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4

Installing Oracle Database Software

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Objectives

After completing this lesson, you should be able to:

- Describe the operating system groups and users that are required for Oracle Database software installation
- Install the Oracle Database software

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Oracle Database Installation: System Requirements

- Memory requirements for Linux:
  - Minimum 1 GB (2 GB recommended) for the database instance
  - Swap space:
    - 1 GB – 2 GB RAM, swap space = 1.5 times the size of RAM
    - 2 GB – 16 GB RMAN, swap space = size of RAM
    - 16 GB + RAM, swap space = 16 GB
- Disk space requirements for Linux:
  - 6.4 GB for the Oracle Database software (Enterprise Edition) and data files
  - 1 GB of disk space in the `/tmp` directory
  - 4 GB (default) for the fast recovery area (optional)

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An Oracle Database installation can be completed on a computer with 1 GB of RAM and 1.5 GB of swap space or larger.

The amount of swap space required is dependent on the amount of RAM. (For example, for 2 GB RAM, you need 3 GB of swap space.)

Storage requirements for Oracle Database Enterprise Edition software files and data files are listed in the slide. Standard Edition requires 6.1 GB of disk space.

Refer to operating system–specific installation guides for system requirements for other operating systems.

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Creating Operating System Groups and Users

Create custom configuration groups and users based on job role separation:

- Groups:
  - Oracle Inventory group (`oinstall`)
  - Standard Oracle Database groups:
    - OSDBA (`dba`)
    - OSOPER (`oper`)
  - Extended Oracle Database groups:
    - OSBACKUPDBA (`backupdba`)
    - OSDGDBA (`dgdba`)
    - OSKMDBA (`kmdba`)
- Users (software owners):
  - Oracle Database: `oracle`

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Before you install the Oracle Database software, you need to create operating system groups and users as described in the slide. If you installed Oracle Grid Infrastructure for a stand-alone server, you may have already created some of the required groups and users.

If you used the Oracle Pre-Install RPM to provision your Linux operating system for an Oracle Grid Infrastructure and Oracle Database installation, it configured the Oracle database installation owner (`oracle`), an Oracle Inventory group (`oinstall`), and an Oracle administrative privileges group (`dba`).

Create the following operating system groups:

- OSDBA (`dba`): Database administrative privileges (`SYSDBA` privilege)
- OSOPER (`oper`): Limited set of database administrative privileges (`SYSOPER` privilege)

Optionally, create the following operating system groups that are more task specific and less privileged than OSDBA:

- OSBACKUPDBA (`backupdba`): Limited set of database backup and recovery-related administrative privileges (`SYSBACKUP` privilege)
- OSDGDBA (`dgdba`): Limited set of privileges to administer and monitor Oracle Data Guard (`SYSDG` privilege)

- OSKMDBA (`kmdba`): Limited set of privileges for encryption key management (`SYSKM` privilege)

Be sure to add the Oracle software installation to the above groups.

Oracle recommends that you create separate software owners for Oracle Database and Oracle Grid Infrastructure for a standalone server. Typically, the owner for Oracle Database is named `oracle`.

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Types of Installations

- Software-only installation
  - Copies the binaries to the specified location
  - Use Database Configuration Assistant (DBCA) to create the database.
- Installation of the software and creation of a database
- Upgrade an existing database

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You can perform the following types of installations:

- **Install database software only:** This option only installs the database binaries. You must use the Oracle Database Configuration Assistant (DBCA) after the software installation to create the database. Additional information about DBCA is presented in the next lesson.
- **Create and configure a database:** This option installs the software and creates a new database.
- **Upgrade an existing database:** This option installs the software binaries in a new Oracle home. After the installation, you can upgrade the existing database. Additional information about upgrading a database is provided in later lessons.

Quiz

During the Oracle Database software installation, you can specify groups for:

a. the `osoper` group
b. the `osasm` group
c. the `osdba` group
d. the `osadmin` group

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Answer: a, c

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Summary

In this lesson, you should have learned how to:

- Describe the operating system groups and users that are required for Oracle Database software installation
- Install the Oracle Database software

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Practice 4

4-1: Installing the Oracle Database 12*c* Software

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