAR Directory: <Mandatory>
   ONS JAR Directory:
   Web Application Server Home Directory: <Mandatory>
   ADF Home Directory:
   OIM OAM Enabled Environment:
2. Keystore Options
   Store Type: JCEKS
   Alias: ouaf.system
   Alias Key Algorithm: AES
   Alias Key Size: 128
   HMAC Alias: ouaf.system.hmac
   Padding: PKCS5Padding
   Mode: CBC
```

50. Environment Installation Options
    Environment Mount Point: <Mandatory> - Install Location
Log Files Mount Point: <Mandatory> - ThreadPoolWorker Logs Location

Environment Name: <Mandatory>
Web Application Server Type: WLS
Install Application Viewer Module: true

Each item in the above list should be configured for a successful install.
Choose option (1,2,50, <P> Process, <X> Exit):

11. Once you enter 'P' after entering mandatory input values in the above menu, the system populates another configuration menu.

***********************************************************
* Environment Configuration *
***********************************************************
1. Environment Description
Environment Description: <Mandatory>

2. Business Application Server Configuration
Business Server Host: <Mandatory> - Hostname on which application being installed
WebLogiServer Name: myserver
Business Server Application Name: SPLService
MPL Admin Port Number: <Mandatory> - Multipurpose Listener Port
MPL Automatic startup: false

3. Web Application Server Configuration
Web Server Host: <Mandatory>
Web Server Port Number: <Mandatory>
Web Context Root: ouaf
WebLogic JNDI User ID: <Mandatory>
WebLogic JNDI Password: <Mandatory>
WebLogic Admin System User ID: <Mandatory>
WebLogic Admin System Password: <Mandatory>
WebLogic Server Name: myserver
Web Server Application Name: SPLWeb
Application Admin User ID: <Mandatory>
Application Admin Password: <Mandatory>
Expanded Directories: false
Application Viewer Module: true

4. Database Configuration
Application Server Database User ID: <Mandatory>
Application Server Database Password: <Mandatory>
MPL Database User ID: <Mandatory>
MPL Database Password: <Mandatory>
XAI Database User ID: <Mandatory>
XAI Database Password: <Mandatory>
Batch Database User ID: <Mandatory>
Batch Database Password: <Mandatory>
Database Name: <Mandatory>
Database Server: <Mandatory>
Database Port: <Mandatory>
ONS Server Configuration:
Database Override Connection String:
Oracle Client Character Set NLS_LANG:

5. General Configuration Options
Upgrade Procedure

Upgrading Oracle Utilities Meter Data Management

Batch RMI Port: [Mandatory] - RMI port for batch
Batch Mode: [Mandatory] - CLUSTERED or DISTRIBUTED
Coherence Cluster Name: [Mandatory] - Unique name for batch
Coherence Cluster Address: [Mandatory] - Unique multicast address
Coherence Cluster Port: [Mandatory] - Unique port for batch cluster
Coherence Cluster Mode: [Mandatory] - prod

Each item in the above list should be configured for a successful install.

Choose option (1,2,3,4,5, <P> Process, <X> Exit):

12. When you are done with the parameter setup, proceed with the option P. The utility writes the configured parameters and their values into the configuration file.

13. Once the upgrade install has finished, the installation log location appears on the screen. If the log does not list any error messages, the upgrade installation of the application component of Oracle Utilities Application Framework is complete. You can now upgrade Oracle Utilities Service and Measurement Data Foundation as described in the following section.

Upgrading the Application Component on Top of Oracle Utilities Meter Data Management V2.1.0.1 or V2.1.0.2

This section outlines the steps for upgrading the application component of Oracle Utilities Application Framework over Oracle Utilities Meter Data Management 2.1.0.1 or 2.1.0.2.

Note: Customers who have version 2.1.0.0 must install 2.1.0.1 before upgrading to 2.1.0.3.

1. Login to the Application Server host as administrator (the default is cissys on UNIX) or as a user with Administrator privileges (on Windows).

2. Change directory to the bin folder.

   cd <install_dir>/bin

   where <install_dir> is the location where the Oracle Utilities Service and Measurement Data Foundation Base application component is installed.

3. Initialize the environment by running the appropriate command:

   UNIX:

   ./splenviron.sh -e <ENV NAME>

   Windows:

   splenviron.cmd -e <ENV NAME>

4. Stop the environment, if running:

   UNIX:

   $SPLEBASE/bin/spl.sh stop

   Windows:

   %SPLEBASE%\bin\spl.cmd stop

5. Change directory to the <TEMP_DIR>/FWV4.2.0.3.0 directory.

6. Start the application installation utility by executing the appropriate script:
Upgrade Procedure

Upgrading Oracle Utilities Meter Data Management

UNIX:
ksh ./installSP.sh

Windows:
installSP.cmd

Note: If you are upgrading over 2.1.0.1 or 2.1.0.2, the Oracle Utilities Application Framework specific menu will not appear.

Installing Oracle Utilities Application Framework V4.2.0.3 Single Fix Prerequisite Rollup for SMDF V2.1.0.3

1. Create a <TEMPDIR> directory on the host server that is independent of any current or other working Oracle Utilities Meter Data Management application environment.

2. Copy the file 'MDM-V2.1.0.3.0-FW-SP3-PREREQ-Multiplatform.zip' in the delivered package to <TEMPDIR>.

   If you are using FTP to transfer this file, remember to use the BINARY option for the FTP transfer.

3. Upon extracting the zip file 'Application-Server-Multiplatform' sub-directory will be created.

4. Refer to the Readme.txt inside 'Application-Server-Multiplatform' file for instructions on installing the Oracle Utilities Application Framework 4.2.0 Service Pack 3 Prerequisite Single Fixes.

   These patches are also available for download separately from My Oracle Support.

   See Appendix E for a list of the patches contained in the rollup.

Upgrading the Oracle Utilities Service and Measurement Data Foundation Application Component to V2.1.0.3

This section describes how to upgrade the application component of Oracle Utilities Service and Measurement Data Foundation, including:

- Copying and Decompressing Install Media
- Upgrading the Application Component

Copying and Decompressing Install Media

The Oracle Utilities Service and Measurement Data Foundation file is delivered in jar format for both UNIX and Windows platforms. If you are planning to install multiple Oracle Utilities Application Framework environments operated by different Oracle Utilities Application Framework administrator user IDs, you must complete each of the following installation steps for each Administrator user ID.

1. Log in to the application server as the Oracle Utilities Application Framework administrator user ID (default cissys). This is the same user ID that was used to install the Oracle Utilities Application Framework.

2. Download the Oracle Utilities Service and Measurement Data Foundation V2.1.0.3 Multiplatform from Oracle Software Delivery Cloud.

3. Create a <TEMPDIR> directory on the application server, which is independent of any current or other working Oracle Utilities Service and Measurement Data Foundation application environment. This can be the same <TEMPDIR> used for the installation of the Oracle Utilities Application Framework.

4. Copy the file SMDF-V2.1.0.3.0-MultiPlatform.jar in the delivered package to a <TEMPDIR> on your application server. If you are using FTP to transfer this file, remember to use the BINARY option for the FTP transfer.

5. Decompress the file:
cd <TEMPDIR>
jar -xvf SMDF-V2.1.0.3.0-MultiPlatform.jar

For Windows installations, include the location of the JDK in your path before you execute
the jar command.

For both Unix and Windows platforms, a sub-directory named MDF.V2.1.0.3.0 is created. The
contents of the installation directory are identical for both platforms. The directory contains the
install software for the application product.

**Upgrading the Application Component**

Follow the steps below to install the application component of Oracle Utilities Service and
Measurement Data Foundation:

1. Log on as Oracle Utilities Service and Measurement Data Foundation Administrator (default
cissys).
2. Initialize the Framework environment that you want to install the product into.
   
   **UNIX:**
   
   ```bash
   $SPLEBASE/bin/splenviron.sh -e $SPLENVIRON
   ```
   
   **Windows:**
   
   `%SPLEBASE%\bin\splenviron.cmd -e %SPLENVIRON%`

3. Stop the environment if it is running.
   
   **UNIX:**
   
   ```bash
   $SPLEBASE/bin/spl.sh stop
   ```
   
   **Windows:**
   
   `%SPLEBASE%\bin\spl.cmd stop`

**Installing the Application**

1. Change to the <TEMPDIR>/MDF.V2.1.0.3.0 directory.
2. Execute the script:
   
   **UNIX:**
   
   ```bash
   ksh ./install.sh
   ```
   
   **Windows:**
   
   `install.cmd`

   **Note:** On UNIX, ensure that you have the proper execute permission on
install.sh

   The configuration menu for the Oracle Utilities Service and Measurement Data Foundation
Application appears.

3. Select menu item 8 to configure OSB.
   
   Use the completed OSB configuration worksheet to assist you in this step. See the **Appendix B: Installation and Configuration Worksheets**.

4. Select menu item 9 to configure SOA.
   
   Use the completed SOA configuration worksheet to assist you in this step. See the **Appendix B: Installation and Configuration Worksheets**.

5. Select menu item 10 to configure the SOA Configuration Plan.
   
   Use the completed SOA Configuration Plan (MDF) worksheet to assist you in this step. See the **Appendix B: Installation and Configuration Worksheets**.
When you are done with the parameter setup, choose option P to proceed with the installation.

6. Change to the <TEMPDIR>/MDF.V2.1.0.3.0 directory.
7. Execute the following command:
   
   **UNIX:**
   
   ksh ./postinstall.sh

   **Windows:**
   
   postinstall.cmd

   **Note:** On UNIX, ensure that you have the proper execute permission on postinstall.sh.

   Installation of Oracle Utilities Service and Measurement Data Foundation Application Server is complete if no errors occurred during installation.

### Upgrading the Oracle Utilities Meter Data Management Application Component to V2.1.0.3

This section describes how to install the application component of Oracle Utilities Meter Data Management, including:

- Copying and Decompressing Install Media
- Upgrading the Application Component

#### Copying and Decompressing Install Media

The Oracle Utilities Meter Data Management installation file is delivered in jar format for both UNIX and Windows platforms.

To copy and decompress the install media, follow these steps:

1. Log in to the application server host as the Oracle Utilities Application Framework administrator user ID (default cissys). This is the same user ID that was used to install the Oracle Utilities Application Framework.
2. Download the Oracle Utilities Meter Data Management V2.1.0.3.0 Multiplatform from Oracle Software Delivery Cloud.
3. Create a <TEMPDIR> directory on the host server, which is independent of any current or other working Oracle Utilities Meter Data Management application environment. This can be the same <TEMPDIR> used during the installation of the Oracle Utilities Application Framework.
4. Copy the file MDM-V2.1.0.3.0-MultiPlatform.jar in the delivered package to a <TEMPDIR> on your host server. If you are using FTP to transfer this file, remember to use the BINARY option for the FTP transfer.
5. Decompress the file:
   
   cd <TEMPDIR>
   
   jar -xvf MDM-V2.1.0.3.0-MultiPlatform.jar

   For Windows installations, include the location of the JDK in your path before you execute the jar command.

   For both Unix and Windows platforms, a sub-directory named MDM.V2.1.0.3.0 is created. The contents of the installation directory are identical for both platforms. The directory contains the install software for the application product.

#### Upgrading the Application Component

Follow the steps below to install Oracle Utilities Meter Data Management application component:
1. Log in to the application server host as Oracle Utilities Meter Data Management Administrator (default cissys).

2. Change directory:
   ```
cd <install_dir>/bin
   
   where <install_dir> is the location where the Oracle Utilities Service and Measurement Data Foundation application component is installed.
   ```

3. Initialize the environment by running the appropriate command:
   - UNIX:
     ```
     ./splenviron.sh -e <ENV NAME>
     ```
   - Windows:
     ```
     splenviron.cmd -e <ENV NAME>
     ```

4. If the environment is running, stop it by running the appropriate command:
   - UNIX:
     ```
     ./spl.sh stop
     ```
   - Windows:
     ```
     spl.cmd stop
     ```

5. Change to the <TEMPDIR>/MDM.V2.1.0.3.0 Directory.

6. Execute the install script:
   - Note: On UNIX, ensure that you have the proper execute permission on install.sh.
   
   - UNIX:
     ```
     ksh ./install.sh
     ```
   - Windows:
     ```
     install.cmd
     ```
   Choose option P to proceed with the installation.

7. Change to the <TEMPDIR>/MDMV2.1.0.3.0 directory.

8. Execute the following command:
   - UNIX:
     ```
     ksh ./postinstall.sh
     ```
   - Windows:
     ```
     postinstall.cmd
     ```
   
   Note: On UNIX, ensure that you have the proper execute permissions on postinstall.sh

   Installation of Oracle Utilities Oracle Utilities Meter Data Management Server is complete if no errors occurred during the installation.

9. Start up the environment. Run the following command:
   - UNIX:
     ```
     spl.sh start
     ```
   - Windows:
spl.cmd start
Follow the message on the screen and review the logs in $SPLSYSTEMLOGS directory to ensure that the environment was started successfully.

If the startup failed, identify the problem by reviewing the logs. Resolve any issues before attempting to restart the environment.

