Oracle Utilities Meter Data Management

Installation Guide

Release 2.1.0 Service Pack 3

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Oracle Utilities Meter Data Management Installation Guide

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Preface

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

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*

- *Oracle Utilities Application Framework Administration Guide*

Supplemental Documents

- *Oracle Utilities Meter Data Management Batch Server Administration Guide*
- *Oracle Utilities Meter Data Management Server Administration Guide*
- *Oracle Utilities Meter Data Management Security Guide*

Conventions

The following text conventions are used in this document:

Convention	Meaning
boldface	Boldface type indicates graphical user interface elements associated with an action, or terms defined in text or the glossary.
italic	Italic type indicates book titles, emphasis, or placeholder variables for which you supply particular values.
monospace	Monospace type indicates commands within a paragraph, URLs, code in examples, text that appears on the screen, or text that you enter.

Acronyms

The following acronyms and terms are used in this document:

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

Acronym	Definition
OIM	Oracle Identity Management
ONS	Oracle Notification Service
Oracle RAC FCF	Oracle Real Application Clusters Fast Connection Failover
RMI	Remote Method Invocation
SOAP	Simple Object Access Protocol
SOA	Service-oriented architecture
SPLEBASE	The location where the application will be installed.
SPLOUTPUT	This location is used for storing batch log files and output from batch jobs
WAR	Web application Archive
WAS	WebSphere
WASND	WebSphere Network Deployment
WLS	WebLogic
XAIApp	XML Application Integration

Chapter 1

Introduction

This chapter provides an overview of the installation of Oracle Utilities Meter Data Management.

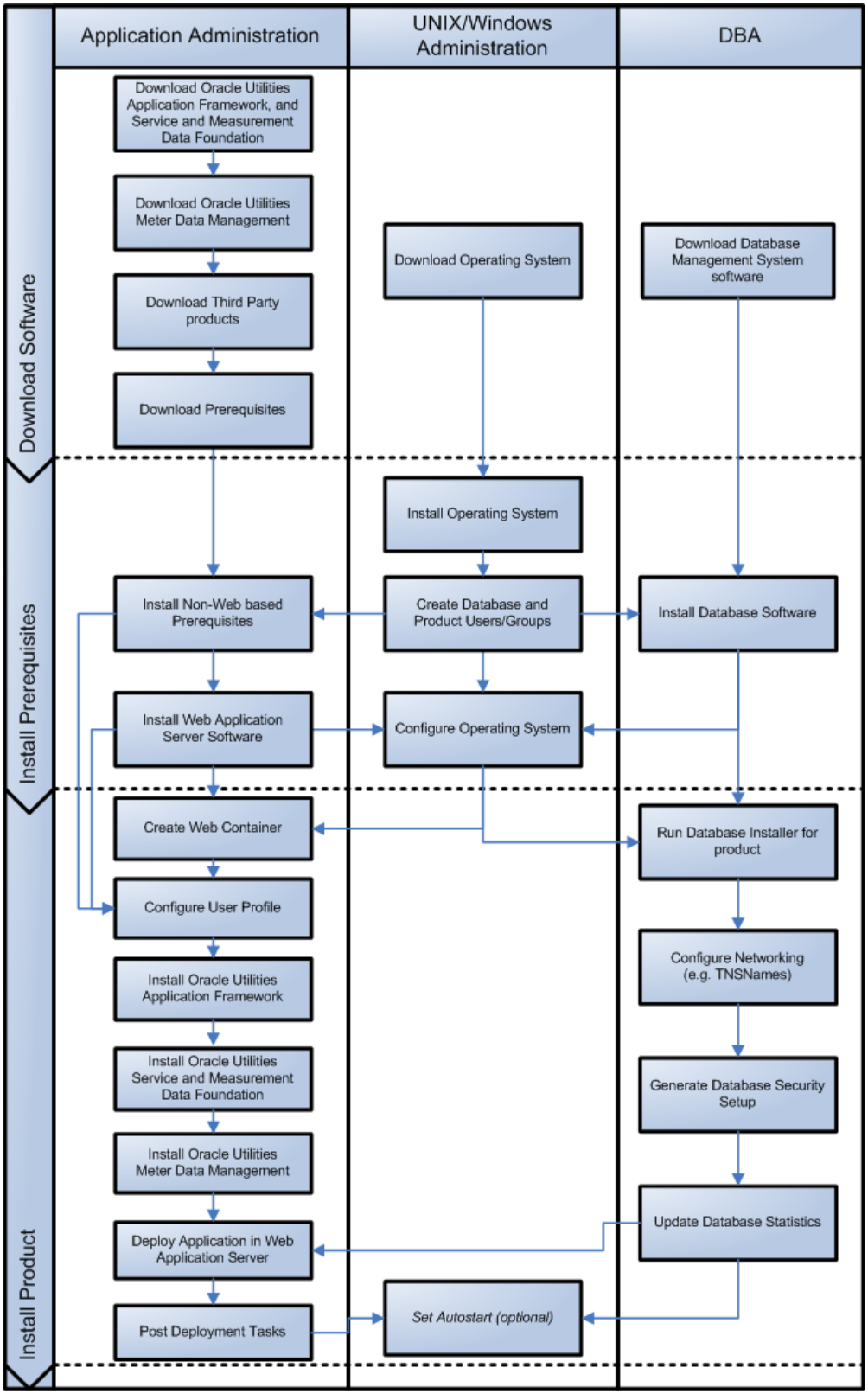
Installation Overview

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.

Media Pack Components

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

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.

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

* 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

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

* 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:

Location	Size	Usage
$SPLEBASE	5 GB minimum	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.
$SPLAPP	2 GB minimum	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.

Location	Size	Usage
Location of the application Web work files on the Web servers	1.5 GB minimum	This location is used by the various Web server vendors to expand the application. It should be considered when installing these products. Refer to the individual Web server documentation to determine the location of the temporary files.
Installation temporary area	4 GB	The application gets installed from this location. You need enough space to uncompress the files and install the application.
Oracle data area	4 GB minimum	This location is where the Oracle database data files are stored. The size of this space should be based on the requirements of the production environment. For an initial or demo database install 4 GB should be sufficient.

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.

Chapter 3

Planning the Installation

This chapter provides information for planning an Oracle Utilities Meter Data Management installation, including:

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 follow 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

Operating System	Chipset	Application Server
AIX 7.1 TL01	POWER 64-bit	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

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

Description	Default Value	Customer Defined Value
Oracle Utilities Meter Data Management Administrator User ID	cissys	
Oracle Utilities Meter Data Management User Group	cisusr	

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:

User	Group	Description
cissys	cisusr	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 and files within the application.
cisadm	cisusr	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
cisoper	-------	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.

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.

IBM Java Software Development Kit version 6.0 SR15 64-bit, IBM SDK, Java Technology Edition, Version 7.1

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

```
http://sourceforge.net/projects/hibernate/files/hibernate4/
```

   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
copycopy 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:

```
<$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>}
```

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:

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

   Edit the property lines as follows:

   - 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 sections 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.-d, 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

Operating System	Chipset	Application Server
Oracle Enterprise Linux 5.x, 6.x, 7.x (64-bit) (based on Red Hat Enterprise Linux (64-bit))	x86_64	Oracle WebLogic 11gR1 (10.3.6) or Oracle WebLogic 12c (12.1.3.0+) 64-bit version

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:

Description	Default Value	Customer Defined Value
Oracle Utilities Meter Data Management Administrator User ID	cissys	
Oracle Utilities Meter Data Management User Group	cisusr	

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:

User	Group	Description
cissys	cisusr	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 and files within the application.
cisadm	cisusr	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
cisoper	-------	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.

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

```
http://sourceforge.net/projects/hibernate/files/hibernate4/
```

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+).

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

Operating System	Chipset	Application Server
Oracle Solaris 11 (64-bit)	SPARC	Oracle WebLogic 11gR1 (10.3.6) or Oracle WebLogic 12c (12.1.3.0+) 64-bit version

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:

Description	Default Value	Customer Defined Value
Oracle Utilities Meter Data Management Administrator User ID	cissys	
Oracle Utilities Meter Data Management User Group	cisusr	

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:

User	Group	Description
cissys	cisusr	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 and files within the application.
cisadm	cisusr	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
cisoper	-------	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.

