



# How to Implement Oracle CPUs for EBS

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# I Program Agenda

- Understanding what an Oracle CPU is
- What we need to do after Oracle launches a CPU
- How to install all the CPUs that we need



**What is an Oracle CPU?**

# | What is a CPU?

## Definition:

### **CPU:** Critical Patch Update Advisories

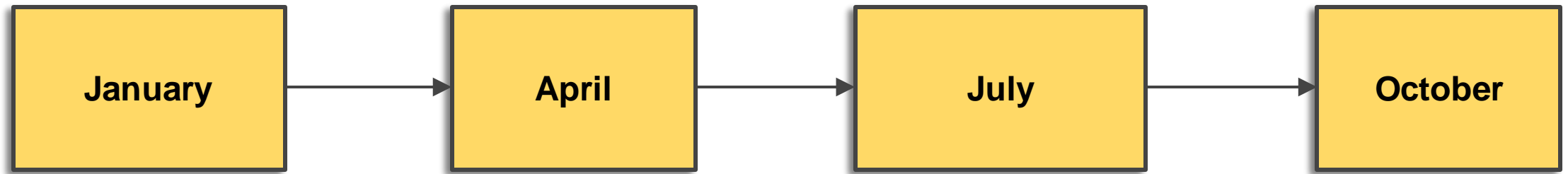
Collections of security fixes for Oracle products

Normally confused with:

### **PSU:** Patch Set Update

Proactive cumulative patches containing recommended bug fixes that are released on a regular and predictable schedule.

# | When are CPUs released?





**What do we need to do after Oracle launches a CPU?**

# View the Oracle Page

<https://www.oracle.com/technetwork/topics/security/alerts-086861.html>

## Critical Patch Update

Critical Patch Updates are released on the T

- 16 October 2018
- 15 January 2019
- 16 April 2019
- 16 July 2019

A pre-release announcement

The Critical Patch Updates are here.

Oracle Communications Network Charging and Control, versions 4.4.1.5.0, 5.0.0.1.0, 5.0.0.2.0, 5.0.1.0.0, 5.0.2.0.0	Oracle Communications Network Charging and Control
Oracle Communications Policy Management, version 12.x	Oracle Communications Policy Management
Oracle Communications Session Border Controller, versions ECz7.x, ECz8.x	Oracle Communications Session Border Controller
Oracle Communications User Data Repository, versions 10.x, 12.x	Oracle Communications User Data Repository
Oracle Database Server, versions 11.2.0.4, 12.1.0.2, 12.2.0.1, 18.1, 18.2	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 Studio, versions 3.1, 3.2	Fusion Middleware
Oracle Enterprise Data Quality, version 12.2.1.3.0	Fusion Middleware
Oracle Enterprise Repository, versions 11.1.1.7.0, 12.1.3.0.0	Fusion Middleware
Oracle Financial Services Analytical Applications Infrastructure, versions 7.3.3.x, 8.0.x	Oracle Financial Services Analytical Applications Infrastructure
Oracle Financial Services Behavior Detection Platform, version 8.0.x	Oracle Financial Services Behavior Detection Platform

Critical Patch Update - July 2017	Rev 6, 20 March 2018
Critical Patch Update - April 2017	Rev 5, 20 June 2017
Critical Patch Update - January 2017	Rev 5, 18 May 2017
Critical Patch Update - October 2016	Rev 4, 21 November 2016

# What is included in the CPUs

Normally the list of the patches in this note is as follows:

E-Business Suite Release CPU

Database OJVM PSU 12.1.0.2.180417:

WebLogic Server 10.3.6.0.180417

Oracle Fusion Middleware 10.1.2.3

Fusion Middleware 11.1.1.9 - Web Tier Home

Fusion Middleware 11.1.1.9 - Oracle Common Home

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

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



## Before Installing the CPUs

- Review the actual environment and know the version of your EBS.
- Download all patches (Remember to install them in order DEV, TEST and PROD)
- Close cycle in adop (for EBS 12.2)
- Update and run the ETCC tool for Database and Application



