Oracle Database 12c R2: ASM Administration

This Oracle Database 12c R2: ASM Administration training teaches you about Oracle ASM architecture. Expert Oracle University instructors will help you develop a deeper understanding of both standard ASM and Flex ASM applications. In this course, you will be introduced to Oracle Database Exadata Cloud Service.

Learn To:

- Administer ASM files, directories, templates, and disk groups.
- Manage and administer Oracle ASM File System and its components.
- Gain an understanding of ASM New Features.
- Gain an understanding of the Oracle Database Exadata Cloud Service.

Benefits to You

Ensure fast, reliable, secure and easy to manage performance. Optimize database workloads, lower IT costs and deliver a higher quality of service by enabling consolidation onto database clouds by learning about the Oracle Database 12c Grid Infrastructure, specifically Oracle ASM.

Prerequisites

Suggested Prerequisite

- Working knowledge of Oracle Clusterware, ASM & RAC on Linux
- Oracle Database 12c R2: RAC Administration
- Oracle Database 12c R2: Clusterware Administration

Required Prerequisite

- Oracle Database 12c R2: Clusterware Administration Ed 2
- Oracle Database 12c R2: RAC Administration Ed 2
- Oracle Database 12c R2: Clusterware Administration
- Working knowledge of Oracle Database 11g: Release 2 on Linux Operating System

- Oracle Database 12c R2: Clusterware Administration

Audience

- Administrator
- Database Administrator

Objectives

- Manage ASM instances and associated processes
- Monitor ASM using the V$ASM dynamic performance views
- Manage Flex ASM
- Understand Flex ASM architecture and components
- Manage Flex ASM Disk Group
- Create and delete Automatic Storage Management (ASM) disk groups
- Employ ASM space management techniques
- Set the attributes of an existing ASM disk group
- Perform ongoing maintenance tasks on ASM disk groups
- Explain key performance and scalability considerations for ASM disk groups
- Use different client tools to access ASM files
- Describe the format of a fully qualified ASM file name
- Describe the Automatic Storage Management (ASM) architecture
- Describe the components of ASM
- Understand ASM Deployment Alternatives
- Explain and apply Automatic Storage Management (ASM) initialization parameters

Topics

- Oracle ASM Overview
    - Overview of ASM
    - ASM Placement in Storage Stack
    - ASM Cluster Configuration for Oracle RAC
    - ASM Software Installation
    - ASM Key Components
    - ASM Instance Designs
    - ASM Utilities
- Administering ASM Instance
    - Operating with Different releases of Oracle ASM and Database Instances
    - Managing ASM instance with various tools
    - Instance Startup and Shutdown
    - ASM Instance Parameters
    - Adjusting ASM Instance Parameters in SPFILEs
    - ASM System Privileges
    - ASM OS Groups and Role Separation
    - ASM Instance Connection modes
- Flex ASM
    - Flex ASM Architecture
    - Background and Overview
    - ASM Deployment Alternatives
    - Configuring Flex ASM
    - Managing Flex ASM
    - Relocating an ASM Client
    - ASM IO Services and Configuration

- Administering ASM Disk Groups Part 1 & Part 2
  - ASM Disk Group Overview
  - Disk Group Attributes
  - Compatibility Attributes
  - Disk Group Management
  - Disk Group Metadata
  - Viewing Connected Clients
  - Extending an Existing Disk Group
  - Dropping Disks from an Existing Disk Group
- Administering ASM Disk Groups Part 1 & Part 2
  - Adding and Dropping in the same command
  - Undropping Disks in Disk Groups
  - Replacing Disks in Disk Group
  - Renaming Disk Groups
  - Resizing Disks in Disk Groups
  - Mounting and Dismounting Disk Groups
  - Dropping Disk Groups
  - ASM Disk Group Rebalance and Priority Ordered Rebalance
- Flex ASM Disk Group
  - ASM Database-Oriented Storage Management
  - ASM Flex Disk Groups Characteristics
  - ASM File Groups
  - ASM Quota Groups
  - Administering File Groups and Quota Groups
  - Prioritized Rebalancing for File Groups
- Administering ASM Files, Directories, and Templates
  - Interaction Between Database Instances and ASM
  - Accessing ASM Files
  - Fully Qualified ASM File Names
  - ASM File Creation
  - View ASM Aliases, Files, and Directories
  - ASM Directories Overview
  - Managing ASM Directories
  - Managing Alias File Names
- Administering Oracle ASM Cluster File System
  - Overview of Oracle ACFS
  - Oracle ASM Dynamic Volume Manager
  - Oracle ACFS Integration with Oracle ASM
  - Oracle ACFS Administration
  - Clusterware Resources and ACFS Administration
  - ACFS and Dismount or Shutdown Operations
  - ACFS Snapshots
- ACFS/ADVM Enhancements
  - Oracle ACFS Automatic Resize
  - Oracle ACFS Scrubbing
  - Oracle ACFS Defragger
  - Oracle ACFS Metadata Collection
  - Oracle Metadata Acceleration
  - 4K Sector Support for Oracle ACFS and Metadata
  - Oracle ACFS Compression
  - Oracle ACFS Spare Files
- Oracle Database Exadata Cloud Service Overview
  - Introducing Exadata Cloud Service
  - Service Configuration Options & Service Connection Options

- Service Architecture & Availability
- Management Responsibilities
- Storage Configuration & Management Details
- Simple Web-Based Provisioning & Management
- REST APIs
- Migrating to Exadata Cloud Service