Oracle Database 12c: Advanced Administration

Exam Number: 1Z0-063

Backup and Recovery

Oracle Data Protection Solutions

- Explain Oracle backup and recovery solutions

    o Describe types of database failures

    o Describe the tools available for backup and recovery tasks

    o Describe RMAN and maximum availability architecture

    o Use the SYSBACK privilege

    o Use RMAN stand-alone and job commands

Performing Basic Backup and Recovery

- Back up and recover a NOARCHIVELOG database

- Perform backup and recovery in NOARCHIVELOG mode

- Use SQL in RMAN

Configuring for Recoverability

- Configure and manage RMAN settings

    o Configure persistent settings for RMAN

    o View persistent settings

    o Specify a retention policy

- Configure the Fast Recovery Area

    o Explain the Fast Recovery Area

    o Configure the Fast Recovery Area

- Configure control files and redo log files for recoverability

    o Multiplex control files

    o Multiplex redo log files

Using the RMAN Recovery Catalog

- Create and use an RMAN recovery catalog

  - Configure a recovery catalog

  - Register target databases in a recovery catalog

  - Catalog additional backup files

  - Resynchronize a recovery catalog

  - Use and maintain RMAN stored scripts

  - Upgrade and drop a recovery catalog

- Protect the RMAN recovery catalog

  - Back up the recovery catalog

  - Re-create an unrecoverable recovery catalog

  - Export and import the recovery catalog

Implementing Backup Strategies

- Use various RMAN backup types and strategies

  - Enable ARCHIVELOG mode

  - Create tape and disk based backups

  - Create whole database backups

  - Create consistent and inconsistent backups

  - Create backup sets and image copies

  - Create backups of read-only tablespaces

  - Employ best practices for data warehouse backups

Performing Backups

- Perform full and incremental backups

  - Create full and incremental backups

  - Use the Oracle-suggested backup strategy

- Manage backups

  - Configure and monitor block change tracking

  - Report on backups using LIST, REPORT commands

- Manage backups using CROSSCHECK, DELETE commands

Configuring RMAN Backup Options and Creating Backup of Non-Database Files

- Use techniques to improve backups

  - Create compressed backups

  - Create multi-section backups of very large files

  - Create proxy copies

  - Create duplexed backup sets

  - Create backups of backup sets

  - Create archival backups

- Perform backup of non-database files

  - Back up a control file to trace

  - Back up archived redo log files

  - Back up ASM diskgroup metadata

Using RMAN-Encrypted Backups

- Create RMAN-encrypted backups

  - Use transparent-mode encryption

  - Use password-mode encryption

  - Use dual-mode encryption

  - Restore encrypted backups

Diagnosing Failures

- Describe the Automatic Diagnostic Workflow

  - Use the Automatic Diagnostic Repository

  - Use ADRCI

  - Find and interpret message output and error stacks

  - Use the Data Recovery Advisor

- Handle block corruption

  - Detect block corruption using RMAN

  o Perform block recovery using RMAN

Performing Restore and Recovery Operations

- Describe and tune instance recovery

- Perform complete and incomplete recovery

  o Use RMAN RESTORE and RECOVER commands

  o Restore ASM disk groups

  o Recover from media failures

  o Perform complete and incomplete or "point-in-time" recoveries using RMAN

Recovering Files Using RMAN

- Perform recovery for spfile, control file, redo log files

- Perform table recovery from backups

- Perform recovery of index and read-only tablespaces, temp file

- Restore a database to a new host

Using Oracle Secure Backup

- Configure and use Oracle Secure Backup

Using Flashback Technologies

- Describe the Flashback technologies

  o Configure a database to use Flashback technologies

  o Guarantee undo retention

- Use Flashback to query data

  o Use Flashback Query

  o Use Flashback Version Query

  o Use Flashback Transaction Query

  o Flash back a transaction

- Perform Flashback Table operations

  o Perform Flashback Table

  o Restore tables from the recycle bin

- Describe and use Flashback Data Archive

    o Use Flashback Data Archive

    o Use DBMS_FLASHBACK_ARCHIVE package

Using Flashback Database

- Perform Flashback Database

    o Configure Flashback Database

    o Perform Flashback Database

Transporting Data

- Describe and use transportable tablespaces and databases

    o Transport tablespaces between databases using image copies or backup sets

    o Transport databases using data files or backup sets

    o Transport data across platforms

Duplicating a Database

- Choose a technique for duplicating a database

    o From an active database, connected to the target and auxiliary instances

    o From backup, connected to the target and auxiliary instances

    o From backup, connected to the auxiliary instance, not connected to the target, but with recovery catalog connection

    o From backup, connected to the auxiliary instance, not connected to the target and the recovery catalog

    o Duplicate a database with RMAN

- Create a backup-up based duplicate database

- Duplicate a database based on a running instance

Monitoring and Tuning of RMAN Operations

- Tune RMAN performance

    o Interpret RMAN error stacks

    o Diagnose performance bottlenecks

- o Tune RMAN backup performance

Managing Pluggable and Container Databases

Introduction

Multitenant Container and Pluggable Database Architecture

- Describe the multitenant container database architecture

- Explain pluggable database provisioning

Creating Multitenant Container and Pluggable Databases

- Configure and create a CDB

- Create a PDB using different methods

- Unplug and drop a PDB

- Migrate a non-CDB database to PDB

Managing a CDB and PDBs

- Establish connections to CDB/PDB

- Start up and shut down a CDB and open and close PDBs

- Evaluate the impact of parameter value changes

Managing Storage in a CDB and PDBs

- Manage permanent and temporary tablespaces in CDB and PDBs

Managing Security in a CDB and PDBs

- Manage common and local users

- Manage common and local privileges

- Manage common and local roles

- Enable common users to access data in specific PDBs

Managing Availability

- Perform backups of a CDB and PDBs

- Recover PDB from PDB datafiles loss

- Use Data Recovery Advisor

- Duplicate PDBs using RMAN

Managing Performance

- Monitor operations and performance in a CDB and PDBs

- Manage allocation of resources between PDBs and within a PDB

- Perform Database Replay

Moving Data, Performing Security Operations and Interacting with Other Oracle Products

- Use Data Pump

- Use SQL*Loader

- Audit operations

- Use Other Products with CDB and PDBs - Database Vault, Data Guard, LogMiner