Oracle Utilities Meter Data Management

Installation Guide

Release 2.1.0 Service Pack 2

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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*
- *Oracle Utilities Application Framework Release Notes*

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 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

Acronym	Definition
OAM	Oracle Access Manager
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
- Application Architecture
- Installation Components
- Installation Types
- Media Pack Components

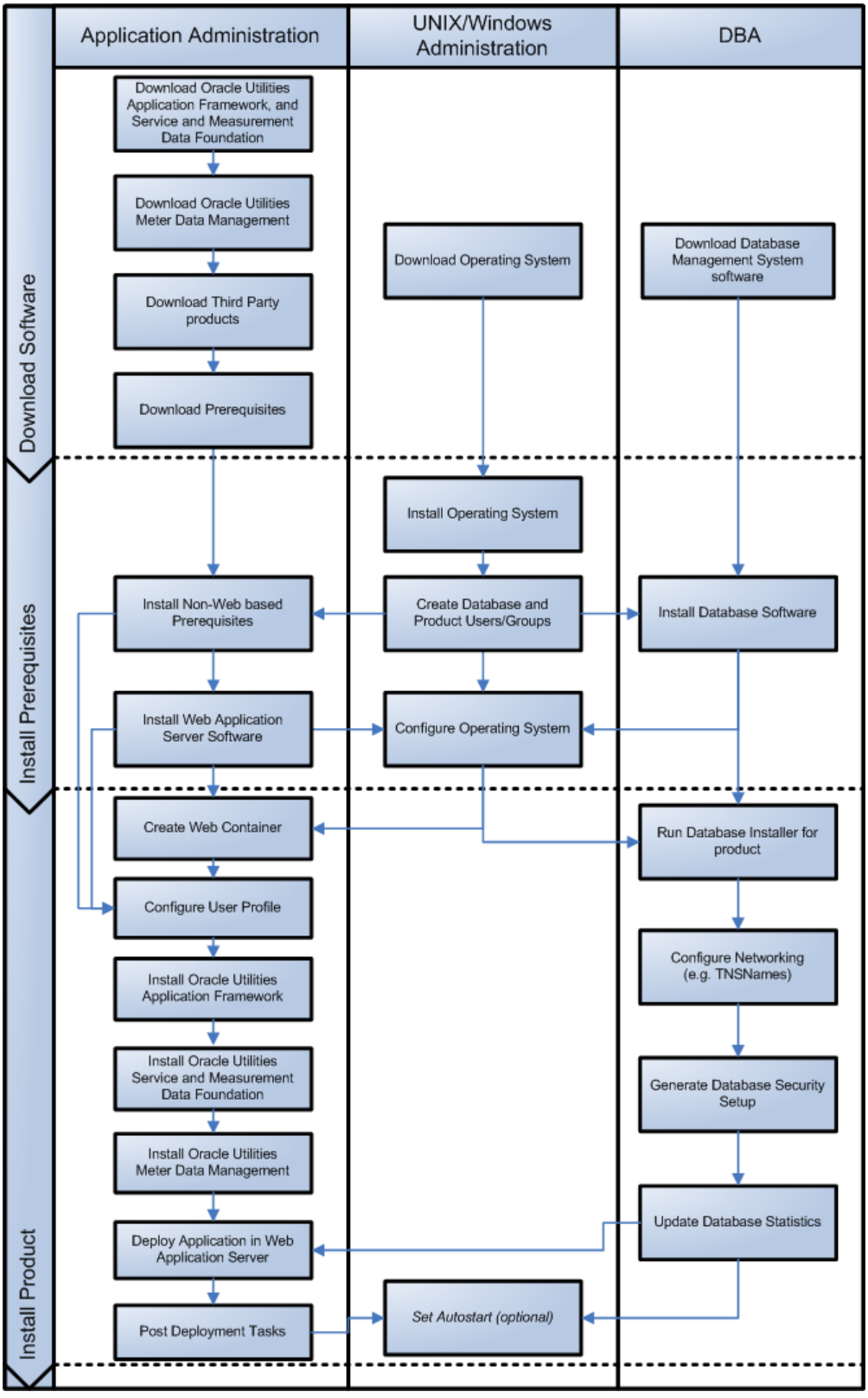
Installation Overview

Installing Oracle Utilities Meter Data Management involves the following steps:

1. Review the different tiers of the application architecture as described in the section Application Architecture of this chapter.
2. Understand the hardware requirements for installing the application and the supported platforms for the application and database servers as described in the Chapter 2**:** Supported Platforms and Hardware Requirements.

   Note: The installation and administration of the database server tier is described in detail in the document *Oracle Utilities Meter Data Management Database Administrator's Guide.*
3. Plan your installation as described in the Chapter 3**:** Planning the Installation. This chapter includes lists of the required software for each supported combination of operating system and application server.
4. Install the database as described in the document *Oracle Utilities Meter Data Management Database Administrator's Guide.*
5. Install all required third-party software as described in the Installing Prerequisite Software section in the Chapter 3**:** Planning the Installation.
6. Install the framework for the application.
7. Install the Oracle Utilities Service and Measurement Data Foundation for the application.
8. Install Oracle Utilities Meter Data Management.
9. Follow the installation guidelines described in the Chapter 7**:** Additional Tasks.

The following diagram provides an overview of the steps that need to be taken to install and configure Oracle Utilities Meter Data Management:



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

Application Architecture

The Oracle Utilities Meter Data Management application is deployed on multiple tiers.

