Patching Plan January 2015

Instructions based on [document 1954250.1](https://support.oracle.com/epmos/faces/DocumentDisplay?id=1954250.1)

We do the patching in the following order (according to the above document):

1. E-Business Suite database home
2. Fusion Middleware application tier homes
3. E-Business Suite applications

# Shutdown

* Login to the application server as apphr.
* Hrenv
* Cd $ADMIN\_SCRIPTS\_HOME
* Shutdown application using ./adstpall.sh apps
* ps –fu apphr (to check all processes stopped)
* Login to the database server as orahr
* Cd $ORACLE\_HOME/appsutil/scripts/$CONTEXT\_NAME
* ./addbctl.sh stop immediate
* ./addlnctl.sh stop HRDEV

**Applying PSU to Database**

**Prerequisites**

* PSU
* OPatch is already at 11.2.0.3.6
* This is provided as a combo [Patch 20132646](https://support.oracle.com/epmos/faces/ui/patch/PatchDetail.jspx?parent=DOCUMENT&sourceId=1954250.1&patchId=20132646), which includes Patch 19769496 and Patch 19877443.

**Installation**

### Patch 19769496

* Patch 19769496, instructions based on <https://updates.oracle.com/Orion/Services/download?type=readme&aru=18257305> and <https://support.oracle.com/epmos/faces/DocumentDisplay?_afrLoop=557525156730931&parent=DOCUMENT&sourceId=1954250.1&id=1929745.1&_afrWindowMode=0&_adf.ctrl-state=inmmff35o_949> (the “preferred approach”)
* Login to database server as orahr
* cd $ORACLE\_HOME/.patch\_storage
* unzip p20132646\_112030\_Linux-x86-64.zip
* cd 20132646/19769496
* opatch prereq CheckConflictAgainstOHWithDetail -ph ./ (to check for conflicts)
* cd $ORACLE\_HOME/appsutil/scripts/$CONTEXT\_NAME
* Shutdown the database using ./addbctl.sh stop immediate.
* Shutdown the listener using ./addlnctl.sh stop <DATABASE\_NAME>
* opatch apply (it mentions 19121548, which is 11.2.0.3.12, as well as 19769496, don’t supply an email and say Y when it asks if you want to remain uninformed)
* You can ignore the warnings about nmosudo, which are mentioned in the readme.
* opatch lsinventory (to verify)
* Now do the OJVM PSU patch below including its postinstall steps, before you run the postinstall steps for this one... (don’t worry about the jdbc patch mentioned in the preferred approach, it’s not required from Jan 2015).

### Patch 19877443

* Patch 19877443, instructions based on <https://updates.oracle.com/Orion/Services/download?type=readme&aru=18440720>
* Login to database server as orahr
* cd $ORACLE\_HOME/.patch\_storage
* unzip p20132646\_112030\_Linux-x86-64.zip
* cd 20132646/19877443
* opatch prereq CheckConflictAgainstOHWithDetail -ph ./ (to check for conflicts)
* opatch apply (it mentions optional component oracle.sqlj missing, also asks for email address again)
* opatch lsinventory (to verify)
* For each database running from this $ORACLE\_HOME…
* cd $ORACLE\_HOME/rdbms/admin
* sqlplus /nolog
* SQL> CONNECT / AS SYSDBA
* SQL> STARTUP
* Install the SQL portion of the patch by running the following command.
* cd $ORACLE\_HOME/sqlpatch/19877443
* sqlplus /nolog
* SQL> CONNECT / AS SYSDBA
* SQL> @postinstall.sql
* After installing the SQL portion of the patch, some packages could become INVALID. This will get recompiled upon access or you can run utlrp.sql to get them back into a VALID state.
* cd $ORACLE\_HOME/rdbms/admin
* sqlplus /nolog
* SQL> CONNECT / AS SYSDBA
* SQL> @utlrp.sql
* Now continue with the postinstall steps for Patch 19769496…

