



Oracle 11g DBA Fundamentals Overview

Lesson 02: Creating an Oracle
Database



Lesson Objectives

Deciding How to Create an Oracle Database

Manually Creating an Oracle Database

Understanding the CREATE DATABASE Statement

Initialization Parameters and Database Creation

Dropping a Database

Managing Initialization Parameters Using a Server Parameter File

Viewing Information About the Database

- Using Data Dictionaries
- Using EM

Using DBCA





Deciding How to Create an Oracle Database

Use the Database Configuration Assistant (DBCA)

Use the CREATE DATABASE statement

Upgrade an existing database



Manually Creating an Oracle Database

- Step 1: Decide on Your Instance Identifier (SID)
- Step 2: Establish the Database Administrator Authentication Method
- Step 3: Create the Initialization Parameter File
- Step 4: Connect to the Instance
- Step 5: Create a Server Parameter File (Recommended)
- Step 6: Start the Instance
- Step 7: Issue the CREATE DATABASE Statement
- Step 8: Create Additional Tablespaces
- Step 9: Run Scripts to Build Data Dictionary Views
- Step 10: Run Scripts to Install Additional Options (Optional)
- Step 11: Back Up the Database.



Understanding the CREATE DATABASE Statement

Creates the datafiles for the database

Creates the control files for the database

Creates the redo log files for the database and establishes the ARCHIVELOG mode.

Creates the SYSTEM tablespace and the SYSTEM rollback segment

Creates the SYSAUX tablespace

Creates the data dictionary

Sets the character set that stores data in the database

Sets the database time zone

Mounts and opens the database for use



Initialization Parameters and Database Creation

Determining the Global Database Name

Specifying a Flash Recovery Area

Specifying Control Files

Specifying Database Block Sizes

Managing the System Global Area (SGA)

Specifying the Maximum Number of Processes

Specifying the Method of Undo Space Management



Dropping a Database

To use the DROP DATABASE statement successfully, all of the following conditions must apply:

- **The database must be mounted and closed**
- **The database must be mounted exclusively--not in shared mode**
- **The database must be mounted as RESTRICTED**

An example of this statement is:

- **DROP DATABASE;**

Managing Initialization Parameters Using a Server Parameter File



What Is a Server Parameter File?

Migrating to a Server Parameter File

Creating a Server Parameter File

The SPFILE Initialization Parameter

Managing Initialization Parameters Using a Server Parameter File

Using ALTER SYSTEM to Change Initialization Parameter Values

Exporting the Server Parameter File

Backing Up the Server Parameter File

Errors and Recovery for the Server Parameter File

Viewing Parameter Settings

Accessing Database Control



The screenshot shows a web browser window with the address bar displaying `http://139.185.35.109:5500/em`. The browser's menu bar includes File, Edit, View, Favorites, Tools, and Help. The toolbar contains Back, Forward, Stop, Home, Search, Favorites, Media, and other navigation icons. The main content area displays the Oracle Enterprise Manager 10g Database Control login page. At the top, there is a blue banner with the text "Login". Below this, the page title is "Login to Database:orcl.oracle.com". The login form consists of three fields: "User Name" with the value "sys", "Password" with masked characters "*****", and "Connect As" with a dropdown menu showing "SYSDBA". A "Login" button is located to the right of the password field. A mouse cursor is hovering over the button, and a tooltip with the word "Login" is visible. At the bottom of the page, there is a copyright notice: "Copyright © 1996, 2004, Oracle. All rights reserved." The browser's status bar at the bottom shows the full URL `http://139.185.35.109:5500/em/console/logon/logon.jsessionid=8` and the text "Internet".

File Edit View Favorites Tools Help Links

Back Forward Stop Home Search Favorites Media Go

Address `http://139.185.35.109:5500/em`

ORACLE® Enterprise Manager 10g Database Control Help

Login

Login to Database:orcl.oracle.com

* User Name

* Password

Connect As

Login

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`http://139.185.35.109:5500/em/console/logon/logon.jsessionid=8` Internet

