Creating an Oracle Database Using DBCA

Objectives

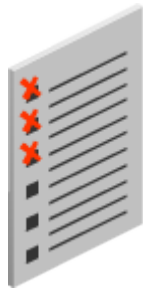
After completing this lesson, you should be able to do the following:

- Create a database by using the Database Configuration Assistant (DBCA)
- Generate database creation scripts with the DBCA
- Manage database design templates with the DBCA
- Perform additional tasks with the DBCA

Planning the Database

As a DBA, you must plan:

- The logical storage structure of the database and its physical implementation:
  - How many disk drives do you have? What type of storage is being used?
  - How many data files will you need? (Plan for growth.)
  - How many tablespaces will you use?
  - What types of information will be stored?
  - Are there any special storage requirements due to type or size?
- Overall database design
- Database backup strategy



Databases: Examples

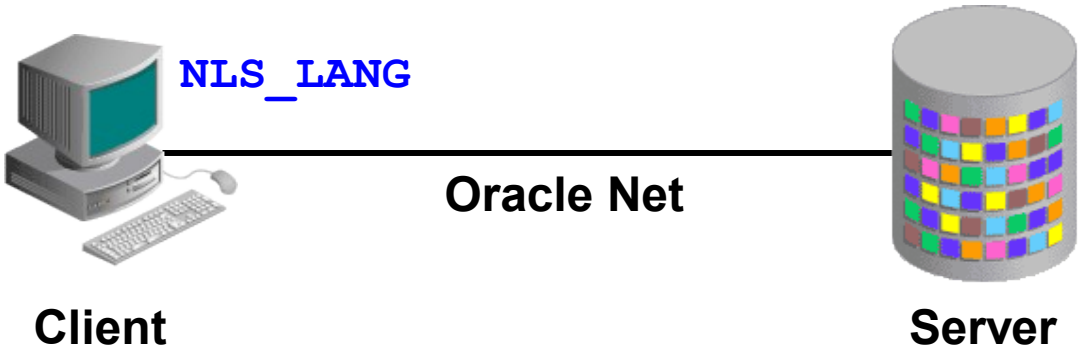
- General purpose or transaction processing:
  - Online transaction processing (OLTP) system, for example a retail billing system for a software house or a nursery
- Custom:
  - Multipurpose database (perhaps combined OLTP and data warehouse functionality)
- Data warehouse:
  - Research and marketing data
  - State or federal tax payments
  - Professional licensing (doctors, nurses, and so on)

Choosing the Appropriate Character Set

- The Oracle database supports different classes of character-encoding schemes:
  - Single-byte character sets
    - 7-bit
    - 8-bit
  - Multibyte character sets, including Unicode
- The character set is chosen at the time of database creation. Choose the character set that best meets your business requirements now and in the future because it can be difficult to change character sets later on.
- In general Unicode is recommended because it is the most flexible character set.

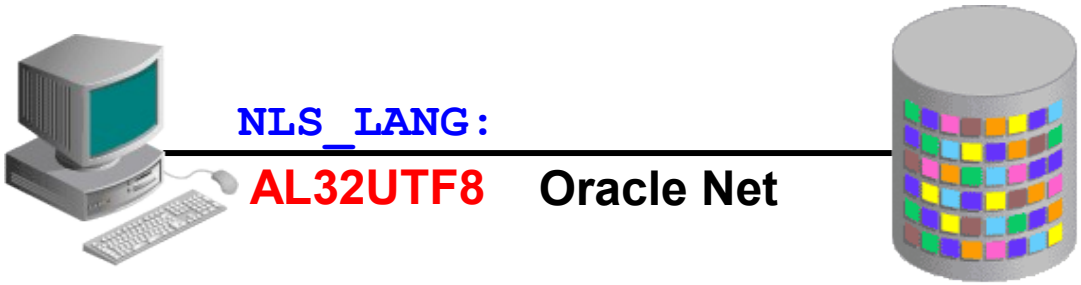
How Are Character Sets Used?

- Oracle Net compares the client `NLS_LANG` setting to the character set on the server.
- If needed, conversion occurs automatically and transparently.



Problems to Avoid

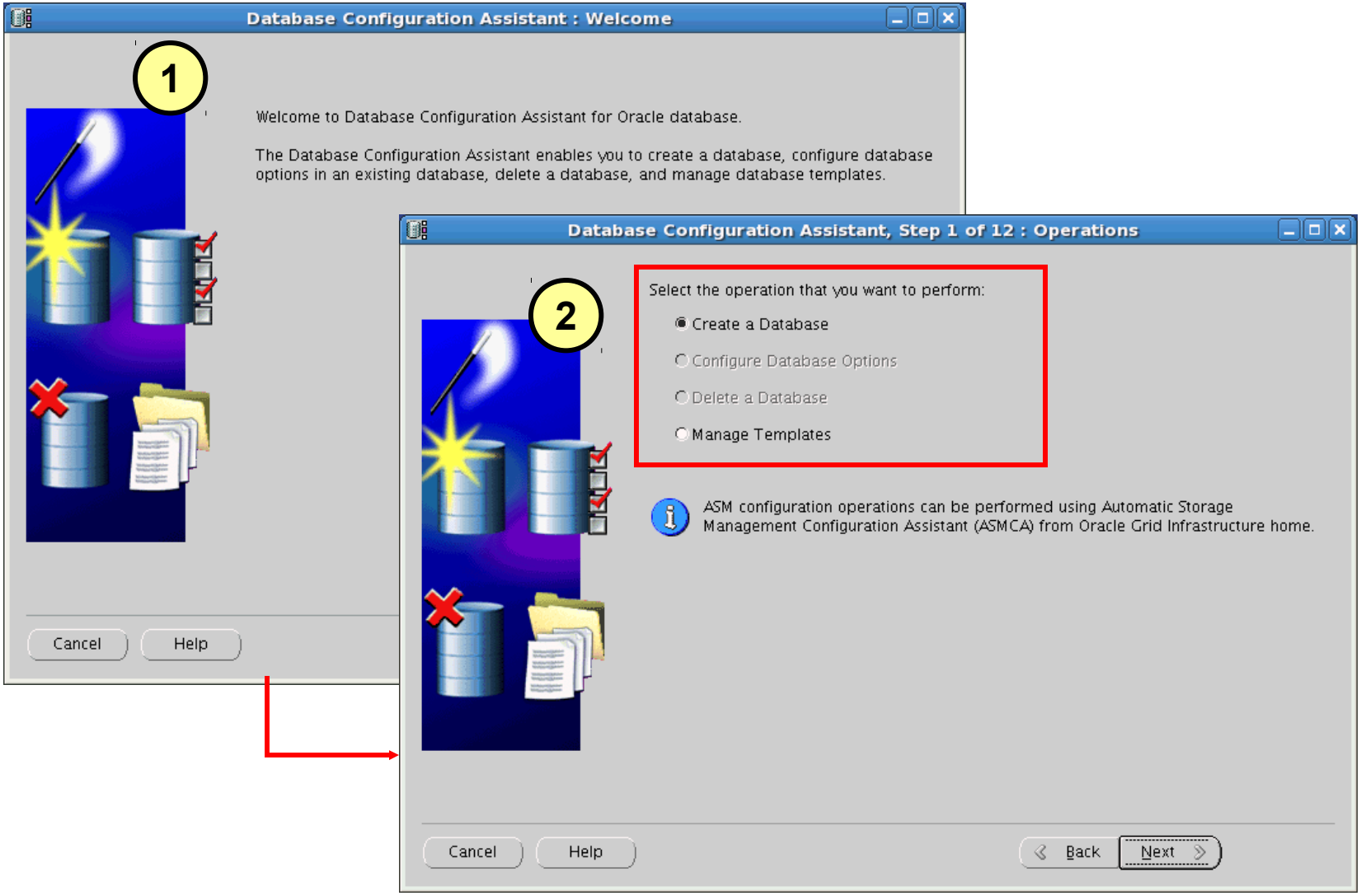
Example:



