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';

2

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
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PREREQ session

Oracle Home   : /u01/app/oracle/product/19.0.0.0/dbhome_1
Central Inventory : /u01/app/oraInventory
  from   : /u01/app/oracle/product/19.0.0.0/dbhome_1/oraInst.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 listerner

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
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Oracle Home   : /u01/app/oracle/product/19.0.0.0/dbhome_1
Central Inventory : /u01/app/oraInventory
   from   : /u01/app/oracle/product/19.0.0.0/dbhome_1/oraInst.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