

## **Red Hat Enterprise Linux 8-RHCSA Syllabus**

### **RH124 Red Hat System Administration I**

Red Hat System Administration 1(RH124) is Designed for IT Professionals who are new to Linux. This course will actively engage students in task focused activities, lab-based knowledge checks, and facilitative discussions to ensure maximum skill transfer and retention. In addition GUI-based Environment will be featured to build on the student's existing technical knowledge, while command line concepts will be introduced to provide a foundation for students planning to become full time Linux system administrator.

#### **Course Outline**

##### **Unit 1: Accessing the Command Line**

- Recognize the BASH shell based on the default prompt.
- Use Linux efficiently by switching between virtual consoles.
- Display usage messages and be able to interpret a command's syntax.

##### **Unit 2: Managing Files from the Command Line**

- Recognize and Find Familiarity in a File-system Tree,
- Learn Terms Like “root” Directory and Subdirectory.
- Introduction to Different types of Data in Separate System Directories.

##### **Unit 3: Getting Help in Red Hat Enterprise Linux**

- Learn “man” Terminology, Including Topics and Sections.
- Become Aware of The importance of less-noticed man sections.

##### **Unit 4: Creating, Viewing and Editing Text Files**

- Describe the Technical Terms Standard Output, and Standard Error. • Use Redirection Characters to Control Output to Files.
- Use Pipe to Control Output to Other Programs.

##### **Unit 5: Manage Local Linux Users and Groups**

□ Explain the Role of Users and Groups on a Linux System and How They are understood by the Computer.

##### **Unit 6: Controlling Access to Files with Linux File-system Permissions**

- Explain How the Linux File Permissions Model Works.

##### **Unit 7: Monitoring and Managing Linux Processes**

- Learn the Processes Lifecycle, in Order to better Comprehend Process States.

##### **Unit 8: Controlling Services and Daemons**

- List System Daemons and Network Services Started by System services and Socket

units.

### **Unit 9: Configuring And Securing Open-ssh Service**

- Log into a Remote System Using ssh to Run Commands From a Shell Prompt.

### **Unit 10: Analyzing and Storing Logs**

- Describe the Basic “syslog” Architecture in RHEL7

### **Unit 11: Managing RHEL Networking**

- Explain Fundamental Concepts of Computer Networking.

### **Unit 12: Archiving and Copying Files between Systems**

- To Create Backups and Transfer Files Over The Network..

### **Unit 13: Installing and Updating Software Packages**

- Register System With Your Red Hat Account and Entitle Them to Software Updates for Installed Products.

### **Unit 14: Accessing Linux File-systems**

□ Determine which Directories in the File-system Hierarchy are Stored on Which Storage Devices.

### **Unit 15: Using Virtualized Systems**

- Recognize the Consistent Use of KVM Architecture Throughout of Red Hat Product Line.

### **Unit 16: Accessing the Command Line**

## **RH 134 Red Hat System Administration II**

Red Hat System Administration II (RH134) is designed for IT Professionals working to full time Linux Administrators, the course is a follow ups to rh124(SA1). This course will actively engage students in task focused activities, lab-based knowledge checks, and facilitative discussions to ensure maximum skill transfer and retention. Students who attend System Administration I and System Administration II will be fully prepared to take the Red Hat Certified System Administration (RHCSA)Exam.

### **Course Outline**

#### **Unit 1: Automating Installation with Kickstart**

- Explain Kickstart Concepts and Architecture
- Install and configure Linux using Kickstart

#### **Unit 2: Using Regular Expressions with “grep”**

- Create a Regular Expressions that match desired data.

#### **Unit 3: Creating and Editing Text files with vim**

- Explain the three main modes of “vim”.

#### **Unit 4: Scheduling Future Linux Tasks**

- Scheduling tasks using at and cron.

#### **Unit 5: Managing Priority of Linux Processes**

- Explain about Linux Processes and nice values.

#### **Unit 6: Controlling Access to Files with Access Control Lists (ACL)**

- Describe ACL's and file system mount options..

**Unit 7: Managing SELinux Security**

- Explain the Basics of Se-Linux permissions and Context Transitions.
- Display Current Se-Linux Modes.
- Correctly Interpret the Se-Linux Context of a File.
- Identify Current Se-Linux Boolean Settings.

**Unit 8: Connecting to Network-Defined Users and Groups**

- User authentication using centralized Identity Management Services.

**Unit 9: Adding Disks, Partitions, and File Systems to a Linux System**

- Create and Delete disk Partitions on disks with an MBR Partitioning Scheme Using “fdisk”.
- Create and Delete disk Partitions on disks with an GPT Partitioning Scheme Using “gdisk”.
- Format Devices Using “mkfs”
- Mount File System into the Directory Tree

**Unit 10: Managing Logical Volume Management (LVM) Storage**

- How to manage high performance LVM storage.

**Unit 11: Accessing Network Attached Storage with Network File System (NFS)**

- Access , Mount and unmount NFS Shares .

**Unit 12: Accessing Network Storage with SMB**

- How to mount and unmount smb file-system using the command line.

**Unit 13: Controlling and Troubleshooting the Red Hat Enterprise Linux Boot Process**

- Describe and Influence the RHEL Boot Process..

**Unit 14: Limiting Network Communication with Firewalled**

- Configure the Basic Firewall Using “firewalld”, “firewalld-config”and “firewalld-cmd”.

**Unit 15: Running Containers**

- Obtain, run, and manage simple, lightweight services as containers on a single Red Hat Enterprise Linux server.