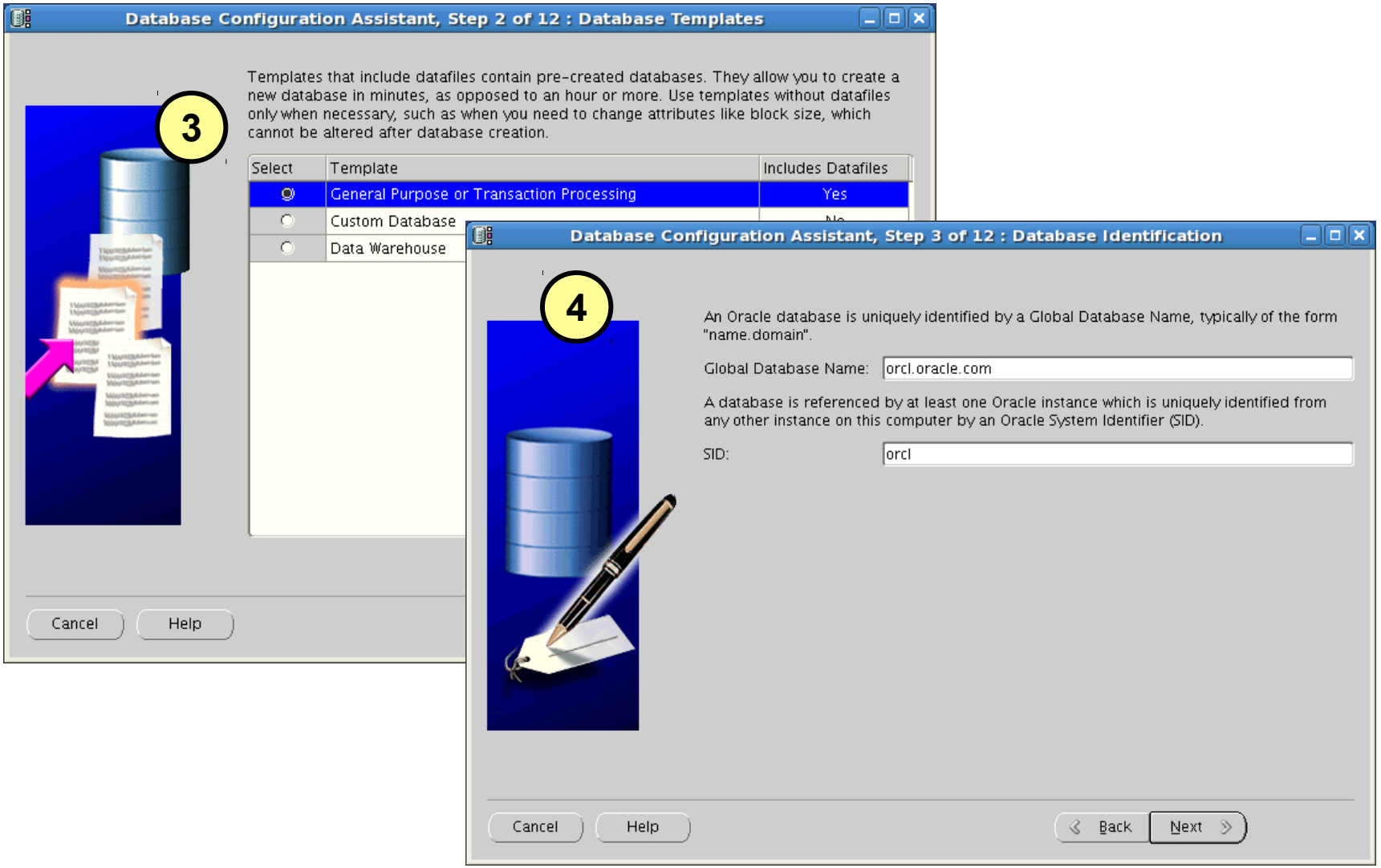
No conversion occurs, because it does not seem to be required.

Issue: Invalid data are entered into the database.