SYSOPER and SYSDBA



Login to Database:orcl.oracle.com

* User Name

* Password

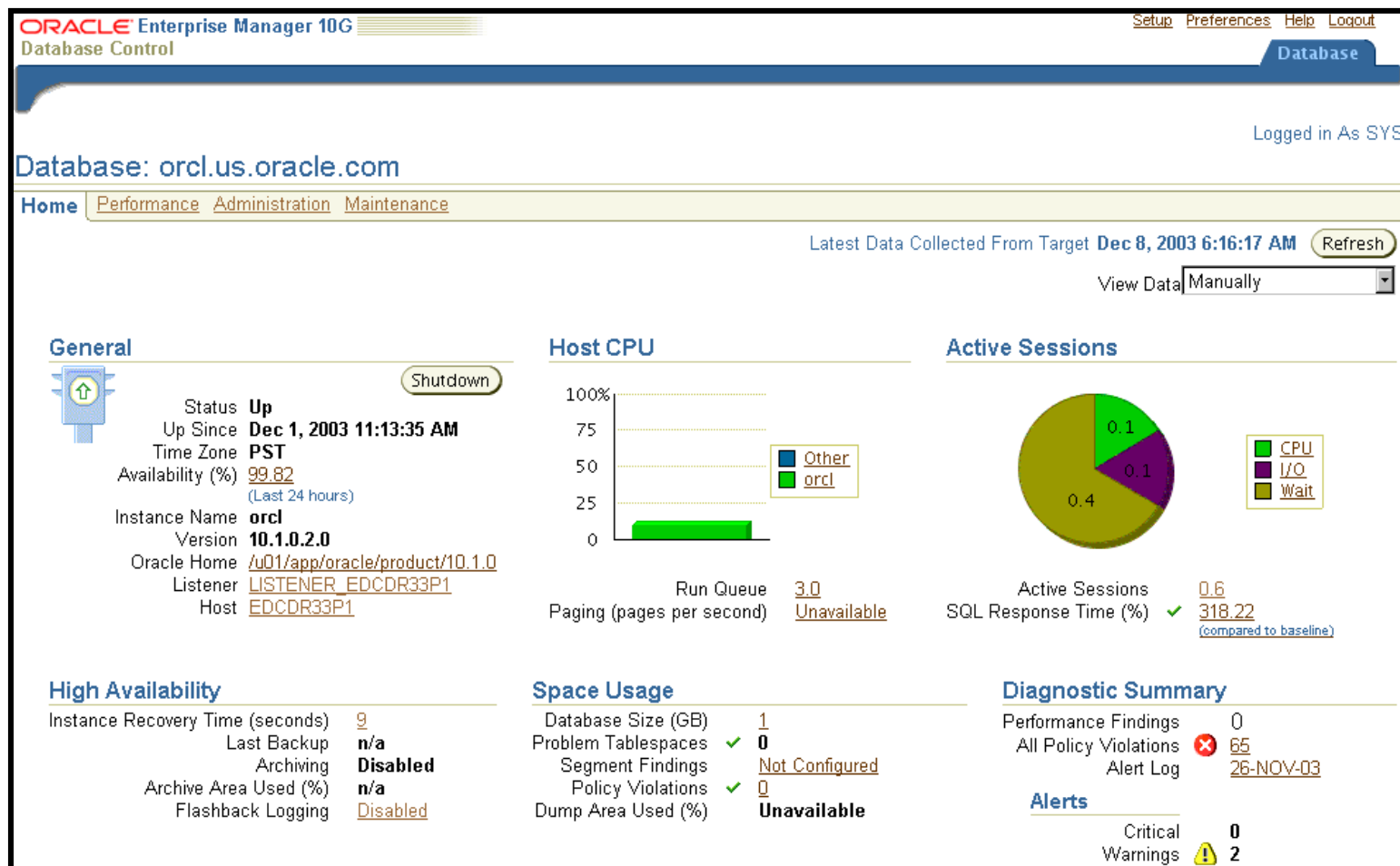
Connect As

Normal
SYSOPER
SYSDBA

Login

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Database Home Page



Changing the Listener Status



Listener: LISTENER_EDRSR9P1

[Home](#) [Serviced Databases](#)

Page Refreshed Feb 17, 2004 7:08:31 AM

General



Status	Up
Availability (%)	99 (Last 24 Hours)
Alias	LISTENER
Version	10.1.0.2.0
Oracle Home	/u01/app/oracle/product/10.1.0/db_1
Net Address	(ADDRESS=(PROTOCOL=TCP)(HOST=EDRSR9P1)(PORT=1521))
LISTENER.ORA Location	/u01/app/oracle/product/10.1.0/db_1/network/admin
Start Time	Feb 11, 2004 10:17:53 AM
Host	edrsr9p1.us.oracle.com

[Edit](#) [Stop](#)