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

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

   ```
   http://sourceforge.net/projects/hibernate/files/hibernate4/
   ```

   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

Operating System	Chipset	Application Server
Windows Server 2008/2012 R2 (64-bit)	x86_64	Oracle WebLogic 11gR1 (10.3.6) or Oracle WebLogic 12c (12.1.3.0+) 64-bit version

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>
   ```

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

   ```
   http://sourceforge.net/projects/hibernate/files/hibernate4/
   ```

   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+).

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.
6. Perform post-installation tasks.

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

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

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 V4.2.0.3.0 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 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:                         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:

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

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 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.
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
   ```

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

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

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
   ```

   Note: This above command is only applicable for WebSphere 8.5.5 on AIX7.1.

   ```
   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
       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):
```

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:

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 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 Administrator user ids, you must complete each of the following installation steps for each Administrator userid.

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 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 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:

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

   Windows:

   ```
   %SPLEBASE%\bin\splenviron.cmd -e %SPLENVIRON%
   ```
3. Stop the environment if it is 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.

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>/consoleAfter the Upgrade

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.

Chapter 7

Additional Tasks

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:

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://<host name>:<port>/<Web Context>/cm/<customer_logo_file>.gif

For UNIX: http://<host name>:<port>/<Web Context>/cm/<customer_logo_file>.gif.

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.

Appendix A

Installation Menu Functionality Overview

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:
```

Menu Option	Name Used in Documentation	Usage	Customer Install Value
Oracle Client Home Directory	ORACLE_CLIENT_HOME	The home directory of the Oracle Client. The application will use the Perl included under this Oracle Client. Example Location: /oracle/client/product/11.2.0.3	

Menu Option	Name Used in Documentation	Usage	Customer Install Value
Web Java Home Directory	JAVA_HOME	Java home that will be used by the web application server. Example Location: /ouaf/java/jdk1.6.0_65	
* Child JVM Home Directory	CHILD_JVM_JAVA_HOME	Java home that will be used by the child java process that handles COBOL related requests. Example Location: /ouaf/java/jdk1.6.0_20	
* COBOL Home Directory	COBDIR	COBOL installation location directory. Example Location: /opt/SPLcobAS51WP6	
Hibernate JAR Directory	HIBERNATE_JAR_DIR	Location on the disk where the hibernate410Final.jar is installed.	
*ONS JAR Directory	ONS_JAR_DIR	Location on the disk where the ons-11.2.0.2.jar file is installed. **Required for Oracle RAC installation. See the Server Administration Guide for more information.	
Database Home Directory	DATABASE_HOME	Location on the disk where database client is installed for your particular installation. Example Location for Oracle Database: /oracle/client/product/11.2.0.1 Note: This value will be the same as the previously entered for Oracle.	
Web Application Server Home Directory	WEB_SERVER_HOME	Location on the disk where the application server is installed. Example Location: WebLogic: /ouaf/middleware/wlserver_10.3 To validate the home directory, check if the following jar files exist in the appropriate path: $WEB_SERVER_HOME/server/lib/weblogic.jar %WEB_SERVER_HOME%\server\lib\weblogic.jar	
* ADF Home Directory	ADF_HOME	Location on the disk where ADF is installed. Example Location: /ouaf/jdev11_1_1_4	

Menu Option	Name Used in Documentation	Usage	Customer Install Value
OIM OAM Enabled Environment	OPEN_SPML_ENABLED_ENV	Denotes if an environment will be integrating with Oracle Identity Manager for user propagation. Valid values: true false Defaulted value: 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
      Store Type:                                          JCEKS
      Alias:                                               ouaf.system
      Alias Key Algorithm:                                 AES
      Alias Key Size:                                      128
      HMAC Alias:                                        ouaf.system.hmac
      Padding:                                             PKCS5Padding
      Mode:                                                CBC
```

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

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:
```

Menu Option	Name Used in Documentation	Usage	Customer Install Value
Environment Mount Point	<SPLDIR>	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 <SPLENVIRON> below for more information on how this mount point is used.	
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>	

Menu Option	Name Used in Documentation	Usage	Customer Install Value
Environment Name	<SPLENVIRON>	A descriptive name to be used as both a directory name under the mount point <SPLDIR> and an environment descriptor. This value typically identifies the purpose of the environment. For example, DEV01 or CONV. On installation a directory <SPLDIR>/<SPLENVIRON> is created, under which the Oracle Utilities Application Framework and Oracle Utilities Meter Data Management software resides. When multiple environments are set up on the machine you will typically have directories such as: /ouaf/DEV01/.... /ouaf/CONV/.... Each of these contains a complete version of the Oracle Utilities Application Framework and Oracle Utilities Meter Data Management. Note: Later in the installation process, the splenviron.sh (splenviron.cmd) script will set $SPLEBASE (%SPLEBASE%) environment variable to point to <SPLDIR>/<SPLENVIRON>	
Database Type	<CMPDB>	Type of a database to connect an environment to. Valid values: oracle: Oracle Defaulted value: oracle Note: Not all database types are supported on all platforms; refer to the Supported Platforms section for details.	oracle
Web Application Server Type	<SPLWAS>	A web application server for the environment to be used. The following value must be selected: Valid values: WLS: WebLogic WAS: WebSphere WASND: WebSphere ND Note: Not all web application servers are supported on all platforms; refer to Supported Platforms section for details.	

Menu Option	Name Used in Documentation	Usage	Customer Install Value
Installation Application Viewer Module	<WEB_ISAPPVIEWER>	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. Valid values: true: Application Viewer module will be installed. false: Application Viewer module will not be installed. Defaulted value: true 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.	

Environment Description

```
1. Environment Description
       Environment Description:
```

Menu Option	Name Used in Documentation	Usage	Customer Install Value
Environment Description	DESC	This is a free form text field to describe the purpose of the environment.	

WebLogic Business Application Server Configuration

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

```
2. Business Application Server Configuration
      Business Server Host:                          <machine_name>
      WebLogic Server Name:                            myserver
      Business Server Application Name:                SPLService
      MPL Admin Port Number:
      MPL Automatic startup:                           false
```

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

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
```

Menu Option	Name Used in Documentation	Usage	Customer Install Value
Web Server Host	WEB_WLHOST	The host name on which the web application server resides. Default value: <current server name>	
Web Server Port Number	WEB_WLPORT	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. Example value: 6500	
Web Context Root	WEB_CONTEXT_ROOT	A context root name that allows customers to run multiple instances of web application on the same server. Default value: ouaf	
WebLogic JNDI User ID	WEB_WLSYSUSER	The user ID the application uses to connect to the EJB component through JNDI. This is the EJB container user ID. Note: The required value for an initial installation is "system". This is a security value.	
WebLogic JNDI Password	WEB_WLSYSPASS	The password the application uses to connect to the EJB component through JNDI Note: The required value for an initial installation is "ouafadmin". This value will be saved in encrypted format. This is a security value.	

Menu Option	Name Used in Documentation	Usage	Customer Install Value
WebLogic Admin System User ID	WLS_WEB_WLSYSUSER	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.	
WebLogic Admin System Password	WLS_WEB_WLSYSPASS	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.	
WebLogic Server Name	WEB_WLS_SVRNAME	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". .	
Web Server Application Name	WEB_APP	The name of the web application server. Default value: SPLWeb Note: For an initial installation, use the default value of "SPLWeb".	
Application Admin User ID	WEB_SPLUSER	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.	

Menu Option	Name Used in Documentation	Usage	Customer Install Value
Application Admin Userid Password	WEB_SPLPASS	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.	
Expanded Directories	WEB_ISEXPANDED	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	
Application Viewer Module	WEB_ISAPPVIEWER	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	

Database Configuration

```
4. Database Configuration
       Web Application Database User ID:
       Web Application Database Password:
       MPL Database User ID:
       MPL Database Password:
       XAI Database User ID:
       XAI Database Password:
       Batch Database User ID:
       Batch Database Password:
       Database Name
       Database Server:
       Database Port:
       ONS Server Configuration:
       Database Override Connection String:
      Oracle Client Character Set NLS_LANG:  AMERICAN_AMERICA.AL32UTF8
```

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

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

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
       Batch RMI Port:
       Batch Mode:                                          CLUSTERED
       Coherence Cluster Name:
       Coherence Cluster Address:
       Coherence Cluster Port:
       Coherence Cluster Mode:                              dev
```

Menu Option	Name Used in Documentation	Usage	Customer Install Value
Batch RMI Port	BATCH_RMI_PORT	Unique port used by the Batch RMI	
Batch Mode	BATCH_MODE	Valid values: CLUSTERED or DISTRIBUTED Default value: CLUSTERED Note: CLUSTERED is currently the only supported mode for production environments.	
Coherence Cluster Name	COHERENCE_CLUSTER_NAME	Unique name for the batch CLUSTER Note: Value is required when batch mode is CLUSTERED.	
Coherence Cluster Address	COHERENCE_CLUSTER_ADDRESS	Unique multicast address. Note: Value is required when batch mode is CLUSTERED.	
Coherence Cluster Port	COHERENCE_CLUSTER_PORT	Unique port for the batch CLUSTER Note: Value is required when batch mode is CLUSTERED.	
Coherence Cluster Mode	COHERENCE_CLUSTER_MODE	Valid values: dev (Development) prod (Production) Default value: dev	