Please see the Oracle Utilities Meter Data Management *Server Administration Guide* for a more detailed description of the application architecture and individual tiers.

Tier 1: Desktop/Client, or Presentation Tier

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

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

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

Tier 3: Database, or Persistence Tier

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

Installation Components

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

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

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

Installation Types

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

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

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 to 2.1.0.2.

> **Note:** Customers who have a version prior to 2.0.1.9 must install 2.0.1.9 before upgrading to 2.1.0.2

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 V2.1.0.2.0 Release Notes*
- *Oracle Utilities Meter Data Management V2.1.0.2.0 Quick Install Guide*
- *Oracle Utilities Meter Data Management V2.1.0.2.0 Install Documentation*
- *Oracle Utilities Meter Data Management V2.1.0.2.0 User Documentation*
- *Oracle Utilities Meter Data Management V2.1.0.2.0 Supplemental Documentation*

Installation Packages

- Oracle Utilities Application Framework V4.2.0 Service Pack 2 Multiplatform
- Oracle Utilities Application Framework V4.2.0 Service Pack 2 Single Fix Prerequisite Rollup for SMDF V2.1.0.2.0
- Oracle Utilities Service and Measurement Data Foundation V2.1.0.2.0 Multiplatform
- Oracle Utilities Meter Data Management V2.1.0.2.0 Multiplatform
- Oracle Utilities Meter Data Management V2.1.0.2.0 Oracle Database
- Oracle Utilities Meter Data Management V2.1.0.2.0 Reports
- Oracle Utilities Meter Data Management V2.1.0.2.0 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, in Compatibility Mode)	AIX 7.1 TL01	POWER 64-bit	WebLogic 10.3.6 WebSphere 8.5/8.5.5	Oracle 11.2.0.1+ Oracle 12.1.0.1+
	Oracle Linux 5.8/6.2/6.3/6.4/6.5 (64-bit) (based on Red Hat Enterprise Linux (64-bit))**	x86_64	WebLogic 10.3.6	Oracle 11.2.0.1+ Oracle 12.1.0.1+
	Oracle Solaris 10 Oracle Solaris 11 (64-bit)	SPARC	WebLogic 10.3.6	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	Oracle 11.2.0.1+ Oracle 12.1.0.1+

* Oracle support for Windows XP ended December 2013. Microsoft support for Windows XP ended April 2014.

** 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.

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

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

- Java plug-in 1.6.0 17

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 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.

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_20+ (64-bit)
- Oracle Web Logic 11gR1 (10.3.6)
- Hibernate 4.1.0 Final

Web Browser Requirements

The following operating system / web browser software are supported:

- Windows 7 (32-bit or 64-bit) with Internet Explorer 8.x, 9.x, or 10.x, in Compatibility Mode.

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 6.5 or Red Hat Linux 6.5 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) 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 Database 11g Release 2 Client — 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

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 6.5 or Red Hat Linux 6.5 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 6.5 (64-bit) (based on Red Hat Enterprise Linux (64-bit))	x86_64	Oracle WebLogic 11gR1(10.3.6) 64-bit version

Oracle Linux 6.5 or Red Hat Enterprise Linux 6.5 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 11.2.0.1 — 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 65, 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.

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) 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).

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) 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 11.2.0.1 — 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 65, 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: Orale Utilities Meter Data Management 2.1.0 SP2 is also supported on Oracle Java Development Kit Version 6.0 Update 20 or later.

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) 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).

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) 64-bit version

Oracle Client 11.2.0.1 — 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 65, 64-bit

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.

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) 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).

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 V2.1.0.2 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 from V2.0.1.x or 2.1.0.x to V2.1.0.2, 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 2 (4.2.0.2) Application Component
- Installing Oracle Utilities Application Framework V4.2.0.2 Single Fix Prerequisite Rollup for SMDF V2.1.0.2
- Installing Oracle Utilities Service and Measurement Data Foundation V 2.1.0.2 Application Component
- Installing the Oracle Utilities Meter Data Management V2.1.0.2 Application Component

Installing the Oracle Utilities Application Framework V4.2.0 Service Pack 2 (4.2.0.2) Application Component

This section describes how to install the application component of Oracle Utilities Application Framework V4.2.0 Service Pack 2, 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 2 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 2 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 V4.2.0.2.0 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-V4.2.0.2.0-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-V4.2.0.2.0-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.V4.2.0.2.0.0" 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.V4.2.0.2.0.0 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 2.

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.V4.2.0.2.0 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:

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 (1,50, <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 V4.2.0.2 Single Fix Prerequisite Rollup for SMDF V2.1.0.2

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-V2.1.0.2.0-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 2 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 V 2.1.0.2 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 V2.1.0.2

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-V2.1.0.2.0-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-V2.1.0.2.0-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.V2.1.0.2.0 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 V2.1.0.2

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.V2.1.0.2.0 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.V2.1.0.2.0 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 V2.1.0.2 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 2.1.0.2 must be installed prior to installing Oracle Utilities Meter Data Management 2.1.0.2.

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 ManagementV2.1.0.2.0 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-V2.1.0.2.0-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-V2.1.0.2.0-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.V2.1.0.2.0 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.V2.1.0.2.0 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>/MDMV2.1.0.2.0 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 2 (4.2.0.2) Application Component
- Installing Oracle Utilities Application Framework V4.2.0.2 Single Fix Prerequisite Rollup for SMDF V2.1.0.2
- Installing Oracle Utilities Service and Measurement Data Foundation V2.1.0.2 Application Component

Installing the Oracle Utilities Application Framework V4.2.0 Service Pack 2 (4.2.0.2) 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 2 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-V4.2.0.2.0-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-V4.2.0.2.0-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.V4.2.0.2.0" 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.V4.2.0.2.0 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 2.

