



## Red Hat System Engineer (RHCE)

### RH124: Red Hat System Administration-I

#### *Outline for this course:*

- Access the command line
  - Log in to a Linux system and run simple commands using the shell.
- Manage files from the command line
  - Copy, move, create, delete, and organize files from the bash shell prompt.
- Get help in Red Hat Enterprise Linux
  - Resolve problems by using online help systems and Red Hat support utilities.
- Create, view, and edit text files
  - Create, view, and edit text files from command output or in an editor.
- Manage local Linux users and groups
  - Manage local Linux users and groups, and administer local password policies.
- Control access to files with Linux file system permissions
  - Set Linux file system permissions on files and interpret the security effects of different permission settings.
- Monitor and manage Linux processes
  - Obtain information about the system, and control processes running on it.
- Control services and daemons
  - Control and monitor network services and system daemons using systemd
- Configure and secure OpenSSH service
  - Access and provide access to the command line on remote systems securely using OpenSSH
- Analyze and store logs
  - Locate and accurately interpret relevant system log files for troubleshooting purposes.
- Manage Red Hat Enterprise Linux networking
  - Configure basic IPv4 networking on Red Hat Enterprise Linux systems.
- Archive and copy files between systems
  - Archive files and copy them from one system to another.
- Install and update software packages
  - Download, install, update, and manage software packages from Red Hat and yum package repositories.
- Access Linux file systems
  - Access and inspect existing file systems on a Red Hat Enterprise Linux system.
- Use virtualized systems
  - Create and use Red Hat Enterprise Linux virtual machines with KVM and libvirt.
- Comprehensive review
  - Practice and demonstrate the knowledge and skills learned in this course.

## RH134: Red Hat System Administration-II

### *Outline for this course:*

- Automate installation with Kickstart
  - Automate the installation of Red Hat Enterprise Linux systems with Kickstart.
- Use regular expressions with grep
  - Write regular expressions that, when partnered with grep, will allow you to quickly isolate or locate content within text files.
- Create and Edit text files with vim
  - Introduce the vim text editor, with which you can open, edit, and save text files.
- Schedule future Linux tasks
  - Schedule tasks to automatically execute in the future.
- Manage priority of Linux processes
  - Influence the relative priorities at which Linux processes run.
- Control access to files with access control lists (ACL)
  - Manage file security using POSIX access control lists.
- Manage SELinux security
  - Manage the Security Enhanced Linux (SELinux) behavior of a system to keep it secure in case of a network service compromise.
- Connect to network-defined users and groups
  - Configure systems to use central identity management services.
- Add disks, partitions, and file systems to a Linux system
  - Manage simple partitions and file systems.
- Manage logical volume management (LVM) storage
  - Manage logical volumes from the command line.
- Access networked attached storage with network file system (NFS)
  - Access (secure) NFS shares.
- Access networked storage with SMB
  - Use autofs and the command line to mount and unmount SMB file systems.
- Control and troubleshoot the Red Hat Enterprise Linux boot process
- Limit network communication with firewall
  - Configure a basic firewall.
- Comprehensive review
  - Practice and demonstrate knowledge and skills learned in this course.

## RH254: Red Hat System Administration-III

**Outline for this course:**

- Control services and daemons
  - Review how to manage services and the boot-up process using systemctl
- Manage IPv6 networking
  - Configure and troubleshoot basic IPv6 networking on Red Hat Enterprise Linux systems
- Configure link aggregation and bridging
  - Configure and troubleshoot advanced network interface functionality including bonding, teaming, and local software bridges
- Control network port security
  - Permit and reject access to network services using advanced SELinux and firewalld filtering techniques
- Manage DNS for servers
  - Set and verify correct DNS records for systems and configure secure DNS caching
- Configure email delivery
  - Relay all email sent by the system to an SMTP gateway for central delivery
- Provide block-based storage
  - Provide and use networked iSCSI block devices as remote disks
- Provide file-based storage
  - Provide NFS exports and SMB file shares to specific systems and users
- Configure MariaDB databases
  - Provide a MariaDB SQL database for use by programs and database administrators
- Provide Apache HTTPD web service
  - Configure Apache HTTPD to provide Transport Layer Security (TLS)-enabled websites and virtual hosts
- Write Bash scripts
  - Write simple shell scripts using Bash
- Bash conditionals and control structures
  - Use Bash conditionals and other control structures to write more sophisticated shell commands and scripts
- Configure the shell environment
  - Customize Bash startup and use environment variables, Bash aliases, and Bash functions
- Comprehensive review
  - Practice and demonstrate knowledge and skills learned in Red Hat System Administration III