Nutech Computer Training Institute

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OCA Oracle Database 12C: Installation and Administration

Oracle Database Administration

Exploring the Oracle Database Architecture

- List the architectural components of Oracle Database
- Explain the memory structures
- Describe the background processes
- Explain the relationship between logical and physical storage structures

Oracle Database Management Tools

- Use database management tools

Oracle Database Instance

- Understand initialization parameter files
- Start up and shut down an Oracle database instance
- View the alert log and access dynamic performance views

Configuring the Oracle Network Environment

- Configure Oracle Net Services
- Use tools for configuring and managing the Oracle network
- Configure client-side network
- Understand database resident connection pooling
- Configure communication between databases

Managing Database Storage Structures

- Describe the storage of table row data in blocks
- Create and manage tablespaces

Administering User Security

- Create and manage database user accounts

- Grant and revoke privileges
- Create and manage roles
- Create and manage profiles

Managing Space
- Explain how Oracle database server automatically manages space
- Save space by using compression
- Proactively monitor and manage tablespace space usage
- Use the Segment Advisor
- Reclaim wasted space from tables and indexes by using the segment shrink functionality
- Manage resumable space allocation

Managing Undo Data
- Explain DML and undo data generation
- Monitor and administer undo data
- Describe the difference between undo data and redo data
- Configure undo retention

Managing Data Concurrency
- Describe the locking mechanism and how Oracle manages data concurrency
- Monitor and resolve locking conflicts

Implementing Oracle Database Auditing
- Explain DBA responsibilities for security and auditing
- Enable standard database auditing and unified auditing

Backup and Recovery Concepts
- Identify the importance of checkpoints, redo log files, and archive log files

Backup and Recovery Configuration
- Configure the fast recovery area
- Configure ARCHIVELOG mode

Performing Database Backups
- Create consistent database backups
- Back up your database without shutting it down
- Create incremental backups
- Automate database backups
- Manage backups

Performing Database Recovery
- Determine the need for performing recovery

- Use Recovery Manager (RMAN) and the Data Recovery Advisor to perform recovery of the control file, redo log file and data file

Moving Data
- Describe ways to move data
- Use SQL*Loader to load data from a non-Oracle database
- Use external tables to move data via platform-independent files
- Use Data Pump Export and Import to move data between Oracle databases

Performing Database Maintenance
- Manage the Automatic Workload Repository (AWR)
- Use the Automatic Database Diagnostic Monitor (ADDM)
- Describe and use the advisory framework
- Set alert thresholds
- Use automated tasks

Managing Performance
- Use Enterprise Manager to monitor performance
- Use Automatic Memory Management
- Use the Memory Advisor to size memory buffers

Managing Performance: SQL Tuning
- Manage optimizer statistics
- Use the SQL Tuning advisor
- Use the SQL Access Advisor to tune a workload

Managing Resources Using Database Resource Manager
- Configure the Database Resource Manager
- Access and create resource plans
- Monitor the Resource Manager

Automating Tasks by Using Oracle Scheduler
- Use Oracle Scheduler to simplify management tasks
- Use job chains to perform a series of related tasks
- Use Scheduler jobs on remote systems
- Use advanced Scheduler features to prioritize jobs

Installing, Upgrading and Patching the Oracle Database

Oracle Software Installation Basics
- Plan for an Oracle Database software installation

Installing Oracle Grid Infrastructure for a Standalone Server

- Configure storage for Oracle Automatic Storage Management (ASM)
- Install Oracle Grid Infrastructure for a standalone server

Installing Oracle Database Software
- Install the Oracle Database software

Creating an Oracle Database Using DBCA
- Create a database by using the Database Configuration Assistant (DBCA)
- Generate database creation scripts by using DBCA
- Manage database design templates by using DBCA
- Configure database options by using DBCA

Using Oracle Restart
- Use Oracle Restart to manage components

Upgrading Oracle Database Software
- Describe upgrade methods
- Describe data migration methods
- Describe the upgrade process

Preparing to Upgrade to Oracle Database 12c
- Describe upgrade requirements when certain features or options are used in Oracle Database
- Use the pre-upgrade information tool before performing an upgrade
- Prepare the new Oracle home prior to performing an upgrade

Upgrading to Oracle Database 12c
- Upgrade the database to Oracle Database 12c by using the Database Upgrade Assistant (DBUA)
- Perform a manual upgrade to Oracle Database 12c by using scripts and tools

Performing Post-Upgrade Tasks
- Migrate to unified auditing
- Perform post-upgrade tasks

Migrating Data by Using Oracle Data Pump
- Migrate data by using Oracle Data Pump