

## How to Apply Patch on Oracle 19c Database Release Update 19.15.0.0.220419 using Oracle patch utility?

### Step-1

#### Download Software

Download the new patch from the Oracle support.com

Patch download link :

[https://drive.google.com/file/d/1ViNUI\\_fsOfFWBUbsD-vd2ezqtFFvQPf2/view?usp=sharing](https://drive.google.com/file/d/1ViNUI_fsOfFWBUbsD-vd2ezqtFFvQPf2/view?usp=sharing)

Opatch download link :

[https://drive.google.com/file/d/15cxB2RTCRCZEa\\_M2atzwFoKLHUIMDNQX/view?usp=sharing](https://drive.google.com/file/d/15cxB2RTCRCZEa_M2atzwFoKLHUIMDNQX/view?usp=sharing)

Opatch: p6880880\_190000\_Linux-x86-64.zip

Patch: p33859214\_19150000\_Linux-x86-64.zip

### Step -2

#### Check opatch version

Check from \$ORACLE\_HOME/Opatch

```
[oracle@localhost OPatch]$ cd /u01/app/oracle/product/19.0.0/dbhome_1/Opatch
```

```
[oracle@localhost OPatch]$ pwd
```

```
/u01/app/oracle/product/19.0.0/dbhome_1/Opatch
```

```
[oracle@localhost OPatch]$ ./opatch version
```

```
[oracle@localhost OPatch]$ ./opatch lsinventory
```

Oracle Interim Patch Installer version 12.2.0.1.17

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Oracle Home : /u01/app/oracle/product/19.0.0/dbhome\_1

Central Inventory : /u01/app/oraInventory

from : /u01/app/oracle/product/19.0.0/dbhome\_1/orainst.loc

OPatch version : 12.2.0.1.17

OUI version : 12.2.0.7.0

Log file location :

/u01/app/oracle/product/19.0.0/dbhome\_1/cfgtoollogs/opatch/opatch2022-07-12\_18-15-50PM\_1.log

Lsinventory Output file location :

/u01/app/oracle/product/19.0.0/dbhome\_1/cfgtoollogs/opatch/lsinv/lsinventory2022-07-12\_18-15-50PM.txt

-----  
Local Machine Information::

Hostname: localhost

ARU platform id: 226

ARU platform description:: Linux x86-64

Installed Top-level Products (1):

Oracle Database 19c	19.0.0.0.0
---------------------	------------

There are 1 products installed in this Oracle Home.

Interim patches (2) :

Patch 29585399 : applied on Thu Apr 18 12:51:33 IST 2019

Unique Patch ID: 22840393

Patch description: "OCW RELEASE UPDATE 19.3.0.0.0 (29585399)"

Created on 9 Apr 2019, 19:12:47 hrs PST8PDT

Bugs fixed:

27222128, 27572040, 27604329, 27760043, 27877830, 28302580, 28470673

28621543, 28642469, 28699321, 28710663, 28755846, 28772816, 28785321

---

OPatch succeeded.

### Step-3

#### Copy Opatch to opatch\_old

```
[oracle@localhost OPatch]$ pwd
```

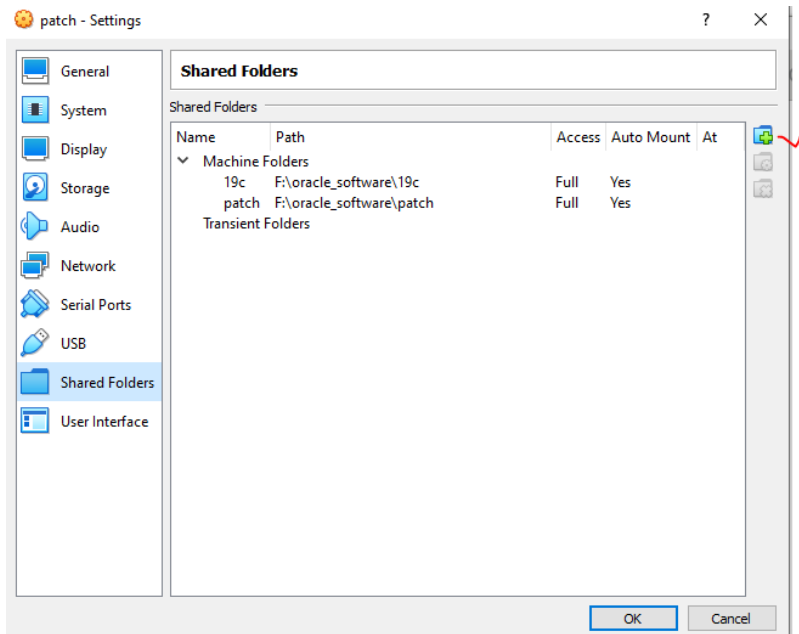
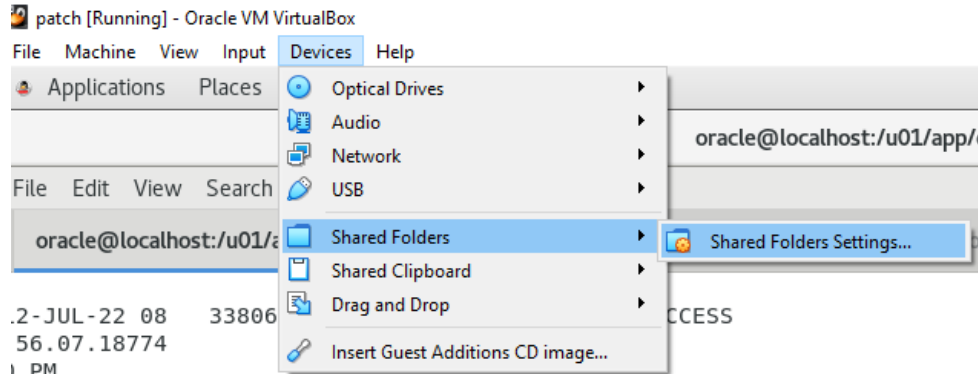
```
/u01/app/oracle/product/19.0.0/dbhome_1/OPatch
```