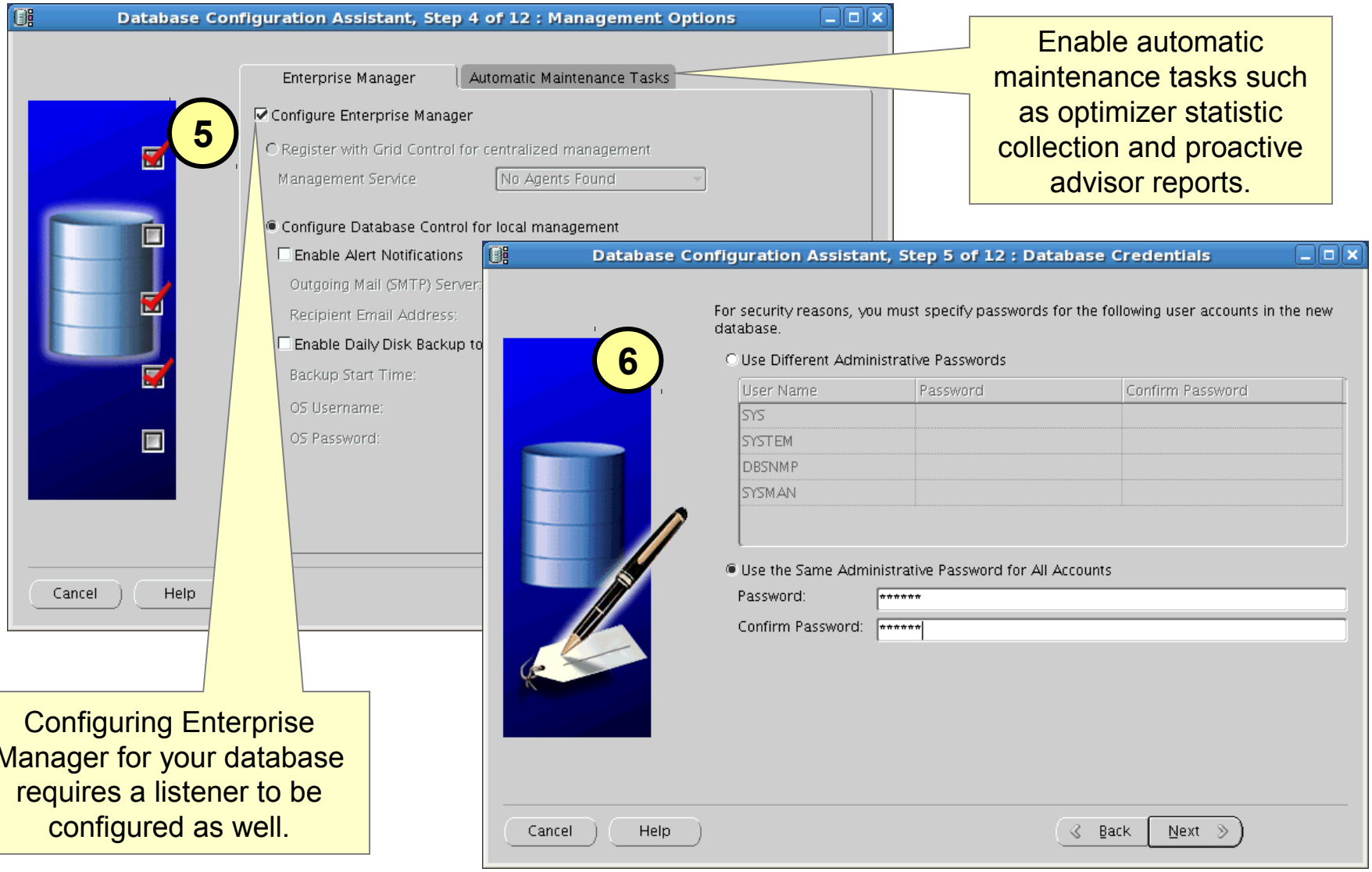
Database Configuration Assistant (DBCA)



