

## Implementing Oracle Critical Patch Updates

In this document, we will demonstrate the steps to take after Oracle launches critical patch updates (CPUs) for all their products, but specifically for Oracle E-Business Suite (EBS) 12.2.7. In our experience, we have seen that the EBS CPUs do not get installed in companies' environments, and in some cases, just on the Database, because the Database CPU is more familiar to DBAs.

Here we will show how easy it is to install all the necessary patches for EBS, Weblogic (WL), DB (Database), MW (Middleware), etc.

The first thing that we need to understand is the note for EBS. Take the Oracle CPU for April 2018 as an example.

[The Oracle Critical Patch Update for April 2018 is located here.](#)

Below is the EBS-specific information:

Oracle Communications Unified Inventory Management, version 7.x	Oracle Communications Unified Inventory Management
Oracle Data Visualization Desktop, version 12.2.4.1.1	Fusion Middleware
Oracle Database Server, versions 11.2.0.4, 12.1.0.2, 12.2.0.1, 18.1.0.0	Database
Oracle E-Business Suite, versions 12.1.1, 12.1.2, 12.1.3, 12.2.3, 12.2.4, 12.2.5, 12.2.6, 12.2.7	E-Business Suite
Oracle Endeca Information Discovery Integrator, versions 3.1, 3.2	Fusion Middleware
Oracle Endeca Information Discovery Studio, versions 7.6.1.0.0, 7.7.0.0.0	Fusion Middleware

To access the patch information, click on the link of the sections and login with a support user.

### Recommendation from Oracle:

*"We recommend that you apply the latest CPU both to Oracle E-Business Suite and the technology stack components. In general, there are no dependencies between the Oracle E-Business Suite CPU and the technology stack components, and the application order does not matter."*

*"Oracle strongly recommends that every Critical Patch Update be applied as soon as possible to minimize the risk of a successful attack. If this is not possible, customers should determine the risk to machines based on factors such as:*

- *the severity of unfixed vulnerabilities;*
- *the sensitivity of data stored; and*
- *the accessibility of the machine to attackers."*

It is very important to review all the patches and stack components for your security. We recommend that ALL security patches be applied, not just the CPU for the database, which is very common in most companies.

Normally the list of the patches in this note follows:

E-Business Suite Release:	<a href="#">Patch 27468058</a>
Database OJVM PSU 12.1.0.2.180417:	<a href="#">Patch 27726471</a>
WebLogic Server 10.3.6.0.180417	<a href="#">Patch 27395085</a>
Oracle Fusion Middleware 10.1.2.3	<a href="#">Patch 26825525</a>
Fusion Middleware 11.1.1.9 - Web Tier Home	<a href="#">Patch 27301611</a>
Fusion Middleware 11.1.1.9 - Oracle Common Home	<a href="#">Patch 27120730</a>

Necessary, but required third-party implementations (won't be addressed in this document):

Oracle Java (Including Java SE (JRE) Plug-in)  
Oracle Java (Java Web Start)  
Oracle Application Management Pack for Oracle E-Business Suite  
Oracle Access Manager

Another important part in this note that may go unnoticed is the ETCC Script (EBS Technology Codelevel Checker), that checks all patches required for EBS in the whole stack (DB, EBS, MW, WT). We can find this script in Patch [17537119](#). Oracle updates this patch often.

## HOW TO INSTALL THE CPU APRIL 2018: STEP-BY-STEP INSTRUCTIONS

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### 1.ETCC

- a. Download the patch from Oracle Support.

This Patch has two scripts:

checkDBpatch.sh -> Check all patches required for the Database in EBS

checkMTpatch.sh -> Check all patches required for the Middleware, WL and EBS.

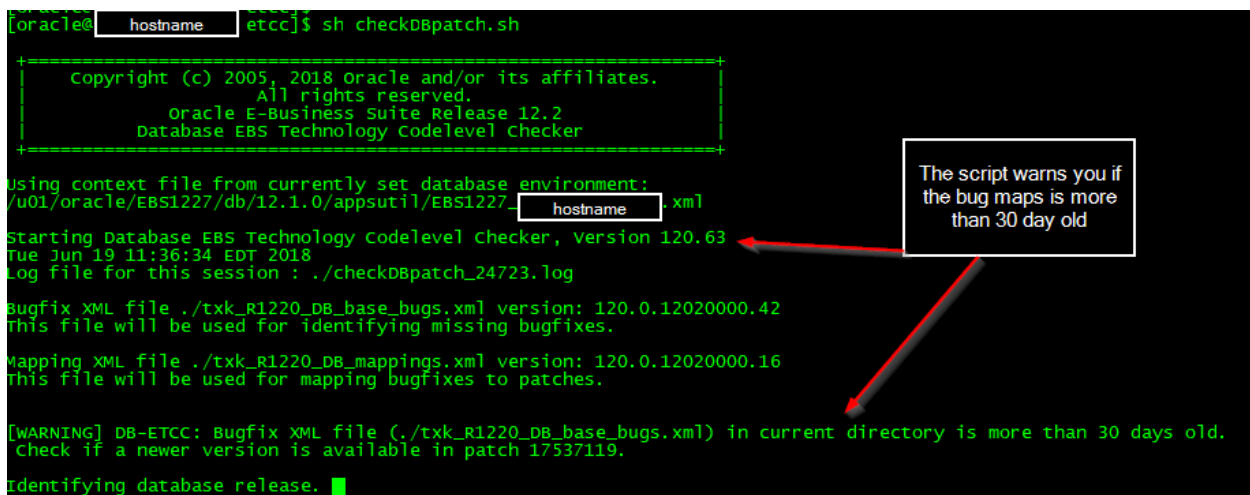
Then unzip the file in the two Tiers (DB and AS)

DB: \$ORACLE\_HOME/appsutil/etcc  
 AS: /u01/oracle/EBS1227/etcc

Note: when we run any adop patch in EBS, check all required patches like etcc script, and we need put the etcc binary in DB Location \$ORACLE\_HOME/appsutil/etcc, but in AS the etcc script can run from any location.

