Oracle 12c: Administration

Hands-on course of 5 days - 35h
Ref.: OMD - Price 2024: €3 110 (excl. taxes)

EDUCATIONAL OBJECTIVES
At the end of the training, the trainee will be able to:

Breaking down the Oracle 12c database architecture

Installing the Oracle 12c DBMS

Determining the main features of Oracle database administration

Creating and managing a database

Managing access to users

Managing database security.

THE PROGRAMME

last updated: 01/2018

1) The Oracle 12c architecture and installation
- Files that constitute the database. Data storage.
- Memory zones. Background processes.
- Transaction management.
- An administrator's tasks.
- System prerequisites. Installation tasks in Unix.
- OFA architecture. Using Oracle Universal Installer (OUI).
- Installation in interactive or silent mode.
- The RAC architecture.
- Shared architecture (CDB) and inserted bases (PDB).
- EM Database Express and SQL Developer.
- Automatic Storage Management (ASM) architecture.
- Hands-on work ¤Installing Oracle 12c.
Installing Oracle 12c.

2) Creating and deleting databases
- Understanding and using Oracle Managed Files (OMF).
- Storage in ASM drive groups.
- The database configuration assistant.
- Creating and managing a CDB container and a PDB inserted base.
- Hands-on work ¤Creating a new database from scripts generated by DBCA.
Creating a new database from scripts generated by DBCA.

3) Managing the instance and network configuration
- Identification control methods, SYSDBA, SYSBACKUP, SYSDG, SYSKM.
- Configuring the instance with PFILE or SPFILE.
- Options for starting or stopping an instance.
- Starting and stopping a CDB container and a PDB inserted base.
- Views: Dynamic, dictionary, and data.
- Trace files, the alert file, and the ADR repository.
- Network configuration, Oracle Net Services configuration, service management.
- Managing an ASM instance and Oracle Restart with crsctl and srvctl.

- Hands-on work ¤Editing the database's settings. Creating the SPFILE file from a PFILE file. Configuration of SQL*Net to

Editing the database's settings. Creating the SPFILE file from a PFILE file.

4) Managing the control file and the log files
- Functions of the control file. Its contents.
- Multiplexing the control file.
- Creating and managing log files.
- ARCHIVELOG mode. Archived file management.
- Hands-on work ¤Multiplexing the control file, viewing its content. Creating and editing the size of log file groups. Upd

Multiplexing the control file, viewing its content. Creating and editing the size of log file groups. Updating the database in ARCHIVELOG mode.

5) Logical disk space management
- Creating a permanent, temporary, and undo tablespace.
- Defining a default permanent, temporary, and undo tablespace.
- Permanent and temporary tablespace in the shared architecture.
- Expanding/moving a tablespace in-line.
- Group of temporary tablespaces and compacting a temporary tablespace.
- Hands-on work ¤Creating different tablespaces, defining permanent (default), temporary, and undo tablespaces. Creating a

Creating different tablespaces, defining permanent (default), temporary, and UNDO tablespaces. Creating a temporary tablespace group.

6) Database structures.
- The storage structure.
- Storage parameters of tablespaces.
- Use of extents.
- The structure of a database block.
- BLOB or CLOB data storage.
- Table storage statistics and information.
- The High Water Mark and block chaining.
- Reorganizing unused storage and space.
- Activity analysis, automatic compression and movement of data.
- Hands-on work ¤Reorganizing a table. Automatic movement and compression of tables.

Reorganizing a table. Automatic movement and compression of tables.

7) Administering objects
- External and temporary tables.
- Index: B*-tree, bitmap and function-based.
- Index-organized tables (IOT).
- Partitioning tables, indexes, and IOTs.
- Materialized views.
- Hands-on work ¤Creating B*-tree indexes, the bitmap index, and a materialized view.

Creating B-tree indexes, the bitmap index, and a materialized view.*

8) Managing undo data.
- Undo segments and the undo data storage period.
- Ensuring the storage of undo data.
- Using the Undo assistant.
- Flashback Database.
- Flashback Query, Version Query, and Transaction Query.
- Flashback Archive and use of Flashback Table.

- Hands-on work ¤Changing the undo data storage mode. Setting the UNDO records of temporary tables in the temporary tables
Changing the undo data storage mode. Setting the UNDO records of temporary tables in the temporary tablespace.

9) Managing users and security.
- Creating a local or common user.
- Expiration and logging of passwords.
- System and object privileges granted locally or commonly.
- Local and common roles. Profiles.
- Managing resources in a database.
- Hands-on work ¤Configuring user rights. Setting up a schema and users to connect and work with this application.
Configuring users' rights. Setting up a schema and users to connect and work with this application.

10) Add-ons
- Managing the AWR repository and the ADDM monitor.
- Defining alert thresholds and using automated tasks.
- Overview of the Datapump architecture.
- Implementing audit trails.

DATES

REMOTE CLASS
2024 : 01 Jul, 14 Oct