# RH033 Red Hat Linux Essentials for Windows and other Operating Systems

# Course Summary

## Description

This course is designed for students who have no command-line experience in Linux or UNIX and need to move into a position where they can accomplish fundamental end-user and administrative tasks on a Red Hat Enterprise Linux system.

## Topics

- Linux Ideas and History
- Linux Usage Basics
- Running Commands and Getting Help
- Browsing the File System
- Users, Groups and Permissions
- Using the bash Shell
- Standard I/O and Pipes
- Text Processing Tools
- vim: An Advanced Text Editor
- Basic System Configuration Tools

- Investigating/Managing Processes
- Configuring the Bash Shell
- Finding and Processing Files
- Network Clients
- Advanced Topics in Users, Groups and Permissions
- The Linux File system In-Depth
- Essential System Administration Tools
- So...What Now?

## Prerequisites

Students should have user-level experience with any computer system, including: use of mouse, use of menus and use of any graphical user interface.

## Duration

Five days

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## Course Outline

**I. Linux Ideas and History**
   A. An Introduction to Linux and Open Source
   B. What are the central ideas behind the Linux phenomenon and where do they come from

**II. Linux Usage Basics**
   A. Logging into the system
   B. Changing users
   C. Editing text files

**III. Running Commands and Getting Help**
   A. How to use built-in and online documentation to enhance your experience

**IV. Browsing the File System**
   A. Understanding the locations of important directories
   B. Navigate them from the command line
   C. Use the graphical Nautilus browser

**V. Users, Groups and Permissions**
   A. Reading and setting permissions on files and directories

**VI. Using the bash Shell**
   A. Tab completion
   B. History
   C. Introduction to shell scripting

**VII. Standard I/O and Pipes**
   A. Ins-and-outs of redirecting output between programs and files

**VIII. Text Processing Tools**
   A. Grep
   B. Cut
   C. Sed
   D. Sort
   E. Diff
   F. Patch

**IX. vim: An Advanced Text Editor**
   A. How to get the most out of the powerful and flexible vim text editor

**X. Basic System Configuration Tools**
   A. Manage networking
   B. Manage printing
   C. Mange date/time settings

**XI. Investigating/Managing Processes**
   A. Listing program executions
   B. Terminating program executions
   C. Scheduling program executions

**XII. Configuring the Bash Shell**
   A. Using shell variables and scripts to customize the command-line environment

**XIII. Finding and Processing Files**
   A. Using the find command and related utilities to locate and act upon files based on arbitrary criteria

**XIV. Network Clients**
   A. Overview of network tools available from web browsers to email clients and diagnostic utilities

**XV. Advanced Topics in Users, Groups and Permissions**
   A. SetUID
   B. SetGID.

**XVI. The Linux Filesystem In-Depth**
   A. Partitions
   B. Iinodes
   C. Linking tools
   D. Archiving tools

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## Course Outline (cont'd)

**XVII.   Essential System Administration Tools**
  A.  Installing Red Hat Enterprise Linux
  B.  Managing software packages
  C.  Enhancing security with SELinux and the netfilter firewall.

**XVIII.  So... What Now?**
  A.  Exposure to further options for training and involvement in the larger open-source community