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| https://support.oracle.com/epmos/adf/images/t.gif | **Complete Checklist for Manual Upgrades to 11gR2 (Doc ID 837570.1)** | [[To Bottom](https://support.oracle.com/epmos/faces/DocumentDisplay?_afrLoop=509192663171888&id=837570.1&_afrWindowMode=0&_adf.ctrl-state=15ioywg2c6_389)To Bottom](https://support.oracle.com/epmos/faces/DocumentDisplay?_afrLoop=509192663171888&id=837570.1&_afrWindowMode=0&_adf.ctrl-state=15ioywg2c6_389) | https://support.oracle.com/epmos/adf/images/t.gif |

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| **In this Document**   |  |  | | --- | --- | |  | [Purpose](https://support.oracle.com/epmos/faces/DocumentDisplay?_afrLoop=509192663171888&id=837570.1&_afrWindowMode=0&_adf.ctrl-state=15ioywg2c6_389#PURPOSE) |  |  |  | | --- | --- | |  | [Ask Questions, Get Help, And Share Your Experiences With This Article](https://support.oracle.com/epmos/faces/DocumentDisplay?_afrLoop=509192663171888&id=837570.1&_afrWindowMode=0&_adf.ctrl-state=15ioywg2c6_389#aref_section11) |  |  |  | | --- | --- | |  | [Scope](https://support.oracle.com/epmos/faces/DocumentDisplay?_afrLoop=509192663171888&id=837570.1&_afrWindowMode=0&_adf.ctrl-state=15ioywg2c6_389#SCOPE) |  |  |  | | --- | --- | |  | [Details](https://support.oracle.com/epmos/faces/DocumentDisplay?_afrLoop=509192663171888&id=837570.1&_afrWindowMode=0&_adf.ctrl-state=15ioywg2c6_389#BODYTEXT) |  |  |  | | --- | --- | |  | [References](https://support.oracle.com/epmos/faces/DocumentDisplay?_afrLoop=509192663171888&id=837570.1&_afrWindowMode=0&_adf.ctrl-state=15ioywg2c6_389#REF) |   **APPLIES TO:**  Oracle Database - Standard Edition - Version 9.2.0.8 to 11.2.0.4 [Release 9.2 to 11.2] Oracle Database - Enterprise Edition - Version 9.2.0.8 to 11.2.0.4 [Release 9.2 to 11.2] Oracle Database - Enterprise Edition - Version 9.2.0.7 to 9.2.0.7 [Release 9.2] Information in this document applies to any platform.  **PURPOSE**  This document is created for use as a guideline and checklist when manually upgrading from Oracle 9iR2 (9.2), Oracle 10gR1 (10.1), Oracle 10gR2 (10.2) or Oracle 11gR1 (11.1) to  Oracle 11gR2 (11.2).  **Ask Questions, Get Help, And Share Your Experiences With This Article**  **Would you like to explore this topic further with other Oracle Customers, Oracle Employees, and Industry Experts?**  [Click here to join the discussion where you can ask questions, get help from others, and share your experiences with this specific article](https://community.oracle.com/message/11793515#11793515). Discover discussions about other articles and helpful subjects by clicking [here](https://community.oracle.com/community/support/oracle_database/database_install_upgrade_opatch) to access the main *My Oracle Support Community* page for Database Install/Upgrade.  **SCOPE**  Database Administrators, Support  **DETAILS**  **Recommendations for Source database**  1) Ensure that all database components/objects**provided by Oracle**are VALIDin the source database  prior to starting the upgrade.  2) Ensure that you do not have duplicate objects in the SYS and SYSTEM schema.  The following objects are permissible duplicate objects:   OBJECT\_NAME OBJECT\_TYPE  ------------------------------ ------------------- AQ$\_SCHEDULES TABLE AQ$\_SCHEDULES\_PRIMARY INDEX DBMS\_REPCAT\_AUTH PACKAGE DBMS\_REPCAT\_AUTH PACKAGE BODY   Please refer to the following article for complete instructions to remove any other duplicates. [NOTE.1030426.6](https://support.oracle.com/epmos/faces/DocumentDisplay?id=1030426.6) HOW TO CLEAN UP DUPLICATE OBJECTS OWNED BY SYS AND SYSTEM  **Note: All these checks are done when you execute step 3 (dbupgdiag.sql)**  3) Disable the custom triggers that would fire before/after DDL and enable them after the upgrade is complete.  4) **Prior to** **Upgrading a database with XML Database(XDB) installed or  installing XDB**, be sure to run the code mentioned in [**Note 1573175.1**](https://support.oracle.com/epmos/faces/DocumentDisplay?id=1573175.1)**"Upgrading or Installing XDB could result in data loss if XDB\_INSTALLATION\_TRIGGER exists "**  to determine if any objects need to be dropped. Please note, failure to follow the steps listed below could result in data loss of user objects like tables, indexes  **Requirements and recommendations for target database**   * Check the certification of Oracle 11gR2 with your Platform/Operating system before downloading and installing Oracle 11gR2. Please check the certification information on My Oracle Support. * Download and Install Oracle 11g Release 2 in a new Oracle Home and make sure there are no  relinking errors. * Install the latest available Patchset from Metalink (if available). * Install the latest opatch available for your platform and database version  (if available). * Install the latest available Critical Patch Update (if available). * Either take a Cold or Hot backup of your source database (advisable to have cold backup). * **If you have XDB installed then  please install the PSE for 10368698 to the 11.2.0.2 Home before doing the upgrade**. If there is not an existing one-off patch for your platform please open an SR to request the one-off patch. This defect can cause certain databases that are XDB enabled to take a great deal of time to upgrade. The bug **10368698 is fixed in 11.2.0.3** . * If you have XDB installed then  the install the fix for [Bug 10419629](https://support.oracle.com/epmos/faces/BugDisplay?id=10419629) in the 11.2.0.2.0 home prior to  upgrade . Please refer  [Note 1305561.1](https://support.oracle.com/epmos/faces/DocumentDisplay?id=1305561.1) While Upgrading From 10.2.0.4.0 To 11.2.0.2.0 Catupgrd.sql=ORA-31061 ORA-19202 LSX-23 * If you are running XDB, you must set SHARED\_POOL\_SIZE = 250M and JAVA\_POOL\_SIZE = 250M or higher before upgrading otherwise you may run into the issue described in the following article [Note 1127179.1](https://support.oracle.com/epmos/faces/DocumentDisplay?id=1127179.1) ORA-07445 [qmkmgetConfig()+52] During Catupgrd.sql (11.2.0.1).    If ASMM is configured on the database, set both parameters as indicated above to guarantee a minimum value for those pools.   * For an awareness of performance-related issues in 11.2.0.2 . Please refer  [Note 1320966.1](https://support.oracle.com/epmos/faces/DocumentDisplay?id=1320966.1) "Things to Consider Before Upgrade to 11.2.0.2 in Relation to Database Performance" * For an awareness of SQL profile related known issue , please refer [BUG 13646689](https://support.oracle.com/epmos/faces/BugDisplay?id=13646689)- SQL PROFILES LOST AFTER UPGRADE ORA-00001 (SYS.I\_SQLOBJ$AUXDATA\_PKEY) . Currently development is working on this bug . SQL PROFILES will be lost when upgrading from 10.2 releases if  following SQL statement return rows .   