

**Oracle Functional Testing Advanced  
Pack for Oracle Utilities**

**Installation and Administration Guide**

Release 5.0.1

**E67843-03**

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Oracle Functional Testing Advanced Pack for Oracle Utilities Installation and Administration Guide, Release 5.0.1

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# Preface

Welcome to the Oracle Functional Testing Advanced Pack for Oracle Utilities (OFTAPOU) Installation and Administration Guide. This guide explains how to install Oracle Functional Testing Advanced Pack for Oracle Utilities, Release 5.0.1.

Oracle Functional Testing Advanced Pack for Oracle Utilities is a licensed product and requires Oracle Functional Tester (OFT).

The Oracle Functional Testing Advanced Pack for Oracle Utilities media pack comprises the following documentation and installation packages:

- **Documentation Package**
  - Oracle Functional Testing Advanced Pack for Oracle Utilities Release Notes
  - Oracle Functional Testing Advanced Pack for Oracle Utilities Installation and Administration Guide
  - Oracle Functional Testing Advanced Pack for Oracle Utilities User's Guide
  - Oracle Functional Testing Advanced Pack for Oracle Utilities Reference Guide for Core
  - Oracle Functional Testing Advanced Pack for Oracle Utilities Reference Guide for Oracle Utilities Mobile Workforce Management/ Oracle Real-Time Scheduler v2.2.0.3
  - Oracle Functional Testing Advanced Pack for Oracle Utilities Reference Guide for Oracle Utilities Mobile Workforce Management/ Oracle Real-Time Scheduler v2.3.0
  - Oracle Functional Testing Advanced Pack for Oracle Utilities Reference Guide for Oracle Utilities Customer Care and Billing v2.4.0.3
  - Oracle Functional Testing Advanced Pack for Oracle Utilities Reference Guide for Oracle Utilities Customer Care and Billing v2.5.0.1
  - Oracle Functional Testing Advanced Pack for Oracle Utilities Reference Guide for Oracle Utilities Customer Care and Billing v2.5.0.2
  - Oracle Functional Testing Advanced Pack for Oracle Utilities Reference Guide for Oracle Utilities Work and Asset Management/ Oracle Utilities Operational Device Management v2.1.1
  - Oracle Functional Testing Advanced Pack for Oracle Utilities Reference Guide for Oracle Utilities Meter Data Management/ Oracle Utilities Smart Grid Gateway v2.1.0.3
  - Oracle Functional Testing Advanced Pack for Oracle Utilities Reference Guide for Oracle Utilities Meter Data Management/ Oracle Utilities Smart Grid Gateway v2.2.0.0
- **Installation Package**
  - Oracle Functional Testing Advanced Pack for Oracle Utilities Multiplatform

This preface includes the following:

- [Audience](#)
- [Prerequisite Knowledge](#)
- [Related Documents](#)
- [Abbreviations and Common Phrases](#)
- [Conventions](#)

## Audience

This guide is intended for System Administrators installing Oracle Functional Testing Advanced Pack for Oracle Utilities.

You are required to have:

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

## Prerequisite Knowledge

This guide does require an understanding of software testing concepts. The users must be familiar with Oracle Flow Builder.

**Note:** *Oracle Flow Builder User's Guide* can be downloaded from Oracle Technology Network (<http://www.oracle.com/technetwork/oem/downloads/index-084446.html>).

## Related Documents

For more information, refer to these Oracle resources:

### Installation, Administration, and Release Notes

- *Oracle Functional Testing Advanced Pack for Oracle Utilities Release Notes*
- *Oracle Functional Testing Advanced Pack for Oracle Utilities Installation and Administration Guide*

### User Guides

- *Oracle Functional Testing Advanced Pack for Oracle Utilities User's Guide*
- *Oracle Functional Testing Advanced Pack for Oracle Utilities Reference Guide for Core*
- *Oracle Functional Testing Advanced Pack for Oracle Utilities Reference Guide for Oracle Utilities Mobile Workforce Management/ Oracle Real-Time Scheduler (v2.2.0.3)*
- *Oracle Functional Testing Advanced Pack for Oracle Utilities Reference Guide for Oracle Utilities Mobile Workforce Management/ Oracle Real-Time Scheduler (v2.3.0)*
- *Oracle Functional Testing Advanced Pack for Oracle Utilities Reference Guide for Oracle Utilities Customer Care and Billing (v2.4.0.3)*
- *Oracle Functional Testing Advanced Pack for Oracle Utilities Reference Guide for Oracle Utilities Customer Care and Billing (v2.5.0.1)*
- *Oracle Functional Testing Advanced Pack for Oracle Utilities Reference Guide for Oracle Utilities Customer Care and Billing (v2.5.0.2)*
- *Oracle Functional Testing Advanced Pack for Oracle Utilities Reference Guide for Oracle Utilities Work and Asset Management/ Oracle Utilities Operational Device Management (v2.1.1)*

- *Oracle Functional Testing Advanced Pack for Oracle Utilities Reference Guide for Oracle Utilities Meter Data Management / Oracle Utilities Smart Grid Gateway (v2.1.0.3)*
- *Oracle Functional Testing Advanced Pack for Oracle Utilities Reference Guide for Oracle Utilities Meter Data Management / Oracle Utilities Smart Grid Gateway (v2.2.0.0)*

See also:

- *Oracle Flow Builder Documentation Library*

## Abbreviations and Common Phrases

The following abbreviations are used throughout this and other documents provided with the product:

OFTAPOU	Oracle Functional Testing Advanced Pack for Oracle Utilities
MDM	Oracle Utilities Meter Data Management
MWM	Oracle Utilities Mobile Workforce Management
WAM	Oracle Utilities Work and Asset Management
CCB	Oracle Utilities Customer Care and Billing
OFB	Oracle Flow Builder
OFT	Oracle Functional Tester

## Conventions

The following text conventions are used in this document:

Convention	Meaning
<b>boldface</b>	Boldface type indicates graphical user interface elements associated with an action, or terms defined in text or the glossary.
<i>italic</i>	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.