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
       Online JVM Batch Server Enabled:                    false
       Online JVM Batch Number of Threads:                 5
       Online JVM Batch Scheduler Daemon Enabled:          false
       JMX Enablement System User ID:
       JMX Enablement System Password:
       RMI Port number for JMX Business:
       RMI Port number for JMX Web:
       GIS Service Running on the same Web Server:         true
       GIS Service URL:
       GIS WebLogic System User ID:
       GIS WebLogic System Password:
       Online Display Software Home:
```

Menu Option	Name Used in Documentation	Usage	Customer Value Install
WebSphere Deployment Manager Host Name	WASND_DMGR_HOST	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.	
Online JVM Batch Server Enabled	BATCHENABLED	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.	

Menu Option	Name Used in Documentation	Usage	Customer Value Install
Online JVM Batch Number of Threads	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.	
Online JVM Batch Scheduler Daemon Enabled	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.	
JMX Enablement System User ID	BSN_JMX_SYSUSER	Example value: user This value is optional.	
JMX Enablement System Password	BSN_JMX_SYSPASS	Example value: admin Note: This value will be saved in encrypted format. This value is optional.	
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.	

Menu Option	Name Used in Documentation	Usage	Customer Value Install
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

```
51. Advanced Environment Memory Configuration
       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
       Web Application Additional Options:
       Ant Min Heap Size:                                  200
       Ant Max Heap Size:                                  800
       Ant Additional Options:
       Thread Pool Worker Java Min Heap Size:              512
       Thread Pool Worker Java Max Heap Size:              1024
       Thread Pool Worker Java Max Perm Size:              768
       Thread Pool Worker Additional Options:
       Additional Runtime Classpath:
       Release Cobol Thread Memory Options:
-Dspl.runtime.cobol.remote.releaseThreadMemoryAfterEachCall=...
```

Menu Option	Name Used in Documentation	Usage	Customer Install Value
JVM Child Memory Allocation	JVMMEMORYARG	Heap size for the JVM Child. Default value: 512	
JVM Child Additional Options	JVM_ADDITIONAL_OPT	Additional JVM options that are passed to the Child JVM. Note: For WebLogic installation only.	
Web Application Java Initial Heap Size	WEB_MEMORY_OPT_MIN	Initial heap size for the application server. Default value: 1024 Note: For WebLogic installation only.	
Web Application Java Max Heap Size	WEB_MEMORY_OPT_MAX	Maximum heap size for the application server. Default value: 1024 Note: For WebLogic installation only.	
Web Application Java Max Perm Size	WEB_MEMORY_OPT_MAXPERMSIZE	Maximum Perm Size for the application server. Default value: 500MB (Linux, Solaris) 300MB (Windows) Note: For WebLogic installation only.	

Menu Option	Name Used in Documentation	Usage	Customer Install Value
Web Application Additional Options	WEB_ADDITIONAL_OPT	Additional options that will be passed in to the web application server JVM. Optional Entry. Note: For WebLogic installation only.	
Ant Min Heap Size	ANT_OPT_MIN	Minimum Heap Size passed to ANT JVM. Default value: 200	
Ant Max Heap Size	ANT_OPT_MAX	Maximum Heap Size passed to ANT JVM. Default value: 800	
Ant Additional Options	ANT_ADDITIONAL_OPT	Additional options that are passed into the ANT JVM.	
Thread Pool Worker Java Min Heap Size	BATCH_MEMORY_OPT_MIN	Minimum heap size passed to the Thread Pool Worker. Default value: 512	
Thread Pool Worker Java Max Heap Size	BATCH_MEMORY_OPT_MAX	Maximum heap size passed to the Thread Pool Worker. Default value: 1024	
Thread Pool Worker Java Max Perm Size	BATCH_MEMORY_OPT_MAXPERMSIZE	Maximum perm size passed to the Thread Pool Worker Default value: 768	
Thread Pool Worker Additional Options	BATCH_MEMORY_ADDITIONAL_OPT	Additional Memory Options passed into the Thread Pool Worker. This is an optional free form field.	
Additional Runtime Classpath	ADDITIONAL_RUNTIME_CLASSPATH	Additional Classpath Options passed in when starting the WebLogic JVM Note: For WebLogic installation only. This is an optional value.	

Menu Option	Name Used in Documentation	Usage	Customer Install Value
Release Cobol Thread Memory Options	REL_CBL_THREAD_MEM	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. Valid values: true, false Default value: false	

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
```

Menu Option	Name Used in Documentation	Usage	Customer Install Value
Web Application Cache Settings	WEB_L2_CACHE_MODE	Default Value: off Valid Values: off read_write read_only	
Socket Location Folder	SPLJVMSOCKET	Folder where the socket files will be created (splSock*). If empty, the application will use the following default: [SPLEBASE]/runtime	
WebLogic SSL Port Number:	WEB_WLSSPORT	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. The Secure Sockets implementation is disabled in the default configuration. For Production additional actions are required. Do NOT run Production with Demo certificates Refer to the WLS installation guide - Configuring Identity and Trust When this value is populated http will be disabled. Example value: 6501 Note: For WebLogic installation only. This value is optional.	

Menu Option	Name Used in Documentation	Usage	Customer Install Value
WebLogic Console Port Number	WLS_ADMIN_PORT	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. Note: For WebLogic installation only. This value is optional.	
WebLogic Additional Stop Arguments	ADDITIONAL_STOP_WEBLOGIC	WebLogic Additional Stop Arguments This value is required when running the WebLogic Console Port Number and the Application using SSL. Example values: -Dweblogic.security.TrustKeyStore=DemoTrust -Dweblogic.security.TrustKeystoreType=CustomTrust Note: For Production additional actions are required. Do NOT run Production with Demo certificates Refer to the WLS installation guide - Configuring Identity and Trust Note: For WebLogic installation only. This is an optional value.	
Batch Cluster URL	WEB_BATCH_CLUSTER_URL	Example: service:jmx:rmi:///jndi/rmi://[host]:[TPW JMX port]/oracle/ouaf/batchConnector	
StripHTMLComments: false	STRIP_HTML_COMMENTS	Stripping HTML (and JavaScript) comments will increase the security of the system. Default value: false Valid values: true, false	
Authentication Login Page Type	WEB_WLAUTHMETHOD	Specifies which authentication mode should be used. To switch off OUAF Login Page enter: BASIC Valid values: FORM, BASIC Default value: FORM	
Web Form Login Page	WEB_FORM_LOGIN_PAGE	Specify the jsp file used to login into the application. Default value: /loginPage.jsp	

Menu Option	Name Used in Documentation	Usage	Customer Install Value
Web Form Login Error Page	WEB_FORM_LOGIN_ERROR_PAGE	Specify the jsp file used when there is an error when logging into the application. Default value: /formLoginError.jsp	
Web Security Role	WEB_PRINCIPAL_NAME	Specify the name of the security role. Default value: cisusers	
Web Principal Name	WEB_PRINCIPAL_NAME	Specify the name of a principal that is defined in the security realm. Default value: cisusers	
This is a development environment	WEB_ISDEVELOPMENT	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 security 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	
Preload All Pages on Startup	WEB_PRELOADALL	This controls if the pages should be pre-loaded during the startup of the application or not. Valid values: true, false Default value: false	
Maximum Age of a Cache Entry for Text	WEB_MAXAGE	Default value: 28800	
Maximum Age of a Cache Entry for Images	WEB_MAXAGEI	Default value: 28800	
JSP Recompile Interval (s)	WEB_wlpageCheckSeconds	Default value: 43200	

Advanced Web Application Configuration

```
53. OIM Configuration Settings
     SPML SOAP Trace Setting:                                  false
     SPML IDM Schema Name:                                     F1-IDMUser
    SPML OIM Name Space:      http://xmlns.oracle.com/OIM/provisioning
     SPML OIM Enclosing Element:                               sOAPElement
```

Menu Option	Name Used in Documentation	Usage	Customer Install Value
SPML SOAP Trace Setting	OIM_SPML_SOAP_DEBUG_SETTING	Name of Oracle Identity Manager library for debug Default value: false Valid values: true, false	
SPML IDM Schema Name	OIM_SPML_UBER_SCHEMA_NAME	Name of Oracle Identity Manager library for schema Defautlt value: F1-IDMUser	
SPML OIM Name Space	OIM_SPML_NAME_SPACE	Default Namespace for Oracle Identity Manager integration Default value: http://xmlns.oracle.com/OIM/provisioning	
SPML OIM Enclosing Element	OIM_SPML_SOAP_ELEMENT	Default top level SOAP Element name for Oracle Identity Manager integration Default value: sOAPElement	