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.V4.2.0.2.0 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:

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 (1,50, <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 V4.2.0.2 Single Fix Prerequisite Rollup for SMDF V2.1.0.2

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-V2.1.0.2.0-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 2 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 V2.1.0.2 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-V2.1.0.2.0-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-V2.1.0.2.0-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.V2.1.0.2.0 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.V2.1.0.2.0 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.V2.1.0.2.0 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 V2.1.0.2 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 2.1.0.2 application must be installed prior to installing Oracle Utilities Meter Data Management 2.1.0.2.

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-V2.1.0.2.0-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-V2.1.0.2.0-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.V2.1.0.2.0 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.V2.1.0.2.0 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>/MDMV2.1.0.2.0 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 chapter provides instructions for installing Oracle Utilities Meter Data Management 2.1.0 Service Pack 2 (2.1.0.2.0) on the top of an existing Oracle Utilities Meter Data Management 2.1.0 Service Pack 1 (2.1.0.1.0) installation.

This service pack can also be used to directly upgrade from version 2.0.1.9 to version 2.1.0.2. For versions prior to 2.0.1.9, install version 2.0.1.9 before upgrading to version 2.1.0.2.

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 2 (4.2.0.2)
- Installing Oracle Utilities Application Framework V4.2.0.2 Single Fix Prerequisite Rollup for SMDF V2.1.0.2
- Upgrading the Oracle Utilities Service and Measurement Data Foundation Application Component to V2.1.0.2
- Upgrading the Oracle Utilities Meter Data Management Application Component to V2.1.0.2

Upgrading the Oracle Utilities Application Framework Application Component to V4.2.0 Service Pack 2 (4.2.0.2)

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

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 V4.2.0.2 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-V4.2.0.2.0-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-V4.2.0.2.0-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.V4.2.0.2.0" 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.V4.2.0.2.0 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 2.1.0.2

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>/FWV4.2.0.2.0 directory.

   NOTE: While installing the FW V4.2.0.2 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 V4.2.0.2 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:

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 (1,50, <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

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.

> **Note:** Customers who have version 2.1.0.0 must install 2.1.0.1 before upgrading to 2.1.0.2.

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>/FWV4.2.0.2.0 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 2.1.0.1.0, the Oracle Utilities Application Framework specific menu will not appear.

Installing Oracle Utilities Application Framework V4.2.0.2 Single Fix Prerequisite Rollup for SMDF V2.1.0.2

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-V2.1.0.2.0-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 2 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 V2.1.0.2

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 V2.1.0.2 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-V2.1.0.2.0-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-V2.1.0.2.0-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.V2.1.0.2.0 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.V2.1.0.2.0 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.V2.1.0.2.0 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 V2.1.0.2

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 V2.1.0.2.0 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-V2.1.0.2.0-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-V2.1.0.2.0-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.V2.1.0.2.0 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.V2.1.0.2.0 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>/MDMV2.1.0.2.0 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-V2.1.0.2.0-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/11.2.0.1	

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_20	
* 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 hibernate3.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.

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.	

Menu Option	Name Used in Documentation	Usage	Customer Install 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.	
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:                   500
       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.	
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
       WebLogic SSL Port Number:
       WebLogic Console Port Number:
       WebLogic Additional Stop Arguments:
       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
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.	
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.	

Menu Option	Name Used in Documentation	Usage	Customer Install Value
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.	
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	
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	

Menu Option	Name Used in Documentation	Usage	Customer Install Value
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):
```

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.	

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
```

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	

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 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.	
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.	
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 2 (4.2.0.2.0) Fixes

The following table lists the Oracle Utilities Application Framework 4.2.0 Service Pack 2 (4.2.0.2.0) fixes included in this release.

Bugs	Description
14041244	IN FIREFOX THE BUTTON IN FILTER UI MAP IS NOT SHOWN AS PER STANDARD
16535383	ABLE TO ADD INVALID ACCESS MODES TO A USER GROUP/ APPLICATION SERVCIE
16555312	F1-LDAP JNDI PASSWORD IS DISPLAYING INTHE LOG FILES
16796398	IN FIREFOX, F1-ENTERBUSINESSOJBECT UI MAP SELECT HAS A DEFAULT VALUE
16988199	FILTER MESSAGE DATE IS NOT SHOWING JAPANESE ERA FORMAT
17302917	DELAY IN LOADING OF DROPDOWNS IN MAPS GENERATED USING UI HINTS
17335688	MDM: GLOBALCONTEXT NOT GETTING UPDATED.
17368315	MDM: NAVIGATION KEY SEARCH BY TYPE IS NOT TRANSLATED.
17476261	WARNING MESSAGE FOR UNSAVED DATA IS INCONSISTENT
17591437	COPY OF 17591429 DASHBOARD NOT REFRESHED WHEN CONTEXT SENSITIVE ZONE IS EMPTY
17597598	COPY OF BUG 17560947 - UI HINTS - MAP GENERATION BASED ON PRE-SCRIPT FAILS TO EX
17597773	COPY OF BUG 17597770 - COPY OF BUG 17263191 - ETM: EXPORT TO EXCEL INQUIRY ON AU
17615392	SPLENVIRON.SH -Q PARAMETER DOESN'T SUPPRESS OUTPUT
17717722	COPY OF BUG 17618354 - F1-BOMOINFO SERVICE PICKS ONLY PARENT BO OPTION TYPES AND

