

Oracle Database 11g: Managing Oracle on Linux for DBAs

Duration: 2 Days

What you will learn

This Database 11g: Managing Oracle on Linux 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.

Learn To:

Configure and verify the Linux operating system for optimal performance with an Oracle Database.

Tune the database to take advantage of the Linux operating system.

Learn 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.

Optimize the Linux environment for Oracle Database.

Discover Linux tips and tricks.

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

Benefits To You

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.

Related Training

Required Prerequisites

Basic knowledge of Linux or Unix operating systems.

Hands-on experience administering Oracle Database 10g or 11g.

Oracle Database 11g: 2 Day DBA

Suggested Prerequisites

Oracle Database 11g: Administration Workshop I Release 2

Course 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

Course Topics

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