Using the DBCA to Create a Database



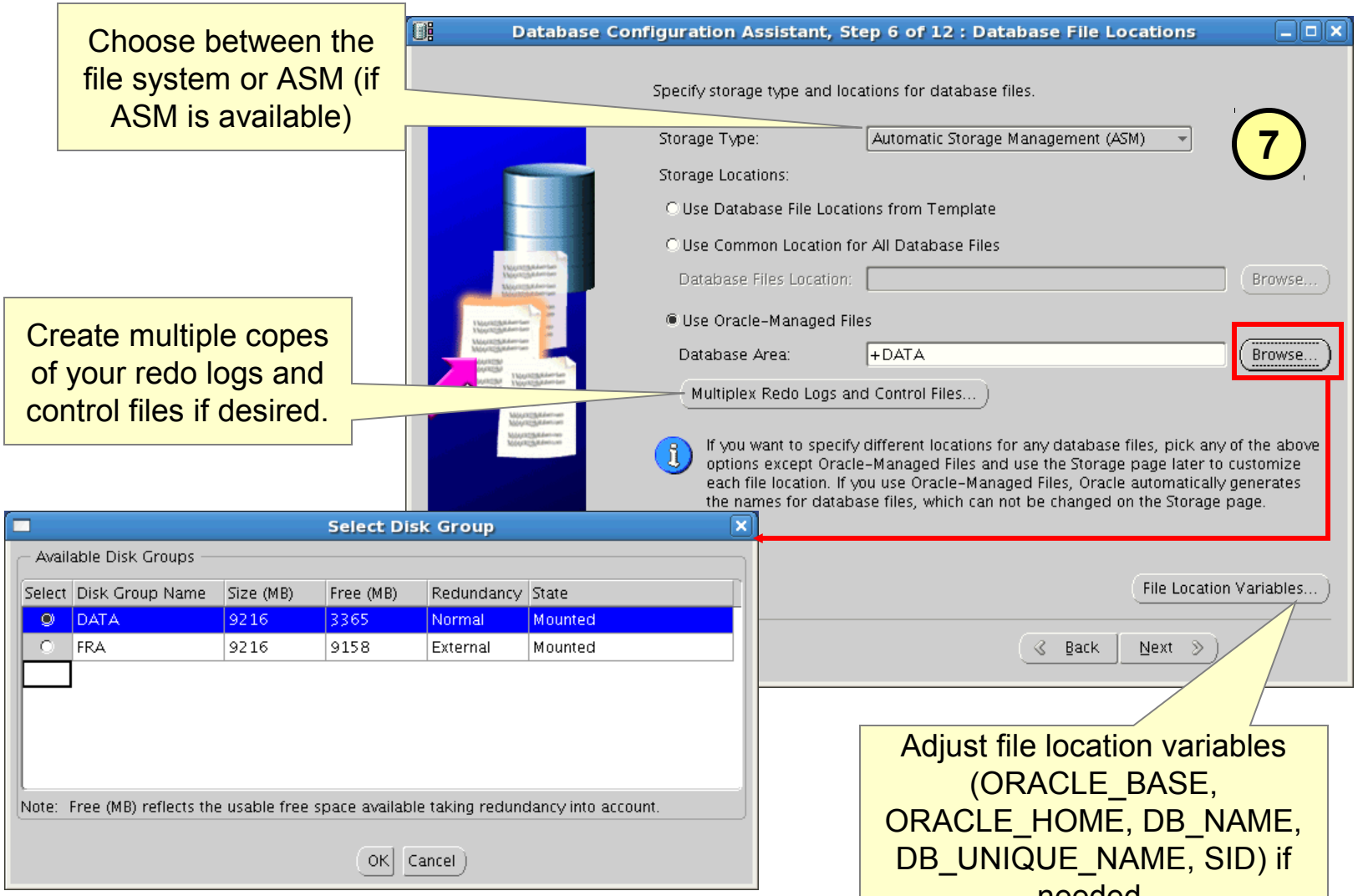
Using the DBCA to Create a Database



Using the DBCA to Create a Database

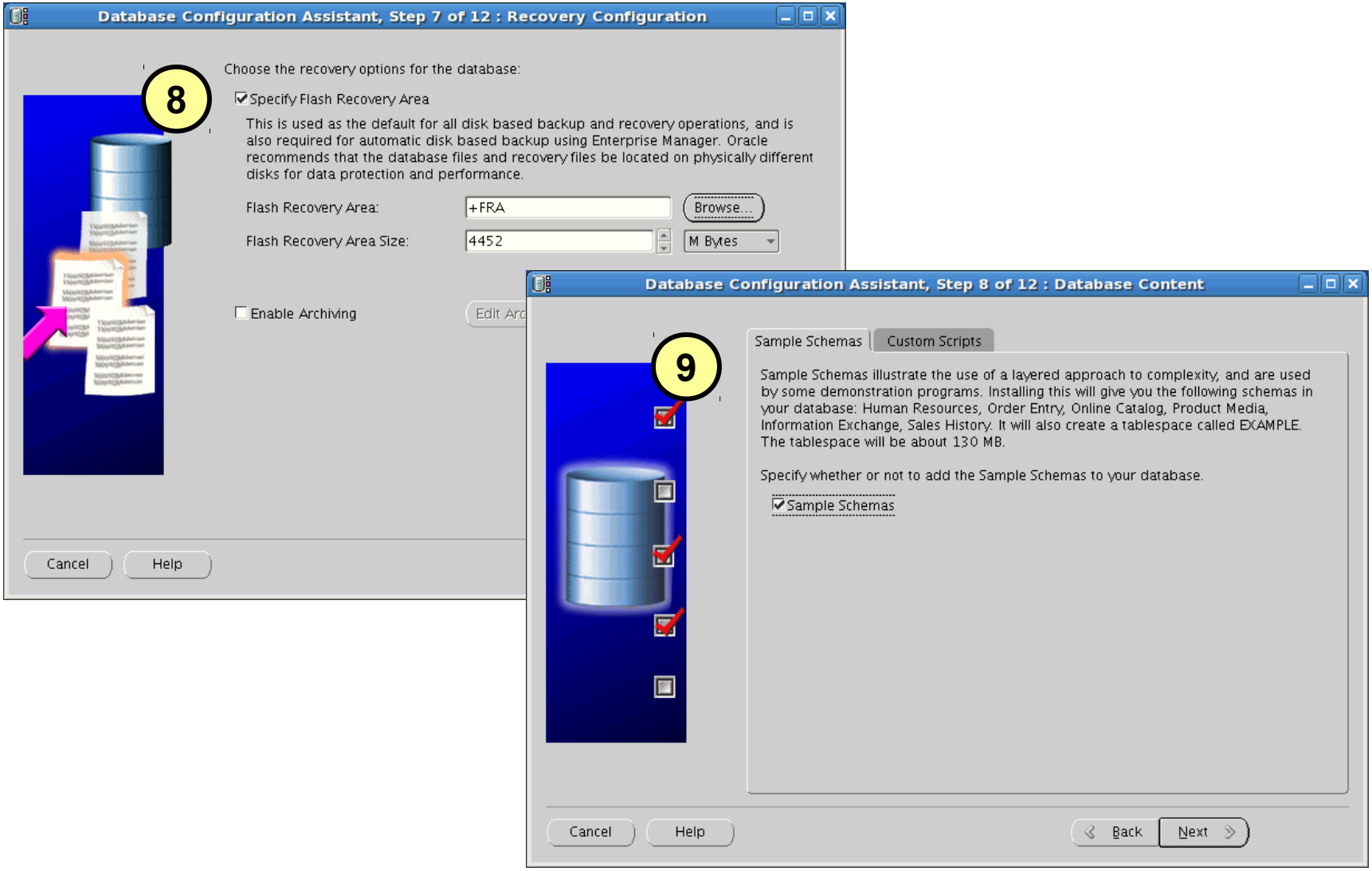
Choose between the file system or ASM (if ASM is available)

Create multiple copes of your redo logs and control files if desired.



Adjust file location variables (ORACLE_BASE, ORACLE_HOME, DB_NAME, DB_UNIQUE_NAME, SID) if needed.