select sp.signature, sp.category, count(\*) from sqlprof$ sp,sqlprof$desc sd,sql$ s  where sp.signature = sd.signature(+) and sp.signature = s.signature group by sp.signature, sp.category having count(\*) > 1;    **Compatibility Matrix**   Minimum version of the database that can be directly upgraded to Oracle 11g Release 2 (11.2)   |  |  | | --- | --- | | **Source Database** | **Target Database** | | 9.2.0.8 or higher | 11.2.x | | 10.1.0.5 or higher | 11.2.x | | 10.2.0.2 or higher | 11.2.x | | 11.1.0.6 or higher | 11.2.x |   The following database versions will require an indirect upgrade path:   |  |  |  |  |  | | --- | --- | --- | --- | --- | | **Source Database** |  | **Upgrade Path for Target Database** |  | **Target Database** | | 7.3.3 (or lower) | ----> | 7.3.4 -> 9.2.0.8 | **---->** | 11.2.x | | 8.0.5 (or lower) | ----> | 8.0.6 -> 9.2.0.8 | ----> | 11.2.x | | 8.1.7 (or lower) | ----> | 8.1.7.4 -> 10.2.0.2(or any higher 10GR2 version) | ----> | 11.2.x | | 9.0.1.3 (or lower) | ----> | 9.0.1.4 -> 10.2.0.2 (or any higher 10GR2 version) | ----> | 11.2.x | | 9.2.0.7(or lower) | ----> | 9.2.0.8 | ----> | 11.2.x |   For example:  If source database is 8.1.7.0.0, the upgrade path to be followed is as below: 8.1.7.0.0 --> 8.1.7.4 --> 10.2.0.2(or any higher 10GR2 version)--> 11.2.x.    Reminder :    9.2.0.8 patchset : [Patch:4547809](https://support.oracle.com/epmos/faces/ui/patch/PatchDetail.jspx?patchId=4547809)  10.1.0.5 patchset : [Patch:4505133](https://support.oracle.com/epmos/faces/ui/patch/PatchDetail.jspx?patchId=4505133) 10.2.0.2 patchset : [Patch:4547817](https://support.oracle.com/epmos/faces/ui/patch/PatchDetail.jspx?patchId=4547817)  To get quickly id of a patchset :  [Note 438049.1](https://support.oracle.com/epmos/faces/DocumentDisplay?id=438049.1) : How To Find RDBMS patchsets on My Oracle Support  [Note 753736.1](https://support.oracle.com/epmos/faces/DocumentDisplay?id=753736.1) : Quick Reference to Patchset Patch Numbers      **Pre-Upgrade Steps**  In this section all the steps need to be performed after having set the environment of the previous version of the Oracle Database. Note that the database must be running in normal mode in the old release.  To download and use the latest Pre-Upgrade Information Tool see the following: How to Download and Run Oracle's Database Pre-Upgrade Utility [Note 884522.1](https://support.oracle.com/epmos/faces/DocumentDisplay?id=884522.1)  or  Run the Pre-Upgrade Information Tool for Collecting Pre-Upgrade Information  **Step1**   * Log into the system as the owner of the Oracle Database 11g Release 2 (11.2) Oracle Home directory. * Copy the Pre-Upgrade Information Tool (utlu112i.sql) from the Oracle Database 11g Release 2 (11.2) ORACLE\_HOME/rdbms/admin directory to a directory outside of the Oracle Home, such as the temporary directory on your system.     $ORACLE\_HOME/rdbms/admin/utlu112i.sql  Failure to run the pre-upgrade tool (utlu112i.sql) will result in the following error while running the catupgrd.sql script :  SQL> SELECT TO\_NUMBER('MUST\_BE\_SAME\_TIMEZONE\_FILE\_VERSION') 2 FROM registry$database 3 WHERE tz\_version != (SELECT version from v$timezone\_file); SELECT TO\_NUMBER('MUST\_BE\_SAME\_TIMEZONE\_FILE\_VERSION') \* ERROR at line 1: ORA-01722: invalid number  It is  required to restore the database back to previous version in order to run the preupgrade tool (utlu112i.sql ) .   **Step 2**   * Change to the directory where utlu112i.sql had been copied in the previous step. * Start SQL\*Plus and connect to the database instance as a user with SYSDBA privileges. Then run and spool the utlu112i.sql file. Please note that the database should be started using the source Oracle Home .   $ sqlplus '/ as sysdba'  SQL> spool upgrade\_info.log SQL> @utlu112i.sql SQL> spool off SQL>  Check the spool file and examine the output of the Upgrade Information Tool. The sections which follow describe the output of the Upgrade Information Tool. For sample output, Click [here](http://download.oracle.com/docs/cd/E11882_01/server.112/e23633/upgrade.htm#CHDJEGIF)  **Database** This section displays global database information about the current database, such as the database name, release number and compatibility level. A warning is displayed if you must adjust the COMPATIBLE initialization parameter before the database is upgraded.  **Logfiles** This section displays a list of redo log files in the current database whose size is less than 4 MB. For each log file, the file name, group number and recommended size is displayed. In a manual upgrade using SQL scripts and utilities, new files of at least 4 MB (preferably 10 MB) must be created in the current database, and any redo log files less than 4 MB must be dropped before the database is upgraded. These tasks are performed automatically by the Database Upgrade Assistant.  **Tablespaces** This section displays a list of tablespaces in the current database. For each tablespace, the tablespace name and minimum required size is displayed. In addition, a message is displayed if the tablespace is adequate for the upgrade.In a manual upgrade using SQL scripts and utilities, space must be added to tablespaces that do not have enough free space in the current database. These tablespace adjustments must be made before the database is upgraded. This task is performed automatically by the Database Upgrade Assistant.  **Update Parameters** This section displays a list of initialization parameters in the parameter file of the current database that must be adjusted before the database is upgraded. The adjustments must be made to the parameter file after it is copied to the new Oracle Database 11g release.  **Deprecated Parameters** This section displays a list of initialization parameters in the parameter file of the current database that are deprecated in the new Oracle Database 11g release.Obsolete Parameters This section displays a list of initialization parameters in the parameter file of the current database that are obsolete in the new Oracle Database 11g release2 (11.2). Obsolete initialization parameters must be removed from the parameter file before the database is upgraded.  [Appendix A](http://download.oracle.com/docs/cd/E11882_01/server.112/e10819/changes.htm#BABFIEDD): "Deprecated Initialization Parameters" for a list of initialization parameters that are deprecated in Oracle Database 11g release 2 (11.2).  **Obsolete Parameters:** This section displays a list of initialization parameters in the parameter file of the current database that are obsolete in the new Oracle Database 11g release 2 (11.2). Obsolete parameters need to be removed from the parameter file before the database is upgraded. Obsolete parameters' means parameters which are no longer valid (or) in use. [Appendix B:](http://download.oracle.com/docs/cd/E11882_01/server.112/e10819/changes.htm#BABEIFFJ) "Obsolete Initialization Parameters" for a list of initialization parameters that are obsolete in Oracle Database 11g release 2 (11.2)  **Components** This section displays a list of database components in the new Oracle Database 11g release 2 (11.2) that are upgraded or installed when the current database is upgraded.  **Miscellaneous Warnings** This section provides warnings about specific situations that might require attention before or after the upgrade.  **SYSAUX Tablespace** This section displays the minimum required size for the SYSAUX tablespace which is required in the new Oracle Database 11g release 2 (11.2). The SYSAUX tablespace must be created if it does not exist (in Oracle 9i ) after the new release is started and before the upgrade scripts are invoked.  **Note**: If SYSAUX was created in 9i then it must be dropped and re-created after starting in the new release. If created in 10g or later then it can be left there and used.  **Preparing Database for Upgrade**  **Step3**  Check for the integrity of the source database.  Check for the integrity of the source database prior to starting the upgrade by downloading and running the  dbupgdiag.sql script from the My Oracle Support article below:  [Note 556610.1](https://support.oracle.com/epmos/faces/DocumentDisplay?id=556610.1)  Script to Collect DB Upgrade/Migrate Diagnostic Information (dbupgdiag.sql)  If the dbupgdiag.sql script reports any invalid objects, run $ORACLE\_HOME/rdbms/admin/utlrp.sql (multiple times) to validate the invalid objects in the database until there is no change in the number of invalid objects.  $ cd $ORACLE\_HOME/rdbms/admin $ sqlplus "/ as sysdba" SQL> @utlrp.sql  After validating the invalid objects, re-run dbupgdiag.sql in the database once again and make sure that everything is fine.  **Step 4**  Deprecated CONNECT Role  After upgrading to Oracle Database 11g Release 2 (11.2) from Oracle Database9i Release 2 (9.2) or Oracle Database 10g Release 1 (10.1), the CONNECT role has only the CREATE SESSION privilege; the other privileges granted to the CONNECT role in earlier releases are revoked during the upgrade. To identify which users and roles in your database are granted the CONNECT role, use the following query:  SELECT grantee FROM dba\_role\_privs WHERE granted\_role = 'CONNECT' and grantee NOT IN ( 'SYS', 'OUTLN', 'SYSTEM', 'CTXSYS', 'DBSNMP', 'LOGSTDBY\_ADMINISTRATOR', 'ORDSYS', 'ORDPLUGINS', 'OEM\_MONITOR', 'WKSYS', 'WKPROXY', 'WK\_TEST', 'WKUSER', 'MDSYS', 'LBACSYS', 'DMSYS', 'WMSYS', 'EXFSYS', 'SYSMAN', 'MDDATA', 'SI\_INFORMTN\_SCHEMA', 'XDB', 'ODM');  If users or roles require privileges other than CREATE SESSION, then grant the specific required privileges prior to upgrade. The upgrade scripts adjust the privileges for the Oracle-supplied users.  In Oracle 9.2.x and 10.1.x CONNECT role includes the following privileges:  SELECT GRANTEE,PRIVILEGE FROM DBA\_SYS\_PRIVS WHERE GRANTEE ='CONNECT'  GRANTEE PRIVILEGE ------- ---------------------- CONNECT CREATE VIEW CONNECT CREATE TABLE CONNECT ALTER SESSION CONNECT CREATE CLUSTER CONNECT CREATE SESSION CONNECT CREATE SYNONYM CONNECT CREATE SEQUENCE CONNECT CREATE DATABASE LINK  From Oracle 10.2, 'CONNECT' role only includes 'CREATE SESSION' privilege.  **Step 5**  Create script for DBLINK (in case the database has to be downgraded again).  During the upgrade to Oracle Database 11g Release 2 (11.2) from Oracle Database 9i Release 2 (9.2) or Oracle Database 10g Release 1 (10.1), any passwords in database links are encrypted. To downgrade to the original release, all of the database links with encrypted passwords must be dropped prior to the downgrade. Consequently, the database links do not exist in the downgraded database. If you anticipate a requirement to be able to downgrade to your original release, then save the information about affected database links from the SYS.LINK$ table, so that you can re-create the database links after the downgrade.  SELECT 'CREATE '||DECODE(U.NAME,'PUBLIC','public ')||'DATABASE LINK '||CHR(10) ||DECODE(U.NAME,'PUBLIC',Null, 'SYS','',U.NAME||'.')|| L.NAME||chr(10) ||'CONNECT TO ' || L.USERID || ' IDENTIFIED BY "'||L.PASSWORD||'" USING  '''||L.HOST||'''' ||chr(10)||';' TEXT FROM SYS.LINK$ L, SYS.USER$ U WHERE L.OWNER# = U.USER#;  **Step 6**  Check for TIMESTAMP WITH TIMEZONE Datatype  The RDBMS DST patching has been greatly improved in 11gR2. Unlike upgrading for older versions (upgrading 10.2.0.4 to 11.1.0.7 for example) there is no need anymore to  apply "dst patches" on the old version \*before\* the upgrade.  If you upgrade from an older RDBMS version to 11gR2 the DST version in 11gR2 after the upgrade will be  simply the same as the DST version that was used in the older RDBMS version.  There are however a few situations where some extra steps are needed,  so please do check below notes before upgrading to 11gR2., depending on to what 11gR2 version you upgrade to  [Note 1579838.1](https://support.oracle.com/epmos/faces/DocumentDisplay?id=1579838.1) :  Actions For DST Updates When Upgrading To Or Applying The 11.2.0.4 Patchset [Note 1358166.1](https://support.oracle.com/epmos/faces/DocumentDisplay?id=1358166.1) :  Actions For DST Updates When Upgrading To Or Applying The 11.2.0.3 Patchset [Note 1201253.1](https://support.oracle.com/epmos/faces/DocumentDisplay?id=1201253.1) :  Actions For DST Updates When Upgrading To Or Applying The 11.2.0.2 Patchset [Note 815679.1](https://support.oracle.com/epmos/faces/DocumentDisplay?id=815679.1) :   Actions For DST Updates When Upgrading To 11.2.0.1 Base Release  Simply follow above note ( depending on to what 11gR2 version you upgrade to ) in most cases there will be no action to  take before the upgrade, but better be safe than sorry.  If the note say's to apply a RDBMS DST patch to the new 11gR2 home before the upgrade then please do so before going further in this note.   Make sure that  SQL> conn / as sysdba SQL> select TZ\_VERSION from registry$database;  returns the RDBMS DST version of your old Oracle RDBMS version.  This is the value found in the "check your current DST version on 9i, 10g or 11.1.0.x" step of the above notes.  If this select gives an error or a different value then re-run the utlu112i.sql (Pre-Upgrade Information Tool) script and check again.   **Step 7**  Check that the National Characterset (NLS\_NCHAR\_CHARACTERSET) is UTF8 or AL16UTF16.  select value from NLS\_DATABASE\_PARAMETERS where parameter = 'NLS\_NCHAR\_CHARACTERSET';  If this is UTF8 or AL16UTF16 then no action is needed. If is not UTF8 or AL16UTF16 then refer to the following article:  [Note 276914.1](https://support.oracle.com/epmos/faces/DocumentDisplay?id=276914.1) The National Character Set in Oracle 9i and 10g.  **Step 8**  Optimizer Statistics  When upgrading to Oracle Database 11g Release 2 (11.2), optimizer statistics are collected for dictionary tables that lack statistics. This statistics collection can be time consuming for databases with a large number of dictionary tables, but statistics gathering only occurs for those tables that lack statistics or are significantly changed during the upgrade.  