

# OpenSUSE 15 Administration

**Duration:** 5 days (8hrs/day)

**Prerequisites:** NA

**Course Objective:** This comprehensive course will help you gain sufficient skill to perform core system administration tasks on OpenSUSE 15.

**OpenSUSE Version:** Latest

**Lab Requirement:** Koenig-DC ( <https://linuxlab.koenig-solutions.com> )

## Module 1 – Introduction to OpenSUSE

Introduction to OpenSUSE

Versions of OpenSUSE (Leap and Tumbleweed)

Overview of YAST

Getting started with GNOME desktop

## Module 2 – Working with command line

Introduction to Shell

Working with the bash shell

Getting help at the command line using man and info pages

Using I/O redirection

Working with pipes

**Lab:** Using common commands

**Lab:** Working with bash shell

**Lab:** Getting help using man and info pages

**Lab:** Using I/O redirection and pipes

## Module 3 – File System Management tools

File System hierarchy in OpenSUSE

Types of Files

Managing files and directories

Working with links

Creating archive and compressed files

**Lab:** Managing files and directories

**Lab:** Understanding hard links and soft links

**Lab:** Working with tar and file compression tools

## **Module 4 – Working with text files**

Introduction to vim

Using grep to search for regular expressions

Editing text files from the shell

**Lab:** Using Vim editor to edit and manipulate text files

**Lab:** Using grep to analyze text files

**Lab:** Editing text files from the CLI

## **Module 5 – Configuring remote administration**

Understand remote administration with SSH

Understand remote administration with VNC

**Lab:** Configure key based authentication with OpenSSH

**Lab:** Configure remote administration using VNC

## **Module 6 – User and Group management**

Understand User and Groups concepts

Manage local user accounts

Manage local groups

Managing local users and groups with YAST

**Lab:** Managing local users

**Lab:** Managing local groups

**Lab:** Managing local users and groups with YAST

## **Module 7 – Managing filesystem permissions**

Managing File Ownership

Managing Basic Permissions

Managing Advanced Permissions

Managing ACLs

Setting Default Permissions with umask

**Lab:** Changing file ownership

**Lab:** Changing file permissions

**Lab:** Changing advance permissions

**Lab:** Changing file ACL permissions

**Lab:** Changing Umask value

## **Module 8 – Boot Process and Systemd**

Understand the boot process

Understand GRUB2 bootloader

Understand Systemd

**Lab:** Secure GRUB2 with a password

**Lab:** Managing services

**Lab:** Working with system targets

## **Module 9 – Privilege Delegation**

Understanding Privilege Delegation

Privilege delegation using su and sudo

Privilege delegation using PolicyKit

**Lab:** Delegating privileges using su and sudo

**Lab:** Delegating privileges using Policykit

## **Module 10 – Process Management**

Introduction to Process Management

Understand shell jobs

Using top to manage Processes

Using command line tools to manage processes

Understand process priority

Scheduling Tasks using cron

**Lab:** Managing shell jobs

**Lab:** Using Command line tools for managing processes

**Lab:** Using Top for process management

**Lab:** Using nice and renice for manipulating process priority

**Lab:** Schedule recurring task using cron

## **Module 11 – Network configuration management**

Understanding network management

Understand network management with Wicked

Understanding Name resolution

**Lab:** Configure network connection

**Lab:** Configure network via the network configuration files

**Lab:** Configuring network with wicked

**Lab:** Configuring Name resolution

## **Module 12 – Understanding Firewall**

Understand firewalld

Configure and manage firewalld

**Lab:** Using firewall-cmd command to manage firewall

## **Module 13 – Storage Administration**

Understand the process for creating partitions

Understand and configure LVM

Understand Btrfs

**Lab:** Create partitions and mount them persistently

**Lab:** Managing partitions with YAST

**Lab:** Configuring and managing LVM

**Lab:** Create a Btrfs filesystem

**Lab:** Managing Btrfs subvolumes

## **Module 14 – Configure system logging**

Understanding System Logging

Configuring rsyslogd

Rotating Log Files

Working with journal

**Lab:** Configuring rsyslog

**Lab:** Configure log rotation

**Lab:** Configure and managing journal

## **Module 15 – Installing OpenSUSE 15**

Preparing to Install OpenSUSE 15

Performing a Manual Installation

**Lab:** OpenSUSE 15 Installation