

**Introduction to the Bash Command Line**

**Course Number:** LNX-112
**Duration:** 2 days

**Overview**

This Introduction to the Bash Command Line training teaches attendees how to master the basics of the shell and Linux/UNIX tools. Attendees discover easy commands that quickly perform complex tasks.

**Note:** This Bash course can also be taught using Linux, Mac OS, Windows 10 (with the Linux Subsystem), or any other operating system that supports Bash.

**Prerequisites**

This Bash course is designed for programmers, who use GUIs but want to understand how to use the command line to complete tasks faster and get more out of their computer. Students should have a basic understanding of how to use a computer.

**Materials**

All Bash training students 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 the bash shell to run commands
* Apply basic Linux/UNIX utilities, such as cat, tr, sort, uniq in commands
* Use redirection and pipes to process data
* Write simple shell scripts to automate tasks

**Outline**

* Introduction
	+ History of the command line
	+ File system refresher
	+ Getting in and out of the command line
* Basic Commands
	+ Explore the filesystem
	+ Manipulate files and directories
	+ Bash commands and external programs
* Wildcards
	+ Wildcard arguments in the shell
	+ Managing groups of files
* Command-line Shortcuts
	+ Shell job control, history, and editing shortcuts
* Environment Variables and Shell Expansion
	+ Environment variables arithmetic
	+ Brace expansion
	+ Command substitution
* Useful Command Line Tools
	+ cat, tac, sort, uniq, tr, col, grep, head, tail, paste, wc, join
* Redirection
	+ File redirection
	+ Extracting output
	+ Appending output
	+ Dealing with stderr and stdout
	+ Using files as input to commands
* Pipes
	+ Filtering unique entries
* Putting It All Together
	+ Working with real-world data
	+ The Unix words file list
	+ Extracting statistics from big data
* Basic Shell Scripting
	+ Disk usage
	+ Writing a script
* Advanced Shell Scripting
	+ Writing complex and interactive shell scripts
	+ Using WinDirStat
* Conclusion