# Chapter 1

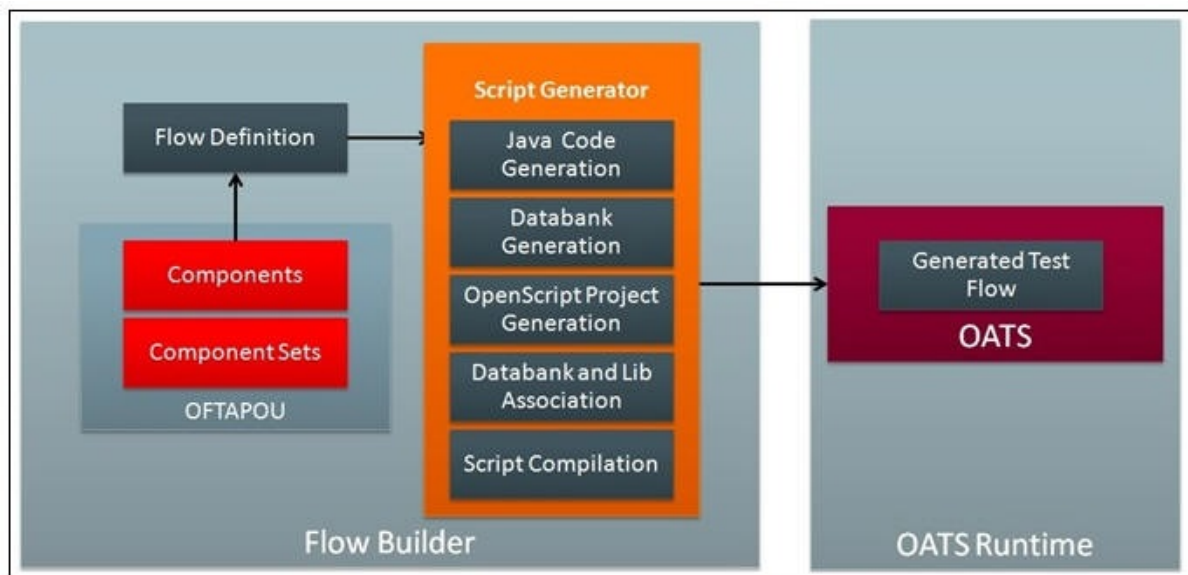
## Overview

This chapter introduces the Oracle Functional Testing Advanced Pack for Oracle Utilities application and provides an overview of the application architecture.

- [Application Architecture](#)

### Application Architecture

Below is a high-level architecture diagram for Oracle Functional Testing Advanced Pack for Oracle Utilities.



**High-Level Architectural Diagram**

Components and component sets are defined using metadata in Oracle Flow Builder. Using these components a flow can be assembled and then generated. The generated script, then, can be used and executed using Oracle Functional Tester.

# Chapter 2

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## Supported Platforms and Hardware Requirements

This chapter provides an overview of the tiers on which Oracle Functional Testing Advanced Pack for Oracle Utilities is implemented, and shows each of the operating system/server combinations that the product is certified for.

The chapter includes information about the following:

- [Software and Hardware Considerations](#)
- [Supported Platforms](#)
- [Support for Software Patches and Upgrades](#)

### Software and Hardware Considerations

See the Oracle Flow Builder documentation library for factors that can influence software and hardware decisions.

### Supported Platforms

The installation has been tested and certified to operate on the following operating system, application server, and database server combinations.

This section includes the following details:

- [Operating Systems and Application Servers](#)
- [Oracle Database Servers](#)
- [Oracle WebLogic Server Information](#)



## Operating Systems and Application Servers

The following table details the operating system and application server combinations on which Oracle Functional Testing Advanced Pack for Oracle Utilities has been tested and certified.

Operating System and Web Browser (Client)	Operating System (Server)	Chipset	Application Server	Database
Windows 7	Oracle Linux 6.5 (64-bit)	x86_64	WebLogic 10.3.6	Oracle 11.2.0.3
Firefox 38ESR	Red Hat Enterprise Linux 6.5 (64-bit)			Oracle 12c

## Oracle Database Servers

Oracle Functional Testing Advanced Pack for Oracle Utilities is supported with Oracle Database Server 11.2.0.3 and 12c on all of the operating systems listed in the table above.

The following Oracle Database Server Editions are supported:

- Oracle Database Enterprise Edition
- Oracle Database Standard Edition

**Note:** Oracle Database Enterprise Edition and the Partitioning and Advanced Compression options are not mandatory but recommended. Standard Edition should only be considered suitable for very small, pilot projects, or development environments where scalability, performance, and database size-on-disk are not important considerations. Oracle Database Enterprise Edition, including the Advanced Compression and Partitioning options, is strongly recommended in all other situations.

Oracle 11.2.0.1 client is required for the 11.2.0.3 database server. Also, Oracle 12c client is required for the 12c database server.

## Oracle WebLogic Server Information

The following Oracle WebLogic Server Editions are supported:

- Oracle WebLogic Server Standard Edition 10.3.6
- Oracle WebLogic Server Enterprise Edition 10.3.6 (required if using application clustering)

## Support for Software Patches and Upgrades

Due to the ongoing nature of software improvement, vendors will issue patches and service packs for the operating systems, application servers, and database servers on top of specific versions that Oracle Utilities Application Framework has been tested with.

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 Oracle Functional Testing Advanced Pack for Oracle Utilities production environment.

Ensure you contact Oracle Functional Testing Advanced Pack for Oracle Utilities Support prior to applying vendor updates that do not guarantee backward compatibility.

