Oracle Database 18c: New Features for Administrators

This course provides an overview of the Oracle Database 18c new features and enhancements related to Multitenant architecture, security, RMAN, general database areas, performance, data warehousing and Sharding.

Learn To

This course provides an overview of the Oracle Database 18c new features and enhancements related to Multitenant architecture, security, RMAN, general database areas, performance, data warehousing and Sharding.

Learn To:

- Use new features like Application PDB Fleet and PDB snapshots carousel of the Multitenant architecture.
- Understand new features like PDB keystores and encryption of sensitive data in Database Replay files of the Security.
- Benefit from new features like reuse of preplugin backups and duplication of active PDBs into an existing CDB of RMAN.
- Use new features like private temporary tables and online modification of partitioning and subpartitioning strategy of General Database.
- Configure and use new features like Automatic In-Memory Management in Performance.
- Manipulate new features like inline external tables and polymorphic table functions of the Data Warehousing.
- Understand enhancements like user-defined sharding method and support for PDBs as shards in Sharding.

Benefits to You

The Multitenant architecture lesson covers CDB fleet, PDB snapshots carousel, dynamic container map, lockdown profile inheritance, static & dynamic lockdown profiles, refreshable copy PDB switchover, parallel statement queuing at PDB level and PDB cloning with DBCA.

The Security lesson covers schema only accounts, PDB keystore in isolated mode versus united mode, user-defined TDE master key, export and import database links, encryption of sensitive data in Database Replay files, Database Replay capture and replay with Database Vault,and direct Active Directory Services integration.

The RMAN lesson covers reuse of preplugin backups before and after a non-CDB conversion as a PDB or of a PDB migration to another CDB, clone of active PDBs into another CDB using DUPLICATE command, duplication of on-premises CDBs to Cloud as encrypted.

The General Database lesson covers private temporary tables, Data Pump import with a new option of the DATA_OPTIONS parameter, online modification of partitioning and subpartitioning strategy, online merging partitions and subpartitions, batched DDL generation by using DBMS_METADATA_DIFF package, and benefit from Unicode 9.0 Support.

The Performance lesson covers configuration and usage of Automatic In-Memory, IMEs window capture, memoptimized rowstore feature and use of In-Memory Hash Index structures, description of the new SQL Tuning Set package, the concurrency of SQL execution of SQL Performance Analyzer tasks, the SQL Performance Analyzer Result Set Validation, SQL Exadata-aware profile.

The Data Warehousing lesson covers query inlined external tables, in-memory external tables, analytic view new query capabilities, polymorphic table functions and the new functions for approximate Top-N queries.

The Sharding lesson covers the user-defined sharding method, support for PDBs as shards, Oracle GoldenGate enhancements for Oracle Sharding support, query system objects across shards, how to set

multi-shard query data consistency level, sharding support for JSON, LOBs, and spatial objects, improved multi-shard query enhancements, and where to find Oracle Sharding documentation in Oracle Database 18c.

Hands-on Practices and Demonstrations

Hands-on practices and available demonstrations help you learn how to use these new or enhanced features of Oracle Database 18c.

Prerequisites

Suggested Prerequisite

- Oracle Database 12c R2: New Features for Administrators Part 1 Ed 1
- Oracle Database 12c R2: New Features for Administrators Part 2 Ed 1
- Oracle Database 12c R2: High Availability New Features Ed 1

Required Prerequisite

- Knowledge of Oracle Database 11g R2 and 12c

Audience

- Database Administrator
- Developer

Course Objectives

- Use new features of the Multitenant architecture
- Understand and benefit from new features of the Database Security
- Benefit from new features of RMAN
- Use new features of General Database
- Configure and use new features in Performance
- Manipulate new features of the Data Warehousing
- Understand enhancements in Sharding

Course Topics

Leveraging Multitenant Enhancements

- Manage application PDBs fleet
- Manage PDB snapshots carousel
- Benefit from dynamic container map
- Understand lockdown profile inheritance and create and use static and dynamic lockdown profiles
- Use refreshable copy PDB switchover

Managing Security

- Create and use a schema only account
- Isolate PDB keystores
- Export and import database links
- Configure encryption of sensitive data in Database Replay files
- Explain direct Active Directory Services integration

Using RMAN Enhancements

- Reuse preplugin backups before and after a non-CDB conversion as a PDB or a PDB migration to another CDB
- Clone active PDB into another CDB using DUPLICATE and duplicate an on-premises CDB to Cloud as encrypted

Applying General Database Enhancements

- Manage private temporary tables
- Use the new Data Pump Import option of the DATA_OPTIONS parameter
- Online modification of partitioning and subpartitioning strategy
- Merging of partitions and subpartitions online
- Generate batched DDL by using DBMS_METADATA_DIFF package

Improving Performance

- Configure Automatic In-Memory
- Use IMEs window capture
- Describe the new SQL Tuning Set package
- Describe the concurrency of SQL execution of SQL Performance Analyzer tasks and Result Set Validation

Handling Enhancements in Big Data and Data Warehousing

- Query inlined external tables and manage in-memory external tables
- Use analytic view new query capabilities
- Create and use polymorphic table functions

Describing Sharding Enhancements

- Describe the user-defined sharding method
- Understand support for PDBs as shards
- Describe Oracle GoldenGate enhancements for Oracle Sharding support
- Query system objects across shards
- Describe improved multi-shard query enhancements