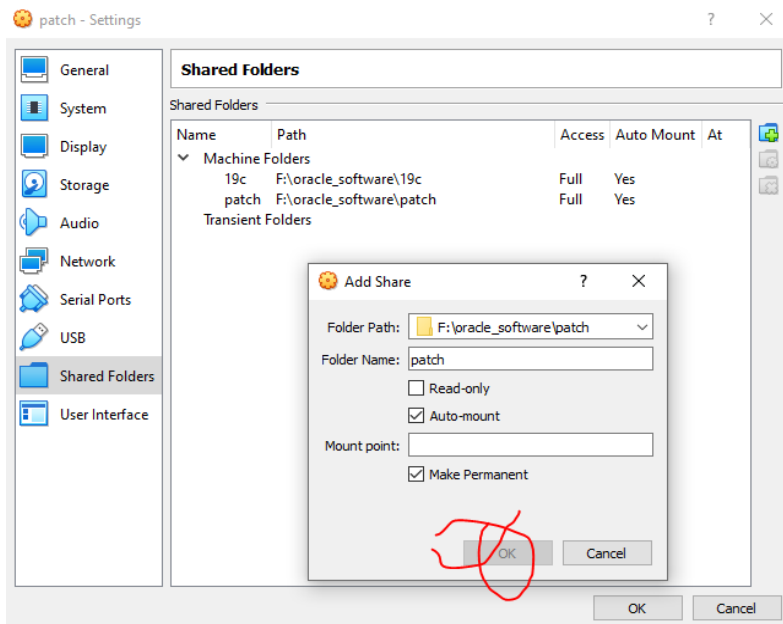
```
[oracle@localhost OPatch]$ cd ..
```

```
[oracle@localhost dbhome_1]$ mv OPatch OPatch_old
```

### Step -4

Shared opatch and patch binary software to virtual machine





## Step -5

```
[root@localhost OPatch]# df -h
```

Filesystem	Size	Used	Avail	Use%	Mounted on
devtmpfs	2.4G	0	2.4G	0%	/dev
tmpfs	2.4G	1.3G	1.2G	53%	/dev/shm
tmpfs	2.4G	9.5M	2.4G	1%	/run
tmpfs	2.4G	0	2.4G	0%	/sys/fs/cgroup
/dev/mapper/ol-root	37G	31G	5.9G	84%	/
/dev/sda1	1014M	256M	759M	26%	/boot
/dev/mapper/ol-home	18G	38M	18G	1%	/home
19c	293G	57G	237G	20%	/media/sf_19c
tmpfs	492M	24K	492M	1%	/run/user/54321
/dev/sr0	59M	59M	0	100%	/run/media/oracle/VBox_GAs_6.1.34

```
patch          293G  57G  237G  20% /media/sf_patch
```

## step-6

Create directory like /u02/software/Patches

```
[root@localhost Patches]# mkdir -p /u02/software/Patches
```

```
[root@localhost media]# cd /media/sf_patch
```

```
[root@localhost sf_patch]# ll
```

```
-rwxrwx---. 1 root vboxsf 2971825968 Jul 11 11:10 p33859214_190000_Linux-x86-64.zip
```

```
-rwxrwx---. 1 root vboxsf 124109254 Jul 7 15:08 p6880880_190000_Linux-x86-64.zip
```

Unzip p33859214\_190000\_Linux-x86-64.zip to /u02/software/Patches

```
[root@localhost sf_patch]# unzip p33859214_190000_Linux-x86-64.zip -d  
/u02/software/Patches
```

```
[root@localhost sf_patch]# chown -R oracle:install /u02
```

```
[root@localhost sf_patch]# chmod -R 775 /u02
```