# Chapter 3

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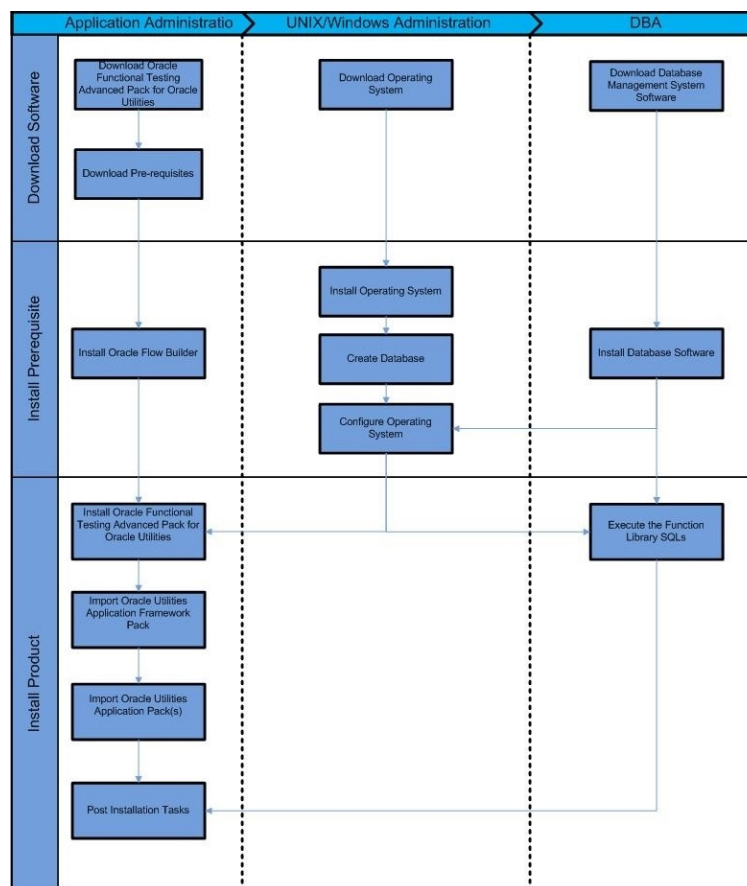
## Installing Oracle Functional Testing Advanced Pack for Oracle Utilities

This chapter explains how to install and setup Oracle Functional Testing Advanced Pack for Oracle Utilities. It includes the following sections:

- [Installation and Configuration Overview](#)
- [Before You Install](#)
- [Setup Overview and Roles](#)
- [System Requirements](#)
- [Prerequisites](#)
- [Installing Oracle Functional Testing Advanced Pack for Oracle Utilities](#)

### Installation and Configuration Overview

The following diagram shows the steps to be followed to install and configure Oracle Functional Testing Advanced Pack for Oracle Utilities.



Installation Overview

## Before You Install

Refer to the *Oracle Functional Testing Advanced Pack for Oracle Utilities Release Notes* for important notes about this product release.

## Setup Overview and Roles

The following table provides an overview of the Oracle Functional Testing Advanced Pack for Oracle Utilities application setup tasks.

Step	Task	Role
1	Verify the system requirements. See <a href="#">System Requirements</a>	Administrator
2	Verify the prerequisites have been met. See <a href="#">Prerequisites</a>	Administrator
3	Install Oracle Flow Builder. Refer to the <i>Oracle Flow Builder User Guide</i> for more details. ( <a href="http://www.oracle.com/technetwork/oem/downloads/index-084446.html">http://www.oracle.com/technetwork/oem/downloads/index-084446.html</a> )	Administrator

Step	Task	Role
4	Perform the initial setup for Administrators. See <a href="#">Installing Oracle Functional Testing Advanced Pack for Oracle Utilities</a>	Administrator
5	Install Oracle Functional Testing Advanced Pack for Oracle Utilities. See <a href="#">Installing Oracle Functional Testing Advanced Pack for Oracle Utilities</a>	Administrator
6	Import Oracle Functional Testing Advanced Pack for Oracle Utilities export zip files into Oracle Flow Builder. See <a href="#">Installing Oracle Functional Testing Advanced Pack for Oracle Utilities</a>	Administrator
7	Install OpenScript. Refer to the <i>Oracle Functional Testing Advanced Pack for Oracle Utilities User's Guide</i> for more details.	User (Developer)
8	Download third party jars. See <i>Oracle Functional Testing Advanced Pack for Oracle Utilities User's Guide</i> for more details.	User (Developer)

## System Requirements

**Note:** Refer to the *Oracle Flow Builder User's Guide* for system requirements and certified platform details for Oracle Flow Builder.

The following table provides the browser, operating system, and database combination details for which this Oracle Functional Testing Advanced Pack for Oracle Utilities release has been certified.

System/Software	Requirement
Browser	Firefox 38ESR
Operating System (Client Admin)	Windows 7 (64-bit)
Operating System (Server)	Oracle Linux 6.5 (64-bit)
Chipset	x86_64
Oracle Application Testing Suite (OATS) OpenScript	12.5.0.3
Database	Oracle Database 11.2.0.3 Enterprise Edition Oracle Database 12c Enterprise
Oracle Flow Builder (OFB)	12.5.0.3 (Patch 24956593)

## Supported Oracle Utilities Products

Test accelerators for the following Oracle Utilities products are provided by this Oracle Functional Testing Advanced Pack for Oracle Utilities release.

Product	Version
Oracle Real-Time Scheduler	2.2.0.3 2.3.0.0
Oracle Utilities Mobile Workforce Management	2.2.0.3 2.3.0.0
Oracle Utilities Customer Care and Billing	2.4.0.3 2.5.0.1 2.5.0.2
Oracle Utilities Work and Asset Management	2.1.1.0
Oracle Utilities Operational Device Management	2.1.1.0
Oracle Utilities Meter Data Management	2.1.0.3 2.2.0.0
Oracle Utilities Smart Grid Gateway	2.1.0.3 2.2.0.0

## Prerequisites

The following table provides the prerequisite software details to install Oracle Functional Testing Advanced Pack for Oracle Utilities in the respective machine categories:

Machine Category	Requirement
Prerequisite Software (Server)	Oracle Flow Builder 12.5.0.3 (Patch 24956593) Oracle Database 11.2.0.3 Enterprise Edition Oracle Database 12c Enterprise Edition
Prerequisite Software (Client Admin)	Oracle Database Client 11.2.0.3 Oracle Database Client 12c
Prerequisite Software (Client Admin)	Oracle JDK 1.7.0+

**Note:** Refer to the *Oracle Flow Builder User's Guide* for steps about how to install Oracle Flow Builder and its prerequisite software.

**Note:** Set the database connection pool size (recommended) to 150 or higher, using the WebLogic console. Below is the pseudo format of the URL to access the WebLogic console. See [Appendix B: Database Connection Pool](#) for detailed steps.