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
      OSB Home:
      OSB Host Server:                                    <machine name>
      OSB Port Number:
      JDBC URL for database:
      Database User Name:
      Database Password:
      JNDI name for datasource:                    wlsbjmsrpDataSource
      Mount point for OSB files:                    /spl/sploutput/osb
      OSB Weblogic User Name:
      OSB Weblogic User Password:
```

Menu Option	Name Used In Documentation	Usage	Customer Install Value
OSB Home	OSB_HOME	Location of the directory where OSB is installed. For Example: Unix: /middleware/Oracle_OSB1 Windows: C:\middleware\Oracle_OSB1	
OSB Host Server	OSB_HOST	Host name of the server where the OSB WebLogic server instance will run. Default Value: <current server name>	
OSB Port Number:	OSB_PORT_NUMBER	Admin port number of the OSB WebLogic server instance. This is the port number that is used as a part of the OSB URL request to connect to the host.	

Menu Option	Name Used In Documentation	Usage	Customer Install Value
JDBC URL for database	DBURL_OSB	The JDBC URL of the database where the OSB schemas are located. For Example: jdbc:oracle:thin:@localhost:1521:OSBDB This value is required for the example WebLogic server instance.	
Database User Name	DBUSER_OSB	OSB database user ID. This value is required for the example WebLogic server instance.	
Database Password	DBPASS_OSB_WLS	OSB database password. This value is required for the example WebLogic server instance.	
JNDI name for datasource	JNDI_OSB	JNDI name for accessing the OSB database Note: Retain the default value. Default Value: wlsbjmsrpDataSource.	
Mount point for OSB files	OSB_LOG_DIR	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/<ENVIRONMENT NAME>/ Default Value: /spl/sploutput/osb	
OSB WebLogic User Name	OSB_USER	WebLogic JMS user ID for the WebLogic instance where the OSB adapter will be deployed. Note: For the example OSB WebLogic instance this should be specified as **weblogic.**	
OSB WebLogic User Password	OSB_PASS_WLS	WebLogic JMS user password for the WebLogic instance where the OSB adapter will be deployed. Note: For the example OSB WebLogic instance this should be specified as **weblogic123.**	

WebSphere OSB Configuration

```
8. OSB Configuration
      OSB Home:
      OSB Host Server:                                  <machine name>
      OSB Port Number:
     Mount point for OSB files:                      /spl/sploutput/osb
```

Menu Option	Name Used in this Documentation	Usage	Customer Install Value
OSB Home	OSB_HOME	Location of the directory where OSB is installed. For Example: **Unix:** /middleware/Oracle_OSB1 **Windows:** C:\middleware\Oracle_OSB1	
OSB Host Server	OSB_HOST	Host name of the server where the OSB WebLogic server instance will run. Default Value: <current server name>	
OSB Port Number:	OSB_PORT_NUMBER	Admin port number of the OSB WebLogic server instance. Note: This also specifies the port number on which the example WebLogic server will listen.	
Mount point for OSB files	OSB_LOG_DIR	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/<ENVIRONMENT NAME>/ Default Value: /spl/sploutput/osb	

WebLogic SOA Configuration

```
9. SOA Configuration
     SOA Home:
     SOA Host Server:                                <machine name>
     SOA Port Number:
     JDBC URL for database:
     Database User Name (SOAINFRA):
     Database Password (SOAINFRA):
     Database User Name (MDS):
     Database Password (MDS):
     Database User Name (ORASDPM):
     Database Password (ORASDPM):
     Specify the path for XAI/IWS Service
```

Menu Option	Name Used in this Documentation	Usage	Customer Install Value
SOA Home	SOA_HOME	Location of the directory where SOA is installed. For Example: Unix: /middleware/Oracle_SOA1 Windows: C:\middleware\Oracle_SOA1	
SOA Host Server	SOA_HOST	Host name of the server where the SOA WebLogic server instance will run. Default Value: <current server name>	
SOA Port Number:	SOA_PORT_NUMBER	Admin port number of the SOA WebLogic server instance. This is the port number that is used as a part of the SOA URL request to connect to the host.	
JDBC URL for database	DBURL_SOA	The JDBC URL of the database where the SOA schemas are located. For Example: jdbc:oracle:thin:@localhost:1521:SOADB This value is required for the example WebLogic server instance.	
Database User Name (SOAINFRA)	DBUSER_SOAINFRA	SOAINFRA database user ID. This value is required for the example WebLogic server instance.	
Database Password (SOAINFRA)	DBPASS_SOAINFRA	SOAINFRA database password. This value is required for the example WebLogic server instance.	

Menu Option	Name Used in this Documentation	Usage	Customer Install Value
Database User Name (MDS)	DBUSER_MDS	MDS database user ID. This value is required for the example WebLogic server instance.	
Database Password (MDS)	DBPASS_MDS	MDS database password. This value is required for the example WebLogic server instance.	
Database User Name (ORASDPM)	DBUSER_ORASDPM	ORASDPM database user ID. This value is required for the example WebLogic server instance.	
Database Password (ORASDPM)	DBPASS_ORASDPM	ORASDPM database password. This value is required for the example WebLogic server instance.	
Specify the path for XAI/ IWS Service	WEB_SERVICE_PATH	Path for XAI/IWS Service. This value is required to choose between XAI/IWS Services	

WebSphere SOA Configuration

```
9. SOA Configuration
       SOA Home:
      SOA Host Server:                                    <machine name>
       SOA Port Number:
```

Menu Option	Name Used in this Documentation	Usage	Customer Install Value
SOA Home	SOA_HOME	Location of the directory where SOA is installed. For Example: **Unix:** /middleware/Oracle_SOA1 **Windows:** C:\middleware\Oracle_SOA1	
SOA Host Server	SOA_HOST	Host server where SOA WebLogic server instance will run. Default Value: <current server name>	
SOA Port Number:	SOA_PORT_NUMBER	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.	

WebLogic SOA Configuration Plan

```
10. SOA Configuration Plan (MDF)
      MDF Bulk Request Callback URL:
      MDF Headend http connection timeout:                    50000
      MDF Headend http read timeout:                         500000
      MDF SOA Request Queue JNDI Name:          queue/BulkRequestQueue
      MDF SOA Notify Queue JNDI Name:           queue/BulkNotifyQueue
      MDF SOA Commnad Queue JNDI Name:          queue/BulkCommandQueue
      SGG-NMS Test Harness Partition Name:      SGG-NMS Test
```

Menu Option	Name Used In Documentation	Usage	Customer Install Value
MDF Bulk Request Callback URL	D1_BULK_REQUEST_CALLBACK_URL	This is the URL from the edge application that receives any fault responses in Bulk Command BPEL processing. Default value: empty	
MDF Headend http connection timeout	D1_HEADEND_HTTP_CONN_TIMEOUT	MDF Headend http connection timeout value. Default value: 50000	
MDF Headend http read timeout	D1_HEADEND_HTTP_READ_TIMEOUT	MDF Headend http read timeout value. Default value: 500000	
MDF SOA Request Queue JNDI Name	SOA_REQUEST_QUEUE_D1	MDF SOA Request Queue JNDI Name. Default Value: queue/BulkRequestQueue	
MDF SOA Notify Queue JNDI Name	SOA_NOTIFY_QUEUE_D1	MDF SOA Notify Queue JNDI Name. Default Value: queue/BulkNotifyQueue	
MDF SOA Commnad Queue JNDI Name	SOA_COMMAND_QUEUE_D1	MDF SOA Commnad Queue JNDI. Default Value: queue/BulkCommandQueue	
SGG-NMS TestHarness Partition Name	SOA_PARTITION_D1	SGG-NMS TestHarness Partition Name Default Value: SGG-NMS_Test	

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:
```

Menu Option	Name Used In Documentation	Usage	Customer Install Value
OSB SSL Port Enabled	OSB_SSL	To enable SSL on OSB set this as 'true' else set to 'false' Default value: false	
OSB SSL Port Number	OSB_SSL_PORT	OSB SSL Port Number.	
DemoTrust,CustomTrust	KeyStoreName	DemoTrust,CustomTrust Default value: DemoTrust	
The path and file name of the Trust Keystore	TrustKeyStoreFilePath	The path and file name of the Trust Keystore.	