## Step--7

```
[root@localhost sf_patch]# cd /u02/software/Patches
```

```
[root@localhost Patches]# ll
```

```
drwxrwxr-x. 4 oracle oinstall    80 Apr 19 08:54 33859214
```

```
-rwxrwxr-x. 1 oracle oinstall 1587409 Apr 19 18:45 PatchSearch.xml
```

```
[root@localhost 33859214]# ll
```

```
total 40
```

```
drwxrwxr-x. 8 oracle oinstall 4096 Apr 7 18:34 33803476
```

```
drwxrwxr-x. 4 oracle oinstall 67 Mar 11 22:01 33808367
-rwxrwxr-x. 1 oracle oinstall 8690 Apr 19 07:54 PatchSearch.xml
-rwxrwxr-x. 1 oracle oinstall 22583 Apr 19 08:54 README.html
[root@localhost 33859214]# cd 33803476
```

```
[root@localhost 33803476]# ll
```

```
total 136
```

```
drwxrwxr-x. 4 oracle oinstall 48 Apr 7 18:41 33575402
drwxrwxr-x. 5 oracle oinstall 81 Apr 7 18:35 33806152
drwxrwxr-x. 5 oracle oinstall 62 Apr 7 18:40 33815596
drwxrwxr-x. 5 oracle oinstall 62 Apr 7 18:34 33815607
drwxrwxr-x. 4 oracle oinstall 48 Apr 7 18:35 33911149
drwxrwxr-x. 2 oracle oinstall 4096 Apr 7 18:34 automation
-rwxrwxr-x. 1 oracle oinstall 5824 Apr 7 12:20 bundle.xml
-rwxrwxr-x. 1 oracle oinstall 123797 Apr 7 11:49 README.html
-rwxrwxr-x. 1 oracle oinstall 0 Apr 7 18:35 README.txt
[root@localhost 33803476]#
```

```
Step --8
```

```
root@localhost 33803476]# cd 33806152
```

```
[root@localhost 33806152]# ll
```

```
total 84
```

```
drwxrwxr-x. 3 oracle oinstall 21 Apr 7 18:35 custom
drwxrwxr-x. 3 oracle oinstall 20 Apr 7 18:35 etc
drwxrwxr-x. 39 oracle oinstall 4096 Apr 7 18:35 files
-rwxrwxr-x. 1 oracle oinstall 76004 Apr 7 18:40 README.html
```

```
-rwxrwxr-x. 1 oracle oinstall  21 Apr  7 18:35 README.txt
```

```
[root@localhost 33806152]# pwd
```

```
/u02/software/Patches/33859214/33803476/33806152
```

```
[root@localhost 33806152]#
```

## Step -9

```
[root@localhost 33806152]# cd ..
```

```
[root@localhost 33803476]# cd 33815596
```

```
[root@localhost 33815596]# pwd
```

```
/u02/software/Patches/33859214/33803476/33815596
```

```
[root@localhost 33815596]# ll
```

```
total 132
```

```
drwxrwxr-x. 3 oracle oinstall  21 Apr  7 18:40 custom
```

```
drwxrwxr-x. 3 oracle oinstall  20 Apr  7 18:40 etc
```

```
drwxrwxr-x. 20 oracle oinstall 4096 Apr  7 18:40 files
```

```
-rwxrwxr-x. 1 oracle oinstall 130064 Apr  7 18:40 README.txt
```

```
[root@localhost 33815596]#
```

## Step --10

Create a script file like `/tmp/patch_list_dbhome.txt`

```
[root@localhost sf_patch]# vi /tmp/patch_list_dbhome.txt
```

```
/u02/software/Patches/33859214/33803476/33806152
```

```
/u02/software/Patches/33859214/33803476/33815596
```

```
:wq!
```

```
[root@localhost sf_patch]# cat /tmp/patch_list_dbhome.txt
```



```
/u02/software/Patches/33859214/33803476/33806152
```

```
/u02/software/Patches/33859214/33803476/33815596
```

```
[root@localhost sf_patch]# chown oracle:oinstall /tmp/patch_list_dbhome.txt
```

```
[root@localhost sf_patch]# chmod 775 /tmp/patch_list_dbhome.txt
```

## Step -11

### Check Database status

```
[oracle@localhost dbhome_1]$ ps -ef | grep pmon
```

```
oracle 13966 16021 0 18:39 pts/1 00:00:00 grep --color=auto pmon
```

```
oracle 15432 1 0 18:11 ? 00:00:00 ora_pmon_orcl
```

### check listener status

```
oracle@localhost dbhome_1]$ ps -ef|grep tns
```

```
root 16 2 0 17:19 ? 00:00:00 [netns]
```

```
oracle 14008 16021 0 18:39 pts/1 00:00:00 grep --color=auto tns
```

```
oracle 16001 1 0 18:14 ? 00:00:00
```

```
/u01/app/oracle/product/19.0.0/dbhome_1/bin/tnslsnr LISTENER -inherit
```

## Step -12

### Check Database status

```
SQL> select name,open_mode from v$database;
```

```
NAME OPEN_MODE
-----
ORCL  READ WRITE
```

```
SQL> alter system switch logfile;
```

System altered.

```
SQL> /
```

System altered.

```
SQL> /
```

System altered.

```
SQL> /
```

System altered.

```
SQL> alter system checkpoint;
```

System altered.

```
SQL> !
```

Take backup database plus archivelog

```
RMAN> backup database plus archivelog;
```

## Shutdown Database

```
SQL> shutdown immediate;
```

Database closed.

Database dismounted.

ORACLE instance shut down.

SQL> !

