
Oracle Database 11g Managing Oracle on Linux for DBAs

2 days

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Oracle Database 11g Managing Oracle on Linux for DBAs Course Overview

The Oracle Database 11g Managing Oracle on Linux for DBAs training course is designed to give delegates practical experience in deploying an Oracle 11g Database on Enterprise Linux.

Skills Gained

The delegates will practise:

- Configuring Linux for an Oracle Database Installation
- Viewing and installing packages on a Linux system
- Monitoring memory, CPU and I/O activity and performance
- Identifying the different kernels and memory models available for Linux
- Creating a database and listener
- Customizing a database to utilize Linux features
- Implementing storage options for an Oracle database on Linux
- Enabling a large SGA
- Tuning an Oracle Database on Linux
- Debugging database errors specific to Linux

Who will the Course Benefit?

Database Administrators who need to deploy an Oracle Database in a Linux environment.

Course Objectives

To provide the skills needed to query optimally configure the Linux operating system, install the Oracle Database software and configure an Oracle database.

Requirements

There are no formal pre-requisites. A working knowledge of Oracle Database Administration and knowledge of operating system concepts is required.

Follow-On Courses

- Oracle Database 11g DBA Performance & Tuning
 - Oracle Database 11g Data Guard
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Oracle Database 11g Managing Oracle on Linux for DBAs Training Course

Course Contents - DAY 1

Course Introduction

- Administration and Course Materials
- Course Structure and Agenda
- Delegate and Trainer Introductions

Session 1: A REVIEW OF LINUX BASICS

- Linux Overview
- Kernel Version Information
- Common Linux Commands
- The Linux Directory Structure
- Linux Utilities and Directories
- Navigating the File System
- The Linux Server Interface
- Linux Web Server Utilities
- Processes and Threads
- Devices
- Filesystems
- The Virtual File System
- Bash Shell Scripting

Session 2: CONFIGURE LINUX FOR ORACLE

- Kernel Configuration Parameters
- Set Shared Memory Parameters
- Set Semaphore Parameters
- Manage Packages
- Configure the ASM Library Driver
- Configure the X Window System
- Create Oracle Users and Groups on Linux

Session 3: INSTALL ORACLE ON LINUX

- Storage Requirements
- File System Security
- Set Environment Variables
- Create Oracle Directories
- Manage Multiple Versions of Oracle Software
- Pre Installation Procedures for Linux
- The Oracle Universal Installer
- The Installation Process
- Post Installation Procedures for Linux
- Testing and Validation of the Installation

Session 4: MANAGE STORAGE ON LINUX

- Storage Requirements
- Certified and Supported File Systems
- Disk Partitioning
- Automatic Storage Management

Session 5: AUTOMATIC STORAGE MANAGEMENT

- Overview of ASM
- ASMLib
- Configure Disks for ASM
- Create an ASM Instance
- ASM Best Practices

Session 6: CREATE THE DATABASE

- Select the Storage Mechanism
 - Assign ASM Disk Groups in the Database
 - dbca Log Files
 - Installation Log Files
 - Instance Dump Files
 - Background Processes
 - Server Processes
 - Process Hierarchy
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Oracle Database 11g Managing Oracle on Linux for DBAs Training Course

Course Contents - DAY 2

Session 7: AUTOMATE ORACLE ON LINUX

- Linux Startup Sequence
- Linux Runlevels
- Database Startup and Shutdown
- Administrative Scripts
- Manage Services with chkconfig
- Automate Jobs
- Server Parameter File

Session 8: MANAGE MEMORY

- Configure Swap Space
- Evaluate the Memory Usage
- Implement Hugepages on 32-bit Linux
- Enlarge the SGA

Session 9: OPTIMIZE ORACLE ON LINUX

- Measure CPU Activity and Reduce Bottlenecks
- Tune Memory
- Measure Memory with sar
- Monitor and Tune Disk I/O
- Use iostat
- Reduce I/O Bottlenecks
- The System Activity Recorder
- Tune Linux and Oracle for Network Performance

Session 10: ADDITIONAL TIPS FOR DBAS

- Create Shell Scripts to Simplify DBA Tasks
- Add Command History to SQL*Plus
- Change Access Rights on Files with SETUID and SETGID
- Server and Background Processes

Session 11: DEBUG ORACLE ON LINUX

- OS Watcher
- The Remote Diagnostic Agent
- Trace Processes with strace
- Deal with ORA-600 Errors
- Deal with ORA-7445 Errors

Follow-On Courses

- Oracle Database 11g DBA Performance & Tuning
 - Oracle Database 11g Data Guard
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