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:
```

Menu Option	Name Used In Documentation	Usage	Customer Install Value
SOA Initial Heap Size	SOA_MEMORY_OPT_MIN	Initial heap size for the SOA server. Default value: 1024 Note: For WebLogic installation only.	

Menu Option	Name Used In Documentation	Usage	Customer Install Value
SOA Maximum Heap Size	SOA_MEMORY_OPT_MAX	Maximum heap size for the SOA server. Default value: 2048 Note: For WebLogic installation only.	
SOA Minimum Perm Size	SOA_MEMORY_OPT_MINPERMSIZE	Maximum Perm Size for the SOA server. Default value: 512 Note: For WebLogic installation only.	
SOA Maximum Perm Size	SOA_MEMORY_OPT_MAXPERMSIZE	Maximum Perm Size for the SOA server. Default value: 1024 Note: For WebLogic installation only.	
SOA Maximum Perm Size	SOA_JVM_ADDITIONAL_OPT	Additional options that will be passed in to the SOA server JVM. Optional Entry. Note: For WebLogic installation only.	

```
62. Advanced Memory Configurations for OSB
       OSB Initial Heap Size:          512
       OSB Maximum Heap Size:          1024
       OSB Minimum Perm Size:          512
       OSB Maximum Perm Size:          1024
       OSB Application Additional Options:
```

Menu Option	Name Used In Documentation	Usage	Customer Install Value
OSB Initial Heap Size	OSB_MEMORY_OPT_MIN	Initial heap size for the OSB server. Default value: 512 Note: For WebLogic installation only	
OSB Maximum Heap Size	OSB_MEMORY_OPT_MAX	Maximum heap size for the OSB server. Default value: 1024 Note: For WebLogic installation only.	

Menu Option	Name Used In Documentation	Usage	Customer Install Value
OSB Minimum Perm Size	OSB_MEMORY_OPT_MINPERMSIZE	Maximum Perm Size for the OSB server. Default value: 512 Note: For WebLogic installation only.	
OSB Maximum Perm Size	OSB_MEMORY_OPT_MAXPERMSIZE	Maximum Perm Size for the OSB server. Default value: 1024 Note: For WebLogic installation only.	
OSB Application Additional Options	OSB_JVM_ADDITIONAL_OPT	Additional options that will be passed in to the OSB server JVM. Optional Entry. Note: For WebLogic installation only.	

Appendix C

Common Maintenance Activities

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://<host name>:<port name>/<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.

Appendix E

Oracle Utilities Application Framework 4.2.0 Service Pack 3 (4.2.0.3.0) Fixes

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.

Bug	Description
20745796	COPY OF 18537889: HIBERNATE REFRESH AFTER RAW UPDT =>A JOIN AGAINST 1ST COLL.
20764407	XAI OPTION "XSD COMPLIANCE" NOT GETTING PICKED UP CORRECTLY
20777697	COPY OF 18534322 - PAGINATION: ROW SERIAL NUMBERS RESET UPON COLUMN SORT ON ANY
20798267	"VIEW MO" LINK ON THE BUSINESS OBJECT UI DISPLAYS AN ERROR IN MDM 2.1 SP3
20808697	UNABLE TO START WEBLOGIC 12.1.3 USING SUPPLIED TEMPLATES

Appendix F

Oracle Utilities Service and Measurement Data Foundation Fixes

The following table lists the Oracle Utilities Service and Measurement Data Foundation fixes included in this release.

Bug	Description
9811867	DYNAMIC OPTION EVENT LIST SHOULD HAVE DESC ORDER BY
14581921	DEVICE COMMISSIONING ACTIVITY UI MAP USES RC HELP (UI: D1-DEVICECOMMISSIONMAINT)
14740293	DISABLE SERVICE TYPE MAINT UI - DISCARD REASON DROPDOWN HAS NO VALUES.
15985648	DATE FILTER IS IGNORED FOR THE SIM QUERY
16365795	ABLE TO CREATE DEVICE WHEN ¿BO STATUS¿ IS SET AS ¿ACTIVE¿ AND ¿RETIREMENTDTTIM"
17557461	USAGE RULES LIST DASHBOARD ZONE LOSES CONTEXT AFTER RULE DELETION
17577230	ZONES UNECESSARILY SHIFTING LOG DATE/TIME
18595709	COPY 18595705 CAN'T CREATE MTPLE COMM TYPES W SAME COMMTYPE BO BUT DIFF COMM BO
18601815	D2-RETINSTSP RETRUNS INCORRECT VALUE FOR DVC CFG ID.
18629838	COPY OF 18503847 - CONVERT DATE TIME TO LOCAL DATE TIME BEFORE RETRIEVING IE
18684214	COPY OF 18442262 - BATCH D1-MC HAS WRONG PARAMETER FOR MAINTENANCEOBJECT
18703272	COPY OF BUG 18703248 - COPY OF BUG 18695548 - INTERVAL MEASUREMENT VALUES NOT TR
18706110	IMD OPTIMIZATION: USE ENTITY PROCESSING TO RETRIEVE INFORMATION INSTEAD OF BO.

Bug	Description
18706184	INCORRECT WORKLIST ON MC SEARCH RESULTS WHEN USING ID TYPE/VALUE CONDITION
18709380	COPY OF BUG 18670251 - COPY OF 18640834 : SCALAR IMD OPTIMIZATION: PREVIOUS MSRM
18748277	COPY OF BUG 18723369 - REMAP MOST RECENT MSRMT DTTM TO CLOB IN REGIST
18757682	COPY OF BUG 18703243 - OPTIMIZE THE CALL OF SQL TO DETERMINE LATEST C
18760202	COPY OF BUG 18590296 - PERFORMANCE: READ REMARK ALGORITHM PERFORMANCE
18781316	COPY OF 19345739 - 75075 DIRECT CHANNELS ON USAGE SUBSCRIPTIONS
18796781	COPY OF BUG 18664813 - COPY OF 18632268 - LOADING IMD WITH OSB PERFORMANCE
18797536	COPY OF 18742153 - COPY OF 18722047 - IMPLEMENT CACHING ON DEVICE CONFIGURATION
18816141	COPY OF 17243837 - FACTOR CHAR VALUES ARE NOT DISPLAYED IN EDIT MODE
18819112	BUG 18755681 - DEVICE EVENT DATE/TIME IS SHIFTED WHEN DEVICE EVENT SEEDER RE-PRO
18823031	COPY OF 18823008 - COPY OF 18775049 - NULLIFY INSTALL EVENT HASH MAP ON DEVICE
18835794	COPY OF 17059401 - SP SHOULD HAVE VALIDATION FOR DISCONNECT LOCATION IF SOURCE S
18835828	COPY OF 18813630 - AMR OPTIMIZATION: ADD ELEMENT MOST RECENT MEASUREMENT DATE/TI
18855625	VALIDATION ERROR MESSAGE MUST BE DISPLAYED UNDER MAP HEADER.
18867477	COPY OF 18554236 - COPY OF 18537170 - ADD EXCLUDED MEASUREMENT CONDITIONS UNDER
18870370	MEASUREMENT LOG DOESN'T DISPLAY CHANGES WHEN ENTITY IS MODIFIED MULTIPLE TIMES
18898077	PERFORMANCE: MISSING INDEX ON D1_SP LEADS TO FULL SCANS WHEN RUNNING D1-CSPSR
18910152	COPY OF 18590387 - ADD JOIN IN SQL WITH LIFECYCLE BO IN AGGREGATION BATCH
18961183	COPY OF 18958363 - DUPLICATING SECURITY GROPUP FAILS DUE TO IMPROPER ACCESS MODE
18978466	ENABLE OPTIONAL EFFECTIVE-DATED CHARACTERISTICS ON MO

Bug	Description
19017978	COPY OF 18947146 - PERFORMANCE ISSUE ON 360 VIEW CAUSED BY ZONE D1-MSRMTS QUERY
