Exadata and Database Machine Administration Seminar

Duration: 2 Days

What you will learn

The first section of this course introduces you to Exadata Storage Server X2-2 (formerly known as Exadata Storage Server Version 2). You'll learn about the architecture and key capabilities of Exadata, along with how to configure, monitor and optimize it.

Learn To:
- Describe what Exadata is and how it differs from traditional database storage.
- List the key capabilities and features of Exadata and DBM.
- Configure DBM.
- Implement Exadata security.
- Maintain DBM and perform various maintenance tasks.
- Monitor DBM using alerts, thresholds, metrics, current activities, SQL plans, V$ views and database statistics.
- Maintain, monitor and optimize the Database Machine after initial configuration.

Part 2

The second section of this course introduces you to the Oracle Exadata Database Machine. You'll learn about the various Database Machine configurations, while reviewing the installation and configuration process. This will help you make appropriate up-front configuration decisions.

You'll also review various options for migrating to the Database Machine, while learning how to select the best approach. Where possible, the topics are reinforced through demonstrations.

Audience

Data Warehouse Administrator
Database Administrators
Database Designers
Technical Administrator

Related Training

*Required Prerequisites*

- Oracle Database 11g: Administration Workshop II Release 2
- Oracle Database 11g: Administration Workshop I Release 2
- Oracle 11g: RAC and Grid Infrastructure Overview Seminar Release 2

*Suggested Prerequisites*

- Networking (inc. Infiniband)
Oracle Enterprise Linux: System Administration

Relevant Hardware Training

System and Storage Administration Concepts

Course Objectives
Describe the key capabilities of Exadata and Database Machine

Identify the benefits of using Database Machine for different application classes

Describe the architecture of Database Machine and its integration with Oracle Database, Clusterware and ASM

Complete the initial configuration of Database Machine

Describe various recommended approaches for migrating to Database Machine

Configure Exadata I/O Resource Management

Monitor Database Machine health and optimize performance

Course Topics

Introduction
Course Objectives
Audience and Prerequisites
Course Scope
Course Contents
Terminology
Additional Resources

Exadata Overview
Traditional Enterprise Database Storage Deployment
Exadata Storage Deployment & Exadata Implementation Architecture Overview
Introducing Exadata
Exadata Hardware Details (Sun Fire X4270 M2) & Exadata Specifications
InfiniBand Network
Classic Database I/O and SQL Processing Model
Exadata Smart Scan Model & Exadata Smart Storage Capabilities
Exadata Hybrid Columnar Compression Architecture Overview, Exadata Smart Flash Cache & Exadata Storage Index

Exadata Architecture
Exadata Software Architecture Overview
Exadata Software Architecture Details
Exadata Smart Flash Cache Architecture
Exadata Monitoring Architecture
Disk Storage Entities and Relationships
Interleaved Grid Disks
Database Machine Implementation Overview & Configuration Worksheet Overview
Configuration Worksheet Example
Configuring ASM Disk Groups with Configuration Worksheet
Generating the Configuration Files
Other Pre-Installation Tasks
The Result After Installation and Configuration
Supported Additional Configuration Activities
Unsupported Configuration Activities

Migrating Databases to Database Machine
Migration Best Practices Overview
Performing Capacity Planning
Database Machine Migration Considerations
Choosing the Right Migration Path
Logical Migration Approaches
Physical Migration Approaches
Other Approaches
Post-Migration Best Practices

Bulk Data Loading with Database Machine
Bulk Data Loading Overview
Preparing the Data Files
Staging the Data Files
Configuring the Staging Area
Configuring the Target Database
Loading the Target Database

Backup and Recovery with Database Machine
Using RMAN with Database Machine
General Recommendations for RMAN
Disk Based Backup Strategy
Disk Based Backup Configuration
Tape Based Backup Strategy & Tape Based Backup Configuration
Hybrid Backup Strategy
Restore and Recovery Recommendations
Backup and Recovery of Database Machine Software

Monitoring and Maintaining Database Machine
ILOM Overview
DCLI Overview
InfiniBand Diagnostic Utilities
Database Machine Support Overview
Patching and Updating Overview
Maintaining Exadata Software
Maintaining Database Server Software
Maintaining Other Software

New Features in Update Release 11.2.1.3.1
New Features Overview
Auto Service Request (ASR)
The ASR process
ASR requirements
Oracle Linux 5.5
Enhanced operating system security
Pro-active disk quarantine
Other new features