**Note:** The first time you start Oracle Utilities Meter Data Management, you need to log into the Weblogic console and give system access to cisusers role. The Weblogic console application can be accessed through the following URL: http://<hostname>:<portname>/console

After you complete the upgrade installation, verify the following:

1. Verify installation logs created under decompressed installer location for any errors.
2. Confirm installation logs do not contain any errors.
3. Confirm all the configurations are correct. Refer to Appendix B: Installation and Configuration Worksheets for details.
4. Confirm that the database is ready.
5. Start the application server. For instructions, refer to Appendix C: Common Maintenance Activities.
6. To operate the application, refer to the following section.

**Operating the Application**

At this point your installation and custom integration process is complete. Be sure to read the Oracle Utilities Meter Data Management Server Administration Guide for more information on further configuring and operating the system.
This section describes tasks that should be completed after installing Oracle Utilities Meter Data Management, including:

- Customizing Configuration Files
- Generating the Application Viewer
- Building Javadoc Indexes
- Configuring the Environment for Batch Processing
- Customizing the Logo
- WebLogic Production Server Considerations
- BI Publisher Report Configuration
Customizing Configuration Files

You may wish to make customer modifications to various configuration files. To do so, you should locate the configuration file you want to customize and edit it manually.

Configuration files are generated from delivered templates in the Oracle Utilities installation and are populated by values entered by the installation utility during the configuration process. In future upgrades of Oracle Utilities application software versions, some templates may be changed to reflect new software version requirements. In this case, the upgrade process will back up your customized configuration file and will regenerate a configuration file based on a new template. You will need to review the new configuration file and apply your customized changes back if still applicable for the new version.

For configuration files that are located in a Web application (for example, web.xml, hibernate.properties), of the Web application during installation process, you will not be able to edit the configuration files directly.

You will need to follow the procedure:

• Locate the configuration file you want to customize in the directory $SPLEBASE/etc/conf.
• Apply your changes.
• Update application war file with the latest changes by executing the command:
  UNIX: $SPLEBASE/bin/initialSetup.sh
  Windows: %SPLEBASE%\bin\initialSetup.cmd

Generating the Application Viewer

You may extend Application Viewer capabilities within an environment by generating additional items. The additional items that can be generated include algorithm type and related algorithm information, maintenance object information and data dictionary information.

This section details the steps necessary to generate the additional items.

1. Shut down the environment.
2. Initialize a command shell:

   The scripts that are provided with the system need to be run from a shell prompt on the machine that you installed the application on. Before such scripts can be run the shell must be “initialized” by running the splenviron script provided with the system.

   For Windows:
   The command window should be opened on the Windows server that you installed the application on.
   In the below example you should replace the variables:
   %SPLEBASE% with the Full directory name that you installed the application into and
   %SPLENVIRON% with the name you gave to the environment at installation time.
   To initialize the environment type the following in your command prompt:
   %SPLEBASE%\bin\splenviron.cmd -e %SPLENVIRON%
   For example:
   D:\ouaf\TEST_ENVIRON1\bin\splenviron.cmd -e TEST_ENVIRON1

   For Unix:
Customizing the Logo

You will need to logon to your UNIX box as the Oracle Utilities Administrator (default cissys) and open a shell prompt.

In the below example you should replace the variables

$SPLEBASE with the Full directory name that you installed the application into and

$SPLENVIRON with the name you gave to the environment at installation time.

To initialize the environment type:

$SPLEBASE/bin/splenviron.sh -e $SPLENVIRON

For example:

/ouaf/TEST_ENVIRON1/bin/splenviron.sh -e TEST_ENVIRON1

3. Execute the script to generate all information

   Execute the following command for your operating system

   **UNIX:**
   
   ksh $SPLEBASE/bin/genappvieweritems.sh

   **Windows:**
   
   %SPLEBASE%\bin\genappvieweritems.cmd

4. Restart your application

Building Javadoc Indexes

The following script allows rebuilding the Javadocs indexes in the appViewer java module. This is necessary after Customer Modifications have been applied to an environment. (This needs to be run only if the Customer Modification includes Java Code.)

**Windows:**

%SPLEBASE%\bin\buildJavadocsIndex.cmd

**UNIX:**

ksh $SPLEBASE/bin/buildJavadocsIndex.sh

Configuring the Environment for Batch Processing

See the *Batch Server Administration Guide* for information on configuring the environment for batch processing.

Customizing the Logo

The customer may want to replace the Oracle Utilities logo image on the Main menu with another logo image. To do this, put the logo <customer_logo_file>.gif file into the directory $SPLEBASE/etc/conf/root/cm and create a new “External” Navigation Key called CM_logoImage. To do that, run the Oracle Utilities application from the browser with the parameters: http://<hostname>:<port>/<Web Context>/cis.jsp?utilities=true&tools=true. From the Admin menu, select Navigation Key. Add the above Navigation Key with its corresponding URL Override path. The syntax for the URL path is:

**For Windows:**

http://<hostname>:<port>/<Web Context>/cm/<customer_logo_file>.gif

**For UNIX:**

The root directory may be deployed in war file format for runtime environment (SPLApp.war). Use provided utilities to incorporate your cm directory into SPLApp.war file.

**WebLogic Production Server Considerations**

By default, WebLogic Server is configured with two keystores, to be used for development only. These keystores should not be used in a production environment.

**Configure Identity and Trust**

Private keys, digital certificates, and trusted certificate authority certificates establish and verify identity and trust in the WebLogic Server environment. WebLogic Server is configured with a default identity keystore DemoIdentity.jks and a default trust keystore DemoTrust.jks. In addition, WebLogic Server trusts the certificate authorities in the cacerts file in the JDK. This default keystore configuration is appropriate for testing and development purposes. However, these keystores should not be used in a production environment.

To configure identity and trust for a server:

1. Obtain digital certificates, private keys, and trusted CA certificates from the CertGen utility, Sun Microsystem’s keytool utility, or a reputable vendor such as Entrust or Verisign. You can also use the digital certificates, private keys, and trusted CA certificates provided by the WebLogic Server kit. The demonstration digital certificates, private keys, and trusted CA certificates should be used in a development environment only.

2. Store the private keys, digital certificates, and trusted CA certificates. Private keys and trusted CA certificates are stored in a keystore.

3. Configure the identity and trust keystores for a WebLogic Server instance on the Configuration: Keystores page.

By default, WebLogic Server is configured with two keystores, to be used for development only.

- DemoIdentity.jks: Contains a demonstration private key for WebLogic Server. This keystore establishes an identity for WebLogic Server.
- DemoTrust.jks: Contains a list of certificate authorities trusted by WebLogic Server. This keystore establishes trust for WebLogic Server.

These keystores are located in the WL_HOME\server\lib directory and the JAVA_HOME\jre\lib\security directory. For testing and development purposes, the keystore configuration is complete. Use the steps in this section to configure identity and trust keystores for production use.

Refer to the WebLogic documentation to configure identity and trust keystores for production use (Secure servers and resources > Configure identity and trust/ Set up SSL)

**Note:** Depending on your choice of implementation you may need to change some configuration files. These files are managed by templates and will be overwritten if the procedures documented in “Customizing Configuration Files” are not followed.

**BI Publisher Report Configuration**

This section describes the steps required to configure Oracle Utilities Meter Data Management and Oracle BI Publisher to support a reporting solution that uses Oracle BI Publisher.

This release of Oracle Utilities Meter Data Management has a separate bundle with a sample BI Publisher 11g report.
Unzip Oracle Utilities Customer Care and Billing Report Files

1. Unzip the MDM-V2.1.0.3.0-Reports.zip file from the installation media into an <TEMPDIR> directory. We'll refer to this directory as the reports extract folder.

2. For both UNIX and Windows platforms, a sub-directory named BIPublisher11g is created. The contents of the installation directory are identical for both platforms.

   Note: By default, the reports provided are read only. You will need to reset the permissions on the files before making any changes, for example, to configure the default data source.

Publish the Sample Reports in Oracle BI Publisher Enterprise

The installation media contains sample reports provided with the system. The report files are in the reports extract folder under <TEMPDIR>\BIPublisher11g\reportFiles

Install Oracle BI Publisher Enterprise. This section assumes that you have already installed Oracle BI Publisher Enterprise.

To configure the BI Publisher reports, follow these steps:

1. Create a folder named D2_VEEEME in the <BI_Repository_Path>\Reports folder

2. Copy D2_VEEEME.xdo and D2_VEEEME.xdm folders to <BI_Repository_Path>\Reports\D2_VEEEME folder

   Note: To check for the location of your <BI_Repository_Path>, log in to the BI console as an Administrator and go to Administration, Server Configuration. If the repository type is File System, the path will be seen in Catalog region. If the repository type is not File System you cannot load the sample reports.

3. Login as Administrator to BI Publisher server

4. Go to the Administration tab

   a. In the JDBC Connection section under Data Sources, add a new data source using Add Data Source.

   b. Create a new Data Source named D2 201 Dev with connection details pointing to the D2 201 Dev database.

   c. Test Connection to make sure the Database connection is successful and save changes using Apply.

   Note: Make sure the Data Source Name (i.e, D2 201 Dev) is created with the same name else the reports won't show up.

5. Go to the Catalog Tab

   a. Click New->Report from dropdown list and select “Use Existing Data Model” option to create new reports using existing data model and then select Data Model from the Shared folders Catalog (e.g. /Shared Folders/D2_VEEEME/D2_VEEEME.xdm).

   b. Click Next and select “Use Report Editor” option. Click Finish.

   c. Select My Folder and save report name as D2_VEEEME

6. Go to the Catalog tab, select D2_VEEEME Report under My folders and click Open. Once the report is open, click Actions and Export Data as XML. Save it.

7. Go to the Catalog tab, select My Folders and click on Edit Report (i.e. D2_VEEEME) and then click on Data Model D2_VEEEME. Under Attachment click on “Upload Sample data” and browse the xml file saved from above and then upload it. Click on Save and return.

8. Click Add New Layout. Under Upload or Generate Layout, click Upload and give Layout Name as D2_VEEEME.rtf.
Browse Template File to 
<BI_Repository_Path>\Reports\D2_VEEEME\D2_VEEEME.xdo folder and select D2_VEEEME.rtf file. Select type as RTF template and Locale as English and click on Upload.

9. Click View Report to see reports.

   Note: Please follow the same steps for configuring other report except for step 4.
Installation Menu Functionality Overview

The main configuration menu is structured so that related variables and/or options are grouped together and are associated by a menu item number. To access a particular group of variables and options, enter the menu item number associated with that group. Each option within that group is displayed in turn on the screen, along with a prompt so that you can type the desired value for the option, if it is not the same as the default or current value.

When performing the initial installation you need to go through all menu options. The menu options may have a default value, a list of valid values and a validation check.

On each option prompt you can keep the current value by simply leaving the input line empty. In order to erase a variable value you need to enter one dot ("."). The leading spaces will be trimmed out on each values entered.

**Note:** When working with the menu you will see the following:

- **Valid Values: [ALFANUM].** This indicates you will need to enter an alphanumeric value in the prompt.
- **Valid Values: [NUM].** This indicates you will need to enter an numeric value in the prompt.

When all options are set, type <P> at the main menu prompt option. This will save the option values selected throughout the configuration.

During this processing the global variables are validated and the configuration file <SPLEBASE>/etc/ENVIRON.INI is created or updated. This file contains all the variables inputted and calculated. These are needed by the next part of the installation process.

To exit the configuration utility without saving any of the values entered, type <X> and 'Enter'

Installation Menu Functionality Details

The Environment Installation Utility requires that Oracle Client Home is set in the path for the user performing the installation.

Prior to running the installation utility you will need to review the supported platforms document to ensure you have all of the Third Party software installed.

In this menu if the variables are set prior to execution, that value will be defaulted by the installation utility when performing the installation.

When the installation has been completed successfully, the values will be written to an ENVIRON.INI file. When splenviron.sh / cmd is executed, it will read from the ENVIRON.INI file to set the environment variables.
In the worksheets there are three different types of values given:

- Default Values are the values that will be defaulted when running the installation utility.
- Security Values denote values that should be changed when in production.
- Example Values are values that can be used for a default installation.

**Note:** The production environment should not be run with default values. See the *Server Administration Guide* specific to this product, for additional information about configuring these values.

When you enter passwords you will not see the password characters on the screen because they are entered in silent mode. Passwords are encrypted when the values are entered.

Install the Oracle Client software specified in the section **Supported Platforms** prior to running any of the installation utilities.

The following prompt will appear when executing the installation utility:

```
Enter Oracle Client Home Directory (<ENTER> quit):
```

**Note:** If the environmental variable ORACLE_CLIENT_HOME is set, the install script will validate the variable. If it passes the validation you will not be prompted for it. This is needed in order to run Perl installation utilities.

### Encryption Methods

When the application server choice is Oracle WebLogic, the Oracle Utilities Application Framework installation uses the WebLogic API to encrypt the User ID and password that perform admin functions for the WebLogic application servers. Please refer to the WebLogic documentation for further information about the encryption.

The Oracle Utilities Application Framework installation also uses industry standard cryptography to encrypt passwords that are prompted within the installation.

When the application server choice is IBM WebSphere Basic or IBM WebSphere Network Deployment, the Oracle Utilities Application Framework installation will use industry standard cryptography to encrypt passwords that are prompted within the installation.

In each case these password are entered in the command line but the inputted values are not reflected on the screen when performing the installation.