Bugs	Description
17782943	TRYING TO SORT COLUMNS IN SERVICE XSL HANDLER ZONES CAUSES ERROR ON PAGE
17802274	COPY OF 17793307 - REINSTATE PREPAREDSTATEMENT API
17843874	INFORMATION LIFE CYCLE MANAGEMENT DATABASE AND APPLICATION CHANGES
17849576	COPY OF BUG 17318042 - CCB V2.4 POP-UP WINDOWS WITH MORE THAT ONE MONITOR
17910758	COPY OF BUG 17901801 - DISPLAY MAP RENDERING USING DISPLAY MAP SERVICE SCRIPT IS
17930543	SUPPORT MULTIPLE OPERATIONS IN IWS
17948308	BUNDLE IMPORT HEADING IS GETTING TRIMMED WHILE CREATING NEW BUNDLE
17950954	CREATE ILM SUBMITTER AND CRAWLER BATCH JOBS
17952946	ALERT MESSAGE IS DISPLAYING DOUBLE QUOTES AS HTML &QUOT
17971113	COPY OF BUG 17971110 - COPY OF BUG 17971102 - SEND ATTACHMENT THROUGH EMAIL
17973498	COPY OF 17968704 - TIMED BATCH JOBS THAT ARE IN PROGRESS WITH PENDING THREAD
17980168	COPY OF 17980142 - MAKE SUBMITBATCH.PROPERTIES.TEMPLATE COMMIT COUNT 10
17992633	ZONES WITH ASIS ARE BROKEN AFTER FW 4.2.0.2.0
17998187	COPY OF BUG 17992955 - COPY OF BUG 16537956 - TO DO ENTRY HAS WRONG BATCH RUN NU
17998487	COPY OF BUG 17998475 - COPY OF BUG 17666677 - COPY OF BUG 17460340 - {INFO}IS IT
18017320	COPY IOF BUG 18017295 - COPY OF BUG 18017268 - COPY OF BUG 18017202 - COPY OF BU
18017508	COPY OF BUG 17790441 - SEARCH FOR SOME USERS RESULTS IN SERVER ERROR
18019745	COPY OF BUG 17831268 - BATCHSCHEDULER IS NOT GETTING STOPPED IN SOLARIS ENV
18033305	COPY OF BUG 16197111 - OTSS: "TO DO ENTRY" MO SHOULD HAVE FOREIGN KEY REFERENCE
18051717	CCB V24010 - MULTIPLE SYSTEM OVERRIDE DATE WAS ADDED VIA XAI INBOUND SERVICE
18055168	COPY OF BUG 18055152: WEB SERVICE ADAPTER CREATION ERROR
18062613	COPY OF 18062597 - CIPZCSTN.DOSQLCLOSE RETURNS ERROR DURING XA000-FINALIZE-SQL-P

Bugs	Description
18078205	COPY OF 18078201 - JAVA THREADS DO NOT CANCEL
18083939	MASTER CONFIGURATION CHANGES FOR ILM
18109222	EXTENDABLE LOOKUP - UNABLE TO ADD VALUES
18112287	COPY OF 18085864 - RUNNING BATCH JOB F1-STKDF GENERATES SAXPARSER RESET ERROR
18115752	COPY OF BUG 17931048 - ERROR WHEN INVOKING PLUGIN SCRIPT ALGORITHM FROM ALG
18117209	COPY OF 18098734 - XAI INBOUND SERVICE EXTRACTFAINFO NOT WORKING
18130703	COPY OF 17583839 - TPW BOOT AS WINDOWS SERVICE
18132851	UI HINT:PROTECT- DATE/TIME AND FKREF PROBLEM ON EDIT
18136611	COPY OF BUG 18016233 - PORTAL PERSONALIZATION - SAVING QUERY ZONE PREFERENCES DO
18139433	NULLPOINTEREXCEPTION ERROR WHEN CREATING TO DO ENTRY VIA BS 'F1-ADDTODOENTRY'
18141665	FILTER AREA USING INPUT ELEMENT WITH DEFAULTVALUE BUT WITHOUT ID THROWING ERROR
18144536	SIDE ISSUES OF BUG 18083939 - MASTER CONFIGURATION CHANGES FOR ILM
18147812	FK REF HYPERLINK IN UI MAP NOT ABLE TO NAVIGATE USING NAVIGATION OPTION SCRIPT
18164113	CCB CONTROL CENTRAL SEARCH - DO NOT NAVIGATE IF USER NOT AUTHORIZED FOR ACCOUNT
18186632	COPY OF BUG 18051826 - GETSEVERITY METHOD ALWAYS RETURNS NULL IN CCB V2.4
18198530	SF ENVIRONMENTS ARE MISSING FK REF F1-TODO
18204962	COPY BUG 18140377 - THE SYSTEM START UP TIME NEEDS IMPROVEMENT
18220265	COPY OF BUG 18220253 - MWM - ALGORITHM TYPE AND DESCRIPTION DO NOT DISPLAY WHEN
18223615	ZONE SQL IGNORING OPTIONAL PARAMETER
18233168	COPY BUG OF BUG 17505634 - ETM: 40045C - INFO STRING ON MAINTENANCE MAPS SHOULD
18233184	COPY OF BUG 18197798 - CMA FAILS TO EXPORT ENTITIES WITH NULL DURATION VALUES
18242229	BUG 17767813 - XAI DYNAMIC UPLOAD SEARCH NOT DISPLAYING DETAILS IN CONTROL CENTR