To determine the schemas which lack statistics, either review the output of the utlu112i.sql script or download and run the script from the below article:  [Note 560336.1](https://support.oracle.com/epmos/faces/DocumentDisplay?id=560336.1) Script to Check Schemas with Stale Statistics  To decrease the amount of downtime incurred when collecting statistics, you can collect statistics prior to performing the actual database upgrade. As of Oracle Database 10g Release 1 (10.1), Oracle recommends that you use the DBMS\_STATS.GATHER\_DICTIONARY\_STATS procedure to gather these statistics. For example, you can enter the following:  $ sqlplus "/as sysdba"  SQL> EXEC DBMS\_STATS.GATHER\_DICTIONARY\_STATS;  If you are using Oracle Database 9i Release 2 (9.2), then you should use the DBMS\_STATS.GATHER\_SCHEMA\_STATS procedure to gather statistics. To do this, you can run the scripts provided in [Appendix B.](http://docs.oracle.com/cd/E11882_01/server.112/e10819/statistics.htm)  [Appendix B](http://docs.oracle.com/cd/E11882_01/server.112/e10819/statistics.htm#BEIDEAGD)has a sample script, which creates the table dictstattab and exports the statistics for the RDBMS component schema into it. The statistics collection might give errors if a particular component schema does not exist in the database or if a component is not installed or is invalid.  This script is useful when you want to import the statistics back into the database  For example, the following PL/SQL subprograms import the statistics for the SYS schema after deleting the existing statistics:  SQL> EXEC DBMS\_STATS.DELETE\_SCHEMA\_STATS('SYS'); SQL> EXEC DBMS\_STATS.IMPORT\_SCHEMA\_STATS('SYS','dictstattab');  **Step 9**  Disable Oracle Database Vault  When upgrading from Oracle Database release 10.2, if you have enabled the Oracle Database Vault option in your current Oracle Home, then you must disable Oracle Database Vault in the target Oracle Home where the new release 11.2 software is installed before upgrading the database, and enable it again when the upgrade is finished. If Database Vault is enabled, then DBUA will return an error asking you to disable Database Vault prior to upgrade.  You must do this before upgrading the database. Enable Oracle Database Vault again once the upgrade is complete.  Please refer to the following Documentation/Articles for complete information to Disable/Enable Oracle Database Vault.  [**Disabling and Enabling Oracle Database Vault**](http://download.oracle.com/docs/cd/E11882_01/server.112/e16544/dvdisabl.htm#BJEDGGGA)  OR  You can also refer to the following  documents for Disabling Oracle Database Vault before the upgrade and enabling it after the upgrade.  [Note 453903.1](https://support.oracle.com/epmos/faces/DocumentDisplay?id=453903.1)  - Enabling and Disabling Oracle Database Vault in UNIX [Note 453902.1](https://support.oracle.com/epmos/faces/DocumentDisplay?id=453902.1)  - Enabling and Disabling Oracle Database Vault in WINDOWS  **Step 10**  Backing up Enterprise Manager Database Control Data. This can be skipped if EM Database Control Console is not being used or not configured.  After upgrading to Oracle Database 11g release 2 (11.2), if you want to downgrade Oracle Enterprise Manager Database Control you must save your Database Control files and data before upgrading your database. The emdwgrd utility can be used to keep a copy of your database control files and data before upgrading your database. The emdwgrd utility resides in the ORACLE\_HOME/bin directory in the Oracle Database 11g release 2 (11.2) home.  1. Set ORACLE\_HOME to your old Oracle Home 2. Set ORACLE\_SID to the SID of the database being upgraded. 3. Set PATH, LD\_LIBRARY\_PATH and SHLIB\_PATH to point to the Oracle home from which the database is being upgraded.       Example : export SHLIB\_PATH=$ORACLE\_HOME/lib:$SHLIB\_PATH                     export LD\_LIBRARY\_PATH=$ORACLE\_HOME/lib:$LD\_LIBRARY\_PATH 4. Change directory to Oracle Database 11g release 2 (11.2) home. 5. Run the emdwgrd command.    a. Run the following command for single instance database:  $ emdwgrd -save -sid old\_SID -path save\_directory  where old\_SID is the SID of the database being upgraded and save\_directory is the path to the storage place you have chosen for your Database Control files and data.  @[Note 870877.1](https://support.oracle.com/epmos/faces/DocumentDisplay?id=870877.1)  How To Save Oracle Enterprise Manager Database Control Data Before Upgrading The Single Instance Database To Other Release ?   b. For RAC database, remote copy is required across the cluster nodes. Define an environment variable to indicate which remote copy is configured. For example: setenv EM\_REMCP /usr/bin/scp  $ emdwgrd -save -cluster -sid old\_SID -path save\_directory  Note: If 10g Oracle Home is on a shared device, add -shared to the previous command line.  The above command(s) may core dump on the HP-UX Itanium platform, which is a known issue. For more information, refer to following article:  [Note 562980.1](https://support.oracle.com/epmos/faces/DocumentDisplay?id=562980.1) - emdwgrd core dumps : emdwgrd[228]: 10366 Memory fault(coredump)  6. Enter the SYS password for the database to be upgraded. Note: On RAC databases you will be prompted to run '/tmp/racdwgrd\_dbctl.sh' on each of the nodes.  **Step 11**  Configuring Network ACL's  Oracle Database 11g Release 2 (11.2) includes fine-grained access control to the UTL\_TCP, UTL\_SMTP, UTL\_MAIL, UTL\_HTTP, or UTL\_INADDR packages using Oracle XMLDB. If you have applications that use one of these packages, you must install OracleXML DB if it is not already installed. You must also configure network access control lists (ACLs) in the database before these packages can work as they did in prior releases. Actions are discussed in Post Upgrade tasks (Step 35), as the DBMS\_NETWORK\_ACL\_ADMIN package is introduced after upgrading the database and not available in prior releases.  **Step 12**  This optional check is introduced to spot any logical corruption in underlying objects and their dependencies.  This proactive check is introduced to avoid any failure in database upgrade at a later stage due to such corruption. If there is corruption the upgrade will most likely fail.  To check for corruption in the dictionary, use the following commands in SQL\*Plus (connected as sys):  Set verify off Set space 0 Set line 120 Set heading off Set feedback off Set pages 1000 Spool analyze.sql  SELECT 'Analyze cluster "'||cluster\_name||'" validate structure cascade;' FROM dba\_clusters WHERE owner='SYS' UNION SELECT 'Analyze table "'||table\_name||'" validate structure cascade;' FROM dba\_tables WHERE owner='SYS' AND partitioned='NO' AND (iot\_type='IOT' OR iot\_type is NULL) UNION SELECT 'Analyze table "'||table\_name||'" validate structure cascade into invalid\_rows;' FROM dba\_tables WHERE owner='SYS' AND partitioned='YES';  spool off  This creates a script called analyze.sql. Now execute the following steps:  $ sqlplus "/ as sysdba" SQL> @$ORACLE\_HOME/rdbms/admin/utlvalid.sql SQL> @analyze.sql  This script (analyze.sql) should not return any errors.  Note: 1. ORA-30657 might occur if there is any external table validated, which can be safely ignored as per [Note 209355.1](https://support.oracle.com/epmos/faces/DocumentDisplay?id=209355.1) ORA-30657: Using ANALYZE TABLE for an External Table  2. Errors shown below when executing analyze.sql can be ignored: SP2-0734: unknown command beginning "SQL> SELEC..." - rest of line ignored. SP2-0042: unknown command "SQL>" - rest of line ignored. SP2-0734: unknown command beginning "SQL> spool..." - rest of line ignored.  