b. run script in DB.

```
[$ cd $ORACLE_HOME/appsutil/etcc
[$ sh checkDBpatch.sh
```



```
oracle@hostname etcc]$ sh checkDBpatch.sh
+-----+
| copyright (c) 2005, 2018 oracle and/or its affiliates. |
| All rights reserved. |
| Oracle E-Business Suite Release 12.2 |
| Database EBS Technology Codelevel Checker |
+-----+
Using context file from currently set database environment:
/u01/oracle/EBS1227/db/12.1.0/appsutil/EBS1227_hostname.xml
Starting Database EBS Technology Codelevel Checker, Version 120.63
Tue Jun 19 11:36:34 EDT 2018
Log file for this session : ./checkDBpatch_24723.log
Bugfix XML file ./txk_R1220_DB_base_bugs.xml version: 120.0.12020000.42
This file will be used for identifying missing bugfixes.
Mapping XML file ./txk_R1220_DB_mappings.xml version: 120.0.12020000.16
This file will be used for mapping bugfixes to patches.
[WARNING] DB-ETCC: Bugfix XML file (./txk_R1220_DB_base_bugs.xml) in current directory is more than 30 days old.
Check if a newer version is available in patch 17537119.
Identifying database release. ■
```

Output DB:



```
+-----+
| Copyright (c) 2005, 2018 Oracle and/or its affiliates. |
| All rights reserved. |
| Oracle E-Business Suite Release 12.2 |
| Database EBS Technology Codelevel Checker |
+-----+
Using context file from currently set database environment:
/u01/oracle/EBS1227/db/12.1.0/appsutil/EBS1227_hostname.xml
Starting Database EBS Technology Codelevel Checker, Version 120.63
Fri Jun 1 10:51:32 EDT 2018
Log file for this session : ./checkDBpatch_12906.log
```

```
Bugfix XML file ./txk_R1220_DB_base_bugs.xml version:
120.0.12020000.42
This file will be used for identifying missing bugfixes.

Mapping XML file ./txk_R1220_DB_mappings.xml version:
120.0.12020000.16
This file will be used for mapping bugfixes to patches.

[WARNING] DB-ETCC: Bugfix XML file (./txk_R1220_DB_base_bugs.xml) in
current directory is more than 30 days old.
Check if a newer version is available in patch 17537119.

Identifying database release. []$ cat checkDBpatch_13370.log

+=====+
|      Copyright (c) 2005, 2018 Oracle and/or its affiliates.      |
|              All rights reserved.                                |
|      Oracle E-Business Suite Release 12.2                       |
|      Database EBS Technology Codelevel Checker                  |
+=====+

Using context file from currently set database environment:
/u01/oracle/EBS1227/db/12.1.0/appsubutil/EBS1227_hostname.xml

Starting Database EBS Technology Codelevel Checker, Version 120.63
Fri Jun  1 11:07:22 EDT 2018
Log file for this session : ./checkDBpatch_13370.log

Bugfix XML file ./txk_R1220_DB_base_bugs.xml version:
120.0.12020000.42
This file will be used for identifying missing bugfixes.

Mapping XML file ./txk_R1220_DB_mappings.xml version:
120.0.12020000.16
This file will be used for mapping bugfixes to patches.

[WARNING] DB-ETCC: Bugfix XML file (./txk_R1220_DB_base_bugs.xml) in
current directory is more than 30 days old.
Check if a newer version is available in patch 17537119.
Identifying database release.
```

Database release set to 12.1.0.2.

Connecting to database.

Database connection successful.

Identifying APPS and APPLSYS schema names.

- APPS schema : APPS
- APPLSYS schema : APPLSYS

Checking for DB-ETCC results table.

Table to store DB-ETCC results already exists in the database.

Checking if InMemory option is enabled.

InMemory option is not enabled in the database.

Checking Bugfix XML file for 12.1.0.2\_PSU

Obtained list of bugfixes to be applied and the list to be rolled back.

Now checking Database ORACLE\_HOME.

DB-ETCC is compatible with this opatch version.

Found patch records in the inventory.

Checking Mapping XML file for 12.1.0.2.171017

Patch mapping not available.

Patch mapping data is not available for 12.1.0.2 (PATCHSET UPDATE 12.1.0.2.171017)

Refer to Doc ID 1147107.1 for the required overlay patches for PSUs and Oracle E-Business Suite

Some required one-off bugfixes are missing from the Database ORACLE\_HOME.

The missing bugfixes are:

14666816  
18485835  
19239846  
20476776  
20766180  
21321429  
21614112

```
21751519
21813400
21967332
22229581
22452653
22568797
22660003
22666802
22737974
23604553
23632545
23645516
24326444
24589081
25099339
25139545
25305405
25906117
25919622
25971286
26336977
26654363
26658759
26742604
26911000
27338041
```

```
** Refer to MOS Doc ID "1147107.1:Database Patch Set Update Overlay
Patches Required for Use with PSUs and Oracle E-Business Suite" to
find the corresponding overlay patch that delivers the bug fix. **
```

```
Apply the missing bugfixes and then rerun the script.
```

```
Stored Technology Codelevel Checker results in the database EBS1227
successfully.
```

```
Finished checking fixes for Oracle Database: Fri Jun  1 11:08:04 EDT
2018
```

```
Log file for this session: ./checkDBpatch_13370.log
```

```
=====
=====
```

c. Run in AS.

```
[$ cd /u01/oracle/EBS1227/etcc
```

```
[$ sh checkMTpatch.sh
```

```
[appMgr@HOSTNAME etcc]$ sh checkMTpatch.sh
+-----+
| Copyright (c) 2005, 2016 Oracle and/or its affiliates. |
| All rights reserved. |
| Oracle E-Business Suite Release 12.2 |
| Application Tier Technology Codelevel Checker |
+-----+

Using context file from currently set applications environment:
/u01/oracle/EBS1227/fs1/inst/apps/EBS1227_HOSTNAME/appl/admin/EBS1227_HOSTNAME.xml

Starting Application Tier Technology Codelevel Checker
Version: 120.0.12020000.33.
Tue Jun 12 13:46:23 EDT 2018
Log file for this session: /u01/oracle/EBS1227/etcc/checkMTpatch_9522.log

Bugfix XML file version: 120.0.12020000.35
This file will be used for identifying missing bugfixes.

Mapping XML file version: 120.0.12020000.20
This file will be used for mapping bugfixes to patches.

Checking for prerequisite bugfixes in File Edition: run
Enter the password for the APPS user: █ Password APPS user
```