Bugs	Description
18253154	NOSUCHFIELDERROR: BATCH_LEVEL_OF_SERVICE_REASON IN 4.2 SP2
18253693	IWS DEPLOY FAILS ON BO WHOSE MAINTENANCE OBJECT IS NOT F1
18259634	COPY OF 18189984 - FIREFOX BEHAVIOR ON HIDING COLUMNS OF UISUPPORT.JS
18270274	COPY OF 18270271 - XAI SENDER F1OUTBNDMSG PROCESSES MESSAGES IN WRONG ORDER
18277216	CLIRR: CORRECT API CHANGE IN SERVERMESSAGE
18287159	COPY OF BUG 18125008 IN 2.2 WHEN THERE IS NO DATA THE TAG STILL SHOWED IN XML
18291614	METADATA AND DOC UPDATES
18291643	COPY OF BUG 18180822 - UNABLE TO BRING UP MWM ENV WITH SSL PORT TURNED ON
18300703	GUI SE: TABLE SEARCH BY MO DOES NOT DEFAULT TO MO CODE IN CONTEXT
18334251	COPY OF BUG 17873194 - ATTACHMENT QUERY PORTAL PROVIDED BY FW RETRIEVES ONLY FW
18335807	COPY OF BUG 18335787 - COPY OF BUG 18173951 - COPY OF BUG 17881075 - COP
18337995	BATCHEDIT TEMPLATES MISSING @VARIABLES
18346736	COPY BUG 18245008 - ER TO CHANGE QUERY FOR TO DO SUMMARY
18362779	ILM " RETENTION PERIOD IN DAYS" SHOWING DATA IN WRONG FORMAT
18364208	ORG.XML.SAX.SAXNOTRECOGNIZEDEXCEPTION: SECURE-PROCESSING FEATURE
18365321	COPY OF BUG 18365312 - LIST ICON DISPLAYS ON WRONG COLUMN IN QUERY ZONE
18375959	COPY OF 17490361 - VALIDATION ERROR RESOLVED BUT OBJECT STILL IN APPLIED WITH ER
18376516	COPY OF BUG 18315638 - COPY OF BUG 17348026 - AIX: (LOCATION OF ERROR UNKNOWN)DU
18378042	COPY OF 18378035 - ETM:UPON ADDING ENTITY THRU XAI DB FIELDS GET TRUNCATED IF LO
18394093	JAVASCRIPT FUNCTION UNHIDELISTCOLUMN() IS NOT WORKING AS EXPECTED
18406240	COPY OF BUG 18078918 - FA RESPONSE TAKES 4 MINUTES TO PROCESS

Bugs	Description
18413339	NULLPOINTER EXCEPTION IS THROWN IN SYNCREQUESTUPDATESERVICE
18417428	COPY OF 18417308 - ETM:SEVERAL ISSUES ON DATA GRID SEARCH RESULTS ZONES

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.

Bugs	Description
12880187	ACTIVITIES SHOULD CONSISTENTLY SET THEIR END DATE
13342371	DELETION OF FACTOR VALUE RELOADS THE PORTAL WITHOUT THE FACTOR BROADCAST
14174639	ADD LIFE SUPPORT TO CONTACT SYNC
15837993	COPY BUG 14668748 - INCONSISTENT EXTENDABLE LOOKUP VALUE AND DESCRIPTION REC
15954799	SCRIPT - D1-VEEIMDGT USES DETERMINE BO WHICH IS NOT REQUIRED
15968048	INVALID SIO ACTIVITY CAUSES SIM PROCESSING ISSUES
16694120	SCALAR ESTIMATION IMD END QTY IS NOT UPDATED PROPERLY
16726766	SP SYNC - DEFAULT VALUE FOR SP SOURCE STATUS
16757651	76005: UPDATE IMD SEEDER TO SUPPORT TIME ZONE FROM HEAD END
16775725	CREATE A TO DO/MO LOG RELATED OBJECT IF SPAWNED MANUAL IMD FAILS
16949385	VEE/USAGE RULES - NEW QEURY OPTION - BUSINESS OBJECT
17011823	INAPPROPRIATE HIDDEN FILTER H1:US_TYPE_CD IN ZONE: D1-SPQ4
17025792	EXPORT TO EXCEL DROPDOWN FUNCTION IN 360 EXPORTS MEASUREMENTS IN LOCAL TIME.
17047456	COPY OF 17046694 - COPY OF 17046691 - COPY OF 16946219 - USAGE RULE SP/SP TYPE E