## Stop listener

```
[oracle@localhost 33859214]$ lsnrctl stop listener
```

```
LSNRCTL for Linux: Version 19.0.0.0.0 - Production on 13-JUL-2022 17:54:45
```

```
Copyright (c) 1991, 2022, Oracle. All rights reserved.
```

```
Connecting to
```

```
(DESCRIPTION=(ADDRESS=(PROTOCOL=TCP)(HOST=localhost.localdomain)(PORT=1521)))
```

```
The command completed successfully
```

```
[oracle@localhost 33859214]$
```

## Step-13

Unzip Opatch to \$ORACLE\_HOME

```
[oracle@localhost dbhome_1]$ unzip p6880880_190000_Linux-x86-64.zip
```

```
-d /u01/app/oracle/product/19.0.0/dbhome_1
```

```
Archive: p6880880_190000_Linux-x86-64.zip
```

```
creating: /u01/app/oracle/product/19.0.0/dbhome_1/OPatch/
```

inflating: /u01/app/oracle/product/19.0.0/dbhome\_1/OPatch/README.txt

inflating: /u01/app/oracle/product/19.0.0/dbhome\_1/OPatch/jre/bin/orbd

creating: /u01/app/oracle/product/19.0.0/dbhome\_1/OPatch/modules/oracle.rsa/

inflating:

/u01/app/oracle/product/19.0.0/dbhome\_1/OPatch/modules/oracle.rsa/cryptoj.jar

inflating:

/u01/app/oracle/product/19.0.0/dbhome\_1/OPatch/modules/com.oracle.glcm.patch.opatch-common-api-schema\_13.9.5.0.jar

inflating:

/u01/app/oracle/product/19.0.0/dbhome\_1/OPatch/modules/com.sun.xml.bind.jaxb-xjc.jar

inflating:

/u01/app/oracle/product/19.0.0/dbhome\_1/OPatch/modules/com.oracle.glcm.patch.opatch-common-api-interfaces\_13.9.5.0.jar

## Step-13

```
[root@localhost sf_patch]# chown -R oracle:oinstall /u01
```

```
[root@localhost sf_patch]# chmod -R 775 /u01
```

## Step-14

```
[root@localhost sf_patch]# su oracle
```

```
[oracle@localhost sf_patch]$ cd /u01/app/oracle/product/19.0.0/dbhome_1/
```

```
[oracle@localhost dbhome_1]$ cd Opatch
```

## Step -15

### Check new Opatch

```
[oracle@localhost OPatch]$ ./opatch lsinventory
```

```
Oracle Interim Patch Installer version 12.2.0.1.30
```

```
Copyright (c) 2022, Oracle Corporation. All rights reserved.
```

```
Oracle Home      : /u01/app/oracle/product/19.0.0/dbhome_1
```

```
Central Inventory : /u01/app/oralInventory
```

```
from             : /u01/app/oracle/product/19.0.0/dbhome_1/oralnst.loc
```

```
OPatch version   : 12.2.0.1.30
```

```
OUI version      : 12.2.0.7.0
```

```
Log file location :
```

```
/u01/app/oracle/product/19.0.0/dbhome_1/cfgtoollogs/opatch/opatch2022-07-12_18-53-29PM_1.log
```

```
Lsinventory Output file location :
```

```
/u01/app/oracle/product/19.0.0/dbhome_1/cfgtoollogs/opatch/lsinv/lsinventory2022-07-12_18-53-29PM.txt
```

---

```
Local Machine Information::
```

```
Hostname: localhost
```

```
ARU platform id: 226
```

```
ARU platform description:: Linux x86-64
```

```
Installed Top-level Products (1):
```

Oracle Database 19c

19.0.0.0.0

There are 1 products installed in this Oracle Home.

Interim patches (2) :

Patch 29585399 : applied on Thu Apr 18 12:51:33 IST 2019

Unique Patch ID: 22840393

Patch description: "OCW RELEASE UPDATE 19.3.0.0.0 (29585399)"

Created on 9 Apr 2019, 19:12:47 hrs PST8PDT

Bugs fixed:

27222128, 27572040, 27604329, 27760043, 27877830, 28302580, 28470673  
28621543, 28642469, 28699321, 28710663, 28755846, 28772816, 28785321  
28800508, 28808652, 28815557, 28847541, 28847572, 28870496, 28871040  
28874416, 28877252, 28881191, 28881848, 28888083, 28911140, 28925250  
29429566, 29431485, 29435652, 29438736, 29439522, 29450421, 29451386  
29452576, 29452953, 29457807, 29460252, 29462957, 29486181, 29507616  
29521748, 29530812, 29531654, 29557336, 29558975, 29601461

---

OPatch succeeded.

Step -16

Below command will do the prerequisite check

```
[oracle@localhost OPatch]$ pwd
```

```
/u01/app/oracle/product/19.0.0/dbhome_1/OPatch
```

```
[root@localhost OPatch]$
```

```
[oracle@localhost OPatch]$ /u01/app/oracle/product/19.0.0/dbhome_1/OPatch/opatch  
prereq CheckConflictAgainstOHWithDetail -phBaseDir  
/u02/software/Patches/33859214/33803476/33806152
```

Oracle Interim Patch Installer version 12.2.0.1.30

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PREREQ session

Oracle Home : /u01/app/oracle/product/19.0.0/dbhome\_1

Central Inventory : /u01/app/oraInventory

from : /u01/app/oracle/product/19.0.0/dbhome\_1/orainst.loc

OPatch version : 12.2.0.1.30

OUI version : 12.2.0.7.0

Log file location :

/u01/app/oracle/product/19.0.0/dbhome\_1/cfgtoollogs/opatch/opatch2022-07-12\_18-55-  
19PM\_1.log

Invoking prereq "checkconflictagainsthwithdetail"

Prereq "checkConflictAgainstOHWithDetail" passed.

OPatch succeeded.

