

# Oracle® Enterprise Manager

Enterprise Manager for Oracle Utilities

Whitepaper: Service Pack Compliance

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January 2023

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This document describes the structures and packaging procedures required for support of OUAF-based product service packs in Enterprise Manager for Oracle Utilities.

## Abbreviations/Acronyms Used in This Document

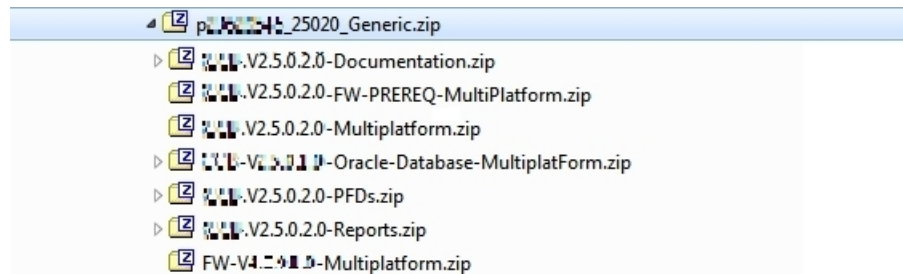
- **OEM.** Oracle Enterprise Manager.
- **OUAF.** Oracle Utilities Application Framework (a.k.a "Framework").
- **SP.** Service pack.

## Comparing Typical and OEM-Compliant Packaging

OUAF-based service packs available on Oracle Support are typically packaged in the format *pBUG\_NUMBER\_VERSION.zip*. The package includes the Framework installer and application installer. A Framework rollup installer may also be packaged with it.

Each installation has two parts: the database installation and the application installation. Separate installers are therefore available for each type of installation.

The following image illustrates the structure of a typical OUAF service pack:



| Filename                                  | Contents                                  | Description   |
|---|---|---|
| *Oracle-Database-MultiplatForm.zip        | *Oracle-Database-MultiplatForm            | Contains framework and application installer for database |
| *FW-PREREQ- MultiplatForm.zip             | *FW-PREREQ- MultiplatForm.jar             | Contains the Framework application rollup installer       |
| <application>-<version>-MultiplatForm.zip | <application>-<version>-MultiplatForm.jar | Contains application installer                            |
| FW-<version>- MultiplatForm.zip           | FW-<version>- MultiplatForm.jar           | Contains the Framework application installer              |

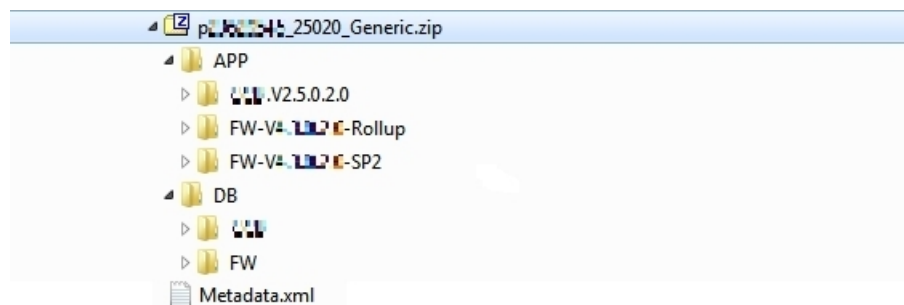
## OEM-Compliant Packaging Structure

A service pack must be packaged in a different way to enable installation by the Enterprise Manager for Oracle Utilities plugin.

Structurally, it must include the following three top-level items:

- **App folder.** This folder contains application installers, e.g., the edge product installer, the Framework installer, and the Framework rollup installer (if any).
- **DB folder.** This folder contains database installers for OUAF and the edge product.
- **Metadata.xml.** This file contains the sequence of execution of the installers. This needs to be created separately and then included in the final Service Pack zip file.

The following image illustrates a compliant service pack structure:



The next topic describes the steps involved in repackaging an existing Service Pack to make it OEM compliant.

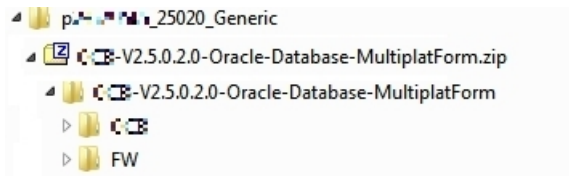
## Creating an OEM-Compliant Service Pack

There are two high-level steps to creating an OEM-compliant service pack: repackage the existing service pack, then create and add a Metadata.xml file. The following topics describe these two steps and their substeps in detail.