### Patch 19769496 Postinstall

* For each database running from this $ORACLE\_HOME…
* cd $ORACLE\_HOME/rdbms/admin
* sqlplus /nolog
* SQL> CONNECT / AS SYSDBA
* SQL> STARTUP
* SQL> @catbundle.sql psu apply
* select \* from dba\_registry\_history (should be a new row for bundle\_series PSU and for the OJVM)
* If the OJVM PSU was applied for a previous PSU patch, you may see invalid Java classes after execution of the catbundle.sql script in the previous step. If this is the case, run utlrp.sql to re-validate these Java classes.
* cd $ORACLE\_HOME/rdbms/admin
* sqlplus /nolog
* SQL> CONNECT / AS SYSDBA
* SQL> @utlrp.sql
* Check the following log files in $ORACLE\_HOME/cfgtoollogs/catbundle or $ORACLE\_BASE/cfgtoollogs/catbundle for any errors:
* catbundle\_PSU\_*<database SID>*\_APPLY\_*<TIMESTAMP>*.log
* catbundle\_PSU\_*<database SID>*\_GENERATE\_<*TIMESTAMP>*.log
* Are you sure about the following?
* If you are using the Oracle Recovery Manager, the catalog needs to be upgraded. Enter the following command to upgrade it:
* rman catalog username/password@alias
* RMAN> UPGRADE CATALOG;

I did a shutdown immediate at this point, as there is still work to do on the apps tier.

# Applying PSU to Fusion Middleware

## Applying to 10.1.3.5 ORACLE\_HOME

### [Patch 19952538](https://support.oracle.com/epmos/faces/ui/patch/PatchDetail.jspx?parent=DOCUMENT&sourceId=1954250.1&patchId=19952538)

[Patch 19952538](https://support.oracle.com/epmos/faces/ui/patch/PatchDetail.jspx?parent=DOCUMENT&sourceId=1954250.1&patchId=19952538), instructions based on <https://updates.oracle.com/Orion/Services/download?type=readme&aru=18346466>

* Login to application server as apphr.
* Opatch is already on 1.0.0.0.64, so no need to upgrade
* Set your ORACLE\_HOME to /u01/software/apphr/apps/tech\_st/10.1.3 (this can’t be done just by running hrenv, which has 10.1.2 as the ORACLE\_HOME)
* Cd $ ORACLE\_HOME/.patch\_storage
* You should now be in /u01/software/apphr/apps/tech\_st/10.1.3
* unzip p19952538\_101350\_SOLARIS64.zip
* cd 19952538
* opatch napply (there are multiple patches here, usual messages about email addresses, opatch also advises that it will rollback 4601861 and install 12419228, which is ok)
* opatch lsinventory (to verify, note that it applies 10011970, 12419228, 14123312, 19952531 and 9273888)
* Run the 19952538/remove\_demo.sh script to remove vulnerable Oracle HTTP Server and JAZN demos only if CPUJul2012 or later has not been previously applied:
* sh remove\_demo.sh (but these are not present in our installation)

### *Not sure if we need the following patches:*

### [*Patch 20426272*](https://support.oracle.com/epmos/faces/ui/patch/PatchDetail.jspx?parent=DOCUMENT&sourceId=1954250.1&patchId=20426272)

* [*Patch 20426272*](https://support.oracle.com/epmos/faces/ui/patch/PatchDetail.jspx?parent=DOCUMENT&sourceId=1954250.1&patchId=20426272)*, instructions based on* [*https://updates.oracle.com/Orion/Services/download?type=readme&aru=18527609*](https://updates.oracle.com/Orion/Services/download?type=readme&aru=18527609)
* *OUI is installed but appears to be missing some components, and causes opatch to fail on apply, so upgrade OUI according to* [*https://updates.oracle.com/Orion/Services/download?type=readme&aru=13621074*](https://updates.oracle.com/Orion/Services/download?type=readme&aru=13621074)
* *Opatch is already on version 1.0.0.0.64, so no need to upgrade*
* *unzip p20426272\_101350\_Generic.zip*
* *cd 20426272*
* *opatch apply (note that it overlays 19952531)*
* *opatch lsinventory (to verify)*
* *restart oc4j (but this will happen as part of the application restart)*

### [*Patch 19568561*](https://support.oracle.com/epmos/faces/ui/patch/PatchDetail.jspx?parent=DOCUMENT&sourceId=1954250.1&patchId=19568561)