3. "ORA-00054: resource busy and acquire with NOWAIT specified" may be returned when analyzing AWR tables (WRH$\_...)     to workaround this error AWR can be temporarily disabled :  3.a) get current value for snapshot interval :         select snap\_interval,retention from dba\_hist\_wr\_control;  3.b) set this interval to zero to temporarily disable AWR :      exec dbms\_workload\_repository.modify\_snapshot\_settings(interval=>0);  3.c) Analyze the WRH$ tables   3.d) Revert back to initial value :     exec dbms\_workload\_repository.modify\_snapshot\_settings(interval=><value in mn of snap\_interval returned at 3.a>);      **Step 13**  Before upgrading Oracle Database, you must wait until all materialized views have completed refreshing and check that replication is stopped.  Run the following query to determine if there are any materialized view refreshes still in progress:  SQL> select distinct(trunc(last\_refresh)) from dba\_snapshot\_refresh\_times;  SQL> select s.obj#,o.obj#,s.containerobj#,lastrefreshdate,pflags,xpflags,o.name,o.owner#, bitand(s.mflags, 8) from obj$ o, sum$ s where o.obj# = s.obj# and o.type# = 42 AND bitand(s.mflags, 8) = 8;  If the second query returns any row, then use [Note 1442457.1](https://support.us.oracle.com/oip/faces/secure/km/DocumentDisplay.jspx?id=1442457.1) : During 11g Upgrade, Mview refresh warning  **Step 14** Ensure that no files need media recovery and that no files are in backup mode.  SELECT \* FROM v$recover\_file; SELECT \* FROM v$backup WHERE status != 'NOT ACTIVE';  This should return no rows.   **Step 15** Password protected roles.In version 11.2 password protected roles are no longer enabled by default,  if any of your applications relies on such roles being enabled by default and you take no measures to allow the user to enter the password with the set role command, it is recommended to remove the password  from those roles to allow for existing privileges to remain available, for more information see :  [Note 745407.1](https://support.oracle.com/epmos/faces/DocumentDisplay?id=745407.1) : What Roles Can Be Set as Default for a User? [Oracle Database Security Guide 10g Release 2 (10.2) Part Number B14266-07](http://docs.oracle.com/cd/B19306_01/network.102/b14266/admusers.htm#i1008785) [Oracle Database Security Guide 11g Release 1 (11.1) Part Number B28531-15](http://docs.oracle.com/cd/B28359_01/network.111/b28531/authorization.htm#BABCGBAA) [Oracle Database Security Guide 11g Release 2 (11.2) Part Number E16543-09](http://docs.oracle.com/cd/E11882_01/network.112/e16543/authorization.htm#BABCGBAA)   **Step 16** Resolve outstanding distributed transactions prior to the upgrade.  SQL> select \* from dba\_2pc\_pending;  If this returns rows you should do the following:  SQL> SELECT local\_tran\_id      FROM dba\_2pc\_pending; SQL> EXECUTE dbms\_transaction.purge\_lost\_db\_entry(''); SQL> COMMIT;  **Step 17** To check if a standby database exists, issue the following query:  SELECT SUBSTR(value,INSTR(value,'=',INSTR(UPPER(value),'SERVICE'))+1) FROM v$parameter WHERE name LIKE 'log\_archive\_dest%' AND UPPER(value) LIKE 'SERVICE%';  If this query returns a row, then sync the standby database with the primary database. 1. Make sure all the logs are transported to the standby server after a final log switch in the primary. 2. Start the recovery of the standby database with the NODELAY option. **Step 18**  Disable all batch and cron jobs.  About jobs initiated with Oracle the packages DBMS\_JOB, DBMS\_SCHEDULER can be used , regarding cron jobs (external jobs controlled at the OS level), this is a task for your Unix administrator  See also :   [Note 404238.1](https://support.oracle.com/epmos/faces/DocumentDisplay?id=404238.1) : How to Disable an Entry from DBMS\_SCHEDULER  [Note 1335741.1](https://support.oracle.com/epmos/faces/DocumentDisplay?id=1335741.1) : How To Stop A Running Job Using DBMS\_JOB  [Note 67695.1](https://support.oracle.com/epmos/faces/DocumentDisplay?id=67695.1) : PROCEDURE DBMS\_JOB.BROKEN Specification   **Step 19**  Ensure the users SYS and SYSTEM have 'SYSTEM' as their default tablespace.  You must have sufficient space in the tablespace or be set to extents unlimited.  SQL> SELECT username, default\_tablespace      FROM dba\_users      WHERE username in ('SYS','SYSTEM');  If DEFAULT\_TABLESPACE is anything other than SYSTEM tablespace, modify the default tablespace to SYSTEM by using the below command.  SQL> ALTER user SYS default tablespace SYSTEM; SQL> ALTER user SYSTEM default tablespace SYSTEM;  **Step 20**  Ensure that if the aud$ table exists that it is in the SYS schema and in the SYSTEM tablespace.  SQL> SELECT owner,tablespace\_name      FROM dba\_tables      WHERE table\_name='AUD$';  If the AUD$ table is not in SYSTEM tablespace and not owned by the SYS user then before doing the upgrade put it back to the SYSTEM tablespace and it should be owned by SYS .   Note: If the AUD$ table exists and is in use, upgrade performance can be effected depending on the number of records in the table.  **Step 21**  Check whether database has any externally authenticated SSL users.  SQL> SELECT name FROM sys.user$      WHERE ext\_username IS NOT NULL      AND password = 'GLOBAL';  If any SSL users are found then Step 33 has to be followed after the upgrade.  **Step 22**  Note down the location of datafiles, redo logs and control files. Also take a backup of all configuration files like listener.ora, tnsnames.ora, etc. from $ORACLE\_HOME.  SQL> SELECT name FROM v$controlfile; SQL> SELECT file\_name FROM dba\_data\_files; SQL> SELECT group#, member FROM v$logfile;.  **Step 23**  If the you have upgraded the Grid Infrastructure then this step is not needed as it was done as part of the GI install / upgrade  a) Stop the listener for the database.  $ lsnrctl stop  Previous versions of the listener are not supported for use with an Oracle Database 11g Release 2 (11.2) database. However, it is possible to use the new version of the listener with previous versions of Oracle Databases. If you are upgrading from 9i or upgrading manually without using DBUA, run Oracle Net Configuration Assistant before upgrading the Oracle RAC database.  This is a two-step option.  You must first run Oracle Net Configuration Assistant from the old Oracle Home to remove the old listener. - Invoke the Netca - Choose the configuration you want to do  ==> Choose Listener Configuration - Select what you want to do ==> Delete  - Select the listener you want to delete .   Then you must run Oracle Net Configuration Assistant again from the new Oracle Database 11g Release 2 (11.2) Home to create a new listener.  - Invoke the Netca - Choose the configuration you want to do ==> Choose Listener Configuration - Select what you want to do ==> Add - Provide the detail that is required to configure the listener.  You must remove the old listener before creating a new one. If you attempt to create a new listener from the new Oracle Home first, and use the same name and port as the old listener, then Oracle Net Configuration Assistant returns an error.  