[http://<OFB\\_HOST>:<OFB\\_ADMIN\\_PORT>/console](http://<OFB_HOST>:<OFB_ADMIN_PORT>/console)

# Installing Oracle Functional Testing Advanced Pack for Oracle Utilities

This section provides instructions for installing Oracle Functional Testing Advanced Pack for Oracle Utilities and the post-installation checklist. It includes the following:

- [Extracting OFTAPOU Packages](#)
- [Installing Components and Flows](#)
- [Post-Installation Tasks](#)
- [Initial Setup for Administrators](#)

## Extracting OFTAPOU Packages

**Note:** Ensure that the prerequisite software is successfully installed before proceeding with the steps below.

To install the product successfully, follow these steps:

1. Download the Oracle Functional Testing Advanced Pack for Oracle Utilities v5.0.1 Multiplatform part from Oracle Software Delivery Cloud (OSDC) (<https://edelivery.oracle.com/>) onto a Windows desktop.
2. Create the <TEMPDIR> directory.
3. Extract the zip file into the <TEMPDIR> created in the above step.
4. Execute `java -jar <TEMPDIR>\oftapou-5.0.1_generic.jar`. The **Oracle Universal Installer Welcome** screen is displayed.

**Note:** Ensure that the Java version used is 1.70+.

5. Click **Next**. The **Specify Home Details** screen is displayed.
6. Enter the **Name** and **Path** details as below:

**Name:** <Name of the directory where Oracle Functional Testing Advanced Pack for Oracle Utilities should be installed>

**Path:** <Path where the installation directory should be created>

**Note:** This directory is referred to in the following sections as <OFTAPOU\_HOME>.

7. Click **Next**. The **Summary** screen is displayed.
8. Verify the details (global settings, product languages, space requirements, etc), and then click **Install**.
9. Click **Next**, and then click **Finish**.

This completes the setup process.

## Installing Components and Flows

This section provides the steps to install the components and flows for Core, Mobile Workforce Management, Customer Care and Billing, Work and Asset Management, and Meter Data Management. It includes:

- [Installing Core Components and Flows](#)
- [Installing Components and Flows for Mobile Workforce Management \(v2.2.0.3\)](#)
- [Installing Components and Flows for Mobile Workforce Management \(v2.3.0.0\)](#)
- [Installing Components and Flows for Customer Care and Billing \(v2.4.0.3\)](#)

- [Installing Components and Flows for Customer Care and Billing \(v2.5.0.1\)](#)
- [Installing Components and Flows for Customer Care and Billing \(v2.5.0.2\)](#)
- [Installing Components and Flows for Work and Asset Management \(v2.1.1.0\)](#)
- [Installing Components and Flows for Meter Data Management/ Smart Grid Gateway \(v2.1.0.3\)](#)
- [Installing Components and Flows for Meter Data Management/ Smart Grid Gateway \(v2.2.0.0\)](#)
- [Importing Components and Flows into Oracle Flow Builder](#)

## Installing Core Components and Flows

This section provides information about installing the core components and flows. It includes:

- [Copying Function Library Files to Oracle Flow Builder Server](#)
- [Importing Core Function Libraries, Components, and Flows](#)

### Copying Function Library Files to Oracle Flow Builder Server

To copy the core function library files to Oracle Flow Builder server, follow these steps:

1. Copy the <OFTAPOU\_HOME>\OatsouLibrary\modules\oatsou-function-libs\Core\ directory to <OFB-Install-Folder>/data/function-libraries/outsp-function-libs/Core.
2. Copy the <OFTAPOU\_HOME>\OatsouLibrary\modules\oatsou-function-libs\MWM\ directory to <OFB-Install-Folder>/data/function-libraries/outsp-function-libs/MWM.
3. Copy the <OFTAPOU\_HOME>\OatsouLibrary\modules\oatsou-function-libs\CCB\ directory to <OFB-Install-Folder>/data/function-libraries/outsp-function-libs/CCB.
4. Copy the <OFTAPOU\_HOME>\OatsouLibrary\modules\oatsou-function-libs\WAM\ directory to <OFB-Install-Folder>/data/function-libraries/outsp-function-libs/WAM.
5. Copy the <OFTAPOU\_HOME>\OatsouLibrary\modules\oatsou-function-libs\MDM\ directory to <OFB-Install-Folder>/data/function-libraries/outsp-function-libs/MDM.

**Note:** Ensure that the directories and their content under <OFB-Install-Folder>/data/function-libraries/outsp-function-libs have the same file permissions, owner as remaining Oracle Flow Builder directories.

### Importing Core Function Libraries, Components, and Flows

After installing Oracle Functional Testing Advanced Pack for Oracle Utilities, perform the following steps:

1. Login to any SQL client (sqlplus or SQLDeveloper, for example) as “OFB” user.
2. Execute the following script:

```
<OFTAPOU_HOME>\OatsouLibrary\modules\sqls\CORE5001_FuncLibrary_Metadata.sql
```

3. Commit the SQL changes.
4. Import the <OFTAPOU\_HOME>\OatsouLibrary\modules\exports\Core\CORE5001\_PACK.zip.

See the [Importing Components and Flows into Oracle Flow Builder](#) section for detailed steps to import components and flows into Oracle Flow Builder.

**Note:** While installing Oracle Utilities Mobile Workforce Management v2.2.0.3, Oracle Utilities Customer Care and Billing v2.4.0.3, or Oracle Utilities Meter Data Management v2.1.0.3, ensure to import the CORE5001\_IWS\_42x.xml metadata bundle.

While installing Oracle Utilities Customer Care and Billing v2.5.0.1 or Oracle Utilities Work and Asset Management v2.1.1.0, import the CORE5001\_IWS.xml bundle.

### Installing Components and Flows for Mobile Workforce Management (v2.2.0.3)

**Important:** Ensure to execute the steps in the [Installing Core Components and Flows](#) section.

After installing Oracle Functional Testing Advanced Pack for Oracle Utilities, perform the following steps:

1. Login to any SQL client (sqlplus, for example) as “OFB” user.
2. Execute the following script:

```
<OFTAPOU_HOME\OatsouLibrary\modules\sqls\MWM2203_FuncLibrary_Metad
ata.sql
```

3. Commit the SQL changes.
4. Import the  
<OFTAPOU\_HOME>\OatsouLibrary\modules\exports\MWM\MWM2203\_PACK.zip.

See the [Importing Components and Flows into Oracle Flow Builder](#) section for detailed steps to import components and flows into Oracle Flow Builder.