Output:

```
+-----+
| Copyright (c) 2005, 2016 Oracle and/or its affiliates. |
| All rights reserved. |
| Oracle E-Business Suite Release 12.2 |
| Application Tier Technology Codelevel Checker |
+-----+

Using context file from currently set applications environment:
/u01/oracle/EBS1227/fs1/inst/apps/EBS1227_HOSTNAME/appl/admin/EBS1227_HOSTNAME.xml

Starting Application Tier Technology Codelevel Checker
Version: 120.0.12020000.33.
Tue May 22 10:56:28 EDT 2018
Log file for this session:
/mnt/nfs/oracle/ETCC/etcc_new/checkMTpatch_57795.log

Bugfix XML file version: 120.0.12020000.35
This file will be used for identifying missing bugfixes.
```

```
Mapping XML file version: 120.0.12020000.20
This file will be used for mapping bugfixes to patches.

Checking for prerequisite bugfixes in File Edition: run

Connecting to database.
Database connection successful.
The installed AD.C.10 codelevel supports storing the results in the
database.

Checking for ETCC results table.
Table to store results already exists in database.

=====
=====
Oracle Forms and Reports
=====
=====
Now examining product Oracle Forms and Reports.
Oracle Home = /u01/oracle/EBS1227/fs1/EBSapps/10.1.2.
Product version = 10.1.2.3.0.
Checking required bugfixes for Oracle Forms and Reports 10.1.2.3.0.
  Missing Bugfix: 24620875  ->  Patch 26825525
  Missing Bugfix: 25355211  ->  Patch 26825525
  Missing Bugfix: 23538157  ->  Patch 26825525
  Missing Bugfix: 23538170  ->  Patch 26825525
  Missing Bugfix: 13557392  ->  Patch 26825525
  Missing Bugfix: 25506193  ->  Patch 26825525
  Missing Bugfix: 25342269  ->  Patch 25342269
  Missing Bugfix: 26048089  ->  Patch 26825525
  Missing Bugfix: 25990479  ->  Patch 26825525
  Missing Bugfix: 1770039   ->  Patch 26825525
The above list shows missing bugfixes for Oracle Forms and Reports.
These results have been stored in the database.

Checking required bugfixes for RSF within Forms 10.1.0.5.0.
All required bugfixes are present for RSF within Forms.
These results have been stored in the database.

=====
=====
Oracle Fusion Middleware (FMW) - Web Tier
```





```
=====
=====
Now examining product Oracle Fusion Middleware (FMW) - Web Tier.

Oracle Home = /u01/oracle/EBS1227/fs1/FMW_Home/webtier.
Product Version = 11.1.1.9.0
Checking required bugfixes for FMW - Web Tier 11.1.1.9.0.
All required bugfixes are present for FMW - Web Tier.
These results have been stored in the database.

Checking required bugfixes for RSF within FMW Web tier 11.1.0.7.0.
All required bugfixes are present for RSF within FMW Web tier.
These results have been stored in the database.

=====
=====
Oracle Fusion Middleware (FMW) - oracle_common
=====
=====
Now examining product Oracle Fusion Middleware (FMW) - oracle_common.

Oracle Home = /u01/oracle/EBS1227/fs1/FMW_Home/oracle_common.
Product Version = 11.1.1.9.0
Checking required bugfixes for FMW - oracle common 11.1.1.9.0.
  Missing Bugfix: 17428617 -> Patch 17428617
  Missing Bugfix: 24843064 -> Patch 24843064
  Missing Bugfix: 13544814 -> Patch 13544814
  Missing Bugfix: 16089637 -> Patch 16089637
  Missing Bugfix: 20141119 -> Patch 20141119
The above list shows missing bugfixes for FMW - oracle common.
These results have been stored in the database.

=====
=====
Oracle WebLogic Server (WLS)
=====
=====
Now examining product Oracle WebLogic Server (WLS).

Oracle Home = /u01/oracle/EBS1227/fs1/FMW_Home/wlserver_10.3.
Product Version = 10.3.6.0.171017
```

Note that for Oracle WebLogic Server, patches rather than bugfixes are verified.

Checking required patches for Oracle WebLogic Server (WLS)  
10.3.6.0.171017.

Missing Patch ID: 13729611  
Missing Patch ID: 17319481  
Missing Patch ID: 19259028  
Missing Patch ID: 26795917  
Missing Patch ID: 25373406  
Missing Patch ID: 16684205  
Missing Patch ID: 27158972

The above list shows missing patches for Oracle WebLogic Server.  
If you have applied other Oracle WebLogic Server patches, they may  
have included the bugfixes needed.

Contact Oracle Support if you require assistance in determining  
whether this is the case.

These results have been stored in the database.

=====  
=====  
Generating Patch Recommendation Summary.

=====  
=====  
PATCH RECOMMENDATION SUMMARY  
=====  
=====  
One or more products have bugfixes missing.  
The default patch recommendations to install these missing bugfixes  
are:

-----  
-----  
Oracle Forms and Reports 10.1.2.3.0  
-----  
-----  
Patch 26825525

- Filename: p26825525\_101232\_LINUX.zip

Patch 25342269

- Filename: p25342269\_101232\_Generic.zip



```
-----  
-----  
Oracle Fusion Middleware (FMW) - oracle_common 11.1.1.9.0  
-----  
-----
```

```
Patch 17428617  
  - Filename: p17428617_111190_Generic.zip  
Patch 24843064  
  - Filename: p24843064_111190_Generic.zip  
Patch 13544814  
  - Filename: p13544814_111190_Generic.zip  
Patch 16089637  
  - Filename: p16089637_111190_Generic.zip  
Patch 20141119  
  - Filename: p20141119_111190_Generic.zip  
-----  
-----
```

```
Oracle WebLogic Server (WLS) 10.3.6.0.171017  
-----  
-----
```

```
Patch 13729611 [SU Patch [PSVV]]  
  - Filename: p13729611_10360171017_Generic.zip  
Patch 17319481 [SU Patch [45ET]]  
  - Filename: p17319481_10360171017_Generic.zip  
Patch 19259028 [SU Patch [96N5]]  
  - Filename: p19259028_10360171017_Generic.zip  
Patch 26795917 [SU Patch [DN1F]]  
  - Filename: p26795917_1036_Generic.zip  
Patch 25373406 [SU Patch [7P2C]]  
  - Filename: p25373406_10360171017_Generic.zip  
Patch 16684205 [SU Patch [XNBA]]  
  - Filename: p16684205_1036_Generic.zip  
Patch 27158972 [SU Patch [GHHS]]  
  - Filename: p27158972_10360171017_Generic.zip
```

```
Apply the required patches and rerun this script.
```

```
+-----+  
-----+  
A consolidated zip file with the required application tier patches is
```

available on My Oracle Support via:

Patch 27557446

- EBS RELEASE 12.2 CONSOLIDATED FMW FIXES FOR APR 2018

```
+-----+
-----+
```

See Doc ID 1594274.1 for any special instructions regarding these patches.

Footnotes in Doc ID 1594274.1 also apply to corresponding overlay patches.

Finished checking prerequisite patches for File Edition: run.

Tue May 22 10:59:55 EDT 2018

Log file for this session:

/mnt/nfs/oracle/ETCC/etcc\_new/checkMTpatch\_57795.log

```
=====
=====
```

In the output we can see all the patches that are not included in the stack.

## 2. Install CPU EBS

Before installing any patch in EBS we need to check the cycle of adop and restart it.

a. Run:

```
$ adop phase=fs_clone
```

```
$ adop phase=cleanup
```

b. In Run FS we need to update the snapshot from APPL\_TOP (not necessary for adop but is neat)

```
$ adadmin (then all submenus)
```

```
2. Maintain Applications Files menu
```

```
3. Maintain snapshot information
```

```
2. Update current view snapshot
```

```
1. Update Complete APPL_TOP
```

```
3. Run Prepare adop
```

```
$ adop phase=prepare

The prepare phase completed successfully.

adop exiting with status = 0 (Success)
Log:
/u01/oracle/EBS1227/fs_ne/EBSapps/log/adop/7/20180531_125458/adop.log
```

#### 4. Run adgrants.sql (prereq of CPU)

- a. Create folder \$ORACLE\_HOME/appsutil/admin on the database server.
- b. Copy the higher version of adgrants.sql to \$ORACLE\_HOME/appsutil/admin.
- c. Set the environment to point to \$ORACLE\_HOME on the database server.
- d. Use SQL\*Plus to run the script:

```
$ sqlplus /nolog
SQL> @$ORACLE_HOME/appsutil/admin/adgrants.sql <APPS schema name>
```

#### 5. Install the patch

```
$ adop phase=apply patches=27468058 patchtop="/stage/CPU2018"

log:
/u01/oracle/EBS1227/fs_ne/EBSapps/log/adop/7/20180531_143729/apply/hostname/27468058/log/u27468058.log

Applying patch 27468058.
  Log:
/u01/oracle/EBS1227/fs_ne/EBSapps/log/adop/7/20180531_143729/apply/hostname/27468058/log/u27468058.log

Generating post apply reports.
Generating log report.
  Output:
/u01/oracle/EBS1227/fs_ne/EBSapps/log/adop/7/20180531_143729/apply/hostname/adzdshowlog.out

The apply phase completed successfully.
adop exiting with status = 0 (Success)
```

We always need to check the existing status of adop

### 3. Install DB CPU and all required patches from ETCC

- a. Determine whether any currently installed interim patches conflict with the patch being installed, 27338041:

```
cd $ORACLE_HOME/OPatch
unzip p27338041_<version>_<platform>.zip
cd 27338041

cd
$ $ORACLE_HOME/OPatch/opatch prereq CheckConflictAgainstOHWithDetail -
ph ./

Oracle Interim Patch Installer version 12.1.0.1.10
Copyright (c) 2018, Oracle Corporation. All rights reserved.

PREREQ session

Oracle Home      : /u01/oracle/EBS1227/db/12.1.0
Central Inventory : /u01/oraInventory
   from           : /u01/oracle/EBS1227/db/12.1.0/oraInst.loc
OPatch version   : 12.1.0.1.10
OUI version      : 12.1.0.2.0
Log file location :
/u01/oracle/EBS1227/db/12.1.0/cfgtoollogs/opatch/opatch2018-05-28_10-
35-40AM_1.log

Invoking prereq "checkconflictagainsthwithdetail"
Prereq "checkConflictAgainstOHWithDetail" passed.

OPatch succeeded.
```

- b. Stop the Database

- c. Install 27338041

```
$ cd /CPU2018/DB/27338041/
$ $ORACLE_HOME/OPatch/opatch apply

Oracle Interim Patch Installer version 12.1.0.1.10
Copyright (c) 2018, Oracle Corporation. All rights reserved.
```

```
Oracle Home      : /u01/oracle/EBS1227/db/12.1.0
Central Inventory : /u01/oraInventory
  from           : /u01/oracle/EBS1227/db/12.1.0/oraInst.loc
OPatch version   : 12.1.0.1.10
OUI version      : 12.1.0.2.0
Log file location :
/u01/oracle/EBS1227/db/12.1.0/cfgtoollogs/opatch/opatch2018-05-28_10-
42-24AM_1.log

Verifying environment and performing prerequisite checks...
OPatch continues with these patches:  26925311  27338041

Do you want to proceed? [y|n]
Y
User Responded with: Y
All checks passed.
Provide your email address to be informed of security issues, install
and
initiate Oracle Configuration Manager. Easier for you if you use your
My
Oracle Support Email address/User Name.
Visit http://www.oracle.com/support/policies.html for details.
Email address/User Name:

You have not provided an email address for notification of security
issues.
Do you wish to remain uninformed of security issues ([Y]es, [N]o) [N]:
Y

Please shutdown Oracle instances running out of this ORACLE_HOME on
the local system.
(Oracle Home = '/u01/oracle/EBS1227/db/12.1.0')

Is the local system ready for patching? [y|n]
Y
User Responded with: Y
Backing up files...
Applying sub-patch '26925311' to OH '/u01/oracle/EBS1227/db/12.1.0'
```

```
Patching component oracle.network.rsfc, 12.1.0.2.0...
Patching component oracle.rdbms.rsfc, 12.1.0.2.0...
Patching component oracle.rdbms.rman, 12.1.0.2.0...
Patching component oracle.rdbms, 12.1.0.2.0...
Patching component oracle.rdbms.dbscripts, 12.1.0.2.0...
Applying sub-patch '27338041' to OH '/u01/oracle/EBS1227/db/12.1.0'
ApplySession: Optional component(s) [ oracle.assistants.asm,
12.1.0.2.0 ] not present in the Oracle Home or a higher version is
found.

Patching component oracle.network.rsfc, 12.1.0.2.0...
Patching component oracle.assistants.server, 12.1.0.2.0...
Patching component oracle.rdbms.rsfc, 12.1.0.2.0...
Patching component oracle.rdbms.rman, 12.1.0.2.0...
Patching component oracle.rdbms, 12.1.0.2.0...
Patching component oracle.rdbms.dbscripts, 12.1.0.2.0...
Patching component oracle.sqlplus.rsfc, 12.1.0.2.0...
Composite patch 27338041 successfully applied.
Log file location:
/u01/oracle/EBS1227/db/12.1.0/cfgtoollogs/opath/opath2018-05-28_10-
42-24AM_1.log

OPatch succeeded.
```