* [*Patch 19568561*](https://support.oracle.com/epmos/faces/ui/patch/PatchDetail.jspx?parent=DOCUMENT&sourceId=1954250.1&patchId=19568561)*, instructions based on* [*https://support.oracle.com/epmos/faces/ui/patch/PatchDetail.jspx?\_afrLoop=555964810665371&parent=DOCUMENT&patchId=19568561&sourceId=1954250.1&\_afrWindowMode=0&\_adf.ctrl-state=inmmff35o\_724*](https://support.oracle.com/epmos/faces/ui/patch/PatchDetail.jspx?_afrLoop=555964810665371&parent=DOCUMENT&patchId=19568561&sourceId=1954250.1&_afrWindowMode=0&_adf.ctrl-state=inmmff35o_724)
* *Funny thing about the README. It says the patch is for the database, but clearly says to apply this patch to the Fusion Middleware 10.1.3. ORACLE\_HOME.*
* *Unzip p19568561\_10105\_SOLARIS64.zip*
* *Cd 19568561*
* *opatch apply (note that it overlays 12419228)*
* *opatch lsinventory*

## Applying to 10.1.2.3 ORACLE\_HOME

### [Patch 19434967](https://support.oracle.com/epmos/faces/ui/patch/PatchDetail.jspx?parent=DOCUMENT&sourceId=1954250.1&patchId=19434967)

* [Patch 19434967](https://support.oracle.com/epmos/faces/ui/patch/PatchDetail.jspx?parent=DOCUMENT&sourceId=1954250.1&patchId=19434967), instructions based on <https://updates.oracle.com/Orion/Services/download?type=readme&aru=18032369>
* Patch 14825718 already applied.
* Cd $ORACLE\_HOME/.patch\_storage
* OUI is installed but appears to be missing some components, and causes opatch to fail on apply, so upgrade OUI according to <https://updates.oracle.com/Orion/Services/download?type=readme&aru=13621074>
* Unzip p19434967\_101232\_SOLARIS.zip (why is this only available in 32 bit?)
* Cd 19434967
* Opatch apply (note that it overlays 14825718)
* cd $ORACLE\_HOME/j2ee/OC4J\_BI\_Forms/applications/formsapp/formsweb/WEB-INF
* cp orion-web.xml $ORACLE\_HOME/j2ee/OC4J\_BI\_Forms/applications/orion-web.xml\_pre9282569
* cp web.xml $ORACLE\_HOME/j2ee/OC4J\_BI\_Forms/applications/web.xml\_pre9282569
* Redeploy formsapp by executing the following command:
* dcmctl redeployApplication -f $ORACLE\_HOME/forms/j2ee/formsapp.ear -a formsapp -co OC4J\_BI\_Forms (this fails, but see <https://support.oracle.com/epmos/faces/SearchDocDisplay?_adf.ctrl-state=6rl2e44et_262&_afrLoop=893913550608605#SYMPTOM> )
* Restart OC4J\_BI\_Forms (but this will be done as part of the application restart)

# Applying PSU to E-Business Suite

## Prerequisites

* Already on R12.AD.B.delta.3 and R12.ATG\_PF.B.delta.3.
* We thought R12.BNE.B.delta.4 didn’t apply to us, but it needs to be present or the main patch will fail. Apply using Patch 19273341.
* [Patch 19393542](https://support.oracle.com/epmos/faces/ui/patch/PatchDetail.jspx?parent=DOCUMENT&sourceId=1954250.1&patchId=19393542)

## Installation

### [Patch 19393542](https://support.oracle.com/epmos/faces/ui/patch/PatchDetail.jspx?parent=DOCUMENT&sourceId=1954250.1&patchId=19393542)

* [Patch 19393542](https://support.oracle.com/epmos/faces/ui/patch/PatchDetail.jspx?parent=DOCUMENT&sourceId=1954250.1&patchId=19393542), instructions based on <https://updates.oracle.com/Orion/Services/download?type=readme&aru=18532052>
* Login to database server as orahr
* cd $ORACLE\_HOME/.patch\_storage
* unzip p19393542\_112030\_Linux-x86-64.zip
* cd 19393542
* opatch prereq CheckConflictAgainstOHWithDetail -ph ./ (to check for conflicts)
* opatch apply
* opatch lsinventory (to verify)

