2

Installing your Oracle Software

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Objectives

After completing this lesson, you should be able to:

- Describe your role as a database administrator (DBA) and explain typical tasks and tools

- Plan an Oracle software installation

- Install Oracle Grid Infrastructure for a standalone server

- Install the Oracle database software

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Tasks of an Oracle Database Administrator

The approach for designing, implementing, and maintaining an Oracle database involves the following tasks:

1. Evaluating the database server hardware

2. Installing the Oracle software

3. Planning the database and security strategy

4. Creating, migrating, and opening the database

5. Backing up the database

6. Enrolling system users and planning for their Oracle Network access

7. Implementing the database design

8. Recovering from database failure

9. Monitoring database performance

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Tools for Administering an Oracle Database

- Oracle Universal Installer
- Database Configuration Assistant
- Database Upgrade Assistant
- Oracle Net Manager
- Oracle Net Configuration Assistant
- Oracle Enterprise Manager
- Server Control Utility
- SQL*Plus
- Recovery Manager
- Data Pump
- SQL*Loader

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Planning Your Installation

- What Oracle software are you installing?

- Does the hardware involved meet the minimum required specifications?

- Is there a recommended order of installation when multiple products are involved?

- Are there prerequisite steps that must be performed by someone other than the DBA?

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Oracle Grid Infrastructure and Oracle Database Installation: System Requirements

- Memory requirements:
  - 1 GB for the database instance with Oracle Enterprise Manager Database Control
  - 1.5 GB for the ASM instance and Oracle Restart
- Disk space requirements:
  - 3 GB of swap space (based on 2 GB RAM)
  - 1 GB of disk space in the /tmp directory
  - 3.8 GB for the Oracle Database software
  - 4.5 GB for the Grid Infrastructure software
  - 1.7 GB for the preconfigured database (optional)
  - 3.4 GB for the fast recovery area (optional)
- Operating system (see documentation)

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Preparing the Operating System

Create the required operating system users and groups:

- Groups:
  - `oinstall`
  - `dba`
  - Optional groups (if doing separation of duty across multiple users):
    - `oper`
    - `asmdba`
    - `asmoper`
    - `asmadmin`
- Users:
  - Software owner, usually `oracle`
  - Can create multiple users for multiple product installations

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Setting Environment Variables

Oracle environment variables:

- `ORACLE_BASE`: Base of the Oracle directory structure. Recommended to set this before installation.

- `ORACLE_HOME`: The environment in which Oracle products run. Not required before installation if `ORACLE_BASE` is set.

- `ORACLE_SID`: Not required before installation, but useful afterwards for ease of interaction with a particular instance

- `NLS_LANG`: Optional environment variable that controls language, territory, and client character set settings

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Checking the System Requirements

- Adequate temporary space

- 64-bit versus

- 32-bit issues

- Correct operating system (OS)

- OS patch level

- System packages

- System and kernel parameters

- X Server permissions

- Sufficient swapping

- ORACLE_HOME status

```
[oracle@edrsr12p1-+ASM Disk1]$ ./runInstaller
Starting Oracle Universal Installer...

Checking Temp space: must be greater than 80 MB.   Actual 15067 MB    Passed
Checking swap space: must be greater than 150 MB.   Actual 4000 MB    Passed
Checking monitor: must be configured to display at least 256 colors.   Actual 6
5536    Passed
Preparing to launch Oracle Universal Installer from /tmp/OraInstall2009-05-15_12
-04-10AM. Please wait ...
```

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Oracle Universal Installer (OUI)

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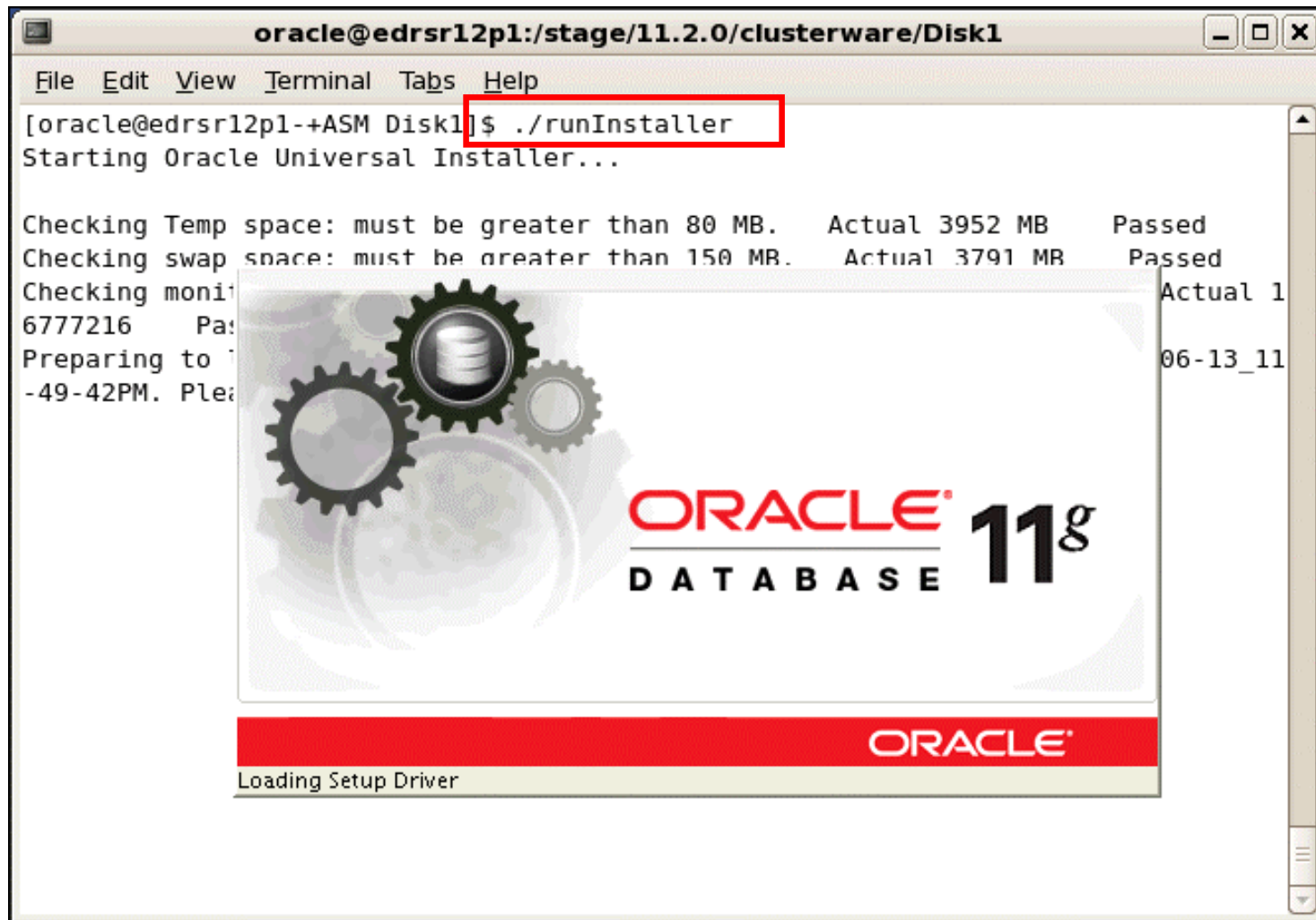
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Example: Installation Scenario

The installation scenario being presented in this lesson is divided into two parts:

- Part One: Install Oracle Grid Infrastructure for standalone server
- Part Two: Install Oracle Database software