### c. Load Modified SQL Files into the Database

```
sqlplus /nolog
SQL> Connect / as sysdba
SQL> Startup
SQL> quit
cd $ORACLE_HOME/OPatch
./datapatch -verbose
```

Note: The datapatch utility runs the necessary apply scripts to load the modified SQL files into the database. An entry is added to the dba\_registry\_sqlpatch view reflecting the patch application. In the dba\_registry\_sqlpatch view, verify the Status for the APPLY is "SUCCESS."

```
$ cd $ORACLE_HOME/OPatch
$ ./datapatch -verbose
```



SQL Patching tool version 12.1.0.2.0 Production on Mon May 28 10:54:25  
2018

Copyright (c) 2012, 2016, Oracle. All rights reserved.

Log file for this invocation:

/u01/oracle/EBS1227/db/12.1.0/cfgtoollogs/sqlpatch/sqlpatch\_27046\_2018  
\_05\_28\_10\_54\_26/sqlpatch\_invocation.log

Connecting to database...OK

Bootstrapping registry and package to current versions...

Bootstrap timed out after 120 seconds

Retrying bootstrap after retryable errors....done

Determining current state...done

Current state of SQL patches:

Patch 18793246 ():

Installed in the binary registry and the SQL registry

Patch 18966843 ():

Not installed in the binary or the SQL registry

Patch 20204035 ():

Installed in the binary registry and the SQL registry

Patch 20476776 ():

Not installed in the binary or the SQL registry

Patch 20887355 ():

Installed in the binary registry and the SQL registry

Patch 22098146 ():

Installed in the binary registry and the SQL registry

Patch 22731026 (XTTS12102: DRG-10602 AFTER MIGRATION FROM RDBMS 11.2.0  
TO 12.1.0):

Installed in the binary registry and the SQL registry

Bundle series PSU:

ID 180417 in the binary registry and ID 171017 in the SQL registry

Adding patches to installation queue and performing prereq checks...

Installation queue:

Nothing to roll back

The following patches will be applied:

27338041 (DATABASE PATCH  
SET UPDATE 12.1.0.2.180417)

Installing patches...

Patch installation complete. Total patches installed: 1

```
Validating logfiles...
Patch 27338041 apply: SUCCESS
  logfile:
/u01/oracle/EBS1227/db/12.1.0/cfgtoollogs/sqlpatch/27338041/22036385/2
7338041_apply_EBS1227_2018May28_10_58_38.log (no errors)
SQL Patching tool complete on Mon May 28 11:02:44 2018
```

## 4. Install OJVM CPU for Database

### a. Process to install the patch

```
$ cd /CPU2018/DB/27475603
$ $ORACLE_HOME/OPatch/opatch prereq CheckConflictAgainstOHWithDetail -
ph ./
```

```
Oracle Interim Patch Installer version 12.1.0.1.10
Copyright (c) 2018, Oracle Corporation. All rights reserved.
```

```
PREREQ session
```

```
Oracle Home      : /u01/oracle/EBS1227/db/12.1.0
Central Inventory : /u01/oraInventory
  from            : /u01/oracle/EBS1227/db/12.1.0/oraInst.loc
OPatch version   : 12.1.0.1.10
OUI version      : 12.1.0.2.0
Log file location :
/u01/oracle/EBS1227/db/12.1.0/cfgtoollogs/opatch/opatch2018-05-28_12-
18-33PM_1.log
```

```
Invoking prereq "checkconflictagainsthwithdetail"
```

```
Prereq "checkConflictAgainstOHWithDetail" passed.
```

```
OPatch succeeded
```

```
$ $ORACLE_HOME/OPatch/opatch apply
```

```
.
.
.
```

```
You have not provided an email address for notification of security
issues.
Do you wish to remain uninformed of security issues ([Y]es, [N]o) [N]:
Y

Please shutdown Oracle instances running out of this ORACLE_HOME on
the local system.
(Oracle Home = '/u01/oracle/EBS1227/db/12.1.0')

Is the local system ready for patching? [y|n]
Y
User Responded with: Y
Backing up files...
Applying interim patch '27475603' to OH
'/u01/oracle/EBS1227/db/12.1.0'
ApplySession: Optional component(s) [ oracle.sqlj, 12.1.0.2.0 ] not
present in the Oracle Home or a higher version is found.

Patching component oracle.javavm.server, 12.1.0.2.0...
Patching component oracle.javavm.server.core, 12.1.0.2.0...
Patching component oracle.rdbms.dbscripts, 12.1.0.2.0...
Patching component oracle.rdbms, 12.1.0.2.0...
Patching component oracle.javavm.client, 12.1.0.2.0...
Patching component oracle.dbjava.jdbc, 12.1.0.2.0...
Patching component oracle.dbjava.ic, 12.1.0.2.0...
Patch 27475603 successfully applied.
Log file location:
/u01/oracle/EBS1227/db/12.1.0/cfgtoollogs/opatch/27475603_May_28_2018_
12_21_22/apply2018-05-28_12-21-22PM_1.log

OPatch succeeded.
```