Appendix B

Installation and Configuration Worksheets

Application Framework Installation and Configuration Worksheets

During the installation and configuration of the application you will need to provide a variety of system values. These worksheets will assist you in providing that information. They should be completed before installing the application framework. No Customer Install Value fields should be left blank.

Note: Some web application server information will not be available until the software installation steps have been completed as described in the Installing Prerequisite Software section in the Chapter 3: Planning the Installation for prerequisite third-party software installation instructions.

Third Party Software Configuration

*****************************************************
* Environment Installation Options *
*****************************************************
1. Third Party Software Configuration
   Oracle Client Home Directory:
   Web Java Home Directory:
   Child JVM Home Directory:
   COBOL Home Directory:
   Hibernate JAR Directory:
   ONS JAR Directory:
   Database Home Directory:
   Web Application Server Home Directory:
   ADF Home Directory:
   OIM OAM Enabled Environment:

<table>
<thead>
<tr>
<th>Menu Option</th>
<th>Name Used in Documentation</th>
<th>Usage</th>
<th>Customer Install Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Oracle Client Home</td>
<td>ORACLE_CLIENT_HOME</td>
<td>The home directory of the Oracle Client. The application will use the Perl included under this Oracle Client.</td>
<td></td>
</tr>
<tr>
<td>Directory</td>
<td></td>
<td>Example Location:</td>
<td>/oracle/client/product/11.2.0.3</td>
</tr>
<tr>
<td>Menu Option</td>
<td>Name Used in Documentation</td>
<td>Usage</td>
<td>Customer Install Value</td>
</tr>
<tr>
<td>---------------------------------</td>
<td>----------------------------</td>
<td>----------------------------------------------------------------------</td>
<td>------------------------</td>
</tr>
<tr>
<td>Web Java Home Directory</td>
<td>JAVA_HOME</td>
<td>Java home that will be used by the web application server.</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Example Location:</td>
<td>/ouaf/jdk1.6.0_65</td>
</tr>
<tr>
<td>* Child JVM Home Directory</td>
<td>CHILD_JVM_JAVA_HOME</td>
<td>Java home that will be used by the child java process that handles COBOL related requests.</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Example Location:</td>
<td>/ouaf/jdk1.6.0_20</td>
</tr>
<tr>
<td>* COBOL Home Directory</td>
<td>COBDIR</td>
<td>COBOL installation location directory.</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Example Location:</td>
<td>/opt/SPLcobAS51WP6</td>
</tr>
<tr>
<td>Hibernate JAR Directory</td>
<td>HIBERNATE_JAR_DIR</td>
<td>Location on the disk where the hibernate410Final.jar is installed.</td>
<td></td>
</tr>
<tr>
<td>* ONS JAR Directory</td>
<td>ONS_JAR_DIR</td>
<td>Location on the disk where the ons-11.2.0.2.jar file is installed.</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>**Required for Oracle RAC installation. See the Server Administration Guide for more information.</td>
<td></td>
</tr>
<tr>
<td>Database Home Directory</td>
<td>DATABASE_HOME</td>
<td>Location on the disk where database client is installed for your particular installation.</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Example Location for Oracle Database:</td>
<td>/oracle/client/product/11.2.0.1</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Note: This value will be the same as the previously entered for Oracle.</td>
<td></td>
</tr>
<tr>
<td>Web Application Server Home Directory</td>
<td>WEB_SERVER_HOME</td>
<td>Location on the disk where the application server is installed.</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Example Location:</td>
<td>WebLogic: /ouaf/middleware/wlserver_10.3</td>
</tr>
<tr>
<td></td>
<td></td>
<td>To validate the home directory, check if the following jar files exist in the appropriate path:</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>$WEB_SERVER_HOME/server/lib/weblogic.jar</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>%WEB_SERVER_HOME%\server%\lib\weblogic.jar</td>
<td></td>
</tr>
<tr>
<td>* ADF Home Directory</td>
<td>ADF_HOME</td>
<td>Location on the disk where ADF is installed.</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Example Location:</td>
<td>/ouaf/jdev11_1_1_4</td>
</tr>
</tbody>
</table>
### Menu Option | Name Used in Documentation | Usage | Customer Install Value
--- | --- | --- | ---
OIM OAM Enabled Environment | OPEN_SPMI_ENABLE D_ENV | Denotes if an environment will be integrating with Oracle Identity Manager for user propagation. Valid values: true false | 

* Denotes optional Menu Options that may be required for the product installation and variables.

** In order to activate the RAC FCF, the application needs the external ons.jar file, version 11.2.0.2. This ons.jar is located under the Oracle Database Software 11.2.0.2, at the following path:

```
$ORACLE_HOME/opmn/lib/ons.jar
```

The ons.jar should be copied to the Application Server. During the OUAF installation the relevant option should be populated with the folder location of the ons.jar.
## Keystore Options

2. Keystore Options

<table>
<thead>
<tr>
<th>Menu Option</th>
<th>Name Used in Documentation</th>
<th>Usage</th>
<th>Customer Install Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Store Type</td>
<td>KS_STORETYPE</td>
<td>Value used for keytool option –storetype</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Default Value: JCEKS</td>
<td></td>
</tr>
<tr>
<td>Alias</td>
<td>KS_ALIAS</td>
<td>Value used for keytool option –alias</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Default Value: ouaf.system</td>
<td></td>
</tr>
<tr>
<td>Alias Key Algorithm</td>
<td>KS_ALIAS_KEYALG</td>
<td>Value used for keytool option -keyalg</td>
<td></td>
</tr>
<tr>
<td>Alias Key Size</td>
<td>KS_ALIAS_KEYSIZE</td>
<td>Value used for keytool option -keysize</td>
<td></td>
</tr>
<tr>
<td>HMAC Alias</td>
<td>KS_HMAC_ALIAS</td>
<td>Value used for keytool option -alias</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>The following values are fixed:</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>- HMAC Alias Key Algorithm: HmacSHA256</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>- HMAC Alias Key Size: 256</td>
<td></td>
</tr>
<tr>
<td>Padding</td>
<td>KS_PADDING</td>
<td>Value used for encryption/decryption</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Default Value: PKCS5Padding</td>
<td></td>
</tr>
<tr>
<td>Mode</td>
<td>KS_MODE</td>
<td>Value used for encryption/decryption</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Default Value: CBC</td>
<td></td>
</tr>
</tbody>
</table>
Environment Installation Options

50. Environment Installation Options

Environment Mount Point:
Log Files Mount Point:
Environment Name:
Database Type:
Web Application Server Type:
Install Application Viewer Module:

<table>
<thead>
<tr>
<th>Menu Option</th>
<th>Name Used in Documentation</th>
<th>Usage</th>
<th>Customer Install Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Environment Mount Point</td>
<td>&lt;SPLDIR&gt;</td>
<td>The mount point into which the application is installed. For example: /ouaf for UNIX and C:\ouaf for Windows. This mount point MUST exist and the MDM administrator user ID MUST be able to write to this directory. (This is the user ID that is created specifically to administer the (MDM) environments; the default is cissys). The installation sets permissions on all subdirectories installed under this directory. See &lt;SPLENVIRON&gt; below for more information on how this mount point is used.</td>
<td></td>
</tr>
</tbody>
</table>
| Log File Mount Point      | <SPLDIROUT>                 | A mount point that will contain any application output or application logs. Example value is /ouaf/sploutput for UNIX installation or C:\ouaf\sploutput for Windows. This mount point MUST exist and the MDM administrator user ID MUST be able to write to this directory. (This is the user ID that is created specifically to administer the (MDM) environments; the default is cissys). For each environment initialized, the application logs will be written to the directory <SPLDIROUT>/<SPLENVIRON>

Note: Later in the installation the splenviron.sh (splenviron.cmd ) script will set the $SPLOUTPUT (%SPLOUTPUT%) environment variable to point to:<SPLDIROUT>/<SPLENVIRON>
<table>
<thead>
<tr>
<th>Menu Option</th>
<th>Name Used in Documentation</th>
<th>Usage</th>
<th>Customer Install Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Environment Name</td>
<td>&lt;SPLENVIRON&gt;</td>
<td>A descriptive name to be used as both a directory name under the mount point &lt;SPLDIR&gt; and an environment descriptor. This value typically identifies the purpose of the environment. For example, DEV01 or CONV.</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>On installation a directory &lt;SPLDIR&gt;/ &lt;SPLENVIRON&gt; is created, under which the Oracle Utilities Application Framework and Oracle Utilities Meter Data Management software resides.</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>When multiple environments are set up on the machine you will typically have directories such as: /ouaf/DEV01/.... /ouaf/CONV/....</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Each of these contains a complete version of the Oracle Utilities Application Framework and Oracle Utilities Meter Data Management.</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Note: Later in the installation process, the splenviron.sh (splenviron.cmd) script will set $SPLEBASE (%SPLEBASE%) environment variable to point to &lt;SPLDIR&gt;/ &lt;SPLENVIRON&gt;</td>
<td></td>
</tr>
<tr>
<td>Database Type</td>
<td>&lt;CMPDB&gt;</td>
<td>Type of a database to connect an environment to.</td>
<td>oracle</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Valid values:</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>oracle: Oracle</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Defaulted value: oracle</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Note: Not all database types are supported on all platforms; refer to the Supported Platforms section for details.</td>
<td></td>
</tr>
<tr>
<td>Web Application Server Type</td>
<td>&lt;SPLWAS&gt;</td>
<td>A web application server for the environment to be used. The following value must be selected:</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Valid values:</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>WLS: WebLogic</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>WAS: WebSphere</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>WASND: WebSphere ND</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Note: Not all web application servers are supported on all platforms; refer to Supported Platforms section for details.</td>
<td></td>
</tr>
<tr>
<td>Menu Option</td>
<td>Name Used in Documentation</td>
<td>Usage</td>
<td>Customer Install Value</td>
</tr>
<tr>
<td>----------------------------------</td>
<td>-----------------------------</td>
<td>-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------</td>
<td>------------------------</td>
</tr>
<tr>
<td>Installation Application Viewer Module</td>
<td>&lt;WEB_ISAPPVIEWER&gt;</td>
<td>Denotes if the Application Viewer Web Module will be installed in the environment. When this value is set to false the application viewer will not be accessible in the environment.</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Valid values:</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>true: Application Viewer module will be installed.</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>false: Application Viewer module will not be installed.</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Defaulted value: true</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Note: When the value of false is selected, the Application Viewer will only be installed at a later date by a complete reinstall of the application.</td>
<td></td>
</tr>
</tbody>
</table>
## Environment Description

1. Environment Description

Environment Description:

<table>
<thead>
<tr>
<th>Menu Option</th>
<th>Name Used in Documentation</th>
<th>Usage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Environment Description</td>
<td>DESC</td>
<td>This is a free form text field to describe the purpose of the environment.</td>
</tr>
</tbody>
</table>
WebLogic Business Application Server Configuration

The WebLogic parameters below and in the worksheet are for a WebLogic installation.

2. Business Application Server Configuration

<table>
<thead>
<tr>
<th>Business Server Host:</th>
<th>&lt;machine_name&gt;</th>
</tr>
</thead>
<tbody>
<tr>
<td>WebLogic Server Name:</td>
<td>myserver</td>
</tr>
<tr>
<td>Business Server Application Name:</td>
<td>SPLService</td>
</tr>
<tr>
<td>MPL Admin Port Number:</td>
<td></td>
</tr>
<tr>
<td>MPL Automatic startup:</td>
<td>false</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Menu Option</th>
<th>Name Used in Documentation</th>
<th>Usage</th>
<th>Customer Install Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Business Server Host</td>
<td>BSN_WLHOST</td>
<td>The host name on which business application server resides.</td>
<td>Default value: &lt;current server name&gt;</td>
</tr>
<tr>
<td>WebLogic Server Name</td>
<td>BSN_WLS_SVRNAME</td>
<td>The name of the WebLogic server where the business application resides.</td>
<td>Default value: myserver</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Note: If there is not a previously created WebLogic server, take the default value of “myserver”</td>
<td></td>
</tr>
<tr>
<td>Business Server Application Name</td>
<td>BSN_APP</td>
<td>The name of the business application server.</td>
<td>Default value: SPLService</td>
</tr>
<tr>
<td>MPL Admin Port number</td>
<td>MPLADMINPORT</td>
<td>The port number for the Multi Purpose Listener (MPL) Admin Server.</td>
<td>Example value: 6502</td>
</tr>
<tr>
<td>MPL Automatic Startup</td>
<td>MPLSTART</td>
<td>Automatically starts the MPL Listener whenever environment starts.</td>
<td>Default value: false</td>
</tr>
</tbody>
</table>
WebLogic Web Application Server Configuration

The WebLogic parameters below and in the worksheet are for a WebLogic installation.

