
Oracle Database 12c: RAC Administration Ed 1

Varighed: 4 Days Kursus Kode: D81250GC10

Beskrivelse:

This Oracle Database 12c: RAC Administration training will teach you about Oracle RAC database architecture. Expert Oracle University instructors will deep dive into Global Resources and Cache Fusion.

Learn To:

Install Oracle RAC software, Create cluster databases. Administer both administrator and policy-managed Oracle RAC databases. Monitor and address performance issues. Learn about services in a RAC environment as well as highly available connection features including Application Continuity and Transaction Guard. Create and administer a RAC One Node Database. Create and manage multitenant RAC databases.

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.

Målgruppe:

Databaseadministrator

Agenda:

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| ■ Describe the Oracle Clusterware architecture | ■ Convert a single-instance Oracle database to RACs |
| ■ Describe how Grid Plug and Play affects Clusterware | ■ Explain the principles and purposes of clusters |
| ■ Describe the benefits of Oracle RAC | ■ Define redo log files in a RAC environment |
| ■ Explain the necessity of global resources | ■ Define undo tablespaces in a RAC environment |
| ■ Describe global cache coordination | ■ Start and stop RAC databases and instances |
| ■ Install the Oracle database software | ■ Modify initialization parameters in a RAC environment |
| ■ Create a cluster database | ■ Configure the RAC database to use ARCHIVELOG mode and the fast recovery area |
| ■ Perform post-database-creation tasks | ■ Configure RMAN for the RAC environment |
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Forudsætninger:

Oracle Database 12c: Grid Infrastructure Administration
Oracle Database 12c: Oracle Automatic Storage Management
Administration
Working knowledge of Oracle Database 11g: Release 2, including Clusterware, ASM and RAC. or

Oracle Database 12c: Clusterware Administration NEW
Oracle Database 12c: ASM Administration NEW

Indhold:

Grid Infrastructure Overview and Review

- What is a Cluster?
- What is a Flex Cluster
- Clusterware Characteristics
- Oracle Clusterware
- Hardware and Software Concepts (High level)

RAC Databases Overview ; Architecture

- Overview of Oracle RAC
- RAC One Node
- Cluster-Aware Storage Solutions
- Benefits of Using RAC
- Scaleup and Speedup
- I/O Throughput Balanced
- Global Resources
- RAC and Flex ASM

Installing and Configuring Oracle RAC

- Installing the Oracle Database Software
- Installation options
- Creating the Cluster Database
- Post-installation Tasks
- Single Instance to RAC Conversion
- Cleaning Up Unsuccessful Installs

Oracle RAC Administration

- Parameters and RAC - SPFILE, Identical and Unique Parameters
- Instance Startup, Shutdown and Quiesce
- Undo Tablespaces
- Redo Threads
- Use Enterprise Manager Cluster Database Pages
- RAC Alerts
- RAC Metrics
- Session management on RAC instances

RAC Backup and Recovery

- Instance Failure And Recovery In RAC - LMON and SMON
- Redo Threads and Archive Log Configurations and Admin
- Parameter Settings Affecting Parallel Recovery and MTTR
- Instance Failure And Recovery In RAC - LMON and SMON
- RAC and the Fast Recovery Area
- RMAN Configuration
- RMAN Admin For RAC: Channels, Instances, Backup Distribution
- RMAN Restore And Recovery RAC Considerations

RAC Global Resource Management and Cache Fusion

- Globally Managed Resources and Management
- Library Cache Management
- Row cache management
- Buffer cache fusion
- Buffer Cache Management Requirements
- Accessing single blocks in RAC
- Multi-block read considerations in RAC
- Undo and read consistency considerations in RAC

RAC Monitoring and Tuning

- OCPU and Wait Time Latencies
- Wait Events for RAC
- Common RAC Tuning
- Session and System Statistics
- RAC specific V\$ Views
- Automatic Database Diagnostic Monitor for RAC
- Managing High Availability of Services in a RAC Environment
- Oracle Services
- Services for Policy - and Administrator-Managed Databases
- Creating Services
- Managing Services
- Use Services with Client Applications
- Services and Connection Load Balancing
- Services and Transparent Application Failover
- Services and the Resource Manager

Managing High Availability of Connections

- Types of Workload Distribution
- Client-Side Load Balancing
- Server-Side Load Balancing
- Runtime Connection Load Balancing and Connection Pools
- Fast Application Notification
- The Load Balancing Advisory FAN Event
- Server-Side Callouts
- Configuring the Server-Side ONS

Upgrading and Patching RAC

- Overview of Upgrades and Patching
- Release and Patch Set Upgrades
- PSU, CPU and Interim Patches
- Merge Patches
- Performing Out Of Place Database Upgrades
- Planning and Preparing for Upgrade
- Performing Out of Place Release Install or Upgrade
- Post Upgrade Tasks

Application Continuity

- What is AC?

Quality of Service Management

- QOS Management concepts
- Describe the benefits of using QoS Management
- QoS Management components
- QoS Management functionality

RAC One Node

- RAC One Node Concepts
- Online database migration
- Adding Oracle RAC One Node Database to an Existing Cluster
- Convert an Oracle RAC One Node database to a RAC database
- Convert an Oracle RAC database to a RAC One Node database
- Use DBCA to convert a single instance database to a RAC One Node database

Design for High Availability

- Causes of Planned and Unplanned Down Time
- Oracle's Solution to Down Time
- RAC and Data Guard
- Maximum Availability Architecture
- Fast-Start Failover
- Hardware Assisted Resilient Data
- Database High Availability Best Practices
- RAID Configuration for High Availability

- What problem does it solve?
 - Benefits of AC
 - How AC works
 - AC Architecture
 - Side Effects
 - Restrictions
 - Application requirements
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Flere Informationer:

For yderligere informationer eller booking af kursus, kontakt os på tlf.nr.: 44 88 18 00

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