19047299	COPY OF 18553026 - POPULATE LAST_UPDATE_DTTM FOR IMD AND MEASUREMENT TABLES TO S
19048286	COPY BUG: SGG-NMS: DEVICE EVENT NOTIFICATION AUTOMATICALLY USES STANDARD TIME IN
19051951	COPY OF 18956872 - INACTIVE USAGE SUBSCRIPTION RETURNS DEFAULT FACTOR VALUE AND
19058202	PERFORMANCE: MDM ONLINE PERFORMANCE ISSUES RELATED TO UNBOUNDED ZONE SQL STMTS
19058223	DEVICE HISTORY ZONE ON SERVICE POINT RETAINS DEVICE ID ON FILTER INCORRECTLY
19058320	CHANGE THE FORMAT OF OUCSS SP/DEVICE INFO - D1-SPDCINFO
19059382	CHANGE ERROR MESSAGE FOR VALUE IDENTIFIERS SHORT HAND DESCRIPTION MISSING
19065460	PERFORMANCE IMPROVEMENT FOR DEVICE EVENT INFO STRING DISPLAY
19076593	COPY OF 19050777 - NPE FOR AUTO READ REGISTERS
19136617	COPY BUG: EXTERNAL STATUS DATE TIME SHOWS IN STANDARD TIME ON UI MAP
19168816	COPY OF 19168784 - INTERVAL IMD OPTIMIZATION: INTRODUCE MOST RECENT MSRMT DTTM
19179504	COPY OF 19179435 - DUPLICATE IMD CHECK DOES NOT WORK WITH CHILD BO'S
19197718	COPY OF 16516788 - METER EXCHANGE SYNC REQUESTS PROCESS OUT OF ORDER
19225928	COPY OF 19190521 - PERIODIC ESTIMATION CREATING 23 HOURS OF INTERVALS WHEN 24 IS
19244161	COPY OF 19244145 - PERFORMANCE: UNNECESSARY MC TYPE BO READ IN D1-MCINFO SCRIPT
19289372	COPY BUG 18505416 (ADK) NEED TO ADD RETRY LOGIC TO DEVICE EVENTS
19394007	COPY OF 19328191 - LATEST READ DATE/TIME OUT OF SYNC ON SCALAR MCS
19448303	COPY OF 19448298 - COPY OF 19384770 - IMD RECORDS WITH BO D1-SYNCIMDSCALAR IN ST
19480276	COPY OF 19388605 - EXTERNAL UOM NOT BEING CONVERTED TO UOM
19480289	COPY OF 19452851 - ADJUSTED READ DATE TIME IS NOT POPULATED AND NOT IN SYNC WITH

Bug	Description
19505856	COPY OF 19435803 - COPY OF 19403353 - MOST RECENT MSRMT DTTM ELEMENT IS NOT BEIN
19511035	COPY OF 19314306 - COPY OF 19278517 - 360 CHARTS - PERFORMANCE - REPLACE ORDER B
19522676	COPY OF 19259706 - SCALAR IMD PERFORMANCE ISSUES.
19582322	ILM RELATED ENHANCEMENTS FOR IMD AND VEE EXCEPTION
19598919	ILM RELATED ENHANCEMENT FOR USAGE TRANSACTION
19608685	COPY OF 19587188 - REESTIMATION ACTIVITIES ARE GOING TO DISCARDED STATUS IN ALL
19644997	COPY BUG MDM - SEARCH FOR ACTIVITY BY NAME DOES NOT WORK
19650736	COPY OF 19613463 - MULTIPLE IMDS NEEDED TO INITIATE REESTIMATION ACTIVITY
19674075	75083 ODI-BASED BI ETL SUPPORTING OBJECTS
19693052	COPY OF 19663054 - D1-RMCRR BATCH DOES NOT COMPLETE WHEN WE HAVE RE-ESTIMATION A
19704523	COPY OF 19636581 - INCONSISTENT LOGIC IN INSTALL EVENT OVERLAPPING VALIDATION
19705863	COPY OF 19279357 - PERFORMVEE, CALC INTERVAL CON, IMD PREVEE AND UPD LATEST DTTM
19715160	DUPLICATE STATUS REASON DISPLAYED IN RECORD INFORMATION SECTION OF ONDEMAND READ
19722729	COPY OF 19289737 - SCALAR IMD PROCESSING OPTIMIZATION BY DOING ENTITY READS TO R
19769488	COPY BUG 19058976 - DEVICE EVENT DESIGN ISSUE LEADING TO SLOW ONLINE RESPONS
19770439	COPY OF 19624794 - TEMPLATE DEVICE DOES NOT SETUP DEPENDENT MCS
19784944	COPY OF 19779848 - DO NOT USE FLAG NOT PROPERLY POPULATED WHEN IMD IS CREATED MA
19789943	INCORRECT IMD START DATE AND MISLEADING ERROR MSG SEEN FOR REPLACEMENT IMD.
19797183	COPY OF 19531184 - MODIFY IMD SEEDER ALGORITHMS TO IMPROVE PERFORMANCE
19818462	IMD QUERY PORTAL LIMIT IMD SEARCH ONLY FOR 30 DAYS.
19849641	COPY BUG - IMPLEMENT NON-BLOCKING INVOKES FOR XAI WS CALLS
19852957	VEE RULE CODE CAN'T BE EDITED

Bug	Description
19878715	COPY OF 19872569 - (SMDF) PERFORMANCE ISSUE - 360 VIEW - MEASURING COMPONENT TAB
19889468	IMD SEEDER POPULATES INCOORECT/INSUFFICIENT RELATED OBJECTS IN PROCESSING METHOD
19911255	D1-PAYLOADEXTSCHEDTYPEMAINT INCLUDE REF. TO SERVICEISSUEMONITORTYPE ELEMENT
19943588	CMA: ENVIRONMENT REFERENCE IN MIGRATION REQUEST D1-ADMINDATA IS UNNECESSARY
19987602	COPY 19987593 INFO STRING GENERATED BY D1-COMMINFO SHOULD SHOW COMMUNICATION TY
19987988	COPY BUG 19581855 - PERFORMANCE: MODIFY ALGORITHM D1-PBSCMTOCC TO BE ENTITY BASE
20014110	COPY OF 19931430 - 360 MEASURING COMPONENT TAB PERFORMANCE - CHANGE BO INFO PLUG
20017016	COPY OF 19911065 - SP NOT FOUND ERROR WHILE D2-DETERMINEESTIMATEDANDHIGHLOWSCALA
20030657	COPY OF 20030611 - DUPLICATE RECORDS EXTRACTED D1-SPSFX BATCH WHEN QUERY ITERATO
20031627	COPY OF 19505316 - COPY OF 19242842 - ERROR UPDATING OVERRIDE DESC ON D1-MEASURE
20033997	COPY OF 19888393 - MANUAL IMDS AND INITIAL LOAD IMD FROM UPLOAD TOOL DO NOT HAVE
20048413	COPY OF 19618630 - UNNECESSARY 'H' SHOWN ON THE SERVICE PROVIDER EDIT PAGE
20062491	COPY OF 20012598 - PERFORMANCE: SEEDER PROCESSING QUERY IMPROVEMENT
20062493	COPY OF 20047298 - PERFORMANCE: D1-CURRENTCONTEXTS UNNECESSARY FKREF CALLS.
20070223	COPY OF 19987600 - INDEX D1T304S2 ON D1_INIT_MSRMT_DATA TABLE NEEDS TO BE REINST
20091235	COPY OF BUG 20025775 - IMD AUDITING ALGORITHM DOES NOT LOG CONDITION CODE CHANG
20125939	COPY OF BUG 19858244 - GUI PAGE FOR COMMAND REQUEST DEVICE CHECK IS NOT IN ALIG
20126999	COPY OF 19826587 - PERFORMANCE : INTRODUCE CACHING OF PROCESSING METHOD CALL
20201747	COPY OF 19641350 -D1-SYNCIMDSCALAR - ESTIMATED IMD NOT REEVALUATED FOR ADDITIVE
20215960	USE MOST RECENT MEASUREMENT DATETIME TO EVALUATE RELATED MC MEASUREMENT EXISTANC

Bug	Description
20267563	COPY OF 19624908 - DEVICE CONFIG EFF. DATE TIME SET TO TEMPLATE DEVICE EFF. DATE
20287757	SPR DISPLAY UI SHOWS ERRONEOUS ELEMENTS
20306094	MEASUREMENT ZONE IN MC AND 360 VIEW PAGES IS REGRESSED BY ILM ARCHIVED IMD.
20315712	UPDATE DETAIL DESCRIPTION OF ALGORITHM D1-CREDCMC
20332190	COPY BUG - PERFORMANCE IMPROVEMENTS FOR BULK DEVICE STATUS CHECK COMMAND
20374249	75081 MULTIPLE TIME ZONE SUPPORT IN IMD
20380342	COPY OF 20380334 - ALGORITHM D1-MC-CDCP ON THE MC MO CAUSES EXPENSIVE QUERY IN D
20380650	75081 MULTIPLE TIME ZONE SUPPORT FOR MASTER DATA & SYNC, TOU MAPPING & ITEM
20384359	75081 MULTIPLE TIME ZONE SUPPORT FOR COMMON