Part One: Installing the Oracle Grid Infrastructure for Standalone Server
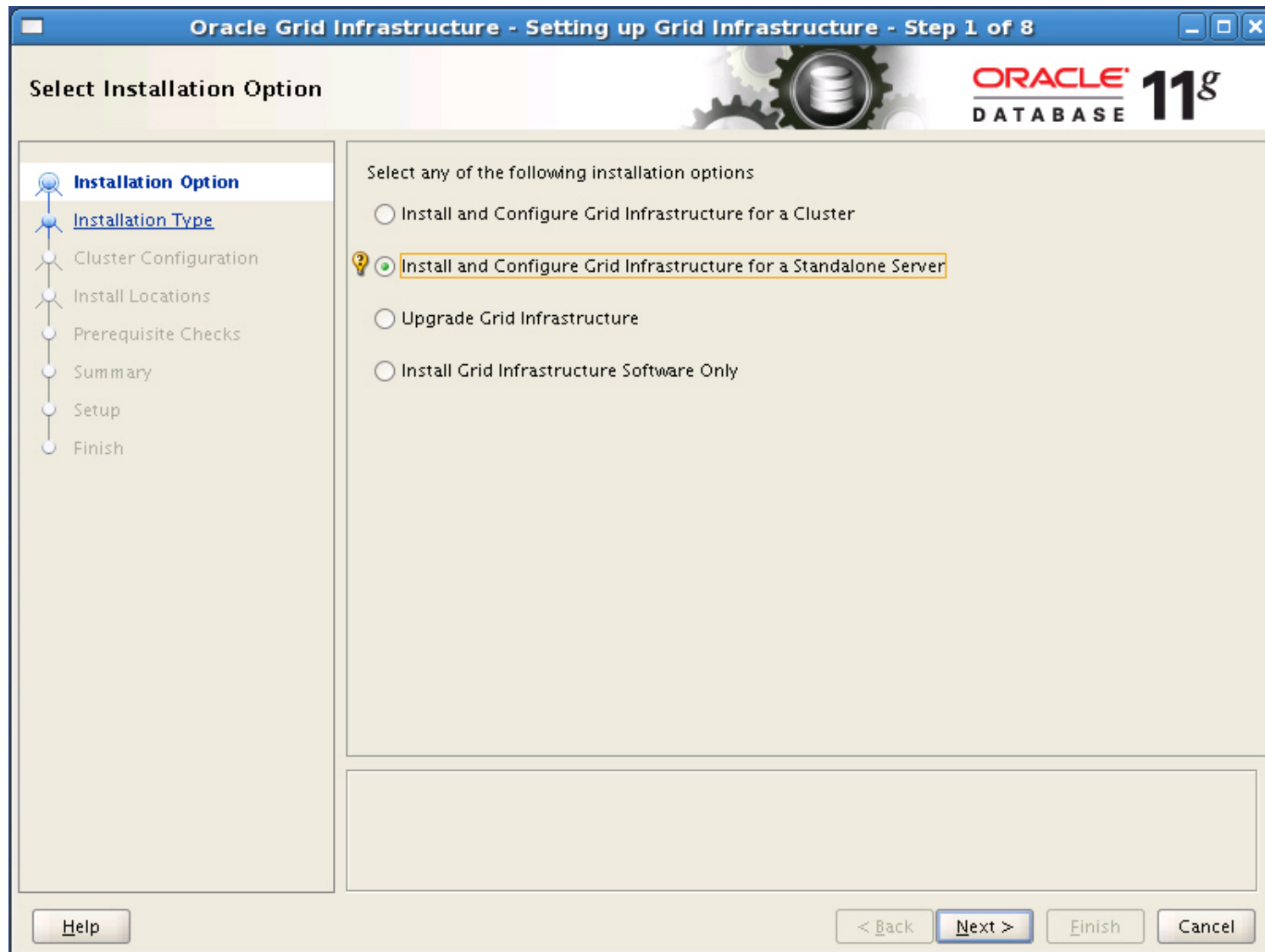
Selecting Product Languages
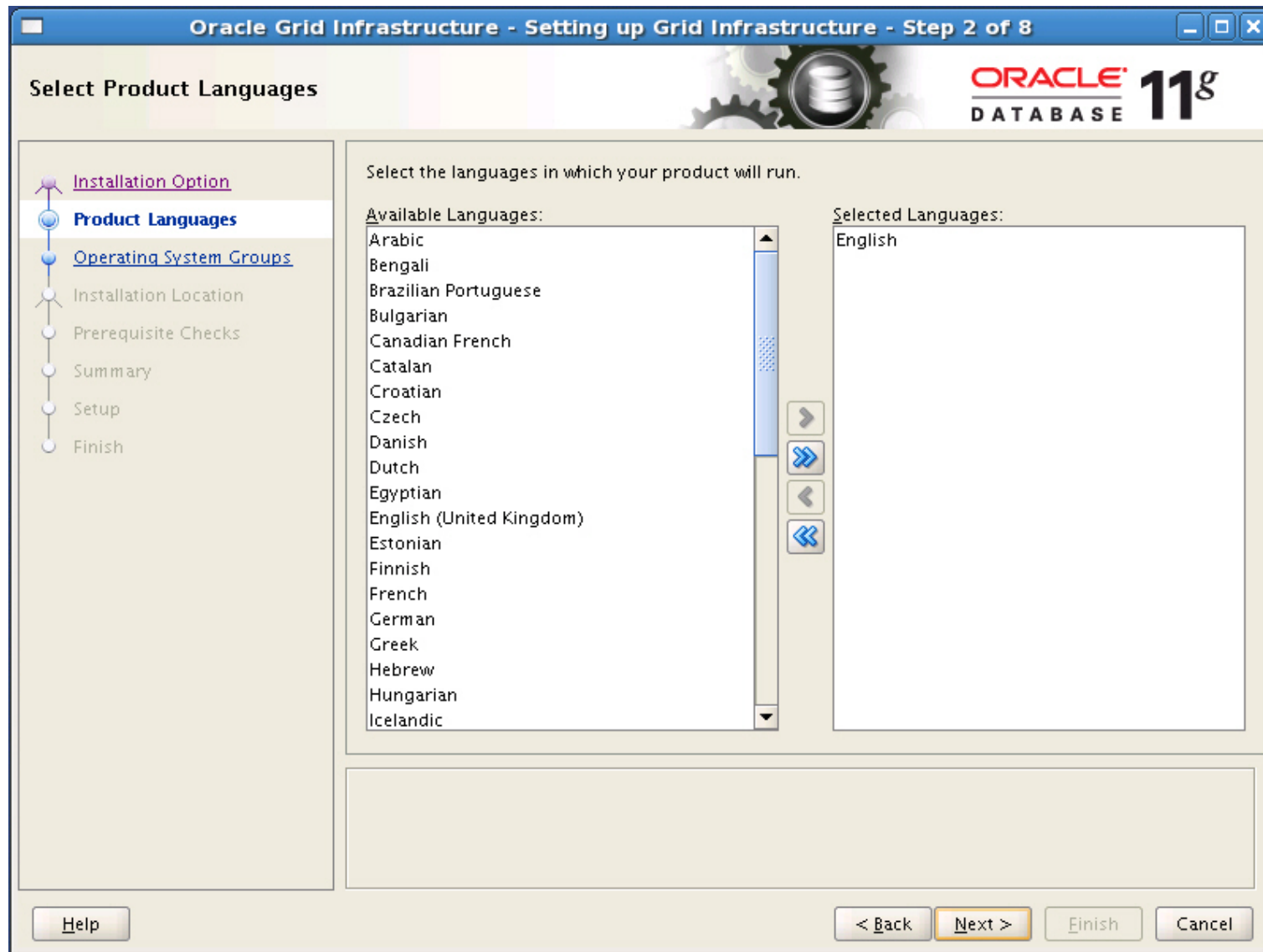
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Creating an ASM Disk Group