### Repackaging a Service Pack for OEM Compliance

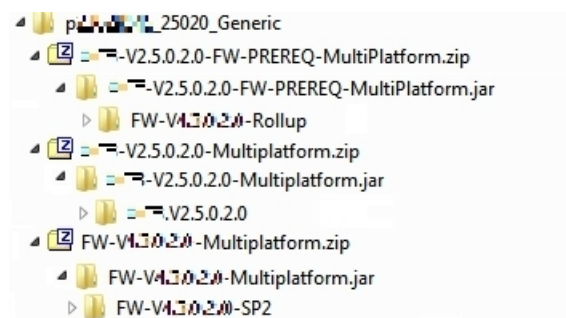
1. Download the existing service pack zip from My Oracle Support site.

2. Create a new structure with two new folders, `App` and `DB`, in the root of the structure.
3. From the downloaded existing service pack, extract the contents of `*Oracle-Database-MultiplatForm.zip` to your `/DB` folder.

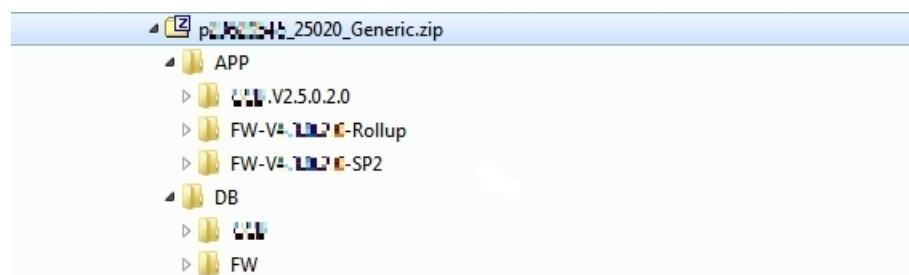


The contents of `*Oracle-Database-MultiplatForm.zip` contain all database installers.

4. The application installers, which will be copied into your `/App` folder, can be broadly divided into three categories: Framework installer, Framework rollup, and application installer. All the application and Framework installers are packaged as `<product>-<version>.MultiplatForm.zip`. If a Framework rollup installer is also present, it will be packaged as `<product>-<version>-FW-PREREQ-MultiplatForm.zip`. Each of these zip files contain a jar file with the same name.
  - a) Unzip all such zip files, followed by the jar files contained within them.
  - b) Copy the folders after unzipping the jar files to your `/App` folder.



5. Create the new compliant service pack zip file from your `/App` and `/DB` folders. The new zip file must have the same name as the original downloaded service pack name. The following image illustrates the structure of the new compliant zip.



Follow the steps in the next topic to create and add the required `Metadata.xml` file to the final compliant zip.

## Adding Metadata.xml

The final step in creating an OEM-compliant service pack is to create a `Metadata.xml` file and include it in the new service pack zip.

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**IMPORTANT:** These steps need to be carried out on the host on which the OEM agent has been installed and on which the Enterprise Manager for Oracle Utilities plugin is deployed.

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1. Set JAVA\_HOME to the location on which the Java Development Kit (JDK) is installed. Note that the JDK must be release 1.7.0\_79 or later.

**Example:**

```
export JAVA_HOME=/scratch/software/java/jdk1.7.0_79
```

2. Add the jars commons-cli-1.1.jar and OraDBI.jar to the classpath. The commons-cli-1.1.jar is located at <SPLEBASE>/etc/lib and OraDBI.jar is in <PLUGIN\_ROOT>/archives. Note that PLUGIN\_ROOT corresponds to <Agent\_home>/agent\_13.1.0.0.0/plugins/oracle.tugbu.ouy.agent.plugin\_13.1.3.1.0.

**Example:**

```
export CLASSPATH=<SPLEBASE>/etc/lib /commons-  
cli-1.1.jar:<PLUGIN_ROOT>/archives/OraDBI.jar
```

3. Run the CreateMetadata class to create the Metadata.xml in the current directory:

```
java -Xmx1500M com.oracle.ouaf.oem.sp.CreateMetadata -  
f <SP_full_path> -o ./
```