State

TNS Ping (ms)	✓ 0
Established	
Connections per minute	Unavailable
Refused	
Connections per minute	Unavailable

Listener: LISTENER_EDRSR9P1 > Start/Stop: LISTENER

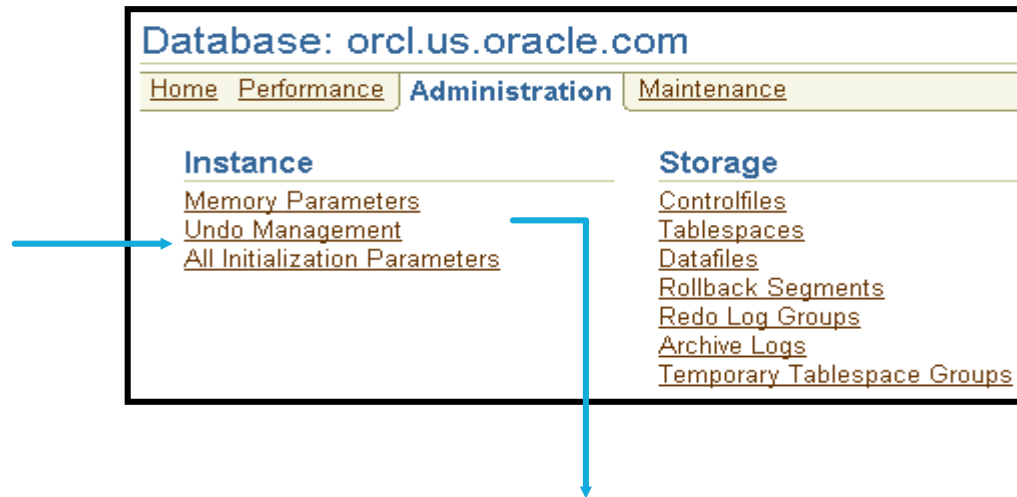
Start/Stop: LISTENER

Current Status	Started	Cancel OK
Operation	Stop	

[Cancel](#) [OK](#)



Viewing Initialization Parameters



Database: orcl.us.oracle.com > Initialization Parameters Logged in As SYS

Initialization Parameters

[Show SQL](#) [Revert](#) [Apply](#)

Current [SPFile](#)

The parameter values listed here are currently used by the running instance(s). You can change static parameters in SPFile mode.

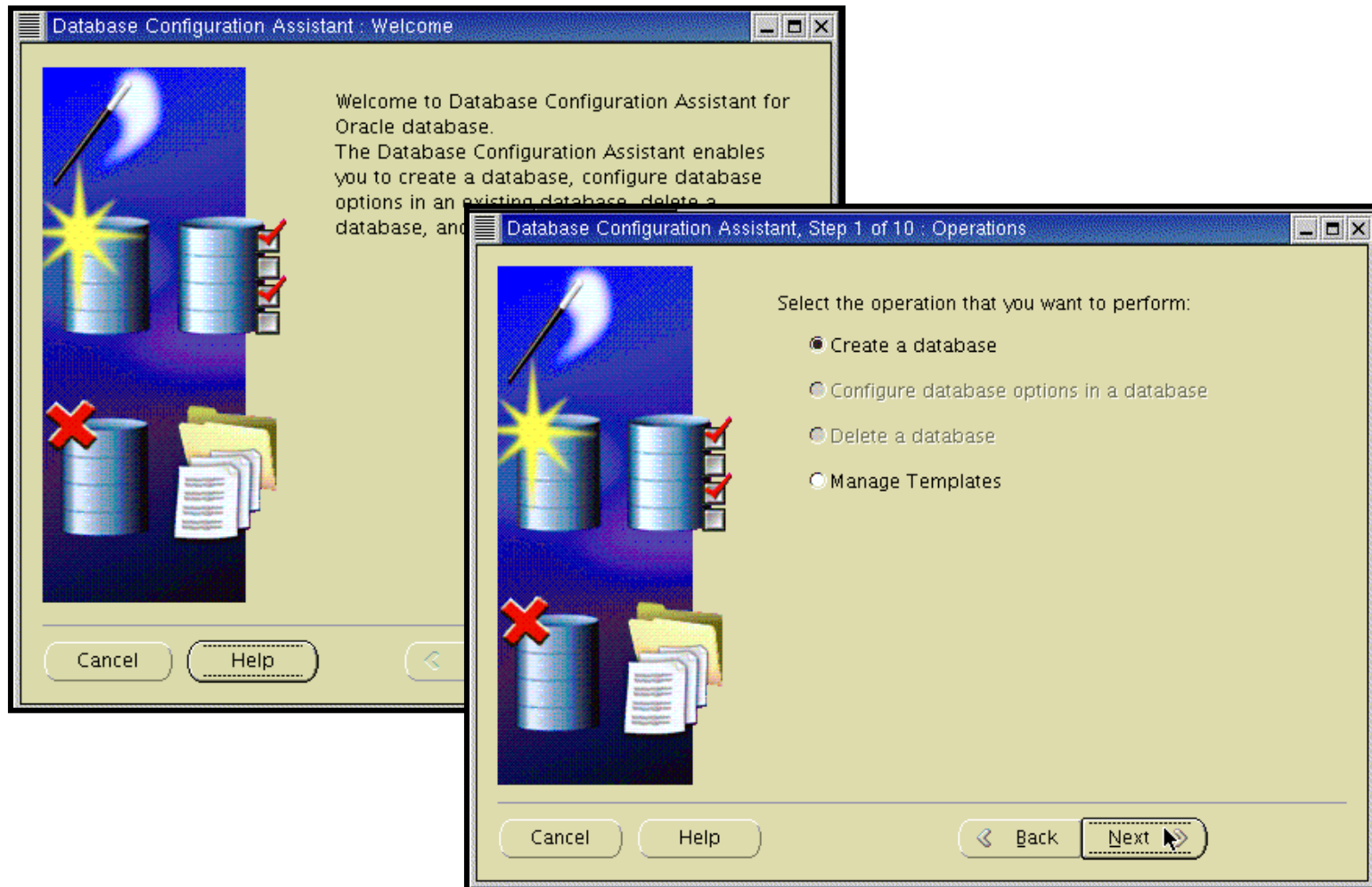
Filter [Go](#)
Filter on a name or partial name