Defining ASM Passwords

Defining Privileged Operating System Groups

Specifying Installation Location

Creating Inventory

Performing Prerequisite Checks

Verifying Installation Summary Data

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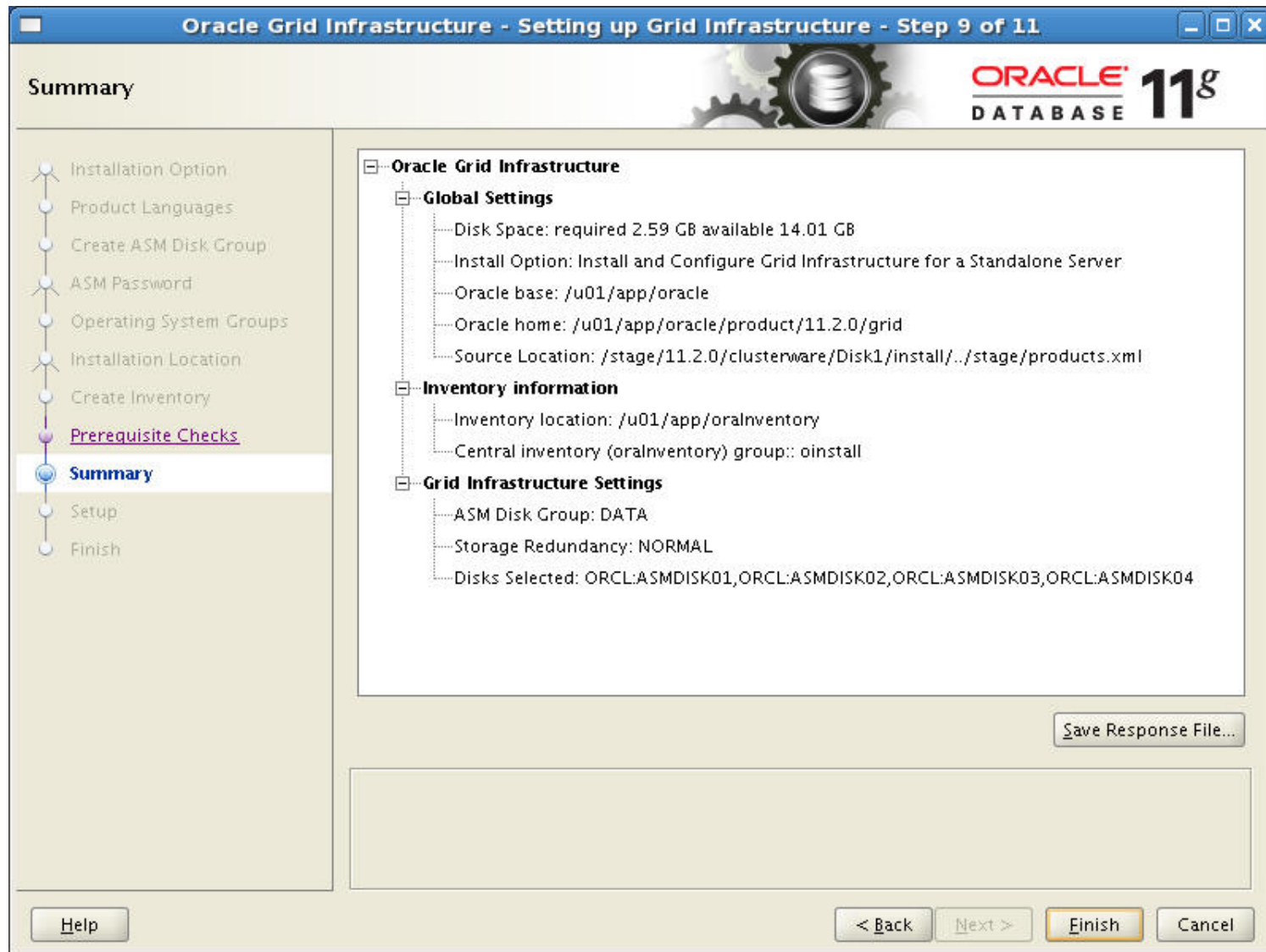