#### Post patch installation:

```
sqlplus /nolog
SQL> Connect / as sysdba
SQL> startup upgrade
SQL> quit
cd $ORACLE_HOME/OPatch
```

```
./datapatch -verbose
```

```
Connecting to database...OK
Bootstrapping registry and package to current versions...done
Determining current state...done

Current state of SQL patches:
Patch 18793246 (:):
  Installed in the binary registry and the SQL registry
Patch 18966843 (:):
  Not installed in the binary or the SQL registry
Patch 20204035 (:):
  Installed in the binary registry and the SQL registry
Patch 20476776 (:):
  Not installed in the binary or the SQL registry
Patch 20887355 (:):
  Installed in the binary registry and the SQL registry
Patch 22098146 (:):
  Installed in the binary registry and the SQL registry
Patch 22731026 (XTTS12102: DRG-10602 AFTER MIGRATION FROM RDBMS 11.2.0 TO 12.1.0):
  Installed in the binary registry and the SQL registry
Patch 27475603 (Database PSU 12.1.0.2.180417, Oracle JavaVM Component (APR2018)):
  Installed in the binary registry only
Bundle series PSU:
  ID 180417 in the binary registry and ID 180417 in the SQL registry

Adding patches to installation queue and performing prereq checks...
Installation queue:
Nothing to roll back
The following patches will be applied:
  27475603 (Database PSU 12.1.0.2.180417, Oracle JavaVM Component (APR2018))

Installing patches...
Patch installation complete. Total patches installed: 1

Validating logfiles...
Patch 27475603 apply: SUCCESS
  logfile: /u01/oracle/EBS1227/db/12.1.0/cfgtoollogs/sqlpatch/27475603/21932445/27475603_apply_EBS1227_2018Jun01_12_02_10.log (no errors)
SQL Patching tool complete on Fri Jun 1 12:55:58 2018
```

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
```

b. Install the list of required patches for EBS from ETCC

```
$ sqlplus / as sysdba

SQL> shutdown immediate
Database closed.
Database dismounted.
ORACLE instance shut down.
```

```
$ cd /CPU2018/DB/etcc-bundle/LINUX_X86-64/database/12.1.0.2.180417

$ORACLE_HOME/OPatch/opatch napply
$ $ORACLE_HOME/OPatch/opatch napply
Oracle Interim Patch Installer version 12.1.0.1.10
Copyright (c) 2018, Oracle Corporation. All rights reserved.

Oracle Home      : /u01/oracle/EBS1227/db/12.1.0
Central Inventory : /u01/oraInventory
   from           : /u01/oracle/EBS1227/db/12.1.0/oraInst.loc
OPatch version   : 12.1.0.1.10
OUI version      : 12.1.0.2.0
Log file location :
/u01/oracle/EBS1227/db/12.1.0/cfgtoollogs/opatch/opatch2018-05-28_11-
12-11AM_1.log

Verifying environment and performing prerequisite checks...

The following patches are duplicate and are skipped:
[ 18793246 19472320 20181016 20204035 20887355 21864513 21904072
22098146 22731026 ]

OPatch continues with these patches:    20766180  21321429  21967332
24326444  25099339  25305405  25906117  27716852  27720266  27747062

Do you want to proceed? [y|n]
User Responded with: Y
All checks passed.
Provide your email address to be informed of security issues, install
and
initiate Oracle Configuration Manager. Easier for you if you use your
My
Oracle Support Email address/User Name.
Visit http://www.oracle.com/support/policies.html for details.
Email address/User Name:

You have not provided an email address for notification of security
issues.
Do you wish to remain uninformed of security issues ([Y]es, [N]o) [N]:
Y
```



```
Please shutdown Oracle instances running out of this ORACLE_HOME on
the local system.
```

```
(Oracle Home = '/u01/oracle/EBS1227/db/12.1.0')
```

```
Is the local system ready for patching? [y|n]
```

```
Y
```

```
Applying interim patch '20766180' to OH
'/u01/oracle/EBS1227/db/12.1.0'
```

```
Patching component oracle.rdbms, 12.1.0.2.0...
```

```
Applying interim patch '21321429' to OH
'/u01/oracle/EBS1227/db/12.1.0'
```

```
Patching component oracle.rdbms.dbscripts, 12.1.0.2.0...
```

```
Applying interim patch '21967332' to OH
'/u01/oracle/EBS1227/db/12.1.0'
```

```
Patching component oracle.rdbms.rsfl, 12.1.0.2.0...
```

```
Patching component oracle.rdbms, 12.1.0.2.0...
```

```
Applying interim patch '24326444' to OH
'/u01/oracle/EBS1227/db/12.1.0'
```

```
Patching component oracle.rdbms, 12.1.0.2.0...
```

```
Applying interim patch '25099339' to OH
'/u01/oracle/EBS1227/db/12.1.0'
```

```
Patching component oracle.rdbms, 12.1.0.2.0...
```

```
Applying interim patch '25305405' to OH
'/u01/oracle/EBS1227/db/12.1.0'
```

```
Patching component oracle.rdbms, 12.1.0.2.0...
```

```
Applying interim patch '25906117' to OH
'/u01/oracle/EBS1227/db/12.1.0'
```

```
Patching component oracle.rdbms, 12.1.0.2.0...
```

```
Applying interim patch '27716852' to OH
'/u01/oracle/EBS1227/db/12.1.0'
```

```
Patching component oracle.rdbms, 12.1.0.2.0...
```

```
Applying interim patch '27720266' to OH
'/u01/oracle/EBS1227/db/12.1.0'
```

```
Patching component oracle.rdbms.install.seeddb, 12.1.0.2.0...
```

```
Patching component oracle.rdbms, 12.1.0.2.0...
```

```
Patching component oracle.rdbms.dbscripts, 12.1.0.2.0...
```

```
Applying interim patch '27747062' to OH
'/u01/oracle/EBS1227/db/12.1.0'
Patching component oracle.rdbms.rsfc, 12.1.0.2.0...
Patching component oracle.rdbms, 12.1.0.2.0...
Patches
20766180,21321429,21967332,24326444,25099339,25305405,25906117,2771685
2,27720266,27747062 successfully applied.
Log file location:
/u01/oracle/EBS1227/db/12.1.0/cfgtoollogs/opatch/opatch2018-05-28_11-
12-11AM_1.log
OPatch succeeded.
```

#### Post install instructions:

```
sqlplus /nolog
SQL> Connect / as sysdba
SQL> startup upgrade
SQL> quit
cd $ORACLE_HOME/OPatch
./datapatch -verbose

Installing patches...