Note: This is your only option if you want to upgrade your Oracle RAC database manually.  b) Stop other executable such as dbconsole, isqlplus, etc.  $ emctl stop dbconsole $ isqlplusctl stop  **Step 24**  Shutdown the database.  $ sqlplus "/as sysdba" SQL> shutdown immediate;  Back up the Database  1. Perform Cold Backup (or) 2. Take a backup using RMAN  Connect to RMAN:  rman "target / nocatalog"  RUN { ALLOCATE CHANNEL chan\_name TYPE DISK; BACKUP DATABASE FORMAT '<db\_backup\_directory>%U' TAG before\_upgrade; BACKUP CURRENT CONTROLFILE TO '<controlfile\_backup\_directory>'; }  --> backup\_directory >> Location of the Database backup. --> controlfile\_backup\_directory >> Location of the Controlfile backup.  **Step 25**    - copy the initialization file from source Oracle Home to <target 11GR2 home>/dbs (<target 11GR2 home>\database on Windows)  - then process in target 11GR2 directory (<target 11GR2 home>/dbs for unix and <target 11GR2 home>\database for Windows) to the needed modiciations :   Comment out obsoleted parameters ([Appendix A](http://docs.oracle.com/cd/E11882_01/server.112/e10819/changes.htm#BABEIFFJ)) and change all deprecated parameters ([Appendix A](http://docs.oracle.com/cd/E11882_01/server.112/e10819/changes.htm#BABJDFAC)).  It is  also recommended to  remove all hidden parameters set manually prior to upgrading.  \* The DIAGNOSTIC\_DEST initialization parameter replaces the USER\_DUMP\_DEST, BACKGROUND\_DUMP\_DEST.  According to [Bug 8937877](https://support.oracle.com/epmos/faces/BugDisplay?id=8937877), CORE\_DUMP\_DEST is not deprecated.  Refer to the below article for understanding directory structure in 11g and DIAGNOSTIC\_DEST.  [Note 454442.1](https://support.oracle.com/epmos/faces/DocumentDisplay?id=454442.1) 11g Install : Understanding about Oracle Base, Oracle Home and Oracle Inventory locations  \* If you are upgrading from 9.2.0.x, the COMPATIBLE initialization parameter must be set to at least 10.0.0,  which is the lowest possible setting for Oracle Database11g Release 2 (11.2) prior to the upgrade.  This value must remain throughout the upgrade and can be changed to the higher value after the upgrade has been completed successfully.  (Please note, once you set the COMPATIBLE to 10.1 there is no way to downgrade to 9iR2 because of symptoms described in  [Note 388604.1](https://support.oracle.com/epmos/faces/DocumentDisplay?id=388604.1) : ORA-00201 while downgrading from 10gR2 to 10gR1 or 9iR2 ).  Oracle recommends increasing the COMPATIBLE parameter only after complete testing of the upgraded database has been performed.  If you are upgrading from 10.1.0.x or 10.2.0.x then you can leave the COMPATIBLE parameter set to  it's current value until the upgrade has been completed successfully.  This will avoid any unnecessary ORA-942 errors from being reported in SMON trace files during the upgrade  (because the upgrade is looking for 10.2 objects that have not yet been created).  \* Adjust the values of the initialization parameters to at least the minimum value indicated by the Pre-Upgrade Information Tool.  Make sure all path names in the parameter file are fully specified. You should not have relative path names in the parameter file.  \* If you are upgrading a cluster database, set the parameter CLUSTER\_DATABASE=FALSE during the upgrade and set it back to true after the upgrade.     **Step 26**  If your operating system is Windows then complete the actions in this step, else skip to the next step.  Stop the OracleServiceSID Oracle service of the database you are upgrading, where SID is the instance name. For example, if your SID is ORCL, then enter the following at a command prompt:  Set the environment to Source/Previous version (9.2 / 10.1 / 10.2 /11.1)  1. Stop the Oracle database service.  C:\> NET STOP OracleServiceORCL  2. Delete Oracle service using ORADIM binary from which the database is upgraded to 11.2.  C:\> ORADIM -DELETE -SID ORCL  3. Create the Oracle Database 11g Release 2 (112) service at a command prompt using the ORADIM command of the new Oracle Database release:  C:\> ORADIM -NEW -SID SID -INTPWD PASSWORD  -STARTMODE AUTO -PFILE %ORACLE\_HOME%\DATABASE\INIT<SID>.ORA  For Instance,  C:\> ORADIM -NEW -SID ORCL -INTPWD <PASSWORD> -STARTMODE AUTO -PFILE %ORACLE\_HOME%\DATABASE\INIT<SID>.ORA  **Step 27**  If your operating system is UNIX then complete this step, else skip to the next step.  1. Make sure the following environment variables point to the Oracle 11g Release 2 (11.2) directories:  - ORACLE\_BASE - ORACLE\_HOME - PATH, LD\_LIBRARY\_PATH , SHLIB\_PATH  and LIBPATH ( for AIX )  For example:  $ export ORACLE\_HOME=<location of Oracle 11.2> $ export PATH=$ORACLE\_HOME/bin:$PATH $ export ORACLE\_BASE=<Oracle\_Base set during installation> $ export LD\_LIBRARY\_PATH=$ORACLE\_HOME/lib:$LD\_LIBRARY\_PATH $ export SHLIB\_PATH=$ORACLE\_HOME/lib:$SHLIB\_PATH $ export LIBPATH=$ORACLE\_HOME/lib:$LIBPATH  Note : If ORACLE\_BASE is not known, after setting PATH to 11gR2 Oracle Home, execute 'orabase', which will point the location of the base.  Note : Unset/Remove  the ORA\_TZFILE environment variable if it is set in your environment .  $ orabase /uo1/app/oracle  2. Update the oratab entry to set the new ORACLE\_HOME pointing to ORCL and disable automatic startup.  Sample /etc/oratab  #orcl:/opt/oracle/product/10.2/db\_1:N orcl:/opt/oracle/product/11.2/db\_1:N  Note: After /etc/oratab is updated to have SID and Oracle Home (11.2), you can execute oraenv (/usr/local/bin/oraenv) and set the environment. The input has to be the SID which is entered in /etc/oratab against the 11gR2 home.  For example:  [oracle@localhost ~]$ . oraenv ORACLE\_SID = [orcl] ? orcl The Oracle base for ORACLE\_HOME=/opt/oracle/product/11.2/db\_1 is /u01/app/oracle [oracle@localhost ~]$  **Upgrading Database to 11gR2**  **Step 28**  At the operating system prompt, change to the $ORACLE\_HOME/rdbms/admin directory of 11gR2 Oracle Home.  $ cd $ORACLE\_HOME/rdbms/admin $ sqlplus "/ as sysdba" SQL> startup UPGRADE  **Note:**If you are upgrading from 9.2 and the SYSAUX table already exists then drop the existing SYSAUX tablespace. The SYSAUX tablespace needs to be created immediately after the database is started in upgrade mode using 11g binaries (with Compatibility set to atleast 10.1 and just prior to the running of the catupgrd.sql scripts.  Create the SYSAUX tablespace only if you are upgrading from Oracle Database9i Release 2 (9.2) with the following mandatory attributes:  ONLINE PERMANENT READ WRITE EXTENT MANAGEMENT LOCAL SEGMENT SPACE MANAGEMENT AUTO  The Pre-Upgrade Information Tool provides an estimate of the minimum required size for the SYSAUX tablespace in the SYSAUX Tablespace section. Refer to the output generated by the utlu112i.sql script in Step 1. The following SQL statement would create a 500 MB SYSAUX tablespace for the database:  SQL> CREATE TABLESPACE SYSAUX      DATAFILE '<location>/sysaux01.dbf'      SIZE 500M REUSE      EXTENT MANAGEMENT LOCAL      SEGMENT SPACE MANAGEMENT AUTO      ONLINE;  Set the system to spool results to a log file for later verification after the upgrade is completed and start the upgrade script.  