Monitoring Installation Progress
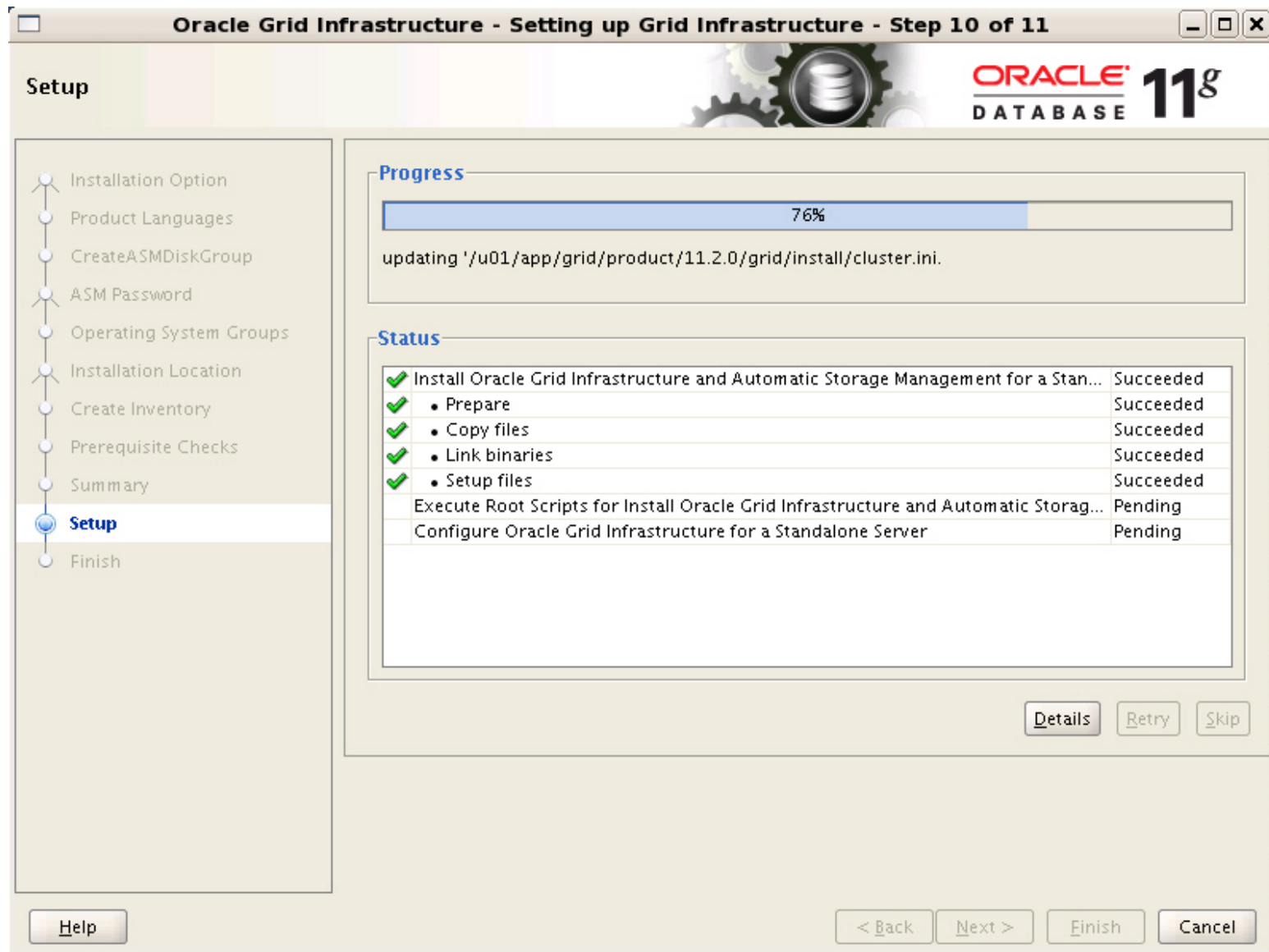
Executing `root` Configuration Scripts
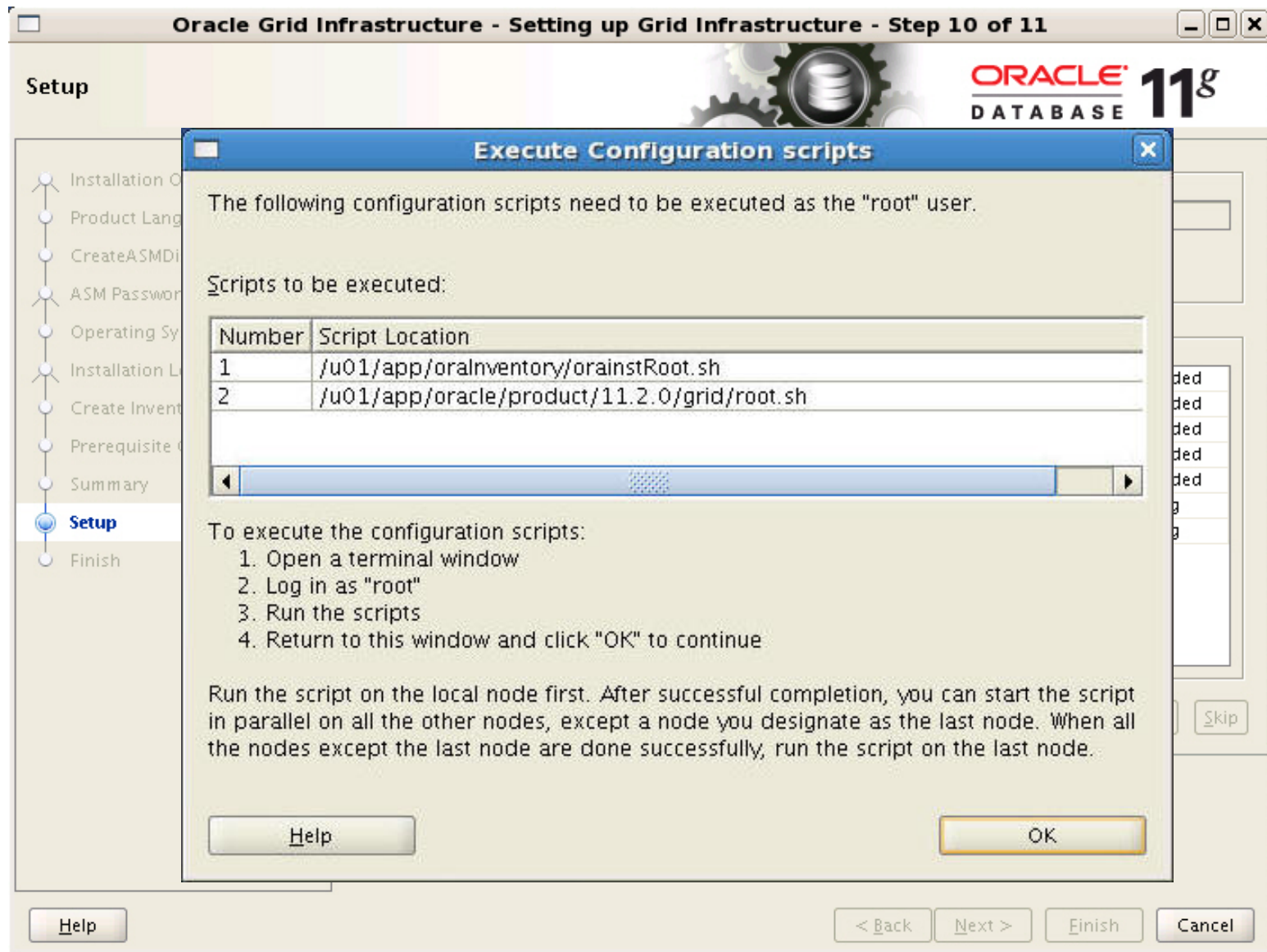
Executing Configuration Assistants
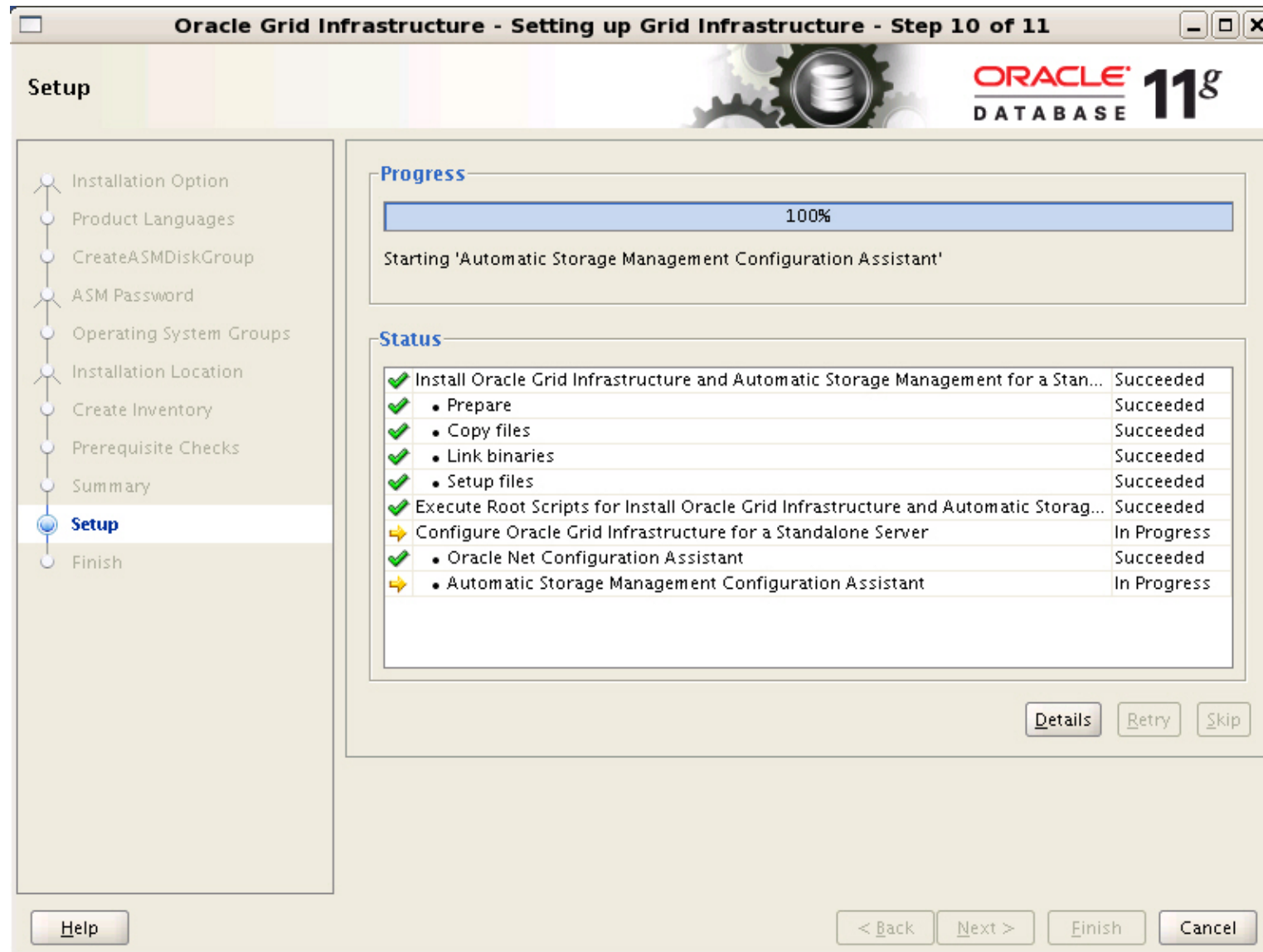
Finishing Installation