### Installing Components and Flows for Mobile Workforce Management (v2.3.0.0)

**Important:** Ensure to execute the steps in the [Installing Core Components and Flows](#) section.

After installing Oracle Functional Testing Advanced Pack for Oracle Utilities, perform the following steps:

1. Login to any SQL client (sqlplus, for example) as “OFB” user.
2. Execute the following script:

```
<OFTAPOU_HOME\OatsouLibrary\modules\sqls\MWM2300_FuncLibrary_Metad
ata.sql
```

3. Commit the SQL changes.
4. Import the  
<OFTAPOU\_HOME>\OatsouLibrary\modules\exports\MWM\MWM2300\_PACK.zip.

See the [Importing Components and Flows into Oracle Flow Builder](#) section for detailed steps to import components and flows into Oracle Flow Builder.

### Installing Components and Flows for Customer Care and Billing (v2.4.0.3)

**Important:** Ensure to execute the steps in the [Installing Core Components and Flows](#) section.

After installing Oracle Functional Testing Advanced Pack for Oracle Utilities, perform the following steps:

1. Login to any SQL client (sqlplus, for example) as “OFB” user.
2. Execute the following script for the intended Oracle Utilities product version:

```
<OFTAPOU_HOME\OatsouLibrary\modules\sqls\CCB2403_FuncLibrary_Metad
ata.sql
```

**Important:** If you have already executed  
<OFTAPOU\_HOME\OatsouLibrary\modules\sqls\CCB2501\_FuncLibrary



\_Metad ata.sql as part of importing the Oracle Utilities Customer Care and Billing v2.5.0.1 installation, skip this step.

3. Commit the SQL changes.
4. Import the  
<OFTAPOU\_HOME>\OatsouLibrary\modules\exports\CCB\CCB2403\_PACK.zip file.

See the [Importing Components and Flows into Oracle Flow Builder](#) section for detailed steps to import components and flows into Oracle Flow Builder.

## Installing Components and Flows for Customer Care and Billing (v2.5.0.1)

**Important:** Ensure to execute the steps in the [Installing Core Components and Flows](#) section.

After installing Oracle Functional Testing Advanced Pack for Oracle Utilities, perform the following steps:

1. Login to any SQL client (sqlplus, for example) as “OFB” user.
2. Execute the following script for the intended Oracle Utilities product version:

```
<OFTAPOU_HOME\OatsouLibrary\modules\sqls\CCB2501_FuncLibrary_Metad
ata.sql
```

**Important:** If you have already executed  
<OFTAPOU\_HOME\OatsouLibrary\modules\sqls\CCB2501\_FuncLibrary  
\_Metad ata.sql as part of importing the Oracle Utilities Customer Care and  
Billing v2.4.0.3 installation, skip this step.

3. Commit the SQL changes.
4. Import the  
<OFTAPOU\_HOME>\OatsouLibrary\modules\exports\CCB\CCB2501\_PACK.zip file.

See the [Importing Components and Flows into Oracle Flow Builder](#) section for detailed steps to import components and flows into Oracle Flow Builder.

## Installing Components and Flows for Customer Care and Billing (v2.5.0.2)

**Important:** Ensure to execute the steps in the [Installing Core Components and Flows](#) section.

After installing Oracle Functional Testing Advanced Pack for Oracle Utilities, perform the following steps:

1. Login to any SQL client (sqlplus, for example) as “OFB” user.
2. Execute the following script for the intended Oracle Utilities product version:

```
<OFTAPOU_HOME\OatsouLibrary\modules\sqls\CCB2502_FuncLibrary_Metad
ata.sql
```

3. Commit the SQL changes.
4. Import the  
<OFTAPOU\_HOME>\OatsouLibrary\modules\exports\CCB\CCB2502\_PACK.zip file.

See the [Importing Components and Flows into Oracle Flow Builder](#) section for detailed steps to import components and flows into Oracle Flow Builder.

## Installing Components and Flows for Work and Asset Management (v2.1.1.0)

**Important:** Execute the steps in the [Installing Core Components and Flows](#) section prior to completing these steps.

After installing Oracle Functional Testing Advanced Pack for Oracle Utilities, perform the following steps:

1. Login to any SQL client (sqlplus, for example) as “OFB” user.
2. Execute the following script for the intended Oracle Utilities product version:  

```
<OFTAPOU_HOME\OatsouLibrary\modules\sqls\WAM211_FuncLibrary_Metada.ta.sql
```
3. Commit the SQL changes.
4. Import the  

```
<OFTAPOU_HOME>\OatsouLibrary\modules\exports\WAM\WAM211_PACK.zip
```

file.

See the [Importing Components and Flows into Oracle Flow Builder](#) section for detailed steps to import components and flows into Oracle Flow Builder.

## Installing Components and Flows for Meter Data Management/ Smart Grid Gateway (v2.1.0.3)

**Important:** Execute the steps in the [Installing Core Components and Flows](#) section prior to completing these steps.

After installing Oracle Functional Testing Advanced Pack for Oracle Utilities, perform the following steps:

1. Login to any SQL client (sqlplus, for example) as “OFB” user.
2. Execute the following script for the intended Oracle Utilities product version:  

```
<OFTAPOU_HOME\OatsouLibrary\modules\sqls\Meter2103_FuncLibrary_Metadata.sql
```
3. Commit the SQL changes.
4. Import the  

```
<OFTAPOU_HOME>\OatsouLibrary\modules\exports\MDM\Meter2103_PACK.zip
```

file.

See the [Importing Components and Flows into Oracle Flow Builder](#) section for detailed steps to import components and flows into Oracle Flow Builder.

**Important:** Before the sample flows provided in this release can be executed, the Test Harness needs to be configured. For more details about configuring the Test Harness, refer to the *Oracle Utilities Smart Grid Gateway Configuration Guide*.

**Important:** While importing the metadata bundles, ensure that the Meter2103\_IWS.xml bundle is imported first. Then, for each adapter installed, import its specific metadata bundle. (For example: If Echelon is installed, import Meter2103\_Echelon\_IWS.xml).

## Installing Components and Flows for Meter Data Management/ Smart Grid Gateway (v2.2.0.0)

**Important:** Execute the steps in the [Installing Core Components and Flows](#) section prior to completing these steps.

After installing Oracle Functional Testing Advanced Pack for Oracle Utilities, perform the following steps:

1. Login to any SQL client (sqlplus, for example) as “OFB” user.
2. Execute the following script for the intended Oracle Utilities product version:
 

```
<OFTAPOU_HOME\OatsouLibrary\modules\sqls\Meter2200_FuncLibrary_Met
adata.sql
```
3. Commit the SQL changes.
4. Import the
 

```
<OFTAPOU_HOME>\OatsouLibrary\modules\exports\MDM\Meter2200_PACK.zip
```

 file.