SQL> set echo on SQL> SPOOL upgrade.log SQL> @catupgrd.sql SQL> spool off  These measures are an important final step to ensure the integrity and consistency of the newly upgraded Oracle Database software. Also, if you encountered a message listing obsolete initialization parameters when you started the database for upgrade, then remove the obsolete initialization parameters from the parameter file before restarting. If necessary, convert the SPFILE to a PFILE so you can edit the file to delete parameters.  Run the Post-Upgrade Status Tool $ORACLE\_HOME/rdbms/admin/utlu112s.sql which provides a summary of the upgrade at the end of the spool log. It displays the status of the database components in the upgraded database and the time required to complete each component upgrade. Any errors that occur during the upgrade are listed with each component and must be addressed.  $ sqlplus "/as sysdba" SQL> STARTUP SQL> @utlu112s.sql  Run catuppst.sql, located in the $ORACLE\_HOME/rdbms/admin directory, to perform upgrade actions that do not require the database to be in UPGRADE mode.  SQL> @catuppst.sql  This script can be run concurrently with utlrp.sql. Run utlrp.sql to recompile any remaining stored PL/SQL and Java code in another session.  SQL> @utlrp.sql  Check for the integrity of the upgraded database by running dbupgdiag.sql script from the below article:  [Note 556610.1](https://support.oracle.com/epmos/faces/DocumentDisplay?id=556610.1)  Script to Collect DB Upgrade/Migrate Diagnostic Information (dbupgdiag.sql)  If the dbupgdiag.sql script reports any invalid objects, run $ORACLE\_HOME/rdbms/admin/utlrp.sql (multiple times) to validate the invalid objects in the database, until there is no change in the number of invalid objects.  After validating the invalid objects, re-run dbupgdiag.sql in the upgraded database once again and make sure that everything is fine.  **Post Upgrade Steps**  **Step 29**  Verify the listener.ora file.  For the upgraded instance(s) Verify the ORACLE\_HOME parameter to point to the new ORACLE\_HOME. Start the listener.  lsnrctl start  **Step 30**  Environment Variables  1. Make sure the following environment variables point to the Oracle 11g Release 2 (11.2) directories:  - ORACLE\_BASE - ORACLE\_HOME - PATH, LD\_LIBRARY\_PATH, SHLIB\_PATH and LIBPATH ( for AIX )  Also check that your oratab file and any client scripts that set the value of ORACLE\_HOME point to the Oracle Database 11g Release 2 (11.2) Home.  Note : If you are upgrading a cluster database, then perform these checks on all nodes in which this cluster database has instances configured.  2. Modify /etc/oratab entry to use automatic startup.  SID:ORACLE\_HOME:Y  For Instance, orcl:/opt/oracle/product/11.2/db\_1:Y  **Step 31**  After the upgrade   note : this simply repeats the same actions as given in the "DST" notes referenced in step 6 of this note.  Check the current version of the Oracle time zone definitions in the upgraded database:  SQL> conn / as sysdba Connected. SQL>SELECT version FROM v$timezone\_file;  VERSION ---------- 4  This should be the same as the value found before the upgrade.  if this is HIGHER than 11 (for 11.2.0.1 ) or 14 (for 11.2.0.2 and 11.2.0.3) then goto step 32  if this is 11 (for 11.2.0.1 ) or 14 (for 11.2.0.2 and 11.2.0.3) then goto step 32  if this is LOWER than 11 (for 11.2.0.1 ) or 14 (for 11.2.0.2 and 11.2.0.3) then it is \*recommended\* to  upgrade the timezone version    \*For 11.2.0.1 : update to DSTv11 (standard DST version of 11.2.0.1) by        using the scripts in [Note 1585343.1](https://support.oracle.com/epmos/faces/DocumentDisplay?id=1585343.1) Scripts to automatically update the RDBMS DST (timezone) version in an 11gR2 or 12cR1 database . OR     following [Note 977512.1](https://support.oracle.com/epmos/faces/DocumentDisplay?id=977512.1) Updating the RDBMS DST version in 11g Release 2 (11.2.0.1 and up) using DBMS\_DST  (from step 3a) onwards using "11" as (<the new DST version number>) in that note.   \*For  11.2.0.2 , 11.2.0.3 and 11.2.0.4 : update to DSTv14 (standard DST version of (for 11.2.0.2 , 11.2.0.3 and 11.2.0.4) by        using the scripts in [Note 1585343.1](https://support.oracle.com/epmos/faces/DocumentDisplay?id=1585343.1) :  Scripts to automatically update the RDBMS DST (timezone) version in an 11gR2 or 12cR1 database . OR     following [Note 977512.1](https://support.oracle.com/epmos/faces/DocumentDisplay?id=977512.1) Updating the RDBMS DST version in 11g Release 2 (11.2.0.1 and up) using DBMS\_DST  (from step 3a) onwards using "14" as (<the new DST version number>) in that note.)  note that :  \* it is supported to use a lower DST version in 11gR2, but there is no technical reason to use a lower DST version,  hence we \*strongly\* recommend to update to the highest DST version included in the 11gR2 version you upgraded  \* Optionally you can update to the lastest dst version available. The latest available DST patch is found in  [Note 412160.1](https://support.oracle.com/epmos/faces/DocumentDisplay?id=412160.1) :  Updated DST transitions and new Time Zones in Oracle Time Zone File patch  **Step 32**  Upgrade Statistics Tables Created by the DBMS\_STATS Package.  If you created statistics tables using the DBMS\_STATS.CREATE\_STAT\_TABLE procedure, then upgrade these tables by executing the following procedure:  EXECUTE DBMS\_STATS.UPGRADE\_STAT\_TABLE('SYS','dictstattab');  In the example, 'SYS' is the owner of the statistics table and 'dictstattab' is the name of the statistics table. Execute this procedure for each statistics table.  **Step 33**  Upgrade Externally Authenticated SSL Users.  If you have upgraded from Oracle 9.2.0.x or 10.1.0.x, and you are using externally authenticated SSL users, then you must run the following command to upgrade those users:  ORACLE\_HOME/rdbms/bin/extusrupgrade --dbconnectstring <hostname:port\_no:sid> --dbuser <db admin> --dbuserpassword <password> -a  If you are upgrading from 10.2.0.x (or higher), then you are not required to run this command.  **Step 34**  Enable Database Vault  Refer to the following documents for enabling Oracle Database Vault:  [Note 453903.1](https://support.oracle.com/epmos/faces/DocumentDisplay?id=453903.1) - Enabling and Disabling Oracle Database Vault in UNIX [Note 453902.1](https://support.oracle.com/epmos/faces/DocumentDisplay?id=453902.1) - Enabling and Disabling Oracle Database Vault in WINDOWS  **Step 35**  Configure Fine-Grained Access to External Network Services.  To avoid "ORA-24247: network access denied by access control list (ACL)" when executing UTL packages (Network related packages), access has to be granted to user using these packages.  The following example first looks for any ACL currently assigned to host\_name. If one is found, then the example grants user\_name the CONNECT privilege in the ACL only if that user does not already have it. If no ACL exists for host\_name, then the example creates a new ACL called ACL\_name, grants the CONNECT privilege to user\_name, and assigns the ACL to host\_name.  