Step-17

```
[oracle@localhost OPatch]$ /u01/app/oracle/product/19.0.0/dbhome_1/OPatch/opatch  
prereq CheckConflictAgainstOHWithDetail -phBaseDir  
/u02/software/Patches/33859214/33803476/33815596
```

Oracle Interim Patch Installer version 12.2.0.1.30

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PREREQ session

Oracle Home : /u01/app/oracle/product/19.0.0/dbhome\_1

Central Inventory : /u01/app/oralInventory

from : /u01/app/oracle/product/19.0.0/dbhome\_1/oralnst.loc

OPatch version : 12.2.0.1.30

OUI version : 12.2.0.7.0

Log file location :

/u01/app/oracle/product/19.0.0/dbhome\_1/cfgtoollogs/patch/patch2022-07-12\_18-55-52PM\_1.log

Invoking prereq "checkconflictagainsthwithdetail"

Prereq "checkConflictAgainstOHWithDetail" passed.

OPatch succeeded.



## Step -18

```
[root@localhost OPatch]# su oracle
```

```
[oracle@localhost OPatch]$ su oracle
```

```
[oracle@localhost OPatch]$ /u01/app/oracle/product/19.0.0/dbhome_1/OPatch/opatch  
prereq CheckSystemSpace -phBaseFile /tmp/patch_list_dbhome.txt
```

```
Oracle Interim Patch Installer version 12.2.0.1.30
```

```
Copyright (c) 2022, Oracle Corporation. All rights reserved.
```

```
PREREQ session
```

```
Oracle Home      : /u01/app/oracle/product/19.0.0/dbhome_1
```

```
Central Inventory : /u01/app/oraInventory
```

```
from             : /u01/app/oracle/product/19.0.0/dbhome_1/orainst.loc
```

```
OPatch version   : 12.2.0.1.30
```

```
OUI version      : 12.2.0.7.0
```

```
Log file location :
```

```
/u01/app/oracle/product/19.0.0/dbhome_1/cfgtoollogs/opatch/opatch2022-07-12_19-06-  
39PM_1.log
```

```
Invoking prereq "checksystemspace"
```

```
Prereq "checkSystemSpace" passed.
```

```
OPatch succeeded.
```

Step -19

## Patch Apply

```
[oracle@localhost 33859214]$  
/u01/app/oracle/product/19.0.0/dbhome_1/OPatch/opatch apply  
/u02/software/Patches/33859214/33803476/33806152
```

Oracle Interim Patch Installer version 12.2.0.1.30

Copyright (c) 2022, Oracle Corporation. All rights reserved.

Oracle Home : /u01/app/oracle/product/19.0.0/dbhome\_1

Central Inventory: /u01/app/oralInventory

From : /u01/app/oracle/product/19.0.0/dbhome\_1/oraInst.loc

OPatch version : 12.2.0.1.30

OUI version : 12.2.0.7.0

Log file location :

/u01/app/oracle/product/19.0.0/dbhome\_1/cfgtoollogs/opatch/opatch2022-07-12\_19-44-34PM\_1.log

Verifying environment and performing prerequisite checks...

-----

Start OOP by Prereq process.

Launch OOP...

Oracle Interim Patch Installer version 12.2.0.1.30

Copyright (c) 2022, Oracle Corporation. All rights reserved.

Oracle Home : /u01/app/oracle/product/19.0.0/dbhome\_1

Central Inventory : /u01/app/oraInventory

from : /u01/app/oracle/product/19.0.0/dbhome\_1/orainst.loc

OPatch version : 12.2.0.1.30

OUI version : 12.2.0.7.0

Log file location :

/u01/app/oracle/product/19.0.0/dbhome\_1/cfgtoollogs/opatch/opatch2022-07-12\_19-47-11PM\_1.log

Verifying environment and performing prerequisite checks...

OPatch continues with these patches: 33806152

Do you want to proceed? [y|n]

y

User Responded with: Y

All checks passed.

Please shutdown Oracle instances running out of this ORACLE\_HOME on the local system.

(Oracle Home = '/u01/app/oracle/product/19.0.0/dbhome\_1')

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

y

User Responded with: Y

Backing up files...

Applying interim patch '33806152' to OH '/u01/app/oracle/product/19.0.0/dbhome\_1'

ApplySession: Optional component(s) [ oracle.network.gsm, 19.0.0.0.0 ] , [ oracle.rdbms.ic, 19.0.0.0.0 ] , [ oracle.rdbms.tg4db2, 19.0.0.0.0 ] , [ oracle.tfa, 19.0.0.0.0 ] , [ oracle.network.cman, 19.0.0.0.0 ] , [ oracle.options.olap.api, 19.0.0.0.0 ] , [ oracle.ons.cclient, 19.0.0.0.0 ] , [ oracle.rdbms.tg4ifmx, 19.0.0.0.0 ] , [ oracle.rdbms.tg4sybs, 19.0.0.0.0 ] , [ oracle.options.olap, 19.0.0.0.0 ] , [

oracle.xdk.companion, 19.0.0.0.0 ] , [ oracle.net.cman, 19.0.0.0.0 ] , [ oracle.ons.eons.bwcompat, 19.0.0.0.0 ] , [ oracle.oid.client, 19.0.0.0.0 ] , [ oracle.rdbms.tg4tera, 19.0.0.0.0 ] , [ oracle.rdbms.tg4msql, 19.0.0.0.0 ] , [ oracle.jdk, 1.8.0.191.0 ] not present in the Oracle Home or a higher version is found.