[Save to File](#) [Show All](#)

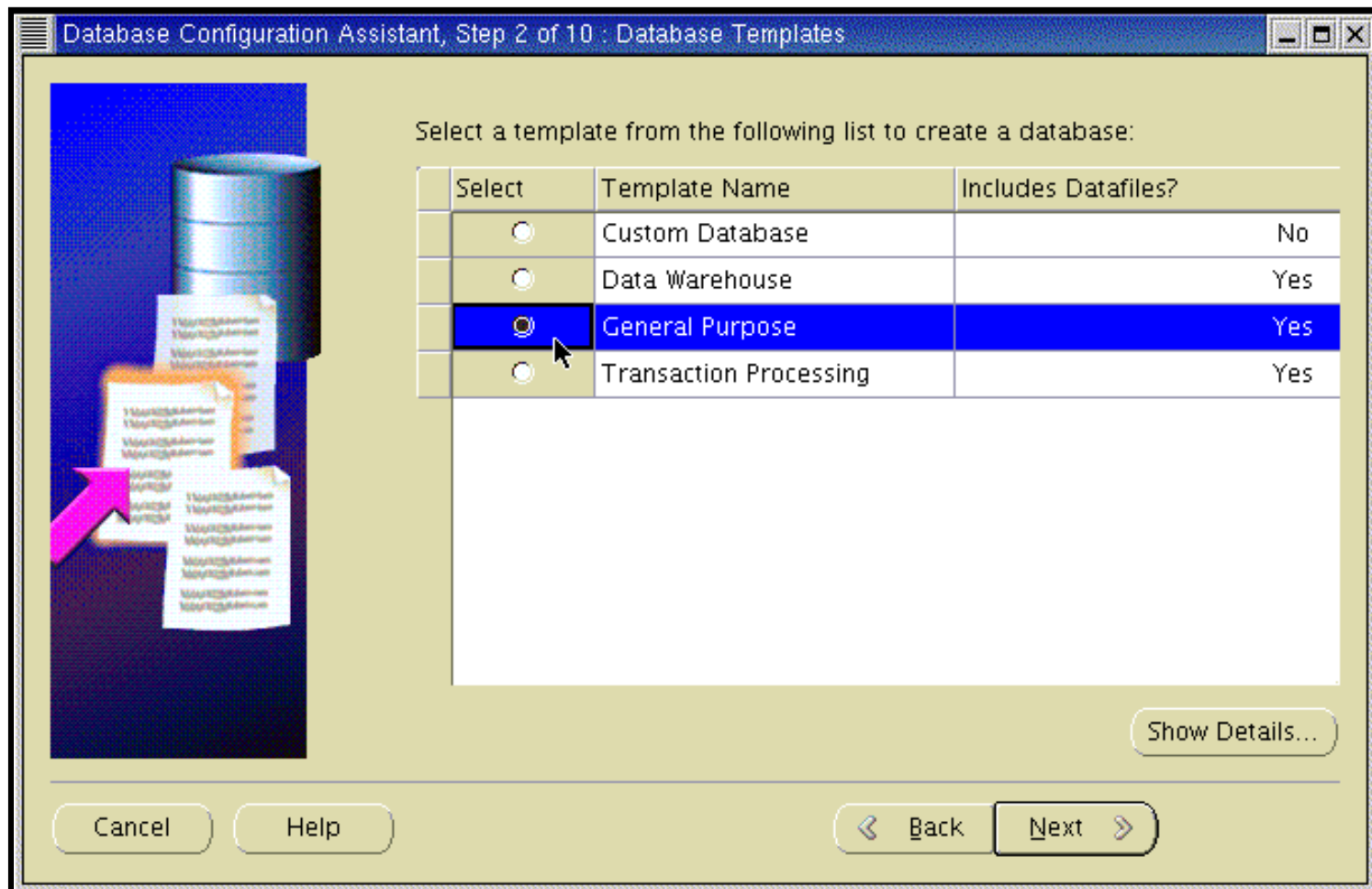
Previous 1-25 of 256 Next 25

Name	Help	Revisions	Value	Type	Basic	Default	Dynamic	Category
cluster_database	?		FALSE	Boolean	✓	✓		Cluster Database
compatible	?		10.1.0.1.0	String	✓			Miscellaneous
control_files	?		%U01/app/oracle/oradata/orcl/control01.ctl', %U01/app/oracle/oradata/orcl/control02.ctl', %U01/app/oracle/oradata/orcl/control03.ctl'	String	✓			File Configuration

Database Configuration Assistant (DBCA) Overview




Creating a Database



Database Identification



Database Configuration Assistant, Step 3 of 12 : Database Identification



An Oracle database is uniquely identified by a Global Database Name, typically of the form "name.domain".

Global Database Name:

A database is referenced by at least one Oracle instance which is uniquely identified from any other instance on this computer by an Oracle System Identifier (SID).

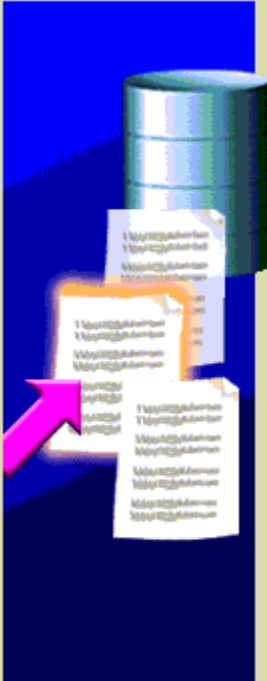
SID:

Cancel Help Back Next

Management Options



Database Configuration Assistant, Step 4 of 12 : Management Options



Each Oracle database may be managed centrally using the Oracle Enterprise Manager Grid Control or locally using the Oracle Enterprise Manager Database Control. Choose the management option that you would like to use to manage this database.

☒ **Configure the Database with Enterprise Manager**

☐ Use Grid Control for Database Management

Select the Management Service:

☒ **Use Database Control for Database Management**

☐ Enable Email Notifications

Outgoing Mail (SMTP) Server:

Email Address:

☐ Enable Daily Backup

Backup Start Time: ☒ AM ☐ PM

OS Username:

Password:

Cancel Help Back Next



Passwords and Storage

☒ Use the Same Password for All Accounts
Password:
Confirm Password:
☐ Use Different Passwords

User Name	Password	Confirm Password
SYS		
SYSTEM		
DBSNMP		
SYSMAN		

Select the storage mechanism you would like to use for the database.

☒ File System
Use the File System for Database storage.

☐ Automatic Storage Management (ASM)
Automatic Storage Management simplifies database storage administration and optimizes database layout for I/O performance. To use this option you must either specify a set of disks to create an ASM disk group or specify an existing ASM disk group.

☐ Raw Devices
Raw partitions or volumes can provide the required shared storage for Real Application Clusters (RAC) databases if you do not use Automatic Storage Management and a Cluster File System is not available. You need to have created one raw device for each datafile, control file, and log file you are planning to create in the database.