See the [Importing Components and Flows into Oracle Flow Builder](#) section for detailed steps to import components and flows into Oracle Flow Builder.

**Important:** Before the sample flows provided in this release can be executed, the Test Harness needs to be configured. For more details about configuring the Test Harness, refer to the *Oracle Utilities Smart Grid Gateway Configuration Guide*.

**Important:** While importing the metadata bundles, ensure that the Meter2200\_PrereqBundle.xml bundle is imported first and then import Meter2200\_IWS.xml. Then, for each adapter installed, import its specific metadata bundle. (For example: If Echelon is installed, import Meter2103\_Echelon\_IWS.xml).

## Importing Components and Flows into Oracle Flow Builder

To import the components and flows into Oracle Flow Builder, follow these steps:

1. Open the Firefox browser.
2. Navigate to the **Oracle Flow Builder Login** page (the URL would have been provided during the Oracle Flow Builder installation process and is usually in the http://<server>:9090/ofb format).
3. Login as an Administrator using the credentials provided during the Oracle Flow Builder installation.
4. Once the login is successful, the **Home** page is displayed.
5. On the **Administration** tab, navigate to **Tools** and then click **Import**.
6. On the **Import** page, click **Choose File**.
7. Navigate to the components/flows pack and select the pack.

For example: The components/flows pack for Oracle Utilities Work and Asset Management is named as WAM211\_PACK.zip.

8. Click **Save**.
9. After the import process is complete, log out from Oracle Flow Builder.

## Post-Installation Tasks

Oracle Functional Testing Advanced Pack for Oracle Utilities components and flows require Oracle Utilities' application specific metadata to exist in the environment on which the automation test cases are executed. This metadata includes automation specific Business Objects, Business Scripts, Data Areas, and Web Services.

This section includes the tasks to be performed after installing the components and flows:

- [Modifying the WebLogic Startup Script \(Optional\)](#)
- [Replacing the Core Libraries](#)
- [Importing Application Specific Metadata Bundles](#)
- [Importing Inbound Web Service Bundles](#)
- [Deploying Inbound Web Services](#)
- [Applying Prerequisite Patches](#)

### Modifying the WebLogic Startup Script (Optional)

To modify the WebLogic Startup script, follow these steps:

1. Login to the server hosting the Oracle Utilities application.
2. Switch to the Oracle Utilities application environment and execute the following command:
 

```
configureEnv.sh -a
```
3. From the menu, select **51**.
4. Modify the **Web Application Additional Options** parameter as follows:
 

```
Djavax.xml.soap.MessageFactory=com.sun.xml.internal.messaging.saaj
.soap.ver1_1.SOAPMessageFactory1_1Impl
```
5. Update **Additional Runtime Classpath** as follows:
 

```
$WL_HOME/./oracle_common/modules/com.sun.xml.messaging.saaj.saaj-
impl_1.3.jar
```
6. Enter 'P' to process and save the changes.
7. Restart the environment to apply the modifications.

### Replacing the Core Libraries

To replace the Core folder in both the Oracle Flow Builder installation location, follow these steps:

1. Navigate to the location where Oracle Flow Builder is installed on the server.
2. Overwrite the libraries under the <OFB\_INSTALL\_DIR>/data/function-libraries/outsp-function-libs/Core directory with the libraries under the <OFTAPOU\_HOME>\OatsouLibrary\modules\postInstall directory.

### Importing Application Specific Metadata Bundles

To import metadata bundles into an Oracle Utilities application, follow these steps:

1. Login to the Oracle Utilities Application. (For example: Oracle Utilities Mobile Workforce Management application)
2. Open the application specific IWS bundle located at <OFTAPOU\_HOME>\OatsouLibrary\modules\webservices\<Product Folder> and copy the content of the bundle.

For example: Open CCB2501\_BO.xml and copy the content.

**Note:** Before importing any product specific metadata bundles, ensure that the Core metadata bundle is imported. For more details, see the [Importing Core Function Libraries, Components, and Flows](#) section.

3. Navigate to **Admin > B > Bundle Import > Add**.
4. Provide the **External Reference** and **Detailed Description**.
5. Paste the xml content from Step 2 into the **Bundle Details** field.
6. Click **Save**.
7. On the **Bundle Import** page, check if the status of the bundle is **'Pending'**.
8. Click **Apply**.

The metadata bundle is imported successfully. The **Bundle Import** screen displays the status as **'Applied'**.

## Importing Inbound Web Service Bundles

To import the Inbound Web Service bundles into an Oracle Utilities application, follow these steps:

1. Login to the Oracle Utilities Application. (For example: Oracle Utilities Mobile Workforce Management)
2. Open the application specific IWS bundle located at <OFTAPOU-HOME>\OatsouLibrary\modules\webservices\<Product Folder> and copy the content of the bundle.

For example: Open MWM2203\_IWS.xml and copy the content.

3. Navigate to **Admin > B > Bundle Import > Add**.
4. Provide the **External Reference** and **Detailed Description**.
5. Paste the xml content from Step 2 into the **Bundle Details** field.
6. Click **Save**.
7. On the **Bundle Import** page, check if the status of the bundle is **'Pending'**.
8. Click **Apply**.

The metadata bundle is imported successfully. The **Bundle Import** screen displays the status as **'Applied'**.

## Deploying Inbound Web Services

To deploy the Inbound Web Service bundles, follow these steps:

**Important:** Ensure that the application specific Inbound Web Services bundle is imported successfully into the Oracle Utilities application.

1. Login to the Oracle Utilities application where the Inbound Web Services have to be deployed.
2. Navigate to **Admin > I > Inbound Web Service Deployment**. The Inbound Web Services imported successfully into the application are displayed with the **'Needs Deploy'** status.
3. Click **Deploy** to deploy the services.
4. Click **Refresh** to view the deployment status.

The Inbound Web Services should be deployed before they can be used for automation.

## Applying Prerequisite Patches

There are certain Oracle Utilities application specific patches that should be installed in the respective application before executing any automation flows in it.

See [Appendix B: Prerequisite Patches](#) for details about patches.

## Initial Setup for Administrators

See the **Initial Setup for Administrators** section in the *Oracle Flow Builder User's Guide* for setup details.