Bugs	Description
17054035	COPY OF 17054033 - COPY OF 17054024 - COPY OF 17050294 - CURRENT CONTEXT IN SP 9
17057673	COPY OF 17055408 - UPDATE STEP DESCRIPTION OF STEP 20 IN SERVICE SCRIPT D1-SPMNP
17082756	FACTOR PROCESSOR NOT WORKING PROPERLY
17084819	COPY OF 17084764 - REMOVE UNUSED CODE FROM D1-ADDRESSDISP UI FRAGMENT
17087063	DEVICE COMPONENT MO CHANGES FOR SOM COMPLETION EVENT
17087082	DATA MODEL-DEVICE AND MEASURING COMPONENT CHANGES FOR SOM COMPLETION EVENT
17179517	INTRODUCE PARAMETER TO CONTROL CREATION OF ESTIMATION IMD FOR "OFF" PERIOD.
17190060	COPY OF 17190042 - COPY OF 17190034 - COPY OF 17190028 - COPY OF 17173107 - INTE
17264462	SCALAR IMD CALC SCALAR CONSUMPTION ALGO NEEDS PROVISION TO IGNORE ESTIMATES
17299135	COPY OF 17299133 - COPY OF 17299078 - COPY OF 17289156 - COPY OF 17283269 - STAT
17301052	D1-SIOPE BATCH ERROR
17318073	COPY OF 16184348 - USAGE SUBSCRIPTION IS IN THE MIDDLE OF THE LIST
17319590	75041 NETWORK LOCATION OF A SP
17332105	MDM2101_JA: PATIAL TR: "COUNT" NOT TRANSLATED
17345137	COPY OF 17341057 - HIGH I/O PER EXECUTION FOR SQL.
17349325	COPY BUG - OUTAGE ACTIVITY START\END TIMES SHIFTED EXTRA HOUR
17362860	ADJUSTMENTS TO BILL SHOULD NOT BE CREATED WHEN MEASUREMENTS ARE NOT UPDATED.
17363170	TIME ZONE CONVERSION DOES NOT TAKE PLACE AS EXPECTED.
17363270	UPDATE USAGETRANSACTIONAUTOTRANSITIONBATCHPROCESS.JAVA TO FORCE COMMIT FREQ OF 1
17363378	SPR SELECTION ON IMD SEEDER MAIN MAP CALLING DETER SPRS BS WITHOUT RELATED OBJEC
17371686	COPY OF BUG 18484632: ERROR WHILE FINALIZING IMD CREATED FROM 360 PORTAL
17388974	COPY BUG 17363597 - D1-PBSCMTOCC ALG OVERRIDES OUTAGE INTERVAL STATUS

Bugs	Description
17429687	COPY OF 17423473 - HIGH/LOW CHECK VEE RULE CALCULATIONS ARE INCORRECT
17431481	COPY OF 17011869 - MISSING METADATA FOR D1_OBIEE_EVENT_POLLING TABLE/COLUMNS
17442808	DATE FORMAT INCONSISTENCIES IN SERVICE POINT UI
17451520	COPY OF 18143873 -REDESIGN OF QUERY DURING IMD PROCESSING
17467504	COPY OF 17458088 - CONFIRM FILES DELIVERED THAT ARE NEEDED FOR ODM/MDM INTEGRATI
17495420	COPY OF 17495416 - COPY OF 17471265 - SUPERVISOR TO ASSIGNMENT PORTAL NOT DISPLA
17514594	COPY OF 17514585 - COPY OF 17514563 - COPY OF 17503973 - INCONSISTENT VALUES IN
17526125	75035-5 RELATED MC CONSUMPTION SYNCHRONIZATION
17554062	COPY OF 17284771 - VEE FACTOR MATRIX RULES ERRORS OUT EVEN IF IT IS SETUP TO BE
17559480	75042 SUPPORT FOR ITEMS
17566883	COPY OF 17515859 - ZERO INSTALL READ CALCULATES CONSUMPTION WITH LAST FINAL READ
17602887	ALGORITHM D1-SMTMCINFO HAS INVALID EFFECTIVE DATE
17603467	ELIGIBILITY CRITERIA SHOULD ALLOW COMPARISON TO BLANK VALUES
17650061	COPY BUG 17075370 - ITRON: (2) ERROR WITH ON DEMAND READ INTERVAL - FINAL MEASUR
17656813	COPY BUG 17603270 - ONDEMANDREADSCALAR XAI INBOUND SERVICE IS NOT WORKING
17704836	COPY BUG: PARENT OUTBOUND COMMUNICATION NOT FOUND ERROR FOR INBOUND RESPONSE
17755326	COPY OF 17755292 - COPY OF 17755229 - COPY OF 17743816 - TO DO EXTRA FIELD COLUM
17769423	LINKING INBOUND SYNC REQUEST AND OUTBOUND ACKNOWLEDGEMENT MESSAGE IN THE LOG TAB
17776673	COPY BUG 17761448 - ON DEMAND READ SCALAR DOES NOT RETREIEVE ACTUAL END READING
17796236	COPY OF 17783983 - HIGHLOWCHKALGCOMPL_IMPL IS NOT VISIBLE IN APPLICATION VIEWER
17838354	COPY OF 17838337 - COPY OF 17832402 - COPY OF 17662165 - NEGATIVE ACKNOWLEDGEMEN
17911308	INDEX D1T418S1 IN TABLE (D1_IMD_CTRL) HAS 2 ADDITIONAL COLUMNS ADDED

