

**Course Length:** 3 days

**Course Description:** Designed to provide the essential skills needed to be proficient at the Unix or Linux command line, this challenging, highly praised course focuses on the fundamental concepts and tools which make Unix so powerful. Students in this course commonly span a variety of skill levels, from beginners desiring a solid foundation in Unix to experienced users seeking to fill in gaps in their knowledge. Like all Guru courses, the curriculum is designed to provide hands-on experience. Subjects focused on during this class include the Unix filesystem and how to manipulate it; the basic Unix notions of pipes, redirection, regular expressions, and other tools for performing complex tasks; the management of processes and jobs; vi, the standard Unix editor; and the ability to construct shell scripts to automate routine or difficult operations.

**Prerequisites:** Students are expected to be familiar and comfortable with computers. No familiarity with Linux or other Unix operating systems is expected or required.

**DAY 1**

- Linux history
- Modern Linux
- Distributions
- Multi-User concepts
- Logging in
- Gathering login session information
- Getting help
- Filesystem Structure
- Navigating the filesystem
- Determining disk usage
- File/directory ownership and permissions
- Working with files and directories
- Special file permissions
- User Private Group scheme

**DAY 2**

- Directory and file manipulation
- Unix filesystem structure
- Filesystem links
- Displaying the contents of files
- Searching the filesystem
- Producing file statistics
- Searching inside files
- Editing files - SED and AWK
- Text processing - sort, uniq, cut, and paste
- Shell basics
- Communication channels and redirection
- Shell meta-characters
- Environment variables
- Meta-character expansion and quoting
- Command chaining and nesting
- Regular expressions

## DAY 3

- Archiving - tar, cpio, zip
- Compression - compress, gzip, bzip2
- Text editing - PICO/NANO
- Editor foundations - vi, emacs
- Advanced editing - vi, emacs
- Command shell efficiency
- history, editing, completion, shortcuts
- Fundamental shell scripting
- Positional parameters
- Input / Output
- Doing math
- Comparisons and loops
- Process creation and states
- Viewing processes
- Signals
- Job control