Output should be similar to the following (see notes regarding script prompts at the end of the sample output):

```
-----  
ServicepackFilePath f = <SP_FULL_PATH>  
MetadataFilePath o = ./  
-----  
Please wait a minute, Scanning File list of zip file - <SP_FULL_PATH>  
Input Product Name - PRODUCT_NAME  
Input Product Version - 2.5.0.2.0  
Inputs DB's and its platforms supported by this product  
DB Type (Enter any one - ORA/DB2/MSQL/ALL) ALL  
OS Supported (Enter any one - WIN/NX/ALL) ALL  
Do you want to add another DB ? Y/N N  
Enter Install File (CdxDBI/OraDBI) for FW /DB/FW/FW43020/Install-  
Upgrade/OraDBI.exe  
Enter Install File (CDXPatch) for FW Rollup (if available) /DB/FW/  
FW43020/FW43020-HFix/ouafDatabasePatch.sh  
Enter Install File (CdxDBI/OraDBI) for Edge Product /DB/PRODUCT/  
Upgrade/Install-Upgrade/OraDBI.exe  
Enter Install File (CDXPatch) for Edge Product Rollup (if available)  
Do you want to add another edge product ? Y/N ? N  
Enter Install File (installSP or install.sh/cmd) for FW/  
Edge Product /App/FW-V4.3.0.2.0-SP2/installSP.sh  
Enter Post Install File (postInstall.sh) for FW/Edge Product  
Enter Rollup for FW/Edge Product (installSFgroup.sh/cmd) /App/FW-  
V4.3.0.2.0-Rollup/Application/installSFgroup.sh  
Do you want to add another edge product (App) ? Y/N ? Y  
Enter Install File (installSP or install.sh/cmd) for FW/  
Edge Product /App/PRODUCT.V2.5.0.2.0/install.sh  
Enter Post Install File (postInstall.sh) for FW/Edge Product  
Enter Rollup for FW/Edge Product (installSFgroup.sh/cmd)  
Do you want to add another edge product (App) ? Y/N ? N  
END
```

Notes on the script prompts:

- Pass the location of the service pack along with the zip file name for parameter 'f' while calling the CreateMetadata class.
- All installer paths that are provided as input should start from the /DB/App folder for DB/Application installers, respectively.
- Use only a forward-slash (/) in all paths.
- If an installer (e.g., postinstall.sh) is not required or not available for the service pack, press ENTER and proceed.
- The rollup installer can be ouafDatabasePatch.sh or CDXPatch.exe, depending on the OUAF version. Please check for the appropriate file name before entering.

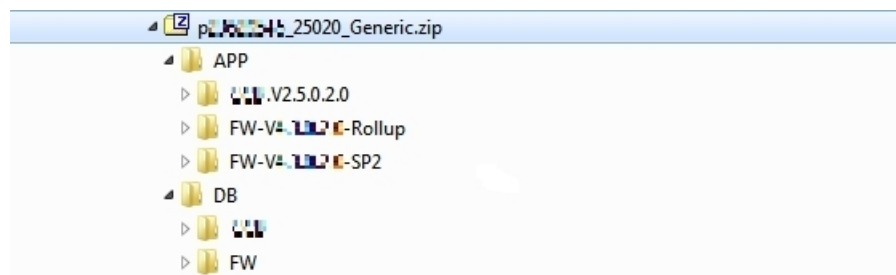
The resulting Metadata.xml file should be similar to the following:

```
<?xml version="1.0" encoding="UTF-8" standalone="no"?>
<root>
  <product>CCB</product>
  <version>2.5.0.2.0</version>
  <DBSupported>
    <DB>
      <DB-Type>ALL</DB-Type>
      <OS-Supported>ALL</OS-Supported>
    </DB>
  </DBSupported>
  <DBPackage>
    <FW>
      <InstallFile>/DB/FW/FW43020/Install-Upgrade/
OraDBI.exe</InstallFile>
      <OraGenSec/>
      <BPName/>
    </FW>
    <FW-Rollup>
      <InstallFile>/DB/FW/FW43020/FW43020-HFix/CDXPatch.exe</
InstallFile>
    </FW-Rollup>
  </DBPackage>
  <DBPackage>
    <EdgeProduct>
      <InstallFile>/DB/CCB/Upgrade/Install-Upgrade/
OraDBI.exe</InstallFile>
      <OraGenSec/>
      <BPName/>
    </EdgeProduct>
    <EdgeRollup>
      <InstallFile/>
    </EdgeRollup>
  </DBPackage>
  <AppPackage>
    <InstallFile>/APP/FW-V4.3.0.2.0-SP2/installSP.sh</
InstallFile>
    <postInstallFile/>
    <rollupInstallFile>/APP/FW-V4.3.0.2.0-Rollup/Application/
installSFgroup.sh</rollupInstallFile>
  </AppPackage>
  <AppPackage>
    <InstallFile>/APP/CCB.V2.5.0.2.0/install.sh</InstallFile>
    <postInstallFile/>
    <rollupInstallFile/>
  </AppPackage>
</root>
```

4. Add the resulting Metadata.xml file to your final compliant service pack zip file (created using the procedure in the previous topic):

```
jar -uf <SP_FULL_PATH> ./Metadata.xml
```

The following image illustrates the contents of the final compliant service pack zip:



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