Bugs	Description
17922882	UNABLE TO CREATE SCRATCHPAD MC/MC TYPE THROUGH THE APPLICATION.
17974320	COPY OF BUG 18066991 - OTHER IMDS DO NOT HAVE OPTION TO SUPPRESS MULTIPLIERS
18006806	COPY OF 17621357 - CHANGE ALGORITHM D1-DERIVAQTY TO USE DEFAULTVALUE WHEN NO FAC
18097967	DROP D1T304S2 INDEX ON INITIAL MEASUREMENT DATA TABLE
18127969	COPY OF 18112283 - D1-DERIVAQTY ALGORITHM ERRORS WHEN USING SP FACTOR/CHAR - AND
18148793	NO DATA AREA IS DEFINED INSIDE THE ML LEVEL OF IMD SCHEMA
18176373	CHILD AGGREGATOR BO ARE NOT PROCESSED USING D1-ACTAG
18184831	COPY OF 18172037 - QUERY FOR MDM MEASUREMENT TABLE IS PERFORMING POOR.
18224807	INITIATE AGGREGATION ALGO NOT PICKING UP NEW AGGREGATORS
18234478	COPY OF 18234468 - COPY OF 18155618 - SUPERVISOR TO DO ASSIGN PORTAL DOES NOT DI
18238784	COPY OF BUG 18290863 - SCALAR IMD OPTIMIZATION: REEVAL MEASUREMENTS PROGRAM HAS
18261900	SCALAR IMD OPTIMIZATION: NEXT MSRMT SEARCH EXECUTED UNNECESSARILY AT TIMES
18281460	COPY OF 18258478 - INCLUDE INSTALL EVENT IN DETERMINE USAGESUBSCRIPTION DEVICE C
18301474	INDEX D1M255S1 FROM TABLE D1_MEASR_COMP_CHAR HAS INCORRECT COLUMNS
18308886	SP9-SP2 UPGRADE: ITEM AND BROWSER ISSUES RELATED TO UPGRADE
18311311	COPY OF 18281887 - BI BATCH JOB D1-SPSFX RUNNING FOREVER AFTER DROPPING CUSTOM I
18324312	2.1.0.2 INITIAL INSTALL ISSUES
18326805	COPY OF 18307662 - BI BATCH EXTRACT FOR D2-SPCFX IS RUNNING SLOW.
18361990	UPDATE TO TABLE DEFINITIONS - ADD L2 CACHING AND CLASSIFICATION CHANGES
18453924	JAPANESE, "ADD" LINK DISPLAYING VERTICALLY IN SOME ZONES
18484879	ADDING LAST UPDATED DATE/TIME TO BETTER SUPPORT EXPORTS OF IMD AND MEASUREMENTS

Bugs	Description
18495101	COPY OF BUG 18492872: INSTALL ZERO READING ISSUE - PREPARE AND CALCULATE SCALAR

Appendix G

Meter Data Management Fixes

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

Bugs	Description
16508342	CSS:87046 - RATE COMPARE
16872937	MDM_2103_PTB:4101:'VALID SERVICE POINT TYPES' DISPLAYED IN ENG
16941609	CSS USAGE DETAILS SHOWS EXTRA BUCKET FOR STANDARD TO DAYLIGHT TIME SHIFT
16995049	GENERAL PROCESS ID NOT GETTING LOGGED IN UT LOG
17011911	COPY OF 14674723 - SQ OVERLAY ZONE ERROR IN UT WHEN USING GET TOU MAPPED USAGE R
17019068	OUTBOUND MESSAGE CREATION FAILED WITHOUT USAGE TRANSACTION EXPORT CONFIGURATION
17047428	AGGREGATION METHOD "AVERAGE" ENCOUNTERING ERROR IN D2-AGG-MC
17173158	COPY OF 16029467 - COPY BUG - DATA NOT DISPLAYED CORRECTLY IN SERVICE POINT CONS
17174527	COPY OF 17011875 - CSS-USAGE DETAIL SHOULD RETURN EMPTY LIST WHEN ACCOUNT HAS NO
17187711	COPY OF 17187705-EXTEND VEE RULE LOGIC RELATED TO "ESTIMATE IF NOT ATTACHED TO S
17190371	COPY OF 17174748 - COPY OF 17174738 - COPY OF 17073504 - TOLERANCE CRITERIA MET
17201469	ZONE D2-STPCQ1 HAS INVALID APPLICATION SERVICE
17202038	COPY OF 16969134 - CSS-USAGE DETAILS SERVICE CALCULATES INCORRECT QUANTITIES
17214486	COPY OF 16799760 - MISMATCH OF TIME BETWEEN IMD¿S/ MEASURMENTS AND THE TIME DISPL
17242172	RENAME "TARGET SPI" TO "TARGET INTERVAL SIZE"

Bugs	Description
17250837	COPY OF 17069057 - CSS-USAGE OVERVIEW SHOULD RETURN EMPTY LIST WHEN ACCOUNT HAS
17285404	COPY OF 17050501 - SCALAR IMD OVERLAY SHOWS ALIGNMENT ISSUE FOR DISPLAY PARCEL S
17307974	COPY OF 17295707 - WX-GETUSAGEOVERVIEW FAILS TO RETURN DATA FOR CERTAIN ACCOUNTS
17331831	COPY OF 17331823 - COPY OF 17331818 - COPY OF 17331813 - COPY OF 17323078 - REJE
17344710	COPY OF 17341176 - USAGE TRANSACTION ERROR WHEN END READING IS ZERO
17345029	COPY OF 17318124 - D2-MATH RULE ADDS HIGHLIGHTDATETIMES LIST FOR EVERY MAX VALUE
17345979	COPY OF 17187112 - CSS USAGE DETAILS (NEW): SLOW PROCESSING OCCUR IN HOUR VIEW M
17352344	COPY OF 17335058 - MATH RULE WITH VECTOR TYPE = PROFILE FACTOR IGNORES HOW TO US
17359946	COPY OF 17359936 - COPY OF 17359919 - COPY OF 17359889 - COPY OF 16820310 - USAG
17370324	COPY OF 17370307 - COPY OF 17370286 - COPY OF 17355877 - 360 ZONE SHOWS MIN/MAX
17378416	COPY OF 17378409 - COPY OF 17378403 - COPY OF 17300695 - GET SCALAR - ESTIMATED
17418744	COPY OF 17376925 - IN 360 PORTAL EVENT BAR PROFILE IS SHIFTED.
17421007	COPY OF 17388727 - MATH/APPLY MATH RULES TARGET UOM FILTER EXCLUDES BASE UOM OF
17430537	COPY OF 17384427 - COPY OF 17355229 - COPY OF 17347444 - CREATE OVERRIDE DOES NO
17444119	COPY OF 17443417 - NULLPOINTEREXCEPTION NPE WHEN IN SCALAR INITIAL MEASUREMENTS
17507128	PARAMETERS ARE MISSING IN EXPANDED MESSAGE ON METER READ SCREEN
17531002	WX-MULTIPLEACCOUNTUSAGESDOWNLOAD DOES NOT USE REFERENCE DTTM FOR LATEST MEASUREM
17534942	COPY OF 17518609 - TOU MAPPED USAGE RULE CANNOT BE EDITED/MODIFIED
17592121	USAGE CALCULATION RELIES UPON US TYPE ELEMENTS TO BE PRESENT
17593927	COPY OF 17051661 - LOGIC FOR DIFFERENT VALUES CALCULATED FOR MEASURED QUANTITY M