Patch installation complete. Total patches installed: 2

Validating logfiles...
Patch 21321429 apply: SUCCESS
  logfile:
/u01/oracle/EBS1227/db/12.1.0/cfgtoollogs/sqlpatch/21321429/20768968/2
1321429_apply_EBS1227_2018Jun01_13_59_59.log (no errors)
Patch 27720266 apply: SUCCESS
  logfile:
/u01/oracle/EBS1227/db/12.1.0/cfgtoollogs/sqlpatch/27720266/22041723/2
7720266_apply_EBS1227_2018Jun01_14_00_29.log (no errors)
SQL Patching tool complete on Fri Jun  1 14:39:51 2018
```

#### Finish Task

- a. Check Invalid Objects  
AD\_ZD\_ADOP and FND\_DIAGNOSTICS are invalid

b. Re-run adgrant.sql

```
$ cd $ORACLE_HOME/appsutil/admin
$ sqlplus / as sysdba
SQL> @adgrants apps
```

- c. Recompile again all objects in DB
- d. Re-run etcc scripts

The output of etcc shows:

```
All the required one-off bugfixes are present in Database ORACLE_HOME.

Stored Technology Codelevel Checker results in the database EBS1227
successfully.

Finished checking fixes for Oracle Database: Fri Jun  1 14:01:51 EDT
2018

Log file for this session: ./checkDBpatch_20096.log
```

## 5. Install WL CPU

To fix memory problem:

- a. Go to \$FMW\_Home/utlis/bsu
- b. Edit bsu.sh (for UNIX) or bsu.cmd (for Windows)
- c. Here you will find the following: MEM\_ARGS="-Xms256m -Xmx512m"
- d. Increase these values as needed: for example, to "-Xms2048m -Xmx2048m"

Check version of WL

```
$ .
/u01/oracle/EBS1227/fs1/FMW_Home/wlserver_10.3/server/bin/setWLSEnv.sh
$ java weblogic.version

WebLogic Server 10.3.6.0.171017 PSU Patch for BUG26519424 TUE SEP 12
18:34:42 IST 2017
WebLogic Server Temporary Patch for BUG13964737 Fri Dec 20 11:32:08
IST 2013
```



```
WebLogic Server Temporary Patch for BUG20474010 Sun Mar 01 17:22:18
IST 2015
WebLogic Server Temporary Patch for BUG17495356 Tue Sep 24 00:23:38
CDT 2013
WebLogic Server Temporary Patch for BUG17495356 Tue Sep 24 00:23:38
CDT 2013
WebLogic Server Temporary Patch for BUG17495356 Tue Sep 24 00:23:38
CDT 2013
WebLogic Server Temporary Patch for BUG17495356 Tue Sep 24 00:23:38
CDT 2013
WebLogic Server Temporary Patch for BUG17495356 Tue Sep 24 00:23:38
CDT 2013
WebLogic Server Temporary Patch for ${CRS} Mon Jul 30 16:45:20 EDT
2012
WebLogic Server Temporary Patch for ${CRS} Mon Jul 30 16:45:20 EDT
2012
WebLogic Server Temporary Patch for BUG13845626 Tue Mar 20 17:35:12
IST 2012
WebLogic Server 10.3.6.0 Tue Nov 15 08:52:36 PST 2011 1441050
```

Note: The first row shows the version of WL, in this case the 171017 version.

Set the environment:

```
export ORACLE_HOME=$FMW_HOME/webtier
export WL_HOME=/d01/oracle/VIS/fs1/FMW_Home/wlserver_10.3
```

Process to install the WL CPU:

```
$cp /CPU2018/p27395085_1036_Generic.zip $FMW_HOME/utils/bsu/cache_dir
$cd $FMW_HOME/utils/bsu/cache_dir
$unzip p27395085_1036_Generic.zip
replace README.txt? [y]es, [n]o, [A]ll, [N]one, [r]ename: y
  inflating: README.txt
  inflating: GFWX.jar
  inflating: patch-catalog_25890.xml
$mv patch-catalog_25890.xml patch-catalog.xml
$cd $FMW_HOME/utils/bsu
```

Remove previous patch to resolve conflict:

Patch GFWX is mutually exclusive and cannot coexist with patch(es): FMJJ

```
$. /bsu.sh -prod_dir=$FMW_HOME/wlserver_10.3 -patchlist=FMJJ -verbose -  
remove  
$. /bsu.sh -prod_dir=$FMW_HOME/wlserver_10.3 -patchlist=GFWX -verbose -  
install
```

Check that now the version of WL has changed.

```
$ java weblogic.version  
WebLogic Server 10.3.6.0.180417 PSU Patch for BUG27395085 THU FEB 21  
18:34:42 IST 2018
```

After installing a WL CPU, we need to install all patches from ETCC tools.

