

APPLYING ORACLE STANDALONE DATABASE PATCH FROM 19.3.0.0 TO 19.20.0.0

Steps to be followed before applying patch

Here I will be demonstrating the entire patch applying process in 3 levels

- Pre-Patch
- Patching
- Post-Patch

Pre-Patch steps:

Check the Database version

```
SQL> select banner_full from v$version;
```

```
BANNER_FULL
```

```
-----  
Oracle Database 19c Enterprise Edition Release 19.0.0.0.0 - Production
```

```
Version 19.3.0.0.0
```

Check the present patch level.

```
SQL> Select TO_CHAR(action_time, 'YYYY-MM-DD') AS action_time, action, status, description, patch_id  
from sys.dba_registry_sqlpatch order by action_time; 2
```

```
ACTION_TIME ACTION      STATUS      DESCRIPTION                                     PATCH_ID  
-----  
2021-12-23 APPLY        SUCCESS     Database Release Update : 19.3.0.0.190416 (29517242) 29517242
```

From OS level check patches applied previously

```
[oracle@oraclelab1 OPatch]$ ./opatch lspatches  
29517242;Database Release Update : 19.3.0.0.190416 (29517242)
```

Check the opatch utility version

```
[oracle@oraclelab1 OPatch]$ ./opatch version  
OPatch Version: 12.2.0.1.17
```

Download the patch.

From support.oracle.com → patches and updates → search by patch number and OS version.

6880880 is opatch version that is 12.2.0.1.39

35320081 is patch version that is 19.20.0.0

Backup oracle home and inventory

```
tar -pcvf /u02/backups/backup.tar dbhome_1
```

```
[oracle@oraclelab1 dbhome_1]$ cp -R inventory /u01/backup
```

Backup entire Database using RMAN

```
RMAN>BACKUP AS COMPRESSED BACKUPSET DATABASE INCLUDE CURRENT CONTROLFILE PLUS ARCHIVELOG
```

Check invalid objects

```
SQL> select * from dba_objects where status = 'INVALID';
```

Store the patches into patches folder on the Linux server and unzip the release update(RU) patch

```
[root@oraclelab1 patches]# ls -l
total 3042520
-rwxr-x---. 1 oracle oinstall 2990370786 Sep 17 14:47 p35320081_190000_Linux-x86-64.zip
-rwxr-x---. 1 oracle oinstall 125167420 Sep 17 14:47 p6880880_190000_Linux-x86-64.zip
drwxr-x---. 8 oracle oinstall    4096 Jul 16 07:51 35319490
```

Unzip Opatch to oracle_home

```
rename old opatch dir
mv OPATCH OPATCH_SEP_17_2023
```

```
[oracle@oraclelab1 patches]$ unzip p6880880_190000_Linux-x86-64.zip -d /u01/app/oracle/product/19.0.0.0/dbhome_1/
```

```
[oracle@oraclelab1 OPatch]$ ./opatch version
OPatch Version: 12.2.0.1.39
```

RUN prerequisite conflict check from patch folder

```
[35320081]$ /u01/app/oracle/product/19.0.0.0/dbhome_1/OPatch/opatch prereq CheckConflictAgainstOHWithDetail -ph ./
Oracle Interim Patch Installer version 12.2.0.1.39
Copyright (c) 2023, Oracle Corporation. All rights reserved.
```

PREREQ session

```
Oracle Home      : /u01/app/oracle/product/19.0.0.0/dbhome_1
Central Inventory : /u01/app/oralInventory
  from            : /u01/app/oracle/product/19.0.0.0/dbhome_1/oralnst.loc
OPatch version   : 12.2.0.1.39
OUI version      : 12.2.0.7.0
```

Log file location : /u01/app/oracle/product/19.0.0.0/dbhome_1/cfgtoollogs/opatch/opatch2023-09-17_15-38-56PM_1.log

Invoking prereq "checkconflictagainstohwithdetail"

Prereq "checkConflictAgainstOHWithDetail" passed.

