

**Red Hat Enterprise Linux 8 (RHEL 8) System Administration I**

**Course Number:** LNX-130  
**Duration:** 5 days

**Overview**

This Red Hat Enterprise Linux 8 (RHEL 8) System Administration I training course teaches attendees the basic working environment of a Linux system and introduces commonly required operations that can be performed by entering commands interactively in a command terminal.  Students also learn how to leverage the functions available in the GNOME Desktop Environment.

This course covers similar topics to Red Hat course 124. Along with Accelebrate's [Red Hat Enterprise Linux 8 (RHEL 8) System Administration II](file:////training/red-hat-enterprise-linux-8-system-administration-ii) class, this course is preparation for the [RHCSA 8 certification examination](https://www.redhat.com/en/services/training/ex200-red-hat-certified-system-administrator-rhcsa-exam).

**Prerequisites**

Students must be proficient in general computing skills but not necessarily experienced with Linux or Unix.

**Materials**

All Red Hat Linux training attendees receive comprehensive courseware.

**Software Needed on Each Student PC**

Attendees will not need to install any software on their computers for this class. The class will be conducted in a remote environment that Accelebrate will provide; students will only need a local computer with a web browser and a stable Internet connection. Any recent version of Microsoft Edge, Mozilla Firefox, or Google Chrome will work well.

**Objectives**

* Use RHEL 8 Bash Shell techniques and commands
* Maintain collections of files
* Create files using interactive editor utilities
* Create and execute basic command procedures
* Communicate with other users
* Tailor the interactive environment to meet their needs
* Use basic administrative features to set up a functioning RHEL 8 system

**Outline**

* Introduction
* Get Started with RHEL 8/Access the Command Line
  + graphical login
  + non-graphical login
  + virtual consoles
  + Unix / Linux standards
  + BASH environment
  + BASH command line format
  + aliases (defining and using)
  + RHEL 8 system messages
  + editing shell command lines
  + keyboard control characters
* Configure and Secure SSH - Part 1
  + command line operations - local host
  + command line operations - remote host
* Get Help in RHEL 8
  + RHEL 8 help information
  + BASH command help information
  + RHEL 8 package help information
  + RHEL 8 on-line documentation
  + Linux graphical help information
* Access Linux Filesystems
  + complete file specification
  + default parts of file specifications
  + directory specifications
  + file specification
  + file characteristics information
  + locating files and directories
* Manage Files from the Command Line
  + basic file manipulation commands
  + more file manipulation commands
  + defining and using hard links
  + defining and using symbolic links
  + redirection of input, output, and error information
  + pipelines
* Archive and Transfer Files
  + tar
  + gzip and gunzip
  + remote file operations - wget  utility
  + remote file operations - ssh utilities
  + rsync
  + vsftpd package
  + managing vsftpd
* Control Access to Files
  + protecting files (chmod, umask)
  + special file attributes (chattr, lsattr)
* Create, View, and Edit Text Files
  + file manipulation commands
  + redirecting standard output
  + vim editor (introduction)
  + gedit editor (introduction)
  + nano editor (introduction)
* Monitor and Manage Linux Processes
  + user working environment
  + user process characteristics
  + displaying process information (static) - ps
  + displaying process information (dynamic) - top
  + controlling process execution
  + adjusting process priority
  + process monitoring tools
  + cache management
  + process affinity
* Install Red Hat Enterprise Linux 8
  + installing RHEL 8 system software
  + RHEL 8 directed installation
  + RHEL 8 directed installation - firstboot
* Analyze Servers and Get Support
  + RHEL 8 administrative software
  + Cockpit
  + RHEL 8 web-based portal
* Install and Update Software
  + Managing RHEL 8 software packages
  + rpm command usage
  + dnf / yum command usage
  + Legacy (non-streamed) package repository setup
  + Streamed (AppStream)package repository setup
  + Apache web server configuration
* Manage Local Linux Users and Groups
  + user account management
  + /etc/passwd file
  + /etc/group file
  + User account creation
  + Environment files
  + Password aging
  + PAM
  + Account deletion
  + RHEL 8 administrator responsibilities
  + Using the root account
* Configure and Secure Open SSH Service - Part 2
  + Command line operations - remote host - ssh
  + Manage Networking
  + Network configuration
  + Host configuration
  + Gateway configuration
  + Maintaining system time via an ntp server
  + Maintaining system time via chrony
  + Time zone manipulation
* Control Services and Daemons
  + RHEL 8 startup configuration
  + systemd target files
  + systemd services
  + systemd actions
  + systemd  startup services
  + Boot logging
  + systems journal logging
* Analyze and Store Logs
  + System logging mechanism
  + Kernel message logging
  + System logging configuration
  + Remote system logging
  + Logrotate
* Conclusion