3. Web Application Server Configuration

**Web Server Host:** <machine_name>

**Web Server Port Number:**

**Web Context Root:**

**WebLogic JNDI User ID:**

**WebLogic JNDI Password:**

**WebLogic Admin System User ID:**

**WebLogic Admin System Password:**

**WebLogic Server Name:** myserver

**Web Server Application Name:** SPLWeb

**Application Admin User ID:**

**Application Admin Password:**

**Expanded Directories:** true

**Application Viewer Module:** true

<table>
<thead>
<tr>
<th>Menu Option</th>
<th>Name Used in Documentation</th>
<th>Usage</th>
<th>Customer Install Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Web Server Host</td>
<td>WEB_WLHOST</td>
<td>The host name on which the web application server resides.</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Default value: &lt;current server name&gt;</td>
<td></td>
</tr>
<tr>
<td>Web Server Port Number</td>
<td>WEB_WLPORT</td>
<td>A unique port number within the system that will be assigned to the HTTP port. This is the port number that is used as a part of the client URL request to connect to the host.</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Example value: 6500</td>
<td></td>
</tr>
<tr>
<td>Web Context Root</td>
<td>WEB_CONTEXT_ROOT</td>
<td>A context root name that allows customers to run multiple instances of web application on the same server.</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Default value: ouaf</td>
<td></td>
</tr>
<tr>
<td>WebLogic JNDI User ID</td>
<td>WEB_WLSYSUSER</td>
<td>The user ID the application uses to connect to the EJB component through JNDI. This is the EJB container user ID.</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Note: The required value for an initial installation is &quot;system&quot;.</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>This is a security value.</td>
<td></td>
</tr>
<tr>
<td>WebLogic JNDI Password</td>
<td>WEB_WLSYSPASS</td>
<td>The password the application uses to connect to the EJB component through JNDI</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Note: The required value for an initial installation is “ouafadmin”. This value will be saved in encrypted format.</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>This is a security value.</td>
<td></td>
</tr>
<tr>
<td>Menu Option</td>
<td>Name Used in Documentation</td>
<td>Usage</td>
<td>Customer Install Value</td>
</tr>
<tr>
<td>-----------------------------</td>
<td>----------------------------</td>
<td>-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------</td>
<td>-------------------------</td>
</tr>
<tr>
<td>WebLogic Admin System User ID</td>
<td>WLS_WEB_WLSYSUSER</td>
<td>The user ID to log in to the Oracle WebLogic console and to administer Oracle WebLogic. The Oracle WebLogic startup and stop script also utilizes this user ID. Note: The installation utility will prompt you to enter “Y” to encrypt. For an initial installation, enter Y/y and specify the required value “system”. This is a security value.</td>
<td></td>
</tr>
<tr>
<td>WebLogic Admin System Password</td>
<td>WLS_WEB_WLSYPASS</td>
<td>The password to login to Oracle WebLogic console and to administer Oracle WebLogic. The Oracle WebLogic startup and stop script also utilize this password. Note: The installation utility will prompt you to enter “Y” to encrypt. For an initial installation, enter Y/y, and specify the required value “ouafadmin”. This is a security value.</td>
<td></td>
</tr>
<tr>
<td>WebLogic Server Name</td>
<td>WEB_WLS_SVRNAME</td>
<td>The name of the WebLogic server where the web application resides. Default value: myserver Note: For an initial installation, use the default value of “myserver”.</td>
<td></td>
</tr>
<tr>
<td>Web Server Application Name</td>
<td>WEB_APP</td>
<td>The name of the web application server. Default value: SPLWeb Note: For an initial installation, use the default value of “SPLWeb”.</td>
<td></td>
</tr>
<tr>
<td>Application Admin User ID</td>
<td>WEB_SPLUSER</td>
<td>This is the default user ID to login to the application through the browser. Example value: SYSUSER Note: The required value for an initial installation is “SYSUSER”. This value is also used in communication within the XAI application. This is a security value.</td>
<td></td>
</tr>
<tr>
<td>Menu Option</td>
<td>Name Used in Documentation</td>
<td>Usage</td>
<td>Customer Install Value</td>
</tr>
<tr>
<td>-----------------------------</td>
<td>----------------------------</td>
<td>------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------</td>
<td>------------------------</td>
</tr>
<tr>
<td>Application Admin Userid</td>
<td>WEB_SPLPASS</td>
<td>This is the password of the application admin user. Example value: sysuser00. Note: The required value for an initial installation is “sysuser00”. This value will be saved in encrypted format. This is a Security Value.</td>
<td></td>
</tr>
<tr>
<td>Password</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Expanded Directories</td>
<td>WEB_ISEXPANDED</td>
<td>When the value is “true” the web application will be deployed in exploded directory format (no WAR files). When the value is “false”, the web application will be deployed in ear file format. Valid values: true: Environment expanded (no WAR files) false: Environment with WAR/EAR files Default value: false</td>
<td></td>
</tr>
<tr>
<td>Application Viewer Module</td>
<td>WEB_ISAPPVIEWER</td>
<td>When the value is “true” the application viewer will be deployed to the web server. When the value is “false”, the application viewer will not be deployed to the web server. Note: With either value the application viewer module will still be managed by the upgrade process. Note: When this value is set to false from the initial install menu you will not be able to change this value to true to re-enable the application viewer. Valid values: true: The application viewer module will be deployed to the web server false: The application viewer module will not be deployed to the web server Default value: true</td>
<td></td>
</tr>
</tbody>
</table>
Database Configuration

4. Database Configuration

<table>
<thead>
<tr>
<th>Menu Option</th>
<th>Name Used in Documentation</th>
<th>Usage</th>
<th>Customer Install Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Web Application Database User ID</td>
<td>DBUSER</td>
<td>The database user ID that has been configured on the database for the web application server connection.</td>
<td>This is a security value.</td>
</tr>
<tr>
<td>Web Application Database Password</td>
<td>DBPASS</td>
<td>The database password that has been configured on the database for the web application server connection.</td>
<td>Note: This value will be saved in encrypted format.</td>
</tr>
<tr>
<td>MPL Database User ID</td>
<td>MPL_DBUSER</td>
<td>The database user ID that has been configured on the database for the MPL server connection.</td>
<td>This is a security value.</td>
</tr>
<tr>
<td>MPL Database Password</td>
<td>MPL_DBPASS</td>
<td>The database password that has been configured on the database for the MPL server connection.</td>
<td>Note: This value will be saved in encrypted format.</td>
</tr>
<tr>
<td>XAI Database User ID</td>
<td>XAI_DBUSER</td>
<td>The database user ID that has been configured on the database for the XAI server connection.</td>
<td>This is a security value.</td>
</tr>
<tr>
<td>XAI Database Password</td>
<td>XAI_DBPASS</td>
<td>The database password that has been configured on the database for the XAI server connection.</td>
<td>Note: This value will be saved in encrypted format.</td>
</tr>
</tbody>
</table>

Oracle Client Character Set NLS_LANG: AMERICAN_AMERICA.AL32UTF8
<table>
<thead>
<tr>
<th>Menu Option</th>
<th>Name Used in Documentation</th>
<th>Usage</th>
<th>Customer Install Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Batch Database User ID</td>
<td>BATCH_DBUSER</td>
<td>The database user ID that has been configured on the database for the batch connection.</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>This is a security value.</td>
<td></td>
</tr>
<tr>
<td>Batch Database Password</td>
<td>BATCH_DBPASS</td>
<td>The database password that has been configured on the database for the batch connection.</td>
<td>Note: This value will be saved in encrypted format.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>This is a security value.</td>
<td></td>
</tr>
<tr>
<td>Database Name</td>
<td>DBNAME</td>
<td>The name of the database instance that the application will be connecting to.</td>
<td></td>
</tr>
<tr>
<td>Database Server</td>
<td>DBSERVER</td>
<td>Host name of the server where database resides.</td>
<td></td>
</tr>
<tr>
<td>Database Port</td>
<td>DBPORT</td>
<td>Database port number on the database server used for connecting to the database</td>
<td></td>
</tr>
<tr>
<td>ONS Server Configuration</td>
<td>ONSCONFIG</td>
<td>ONS Server Configuration is required for Oracle RAC FCF.</td>
<td>See the Server Administration Guide for more information.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>This is an optional value.</td>
<td></td>
</tr>
<tr>
<td>Database Override Connection String</td>
<td>DB_OVERRIDE_CONN</td>
<td>This connection string can be used to override the database information entered above for RAC installation.</td>
<td>Set this string to override the standard database connection string, as entered above.</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>See the Server Administration Guide for more information.</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>This is an optional value.</td>
</tr>
<tr>
<td>Oracle Client Character Set</td>
<td>NLS_LANGUAGE</td>
<td>The Oracle Database Character Set.</td>
<td></td>
</tr>
<tr>
<td></td>
<td>NLS_LANG</td>
<td>Select the Language and Territory that are in use in your country.</td>
<td>Default value: AMERICAN_AMERICA.AL32UTF8</td>
</tr>
</tbody>
</table>
### General Configuration Options

**Note:** See the Oracle Utilities Meter Data Management *Batch Server Administration Guide* for additional details on this configuration.

5. **General Configuration Options**

<table>
<thead>
<tr>
<th><strong>Menu Option</strong></th>
<th><strong>Name Used in Documentation</strong></th>
<th><strong>Usage</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td>Batch RMI Port</td>
<td>BATCH_RMI_PORT</td>
<td>Unique port used by the Batch RMI</td>
</tr>
<tr>
<td>Batch Mode</td>
<td>BATCH_MODE</td>
<td>Valid values: CLUSTERED or DISTRIBUTED</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Default value: CLUSTERED</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Note: CLUSTERED is currently the only supported mode for production environments.</td>
</tr>
<tr>
<td>Coherence Cluster Name</td>
<td>COHERENCE_CLUSTE R_NAME</td>
<td>Unique name for the batch CLUSTER</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Note: Value is required when batch mode is CLUSTERED.</td>
</tr>
<tr>
<td>Coherence Cluster Address</td>
<td>COHERENCE_CLUSTE R_ADDRESS</td>
<td>Unique multicast address;</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Note: Value is required when batch mode is CLUSTERED.</td>
</tr>
<tr>
<td>Coherence Cluster Port</td>
<td>COHERENCE_CLUSTE R_PORT</td>
<td>Unique port for the batch CLUSTER</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Note: Value is required when batch mode is CLUSTERED.</td>
</tr>
<tr>
<td>Coherence Cluster Mode</td>
<td>COHERENCE_CLUSTE R_MODE</td>
<td>Valid values: dev (Development) prod (Production)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Default value: dev</td>
</tr>
</tbody>
</table>
Advanced Menu Options

The advanced menu options are not available during installation. These options can be accessed after installation using the following commands:

Unix:
$SPLEBASE/bin/configureEnv.sh -a

Windows
%SPLEBASE%\bin\configureEnv.cmd -a

Advanced Environment Miscellaneous Configuration

50. Advanced Environment Miscellaneous Configuration

<table>
<thead>
<tr>
<th>Menu Option</th>
<th>Name Used in Documentation</th>
<th>Usage</th>
<th>Customer Value Install</th>
</tr>
</thead>
<tbody>
<tr>
<td>Online JVM Batch Server Enabled</td>
<td>WASND_DMGR_HOST</td>
<td>WebSphere Deployment Manager Host name, this value is used for WebSphere ND, when connecting to the WebSphere Deployment Manager. Note: This value will only appear for WebSphere ND.</td>
<td></td>
</tr>
<tr>
<td>Online JVM Batch Number of Threads</td>
<td></td>
<td>5</td>
<td></td>
</tr>
<tr>
<td>Online JVM Batch Scheduler Daemon Enabled</td>
<td></td>
<td>false</td>
<td></td>
</tr>
<tr>
<td>JMX Enablement System User ID</td>
<td></td>
<td>false</td>
<td></td>
</tr>
<tr>
<td>JMX Enablement System Password</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>RMI Port number for JMX Business</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>RMI Port number for JMX Web</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>GIS Service Running on the same Web Server</td>
<td></td>
<td>true</td>
<td></td>
</tr>
<tr>
<td>GIS Service URL</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>GIS WebLogic System User ID</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>GIS WebLogic System Password</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Online Display Software Home</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

When starting a web application server JVM, this property can be set to “true” to allow the on-line application server to also act as a batch worker in the grid.

Default value: false

Note: This functionality should only be used in low volume environments.
<table>
<thead>
<tr>
<th>Menu Option</th>
<th>Name Used in Documentation</th>
<th>Usage</th>
<th>Customer Value Install</th>
</tr>
</thead>
</table>
| Online JVM Batch                        | BATCHTHREADS                | The maximum number of batch processing threads to be executed within a worker JVM when no explicit Distributed Thread Pool is specified. The “DEFAULT” distributed thread pool is used by the batch-scheduling daemon when it initiates processing on batch jobs (typically added via the online system) where no thread pool is specified). Default value: 5  
Note: This will be only used and activated when BATCHENABLED is set to true. |                        |
| Number of Threads                       |                             |                                                                                                                                                                                                      |                        |
| Online JVM Batch                        | BATCHDAEMON                 | In a distributed batch environment, this property can be set to “true” to allow a worker JVM to host the batch scheduling daemon. The daemon accepts online batch submissions requests and automatically submits the work for them. Valid values: true, false  
Default value: false  
Note: This will be only used and activated when BATCHENABLED is set to true. |                        |
| Scheduler Daemon                       |                             |                                                                                                                                                                                                      |                        |
| Enabled                                 |                             |                                                                                                                                                                                                      |                        |
| JMX Enablement System                   | BSN_JMX_SYSUSER             | Example value: user  
This value is optional.                                                                                                                                                                          |                        |
| User ID                                 |                             |                                                                                                                                                                                                      |                        |
| JMX Enablement System                   | BSN_JMX_SYSPASS             | Example value: admin  
Note: This value will be saved in encrypted format.  
This value is optional.                                                                                                                                 |                        |
| Password                                |                             |                                                                                                                                                                                                      |                        |
| RMI Port number for JMX Business        | BSN_JMX_RMI_PORT_PERFORMACE | JMX Port for business application server monitoring.  
This needs to be set to an available port number on the machine.  
This value is optional.                                                                                                                                 |                        |
| RMI Port number for JMX Web             | WEB_JMX_RMI_PORT_PERFORMACE | JMX Port for web application server monitoring  
This needs to be an available port number for the environment running on the machine.  