Using the DBCA to Create a Database



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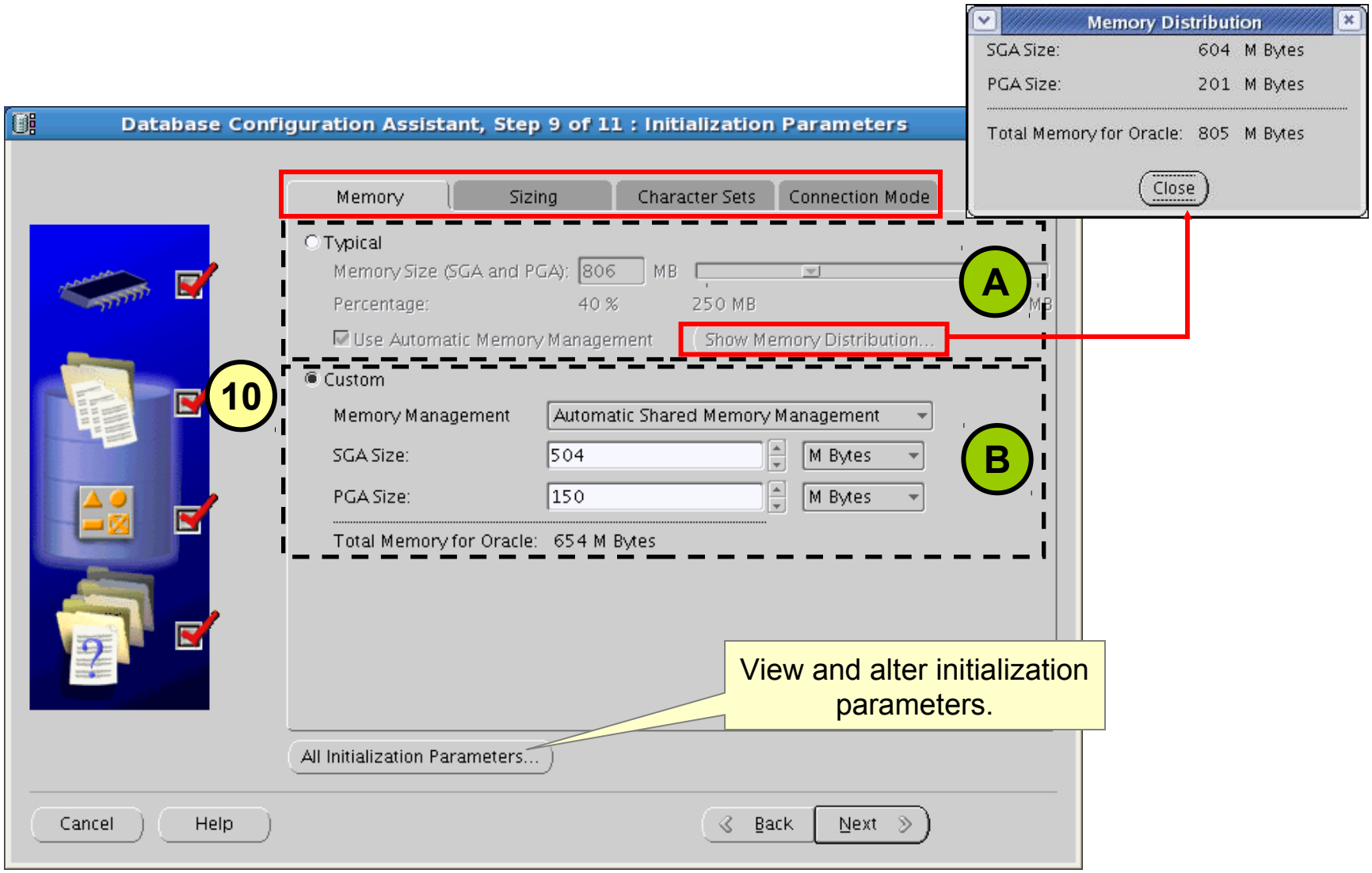
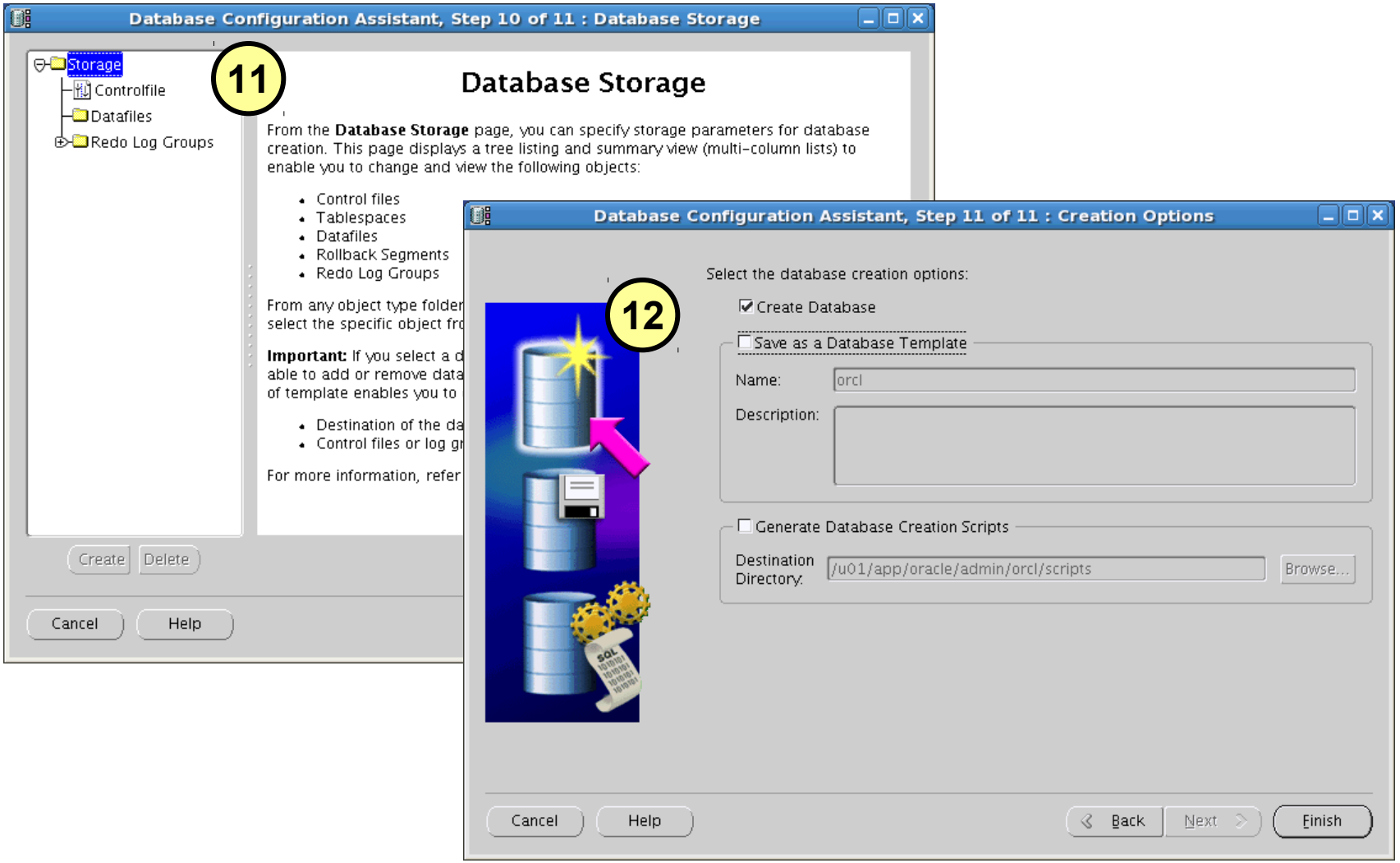
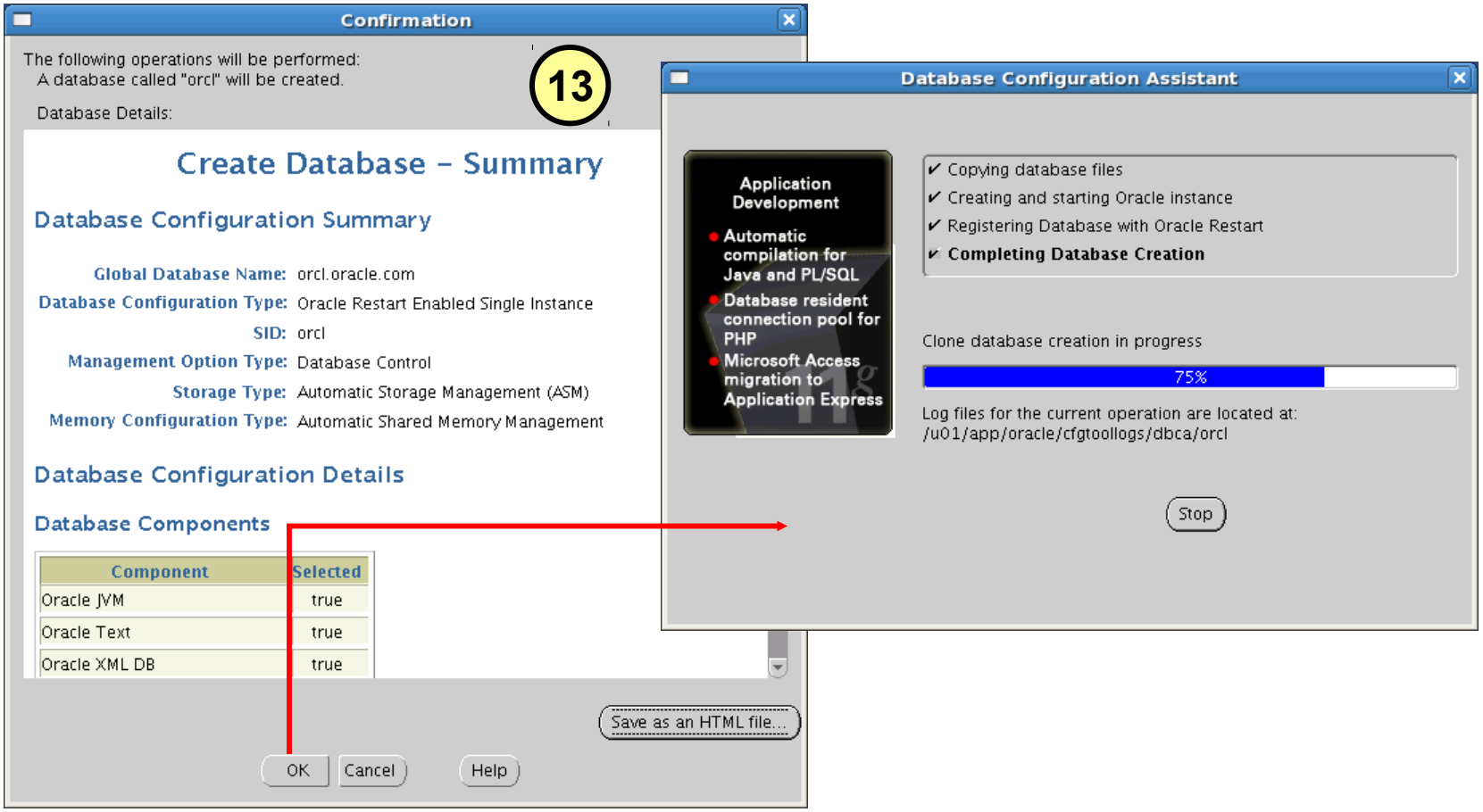


