

Migrate from SQL Server to Oracle Database 10g

What you will learn:

This course is designed for the SQL Server DBA preparing to migrate to Oracle Database 10g. Students gain a conceptual understanding of the Oracle database architecture, design, and implementation through a compare and contrast approach. In class, participants apply best practice guidelines to plan for and perform the migration using Oracle Migration Workbench. The course also covers performing common database administration tasks in the Oracle database after the migration. The lesson topics are reinforced with structured hands-on practices.

This course counts towards the [Hands-on course requirement](#) for the Oracle Database 10g Administrator certification.

Audience:

Technical Consultant
Database Administrators
Support Engineer

Course Objectives:

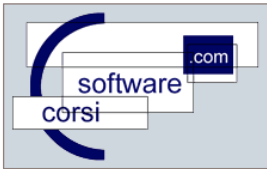
Perform a database migration to Oracle Database 10g using Oracle Migration Workbench
Compare and contrast the database architecture and design between Oracle Database 10g and Microsoft SQL Server 2000
Install Oracle Database software and create a database
Configure and manage the Oracle Network environment
Manage database storage structures
Administer users and security
Backup and recover the Oracle Database 10g
Monitor the database and use advisors

Course Topics:

Installing Oracle Software and Creating the Oracle Database

Install the Oracle 10g database using Oracle Universal Installer
Create a database as part of the installation

Database Architecture Comparison



Compare SQL Server and Oracle Database 10g concepts at a high level
Explore Oracle Database 10g architecture (Control file, online redo log, tablespace, data file, segment, extent, block, Oracle instance, data dictionary, memory and processes)
Use Database Configuration Assistant to create an additional database

Managing the Oracle Instance

Use Windows Services to check the status of Oracle processes
Administer two databases using Oracle Enterprise Manager
Modify initialization parameters
Stop and start the Oracle Listener
Startup and shutdown the Oracle instance and explain the different stages of the start-up and shut-down operations
Compare automatic and manual memory management of the SGA
View the Alert log
Access databases with SQL*Plus and iSQL*Plus

Managing Database Storage Structures

Define the purpose of tablespaces and data files
Create and manage tablespaces
Describe dictionary versus locally managed tablespaces
Obtain tablespace information
Understand the main concepts and functionality of Automatic Storage Management (ASM)

Administering Users

Create and manage database user accounts
Create and manage roles
Grant and revoke privileges (system privileges and object privileges)
Control resource usage by users

Managing Schema Objects

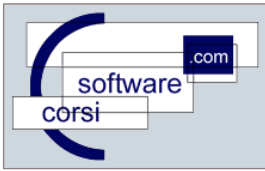
Compare Oracle Database 10g and SQL Server: data objects, data types and the use of temporary tables
Create and modify database schema objects: tables, columns, constraints, indexes, views and sequences
Remove schema objects: delete or truncate

Planning a Migration

Establish and follow a migration methodology
Plan how to migrate key components in a database migration
Select the appropriate Oracle migration tools
Assign key roles for a migration project

Getting Started with Oracle Migration Workbench

Identify key components of OMWB
Install Oracle Migration Workbench software



Configure OMWB to connect to SQL Server and Oracle Database 10g
Create database users with appropriate permissions to access SQL Server and Oracle databases
Create the OMWB repository to store migration information

Performing a Database Migration Using Oracle Migration Workbench

Identify the three stages in the OMWB workflow process
Capture the source database using the online and offline capture methods
Create and customize the Oracle Model
View the log file to correct errors and warnings
Use SQL*Loader to load data into the Oracle database
Identify objects migrated by Oracle Migration Workbench
Analyze the migration process using OMWB reports

Application Migration Overview

Identify incompatibilities between Oracle Database 10g and SQL Server that affect application migration
Explain the key features of Oracle jDeveloper Application Migration Assistant

Migrating SQL Statements and Managing Transactions and Data Concurrency

Describe SQL incompatibilities between Oracle Database 10g and SQL Server
Convert SQL statements to run in an Oracle database
Describe the Oracle transaction model and its differences to SQL Server
Describe the isolation level differences between Oracle database and SQL Server
Apply knowledge of the differences to plan for a database migration
Detect and resolve deadlocks

Migrating Stored Procedures and Triggers

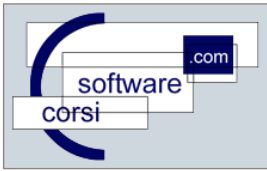
Identify PL/SQL objects
Compare and contrast SQL Server and Oracle database triggers
Use Oracle Migration Workbench to migrate stored procedures and triggers
Identify manual conversion tasks to complete PL/SQL code migration
Identify configuration options that affect PL/SQL performance

Testing the Oracle Database

Use Oracle Migration Verifier to verify the schema and data migrated successfully
Apply guidelines to design and run test cases on the migrated Oracle database

Configuring the Oracle Network Environment

Describe the Oracle Network configuration
Control the Oracle Net Listener
Create a backup listener to support connect-time failover
Configure a client to access the database



Describe Oracle Shared and Dedicated Servers

Implementing Security

Compare security features between SQL Server and Oracle Database 10g
Apply the principal of least privilege
Manage default user accounts
Implement standard password security features
Describe Oracle database auditing

Monitoring and Tuning the Database

Set warning and critical alert thresholds
Collect and use baseline metrics
Use tuning and diagnostic advisors
Use the Automatic Database Diagnostic Monitor (ADDM)
Manage the Automatic Workload Repository (AWR)
Monitor performance
Gather and view optimizer statistics

Managing Undo Segments

Monitor and administer undo segments
Configure and guarantee undo retention: Automatic versus Manual Undo Management
Use the Undo Advisor

Configuring for Recoverability

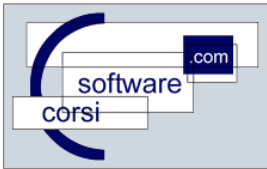
Identify the types of failure that may occur in an Oracle database
Describe ways to tune instance recovery
Identify the importance of checkpoints, redo log files, and archived log files
Configure ARCHIVELOG mode
Configure the flash recovery area

Performing Backups and Recovery

Create consistent database backups
Back up your database without shutting it down
Create incremental backups
Automate database backups
Recover from loss of a control file
Describe recovery tasklist for loss of: control file, redo log file, non-critical and system-critical data file in ARCHIVELOG mode and loss of a data file in NOARCHIVELOG mode

Preferring the Past: Flashback

Describe Flashback database
Manage the recycle bin
Describe Flashback versions query to recover from user errors
Describe Flashback Transaction query to perform transaction level recovery
Perform Flashback table operation



Suggested Next Courses:

[Oracle Database 10g: Program with PL/SQL](#)
[Oracle Database 10g: Program with PL/SQL **NEW**](#)
[Oracle Database 10g: SQL Tuning Workshop](#)

Related Courses:

[Oracle Database 10g: 2 Day DBA](#)