This value is optional.                                                                                                                      |                        |
<table>
<thead>
<tr>
<th>Menu Option</th>
<th>Name Used in Documentation</th>
<th>Usage</th>
<th>Customer Value Install</th>
</tr>
</thead>
</table>
| GIS Service Running on the same Web Server      | GIS                         | Geographical information (GEOCODING) - GIS Service running on the same web application server | Valid values: true, false
|                                                 |                             | This value is optional.                                              |                        |
| GIS Service URL                                 | GIS_URL                     | This is the URL of the external web server.                          | Note: This value will be only be used when GIS is set to true.      |
|                                                 |                             | This value is optional.                                              |                        |
| GIS WebLogic System User ID                     | GIS_WLSYSUSER                | GIS WebLogic System User ID                                          | Note: This value will be only be used when GIS is set to true.      |
|                                                 |                             | This value is optional.                                              |                        |
| GIS WebLogic System Password                    | GIS_WLSYSPASS               | GIS WebLogic System Password.                                        | Note: This value will be only be used when GIS is set to true.      |
|                                                 |                             | This value is optional.                                              |                        |
| Online Display Software Home                    | ONLINE_DISPLAY_HOME         | The location of the Online Display Software installation directory.  | This value is optional.                                           |
### Advanced Environment Memory Configuration

#### JVM Child Memory Allocation
- **JVM Child Memory Allocation:** 512
- **JVM Child Additional Options:**
  - **Web Application Java Initial Heap Size:** 1024
  - **Web Application Java Max Heap Size:** 1024
  - **Web Application Java Max Perm Size:** 700500

#### JVM Child Additional Options
- **Web Application Java Additional Options:**
  - **Ant Min Heap Size:** 200
  - **Ant Max Heap Size:** 800
  - **Thread Pool Worker Java Min Heap Size:** 512
  - **Thread Pool Worker Java Max Heap Size:** 1024
  - **Thread Pool Worker Java Max Perm Size:** 768

#### Web Application Java Initial Heap Size
- **Web Application Java Initial Heap Size:** 1024

#### Web Application Java Max Heap Size
- **Web Application Java Max Heap Size:** 1024

#### Web Application Java Max Perm Size
- **Web Application Java Max Perm Size:** 700500

---

<table>
<thead>
<tr>
<th>Menu Option</th>
<th>Name Used in Documentation</th>
<th>Usage</th>
<th>Customer Install Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>JVM Child Memory Allocation</td>
<td>JVMMEMORYARG</td>
<td>Heap size for the JVM Child.</td>
<td>Default value: 512</td>
</tr>
<tr>
<td>JVM Child Additional Options</td>
<td>JVM_ADDITIONAL_OPTION</td>
<td>Additional JVM options that are passed to the Child JVM.</td>
<td>Note: For WebLogic installation only.</td>
</tr>
<tr>
<td>Web Application Java Initial Heap Size</td>
<td>WEB_MEMORY_OPT_MIN</td>
<td>Initial heap size for the application server.</td>
<td>Default value: 1024</td>
</tr>
<tr>
<td>Web Application Java Max Heap Size</td>
<td>WEB_MEMORY_OPT_MAX</td>
<td>Maximum heap size for the application server.</td>
<td>Default value: 1024</td>
</tr>
<tr>
<td>Web Application Java Max Perm Size</td>
<td>WEB_MEMORY_OPT_MAXPERMSIZE</td>
<td>Maximum Perm Size for the application server.</td>
<td>Default value: 500MB (Linux, Solaris) 300MB (Windows)</td>
</tr>
<tr>
<td>Menu Option</td>
<td>Name Used in Documentation</td>
<td>Usage</td>
<td>Customer Install Value</td>
</tr>
<tr>
<td>-------------------------------------</td>
<td>-----------------------------</td>
<td>----------------------------------------------------------------------</td>
<td>------------------------</td>
</tr>
<tr>
<td>Web Application Additional Options</td>
<td>WEB_ADDITIONAL_OPTION</td>
<td>Additional options that will be passed in to the web application server JVM.</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Optional Entry.</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Note: For WebLogic installation only.</td>
<td></td>
</tr>
<tr>
<td>Ant Min Heap Size</td>
<td>ANT_OPT_MIN</td>
<td>Minimum Heap Size passed to ANT JVM.</td>
<td>Default value: 200</td>
</tr>
<tr>
<td>Ant Max Heap Size</td>
<td>ANT_OPT_MAX</td>
<td>Maximum Heap Size passed to ANT JVM.</td>
<td>Default value: 800</td>
</tr>
<tr>
<td>Ant Additional Options</td>
<td>ANT_ADDITIONAL_OPTION</td>
<td>Additional options that are passed into the ANT JVM.</td>
<td></td>
</tr>
<tr>
<td>Thread Pool Worker Java Min Heap Size</td>
<td>BATCH_MEMORY_OPT_MIN</td>
<td>Minimum heap size passed to the Thread Pool Worker.</td>
<td>Default value: 512</td>
</tr>
<tr>
<td>Thread Pool Worker Java Max Heap Size</td>
<td>BATCH_MEMORY_OPT_MAX</td>
<td>Maximum heap size passed to the Thread Pool Worker.</td>
<td>Default value: 1024</td>
</tr>
<tr>
<td>Thread Pool Worker Java Max Perm Size</td>
<td>BATCH_MEMORY_OPT_MAXPERMSIZE</td>
<td>Maximum perm size passed to the Thread Pool Worker.</td>
<td>Default value: 768</td>
</tr>
<tr>
<td>Thread Pool Worker Additional Options</td>
<td>BATCH_MEMORY_ADDITIONAL_OPTION</td>
<td>Additional Memory Options passed into the Thread Pool Worker. This is an optional free form field.</td>
<td></td>
</tr>
<tr>
<td>Additional Runtime Classpath</td>
<td>ADDITIONAL_RUNTIME_CLASSPATH</td>
<td>Additional Classpath Options passed in when starting the WebLogic JVM</td>
<td>Note: For WebLogic installation only. This is an optional value.</td>
</tr>
<tr>
<td>Menu Option</td>
<td>Name Used in Documentation</td>
<td>Usage</td>
<td>Customer Install Value</td>
</tr>
<tr>
<td>--------------------------</td>
<td>----------------------------</td>
<td>--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------</td>
<td>------------------------</td>
</tr>
<tr>
<td>Release Cobol Thread</td>
<td>REL_CBL_THREAD_M</td>
<td>Allow for child JVMs to be optionally configured to release thread-bound memory when each thread is returned to its thread pool. This will increase the number of memory allocations and memory free calls performed by the Microfocus runtime. It will also lower the amount of C-heap memory consumed by child JVMs.</td>
<td>false</td>
</tr>
<tr>
<td>Memory Options</td>
<td>EM</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Valid values: true, false</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Default value: false</td>
<td></td>
</tr>
</tbody>
</table>
Advanced Web Application Configuration

52. Advanced Web Application Configuration

- Web Application Cache Settings: off
- Socket Location Folder: 
- WebLogic SSL Port Number: 
- WebLogic Console Port Number: 
- WebLogic Additional Stop Arguments: 
- Batch Cluster URL: 
- Strip HTML Comments: false
- Authentication Login Page Type: FORM
- Web Form Login Page: /loginPage.jsp
- Web Form Login Error Page: /formLoginError.jsp
- Web Security Role: cisusers
- Web Principal Name: cisusers
- This is a development environment: false
- Preload All Pages on Startup: false
- Maximum Age of a Cache Entry for Text: 28800
- Maximum Age of a Cache Entry for Images: 28800
- JSP Recompile Interval (s): 43200

<table>
<thead>
<tr>
<th>Menu Option</th>
<th>Name Used in Documentation</th>
<th>Usage</th>
<th>Customer Install Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Web Application Cache Settings</td>
<td>WEB_L2_CACHE_MOD</td>
<td>Default Value: off</td>
<td>False</td>
</tr>
<tr>
<td></td>
<td>E</td>
<td>Valid Values: off</td>
<td>false</td>
</tr>
<tr>
<td></td>
<td></td>
<td>read_write</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>read_only</td>
<td></td>
</tr>
<tr>
<td>Socket Location Folder</td>
<td>SPIJVM_SOCKET</td>
<td>Folder where the socket files will be created (splSock*).</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>If empty, the application will use the following default: [SPLEBASE]/runtime</td>
<td></td>
</tr>
<tr>
<td>WebLogic SSL Port Number:</td>
<td>WEB_WLSSPORT</td>
<td>The port number assigned to WebLogic Secure Sockets connection. This is the port number that is used for Secure Sockets connecting to the WebLogic server.</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>The Secure Sockets implementation is disabled in the default configuration.</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>For Production additional actions are required.</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Do NOT run Production with Demo certificates</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Refer to the WLS installation guide - Configuring Identity and Trust</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>When this value is populated http will be disabled.</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Example value: 6501</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Note: For WebLogic installation only. This value is optional.</td>
<td></td>
</tr>
<tr>
<td>Menu Option</td>
<td>Name Used in Documentation</td>
<td>Usage</td>
<td></td>
</tr>
<tr>
<td>-----------------------------------</td>
<td>----------------------------</td>
<td>---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------</td>
<td></td>
</tr>
<tr>
<td>WebLogic Console Port Number</td>
<td>WLS_ADMIN_PORT</td>
<td>The port number assigned to WebLogic Console connection. This is the port number that is used for Secure Sockets connecting to the WebLogic Console server.</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Note: For WebLogic installation only.</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>This value is optional.</td>
<td></td>
</tr>
<tr>
<td>WebLogic Additional Stop Arguments</td>
<td>ADDITIONAL_STOP_WEBLOGIC</td>
<td>WebLogic Additional Stop Arguments</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>This value is required when running the WebLogic Console Port Number and the Application using SSL.</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Example values:</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>-Dweblogic.security.TrustKeyStore=DemoTrust</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>-Dweblogic.security.TrustKeystoreType=CustomTrust</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Note: For Production additional actions are required. Do NOT run Production with Demo certificates</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Refer to the WLS installation guide - Configuring Identity and Trust</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Note: For WebLogic installation only. This is an optional value.</td>
<td></td>
</tr>
<tr>
<td>Batch Cluster URL</td>
<td>WEB_BATCH_CLUSTER_URL</td>
<td>Example: service:jmx:rmi:///jndi/rmi://[host]:[TPW JMX port]/oracle/ouaf/batchConnector</td>
<td></td>
</tr>
<tr>
<td>StripHTMLComments: false</td>
<td>STRIP_HTML_COMMENTS</td>
<td>Stripping HTML (and JavaScript) comments will increase the security of the system.</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Default value: false</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Valid values: true, false</td>
<td></td>
</tr>
<tr>
<td>Authentication Login Page Type</td>
<td>WEB_WLAUTHMETHOD</td>
<td>Specifies which authentication mode should be used. To switch off OUAF Login Page enter: BASIC</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Valid values: FORM, BASIC</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Default value: FORM</td>
<td></td>
</tr>
<tr>
<td>Web Form Login Page</td>
<td>WEB_FORM_LOGIN_PAGE</td>
<td>Specify the jsp file used to login into the application.</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Default value: /loginPage.jsp</td>
<td></td>
</tr>
<tr>
<td>Menu Option</td>
<td>Name Used in Documentation</td>
<td>Usage</td>
<td>Customer Install Value</td>
</tr>
<tr>
<td>--------------------------------</td>
<td>----------------------------</td>
<td>-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------</td>
<td>------------------------</td>
</tr>
<tr>
<td>Web Form Login Error Page</td>
<td>WEB_FORM_LOGIN_ERROR_PAGE</td>
<td>Specify the jsp file used when there is an error when logging into the application.</td>
<td></td>
</tr>
<tr>
<td>Web Security Role</td>
<td>WEB_PRINCIPAL_NAME</td>
<td>Specify the name of the security role.</td>
<td></td>
</tr>
<tr>
<td>Web Principal Name</td>
<td>WEB_PRINCIPAL_NAME</td>
<td>Specify the name of a principal that is defined in the security realm.</td>
<td></td>
</tr>
<tr>
<td>This is a development environment</td>
<td>WEB_ISDEVELOPMENT</td>
<td>If the value is “true”, the web application may be used for application development, which will trigger certain generation processes. If the value is “false” the environment will be used as a runtime environment. When you choose “true” (development environment) the startup preload pages will be disabled, and the application preload pages will be less strict. This value also controls the amount of logging information written to the application log files. Valid values: true, false Default value: false</td>
<td></td>
</tr>
<tr>
<td>Preload All Pages on Startup</td>
<td>WEB_PRELOADALL</td>
<td>This controls if the pages should be pre-loaded during the startup of the application or not.</td>
<td></td>
</tr>
<tr>
<td>Maximum Age of a Cache Entry for Text</td>
<td>WEB_MAXAGE</td>
<td>Default value: 28800</td>
<td></td>
</tr>
<tr>
<td>Maximum Age of a Cache Entry for Images</td>
<td>WEB_MAXAGEI</td>
<td>Default value: 28800</td>
<td></td>
</tr>
<tr>
<td>JSP Recompile Interval (s)</td>
<td>WEB_wlpageCheckSecond</td>
<td>Default value: 43200</td>
<td></td>
</tr>
</tbody>
</table>
## Advanced Web Application Configuration

### 53. OIM Configuration Settings

<table>
<thead>
<tr>
<th>Menu Option</th>
<th>Name Used in Documentation</th>
<th>Usage</th>
<th>Customer Install Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>SPML SOAP Trace Setting</td>
<td>OIM_SPML_SOAP_DEB_DEBUG_SETTING</td>
<td>Name of Oracle Identity Manager library for debug</td>
<td>Default value: false</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Valid values: true, false</td>
</tr>
<tr>
<td>SPML IDM Schema Name</td>
<td>OIM_SPML_UBER_SCHEMA_NAME</td>
<td>Name of Oracle Identity Manager library for schema</td>
<td>Default value: F1-IDMUser</td>
</tr>
<tr>
<td>SPML OIM Name Space</td>
<td>OIM_SPML_NAME_SPACE</td>
<td>Default Namespace for Oracle Identity Manager integration</td>
<td>Default value: <a href="http://xmlns.oracle.com/OIM/provisioning">http://xmlns.oracle.com/OIM/provisioning</a></td>
</tr>
<tr>
<td>SPML OIM Enclosing Element</td>
<td>OIM_SPML_SOAP_ELEMENT</td>
<td>Default top level SOAP Element name for Oracle Identity Manager integration</td>
<td>Default value: sOAPElement</td>
</tr>
</tbody>
</table>
Service and Measurement Data Foundation Installation and Configuration Worksheets

During the installation and configuration of the application you will need to provide a variety of system values. These worksheets will assist you in providing that information. They should be completed before installing the application framework. No Customer Install Value fields should be left blank.