☐ Specify Raw Devices Mapping File



File Locations and Backup Recovery

Specify locations for the Database files to be created:


☐ Use Database File Locations from Template

☒ Use Common Location for All Database Files

Database Files Location:

☐ Use Oracle-Managed Files

Database Area:

 If you want to specify different locations for any database files, pick either of the above options and use the Storage page to specify each location.

Choose the recovery options for the database:

☒ Specify Flash Recovery Area

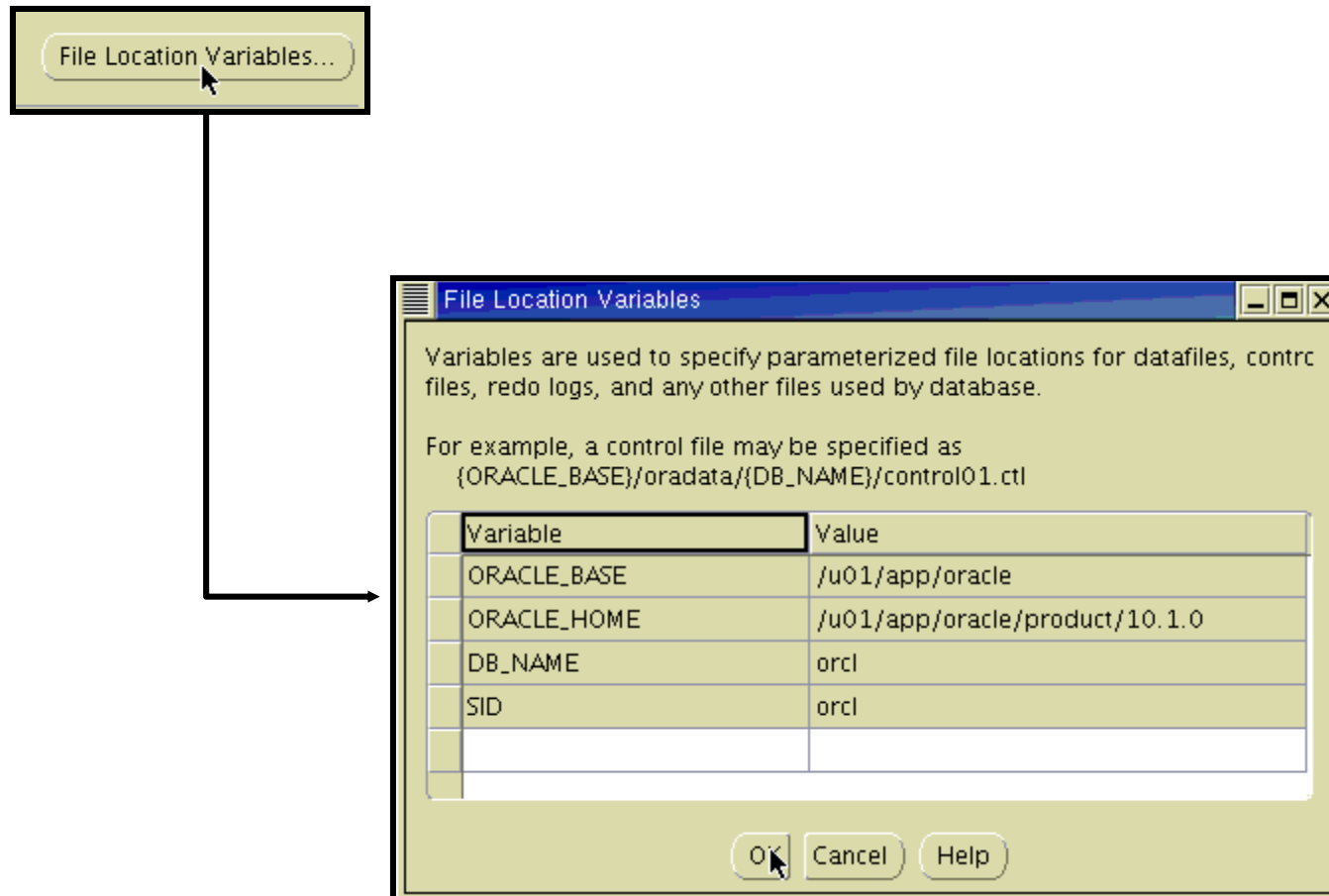
This is used as the default for all backup and recovery operations, and is also required for automatic backup using Enterprise Manager. Oracle recommends that the database files and recovery files be located on physically different disks for data protection and performance.

