

ORACLE 12C DBA NEW FEATURES

1. About Multitenant Container Database and Pluggable Databases

- Benefits of Multitenant architecture
- Adding User Data
- Separating SYSTEM and user data
- SYSTEM objects in the user container
- Naming the Containers
- Common and Local Users
- Common and Local Privileges and Roles
- Shared and Non Shared Objects
- Data Dictionary Views

2. Creating Multitenant Container Database and Pluggable Databases

- Steps to create multitenant Database
- Creating multitenant database using SQL * Plus
- Creating multitenant database using dbca
- SEED FILE_NAME_CONVERT
- ENABLE PLUGGABLE DATABASE
- New in CDB
- Data Dictionary Views
- DBMS_PDB
- Clone PDBs
- Plug Unplugged PDB in to CDB
- Dropping a PDB
- Migrating pre 12.1 Databases to 12.1 CDB

3. Managing Multitenant Container Database and Pluggable Databases

- Switching Connections
- Starting up a CDB instance
- Mounting a CDB
- Opening a CDB
- Opening a CDB
- Closing PDB
- Shutting down a CDB instance
- Automatic PDB Opening
- Changing PDB Mode
- Modifying PDB Settings

4. Managing Tablespaces and Users in CDB and PDBs

- Tablespaces in PDBs
- Creating permanent tablespaces in a CDB

- Assigning Default Tablespaces
- Creating Local Temporary Tablespaces
- Assigning Default Temporary Tablespaces
- Users, Roles and Privileges
- Local Users, Roles and Privileges
- Creating a Local User
- Common Users
- Creating a Common User
- Common and Local users/Schemas
- Common and Local Privileges
- Granting and Revoking Privileges
- Creating Common and Local Roles
- Creating Shared and Non-Shared Objects
- Restriction on Definers Rights

5. Backup, Recovery and Flashback CDBs and PDBs

- New Syntax and Clauses in RMAN
- CDB Backup
- User Managed Hot CDB backup
- Partial CDB Backup
- Whole PDB Backup
- Partial PDB Backup
- Recovery
- Instance Failure
- NOARCHIVELOG mode
- CDB or PDB Temp File Recovery
- Control file Loss
- Redo Log File Loss
- Root SYSTEM or UNDO data File
- Root SYSAUX Data File
- PDB System data file
- PDB Non-System Data file
- PITR
- Flashback CDB
- RC_PDBS
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6. Heat Map, Automatic Data Optimization and online data file and partition move

- ILM Challenges and Solutions
- ILM Components
- ILM Solutions
- Automatic Data Optimization
- Heat Map and ADO
- Enabling Heat Map

- Monitoring Statistics – Segment Level, Block Level, Extent Level
- Compression Levels and Types
- Storage Tiering
- Read Only Tiering
- Multiple Segment policies on a segment
- Displaying Policies
- Monitoring Evaluation and Execution
- ADO DDL
- Turning ADO on and off
- Stopping Activity Tacking
- Online Move Database
- Compression
- REUSE and KEEP
- States
- Online Move Partition
- Archiving Challenges

7. In-Database Archiving and Temporal

- In-database Archiving
- Session Visibility Control
- Disable Row Archival
- Temporal Database

8. Auditing

- Types of Auditing
- Audit Trail Implementation
- Audit Architecture
- Tolerance Level for Loss of Audit Records
- Basic Vs Extended Audit Information
- Data Pump Audit
- RMAN Audit
- Unified Audit Implementation
- Security Auditing
- Creating Audit Policy
- Viewing Audit Policy
- Enabling/Disabling Policy
- Predefined Policies
- Dropping Audit Policy
- Audit Clean Up

9. Privileges

- New Administrative Privileges
- SYSBACKUP
- SYSDG
- SYSKM

- Auditing Privileges
- Purge DBA_RECYCLEBIN
- Privilege Analysis
- Analyzing and Reporting
- System and Object Used Privileges
- Compare Used and Unused Privileges
- Dropping and Analysis
- Privilege Checking During PL/SQL Calls

10. Oracle Data Redaction

- Data Redaction and Operational Activities
- Redaction Methods
- Managing Redaction Policies
- Full & Partial Redaction
- Regular Expression
- Exempting Users from Redaction Policies

11. RMAN New Features

- Separation DBA Duties
- Using SQL in RMAN
- Backing Up & Restoring Very Large Files
- RMAN Duplication Enhancements
- Duplicating an Active Database
- NOOPEN option
- Duplicating Pluggable databases
- Recovering Databases with Third Party Snapshots
- Transporting Data Across Platforms
- Transporting database
- Table Recovery
- Recovering Tables from Backup

12. Real-Time Database Operation Monitoring

- Defining a DB operation
- Scope of a Composite DB Operation
- Identifying a Database Operation
- Enabling Monitoring of Database operations
- Identifying, starting and completing a Database operation
- Monitoring the progress of database operation
- Monitoring Load Database operation
- Reporting Database operations
- Database operation Tuning

13. Schema and Data Change Management

- Change Management Pack Components
- Dictionary Base lines

- Dictionary Comparisons
- Dictionary Synchronization
- Change Requests
- Schema Synchronization
- Creating a Database comparison
- Comparison Job and Results

14. SQL Tuning Enhancements

- SQL Plan Baseline: Architecture
- SQL Plan Management
- Adaptive SQL Plan Management
- Automatically Evolving SQL plan Baseline
- Adaptive Execution Plans
- Dynamic Plans
- Reoptimization
- Cardinality Feedback
- Automatic Re-optimization
- SQL Plan Directives
- Histogram Enhancements
- Automatic Dynamic Sampling

15. Emergency Monitoring, Real Time ADDM, Compare period ADDM and ASH

- Emergency Monitoring
- Real Time ADDM
- DBMS_ADDM Package
- AWR Compare Periods Report
- Preserved Snapshot Sets
- AWR Comparison with AWR Snapshot Sets
- Workload Compatibility
- Comparison Modes
- Report: Configuration
- Report: Finding
- Report: Resource CPU and I/O
- Report: Resource Memory
- ASH
- Top Activity Page
- ASH Annalistic Page

16. Resource Manage and Other performance Enhancements

- Resource Manager
- Managing Resources between PDBs
- CDB Resource Plan
- Creating a CDB Resource Plan
- Viewing Resource Plan Directives

- Enabling a CDB Resource Plan
- Manages Resource within a PDB
- Managing PDB Resource Plans
- Run away queries and Resource Manager
- Multi process, Multi Threaded Unix/Linux Architecture
- Multi Process, Multi Threaded Architecture Setup
- Database Smart Flash Cache
- Enabling and Disabling Flash Devices
- Temporary Undo
- Temporary Undo Setup
- Temporary Undo Monitoring

17. Tables, Indexes and online operations enhancements

- Multiple Indexes on Same set of Columns
- Invisible and Hidden Columns
- Online Redefinition
- Advanced Row Compression
- LOB Compression
- Compression Advisor
- ONLINE drop Index or Constraint
- Index Unusable

18. ADR and Network enhancements

- ADR File Types
- ADRCI command
- Network Compression
- SDU Size

19. Oracle Data pump, SQL * Loader and External Table enhancements

- Full Transportable Export/Import
- Transporting a Database over network
- Disabling logging for Data pump
- Exporting Views as Tables
- SQL Loader Enhancements

20. Partitioning Enhancements

- Online Partition Operation: Compression
- Enhancement to reference partitioning
- Interval Reference Partitioning
- Truncate Table Cascade
- Multi- partition Maintenance