**Note:** The OSB configuration and SOA configuration menus are optional for Oracle Utilities Meter Data Management and can be skipped. These configurations are required in case another product such as Oracle Utilities Smart Grid Gateway will also be installed on top of Oracle Utilities Service and Measurement Data Foundation.

### WebLogic OSB Configuration

8. OSB Configuration

<table>
<thead>
<tr>
<th>Menu Option</th>
<th>Name Used In Documentation</th>
<th>Usage</th>
<th>Customer Install Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>OSB Home</td>
<td>OSB_HOME</td>
<td>Location of the directory where OSB is installed.</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>For Example:</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Unix: /middleware/Oracle_OSB1</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Windows: C:\middleware\Oracle_OSB1</td>
<td></td>
</tr>
<tr>
<td>OSB Host Server</td>
<td>OSB_HOST</td>
<td>Host name of the server where the OSB WebLogic server instance will run.</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Default Value: &lt;current server name&gt;</td>
<td></td>
</tr>
<tr>
<td>OSB Port Number</td>
<td>OSB_PORT_NUMBER</td>
<td>Admin port number of the OSB WebLogic server instance.</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>This is the port number that is used as a part of the OSB URL request to connect to the host.</td>
<td></td>
</tr>
<tr>
<td>Menu Option</td>
<td>Name Used In Documentation</td>
<td>Usage</td>
<td>Customer Install Value</td>
</tr>
<tr>
<td>---------------------------</td>
<td>----------------------------</td>
<td>-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------</td>
<td>------------------------</td>
</tr>
<tr>
<td>JDBC URL for database</td>
<td>DBURL_OSB</td>
<td>The JDBC URL of the database where the OSB schemas are located.</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>For Example: jdbc:oracle:thin:@localhost:1521:OSBDB</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>This value is required for the example WebLogic server instance.</td>
<td></td>
</tr>
<tr>
<td>Database User Name</td>
<td>DBUSER_OSB</td>
<td>OSB database user ID.</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>This value is required for the example WebLogic server instance.</td>
<td></td>
</tr>
<tr>
<td>Database Password</td>
<td>DBPASS_OSB_WLS</td>
<td>OSB database password.</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>This value is required for the example WebLogic server instance.</td>
<td></td>
</tr>
<tr>
<td>JNDI name for datasource</td>
<td>JNDI_OSB</td>
<td>JNDI name for accessing the OSB database</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Note: Retain the default value.</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Default Value: wlsjmsrpDataSource.</td>
<td></td>
</tr>
<tr>
<td>Mount point for OSB files</td>
<td>OSB_LOG_DIR</td>
<td>Location of the network share or mount point where the OSB files will be dropped. This path should be accessible from the machine where OSB WebLogic instance is running. For example: /ouaf/osb/&lt;&lt;ENVIRONMENT NAME&gt;&gt;/</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Default Value: /spl/sploutput/osb</td>
<td></td>
</tr>
<tr>
<td>OSB WebLogic User Name</td>
<td>OSB_USER</td>
<td>WebLogic JMS user ID for the WebLogic instance where the OSB adapter will be deployed.</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Note: For the example OSB WebLogic instance this should be specified as weblogic.</td>
<td></td>
</tr>
<tr>
<td>OSB WebLogic User Password</td>
<td>OSB_PASS_WLS</td>
<td>WebLogic JMS user password for the WebLogic instance where the OSB adapter will be deployed.</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Note: For the example OSB WebLogic instance this should be specified as weblogic123.                                                                                                                                 }</td>
<td></td>
</tr>
</tbody>
</table>
## WebSphere OSB Configuration

8. OSB Configuration

<table>
<thead>
<tr>
<th>Menu Option</th>
<th>Name Used in this Documentation</th>
<th>Usage</th>
<th>Customer Install Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>OSB Home</td>
<td>OSB_HOME</td>
<td>Location of the directory where OSB is installed.</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>For Example:</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td><em>Unix:</em></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>/middleware/Oracle_OSB1</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td><em>Windows:</em></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>C:\middleware\Oracle_OSB1</td>
<td></td>
</tr>
<tr>
<td>OSB Host Server</td>
<td>OSB_HOST</td>
<td>Host name of the server where the OSB WebLogic server instance will run.</td>
<td>Default Value: <em>(current server name)</em></td>
</tr>
<tr>
<td>OSB Port Number:</td>
<td>OSB_PORT_NUMBER</td>
<td>Admin port number of the OSB WebLogic server instance. Note: This also specifies the port number on which the example WebLogic server will listen.</td>
<td></td>
</tr>
<tr>
<td>Mount point for OSB files</td>
<td>OSB_LOG_DIR</td>
<td>Location of the network share or mount point where the OSB files will be dropped. This path should be accessible from the machine where OSB WebLogic instance is running. For example: /ouaf/osb/&lt;ENVIRONMENT NAME&gt;/</td>
<td>Default Value: /spl/sploutput/osb</td>
</tr>
</tbody>
</table>
# WebLogic SOA Configuration

9. SOA Configuration

<table>
<thead>
<tr>
<th>Menu Option</th>
<th>Name Used in this Documentation</th>
<th>Usage</th>
<th>Customer Install Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>SOA Home</td>
<td>SOA_HOME</td>
<td>Location of the directory where SOA is installed.</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>For Example:</td>
<td>Unix: /middleware/Oracle_SOA1</td>
</tr>
<tr>
<td>SOA Host Server</td>
<td>SOA_HOST</td>
<td>Host name of the server where the SOA WebLogic server instance will run.</td>
<td>Default Value: &lt;current server name&gt;</td>
</tr>
<tr>
<td>SOA Port Number</td>
<td>SOA_PORT_NUMBER</td>
<td>Admin port number of the SOA WebLogic server instance.</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>This is the port number that is used as a part of the SOA URL request to connect to the host.</td>
<td></td>
</tr>
<tr>
<td>JDBC URL for database</td>
<td>DBURL_SOA</td>
<td>The JDBC URL of the database where the SOA schemas are located.</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>For Example:</td>
<td>jdbc:oracle:thin:@localhost:1521:SOADB</td>
</tr>
<tr>
<td></td>
<td></td>
<td>This value is required for the example WebLogic server instance.</td>
<td></td>
</tr>
<tr>
<td>Database User Name</td>
<td>DBUSER_SOAINFRA</td>
<td>SOAINFRA database user ID.</td>
<td></td>
</tr>
<tr>
<td>(SOAINFRA)</td>
<td></td>
<td>This value is required for the example WebLogic server instance.</td>
<td></td>
</tr>
<tr>
<td>Database Password</td>
<td>DBPASS_SOAINFRA</td>
<td>SOAINFRA database password.</td>
<td></td>
</tr>
<tr>
<td>(SOAINFRA)</td>
<td></td>
<td>This value is required for the example WebLogic server instance.</td>
<td></td>
</tr>
<tr>
<td>Menu Option</td>
<td>Name Used in this Documentation</td>
<td>Usage</td>
<td>Customer Install Value</td>
</tr>
<tr>
<td>-----------------------------------</td>
<td>---------------------------------</td>
<td>----------------------------------------------------------------------</td>
<td>------------------------</td>
</tr>
<tr>
<td>Database User Name (MDS)</td>
<td>DBUSER_MDS</td>
<td>MDS database user ID.</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>This value is required for the example WebLogic server instance.</td>
<td></td>
</tr>
<tr>
<td>Database Password (MDS)</td>
<td>DBPASS_MDS</td>
<td>MDS database password.</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>This value is required for the example WebLogic server instance.</td>
<td></td>
</tr>
<tr>
<td>Database User Name (ORASDPM)</td>
<td>DBUSER_ORASDPM</td>
<td>ORASDPM database user ID.</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>This value is required for the example WebLogic server instance.</td>
<td></td>
</tr>
<tr>
<td>Database Password (ORASDPM)</td>
<td>DBPASS_ORASDPM</td>
<td>ORASDPM database password.</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>This value is required for the example WebLogic server instance.</td>
<td></td>
</tr>
<tr>
<td>Specify the path for XAI/IWS Service</td>
<td>WEB_SERVICE_PATH</td>
<td>Path for XAI/IWS Service.</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>This value is required to choose between XAI/IWS Services</td>
<td></td>
</tr>
</tbody>
</table>
### WebSphere SOA Configuration

#### 9. SOA Configuration

<table>
<thead>
<tr>
<th>Menu Option</th>
<th>Name Used in this Documentation</th>
<th>Usage</th>
<th>Customer Install Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>SOA Home</td>
<td>SOA_HOME</td>
<td>Location of the directory where SOA is installed.</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>For Example:&lt;br&gt;<strong>Unix:</strong> /middleware/Oracle_SOA1&lt;br&gt;<strong>Windows:</strong> C:\middleware\Oracle_SOA1</td>
<td></td>
</tr>
<tr>
<td>SOA Host Server</td>
<td>SOA_HOST</td>
<td>Host server where SOA WebLogic server instance will run.</td>
<td>Default Value: <code>&lt;current server name&gt;</code></td>
</tr>
<tr>
<td>SOA Port Number</td>
<td>SOA_PORT_NUMBER</td>
<td>Port number of the SOA WebLogic server instance. If SOA is deployed on a managed server, specify the managed server port number. Note: This also specifies the port number on which the example SOA WebLogic server will listen.</td>
<td></td>
</tr>
</tbody>
</table>
### WebLogic SOA Configuration Plan

#### 10. SOA Configuration Plan (MDF)

<table>
<thead>
<tr>
<th>MDF Bulk Request Callback URL</th>
<th>D1_BULK_REQUEST_CALLBACK_URL</th>
<th>This is the URL from the edge application that receives any fault responses in Bulk Command BPEL processing. Default value: empty</th>
</tr>
</thead>
<tbody>
<tr>
<td>MDF Headend http connection timeout</td>
<td>D1_HEADEND_HTTP_CONN_TIMEOUT</td>
<td>MDF Headend http connection timeout value. Default value: 50000</td>
</tr>
<tr>
<td>MDF Headend http read timeout</td>
<td>D1_HEADEND_HTTP_READ_TIMEOUT</td>
<td>MDF Headend http read timeout value. Default value: 500000</td>
</tr>
<tr>
<td>MDF SOA Request Queue JNDI Name</td>
<td>SOA_REQUEST_QUEUE_D1</td>
<td>MDF SOA Request Queue JNDI Name. Default Value: queue/BulkRequestQueue</td>
</tr>
<tr>
<td>MDF SOA Notify Queue JNDI Name</td>
<td>SOA_NOTIFY_QUEUE_D1</td>
<td>MDF SOA Notify Queue JNDI Name. Default Value: queue/BulkNotifyQueue</td>
</tr>
<tr>
<td>MDF SOA Command Queue JNDI Name</td>
<td>SOA_COMMAND_QUEUE_D1</td>
<td>MDF SOA Command Queue JNDI. Default Value: queue/BulkCommandQueue</td>
</tr>
<tr>
<td>SGG-NMS Test Harness Partition Name</td>
<td>SOA_PARTITION_D1</td>
<td>SGG-NMS TestHarness Partition Name. Default Value: SGG-NMS_Test</td>
</tr>
</tbody>
</table>
Advanced Menu Options

The advanced menu options are not available during installation. These options can be accessed after installation using the following commands:

Unix:

```
$SPLEBASE/bin/configureEnv.sh -a
```

Windows

```
%SPLEBASE%\bin\configureEnv.cmd -a
```

Advanced Menu Option for OSB SSL Deployment

60. Advanced Configurations for OSB

OSB ssl Port Enabled:
OSB ssl Port Number:
DemoTrust, CustomTrust: The path and file name of the Trust Keystore:

<table>
<thead>
<tr>
<th>Menu Option</th>