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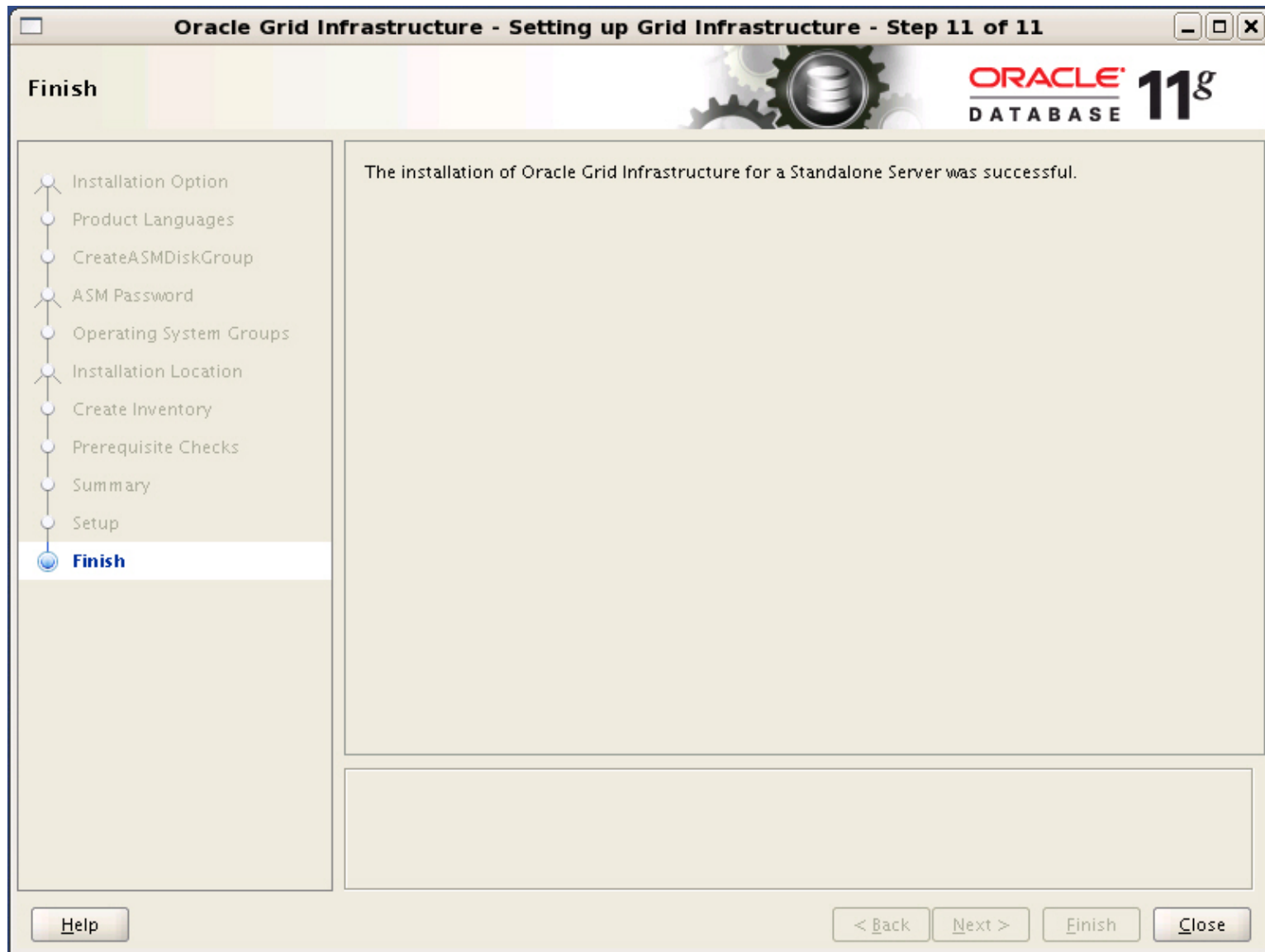
Configuring the FRA Disk Group