20388715	75081 MULTIPLE TIME ZONE SUPPORT FOR US/DYNAMIC OPTION
20399888	COPY OF 18801277 - ERROR IS HIT WHEN EXTRACTING DEVICE EVENT TYPE WITH NO STANDA
20433322	75081 MULTIPLE TIME ZONE SUPPORT FOR PERIODIC ESTIMATION
20449156	COPY OF 20402702 - UT MEASUREMENTCYCLE WILL ONLY POPULATE IF MEASURMENTCYCLEROUT
20478254	COPY OF 20464968 - MC BO DOES NOT DISPLAY FALLBACK VEE GROUPS
20511819	COPY OF 20511806 - IMD SEARCH QUERY IS NOT EFFICIENT
20532562	COPY BUG 19715135 - DUPLICATE STATUS REASON DISPLAYED IN RECORD INFORMATION SECT
20551563	COPY OF 20523462 - GO TO ODM IN SP CONTEXT MENU FAILS BC SP ID HARD CODED IN UI
20573532	COPY OF 20517577 - F1-SYNRQ FAILS FOR D1-MEASURINGCOMPONENTDIMENSION WHEN ST
20596925	CREATING AN IMD WITH MC IDENTIFIER AND DEVICE IDENTIFIER RESULTS IN NPE.
20612005	COPY BUG BUG 19987988 - PERFORMANCE: MODIFY ALGORITHM D1-PBSCMTOCC TO
20615005	COPY OF 20466663 - IMD IN Z TIME FAILS ON OVERCOUNT WHEN FALL START TRANSLATES T
20618912	PROFILE MC CONSUMPTION SHOULD PAD MISSING INTERVALS.

Bug	Description
20629918	COPY 16732307 - DETAILS MISSING FROM PAYLOAD ERROR NOTIFICATION IN NEGATIVE SCEN
20642206	COPY OF BUG 20548812 - PERIODIC EST ISSUE CAUSES D1-EVAL-EXMS ERRORS WHILE PROCE
20664077	IMD ENDING IN DUPLICATE HOUR PERIOD HAS OVERCOUNT DETECTED
20671408	COPY BUG 20663863 - NPE WHEN NO STATUS CODE IS PROVIDED
20737170	2 BULK RESPONSES CREATED WHEN CREATION METHOD IS D1WT
20767442	COPY OF 20714999 - AUDIT ALGORITHM CREATES INCORRECT OUTBOUND SYNC.
20772340	COPY 20764747 - ISSUE WITH DEVICE STATUS CHECK ACTIVITY VALIDATION
20799196	COPY OF 20786904 - INCORRECT PRIORITY BASED INTERVAL STATUS CODE MAPPING
20810787	COPY OF 20757959 - LOOKUP "SP_REL_TYPE_FLG" NOT CUSTOM... WHY

Appendix G

Meter Data Management Fixes

The following table lists the Meter Data Management fixes included in this release.

Bug	Description
15895759	UT SQ OVERLAY UI ISSUE WITH INTERVAL DATA SNAPSHOT WHEN UT SPANS DST CHANGE
17050445	DYNAMIC USAGE GROUP DETERMINATION FAILURE IS NOT VISIBLE ENOUGH
17390265	SUB UT ERRORS OUT BECUASE OF INCORRECT DATE TIMES USED IN CALCULATIONS
17670555	USAGE TRANSACTION HISTORY ZONE HAS MINOR ISSUES
18340023	SAVE AS FUNCTION DOES NOT UPDATE THE VALUE
18490932	FIELD OF VALUES GRAPH STILL KEEPS OLD DESCRIPTION AFTER CHANGING MEASURING COMPO
18498447	CORRECT THE MESSAGE WHEN VALUE IDENTIFIER IS NOT MATCHING FOR TOLERANCE USG RULE
18554906	COPY OF 18554898 - COPY OF 17562354 - FINAL VALUES OVERLAY ZONE GRAPH IS NOT SHO
18636535	COPY OF 18636514 - APPLY CHANGES DOES NOT CHANGE END READING
18680583	COPY OF 18680474 - COPY OF 18631397 - UNABLE TO STOP USAGE SUBSCRIPTION WHEN FUT
18698336	COPY OF 18698216 - COPY OF 18686164 - EXTRACT INTERVAL DATA CONDITION CODES ON G
18698757	COPY OF 18658681 - COPY OF 18646884 - GET SCALAR HANDLING OF PEAK MEASUREMENTS F
18773235	COPY OF 18716944 - SUMMARY ACCOUNTS: UT IS NOT GETTING SKIPPED IN MDM BASED ON M
18813583	COPY OF 18788436 - SCALAR INITIALMEASUREMENT ZONE ON MANUAL SCALAR IMD SHOWS
18842179	COPY OF 18596453 - CSS: RESULTS ARE OFF BY ONE HOUR

Bug	Description
18849199	COPY OF 18713145 - WHEN SUBMITTING DUPLICATE DEMAND READS, OVERLAY GRAPHS DO NOT
18898889	OUTPUT PARAMETER "CUSTOMER AND DEVICE ARE COMPATIBLE" SHOULD BE LOOKUP
18911840	COPY OF 18590681 - OUCSS - SERVICE CHARGES TO DATE ISSUE
18912151	REMOVE US/SP OVERRIDE DATE/TIMES FROM 'GET ITEM COUNTS & CONSUMPTION' USG RULE
18925681	COPY OF 18925674 - COPY OF 18923151 - ERROR WHILE ACCESSING A AGGREGATOR MC IN T
18970256	COPY OF 18970255 - OUCSS USAGE DOWNLOAD DST ISSUES
18990141	INT AVG ESTIMATION RULE - TRACE O/P SHOULD DISPLAY SCANNED DATES RANGE INFO
18996104	USE END INTERVAL DTTM IN USAGE DETAIL DATA
19015569	DEPRECATE AGGREGATION HIERARCHY (MASTER/SUB) BO OPTION IN D2
19028370	COPY OF 18554304 - CSS: NULL POINTER EXCEPTION RUNNING WX-RETWSSTOUMAPPINGSERVIC
19033553	GET SCALAR RULE - TYPO ERROR IN 'SCALAR DETAILS(SCALAR_DETAILS_LBL)' HELP TEXT
19047331	COPY OF 19028509 - POPULATE LAST_UPDATE_DTTM FOR MEASUREMENT TABLES TO SYSDATE
19051963	COPY OF 18992994 - POPULATE NEW INPUT PERIOD DATE/ TIMES IN APPLY FORMULA FROM V
19060558	PERFORMANCE: MDM ONLINE PERFORMANCE ISSUES RELATED TO UNNECESSARY JOINS
19073953	COPY OF 18632805 - BATCH PROGRAM D2-UTEA NOT PICKING UP UT IN CALCULATE DEFER ST
19146588	VECTOR MATH USAGE RULE - ISSUE MANAGING VECTORS OF DIFFERENT SPIS
19162327	COPY OF 19141126 - SYSTEM ERROR WHEN CREATING UT WITH ESTIMATE START READ
19162336	COPY OF 19067079 - GET SCALAR USAGE RULE OPTIMIZATION FOR UT PROCESSING
19164543	COPY OF 18509056 - SCALAR PRORATION VEE RULE ENHANCEMENT
19181881	COPY OF 16192397 - CR - EXPOSE SCALAR READINGS ZONE IN 360 VIEW'S DEVICE TAB
19191494	COPY OF 18781530 - 75078 TIERED INTERVAL CALCULATIONS
19197666	COPY OF 19065573 - MDM INTEGRATION TO MULTIPLE CIS SYSTEMS - EXTERNAL IDS

Bug	Description
19211129	COPY OF 19345758 - 75075 DIRECT CHANNELS ON USAGE SUBSCRIPTIONS
19232364	NO OUT OF THE BOX DISCARD FOR UT SEEDER ERRORS
19271377	COPY OF 19271371 - COPY OF 19250187 - PERFORMANCE: D2-USAGETRANDISPLAY UI MAP SC
19278969	GO TO 360 VIEW CONTEXT MENU ITEM NAVIGATES TO WRONG ENTITY
19282913	COPY OF 19282894 - COPY OF 19261525 - MDM ESTIMATED READING NOT FLAGGED AS ESTIM
19341756	COPY OF 19123212 - D2-DETUSGRP BS REMOVES USG GRP FOR DEFER CAL WHEN METER EXCHA
19369952	COPY OF 19369882 - XAI INBOUND SERVICE D2-DETERMINEESTIMATEDANDHIGHLOWSCALARREA
19386764	REMOVEADJUSTMENTTYPEVALIDATIONIND2-CALCUSGMR
19425865	COPY OF 19298160 - DAILY SCALAR RULE - UT "IS ESTIMATE" FLAG IS NOT POPULATED CO
19431918	360 SEARCH - BY NAME ON US WITH NO SP LINK (AND NO DIRECT CHANNELS) FAILS
19441289	MINUS SIGN IS NOT ON THE SAME LINE AS NUMBERS IN THE UT GUI
19446893	MCS OF CLASS D1AG AGGREAGATORS DONT DISPLAY CONTEXT MENU/INFORMATION STRING