Patching component oracle.bali.ewt, 11.1.1.6.0...

Patching component oracle.help.ohj, 11.1.1.7.0...

Patching component oracle.perlint, 5.28.1.0.0...

Patching component oracle.rdbms.locator, 19.0.0.0.0...

Patching component oracle.perlint.expats, 2.0.1.0.4...

Patching component oracle.rdbms.rsfs, 19.0.0.0.0...

Patching component oracle.rdbms.util, 19.0.0.0.0...

Patching component oracle.rdbms, 19.0.0.0.0...

Patching component oracle.assistants.acf, 19.0.0.0.0...

Patching component oracle.assistants.deconfig, 19.0.0.0.0...

Patching component oracle.assistants.server, 19.0.0.0.0...

Patching component oracle.buildtools.rsfs, 19.0.0.0.0...

Patching component oracle.ctx, 19.0.0.0.0...

Patching component oracle.dbdev, 19.0.0.0.0...

Patching component oracle.dbjava.ic, 19.0.0.0.0...

Patching component oracle.dbjava.jdbc, 19.0.0.0.0...

Patching component oracle.dbjava.ucp, 19.0.0.0.0...

Patching component oracle.duma, 19.0.0.0.0...

Patching component oracle.javavm.client, 19.0.0.0.0...

Patching component oracle.ldap.owm, 19.0.0.0.0...

Patching component oracle.ldap.rsf, 19.0.0.0.0...

Patching component oracle.ldap.security.osdt, 19.0.0.0.0...

Patching component oracle.marvel, 19.0.0.0.0...

Patching component oracle.network.rsf, 19.0.0.0.0...

Patching component oracle.odbc.ic, 19.0.0.0.0...

Patching component oracle.oracore.rsf, 19.0.0.0.0...

Patching component oracle.precomp.common.core, 19.0.0.0.0...

Patching component oracle.rdbms.crs, 19.0.0.0.0...

Patching component oracle.rdbms.dbscripts, 19.0.0.0.0...

Patching component oracle.rdbms.deconfig, 19.0.0.0.0...

Patching component oracle.rdbms.oci, 19.0.0.0.0...

Patching component oracle.rhp.db, 19.0.0.0.0...

Patching component oracle.sdo, 19.0.0.0.0...

Patching component oracle.sdo.locator.jrf, 19.0.0.0.0...

Patching component oracle.sqlplus, 19.0.0.0.0...

Patching component oracle.sqlplus.ic, 19.0.0.0.0...

Patching component oracle.wwg.plsql, 19.0.0.0.0...

Patching component oracle.rdbms.rman, 19.0.0.0.0...

Patching component oracle.dbtoolslistener, 19.0.0.0.0...

Patching component oracle.rdbms.scheduler, 19.0.0.0.0...

Patching component oracle.oraolap, 19.0.0.0.0...

Patching component oracle.oraolap.api, 19.0.0.0.0...

Patching component oracle.precomp.rsfc, 19.0.0.0.0...

Patching component oracle.rdbms.hs\_common, 19.0.0.0.0...

Patching component oracle.xdk.parser.java, 19.0.0.0.0...

Patching component oracle.xdk.xquery, 19.0.0.0.0...

Patching component oracle.rdbms.install.common, 19.0.0.0.0...

Patching component oracle.mgw.common, 19.0.0.0.0...

Patching component oracle.rdbms.drdaas, 19.0.0.0.0...

Patching component oracle.install.deinstalltool, 19.0.0.0.0...

Patching component oracle.network.client, 19.0.0.0.0...

Patching component oracle.odbc, 19.0.0.0.0...

Patching component oracle.ons.ic, 19.0.0.0.0...

Patching component oracle.xdk.rsfc, 19.0.0.0.0...

Patching component oracle.rdbms.hsodbc, 19.0.0.0.0...

Patching component oracle.oraolap.dbscripts, 19.0.0.0.0...

Patching component oracle.rdbms.lbac, 19.0.0.0.0...

Patching component oracle.nlsrtl.rsf, 19.0.0.0.0...

Patching component oracle.ctx.atg, 19.0.0.0.0...

Patching component oracle.network.listener, 19.0.0.0.0...

Patching component oracle.ldap.ssl, 19.0.0.0.0...

Patching component oracle.ovm, 19.0.0.0.0...

Patching component oracle.rdbms.install.plugins, 19.0.0.0.0...

Patching component oracle.ctx.rsf, 19.0.0.0.0...

Patching component oracle.rdbms.dv, 19.0.0.0.0...

Patching component oracle.ons, 19.0.0.0.0...

Patching component oracle.javavm.server, 19.0.0.0.0...

Patching component oracle.ldap.client, 19.0.0.0.0...

Patching component oracle.ldap.rsf.ic, 19.0.0.0.0...

Patching component oracle.xdk, 19.0.0.0.0...

Patching component oracle.sdo.locator, 19.0.0.0.0...

Patching component oracle.rdbms.rsf.ic, 19.0.0.0.0...

Patching component oracle.precomp.common, 19.0.0.0.0...

Patching component oracle.precomp.lang, 19.0.0.0.0...

