

ORACLE 11g DBA I

Duration: 5 days

Description

Through hands-on experience administering an Oracle 11g database, you will gain an understanding of the Oracle Server architecture, and you will learn how to expand the size of the database, implement security, and know why and how specific database administration tasks are performed.

Audience

Data analysts, database administrators, systems administrators, network managers, and technical support personnel

Prerequisites

Knowledge of SQL, the Introduction to Oracle 11g SQL and SQL* Plus course, or equivalent experience Introduction to Oracle 11g PL/SQL or equivalent experience is highly recommended

Topics

INTRODUCTION AND DUTIES OF THE DBA

- Oracle RDBMS Components
- DBA Responsibilities

TABLES, CONSTRAINTS, AND INDEXES

- Introduction to Datatypes and Tables
- Integrity Constraints
- Temporary Tables, Partitioned Tables (range, hash, list), External Tables, IOTs
- Indexes and Skip Scanning
- Online Reorganization
- Database Workspace Management

OTHER DATABASE SCHEMA OBJECTS

- DDL Commands Used
- Views, Materialized Views
- Sequences, Synonyms, Database Links
- Outlines, Dimensions, Hierarchies
- PL/SQL Program Units
- Supplied Packages
- Oracle Data Dictionary

- Storage of Large Objects (BFILEs, BLOBs, CLOBs)

STARTING AND STOPPING THE DATABASE

- What Tool to Use?
- Connecting as a Privileged User
- Password file authentication
- Starting a Database
- Shutting Down a Database
- Reading the Alert Log/Trace Files
- Quiescing the Database
- SPFILE / Parameter Management

HOW SPACE IS PHYSICALLY CONSUMED - BLOCKS AND EXTENTS

- Basic Definitions
- Blocks and Extents
- Fragmentation/Deallocation

HOW SPACE IS LOGICALLY CONSUMED - SEGMENTS

- Introduction to Segments
- Managing Undo Segments
- Automatic Undo Management
- Managing Sort Activity

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- Managing Data Segments
- Managing Index Segments
- Monitoring Database Segments

MANAGING TABLESPACES - DEFAULT BEHAVIOR OF CREATE TABLESPACE COMMAND

- Tablespace Overview
- System Tablespace
- Types of Tablespaces
- Creating Additional tablespaces
- Altering Tablespaces
- Temporary Tablespaces - Default
- Temporary Tablespaces
- Tablespace Quotas
- Monitoring Tablespaces

BASIC ORACLE ARCHITECTURE

- Architecture Overview
- Database Structures
- Process Structures
- Memory Structures - SGA
- Memory Structures - PGA
- Alternative Configurations

ORACLE DATABASE FILES

- Basic Structures of an Oracle RDBMS
- Data Files
- Redo Log Files
- Archived Redo Log Files
- Control Files
- Oracle-Managed Files (OMF)

USERS AND SECURITY

- Managing Database Users
- System/Object Privileges
- Managing Roles/Profiles
- Resource and Password Management
- The Virtual Private Database

NETWORKING

- Duties of the DBA for Networking
- Overview of Oracle Network Architecture
- Name Resolution
- Oracle Net Client Configuration
- Oracle Net Server Configuration
- Tools
- Configuring the Listener
- Shared Server

PHYSICAL NOARCHIVELOG MODE BACKUPS

- Oracle Database Backups
- Automatic Recovery Architecture
- NOARCHIVELOG Mode
- ARCHIVELOG Mode
- Physical Backups
- Closed Backups in NOARCHIVELOG Mode

CONFIGURING ARCHIVELOG MODE

PHYSICAL ARCHIVELOG MODE

BACKUPS

- Configuration of the Database for Archiving
- Setting the ARCHIVELOG Mode
- Establishing Multiple Archiving Destinations
- Closed Backups in ARCHIVELOG Mode
- Open Backups in ARCHIVELOG Mode
- Controlfile Backup

COMPLETE RECOVERY

- Recovery Structures and Processes
- Recovery in NOARCHIVELOG and ARCHIVELOG Mode

INCOMPLETE RECOVERY

- What is Incomplete Recovery?

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- Recovering from Loss of Current Redo Log Files

DATA LOADING

- SQL*Loader
- External Tables
- Data Pump

AUTOMATION TOOLS

- The New Enterprise Manager
- DB Console
- Mgt. & Advisory Framework
- Automated Workload Repository
- ADDM