19462771	COPY OF 19462766 - COPY OF 19452075 - GET INTERVAL USAGE RULE RETURNING ZERO VAL
19496792	PERFORMANCE: IMD DATA RETRIEVAL FOR 30 DAYS DURING GET SCALAR USAGE RULE FOR UT
19503466	MATH RULE LOSING ON EDIT THE CHOSEN VALUE OF THE FIELD EXTRACT INTERVAL DATA
19511045	COPY OF 19271127 - COPY OF 19250129 - 360 CHARTS - FINAL VALUES OVERLAY - REMOVE
19543397	COPY OF 19543387 - AGGREGATOR DIMENSION SCANNER SETS SERVICE TYPE INCORRECTLY
19554556	COPY OF 19309920 - COPY OF 19241008 - 360 CHARTS - PERFORMANCE - REMOVE CHART VM
19555791	COPY OF 19368422 - COPY OF 18977116 - NOT ABLE TO PULL UP THE USAGE TRANSACTION
19580453	COPY OF 19492415 - COPY OF 19181972 - UNABLE TO EXTRACT ONE YEAR WORTH OF INTERV
19581525	UT GUI: SQ OVERLAY SHOWS WRONG START DATE WITH 24-HOUR SPI IN DAYLIGHT TIME

Bug	Description
19614366	PERFORMANCE: 360 VIEW CHANGE SQL FOR DEVICE EVENTS TO USE NEW FIELD ON TABLE.
19645217	COPY OF 16462747 - SERVICE QUANTITY NOT POPULATED IN TABLE OF SERVICE QUANTITY O
19689616	ENHANCE INTERVAL PROFILE RULE TO AXIS CONVERT CONSUMPTIONS, IF UOM/SPI IS DIFF
19708204	SCALAR READINGS ZONE ON DVC CFG UI DISPLAYS "NO LABEL DEFINED".
19731985	SCALAR READINGS CHANGES
19807435	REMOVE 360 SP CONSUMPTION HISTORY VISIBILITY SCRIPT (D2-SPCONVIS) UNUSED CODE
19827884	COPY OF 19827869 - COPY OF 19767822 - SCTD - DOUBLE USAGE
19849888	COPY OF 19847441 - MC DEFAULT PROFILE OPTION ISN'T RETAINING THE CONDITION CODE
19861173	SCALAR READINGS - BUILD REGISTER READS
19871182	INTERVAL CONSUMPTION IS NOT INVOKED FOR AGGREGATOR DIRECT CHANNEL MC'S.
19878732	COPY OF 19726745 - PERFORMANCE ISSUE - 360 VIEW - MEASURING COMPONENT TAB
19894956	COPY OF 19885576 - SUM CHECK VEE RULE RAISE AN ERROR FOR FIRST READ IMD, SKIP RU
19951629	EXCEPTION SEVERITY HELP TIP ON VALIDATE USAGE AGAINST TOLERANC RULE IS INCORRECT
19955930	COPY OF 19582850 - ER - NEW ZONE CURRENT DEVICE CONFIGURATION TO SUPPORT MORE FL
20016925	COPY OF 19978486 - SP NOT FOUND ERROR WHILE USING D2-DETERMINEESTIMATEDANDHIGHLO
20022937	COPY OF 19943552 - DAILY SCALAR USAGE RULE NOT WORKING AS EXPECTED.
20024223	COPY OF 20024207 - DUPLICATE RECORDS EXTRACTED D2-SPCFX BATCH WHEN QUERY ITERATO
20027336	COPY OF 20011787 - 360 DEVICE SEARCH IS CASE SENSITIVE UNLIKE DEVICE PORTAL SEAR
20048664	COPY OF 19303696 - MISLEADING ERRORS ON D2-CREMTRRD SERVICE SCRIPT WHEN IMD IS
20052742	AGGREGATION:VALIDATE NO READ MEASUREMENT CONDITION/CREATE ZERO MEASUREMENT
20097020	COPY OF 20078897 - UNNECESSARY RENDERING OF MC FK REF'S IN 360 VIEW MC PORTAL UI

Bug	Description
20105526	COPY OF 19722168 - CHECK EXISTENCE OF INSTALLED DEVICE IN UT USAGE RULE
20148469	COPY OF 20131754 - USAGE TRANSACTION ERROR "NO EXTERNAL IDENTIFIER FOUND FOR SP"
20186564	D2-DETUSGRP BS RETURNS MULTIPLE FALL BACK USG GRPS WITH SAME START&END DATE/TIME
20194597	COPY OF 20194590 - COPY OF 20173599 - MDM SCALAR CONSUMPTION SUMMARY ISSUE
20223518	COPY OF 20223511 - COPY OF 20201079 - DATE TIME FORMAT SHOWN IN THE GRAPH OF FIN
20283457	COPY OF 20269649 - GET SCALAR & DAILY SCALAR USAGE RULES FAILS TO RETRIEVE END M
20321409	COPY OF 20319761 - ERROR LOADING 360 FINALIZED OVERLAY ZONE IF METER ON IS LATER
20328630	COPY OF 20311966 - SCALAR CALCULATION FROM INTERVAL VEE FAILS TO RETRIEVE INSTAL
20348126	D2-AGGREGATORTYPE'S HELP TEXT REFERENCES A NON-EXISTENT ELEMENT ON THE SCHEMA
20350912	COPY OF 20332743 - SUM CHECK VEE RULE DOES NOT HANDLE ZERO CONSUMPTION CORRECTLY
20381129	UNABLE TO CREATE ITEM AGGREGATOR MC TYPE WITH LOWER CASE LETTERS.
20388727	75081 MULTIPLE TIME ZONE SUPPORT FOR US/DYNAMIC OPTION (D2)
20409952	360 SEARCH BY DEVICE IS NOT FUNCTIONING FOR INSTALLED DEVICES
20419174	COPY OF 20419170 - COPY OF 20409939 - D2-INTERVALSPHISTORY ZONE NOT MULTILINGUAL
20424525	360 VIEW - INTERVAL - AUDIT VIEW ZONE NOT MULTILINGUAL DISPLAY DESCRIPTION FIELD
20431683	MEASUREMENT UNDER 360 INTERVAL AUDIT VIEW ZONE INTERVAL DATA SECTION,NEW AND OLD
20437458	COPY OF 20437429 - COPY OF 18459542 - INTERVAL AUDIT ZONE - ROW CONTENTS VISIBLE
20466121	COPY OF 20466118 - COPY OF 20353251 - MEASURING COMPONENT TYPE DESCRIPTION IN SP
20486266	COPY OF 20486255 - COPY OF 20402707 - INTERVAL AUDIT VIEW - RED CIRCLE FROM LOWE
20514909	COPY OF 20514903 - COPY OF 20508675 - INTERVAL IMO BASE UI MAP DOESN'T CORRECTLY

Bug	Description
20519244	COPY OF 20519231 - COPY OF 20480496 - ISSUE WITH CSS-MDM DIRECT FLOW GET SCALAR
20524708	COPY OF 14339191 - USAGE TRANSACTION HISTORY ZONE SHOULD INCLUDE ORDER BY CREATE
20555558	360 DEVICE SEARCH RETURNS NOTHING WHEN US IS LINKED AND CONTACT IS NULL
20563855	COPY OF 20563849 - COPY OF 20557060 - MCTYPE DESCRIPTION IN SP CONSUMPTION HISTO
20611187	ITEM COUNTS & CONSUMPTION DISPLAY UI SHOULD BE IMPROVED.
20632320	COPY OF 20632306 - COPY OF 20471088 - DATE FORMAT FOR GRAPHS RANGING MULTIPLE YE
20657593	75080 ENERGY MANAGEMENT EXTRACT - INTERVAL DATA EXTRACT
20701960	ODI-BI-D2-DUGDL BATCH JOB ENDS WITH UNIQUE CONSTRAINT ERROR
20713558	COPY OF 20701691 - UT HAS INCORRECT CONDITION CODES AFTER METER EXCHANGE USING D
20733944	COPY OF 20662624 - DEVICE CONFIGURATION OVERVIEW ZONE DISAPPEARS AFTER CLICKING
20739022	USAGE SUBSCRIPTION GUI INSERTS INVALID DEFAULT DATE FOR A NEW USAGE GROUP
20757470	D2-UUSDL FAILS IN UPGRADE SP1 TO SP3 ENV
20787901	COPY OF 20739193 - MATH USAGE RULE ALWAYS CHECKS FOR MISSING INTERVAL
20798154	COPY OF 20787760 - HIGH/LOW VEE - INCORRECT CALCULATED HISTORICAL PERCENTAGE FOR
20816771	UT INTERVAL TIER BY DAY SHOWS WRONG START DATE WITH 24-HR SPI IN DAYLIGHT TIME
20818990	COPY OF 20818965 - BATCH D1-IMD RETURNING "UNSHIFTED DATETIME CANNOT BE NULL" ER
20854857	COPY OF 20854846 - COPY OF 20852274 - USAGE RULE PORTAL ALLOWS CHANGES EVEN WHEN
20985201	SUPPRESS SEQ NUM FROM DISPLAY UI

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