

Oracle 11g Non-Certification Data Base Administration (5 Days) CTI 613

This course covers how to install and maintain an Oracle database. Students will gain a conceptual understanding of the Oracle database architecture and how its components work and interact with one another. You can learn how to create an operational database and properly manage the various structures in an effective and efficient manner including performance monitoring, database security, user management and backup/recovery techniques.

*Prerequisites: Knowledge of SQL; Introduction to Oracle 11g SQL and SQL*Plus course or equivalent experience; Introduction to Oracle 11g PL/SQL course or equivalent experience is highly recommended.*

Minimum software requirements: Windows Server 2003, Windows XP Pro or Vista Pro; Oracle 11g.

Minimum hardware requirements for all machines: Minimum 512 MB RAM (2 GB preferred); 20 GB of free space on hard drive (before installation). Machines need static IP addresses.

Microsoft PowerPoint and Internet access on instructor's workstation for presentation purposes.

Module 1: Introduction

- Basic Concepts of a Relational Database
- Core Database Administrator Tasks

Module 2: Installing Oracle Database Software

- Identifying System Requirements
- Using Optimal Flexible Architecture
- Installing Software with the Oracle Universal Installer

Module 3: Create an Oracle Database

- Describing Oracle Database Architecture
- Understanding the Instance Architecture
- Management Framework and the Database Creation Assistant

Module 4: Controlling the Database

- Starting and stopping the Agent, the Enterprise Manager Database Console, and the Listener
- Startup and Shutdown of the Database

Module 5: Storage Structures

- Defining the purpose of Tablespaces and Data Files
- Create and Manage Tablespace
- Obtain Tablespace Information

Module 6: Administering Users

- Create and Manage Database User Accounts, and Manage Roles
- Grant and Revoke Privileges
- Control Rescue Usage by Users

Module 7: Managing Schema Objects

- Create and Modify Tables, Indexes and Views, and Define Constrains
- View the Attributes and Contents of a Table

Module 8: Managing Data

- Manipulating Data Through SQL
- Use Import, Export, Data Pump and SQL Loader

Module 9: Oracle Database Security

- Apply the Principal of Least Privilege
- Manage Default User Accounts
- Implement Standard Password Security Features, and Audit Database Activity

Module 10: Oracle Net Services

- Understanding Oracle Net Concepts
- Using Oracle Net Manager to Create and Configure Listeners, and Configure Client and Middle-Tier Connection
- Using the Listener Control Utility to Control the Oracle Net Listener
- Using TNSPING to Test Oracle Net Connectivity

Module 11: Proactive Maintenance Objectives

- Set Warning and Critical Alert Thresholds
- Collect and Use Baseline Metrics
- Use Tuning/Diagnostic Advisors/ADDM/ADR

Module 12: Undo Management

- Monitor and Administer Undo
- Configure and Guarantee Retention

Module 13: Recovery Manager Configuration

- Parameters Affecting RMAN
- Use of a Flashback Recovery Area
- The CONFIGURE Command
- Persistent Settings
- NOCATALOG/CATALOG Mode
- Channel Allocation
- Controlfile Autobackup
- Retention Policies

Module 14: Recovery Manager Operations

- Using the BACKUP Command
- Creating Backup Sets/Image Copies
- Compressed Backups
- Incremental Backups
- Block Change Tracking
- RMAN Backup Monitoring
- REPORT and LIST Commands

Module 15: Non-Critical Loss Recovery

- Password and Network Files
- Read-Only Tablespaces
- Temporary Tablespaces
- Index Tablespaces
- Redo Log Members/Control Files

Module 16: Database Recovery

- Complete Recovery
- Incomplete Recovery

Module 17: Flashback Database

- Configuration
- Monitoring Flashback Database

Module 18: User Error Recovery

- Flashback Table
- Flashback Versions Query
- Flashback Transaction Query

Module 19: Automatic Database

Management

- Management and Advisory Framework
- Automatic Statistics Collection
- The Automated Workload Repository
- Database Advisors
- Automatic Statistics Collection

Module 20: Scheduler

- Creating Jobs and Job Classes
- Creating Schedules and Windows
- Scheduler Programs
- Prioritizing Jobs
- Query Scheduler Information