Flash Recovery Area:

Flash Recovery Area Size:

☐ Enable Archiving

File Location Variables



Content and Initialization Parameters



Sample Schemas

Custom Scripts

Sample Schemas illustrate the use of a layered approach to complexity, and are used by some demonstration programs. Installing this will give you the following schemas in your database: Human Resources, Order Entry, Online Catalog , Product Media, Queued Shipping, Sales History . It will also create a tablespace called EXAMPLE. The tablespace will be about 130 MB.

Specify whether or not to add

☒ Sample Schemas

Memory

Sizing

Character Sets

Connection Mode

☐ Typical - Allocate memory as a percentage of the total physical memory (1000 MB)

Percentage: [Show Memory Distribution...](#)

☒ Custom

Shared Memory Management: ☐ Automatic ☒ Manual

Shared Pool:

Buffer Cache:

Java Pool:

Large Pool:


PGA Size:

Total Memory for Oracle: 224 M Bytes

Total memory includes 40MB of Oracle Process Size and the defaults for the empty parameters, if any.

[All Initialization Parameters...](#)





Storage

- Controlfile
- Datafiles
- Redo Log Groups

Database Storage

From the **Database Storage** page, you can specify storage parameters for the database creation. This page displays a tree listing and summary view (multi-column lists) to allow you to change and view the following objects:

- Control files
- Tablespaces
- Datafiles
- Rollback Segments
- Redo Log Groups

From any object type folder, click **Create** to create a new object. To delete an object, select the specific object from within the object type folder and click **Delete**.

Important: If you select a database template including data files, you will not be able to add or remove data files, tablespaces, or rollback segments. Selecting this type of template allows you to change the following:

- Destination of the datafiles
- Control files or log groups.

CreateDelete

File Location Variables...

Creation Options and Create



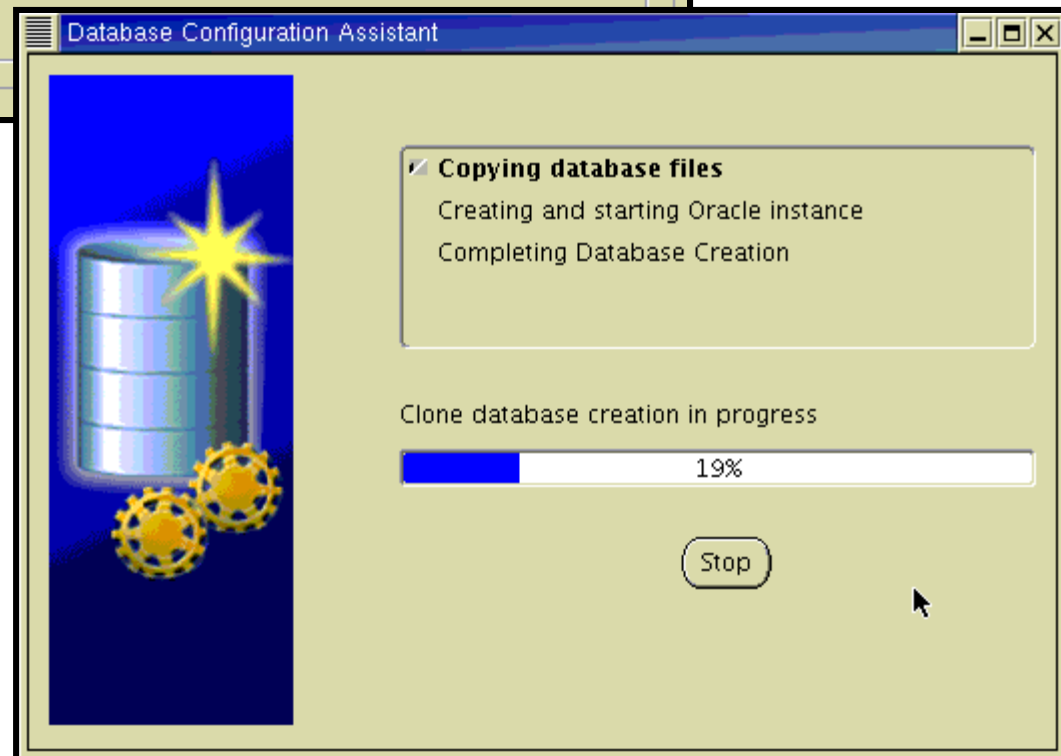
Select the database creation options:

