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## Oracle Database 11g Managing Oracle on Linux for DBAs

**Duration: 2 Days**    **Course Code: O11GMOL**

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### Overview:

This course is designed to give the Database Administrator a firm understanding of the components required to successfully deploy an Oracle 11g database on Oracle Enterprise Linux. Students will learn how to configure and verify the Linux operating system for optimal performance with an Oracle database. Students will also learn how to tune the database to take advantage of the Linux operating system and the Enterprise level features of the OS.

The course covers administrative tasks related to the database like file system choices, kernel and memory model selection, automated startup and shutdown scripts, and customizing the database for Linux. Lectures are reinforced with hands-on practices designed to walk the student through the entire installation, tuning, configuration and troubleshooting process.

This course is based on Oracle Database 11g Release 1.

Learn To:

Optimize the Linux environment for Oracle Database, and vice versa

Use Linux tips and tricks especially important for Oracle DBAs

Prepare and update a Linux 64-bit system for an Oracle Database silent installation

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### Target Audience:

Database Administrators Support Engineer Technical Consultant Technical Administrator

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### Objectives:

- Identify the different kernels available for Linux
  - View installed packages on a Linux system
  - Prepare and update a system for an Oracle Database installation  
Identify and implement the best storage options for an Oracle database
  - Customize the database to take advantage of Linux features
  - Optimize Linux for running an Oracle database
  - Use Linux commands and techniques to automate and streamline DBA tasks
  - Troubleshoot database errors specific to the Linux OS
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### Prerequisites:

- Basic knowledge of Linux or Unix operating systems.
  - Hands-on experience administering Oracle Database 10g or 11g.
  - Oracle Database 11g: 2 Day DBA
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## Content:

### Review of Linux Basics

- Linux Directory Structure
- File Permissions and Security
- Common Linux Commands and Programs
- Working with Linux Shells
- Bash Shell Scripting

### Preparing Linux for Oracle

- Linux Distributions
- Verifying the Linux Kernel
- Using the /proc System
- Setting Kernel Parameters
- Managing Packages
- Using the oracle-validated RPM
- Creating Groups and Users
- The nobody User

### Installing Oracle on Linux

- Setting Environment Variables Pre-Installation
- Optimal Flexible Architecture
- Installing New Releases
- Managing Multiple Oracle Versions
- Setting Oracle Environment Variables
- Performing a Silent or Suppressed Installation
- Oracle Patch Utility
- Oracle Relink Utility

### Managing Storage on Linux

- Oracle Database Storage Options
- Supported Linux I/O Modes
- Disks and Partitions
- Managing Partitions
- Logical Volume Manager Concepts
- Attached Storage
- Linux and File Systems
- Monitoring Disk Usage and Free Space

### Using Oracle ASM on Linux

- Automatic Storage Management Library Driver
- Installing and Initializing ASMLib
- Configuring Disks
- Marking Disks as Automatic Storage Management Disks
- Creating an ASM Instance
- ASM Installation Best Practices
- Disk Group Configuration Best Practices

### Automating Oracle on Linux

- Automating Tasks
- Linux Startup Sequence
- Linux Runlevels
- Automating Startup and Shutdown of Oracle Processes
- Working with the dbstart and dbshut Scripts
- Linux Scheduling Tools
- Scheduling a Backup with cron

### Optimizing Linux for Oracle

- Standard Linux Measurement Tools
- Measuring CPU Activity and Reducing CPU Bottlenecks
- Monitoring and Tuning Memory
- Monitoring and Tuning Disk I/O
- Basic Oracle Database Optimizations
- Basic Linux Optimizations
- Page Address Extensions for 32-bit Systems
- Configuring Hugepages

### Additional Linux Tips for DBAs

- Simple Shell Scripts to Simplify DBA Tasks
- Adding Command History to SQL\*Plus
- Finding Files with SETUID or SETGID Set
- Capturing System Data Using Scripts
- Finding Background Processes
- Finding Server Processes
- Killing Server Processes
- Query Output in an Environment Variable

### Troubleshooting Oracle Issues on Linux

- Monitoring alert log with ADRCI
- Resolving ORA-600/ORA-7445 Errors
- Process Hierarchy
- Viewing the Startup Environment for a Process
- Viewing the Status of a Process
- Recovering from Database Crashes
- Debugging a Core Dump
- Using strace

## Further Information:

For More information, or to book your course, please call us on +254 713 027 191

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