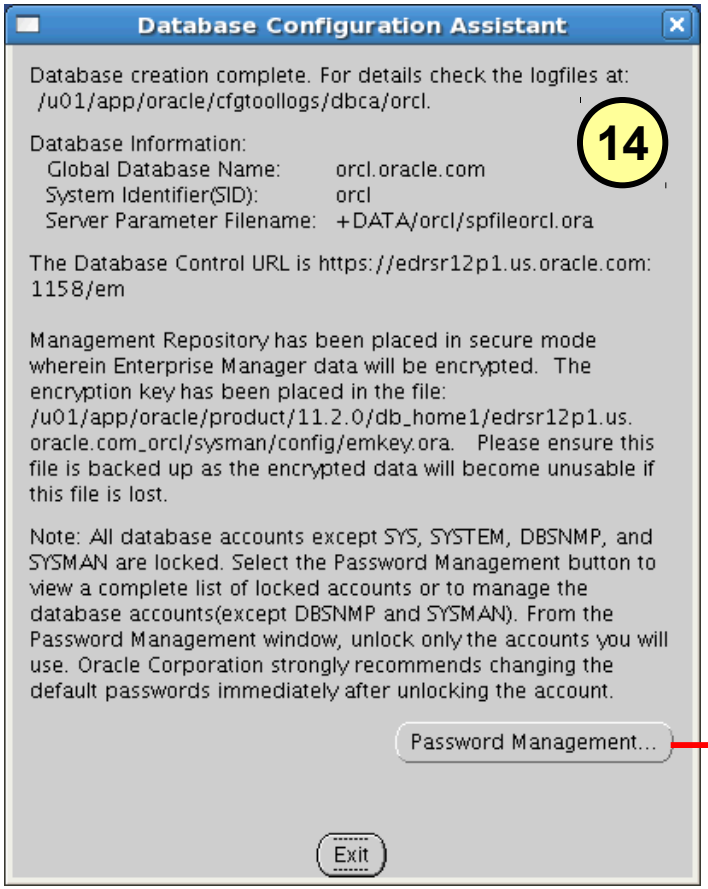
Using the DBCA to Create a Database

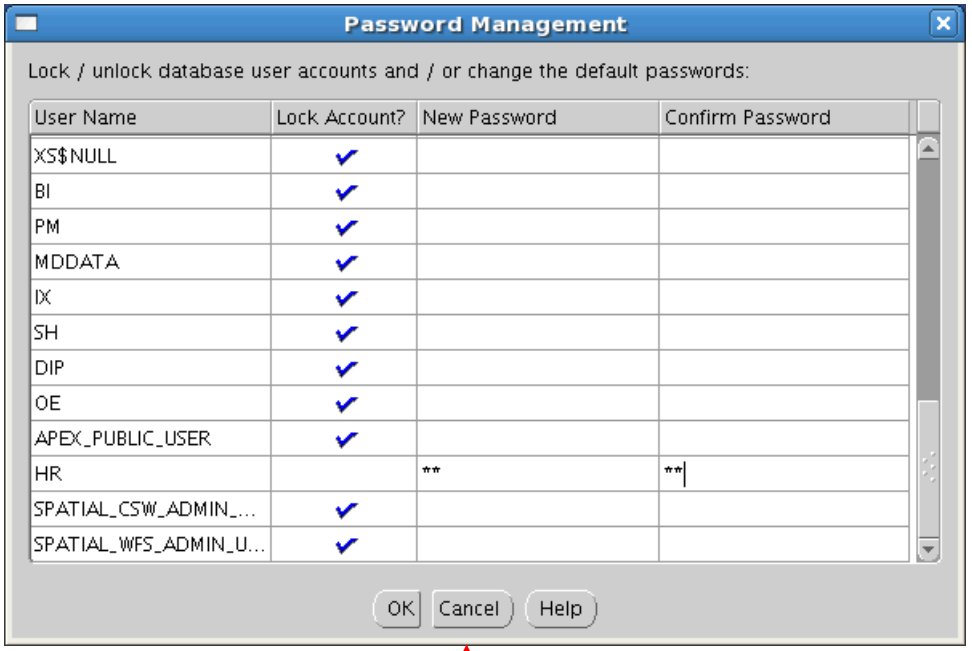


Create Database Summary

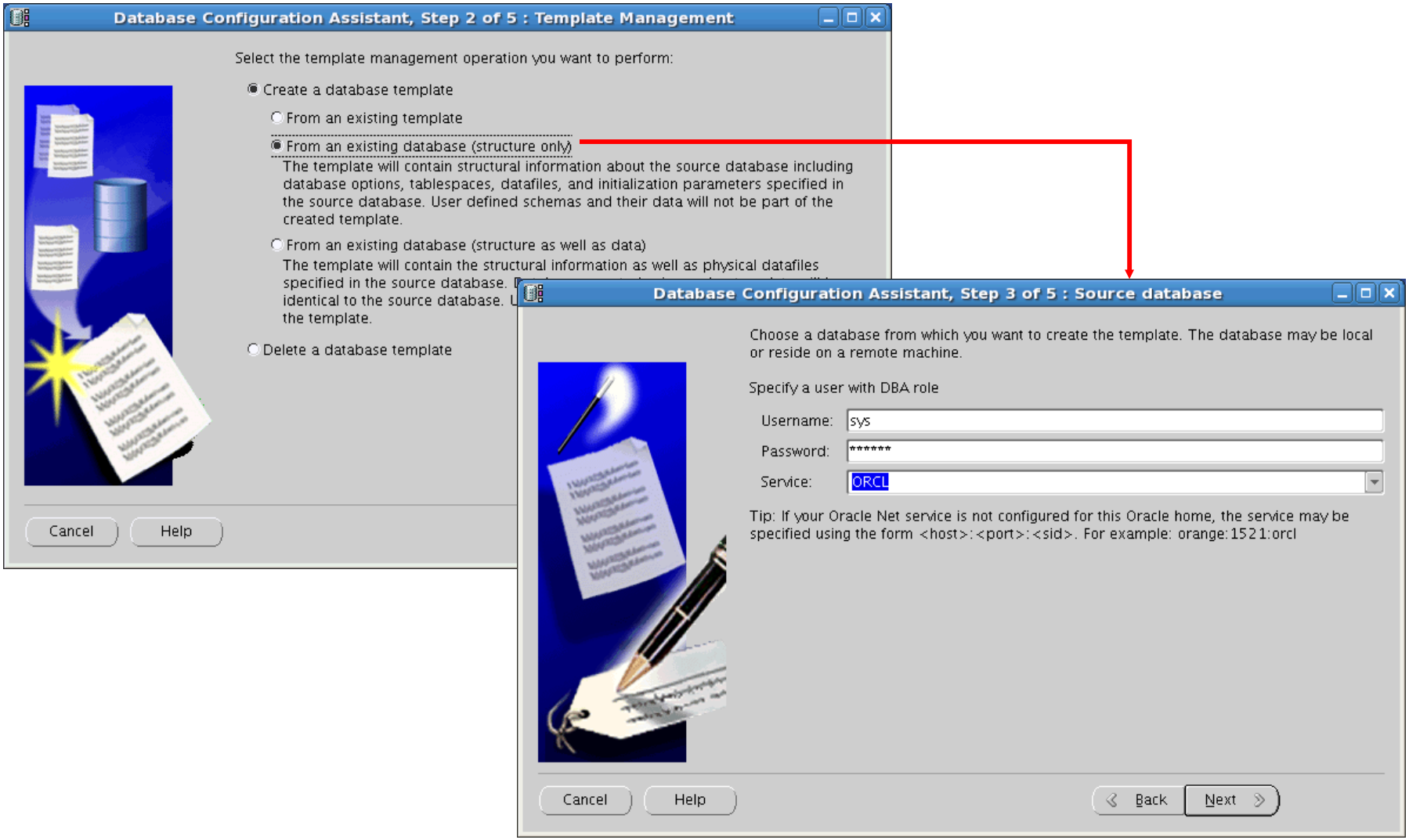


Password Management

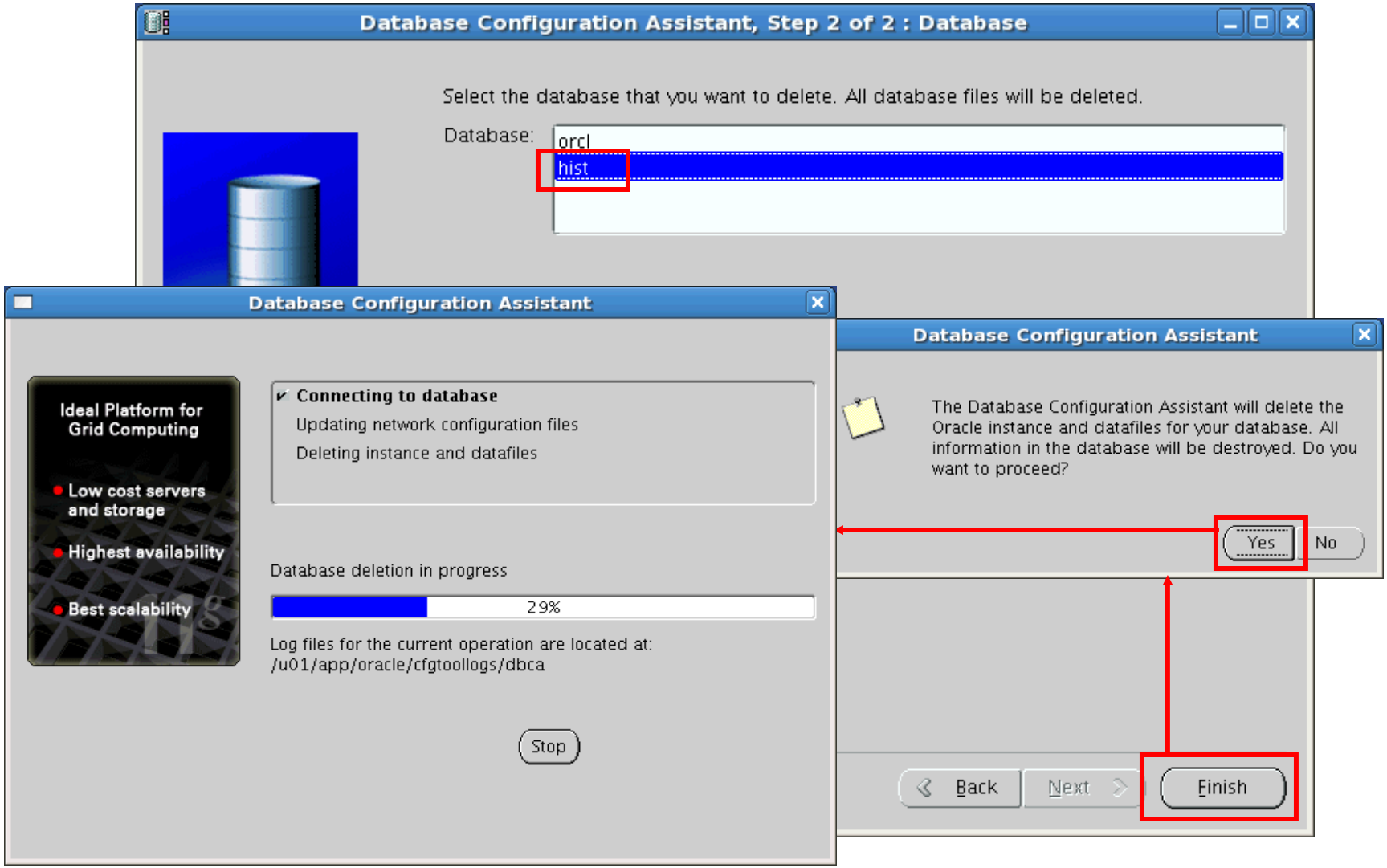




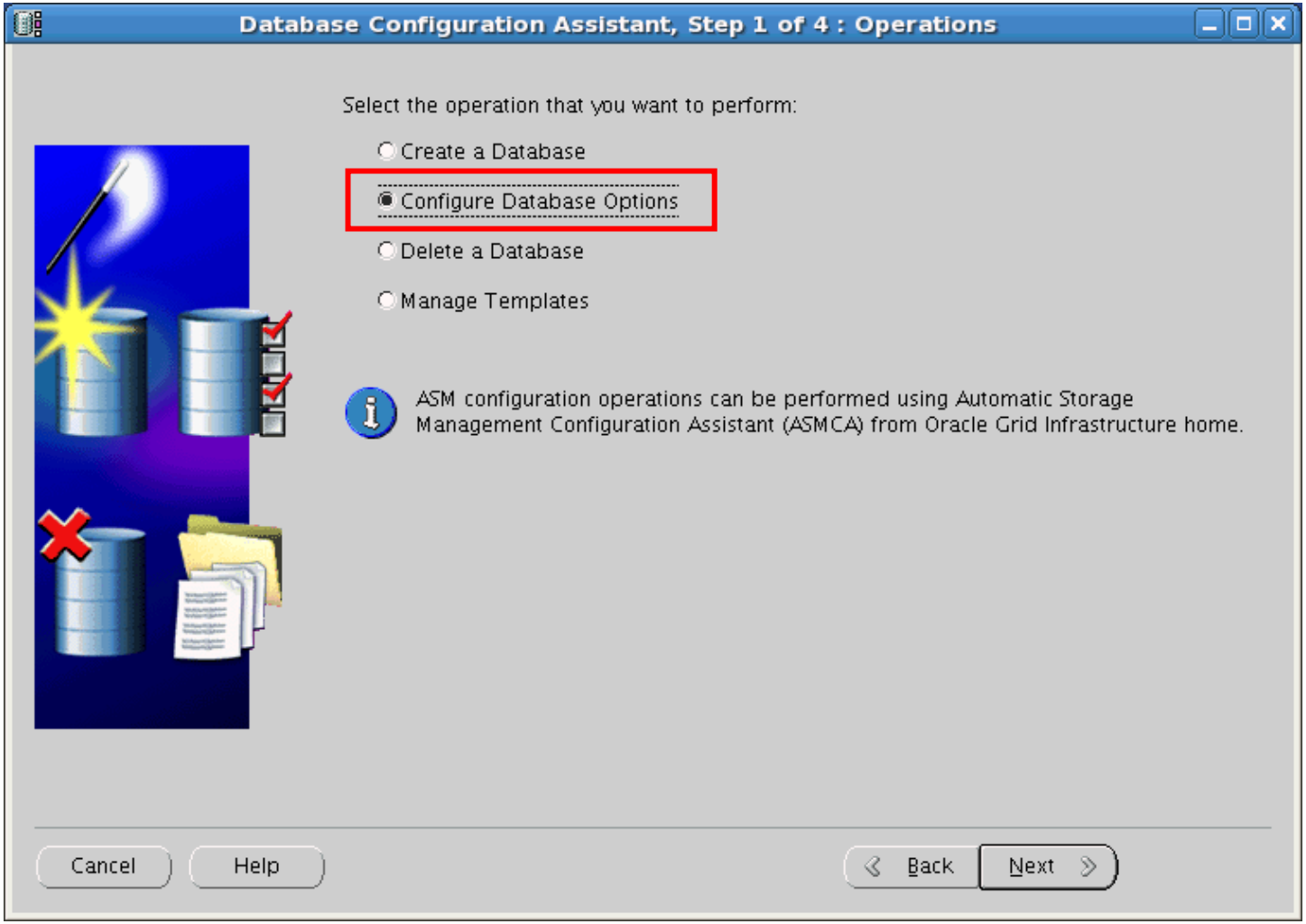
Creating a Database Design Template



Using the DBCA to Delete a Database



Using the DBCA for Additional Tasks



Quiz

The parameter `DB_BLOCK_SIZE` is set for the lifetime of a database and cannot be changed.

1. True
2. False

Quiz

In order to drop a database using the `DROP DATABASE` command, the database must be:

1. Open and in `RESTRICT` mode
2. Mounted exclusively in `RESTRICT` mode
3. Shut down with the immediate option

Summary

In this lesson, you should have learned how to:

- Create a database by using the Database Configuration Assistant (DBCA)
- Generate database creation scripts with the DBCA
- Manage database design templates with the DBCA
- Perform additional tasks with the DBCA

Practice 3 Overview: Using the DBCA

This practice covers the following topics:

- Creating the ORCL database by using the DBCA
- Unlocking the HR schema

Note: Completing database creation and unlocking the HR schema are critical for all following practices.

- Creating the ORCL database design template by using the DBCA
- Creating database creation scripts by using the DBCA