Quiz

The universal installer performs all required configuration for installing Oracle software.

1. True
2. False

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Quiz

During Grid infrastructure setup it is a possible to:

1. Specify exact location of datafiles for ASM instance
2. Create only one DISKGROUP
3. Specify size of SGA for ASM instance
4. Create several DISKGROUPS

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Part Two: Installing the Oracle Database Software
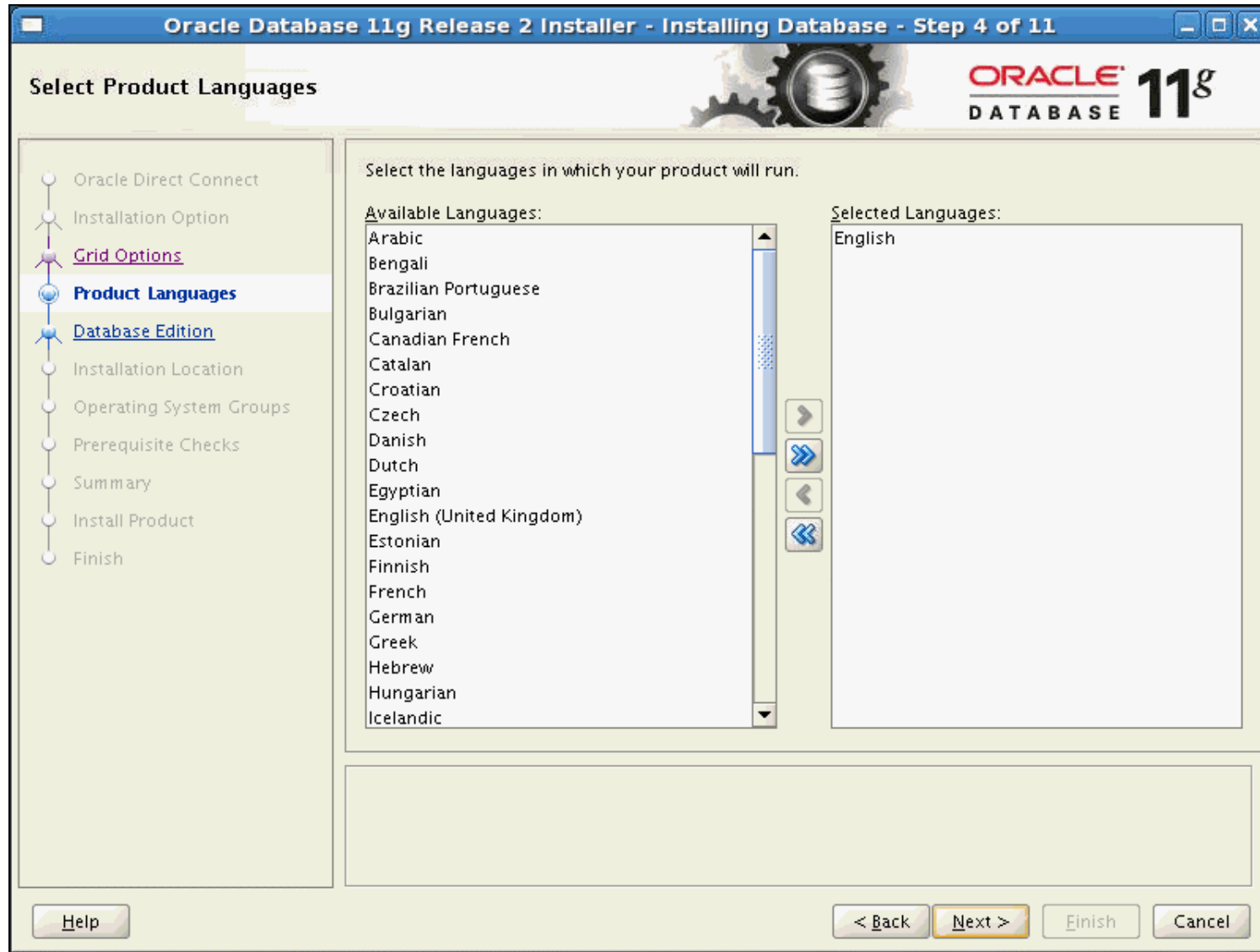
Choosing the Type of Installation
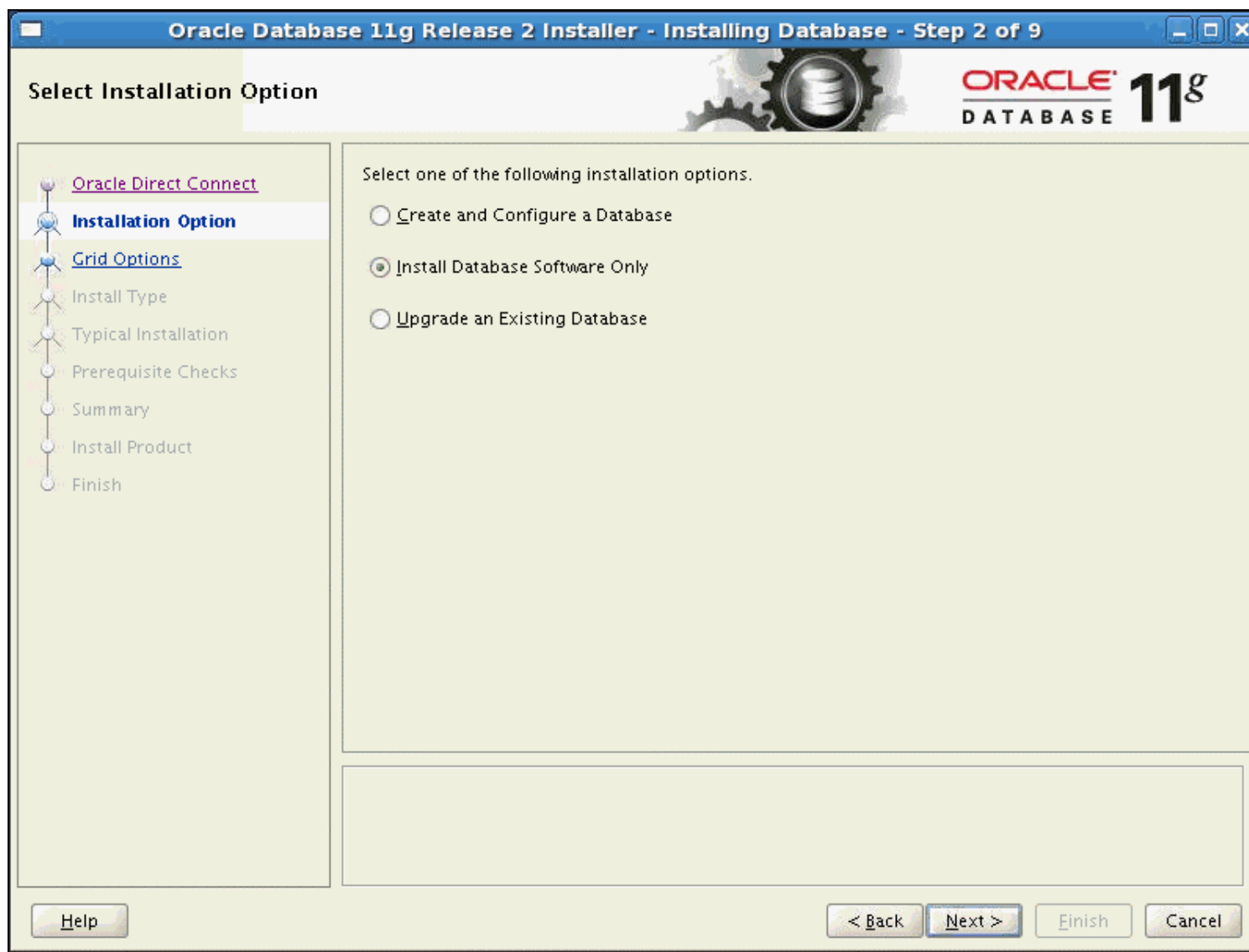
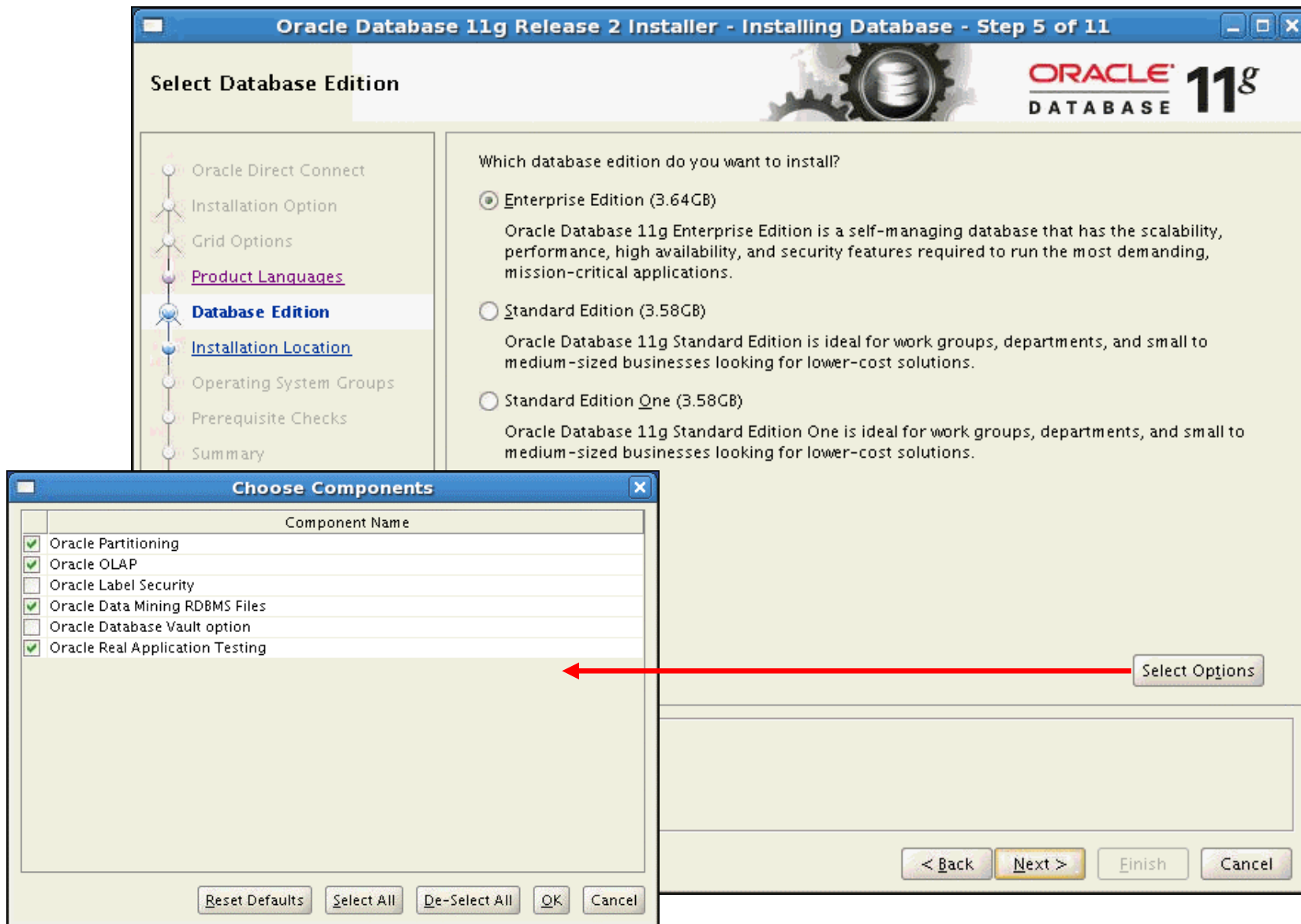# Choosing Grid Installation Options
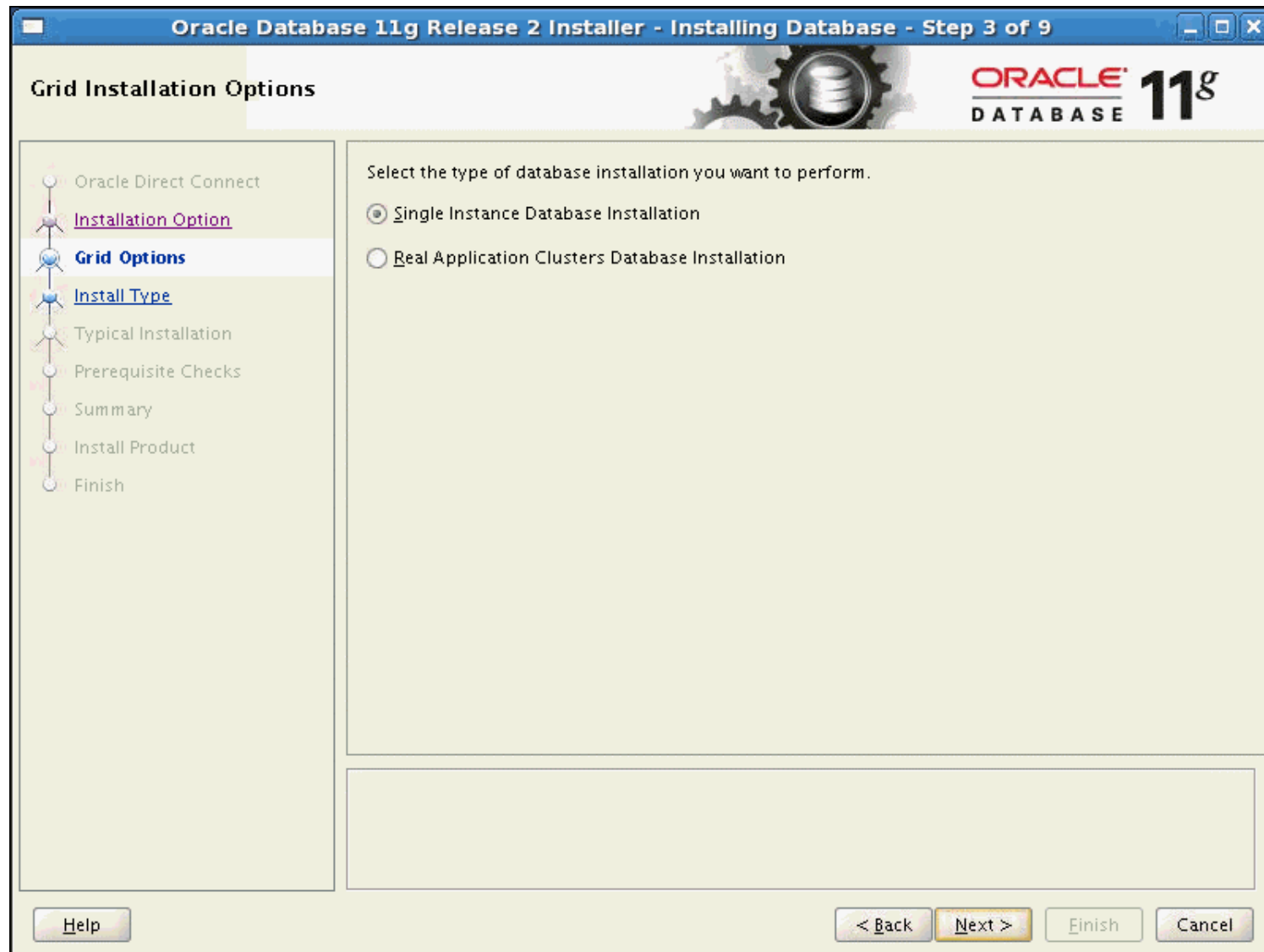
Choosing Language Settings