Patching component oracle.jdk, 1.8.0.201.0...

Patch 33806152 successfully applied.

Sub-set patch [29517242] has become inactive due to the application of a super-set patch [33806152].

Please refer to Doc ID 2161861.1 for any possible further required actions.

Log file location:

/u01/app/oracle/product/19.0.0/dbhome\_1/cfgtoollogs/opatch/opatch2022-07-12\_19-47-11PM\_1.log

OPatch succeeded.

Step -20

Start Database

```
[oracle@localhost 33859214]$ .oraenv
```

```
[oracle@localhost 33859214]$ orcl
```

```
[oracle@localhost 33859214]$ sqlplus
```

```
SQL*Plus: Release 19.0.0.0.0 - Production on Tue Jul 12 20:10:29 2022  
Version 19.15.0.0.0
```

```
Copyright (c) 1982, 2022, Oracle. All rights reserved.
```

```
Enter user-name: /as sysdba  
Connected to an idle instance.
```

```
SQL> startup  
ORACLE instance started.
```

```
Total System Global Area 2063595320 bytes  
Fixed Size 8898360 bytes  
Variable Size 1174405120 bytes  
Database Buffers 872415232 bytes  
Redo Buffers 7876608 bytes  
Database mounted.  
Database opened.
```



## Step-21

### start listener

```
[oracle@localhost 33859214]$ lsnrctl start
```

```
LSNRCTL for Linux: Version 19.0.0.0.0 - Production on 12-JUL-2022 20:10:24
```

```
Copyright (c) 1991, 2022, Oracle. All rights reserved.
```

```
Starting /u01/app/oracle/product/19.0.0/dbhome_1/bin/tnslsnr: please wait...
```

```
TNSLSNR for Linux: Version 19.0.0.0.0 - Production
```

```
System parameter file is
```

```
/u01/app/oracle/product/19.0.0/dbhome_1/network/admin/listener.ora
```

```
Log messages written to /u01/app/oracle/diag/tnslsnr/localhost/listener/alert/log.xml
```

```
Listening on:
```

```
(DESCRIPTION=(ADDRESS=(PROTOCOL=tcp)(HOST=localhost)(PORT=1521)))
```

```
Connecting to
```

```
(DESCRIPTION=(ADDRESS=(PROTOCOL=TCP)(HOST=localhost.localdomain)(PORT=1521)))
```

```
STATUS of the LISTENER
```

```
-----
```

Alias	LISTENER
Version	TNSLSNR for Linux: Version 19.0.0.0.0 - Production
Start Date	12-JUL-2022 20:10:24
Uptime	0 days 0 hr. 0 min. 0 sec
Trace Level	off
Security	ON: Local OS Authentication
SNMP	OFF
Listener Parameter File	
	/u01/app/oracle/product/19.0.0/dbhome_1/network/admin/listener.ora
Listener Log File	/u01/app/oracle/diag/tnslsnr/localhost/listener/alert/log.xml

Listening Endpoints Summary...

```
(DESCRIPTION=(ADDRESS=(PROTOCOL=tcp)(HOST=localhost)(PORT=1521)))
```

Services Summary...

Service "orcl" has 1 instance(s).

Instance "orcl", status UNKNOWN, has 1 handler(s) for this service...

The command completed successfully

## Step -22

```
[oracle@localhost OPatch]$ pwd
```

```
/u01/app/oracle/product/19.0.0/dbhome_1/OPatch
```

```
[oracle@localhost OPatch]$ ./datapatch -verbose
```

SQL Patching tool version 19.15.0.0.0 Production on Tue Jul 12 20:11:59 2022

Copyright (c) 2012, 2022, Oracle. All rights reserved.

Log file for this invocation:

```
/u01/app/oracle/cfgtoollogs/sqlpatch/sqlpatch_25314_2022_07_12_20_11_59/sqlpatch_
invocation.log
```

Connecting to database...OK

Gathering database info...done

Bootstrapping registry and package to current versions...done

Determining current state...done

Current state of interim SQL patches:

No interim patches found

Current state of release update SQL patches:

Binary registry:

19.15.0.0.0 Release\_Update 220331125408: Installed

SQL registry:

Applied 19.3.0.0.0 Release\_Update 190410122720 successfully on 12-JUL-22  
06.00.32.733795 PM

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

Installation queue:

No interim patches need to be rolled back

Patch 33806152 (Database Release Update : 19.15.0.0.220419 (33806152)):  
Apply from 19.3.0.0.0 Release\_Update 190410122720 to 19.15.0.0.0  
Release\_Update 220331125408  
No interim patches need to be applied

Installing patches...

Patch installation complete. Total patches installed: 1

Validating logfiles...done

Patch 33806152 apply: SUCCESS

logfile:

/u01/app/oracle/cfgtoollogs/sqlpatch/33806152/24713297/33806152\_apply\_ORCL\_202

2Jul12\_20\_14\_24.log (no errors)

SQL Patching tool complete on Tue Jul 12 20:56:07 2022

[oracle@localhost OPatch]\$ exit

Exit

## Step -23

```
SQL> select count(*) from all_objects where status ='VALID' group by owner;
```

## Step -24

Check valid objects

```
SQL> select count(*) from all_objects where status ='VALID';
```

```
COUNT (*)
```

```
-----
```

```
71941
```

## Step-25

Run script for valid objects

```
SQL> @?/rdbms/admin/utlrp.sql
```

Session altered.