☒ Create Database

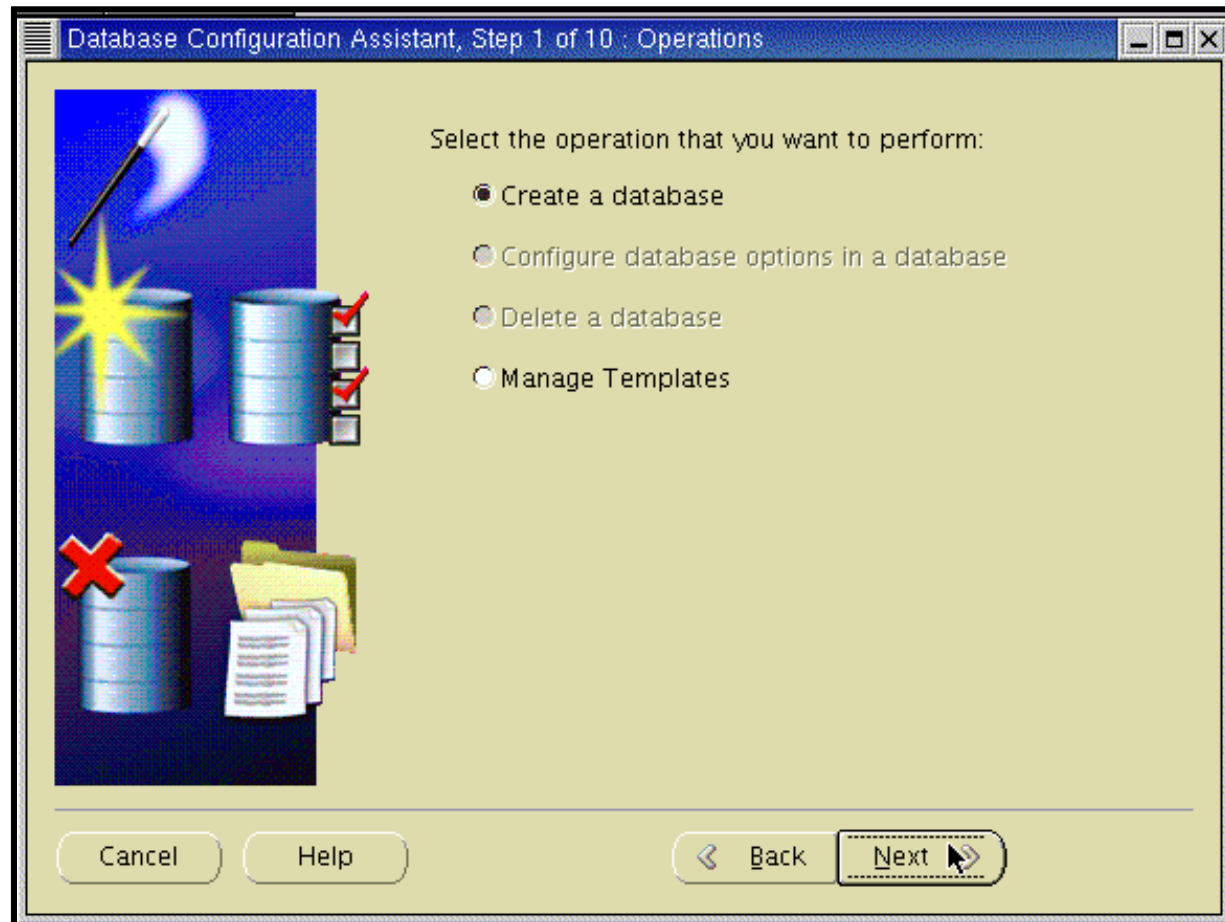
☐ Save as a Database Template

Name:

Description:



Other Actions with DBCA





Practice 3: Creating an Oracle Database

This practice covers creating an Oracle database by using DBCA.



Lab: Creating an Oracle Database

This practice covers creating an Oracle database manually.

SUMMARY

- Deciding How to Create an Oracle Database
- Manually Creating an Oracle Database
- Understanding the CREATE DATABASE Statement
- Initialization Parameters and Database Creation
- Dropping a Database
- Managing Initialization Parameters Using a Server Parameter File
- Viewing Information About the Database
 - **Using Data Dictionaries**
 - **Using EM**
- Using DBCA