```
cd /stage/CPU2018/etcc-bundle/LINUX_X86-64/wls/10.3.6.0.180417
```

```
cp p13729611_10360180417_Generic.zip $FMW_HOME/utils/bsu/cache_dir  
cp p17319481_10360180417_Generic.zip $FMW_HOME/utils/bsu/cache_dir  
cp p19259028_10360180417_Generic.zip $FMW_HOME/utils/bsu/cache_dir  
cp p26795917_1036_Generic.zip $FMW_HOME/utils/bsu/cache_dir  
cp p25373406_10360180417_Generic.zip $FMW_HOME/utils/bsu/cache_dir  
cp p16684205_1036_Generic.zip $FMW_HOME/utils/bsu/cache_dir  
cp p27158972_10360180417_Generic.zip $FMW_HOME/utils/bsu/cache_dir
```

```
unzip \*
```

```
cd $FMW_HOME/utils/bsu
```

```
./bsu.sh -prod_dir=$FMW_HOME/wlserver_10.3 -patchlist=C1YY -verbose -install  
./bsu.sh -prod_dir=$FMW_HOME/wlserver_10.3 -patchlist=CIH8 -verbose -remove  
./bsu.sh -prod_dir=$FMW_HOME/wlserver_10.3 -patchlist=DN1F -verbose -install  
./bsu.sh -prod_dir=$FMW_HOME/wlserver_10.3 -patchlist=EN8U -verbose -install  
./bsu.sh -prod_dir=$FMW_HOME/wlserver_10.3 -patchlist=R1EY -verbose -install  
./bsu.sh -prod_dir=$FMW_HOME/wlserver_10.3 -patchlist=S5C9 -verbose -install  
./bsu.sh -prod_dir=$FMW_HOME/wlserver_10.3 -patchlist=XNBA -verbose -install  
./bsu.sh -prod_dir=$FMW_HOME/wlserver_10.3 -patchlist=HMR4 -verbose -install
```

## 6. Install FMW Oracle Common 11.1.1.9

We can see in the output from ETCC, the same report shows all necessary patches.

```
Oracle Home = /u01/oracle/EBS1227/fs1/FMW_Home/oracle_common.  
Product Version = 11.1.1.9.0  
Checking required bugfixes for FMW - oracle common 11.1.1.9.0.  
Missing Bugfix: 17428617 -> Patch 17428617  
Missing Bugfix: 24843064 -> Patch 24843064  
Missing Bugfix: 13544814 -> Patch 13544814  
Missing Bugfix: 16089637 -> Patch 16089637  
Missing Bugfix: 20141119 -> Patch 20141119
```

a. Export the Oracle HOME to the oracle\_common path

```
$ export ORACLE_HOME=$FMW_HOME/oracle_common
```

b. Install first these four patches all together:

```
$ cd /CPU2018/etcc-bundle/LINUX_X86-64/oracle_common/11.1.1.9.0/etcc  
17428617 13544814 16089637 20141119
```

```
$ORACLE_HOME/OPatch/opatch napply
```

```
Please shutdown Oracle instances running out of this ORACLE_HOME on  
the local system.
```

```
(Oracle Home = '/u01/oracle/EBS1227/fs1/FMW_Home/oracle_common')
```

```
Is the local system ready for patching? [y|n]
```

```
Y
```

```
User Responded with: Y
```

```
Backing up files...
```

```
Applying interim patch '13544814' to OH
```

```
'/u01/oracle/EBS1227/fs1/FMW_Home/oracle_common'
```

```
Patching component oracle.jrf.thirdparty.jee, 11.1.1.9.0...
```

```
Verifying the update...
```

```
Applying interim patch '16089637' to OH
```

```
'/u01/oracle/EBS1227/fs1/FMW_Home/oracle_common'
```

```
Patching component oracle.jrf.thirdparty.jee, 11.1.1.9.0...
```

```
Verifying the update...
```

```
Applying interim patch '17428617' to OH
```

```
'/u01/oracle/EBS1227/fs1/FMW_Home/oracle_common'
```

```
Patching component oracle.jrf.thirdparty.jee, 11.1.1.9.0...
```

```
Verifying the update...
```

```
Applying interim patch '20141119' to OH
```

```
'/u01/oracle/EBS1227/fs1/FMW_Home/oracle_common'
```

```
Patching component oracle.jrf.thirdparty.jee, 11.1.1.9.0...
Verifying the update...
Patches 13544814,16089637,17428617,20141119 successfully applied.

Log file location:
/u01/oracle/EBS1227/fs1/FMW_Home/oracle_common/cfgtoollogs/opatch/opatch2018-06-02_23-16-38PM_1.log
OPatch succeeded.
```

“We need to validate that the OPatch status is succeeded.”

c. Install in another step the patch 24843064:

```
$ cd /CPU2018/etcc-bundle/LINUX_X86-64/oracle_common/11.1.1.9.0/24843064/oui

$ORACLE_HOME/OPatch/opatch apply
Please shutdown Oracle instances running out of this ORACLE_HOME on
the local system.
(Oracle Home = '/u01/oracle/EBS1227/fs1/FMW_Home/oracle_common')

Is the local system ready for patching? [y|n]
Y
User Responded with: Y
Backing up files...

Patching component oracle.jrf.adfirt, 11.1.1.9.0...

Verifying the update...
Patch 24843064 successfully applied
Log file location:
/u01/oracle/EBS1227/fs1/FMW_Home/oracle_common/cfgtoollogs/opatch/24843064_Jun_03_2018_09_43_23/apply2018-06-03_09-43-22AM_1.log

OPatch succeeded.
```

d. Install the last path of ETCC list:

```
$ cd /CPU2018/etcc-bundle/LINUX_X86-64/forms/10.1.2.3.0/25342269
$ $ORACLE_HOME/OPatch/opatch apply
```

```
Please shut down Oracle instances running out of this ORACLE_HOME
(Oracle Home = /u01/oracle/EBS1227/fs1/EBSapps/10.1.2)
Is this system ready for updating?
Please respond Y|N >
Y
Applying patch 25342269...

Patching copy files...

Inventory is good and does not have any dangling patches.

Updating inventory...
Verifying patch...
Backing up comps.xml ...

OPatch succeeded.
```

## 7. Install Middleware 10.1.2.3 (26825525)

```
$ echo $ORACLE_HOME
/u01/oracle/EBS1227/fs1/EBSapps/10.1.2

Check Prereq:
$ cd $ORACLE_HOME/OPatch
$ ./opatch lsinventory |grep 8551790
    [ Bug fixes: 8551790 16234436 ] --OK

cd /CPU2018/26825525
$ORACLE_HOME/OPatch/opatch apply

OPatch succeeded.
```

-----  
SPECIAL INSTRUCTION FOR formsapp.ear  
-----

We can skip this step

*Note: Files do not exist when performing post install steps for patches 19434967, 24946444, 25441839 and 22698265 (Doc ID 1945012.1)*

**END OF IMPLEMENTATION**