**Different Upgrade Methods For Upgrading Your Database (Doc ID 419550.1)**

The different upgrade methods you can use to upgrade your database to the new Oracle Database 9i release or higher are:

1) Database Upgrade Assistant (DBUA)

2) Manual Upgrade

3) Export/Import

4) Data Copying

5) Golden Gate

**2) Manual upgrade  
  
 A manual upgrade consists of running SQL scripts and utilities from a command line to upgrade a database to the new Oracle Database release. A manual upgrade gives you finer control over the upgrade process as it is done step by step manually. So if any error occurs, it is easier to diagnose the error. While a manual upgrade gives you finer control over the upgrade process, it is more susceptible to error if any of the upgrade or pre-upgrade steps are either not followed or are performed out of order.  
 When manually upgrading a database, perform the following pre-upgrade steps:**

* Analyze the database using the Pre-Upgrade Information Tool. The Upgrade Information Tool is a SQL script that ships with the new Oracle Database release, and must be run in the environment of the database being upgraded.  
   The Upgrade Information Tool displays warnings about possible upgrade issues with the database. It also displays information about required initialization parameters for the new Oracle Database release.
* Prepare the new Oracle Home.
* Perform a backup of the database.

Depending on the release of the database being upgraded, you may need to perform additional pre-upgrade steps (adjust the parameter file for the upgrade, remove obsolete initialization parameters and adjust initialization parameters that might cause upgrade problems).

Refer to the following support notes for manual upgrade:

[NOTE 1503653.1](https://support.oracle.com/epmos/faces/DocumentDisplay?parent=DOCUMENT&amp;sourceId=419550.1&amp;id=1503653.1) Complete Checklist for Manual Upgrades to Oracle Database 12c Release 1 (12.1)  
[NOTE 837570.1](https://support.oracle.com/epmos/faces/DocumentDisplay?parent=DOCUMENT&amp;sourceId=419550.1&amp;id=837570.1) Complete Checklist for Manual Upgrades to 11gR2  
[NOTE 429825.1](https://support.oracle.com/epmos/faces/DocumentDisplay?parent=DOCUMENT&amp;sourceId=419550.1&amp;id=429825.1) Complete Checklist for Manual Upgrades to 11gR1  
[NOTE 263809.1](https://support.oracle.com/epmos/faces/DocumentDisplay?parent=DOCUMENT&amp;sourceId=419550.1&amp;id=263809.1) Complete checklist for manual upgrades to 10gR1 (10.1.0.x).  
[NOTE 316889.1](https://support.oracle.com/epmos/faces/DocumentDisplay?parent=DOCUMENT&amp;sourceId=419550.1&amp;id=316889.1) Complete checklist for manual upgrades to 10gR2.  
[NOTE 466181.1](https://support.oracle.com/epmos/faces/DocumentDisplay?parent=DOCUMENT&amp;sourceId=419550.1&amp;id=466181.1) 10g Upgrade Companion  
[NOTE 601807.1](https://support.oracle.com/epmos/faces/DocumentDisplay?parent=DOCUMENT&amp;sourceId=419550.1&amp;id=601807.1) Oracle 11gR1 Upgrade Companion

Note: DBUA can be used only if the source & target Oracle homes are on the same Server.  
 But manual upgrade will work even if the source and target Home are on different servers provided that the Hardware architecture and operating system on source and target Home are the same.  
  
 Example :  
 - You cannot manually upgrade a database from an AIX Operating System to Solaris Operating System.

- You cannot manually upgrade a database from a Solaris X86-64 Machine to Solaris SPARC 64-bit.

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