DECLARE acl\_path VARCHAR2(4000); BEGIN SELECT acl INTO acl\_path FROM dba\_network\_acls WHERE host = 'host\_name' AND lower\_port IS NULL AND upper\_port IS NULL; IF DBMS\_NETWORK\_ACL\_ADMIN.CHECK\_PRIVILEGE(acl\_path,'principal','privilege') IS NULL THEN DBMS\_NETWORK\_ACL\_ADMIN.ADD\_PRIVILEGE(acl\_path,'principal', is\_grant, 'privilege'); END IF; EXCEPTION WHEN no\_data\_found THEN DBMS\_NETWORK\_ACL\_ADMIN.CREATE\_ACL('ACL\_name.xml','ACL description', 'principal', is\_grant, 'privilege'); DBMS\_NETWORK\_ACL\_ADMIN.ASSIGN\_ACL('ACL\_name.xml','host\_name'); END;  COMMIT;  acl\_name.xml => Enter a name for the access control list XML file. ACL description => 'file description', principal => 'user\_or\_role', is\_grant => TRUE|FALSE, privilege => 'connect|resolve', host\_name => host name  Refer to the below note on how to use DBMS\_NETWORK\_ACL\_ADMIN package and also to avoid ORA-24247 : network access denied by access control list (ACL).  [Note 453786.1](https://support.oracle.com/epmos/faces/DocumentDisplay?id=453786.1) ORA-24247 When Executing UTL\_HTTP UTL\_INADDR Packages  **Step 36**  Edit init.ora   * If you changed the CLUSTER\_DATABASE parameter prior the upgrade set it back to TRUE * Migrate your initialization parameter file to a server parameter file.   Create a server parameter file with an initialization parameter file.  SQL> create spfile from pfile;  This will create an spfile as a copy of the init.ora file located in $ORACLE\_HOME/dbs (UNIX) & %ORACLE\_HOME%\database (Windows).  **Step 37**  Change passwords for Oracle-Supplied Accounts.  Depending on the release from which you upgraded, there might be new Oracle-supplied accounts. Oracle recommends that you lock all Oracle supplied accounts except for SYS and SYSTEM, and expire their passwords, thus requiring new passwords to be specified when the accounts are unlocked.  You can view the status of all accounts by issuing the following SQL statement:  SQL> SELECT username, account\_status FROM dba\_users ORDER BY username;  To lock and expire passwords, issue the following SQL statement:  SQL> ALTER USER username PASSWORD EXPIRE ACCOUNT LOCK;  **Step 38**  Upgrading Oracle Text  This is only needed if Oracle Text is in use.  **NOTE :** These steps are NOT required if you are upgrading the database within a same release  ( patchset upgrade ) Example : 11.2.0.1 to 11.2.0.2.  Copy the following files from the previous Oracle Home to the new Oracle Home:  \* Stemming user-dictionary files \* User-modified KOREAN\_MORPH\_LEXER dictionary files \* USER\_FILTER executables  To obtain a list of the above files, use:  $ORACLE\_HOME/ctx/admin/ctxf<version>.txt $ORACLE\_HOME/ctx/admin/ctxf<version>.sql  where version is 920, 101, 102  For instance, if upgrading from 10.2.0:  1. For User Extended Knowledge Base files check $ORACLE\_HOME/ctx/admin/ctxf102.txt 2. Execute the script as database user SYS,SYSTEM, or CTXSYS $ORACLE\_HOME/ctx/admin/ctxf102.sql  If your Oracle Text index uses KOREAN\_LEXER which was deprecated in Oracle 9i and desupported in Oracle 10g Release 2, see below note for further information on manual migration from KOREAN\_LEXER to KOREAN\_MORPH\_LEXER:  [Note 300172.1](https://support.oracle.com/epmos/faces/DocumentDisplay?id=300172.1)  Obsolescence of KOREAN\_LEXER Lexer Type  If you are upgrading to the 11.2.0.3 then please refer the following article for Support Note for Lexer Feature Updates  [Note 1354793.1](https://support.oracle.com/epmos/faces/DocumentDisplay?id=1354793.1) Oracle Text 11.2.0.3 Support Note for Lexer Feature Updates  Please refer to the following article for more information on step 38.  [Note 1319592.1](https://support.oracle.com/epmos/faces/DocumentDisplay?id=1319592.1) Upgrading Oracle Text Post 10.2.0.4 To 11.2.0.2 Upgrade  **Step 39**  Upgrade the Oracle Clusterware Configuration  If you are upgrading a cluster database from releases 10.2, 11.1, or 11.2.0.1, then upgrade the database configuration in Oracle Clusterware using the following command:  $ srvctl upgrade database -d db-unique-name -o oraclehome  where db-unique-name is the database name assigned to it (not the instance name), and oraclehome is the Oracle home location in which the database is being upgraded.   **Step 40**  Configure Enterprise Manager  This step  is only required if  Dbconsole is used for the database , if Dbconsole is not configured or if database is monitored with the Grid Control then this step does not apply.   If your database is being managed by Oracle Enterprise Manager Database Control  then use the following command to update the configuration:  Execute the following command from the Target or upgraded $ORACLE\_HOME  emca -upgrade (db | asm | db\_asm) [-cluster] [-silent] [parameters]  You need to run this from the new Oracle Database 11gR2 Oracle Home. When prompted, provide the Oracle Home from which the configuration is being upgraded.  [Appendix A](http://docs.oracle.com/cd/E11882_01/server.112/e10819/changes.htm#BABJDFAC): Initialization parameters deprecated in Oracle Database 11g release 2 (11.2)    To get a list of all deprecated initialization parameters, issue the following SQL statement:  SQL> SELECT name FROM v$parameter WHERE isdeprecated = 'TRUE';  A warning message is displayed at instance startup if a deprecated parameter is specified in the parameter file. In addition, all deprecated parameters are logged to the alert log at instance startup.  [Appendix A](http://docs.oracle.com/cd/E11882_01/server.112/e10819/changes.htm#BABEIFFJ): Initialization Parameters Obsolete in Oracle Database 11g Release 2 (11.2)  DRS\_START SQL\_VERSION  **Step 41**  TDE (Transparent Data Encryption)  If your are using Transparent Data Encryption then you will have to rekey the master key as follows:  SQL> alter system set encryption key identified by "<wallet password>";  Please see [Note 1260584.1](https://support.oracle.com/epmos/faces/DocumentDisplay?id=1260584.1) : Ora-28374 After Migration From 10.2.0.4 To 11.2.0.1 for additional details.  **Step 42**  Gather Fixed Object Statistics  Please create stats on fixed objects two weeks after the upgrade using the below command SQL>EXECUTE DBMS\_STATS.GATHER\_FIXED\_OBJECTS\_STATS;  It would to good to gather the statistic during non-peak hours  **Useful Upgrade documents**  [Note 1561791.2](https://support.oracle.com/epmos/faces/DocumentDisplay?id=1561791.2) Upgrade / Downgrade Assistant: Oracle Database/Client  [Note 1351112.2](https://support.oracle.com/epmos/faces/DocumentDisplay?id=1351112.2) Information Center: Upgrading and Migration Oracle Database [Note 785351.1](https://support.oracle.com/epmos/faces/DocumentDisplay?id=785351.1) Oracle 11gR2 Upgrade Companion  [Note 251.1](https://support.oracle.com/epmos/faces/DocumentDisplay?id=251.1) Database Upgrade Planner from 10.2 to 11.2 [Note 264.1](https://support.oracle.com/epmos/faces/DocumentDisplay?id=264.1) Database Upgrade Planner from 9.2 to 11.2 |