### Patch 19273341

* Patch 19273341, instructions based on <https://updates.oracle.com/Orion/Services/download?type=readme&aru=17876468>
* Login to application server as apphr.
* cd $ADMIN\_SCRIPTS\_HOME
* Shutdown application using ./adstpall.sh apps
* ps –fu apphr (to check all processes stopped)
* admsi.pl (what does this do, generate instructions? Pointless, just duplicates the instructions in the readme.)
* cd $HOME/PATCHES
* unzip p19273341\_R12.BNE.B\_R12\_GENERIC.zip
* cd 19273341
* Run /u01/software/apphr/apps/apps\_st/appl/ad/12.0.0/bin/adadmin to enable maintenance mode (Change…, Enable…)
* Run /u01/software/apphr/apps/apps\_st/appl/ad/12.0.0/bin/adpatch.
* Log to 19273341.log.
* Driver name is u19273341.drv.
* Run /u01/software/apphr/apps/apps\_st/appl/ad/12.0.0/bin/adadmin to disable maintenance mode (Change…, Disable…)

### [Patch 19873049](https://support.oracle.com/epmos/faces/ui/patch/PatchDetail.jspx?parent=DOCUMENT&sourceId=1954250.1&patchId=19873049)

* [Patch 19873049](https://support.oracle.com/epmos/faces/ui/patch/PatchDetail.jspx?parent=DOCUMENT&sourceId=1954250.1&patchId=19873049), instructions based on <https://updates.oracle.com/Orion/Services/download?type=readme&aru=18178301>
* Login to application server as apphr.
* cd $HOME/PATCHES
* unzip p19873049\_12.1.0\_R12\_SOLARIS64.zip
* cd 19873049
* On the database server, mkdir $ORACLE\_HOME/appsutil/admin
* Then copy the latest version of adgrants.sql from the patch directory to the directory you just created on the database server: scp adgrants.sql orahr@oradevkb.is.ed.ac.uk:/db/app/orahr/db/tech\_st/11.2.0.3/appsutil/admin
* @$ORACLE\_HOME/appsutil/admin/adgrants.sql APPS
* Run /u01/software/apphr/apps/apps\_st/appl/ad/12.0.0/bin/adadmin to enable maintenance mode (Change…, Enable…)
* Run /u01/software/apphr/apps/apps\_st/appl/ad/12.0.0/bin/adpatch.
* Log to 19873049.log.
* Driver name is u19873049.drv.
* Run /u01/software/apphr/apps/apps\_st/appl/ad/12.0.0/bin/adadmin to disable maintenance mode (Change…, Disable…)

### autoconfig

* The application is still down at this point, so you can run autoconfig (see [387859.1](https://support.oracle.com/epmos/faces/DocumentDisplay?_afrLoop=294960769745792&id=387859.1&_adf.ctrl-state=y1audmbin_57)) .
* sh $INST\_TOP/admin/scripts/adautocfg.sh
* You can check the application of patches to both application server nodes by logging in to the application and navigating to System Administrator, Oracle Applications Manager, Patching and Utilities.

# Applying PSU JDK

## Upgrading JDK on the application tier

* No requirement to upgrade this.

## Upgrading JDK on the Forms and Reports tier

* No requirement to upgrade this.

## Upgrading JRE on the database tier

* No requirement to upgrade this.

# Applying PSU JRE

* No requirement to upgrade this.

# Startup

* Login to the database server as orahr
* Cd $ORACLE\_HOME/appsutil/scripts/$CONTEXT\_NAME
* Start the database using ./addbctl.sh start
* Start the listener using ./addlnctl.sh start <DATABASE\_NAME>.
* Login to the application server as apphr
* Execute hrenv
* cd $ADMIN\_SCRIPTS\_HOME
* Startup application using ./adstrtal.sh apps.

# Another step

* Replace file PERWSPP.fmx as per K:\ISAPPS\dsg\Projects\PPP003\Grade Step Customisations\README.txt