

Oracle Linux 8: System Administration 1

Duration: 5 Days

Course Description:

This course is first in a series of three Oracle Linux 8 System Administration courses that covers the system administration tasks. The lab environment is validated against the latest Oracle Linux 8 release.

The course covers the following topics:

- Install and complete initial setup of Oracle Linux
- Configure the Unbreakable Enterprise
- Kernel for Oracle Linux
- Oracle Ksplice for updates without rebooting
- Configure users, storage, and network interfaces on Oracle Linux
- Preparation of the Oracle Linux server for the installation of Oracle Database
- Monitor and troubleshoot Oracle Linux

Course Objectives:

Upon completion of this course, the student should be able to:

- Configure Passwordless authentication
- Configure Date, Time, and Chrony
- Automate Tasks with cron and system
- Use Loadable Kernel Modules
- Use sysctl, rpm and dnf
- Create a Local Yum Repository
- Install the Ksplice Offline Client
- Administer User and Group Accounts
- Restrict the Use of the su Command
- · Allow the Use of the sudo Command
- Partition Storage Device, create ext4 File Systems, and Increase Swap Space
- Configure Network Interface
- Use nmcli, nmtui, and ip
- Configure firewalld and nftables
- Install and Run Oracle Database Preinstall
- Prepare Disks for ASM Use
- Use sosreport to Collect System Information
- Use Standard Linux Performance Monitoring Tools
- Use OSWatcher and OSWatcher Analyzer
- Use rsyslog Templates, logwatch, and systemd-journald

Course Introduction

- Course Introduction
- Demonstration
- Exploring the Gateway Machine
- Exploring the host02 VM
- > Exploring the host03 VM
- Logging Off from Your Gateway Machine

Introduction to Oracle Linux

- > Introduction to Oracle Linux
- Oracle Linux
- Viewing Kernel Information

Installing Oracle Linux 8

- Installing Oracle Linux 8
- > Installation Destination
- Demonstration: Installing Oracle Linux 8

OpenSSH

- OpenSSH
- Connecting to a Remote Server by Using SSH
- Configuring OpenSSH to Connect Without a Password

The GRUB Bootloader

- > The GRUB Bootloader
- GRUB 2 Bootloader Configuration
- Exploring the GRUB 2 Bootloader
- Booting Different Kernels
- Rebuilding the initramfs
- Demonstration: Accessing the GRUB Menu to Select Different Kernels and to Modify Boot Parameters

Introduction to systemd

- > Introduction to systemd
- The Service Unit File
- Exploring systemd Units
- Working with systemd Service Units

Managing Time

- Managing Time
- Automating System Tasks
- Configuring Date and Time
- Configuring Chrony
- Automating Tasks with chron
- > Automating Tasks Using systemd Timers

COURSE OUTLINE



Kernel and Device Configuration

- Kernel and Device Configuration
- > The sysfs File System
- Using Loadable Kernel Modules
- Exploring the /proc File System
- Exploring the sysfs File System
- Using the sysctl Utility
- Exploring and Configuring udev Rules

Package Management

- Package Management
- Using dnf to Install, Upgrade, or Remove Packages
- Demonstration: Update or Upgrade Using DNF
- Using the rpm Utility
- Accessing the Oracle Linux Yum Server
- Creating a Local Yum Repository
- Using the dnf Utility
- Using dnf Modules

Oracle Ksplice

- Oracle Ksplice
- Ksplice Web Interface: System Status Detail
- > Installing the Ksplice Offline Client and Kernel Updates
- Ksplice Online Updates

User and Group Administration

- User and Group Administration
- > Group Account Administration
- > Administering User Accounts
- Administering Group Accounts
- > Implementing User Private Groups
- Configuring Password Aging
- Restricting the Use of the su Command
- Allowing the Use of the sudo Command

Partitions, File Systems, and Swap

- Partitions, File Systems, and Swap
- > File System Types
- > Listing the Current Disk Partitions
- Partitioning a Storage Device
- Creating ext4 File Systems
- Increasing Swap Space
- Removing Partitions and Additional Swap Space

Network Configuration

- Network Configuration
- > The nmcli radio Object
- > Configuring the ethl Network Interface
- > Using the nmcli Utility
- Using the nmtui Utility
- Using the ip Utility

Network Security

- Network Security
- Starting firewalld
- Exploring firewalld
- Configuring firewalld
- Configuring nftables

Oracle On Oracle

- Oracle On Oracle
- Oracle-Related Shell Limits
- > Installing and Running Oracle Database Preinstall
- Preparing disks for ASM use
- Installing and Configuring ASMLib
- Practice 15-4: Reverting Changes Made to host02

System Monitoring and Management

- > System Monitoring and Management
- > top Utility
- OSWatcher Analyzer (OSWbba)
- > Using sosreport to Collect System Information
- Using Standard Linux Performance Monitoring Tools
- Installing and Using OSWatcher
- Using OSWatcher Analyzer

System Logging

- System Logging
- Configuring Log Rotation (logrotate)
- Configuring System Logging
- Using rsyslog Templates
- Using logwatch
- Using systemd-journald

Troubleshooting

- Troubleshooting
- > Transferring Utilities from Gateway & System Utility Commands Fail