TIMESTAMP

-----  
COMP\_TIMESTAMP UTLRP\_BGN            2022-07-13 10:57:29

DOC> The following PL/SQL block invokes UTL\_RECOMP to recompile invalid  
DOC> objects in the database. Recompilation time is proportional to the  
DOC> number of invalid objects in the database, so this command may take  
DOC> a long time to execute on a database with a large number of invalid  
DOC> objects.

DOC>

DOC> Use the following queries to track recompilation progress:

DOC>

DOC> 1. Query returning the number of invalid objects remaining. This  
DOC> number should decrease with time.

DOC>     SELECT COUNT(\*) FROM obj\$ WHERE status IN (4, 5, 6);

DOC>

DOC> 2. Query returning the number of objects compiled so far. This number  
DOC> should increase with time.

DOC>     SELECT COUNT(\*) FROM UTL\_RECOMP\_COMPILED;

DOC>

DOC> This script automatically chooses serial or parallel recompilation  
DOC> based on the number of CPUs available (parameter `cpu_count`) multiplied  
DOC> by the number of threads per CPU (parameter `parallel_threads_per_cpu`).  
DOC> On RAC, this number is added across all RAC nodes.

DOC>

DOC> UTL\_RECOMP uses DBMS\_SCHEDULER to create jobs for parallel  
DOC> recompilation. Jobs are created without instance affinity so that they  
DOC> can migrate across RAC nodes. Use the following queries to verify  
DOC> whether UTL\_RECOMP jobs are being created and run correctly:

DOC>

DOC> 1. Query showing jobs created by UTL\_RECOMP

DOC>     SELECT job\_name FROM dba\_scheduler\_jobs  
DOC>           WHERE job\_name like 'UTL\_RECOMP\_SLAVE\_%';

DOC>

DOC> 2. Query showing UTL\_RECOMP jobs that are running

DOC>     SELECT job\_name FROM dba\_scheduler\_running\_jobs  
DOC>           WHERE job\_name like 'UTL\_RECOMP\_SLAVE\_%';

DOC>#

PL/SQL procedure successfully completed.

TIMESTAMP

-----  
COMP\_TIMESTAMP UTLRP\_END            2022-07-13 10:57:31

DOC> The following query reports the number of invalid objects.

DOC>

DOC> If the number is higher than expected, please examine the error

DOC> messages reported with each object (using SHOW ERRORS) to see if they

DOC> point to system misconfiguration or resource constraints that must be

DOC> fixed before attempting to recompile these objects.

DOC>#

OBJECTS WITH ERRORS

-----

0

DOC> The following query reports the number of exceptions caught during

DOC> recompilation. If this number is non-zero, please query the error

DOC> messages in the table UTL\_RECOMP\_ERRORS to see if any of these errors

DOC> are due to misconfiguration or resource constraints that must be

DOC> fixed before objects can compile successfully.

DOC> Note: Typical compilation errors (due to coding errors) are not

DOC> logged into this table: they go into DBA\_ERRORS instead.

DOC>#

ERRORS DURING RECOMPILATION

-----

0

Function created.

PL/SQL procedure successfully completed.

Function dropped.

PL/SQL procedure successfully completed.

**Step-26**

```
SQL> select count (*) from all_objects where status='VALID';
```

```
COUNT(*)
```

```
-----
```

```
71954
```

## Step-27

```
SQL> select count (*) from all_objects where status = 'INVALID';
```

```
COUNT(*)
```

```
-----
```

```
0
```

## Step-28

```
SQL> desc DBA_REGISTRY_SQLPATCH;
```

```
SQL> select PATCH_ID, PATCH_UID, ACTION, STATUS from DBA_REGISTRY_SQLPATCH;
```

PATCH_ID	PATCH_UID	ACTION	STATUS
29517242	22862832	APPLY	SUCCESS
33806152	24713297	APPLY	SUCCESS

## Step-29

```
SQL> select ACTION_TIME, PATCH_ID, PATCH_UID, ACTION, STATUS from DBA_REGISTRY_SQLPATCH;
```

ACTION_TIME	PATCH_ID	PATCH_UID	ACTION	STATUS
12-JUL-22 06 .00.32.73379 5 PM	29517242	22862832	APPLY	SUCCESS

12-JUL-22 08  
.56.07.18774  
0 PM

33806152 24713297 APPLY SUCCESS

## Step-30

```
SQL> select * from dba_registry_history order by action_time desc ;
```

```
SQL> col COMMENTS for a50
```

```
SQL> col NAMESPACE for a20
```

```
SQL> /
```

ACTION_TIME	ACTION	NAMESPACE	VERSION	ID	COMMENTS	BUNDLE_SERIES
	BOOTSTRAP	DATAPATCH	19	RDBMS_19.15.0.0	DBRU_LINUX.X64_220330	
12-JUL-22 08 .49.19.33838	RU_APPLY	SERVER	19.0.0.0		Patch applied from 19.3.0.0.0 to 19.15.0.0.0: Release Update – 220331125408 0 PM	
12-JUL-22 05 .59.46.10133 0 PM	RU_APPLY	SERVER	19.0.0.0		Patch applied on 19.3.0.0.0: Release Update - 190410122720	

```
SQL>
```

**Thank you!**