



## Red Hat Enterprise Linux 9-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.



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### **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



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### 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



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### RH 134 Red Hat System Administrations 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 wills actively engage students in task focused activities, lab-based knowledge checks, and facilitative discussions tonsure 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 Firewall**

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

### **Unit 15: Comprehensive Review**

- Comprehensive Review of System Administration 2