OPatch succeeded.

Patching:

Shut down database and listener

Set opatch path

```
export PATH=$ORACLE_HOME/OPatch:$PATH
```

which opatch

```
/u01/app/oracle/product/19.0.0.0/dbhome_1/OPatch/opatch
```

Apply the patch with apply command

```
[oracle@oraclelab1 35320081]$ /u01/app/oracle/product/19.0.0.0/dbhome_1/OPatch/opatch apply
```

```
Oracle Interim Patch Installer version 12.2.0.1.39
```

```
Copyright (c) 2023, Oracle Corporation. All rights reserved.
```

```
Oracle Home      : /u01/app/oracle/product/19.0.0.0/dbhome_1
```

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

```
from             : /u01/app/oracle/product/19.0.0.0/dbhome_1/oralnst.loc
```

```
OPatch version   : 12.2.0.1.39
```

```
OUI version      : 12.2.0.7.0
```

```
Log file location : /u01/app/oracle/product/19.0.0.0/dbhome_1/cfgtoollogs/opatch/opatch2023-09-17_17-53-13PM_1.log
```

Verifying environment and performing prerequisite checks...

OPatch continues with these patches: 35320081

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/19.0.0.0/dbhome_1')

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

y

User Responded with: Y

Backing up files...

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

Patching component oracle.odbc, 19.0.0.0.0...

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

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

Patching component oracle.jdk, 1.8.0.201.0...

Patch 35320081 successfully applied.

Sub-set patch [29517242] has become inactive due to the application of a super-set patch [35320081].

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

Log file location: /u01/app/oracle/product/19.0.0.0/dbhome_1/cfgtoollogs/opatch/opatch2023-09-17_17-53-13PM_1.log

OPatch succeeded.

Post Patch

Check list of patches

```
[oracle@oraclelab1 35320081]$ /u01/app/oracle/product/19.0.0.0/dbhome_1/OPatch/opatch lspatches  
35320081;Database Release Update : 19.20.0.0.230718 (35320081)
```

OPatch succeeded.

start Database

start listener

```
SQL> select banner_full from v$version;
```

BANNER_FULL

```
-----  
Oracle Database 19c Enterprise Edition Release 19.0.0.0.0 - Production  
Version 19.20.0.0.0
```

Run Datapatch Verbose

```
[oracle@oraclelab1 OPatch]$ ./datapatch -verbose
```

```
SQL Patching tool version 19.20.0.0.0 Production on Sun Sep 17 18:54:16 2023
```

```
Copyright (c) 2012, 2023, Oracle. All rights reserved.
```

```
Log file for this invocation: /u01/app/oracle/cfgtoollogs/sqlpatch/sqlpatch_28669_2023_09_17_18_54_16/sqlpatch_invocation.log
```

```
Connecting to database...OK
```

```
Gathering database info...done
```

```
Bootstrapping registry and package to current versions...done
```

Determining current state...done

Installing patches...

Patch installation complete. Total patches installed: 1

Validating logfiles...done

Patch 35320081 apply: SUCCESS

logfile: /u01/app/oracle/cfgtoollogs/sqlpatch/35320081/25314491/35320081_apply_DEVDB_2023Sep17_18_58_20.log (no errors)

SQL Patching tool complete on Sun Sep 17 19:33:55 2023

SQL> Select TO_CHAR(action_time, 'YYYY-MM-DD') AS action_time, action, status, description, patch_id
from sys.dba_registry_sqlpatch order by action_time;

ACTION_TIM	ACTION	STATUS	DESCRIPTION	PATCH_ID
2021-12-23	APPLY	SUCCESS	Database Release Update : 19.3.0.0.190416 (29517242)	29517242
2023-09-17	APPLY	SUCCESS	Database Release Update : 19.20.0.0.230718 (35320081)	35320081

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

```
COUNT(*)  
-----  
0
```

If there is any invalid objects found compile it with
Utilrp script

SQL> @ORACLE_HOME/rdbms/admin/utilrp.sql