<th>Name Used In Documentation</th>
<th>Usage</th>
<th>Customer Install Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>OSB SSL Port Enabled</td>
<td>OSB_SSL</td>
<td>To enable SSL on OSB set this as ‘true’ else set to ‘false’</td>
<td>Default value: false</td>
</tr>
<tr>
<td>OSB SSL Port Number</td>
<td>OSB_SSL_PORT</td>
<td>OSB SSL Port Number.</td>
<td></td>
</tr>
<tr>
<td>DemoTrust, CustomTrust</td>
<td>KeyStoreName</td>
<td>DemoTrust, CustomTrust</td>
<td>Default value: DemoTrust</td>
</tr>
<tr>
<td>The path and file name of the Trust Keystore</td>
<td>TrustKeyStoreFilePath</td>
<td>The path and file name of the Trust Keystore.</td>
<td></td>
</tr>
</tbody>
</table>

Advanced Environment Memory Configurations

61. Advanced Memory Configurations for SOA

SOA Initial Heap Size: 1024
SOA Maximum Heap Size: 2048
SOA Minimum Perm Size: 512
SOA Maximum Perm Size: 1024
SOA Application Additional Options:

<table>
<thead>
<tr>
<th>Menu Option</th>
<th>Name Used In Documentation</th>
<th>Usage</th>
<th>Customer Install Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>SOA Initial Heap Size</td>
<td>SOA_MEMORY_OPT_MIN</td>
<td>Initial heap size for the SOA server. Default value: 1024</td>
<td>Note: For WebLogic installation only.</td>
</tr>
<tr>
<td>Menu Option</td>
<td>Name Used In Documentation</td>
<td>Usage</td>
<td>Customer Install Value</td>
</tr>
<tr>
<td>------------------------</td>
<td>----------------------------</td>
<td>----------------------------------------------------------------------</td>
<td>------------------------</td>
</tr>
<tr>
<td>SOA Maximum Heap Size</td>
<td>SOA_MEMORY_OPT_MAX</td>
<td>Maximum heap size for the SOA server. Default value: 2048</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Note: For WebLogic installation only.</td>
<td></td>
</tr>
<tr>
<td>SOA Minimum Perm Size</td>
<td>SOA_MEMORY_OPT_MINPERMSIZE</td>
<td>Maximum Perm Size for the SOA server. Default value: 512</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Note: For WebLogic installation only.</td>
<td></td>
</tr>
<tr>
<td>SOA Maximum Perm Size</td>
<td>SOA_MEMORY_OPT_MAXPERMSIZE</td>
<td>Maximum Perm Size for the SOA server. Default value: 1024</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Note: For WebLogic installation only.</td>
<td></td>
</tr>
<tr>
<td>SOA Maximum Perm Size</td>
<td>SOA_JVM_ADDITIONAL_OPTS</td>
<td>Additional options that will be passed in to the SOA server JVM.</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Optional Entry.</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Note: For WebLogic installation only.</td>
<td></td>
</tr>
</tbody>
</table>

62. Advanced Memory Configurations for OSB

<table>
<thead>
<tr>
<th>Menu Option</th>
<th>Name Used In Documentation</th>
<th>Usage</th>
<th>Customer Install Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>OSB Initial Heap Size</td>
<td>OSB_MEMORY_OPT_MIN</td>
<td>Initial heap size for the OSB server. Default value: 512</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Note: For WebLogic installation only</td>
<td></td>
</tr>
<tr>
<td>OSB Maximum Heap Size</td>
<td>OSB_MEMORY_OPT_MAX</td>
<td>Maximum heap size for the OSB server. Default value: 1024</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Note: For WebLogic installation only</td>
<td></td>
</tr>
<tr>
<td>Menu Option</td>
<td>Name Used In Documentation</td>
<td>Usage</td>
<td>Customer Install Value</td>
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<tr>
<td>-----------------------------</td>
<td>----------------------------</td>
<td>---------------------------------------------------------------------------------------------------</td>
<td>------------------------</td>
</tr>
<tr>
<td>OSB Minimum Perm Size</td>
<td>OSB_MEMORY_OPT_MINPERMSIZE</td>
<td>Maximum Perm Size for the OSB server.</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Default value: 512</td>
<td></td>
</tr>
<tr>
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<td></td>
<td>Note: For WebLogic installation only.</td>
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</tr>
<tr>
<td>OSB Maximum Perm Size</td>
<td>OSB_MEMORY_OPT_MAXPERMSIZE</td>
<td>Maximum Perm Size for the OSB server.</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Default value: 1024</td>
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</tr>
<tr>
<td></td>
<td></td>
<td>Note: For WebLogic installation only.</td>
<td></td>
</tr>
<tr>
<td>OSB Application Additional Options</td>
<td>OSB_JVM_ADDITIONAL OPT</td>
<td>Additional options that will be passed in to the OSB server JVM.</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Optional Entry.</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Note: For WebLogic installation only.</td>
<td></td>
</tr>
</tbody>
</table>
This appendix lists frequently-used commands that you use to perform common maintenance activities, such as starting and stopping the environment and thread pool worker, modifying the configuration items.

Run the following commands to perform these common tasks:

**To Initialize the Environment**
1. Go the directory `<install_dir>/bin`.
2. Run the following command:
   - **UNIX:**
     
     ```
     ./splenviron.sh -e <Env_Name>
     ```
   - **Windows:**
     
     ```
     splenviron.cmd -e <Env_Name>
     ```

**To Start the WebLogic Server**
1. Initialize the environment.
2. Run the following command:
   - **UNIX:**
     
     ```
     ./spl.sh start
     ```
   - **Windows:**
     
     ```
     spl.cmd start
     ```

**To Stop the WebLogic Server**
1. Initialize the environment.
2. Run the following command:
   - **UNIX:**
     
     ```
     ./spl.sh stop
     ```
   - **Windows:**
     
     ```
     spl.cmd stop
     ```

**To Start the Thread Pool Worker**
1. Initialize the environment.
2. Run the following command:
   **UNIX:**
   ```
   ./spl.sh -b start
   ```
   **Windows:**
   ```
   spl.cmd -b start
   ```

   **To Stop the Thread Pool Worker**
   1. Initialize the environment.
   2. Run the following command:
      **UNIX:**
      ```
      ./spl.sh -b stop
      ```
      **Windows:**
      ```
      spl.cmd -b stop
      ```

   **To Modify the Configuration Values**
   1. Initialize the environment.
   2. Run the following command:
      **UNIX:**
      ```
      configureEnv.sh
      ```
      **Windows:**
      ```
      configureEnv.cmd
      ```
      The configuration utility launches menu items. Select any Menu option.
   3. Change the menu values.
   4. After you change the menu values, press P to write the changes to the configuration file.
   5. To apply the changes to the environment, run the initial setup script:
      ```
      initialSetup.sh
      ```

   **To Modify the Advanced Menu Option Values**
   1. Initialize the environment.
      The configuration utility launches menu items.
   2. Run the following command:
      **UNIX:**
      ```
      configureEnv.sh -a
      ```
      **Windows:**
      ```
      configureEnv.cmd -a
      ```
   3. Select any menu option.
   4. Change the menu values.
   5. To apply the changes to the environment, run initial setup script:
      ```
      initialSetup.sh
      ```
Appendix D

Installing User Documentation as a Standalone Application

Installing User Documentation

This section provides instructions for installing the Oracle Utilities Meter Data Management user documentation that is supplied with the system. The Oracle Utilities Meter Data Management user documentation is provided in PDF format for printing.

The documentation is also provided in HTML format located inside the Oracle Utilities Meter Data Management application server installation package. It is automatically installed and can be launched from the user interface. The files are under the applications directory packaged in the file named help.war. User documentation is provided in English (ENG). The documentation material is divided into the following subdirectories underneath the language directory:

- D1: Oracle Utilities Service and Measurement Data Foundation User Guide
- D2: Oracle Utilities Meter Data Management User Guide
- F1: Oracle Utilities Application Framework Administration and Business Process Guides

Installing Stand-Alone Online Help

You can also use the Oracle Utilities Meter Data Management online help in stand-alone mode (that is, you do not have to launch it from the Oracle Utilities Meter Data Management application or access it on the application server).

To install the Oracle Utilities Meter Data Management help for stand-alone operation, copy the help.war from the Oracle Utilities Meter Data Management server (environment) or from the Oracle Utilities Meter Data Management installation package to the server or machine on which you want to access the help. If you want to copy the file from any installed Oracle Utilities Meter Data Management environment, you can locate the file in the $SPLEBASE/splapp/applications directory on the server.

Unzip the help.war file to any directory on your machine. To launch the Oracle Utilities Meter Data Management help in stand-alone mode, open the SPLHelp.html file (located inside the language directory that you wish to use).

*Note:* Do not change the subdirectory names. The documents use relative path names to link to other documents. Changing the subdirectory names will result in broken links.
Customizing Help for Stand-Alone Operation

You can customize the SPLHelp.html file to open to the file and topic that you most frequently use. To do so, edit the SPLHelp.html file and change the DEFAULT_BOOKMARK to the desired location. The default DEFAULT_BOOKMARK is 'helpHome.html'.

Installing Stand-Alone Help Under Web Server

You can also install Oracle Utilities Meter Data Management online help as a stand-alone web application. You can use any Web Application server like WebLogic. Configure the configuration file for your web application server to use web application help.

For example,

For WebLogic, configure config.xml file for deployed application Name="help" with URI="help.war" and set WebServer DefaultWebApp="help"

Access the documentation from the browser by the following URL:

http://<hostname>:<portname>/<WebContext>/<Lang>/SPLHelp.html, where

<hostname>:<portname> is the URL of the web server, <Web Context> is the root web context name specified during Web application server configuration, <Lang> is the name of the language directory, for example, ENG.

Note: Stand-alone online help files are not automatically updated when changes are made to the help files on the application server. You will have to re-install the stand-alone online help files.
The following table lists the Oracle Utilities Application Framework 4.2.0 Service Pack 3 (4.2.0.3.0) fixes included in this release.

<table>
<thead>
<tr>
<th>Bug</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>20745796</td>
<td>COPY OF 18537889: HIBERNATE REFRESH AFTER RAW UPDT =&gt; A JOIN AGAINST 1ST COLL.</td>
</tr>
<tr>
<td>20764407</td>
<td>XAI OPTION &quot;XSD COMPLIANCE&quot; NOT GETTING PICKED UP CORRECTLY</td>
</tr>
<tr>
<td>20777697</td>
<td>COPY OF 18534322 - PAGINATION: ROW SERIAL NUMBERS RESET UPON COLUMN SORT ON ANY</td>
</tr>
<tr>
<td>20798267</td>
<td>&quot;VIEW MO&quot; LINK ON THE BUSINESS OBJECT UI DISPLAYS AN ERROR IN MDM 2.1 SP3</td>
</tr>
<tr>
<td>20808697</td>
<td>UNABLE TO START WEBLOGIC 12.1.3 USING SUPPLIED TEMPLATES</td>
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</table>
The following table lists the Oracle Utilities Service and Measurement Data Foundation fixes included in this release.

