



# HEROTEC

NETWORK PROFESSIONAL TRAINING

## Oracle Database 11g: Administration Workshop

<b>Related Certificate</b>	<b>Oracle</b>
<b>Course ID</b>	<b>Administration Workshop I</b>
<b>Audience</b>	Technical Consultant, Technical Administrator, Database Administrators , Java Developers , Support Engineer
<b>Hours</b>	<b>40</b>

## Overview:

This Oracle Database 11g: Administration Workshop I Release 2 course explores the fundamentals of basic database administration. Expert Oracle University instructors will reinforce topics with structured hands-on practices that will prepare you for the corresponding Oracle Certified Associate exam.

## Objectives:

- Install Oracle Grid Infrastructure
- Install and configure Oracle Database 11g
- Configure Oracle Net services
- Monitor and administer undo data
- Manage the database storage structures
- Create and administer user accounts
- Perform basic backup and recovery of a database
- Manage data concurrency
- Monitor performance
- Describe Oracle Database Architecture

## Outlines:

### ***Exploring the Oracle Database Architecture***

- Oracle Database Architecture Overview
- Oracle ASM Architecture Overview
- Process Architecture
- Memory structures
- Logical and physical storage structures
- ASM storage components

### ***Installing your Oracle Software***

- Tasks of an Oracle Database Administrator
- Tools Used to Administer an Oracle Database
- Installation: System Requirements
- Oracle Universal Installer (OUI)
- Installing Oracle Grid Infrastructure
- Installing Oracle Database Software
- Silent Install

### ***Creating an Oracle Database***

- Planning the Database
- Using the DBCA to Create a Database
- Password Management
- Creating a Database Design Template
- Using the DBCA to Delete a Database

### ***Managing the Oracle Database Instance***

- Start and stop the Oracle database and components
- Use Oracle Enterprise Manager
- Access a database with SQLPlus
- Modify database installation parameters
- Describe the stages of database startup

- Describe database shutdown options
- View the alert log
- Access dynamic performance views

### ***Manage the ASM Instance***

- Set up initialization parameter files for ASM instance
- Start up and shut down ASM instances
- Administer ASM disk groups

### ***Configuring the Oracle Network Environment***

- Use Enterprise Manager to create and configure the Listener
- Enable Oracle Restart to monitor the listener
- Use tnsping to test Oracle Net connectivity
- Identify when to use shared servers and when to use dedicated servers

### ***Managing Database Storage Structures***

- Storage Structures
- How Table Data Is Stored
- Anatomy of a Database Block
- Space Management in Tablespaces
- Tablespaces in the Preconfigured Database
- Actions with Tablespaces
- Oracle Managed Files (OMF)

### ***Administering User Security***

- Database User Accounts
- Predefined Administrative Accounts
- Benefits of Roles
- Predefined Roles
- Implementing Profiles

### ***Managing Data Concurrency***

- Data Concurrency
- Enqueue Mechanism
- Resolving Lock Conflicts
- Deadlocks

### ***Managing Undo Data***

- Data Manipulation
- Transactions and Undo Data
- Undo Data Versus Redo Data
- Configuring Undo Retention

### ***Implementing Oracle Database Auditing***

- Describe DBA responsibilities for security
- Enable standard database auditing
- Specify audit options
- Review audit information
- Maintain the audit trail

## ***Database Maintenance***

- Manage optimizer statistics
- Manage the Automatic Workload Repository (AWR)
- Use the Automatic Database Diagnostic Monitor (ADDM)
- Describe and use the advisory framework
- Set alert thresholds
- Use server-generated alerts
- Use automated tasks

## ***Performance Management***

- Performance Monitoring
- Managing Memory Components
- Enabling Automatic Memory Management (AMM)
- Automatic Shared Memory Advisor
- Using Memory Advisors
- Dynamic Performance Statistics
- Troubleshooting and Tuning Views
- Invalid and Unusable Objects

## ***Backup and Recovery Concepts***

- Part of Your Job
- Statement Failure
- User Error
- Understanding Instance Recovery
- Phases of Instance Recovery
- Using the MTTR Advisor
- Media Failure
- Archive Log Files

## ***Performing Database Backups***

- Backup Solutions: Overview
- Oracle Secure Backup
- User-Managed Backup
- Terminology
- Recovery Manager (RMAN)
- Configuring Backup Settings
- Backing Up the Control File to a Trace File
- Monitoring the Flash Recovery Area

## ***Performing Database Recovery***

- Opening a Database
- Data Recovery Advisor
- Loss of a Control File
- Loss of a Redo Log File
- Data Recovery Advisor
- Data Failures
- Listing Data Failures
- Data Recovery Advisor Views

## ***Moving Data***

- Describe ways to move data
- Create and use directory objects
- Use SQL\*Loader to move data
- Use external tables to move data
- General architecture of Oracle Data Pump
- Use Data Pump export and import to move data

## ***Working with Support***

- Use the Enterprise Manager Support Workbench
- Work with Oracle Support
- Log service requests (SR)
- Manage patches

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