To access the Oracle Functional Testing Advanced Pack for Oracle Utilities application, users should register. See the **Registering User Credentials** section in the *Oracle Flow Builder User's Guide* for more details about how to register.

# Chapter 4

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## Upgrading Oracle Functional Testing Advanced Pack for Oracle Utilities

This chapter guides you through the process of upgrading Oracle Functional Testing Advanced Pack for Oracle Utilities (OFTAPOU), including:

- [Upgrade Overview](#)
- [Planning the Upgrade](#)
- [Upgrading to OFTAPOU v5.0.1](#)
- [Restoring Oracle Flow Builder Database Backup](#)

### Upgrade Overview

This section provides an overview of the Oracle Functional Testing Advanced Pack for Oracle Utilities upgrade process.

The following steps outline the major procedures performed during the upgrade process:

- Step 1: Review the different types of upgrades. See the [Planning the Upgrade](#) section for more details.
- Step 2: Plan the upgrade. See the [Planning the Upgrade](#) section for instructions.
- Step 3: Upgrade the product. See the [Upgrading to OFTAPOU v5.0.1](#) section for steps to upgrade.

### Planning the Upgrade

This section provides an overview of the different types of Oracle Functional Testing Advanced Pack for Oracle Utilities upgrades and also the steps to plan the upgrade. It includes the following:

- [Upgrade Scenario Matrix](#)
- [Upgrade Application Product Pack](#)
- [Before You Upgrade](#)

## Upgrade Scenario Matrix

The table below lists the various upgrades applicable for each upgrade scenario.

Upgrade Scenario	OFB Upgrade	OFTAPOU Upgrade	Application Product Pack Upgrade	Supported in this release?	Example
OFB + OFTAPOU Upgrade	Yes	Yes	No	Yes	Upgrade from OFTAPOU v5.0.0.1 to OFTAPOU v5.0.1 is supported
OFB+ OFTAPOU Upgrade + Application Product Pack	Yes	Yes	Yes	Yes	Upgrade from OFTAPOU v5.0.0.1 to OFTAPOU v5.0.1 is supported

### Upgrade Application Product Pack

The Upgrade Application Product Pack is applicable to customers who already have the Oracle Functional Testing Advanced Pack for Oracle Utilities Product Pack installed and want to upgrade it to the next version.

**For example:** The Customer already has Oracle Utilities Mobile Workforce Management v2.2.0.3 for Oracle Functional Testing Advanced Pack for Oracle Utilities v5.0.1 installed, and wants to upgrade to Oracle Utilities Mobile Workforce Management v2.3.0 for Oracle Functional Testing Advanced Pack for Oracle Utilities v5.0.1.

### Before You Upgrade

Before upgrading Oracle Functional Testing Advanced Pack for Oracle Utilities follow these steps:

1. Login to the target Oracle Flow Builder server and stop it.
2. Take a backup of the Oracle Flow Builder database using the Database Export Tool.

**Important:** Ensure to provide the database administrator credentials while exporting the database and also “OFB” schema is specified.

3. Start the Oracle Flow Builder server.

## Upgrading to OFTAPOU v5.0.1

**Important:** Before proceeding with the upgrade ensure to take a backup of the Oracle Flow Builder database. See the [Before You Upgrade](#) section for instructions.

To install Oracle Functional Testing Advanced Pack for Oracle Utilities v5.0.1 in your current Oracle Flow Builder installation, follow the instructions listed in the [Installing Core Components and Flows](#) section. It should create a new release named OFTAPOU 5.0.1 in Oracle Flow Builder.

The upgrade includes two scenarios.

### Upgrading Existing Product Pack From OFTAPOU v5.0.0.1 to OFTAPOU v5.0.1

**Note:** <OFTAPOU\_HOME> is the installation folder for Oracle Functional Testing Advanced Pack for Oracle Utilities. See the [Extracting OFTAPOU Packages](#) section to extract and install the product.



This scenario is applicable when the customer is already using the product pack on Oracle Functional Testing Advanced Pack for Oracle Utilities v5.0.0.1 and wants to upgrade to Oracle Functional Testing Advanced Pack for Oracle Utilities v5.0.1, but wants to continue to use the same product pack as previous.

For example: Customer is using Oracle Utilities Mobile Workforce Management v2.2.0.3 on Oracle Functional Testing Advanced Pack for Oracle Utilities v5.0.0.1 and wants to upgrade to Oracle Functional Testing Advanced Pack for Oracle Utilities v5.0.1, but continue to use Oracle Utilities Mobile Workforce Management v2.2.0.3 on the new version.

To upgrade your product pack from Oracle Functional Testing Advanced Pack for Oracle Utilities v5.0.0.1 to Oracle Functional Testing Advanced Pack for Oracle Utilities v5.0.1, follow these steps:

1. Execute the SQL for the respective products.

- To upgrade Oracle Utilities Mobile Workforce Management v2.2.0.3 execute the command:

```
<OFTAPOU_HOME>\OatsouLibrary\modules\UpgradeSQLs\MWM2203_Upgrade.sql
```

- To upgrade Oracle Utilities Mobile Workforce Management v2.3.0.0 execute the command:

```
<OFTAPOU_HOME>\OatsouLibrary\modules\UpgradeSQLs\MWM300_Upgrade.sql
```

- To upgrade Oracle Utilities Customer Care and Billing v2.4.0.3 execute the command:

```
<OFTAPOU_HOME>\OatsouLibrary\modules\UpgradeSQLs\CCB2403_Upgrade.sql
```

- To upgrade Oracle Utilities Customer Care and Billing v2.5.0.1 execute the command:

```
<OFTAPOU_HOME>\OatsouLibrary\modules\UpgradeSQLs\CCB2501_Upgrade.sql
```

- To upgrade Oracle Utilities Customer Care and Billing v2.5.0.2 execute the command:

```
<OFTAPOU_HOME>\OatsouLibrary\modules\UpgradeSQLs\CCB2502_Upgrade.sql
```

- To upgrade Oracle Utilities Meter Data Management/ Oracle Utilities Smart Grid gateway v2.1.0.3 execute the command:

```
<OFTAPOU_HOME>\OatsouLibrary\modules\UpgradeSQLs\MDM2103_Upgrade.sql
```

- To upgrade Oracle Utilities Meter Data Management/ Oracle Utilities Smart Grid gateway v2.2.0.0 execute the command:

```
<OFTAPOU_HOME>\OatsouLibrary\modules\UpgradeSQLs\MDM2200_Upgrade.sql
```

- To upgrade Oracle Utilities Work and Asset Management v2.1.1 execute the command:

```
<OFTAPOU_HOME>\OatsouLibrary\modules\UpgradeSQLs\WAM211_Upgrade.sql
```

2. Delete the sample flows from your product pack through the Oracle Flow Builder UI.
3. Import the Oracle Functional Testing Advanced Pack for Oracle Utilities v5.0.1 of your product pack using the product pack specific instructions given in the [Installing Components and Flows](#) section. This overwrites the older components with the latest version (CM components are not affected).

