

## ORA1134

### Oracle Database 12c: Backup and Recovery Workshop

Durata: 5 gg

#### Descrizione

Questo corso Oracle Database 12c: Backup e Recovery workshop vi insegnerà come valutare le proprie esigenze di recupero. Potrai sviluppare strategie appropriate per il backup, il ripristino e procedure di recupero dagli scenari previsti.

#### OBIETTIVI

Al termine del corso gli allievi saranno in grado di:

- Descrivere i metodi di backup Oracle Database e le operazioni di recupero che possono essere utilizzati per risolvere errori del database
- Descrivere i componenti dell'architettura Oracle Database relativi ad operazioni di backup e ripristino
- Pianificare procedure di backup e recovery efficaci
- Configurare il database perché sia recuperabile
- Utilizzare Recovery Manager (RMAN) per creare copie di backup ed eseguire le operazioni di recupero
- Utilizzare il Recovery Advisor Data per diagnosticare e riparare i guasti
- Utilizzare Oracle Flashback Technologies per recuperare da un errore umano
- Eseguire un backup del database crittografato e il relativo ripristino
- Eseguire recupero point-in-time dell'alta disponibilità
- Descrivere ulteriori caratteristiche di alta disponibilità come Oracle Data Guard.

#### A chi è rivolto?

Professionisti IT.

#### Prerequisiti

Per partecipare con profitto a questo corso è necessario che gli allievi possiedano i seguenti prerequisiti:

Prerequisiti obbligatori:

- Conoscenza di Oracle Database 12c
- La conoscenza di SQL e PL / SQL
- Oracle Database 12c: Amministrazione Officina NUOVO

Prerequisiti suggeriti:

- Utilizzo di Oracle Enterprise Manager 12c Cloud Control NUOVO

#### Contenuti

Introduction

- Curriculum Context

- Assess your Recovery Requirements
- Categories of failures
- Oracle Backup and Recovery Solutions
- Oracle Maximum Availability Architecture
- Oracle Secure Backup
- Benefits of using Oracle Data Guard
- Basic Workshop Architecture

#### Getting Started

- Core Concepts of the Oracle Database, Critical for Backup and Recovery
- Oracle DBA Tools for Backup and Recovery
- Connecting to Oracle Recovery Manager (RMAN)
- Quick Start: A Problem-Solution Approach

#### Configuring for Recoverability

- RMAN commands
- Configuring and managing persistent settings
- Using the Fast Recovery Area (FRA)
- Control File
- Redo Log File
- Archiving Logs

#### Using the RMAN Recovery Catalog

- Creating and Configuring the Recovery Catalog
- Managing Target Database Records in the Recovery Catalog
- Using RMAN Stored Scripts
- Maintaining and Protecting the Recovery Catalog
- Virtual Private Catalogs

#### Backup Strategies and Terminology

- Backup Solutions Overview and Terminology
- Balancing Backup and Restore Requirements
- Backing Up Read-Only Tablespaces
- Best Practices for Data Warehouse Backups
- Additional Backup Terminology

#### Performing Backups

- RMAN Backup Types
- Incrementally Updated Backups
- Fast Incremental Backup
- Block Change Tracking
- Oracle-Suggested Backup
- Reporting on Backups
- Managing Backups

#### Improving Your Backups

- Compressing Backups
- Using a Media Manager
- Creating RMAN Multisection Backups, Proxy Copies, Duplexed Backup Sets and Backups of Backup Sets
- Creating and Managing Archival Backups
- Backing Up Recovery Files

- Backing Up the Control File to a Trace File
- Cataloging Additional Backup Files
- Backing Up ASM Disk Group Metadata

#### Using RMAN-Encrypted Backups

- Creating RMAN-Encrypted Backups
- Using Transparent-Mode Encryption
- Using Password-Mode Encryption
- Using Dual-Mode Encryption

#### Diagnosing Database Failures

- Reducing Problem Diagnosis Time
- Automatic Diagnostic Repository
- Interpreting RMAN Message Output and Error Stacks
- Data Recovery Advisor
- Diagnosing Data File Loss (file system and ASM)
- Handling Block Corruption

#### Restore and Recovery Concepts

- Restoring and Recovering
- Instance Failure and Instance/Crash Recovery
- Media Failure
- Complete Recovery (Overview)
- Point-in-Time Recovery (Overview)
- Recovery Through RESETLOGS

#### Performing Recovery, Part 1

- RMAN Recovery in NOARCHIVELOG Mode
- Performing Complete Recovery (of critical and noncritical data files)
- Restoring ASM Disk Groups
- Recovery with Image Files
- Performing Point-in-Time (PITR) or Incomplete Recovery
- Table Recovery from Backups

#### Performing Recovery, Part 2

- Recovery of Server Parameter File, Control File
- Redo Log File Loss and Recovery
- Password Authentication File Re-creation
- Index, Read-Only Tablespace, and Tempfile Recovery
- Restoring the Database to a New Host
- Disaster Recovery
- Restoring RMAN Encrypted Backups

#### RMAN and Oracle Secure Backup

- Oracle Secure Backup Overview
- Oracle Database Disk and Tape Backup Solution
- Backing Up the Fast Recovery Area to Tape
- Defining Retention for RMAN Backups
- RMAN and Oracle Secure Backup Basic Process Flow
- Integration with Cloud Control
- RMAN Database Backup to Tape

## Performing Tape Backups and Restores

- Scheduling Backups with EM
- Oracle-Suggested Backup
- RMAN and OSB Process Flow
- RMAN and Oracle Secure Backup Jobs
- Managing Database Tape Backups
- Performing Database Recovery
- RMAN Automatic Failover to Previous Backup

## Using Flashback Technologies

- Flashback Technology: Overview and Setup
- Using Flashback Technology to Query Data
- Flashback Table
- Flashback Transaction (Query and Backout)
- Flashback Drop and the Recycle Bin
- Flashback Data Archive

## Using Flashback Database

- Flashback Database Architecture
- Configuring Flashback Database
- Performing Flashback Database
- Best Practices for Flashback Database

## Managing Backup Space or Transporting Data

- Transporting Tablespaces
- Transporting Databases

## Duplicating a Database

- Using a Duplicate Database
- Choosing Database Duplication Techniques
- Creating a Backup-up Based Duplicate Database
- Understanding the RMAN Duplication Operation
- Using Cloud Control to Clone a Database

## RMAN Performance and Tuning

- Tuning Principles
- RMAN Multiplexing
- Diagnosing Performance Bottlenecks
- Restore and Recovery Performance Best Practices

## Backup and Recovery Workshop

- Workshop Structure
- Workshop Approach to Solving Failure Scenarios
- Business Requirements for Database Availability and Procedures