<table>
<thead>
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<th>Bug</th>
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<td>DYNAMIC OPTION EVENT LIST SHOULD HAVE DESC ORDER BY</td>
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<tr>
<td>14581921</td>
<td>DEVICE COMMISSIONING ACTIVITY UI MAP USES RC HELP (UI: D1-DEVICECOMMISSIONMAINT)</td>
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<tr>
<td>14740293</td>
<td>DISABLE SERVICE TYPE MAINT UI - DISCARD REASON DROPDOWN HAS NO VALUES.</td>
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<tr>
<td>15985648</td>
<td>DATE FILTER IS IGNORED FOR THE SIM QUERY</td>
</tr>
<tr>
<td>16365795</td>
<td>ABLE TO CREATE DEVICE WHEN <code>BO STATUS</code> IS SET AS <code>ACTIVE</code> AND <code>RETIREMENTDTTIM&quot;</code></td>
</tr>
<tr>
<td>17557461</td>
<td>USAGE RULES LIST DASHBOARD ZONE LOSES CONTEXT AFTER RULE DELETION</td>
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<td>17577230</td>
<td>ZONES UNNECESSARILY SHIFTING LOG DATE/TIME</td>
</tr>
<tr>
<td>18595709</td>
<td>COPY 18595705 CAN'T CREATE MTPEL COMM TYPES W SAME COMMTYPE BO BUT DIFF COMM BO</td>
</tr>
<tr>
<td>18601815</td>
<td>D2-RETINSTSP RETRUNS INCORRECT VALUE FOR DVC CFG ID.</td>
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<tr>
<td>18629838</td>
<td>COPY OF 18503847 - CONVERT DATE TIME TO LOCAL DATE TIME BEFORE RETRIEVING IE</td>
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<tr>
<td>18684214</td>
<td>COPY OF 18442262 - BATCH D1-MC HAS WRONG PARAMETER FOR MAINTENANCEOBJECT</td>
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<tr>
<td>18703272</td>
<td>COPY OF BUG 18703248 - COPY OF BUG 18695548 - INTERVAL MEASUREMENT VALUES NOT TR</td>
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<tr>
<td>18706110</td>
<td>IMD OPTIMIZATION: USE ENTITY PROCESSING TO RETRIEVE INFORMATION INSTEAD OF BO</td>
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<td>Bug</td>
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<tr>
<td>18706184</td>
<td>INCORRECT WORKLIST ON MC SEARCH RESULTS WHEN USING ID TYPE/VALUE CONDITION</td>
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<td>18709380</td>
<td>COPY OF BUG 18670251 - COPY OF 18640834 : SCALAR IMD OPTIMIZATION: PREVIOUS MSRM</td>
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<tr>
<td>18748277</td>
<td>COPY OF BUG 18723369 - REMAP MOST RECENT MSRM DTDM TO CLOB IN REGIST</td>
</tr>
<tr>
<td>18757682</td>
<td>COPY OF BUG 18703243 - OPTIMIZE THE CALL OF SQL TO DETERMINE LATEST C</td>
</tr>
<tr>
<td>18760202</td>
<td>COPY OF BUG 18590296 - PERFORMANCE: READ REMARK ALGORITHM PERFORMANCE</td>
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<tr>
<td>18781316</td>
<td>COPY OF 19345739 - 75075 DIRECT CHANNELS ON USAGE SUBSCRIPTIONS</td>
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<tr>
<td>18796781</td>
<td>COPY OF BUG 18664813 - COPY OF 18632268 - LOADING IMD WITH OSB PERFORMANCE</td>
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<tr>
<td>18797536</td>
<td>COPY OF 18742153 - COPY OF 18722047 - IMPLEMENT CACHING ON DEVICE CONFIGURATION</td>
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<tr>
<td>18816141</td>
<td>COPY OF 17243837 - FACTOR CHAR VALUES ARE NOT DISPLAYED IN EDIT MODE</td>
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<td>18819112</td>
<td>BUG 18755681 - DEVICE EVENT DATE/TIME IS SHIFTED WHEN DEVICE EVENT SEEDER RE-PRO</td>
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<td>18823031</td>
<td>COPY OF 18823008 - COPY OF 18775049 - NULLIFY INSTALL EVENT HASH MAP ON DEVICE</td>
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<td>18835794</td>
<td>COPY OF 17059401 - SP SHOULD HAVE VALIDATION FOR DISCONNECT LOCATION IF SOURCE S</td>
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<td>18835828</td>
<td>COPY OF 18813630 - AMR OPTIMIZATION: ADD ELEMENT MOST RECENT MEASUREMENT DATE/TI</td>
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<td>18855625</td>
<td>VALIDATION ERROR MESSAGE MUST BE DISPLAYED UNDER MAP HEADER.</td>
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<td>18867477</td>
<td>COPY OF 18554236 - COPY OF 18537170 - ADD EXCLUDED MEASUREMENT CONDITIONS UNDER</td>
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<td>18870370</td>
<td>MEASUREMENT LOG DOESN'T DISPLAY CHANGES WHEN ENTITY IS MODIFIED MULTIPLE TIMES</td>
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<td>18898077</td>
<td>PERFORMANCE: MISSING INDEX ON D1_SP LEADS TO FULL SCANS WHEN RUNNING D1-CSPSR</td>
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<tr>
<td>18910152</td>
<td>COPY OF 18590387 - ADD JOIN IN SQL WITH LIFECYCLE BO IN AGGREGATION BATCH</td>
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<td>18961183</td>
<td>COPY OF 18958363 - DUPLICATING SECURITY GROUP FAILS DUE TO IMPROPER ACCESS MODE</td>
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<td>18978466</td>
<td>ENABLE OPTIONAL EFFECTIVE-DATED CHARACTERISTICS ON MO</td>
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<td>19017978</td>
<td>COPY OF 18947146 - PERFORMANCE ISSUE ON 360 VIEW CAUSED BY ZONE D1-MSRMTS QUERY</td>
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<td>19047299</td>
<td>COPY OF 18553026 - POPULATE LAST_UPDATE_DTTM FOR IMD AND MEASUREMENT TABLES TO S</td>
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<td>19048286</td>
<td>COPY BUG: SGG-NMS: DEVICE EVENT NOTIFICATION AUTOMATICALLY USES STANDARD TIME IN</td>
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<td>19051951</td>
<td>COPY OF 18956872 - INACTIVE USAGE SUBSCRIPTION RETURNS DEFAULT FACTOR VALUE AND</td>
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<td>19058202</td>
<td>PERFORMANCE: MDM ONLINE PERFORMANCE ISSUES RELATED TO UNBOUNDED ZONE SQL STMTS</td>
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<td>DEVICE HISTORY ZONE ON SERVICE POINT RETAINS DEVICE ID ON FILTER INCORRECTLY</td>
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<td>19058320</td>
<td>CHANGE THE FORMAT OF OUCSS SP/DEVICE INFO - D1-SPDCINFO</td>
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<td>CHANGE ERROR MESSAGE FOR VALUE IDENTIFIERS SHORT HAND DESCRIPTION MISSING</td>
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<td>19065460</td>
<td>PERFORMANCE IMPROVEMENT FOR DEVICE EVENT INFO STRING DISPLAY</td>
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<td>19076593</td>
<td>COPY OF 19050777 - NPE FOR AUTO READ REGISTERS</td>
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<td>COPY BUG: EXTERNAL STATUS DATE TIME SHOWS IN STANDARD TIME ON UI MAP</td>
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<td>COPY OF 19168784 - INTERVAL IMD OPTIMIZATION: INTRODUCE MOST RECENT MSRMT DTTM</td>
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<td>19179504</td>
<td>COPY OF 19179435 - DUPLICATE IMD CHECK DOES NOT WORK WITH CHILD BO'S</td>
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<td>19197718</td>
<td>COPY OF 16516788 - METER EXCHANGE SYNC REQUESTS PROCESS OUT OF ORDER</td>
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<td>19225928</td>
<td>COPY OF 19190521 - PERIODIC ESTIMATION CREATING 23 HOURS OF INTERVALS WHEN 24 IS</td>
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<td>19244161</td>
<td>COPY OF 19244145 - PERFORMANCE: UNNECESSARY MC TYPE BO READ IN D1-MCINFO SCRIPT</td>
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<td>19289372</td>
<td>COPY BUG 18505416 (ADK) NEED TO ADD RETRY LOGIC TO DEVICE EVENTS</td>
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<td>19394007</td>
<td>COPY OF 19328191 - LATEST READ DATE/TIME OUT OF SYNC ON SCALAR MCS</td>
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<td>COPY OF 19448298 - COPY OF 19384770 - IMD RECORDS WITH BO D1-SYNCMDSCALAR IN ST</td>
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<td>19480276</td>
<td>COPY OF 19388605 - EXTERNAL UOM NOT BEING CONVERTED TO UOM</td>
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<td>19480289</td>
<td>COPY OF 19452851 - ADJUSTED READ DATE TIME IS NOT POPULATED AND NOT IN SYNC WITH</td>
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<td>COPY OF 19435803 - COPY OF 19403353 - MOST RECENT MSRMT DTTM ELEMENT IS NOT BEEN</td>
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<td>19511035</td>
<td>COPY OF 19314306 - COPY OF 19278517 - 360 CHARTS - PERFORMANCE - REPLACE ORDER B</td>
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<td>19522676</td>
<td>COPY OF 19259706 - SCALAR IMD PERFORMANCE ISSUES.</td>
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<td>ILM RELATED ENHANCEMENTS FOR IMD AND VEE EXCEPTION</td>
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<td>ILMRELATEDENHANCEMENTFORUSAGETRANSACTION</td>
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<td>COPY OF 19587188 - REESTIMATION ACTIVITIES ARE GOING TO DISCARDED STATUS IN ALL</td>
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<td>19644997</td>
<td>COPY BUG MDM - SEARCH FOR ACTIVITY BY NAME DOES NOT WORK</td>
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<td>COPY OF 19613463 - MULTIPLE IMDS NEEDED TO INITIATE REESTIMATION ACTIVITY</td>
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<td>19674075</td>
<td>75083 ODI-BASED BI ETL SUPPORTING OBJECTS</td>
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<td>19690453</td>
<td>COPY OF 19663054 - D1-RMCR BATCH DOES NOT COMPLETE WHEN WE HAVE RE-ESTIMATION</td>
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<td>19704523</td>
<td>COPY OF 19636581 - INCONSISTENT LOGIC IN INSTALL EVENT OVERLAPPING VALIDATION</td>
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<td>19705863</td>
<td>COPY OF 19279357 - PERFORM VEE, CALC INTERVAL CON, IMD PREVEE AND UPD LATEST DTTM</td>
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<td>19715160</td>
<td>DUPLICATE STATUS REASON DISPLAYED IN RECORD INFORMATION SECTION OF ONDEMAND READ</td>
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<td>19722729</td>
<td>COPY OF 19289737 - SCALAR IMD PROCESSING OPTIMIZATION BY DOING ENTITY READS TO R</td>
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<td>19769988</td>
<td>COPY BUG 19058976 - DEVICE EVENT DESIGN ISSUE LEADING TO SLOW ONLINE RESPONSES</td>
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<td>19770439</td>
<td>COPY OF 19624794 - TEMPLATE DEVICE DOES NOT SETUP DEPENDENT MCS</td>
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<tr>
<td>19784944</td>
<td>COPY OF 19779848 - DO NOT USE FLAG NOT PROPERLY POPULATED WHEN IMD IS CREATED MA</td>
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<tr>
<td>19789943</td>
<td>INCORRECT IMD START DATE AND MISLEADING ERROR MSG SEEN FOR REPLACEMENT IMD.</td>
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<tr>
<td>19797183</td>
<td>COPY OF 19531184 - MODIFY IMD SEEDER ALGORITHMS TO IMPROVE PERFORMANCE</td>
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<td>19818462</td>
<td>IMDQUERYPORTALLIMITIMDSEARCHONLYFOR30DAYS.</td>
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<td>19849641</td>
<td>COPY BUG - IMPLEMENT NON-BLOCKING INVOKES FOR XAI WS CALLS</td>
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<tr>
<td>19852957</td>
<td>VEE RULE CODE CAN'T BE EDITED</td>
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<td>19878715</td>
<td>COPY OF 19872569 - (SMDF) PERFORMANCE ISSUE - 360 VIEW - MEASURING COMPONENT TAB</td>
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<td>19889468</td>
<td>IMD SEEDER POPULATES INCOORECT/INSUFFICIENT RELATED OBJECTS IN PROCESSING METHOD</td>
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<td>19911255</td>
<td>D1-PAYLOADEXTSCHEDTYPEMAINT INCLUDE REF. TO SERVICEISSUEEMONITORTYPE ELEMENT</td>
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<td>19943588</td>
<td>CMA: ENVIRONMENT REFERENCE IN MIGRATION REQUEST D1-ADMINDATA IS UNNECESSARY</td>
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<td>19987602</td>
<td>COPY 19987593 INFO STRING GENERATED BY D1-COMMINFO SHOULD SHOW COMMUNICATION TY</td>
</tr>
<tr>
<td>19987988</td>
<td>COPY BUG 19581855 - PERFORMANCE: MODIFY ALGORITHM D1-PBSCMTOCC TO BE ENTITY BASE</td>
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<tr>
<td>20014110</td>
<td>COPY OF 19931430 - 360 MEASURING COMPONENT TAB PERFORMANCE - CHANGE BO INFO PLUG</td>
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<td>20017016</td>
<td>COPY OF 19911065 - SP NOT FOUND ERROR WHILE D2-DETERMINEESTIMATEDANDHIGHLOWSCALA</td>
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<td>20030657</td>
<td>COPY OF 20030611 - DUPLICATE RECORDS EXTRACTED D1-SPSFX BATCH WHEN QUERY ITERATO</td>
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<td>20031627</td>
<td>COPY OF 19505316 - COPY OF 19242842 - ERROR UPDATING OVERRIDE DESC ON D1-MEASURE</td>
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<td>20033997</td>
<td>COPY OF 19888393 - MANUAL IMDS AND INITIAL LOAD IMD FROM UPLOAD TOOL DO NOT HAVE</td>
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<tr>
<td>20048413</td>
<td>COPY OF 19618630 - UNNECESSARY 'H' SHOWN ON THE SERVICE PROVIDER EDIT PAGE</td>
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<td>20062491</td>
<td>COPY OF 20012598 - PERFORMANCE: SEEDER PROCESSING QUERY IMPROVEMENT</td>
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<td>COPY OF 20047298 - PERFORMANCE: D1-CURRENTCONTEXTS UNNECESSARY FKREF CALLS.</td>
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<td>COPY OF 19987600 - INDEX D1T304S2 ON D1_INIT_MSRMT_DATA TABLE NEEDS TO BE REINST</td>
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<td>20091235</td>
<td>COPY OF BUG 20025775 - IMD AUDITING ALGORITHM DOES NOT LOG CONDITION CODE CHANG</td>
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<tr>
<td>20125939</td>
<td>COPY OF BUG 19858244 - GUI PAGE FOR COMMAND REQUEST DEVICE CHECK IS NOT IN ALIG</td>
</tr>
<tr>
<td>20126999</td>
<td>COPY OF 19826587 - PERFORMANCE : INTRODUCE CACHING OF PROCESSING METHOD CALL</td>
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<tr>
<td>20201747</td>
<td>COPY OF 19641350 -D1-SYNCIMDSCALAR - ESTIMATED IMD NOT REEVALUATED FOR ADDITIVE</td>
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<tr>
<td>20215960</td>
<td>USE MOST RECENT MEASUREMENT DATETIME TO EVALUATE RELATED MC MEASUREMENT EXISTANC</td>
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<tr>
<td>20267563</td>
<td>COPY OF 19624908 - DEVICE CONFIG EFF. DATE TIME SET TO TEMPLATE DEVICE EFF. DATE</td>
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<tr>
<td>20287757</td>
<td>SPR DISPLAY UI SHOWS ERRONEOUS ELEMENTS</td>
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<td>20306094</td>
<td>MEASUREMENT ZONE IN MC AND 360 VIEW PAGES IS REGRESSED BY ILM ARCHIVED IMD.</td>
</tr>
<tr>
<td>20315712</td>
<td>UPDATE DETAIL DESCRIPTION OF ALGORITHM D1-CREDMCC</td>
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Appendix H

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- Notice Concerning Usage of Concurrent
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