## Upgrading Existing Product Pack from OFTAPOU v5.0.0.1 to New Product Version Pack in OFTAPOU v5.0.1

This scenario is applicable when the customer is already using the product pack of Oracle Functional Testing Advanced Pack for Oracle Utilities v5.0.0.1 and wants to upgrade to a newer product version on Oracle Functional Testing Advanced Pack for Oracle Utilities v5.0.1.

For example: The customer currently uses Oracle Utilities Mobile Workforce Management 2.2.0.3 pack on Oracle Functional Testing Advanced Pack for Oracle Utilities v5.0.0.1 and wants to upgrade to Oracle Utilities Mobile Workforce Management 2.3.0.0 pack of Oracle Functional Testing Advanced Pack for Oracle Utilities v5.0.1.

To upgrade an existing product pack from Oracle Functional Testing Advanced Pack for Oracle Utilities v5.0.0.1 to new product version pack in Oracle Functional Testing Advanced Pack for Oracle Utilities v5.0.1, follow these steps:

1. Install the required new product pack version of Oracle Functional Testing Advanced Pack for Oracle Utilities v5.0.1.
2. Copy your custom components from Oracle Functional Testing Advanced Pack for Oracle Utilities v5.0.0.1 into Oracle Functional Testing Advanced Pack for Oracle Utilities v5.0.1 using the Oracle Flow Builder Copy Component feature.
3. Upgrade your flows from Oracle Functional Testing Advanced Pack for Oracle Utilities v5.0.0.1 into Oracle Functional Testing Advanced Pack for Oracle Utilities v5.0.1 using the Flow Upgrade Tool.

For more details on using the Flow Upgrade Tool, refer to the **Flow Upgrade Tool** section in *Oracle Functional Testing Advanced Pack for Oracle Utilities User's Guide*.

## Restoring Oracle Flow Builder Database Backup

This section provides the steps to restore database backup version when Oracle Flow Builder becomes unusable during the upgrade.

To restore the Oracle Flow Builder database backup follow these steps:

1. Stop the Oracle Flow Builder server.
  - a. Login to the target Oracle Flow Builder server. The credentials used should have execute permissions on the <OFB\_INSTALL\_DIR> and its sub-directories.
  - b. Navigate to the <OFB\_INSTALL\_DIR>/scripts directory and execute the following command:

```
./control.sh stop
```

3. Drop the Oracle Flow Builder schema on the database.
  - a. Connect to the Oracle Flow Builder database instance using any database client. The credentials used should have administrator privileges on the database.
  - b. Execute the following command:
 

```
Drop user ofb cascade;
```
  - c. Commit the changes.
4. Login to the Oracle Flow Builder database server. The credentials used should have execute permissions for the database import tool. Execute the database import tool and provide the location of the Oracle Flow Builder database backup file.
5. Start the Oracle Flow Builder server.

- a. Login to the target Oracle Flow Builder server. The credentials used should have execute permissions on the <OFB\_INSTALL\_DIR> and its sub-directories.
- b. Navigate to <OFB\_INSTALL\_DIR>/scripts directory and execute the command below.

```
./control.sh start
```

# Appendix A

---

## Database Connection Pool

To increase the maximum capacity of the database connection pool, follow these steps:

1. Login to Oracle Functional Testing Advanced Pack for Oracle Utilities WebLogic console with 'OFB' user (use admin password).
2. On the **Home Page**, navigate to **Domain Configurations > Service > Data Sources**.
3. On the **Summary of JDBC Data Sources** page, click **KWDT Data Source**.
4. On the **Connection Pool** tab, increase the **Maximum Capacity** from default value '15' to a desired value (For example: 150)
5. Click **Save** to save the changes.

# Appendix B

## Prerequisite Patches

Oracle Utilities application specific patches should be installed in the respective application before executing any automation flows in it.

The patches are listed below:

Bug Fix	Description
Oracle Utilities Mobile Workforce Management (v2.2.0.3)	
21645604	To enable Inbound Web Services to be bundled
21909965	To add Physical BO for ToDo Role
Oracle Utilities Customer Care and Billing (v2.5.0.2)	
24754355	CCB objects required for automation testing
24610605	Cannot add customer contact using BO
24516230	Create Business Service for Account Update/Read functionality
23025226	Ability to provide input to additional fields for automation testing
21892811	Automation testing related changes
Oracle Utilities Customer Care and Billing (v2.5.0.1)	
21647369	To add Physical BO for ToDo Role
24502590	Create Business Service for Account Update/Read functionality
22955243	Ability to provide input to additional fields for automation testing
21456652	Automation Metadata bundle as product owned
23279058	Automation testing related changes
Oracle Utilities Customer Care and Billing (v2.4.0.3)	
21653023	To enable Inbound Web Services to be bundled
21909955	To add Physical BO for ToDo Role
22722115	Installation Options
24922494	Create Business Service for Account Update/Read functionality
22955159	Ability to provide input to additional fields for automation testing

<b>Bug Fix</b>	<b>Description</b>
21913632	Automation related metadata
Oracle Utilities Meter Data Management/Oracle Utilities Smart Grid Gateway (v2.1.0.3)	
21653023	To enable Inbound Web Services to be bundled
21909955	To add Physical BO for ToDo Role
22722115	Installation Options (4.2.0.3.0)
Oracle Utilities Meter Data Management/Oracle Utilities Smart Grid Gateway (v2.2.0.0)	
23620707	Installation Options (4.3.0.3.0)
Oracle Utilities Work and Asset Management (v2.1.1.0)	
21518735	To enable Inbound Web Services to be bundled
21647369	To add Physical BO for ToDo Role