Bugs	Description
17603729	UT APPROVAL STATE TRANSITION UI MAP SHOWS UT ID INSTEAD OF UT INFO STRING
17607874	CREATE/UPDATE SCALAR READING UI FOR AUTOMATIC READ METHOD
17611299	COPY OF 17511097 - D2-INTERVALMEASUREMENTCOUNTER BUSINESS SERVICE RETURNS INCORR
17615172	COPY OF 17543524 - SUPRESSING TO DO CREATION DURING ISSUE DETECTED FAILS UT
17615817	E/R DEVICE CONFIG OVERVIEW - CONSISTENT SORTING OF CHANNELS
17637753	COPY OF 17623751 - BATCH D1-TOUTR DOES NOT START CREATING TOU MAP DATA AT THE CO
17645766	COPY OF 17643377 - SCALAR CALCLUATION FROM INTERVAL CALCULATES AN END READING OF
17659186	VECTOR & SQ MATH THE FIELD 'INSERT SQ ENTRY' LABEL AND HELP TEXT TO BE MODIFIED
17721135	USAGE TRANSACTION CALCULATE DEFER MONITOR (D2-UTCD) DOES NOT ORDER UT PROPERLY.
17756211	COPY OF 17742062 - GET SCALAR DETAILS CAUSES ERROR IN CC&B BILL SEGMENT OVER DST
17763402	COPY OF 17761464 - DO NOT SUMMARIZE UT OUTBOUND MESSAGE SCALAR DETAILS FOR CONSU
17802406	COPY OF 17723065 - D1-SPSFX MDM SP SNAPSHOT EXTRACT CONTAINS DUPLICATE RECORDS I
17832662	COPY OF 17828060 - WITH METER EXCHANGE, UT DOES NOT ERROR WHEN NO USAGE AND NO E
17869689	COPY OF 17821752 - D2-SUAFX CONSIDERING INACTIVE SA.
17948395	COPY OF 17931403 - SCALAR ESTIMATION TIME STAMP INCORRECT DURING DST PERIOD
18109191	COPY OF 16073801 - ENHANCE OUTBOUND USAGE MESSAGE - ROUND USING UOM DECIMAL PLAC
18119089	COPY OF 18112147 - GREEN BUTTON -"NO DATA FOUND FOR SELECTED SEARCH CRITERIA. CH
18143216	COPY OF 18132142 - DOWNLOAD USAGE DATA IS INCORRECTLY SHIFTED BY 1 HOUR WHEN THE
18150238	COPY OF 18029855 - D2-SUAFX IS EXTRACTING SP WHICH DOES NOT HAVE METER INSTALLED
18162794	UPDATE POSTAL AND SERVICE TYPE AGGREGATOR BO TO USE UI HINTS
18199865	CONSUMPTION SHOULD BE ROUNDED BASED ON MC'S NUMBER OF DIGITS RIGHT IN VEE

Bugs	Description
18205327	SCALAR PROFILE ESTIMATION UI AND HELP TEXT APPEARS TO BE WRONG.
18225404	COPY OF 18225389 - COPY OF 18199040 - COPY OF 18188915 - D2-UTSED BATCH GOES IN
18254425	SP2 GERMAN PSEUDO - USAGE ADJUSTMENT TYPE EXT LOOKUP HAS HARD CODED STRING
18259519	COPY OF 18231303 - ESTIMATED READS AND QTY CREATE INCORRECT MULTIPLIER VALUE
18281442	COPY OF 18231332 - INCORRECT MULTIPLIER DISPLAYED IN USAGE TRANSACTION SCALAR DE
18284805	EFFECTIVE PRIMARY US IS NOT BEING SELECTED ON FIND CONSTITUENT MC FOR AGGREGATIO
18285804	COPY OF 17938351 - VALIDATE AGAINST TOLERANCE USAGE RULE CANNOT BE EFFECTIVELY U
18304301	COPY OF 18246600 - ENHANCE OUTBOUND USAGE MESSAGE - ROUND USING UOM AND SQI DECI
18385133	D2-TRNUS - DISABLEMENT AND BACK TO BACK CREATING WAIT FOR MEASUREMENT ACTIVTITY
18424274	DATA IS NOT GETTING SYNCED FROM CCB TO SOM
18468297	SS METER READ TASK DSPL PAGE SHOWS THE LINK TO ITSEL INSTEAD OF SERVICE TASK ID
18491867	MASTER CONFIGURATION BO DESCRIPTION
18510386	COPY OF 18475478 - ESTIMATED SCALAR DEMAND MEASUREMENTS CALCULATED WITHOUT MULTI

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