

AutoUpgrade Tool (Doc ID 2485457.1)

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APPLIES TO:

Oracle Database - Enterprise Edition - Version 12.2.0.1 and later
Oracle Database - Standard Edition - Version 12.2.0.1 and later
Information in this document applies to any platform.

PURPOSE

Oracle Database AutoUpgrade is the supported and recommended method for upgrading Oracle database. It allows DBAs to upgrade one or many databases without human intervention, all with one command and a single configuration file.

DETAILS

Download

The most recent version of AutoUpgrade can be downloaded via this link: version [20240419](#).

Oracle strongly recommends that you always use the latest version of AutoUpgrade. AutoUpgrade is backward compatible and can upgrade older releases of Oracle Database as well

Target Versions Supported

AutoUpgrade Tool can be used on upgrading to below Oracle Database releases:

- Oracle Database 21c (21.3 and newer)
- Oracle Database 19c (19.3 and newer)
- Oracle Database 18c (18.5 and newer)
- Oracle Database 12c Release 2 (12.2 + DBJAN2019RU and newer)

For supported source Oracle Databases releases to be upgraded to above target releases, refer to [Database Server Upgrade/Downgrade Compatibility Matrix \(Doc ID 551141.1\)](#).

Starting Oracle Databases 23c release to be upgraded to above target releases DBUA and manual Upgrade methods are desupported, for more details refer to [Oracle Database Changes, Dessuports and Deprecations](#).

Installation

In Oracle Database 19c (19.3) and later target Oracle homes, the autoupgrade.jar file exists by default. However, before you use AutoUpgrade, Oracle recommends that you download the latest version and replace the one already existing under \$ORACLE_HOME/rdbms/admin.

Benefits

The AutoUpgrade tool:

- Enables customers to upgrade one or many Oracle databases simultaneously with a single command and a single configuration file. Saves time and money by upgrading hundreds of databases with one command and replacing other high-maintenance upgrade solutions.
- Handles the database upgrade process end-to-end with zero or minimal manual intervention. AutoUpgrade will run the preupgrade tasks, perform automated fixups where needed, execute the database upgrade, and finish by taking care of post-upgrade tasks.
- Is independent from the Oracle database release. You can use the same tool to upgrade to any Oracle Database release starting as early as 12.2 across all supported operating systems.
- Covers all possible database upgrade scenarios a customer may have: non-CDB, CDB, non-CDB to PDB, PDB unplug/plugin, etc. for single instance and RAC databases.
- Has frequent releases providing a major advantage for customers as it facilitates a faster delivery for bug fixes and new features.
- Is resumable at any stage of the process
- Includes automatic retry and fallback, allows you to schedule upgrades for future points in time, and allows you to set, change, or remove initialization parameters as desired, along with customized scripts.
- Performs read-only analysis of databases before the upgrade to identify issues that require manual intervention.
- Performs automated fixups for most checks to validate and ensure database readiness for upgrade to a new release.
- Offers a plethora of features that increase the robustness of the tool, such as:
 - Upgrade of single and RAC databases, non-CDB and CDB, and individual PDB
 - Pre-Upgrade checks displayed in multiple format files (text, HTML, JSON, XML) to meet different automation needs
 - Non-CDB to PDB conversion and upgrade
 - PDB Unplug-plugin upgrade
 - Hot Cloning/Relocate
 - Refreshable Clone
 - Distributed Database Upgrade across RAC nodes for CDBs with multiple pluggable databases
 - Supports not only database upgrades, but also database patching
 - Enhanced Transparent Data Encryption (TDE) support
 - Prioritize PDBs

AutoUpgrade documentation

Refer to [Oracle Upgrade Guide](#) for complete documentation about how to use AutoUpgrade tool.

Known limitations

- Database restoration option is not available on an Oracle Database Standard Edition.

AutoUpgrade 24c Release: New Features/Enhancements

AutoUpgrade 24c release has been delivered with a good number of new features and enhancements, to list some of them:

- Support for upgrades to Oracle 23c Release
 - Ready to upgrade databases to Oracle Database 23c release
- Create Windows service after a successful deploy
 - This feature allows the DBA to handle end-to-end upgrade and patching operations in Windows. It allows to securely create the Database Windows service after a successful execution to leave it up and running ready for connections. This is an extension of existing functionality on Windows where there are certain operations to be done manually.
- Support for database patching in normal mode open
 - Patching in normal mode enables the database to stay open in normal mode throughout the process. In most cases we can move from the source home to the target home with only one required restart. This feature allows your applications to come online before the patching process completes.
- Support PDB upgrade with the -mode upgrade option
 - This feature allows customers to manually plug in a database into an existing container and then upgrade the database.
- Support for passing username/password on environments where OS Authentication is disabled.
 - This is for Oracle customers who don't use OS Authentication but supply a username and password to invoke patching or upgrades. This feature allows a DBA to securely set a username and password enabling AutoUpgrade to automate the process.
- Recompile only objects owned by Oracle-maintained users
 - This feature reduces downtime for patching and upgrading by only recompiling invalid objects that are owned by Oracle.
- Gather performance statistics to analyze database upgrade
 - This feature will collect performance statistics during the upgrade process to evaluate why whole upgrade or certain operations may have taken long time.
- Manage parallel degree when creating pluggable databases
 - This feature improves performance by controlling how many parallel execution servers are used for the clone functionality. This is specified using the parallel pdb creation_clause configuration option.
- Introduced a new command line parameter to list all prechecks on console
 - This command will list all our prechecks so a customer can see the type of checks AutoUpgrade could run during the ANALYZE phase.
- Add -zip_exclusion_list command line option for -zip operation
 - It now allow an exclusion list feature for any customer who wishes to exclude certain log files from the zip utility function in AutoUpgrade.
- Support AutoUpgrade to run on Java Runtime Environments from Java 8 to Java 11

REFERENCES

Oracle Database 23c Documentation: DBUA and Manual Upgrade Methods Desupported

[NOTE:551141.1](#) - Database Server Upgrade/Downgrade Compatibility Matrix

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