SHI | TRAINING & ADOPTION

Course Outline

Oracle 19c Database Administration II
Course TTOR20619: 5 days Instructor Led

About this course

Geared for participants experienced with Oracle 19c DBA essentials Oracle 19c Database Administration Workshop II (Oracle DBA II) expands their understanding of Oracle database administration. Throughout the course students will explore coverage of Multitenant (CDB/PDB), database tuning, SQL tuning, and backup and recovery: the skills needed to keep a database running reliably and efficiently. The current release of the database is used for exercises and demonstrations, and the content back-ported as necessary for previous releases.

Audience profile

This hands-on course is geared for experienced DBAs with basic Oracle 19c skills.

At course completion

After completing this course, students will be able to:

- Creating CDBs and Regular PDBs
- Managing CDBs and PDBs
- Backup and Duplicate
- Upgrading and Transporting CDBs and Regular PDBs
- Backup Strategies and Terminology
- Restore and Recovery Concepts
- Using Flashback Technologies
- Duplicating a Database
- Installing Grid Infrastructure and Oracle Database
- Patching Grid Infrastructure and Oracle Database
- Upgrading to Oracle Grid Infrastructure
- Oracle Database 18c: New Features
- Using General Overall Database Enhancements
- Monitoring and Tuning Database Performance
- Managing Application PDBs
- Managing Security in Multitenant databases
- Recovery and Flashback
- Configuring and Using RMAN
- Diagnosing Failures
- Performing Recovery
- Transporting Data
- RMAN Troubleshooting and Tuning
- Creating an Oracle Database by using DBCA
- Oracle Restart
- Upgrading the Oracle Database
- Installing Grid Infrastructure for a Standalone server
- Using Availability Enhancements
- Tuning SQL Statements

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Creating CDBs and Regular PDBs

- Configure and create a CDB
- Create a new PDB from the CDB seed
- Explore the structure of PDBs

Manage CDBs and PDBs

- Manage PDB service names and connections
- Manage startup, shutdown and availability of CDBs and PDBs
- Change the different modes and settings of PDBs
- Evaluate the impact of parameter value changes
- Performance management in CDBs and PDBs
- Control CDB and PDB resource usage with the Oracle Resource Manager

Backup and Duplicate

- Perform Backup and Recover CDBs and PDBs
- Duplicate an active PDB
- Duplicate a Database

Upgrading and Transporting CDBs and Regular PDBs

- Upgrade an Oracle Database
- Transport Data

Backup Strategies and Terminology

- Perform Full and Incremental Backups and Recoveries
- Compress and Encrypt RMAN Backups
- Use a media manager
- Create multi-section backups of exceptionally large files
- Create duplexed backup sets
- Create archival backups
- Backup of recovery files
- Backup non database files
- Back up ASM meta data

Restore and Recovery Concepts

- Employ the best Oracle Database recovery technology for your failure situation
- Describe and use Recovery technology for Crash, Complete, and Point-in-time recovery

Using Flashback Technologies

- Configure your Database to support Flashback

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- Perform flashback operations

Duplicating a Database

- Duplicate Databases

Install Grid Infrastructure and Oracle Database

- Install Grid Infrastructure for a Standalone server
- Install Oracle Database software

Patching Grid Infrastructure and Oracle Database

- Patch Grid Infrastructure and Oracle Database

Upgrading to Oracle Grid Infrastructure

- Upgrade Oracle Grid Infrastructure

Oracle Database 18c: New Features

- Image and RPM based Database Installation

Using General Overall Database Enhancements

- Install Oracle Database software
- Create, Delete and Configure Databases using DBCA
- Creating CDBs and Regular PDBs
- Use Miscellaneous 19c New Features

Monitoring and Tuning Database Performance

- Managing Memory Components
- Understanding the Automatic Workload Repository (AWR)
- Understanding the Advisory Framework
- Monitoring Wait Events, Sessions, and Services
- Managing Metric Thresholds and Alerts
- Understanding and Using the Performance Tuning Methodology
- Performing Performance Planning
- Understanding the Automatic Database Diagnostic Monitor (ADDM)

Manage Application PDBs

- Explain the purpose of application root and application seed
- Define and create application PDBs
- Install, upgrade and Patch applications
- Create and administer Application PDBS
- Clone PDBs and Application containers

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- Plug and unplug operations with PDBs and application containers
- Comparing Local Undo Mode and Shared Undo Mode

Manage Security in Multitenant databases

- Manage Security in Multitenant databases
- Manage PDB lockdown profiles
- Audit Users in CDBs and PDBs
- Manage other types of policies in application containers

Recovery and Flashback

- Restore and Recovering Databases with RMAN
- Perform CDB and PDB flashback

Configuring and Using RMAN

- Configure RMAN and the Database for Recoverability
- Configure and Using an RMAN recovery catalog

Diagnosing Failures

- Detect and repair database and database block corruption
- Diagnosing Database Issues

Performing Recovery

- Restore and Recovering Databases with RMAN
- Perform Non RMAN database recovery

Transporting Data

- Transport Data

RMAN Troubleshooting and Tuning

- Interpret the RMAN message output
- Diagnose RMAN performance issues

Creating an Oracle Database by using DBCA

- Create, Delete and Configure Databases using DBCA

Oracle Restart

- Configure and use Oracle Restart to manage components

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Upgrade the Oracle Database

- Plan for Upgrading an Oracle Database
- Upgrade an Oracle Database
- Perform Post-Upgrade tasks

Install Grid Infrastructure for a Standalone server

- Rapid Home Provisioning

Using Availability Enhancements

- Use an RMAN recovery catalog
- Use Flashback Database

Tuning SQL Statements

- Understanding the Oracle Optimizer
- Using the SQL Tuning Advisor
- Managing Optimizer Statistics
- Using the SQL Access Advisor
- Understanding the SQL Tuning Process