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

# Installation Guide

## *Index*

1. Run and show output of ETCC in DB and AS
2. Install CPU of EBS
3. Install DB CPU
4. Install OJVM CPU for DB and all required patches from ETCC
5. Install WL CPU
6. Install FMW Oracle Common 11.1.1.9
7. Install Middleware 10.1.2.3

# 1. Run ETCC

## Patch 17537119: EBS Technology Codelevel Checker

DB

APP

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

**checkMTpatch.sh** -> Check all patches required for the VL and EBS

Location:

`$ORACLE_HOME`

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### Patch Details

★ Patch 17537119: EBS Technology Codelevel Checker

Last Updated 08-Aug-2018 09:34 (19 days ago)

Size 95.7 KB

Product Oracle Applications Manager Download Access Software

Release Applications R12 (Other) Classification General

Platform Generic Platform Patch Tag

`BS1227/etcc`

# 1. Run ETCC on DB

```
$ set DB environment  
$ cd $ORACLE_HOME/appsutil/etcc  
$ sh checkDBpatch.sh
```

```
Select Environment  
-----  
1. Env DB  
2. Start DB EBS1227  
3. Stop DB ESB1227  
4. Autoconfig DB  
5. PreClone DB  
6. Exit  
Select one choice [1 - 6]: █
```

# 1. Run ETCC on DB

Example output when you need to install patches:

```
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
```

# 1. Run ETCC on AS

\$ set AS environment

\$ cd /u01/oracle/EBS1227/etcc

\$ sh checkMTpatch.sh

```
[applmgr@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

# 1. Run ETCC on AS

## OUTPUT EXAMPLE:

```
=====
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
```



## 2. Install EBS CPU (First step)

```
[applmgr@]$ adop -status

Enter the APPS password: <*****>
Connected.
=====
ADOP (C.Delta.10)
Session Id: 7
Command: status
Output: /u01/oracle/EBS1227/fs_ne/EBSapps/log/adop/7/20180904_124614/adzdshowstatus.out
=====
```

Node Name	Node Type	Phase	Status	Started	Finished	Elapsed
hostname	master	PREPARE	SESSION ABORTED	2018/05/31 13:43:09	2018/05/31 14:17:36	0:34:27
		APPLY	SESSION ABORTED	2018/05/31 14:38:26	2018/06/07 11:49:26	165:10:00
		FINALIZE	SESSION ABORTED	2018/08/28 14:15:17	2018/08/28 15:07:41	0:52:24
		CUTOVER	SESSION ABORTED			
		CLEANUP	<b>COMPLETED</b>	2018/08/28 17:29:05	2018/08/28 17:44:41	0:15:36

```
File System Synchronization Type: Full
INFORMATION: Patching cycle aborted, so fs_clone will run automatically on laborasrv1034 node in prepare phase of next patching cycle.

adop exiting with status = 0 (Success)
```

## 2. Install EBS CPU

```
Submitting ADZDPATCH concurrent program
Begin
Synchronizing snapshots.
/u01
Generating editions report.
Dora Output: /u01/oracle/EBS1227/fs_ne/EBSapps/log/adop/8/20180904_132839/prepare/laborasrv1034/adzdshowed.out
Generating log report.
Log Output: /u01/oracle/EBS1227/fs_ne/EBSapps/log/adop/8/20180904_132839/prepare/laborasrv1034/adzdshowlog.out
/u01 Stopping services on patch file system.
Stopping admin server.
You are running adadminsrvctl.sh version 120.10.12020000.10
Stopping WLS Admin Server...
Refer /u01/oracle/EBS1227/fs2/inst/apps/EBS1227_laborasrv1034/logs/appl/admin/log/adadminsrvctl.txt for details
AdminServer logs are located at
/u01/oracle/EBS1227/fs2/FMW_Home/user_projects/domains/EBS_domain_EBS1227/servers/AdminServer/logs
adadminsrvctl.sh: exiting with status 0
adadminsrvctl.sh: check the logfile
/u01/oracle/EBS1227/fs2/inst/apps/EBS1227_laborasrv1034/logs/appl/admin/log/adadminsrvctl.txt for more information ...
Stopping node manager.
You are running adnodemgrctl.sh version 120.11.12020000.12
The Node Manager is already shutdown
NodeManager log is located at /u01/oracle/EBS1227/fs2/FMW_Home/wlserver_10.3/common/nodemanager/nmHome1
adnodemgrctl.sh: exiting with status 2
adnodemgrctl.sh: check the logfile
/u01/oracle/EBS1227/fs2/inst/apps/EBS1227_laborasrv1034/logs/appl/admin/log/adnodemgrctl.txt for more information ...
The prepare phase completed successfully.
more
Autc adop exiting with status = 0 (Success)
```

Waiting for conflicting requests to complete

## 2. Install EBS CPU

Start Prepare phase:

```
$ 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
```

Run Agrants.sql (from readme's 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:

Commands:

```
$ sqlplus /nolog
SQL> @$ORACLE_HOME/appsutil/admin/adgrants.sql apps
```

## 2. Install EBS CPU

```
[aplmgr@ ~]$ adop -status
```

```
$ 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)
```

```
adop exiting with status = 0 (Success)
```

Check the Logs and be secure that all finish Ok and with 0 status.

## 3. Install DB CPU

```
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.
```

## 3. Install DB CPU

```
$ 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
```

```
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/opatch/opatch2018-05-28_10-42-24AM_1.log
```

```
OPatch succeeded.
```

AM\_1.log

### 3. Install DB CPU finish step

```
Load 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/27338041/22036385/27338041_apply_EBS1227_2018May28_10_58_38.log (no errors)
```

### 3. Install DB CPU (verify the installed patch)

Hoja de Trabajo | Generador de Consultas

```

SELECT TO_CHAR(action_time, 'DD-MON-YYYY HH24:MI:SS') AS action_time,
       action,
       status,
       description,
       version,
       patch_id,
       bundle_series
FROM   sys.dba_registry_sqlpatch
ORDER by action_time
    
```

SQL> select xmltransform('Patch installed?') as Patch\_Information

ACTION_TIME	Patch_Information
01-JUN-2018 11:30	Patch Information: 27338041:
01-JUN-2018 12:50	
01-JUN-2018 14:30	
01-JUN-2018 14:30	
27-OCT-2017 09:57:50	ROLLBACK SUCCESS (null)
27-OCT-2017 09:57:50	ROLLBACK SUCCESS (null)
27-OCT-2017 09:57:51	APPLY SUCCESS DATABASE PATCH SET UPDATE 12.1.0.2.171017
27-OCT-2017 09:57:51	APPLY SUCCESS XTTS12102: DRG-10602 AFTER MIGRATION FROM RDBMS 11.2.0 TO 12.1.0
27-OCT-2017 09:57:51	APPLY SUCCESS (null)

```

[oracle@ ~]$ cd $ORACLE_HOME/OPatch
[oracle@ OPatch]$ opatch lsinventory |grep 27338041
27338041
27338041
27338041
27338041
27338041
27338041
27338041
27338041
Patch 27338041 : applied on Fri Jun 01 11:23:05 EDT 2018
Patch description: "Database Patch Set Update : 12.1.0.2.180417 (27338041)"
    
```



### 3. Install OJVM CPU

All the steps are exactly the same as the previous patch

Validate invalid objects in your database after finishing both installations (DB and OJVM)

Re-run `adgrant.sql` and compile all invalid objects

## 4. Install Weblogic CPU

Before starting:

- a. Shutdown EBS
- b. Go to \$FMW\_Home/utils/bsu
- c. Edit bsu.sh (for UNIX) or bsu.cmd (for Windows)
- d. Here you will find the following: MEM\_ARGS="-Xms256m -Xmx512m"
- e. 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 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
```

## 4. Install Weblogic CPU

### Set Environment:

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

### Install

```
$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
```

## 5. Install FMW Common 11.1.1.9

```
$ export ORACLE_HOME=$FMW_HOME/oracle_common  
$ cd /CPU2018/etcc-bundle/LINUX_X86-64/oracle_common/11.1.1.9.0/etcc  
17428617 13544814 16089637 20141119  
$ORACLE_HOME/OPatch/opatch napply
```

```
$ 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.adfprt, 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.
```

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

```
OPatch succeeded.
```

# Q&A

# Thanks!!

[cpeque@onapsis.com](mailto:cpeque@onapsis.com)

**Thanks!!**