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Choosing the Database Edition

Specifying Installation Location

Choosing Operating System Groups

Performing Prerequisite Checks

Installation Summary Page
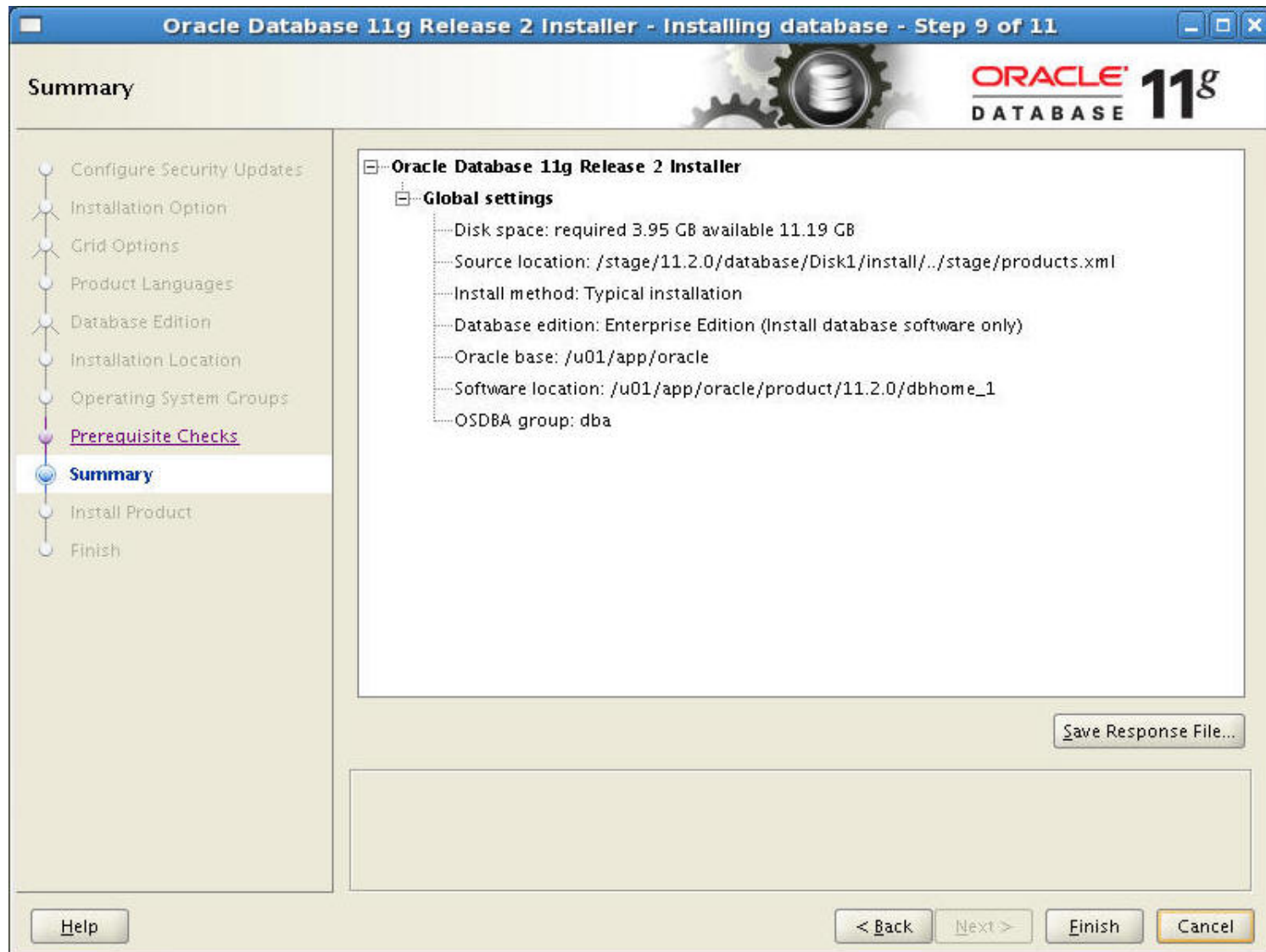
The Install Product Page
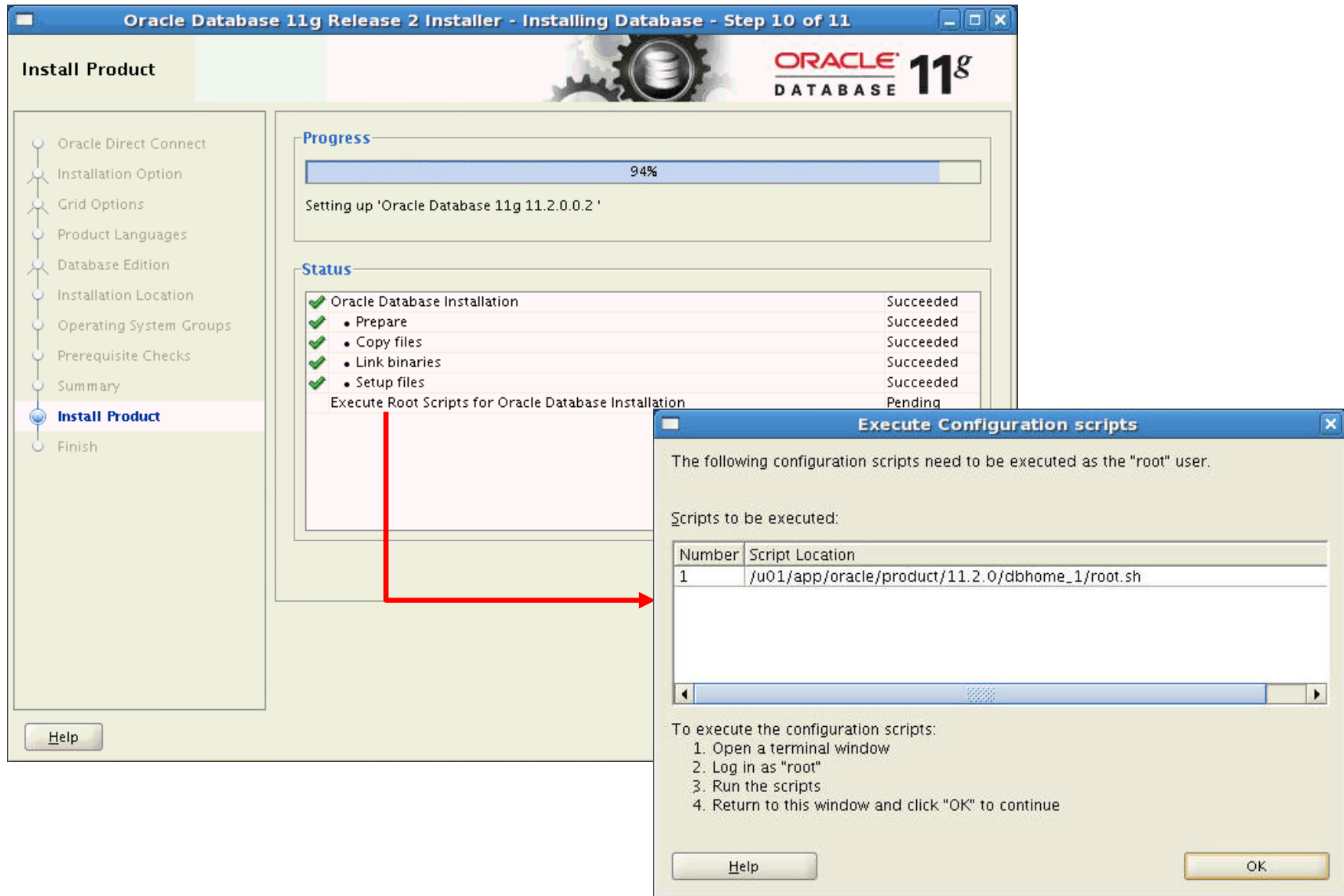
Installation Finished
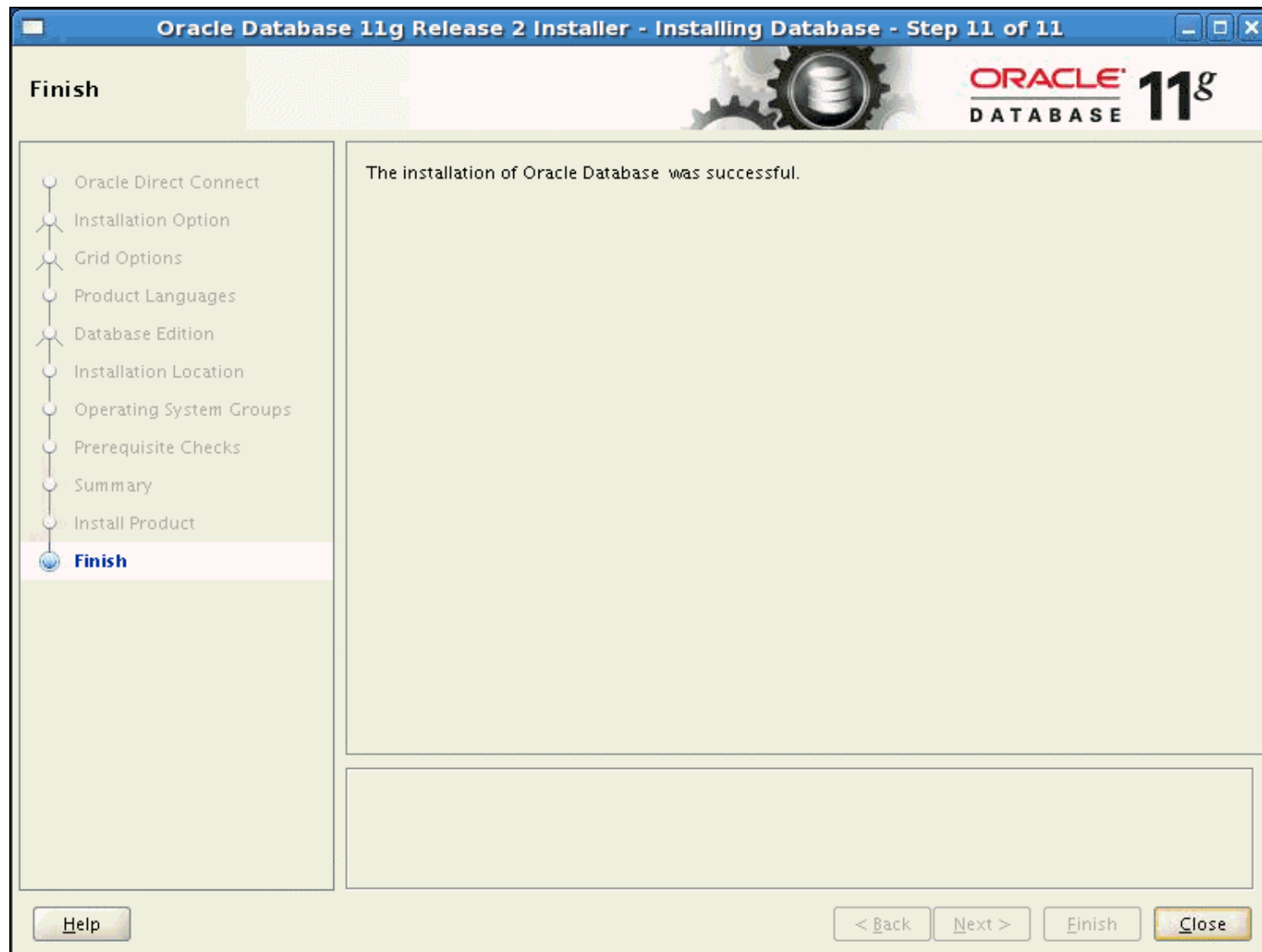
Installation Option: Silent Mode
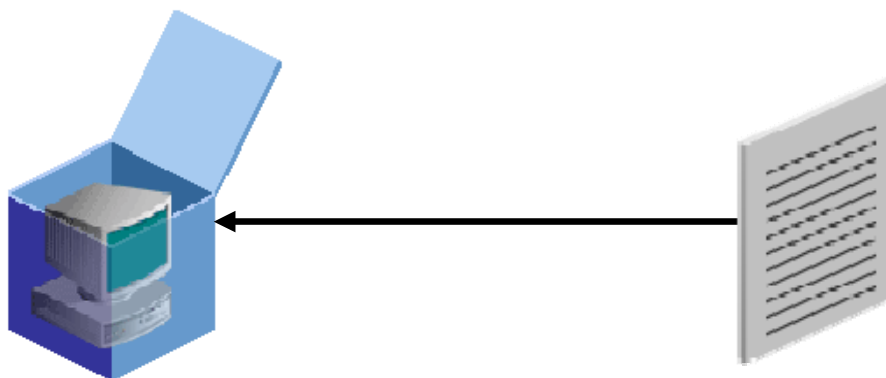
To install and configure Oracle products with OUI in silent mode, perform the following steps:

1. Prepare a response file:
   - Using one of the file templates that are delivered with the Oracle software
   - By recording a response file during an installation process using the OUI by clicking Save Response File on the summary page

2. Run OUI in silent or suppressed mode.
   ```
   ./runInstaller –silent –responsefile <filename>
   ```
   If required, run NetCA and the DBCA in silent mode.

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Quiz

A response file is:

1. A binary file that can be edited using a binary editing program
2. A binary file that can be created by the installer program
3. A text file that cannot be edited, but can be created by the installer program
4. A text file that can be edited with a text editor

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Quiz

During Database software installation you can specify groups for:

1. the `osoper` group
2. the `osasm` group
3. the `osdba` group
4. the `osadmin` group

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Summary

In this lesson, you should have learned how to:

- Describe your role as a database administrator (DBA) and explain typical tasks and tools
- Plan an Oracle software installation
- Install Oracle Grid Infrastructure for a standalone server
- Install the Oracle database software

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Practice 2 Overview:
Preparing the Database Environment

This practice covers installing the Oracle software by using Oracle Universal Installer.

Note: Completing this practice is critical for all subsequent practices.

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