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Learning Style: On Demand

Technology: Linux Foundation

Difficulty: Beginner

Course Duration: 60 Hours

Introduction to Open Source Development, Git and Linux (LFD201)



About This Course:

This course will prepare you to work comfortably and productively in open source development communities and Linux environments. It shows you have mastered important Linux methods and requisite tools, can use Git to create new repositories or clone existing ones, commit new changes, review revision histories, examine differences with older versions, work with different branches, merge repositories,

and work with a distributed development team.

Course Objectives:

- The course surveys how open source software works, including advantages of using it, methods of working in OSS communities, governance models and licensing choices. It delves into Linux systems, including installation, desktop environments, text editors, important commands and utilities, command shells and scripts, file systems and compiling software. It also provides a thorough introduction to Git, the source control system that arose out of the Linux kernel community, that enables widely distributed development to operate efficiently.

Audience:

- This course is for developers with experience working on any operating system who want to understand the basics of open source development. Experience with the command line is not necessary, but would be helpful.

Prerequisites:

- None

Course Outline:

- Chapter 1. Course Introduction
- Chapter 2. Open Source Software (OSS)
- Chapter 3. Why Use Open Source Software?
- Chapter 4. Examples of Successful OSS Projects
- Chapter 5. How to Work in OSS Projects
- Chapter 6. Continuous Integration
- Chapter 7. OSS Licensing and Legal Issues
- Chapter 8. Leadership vs Control and Why Projects Fail
- Chapter 9. GitHub and Other Hosting Providers
- Chapter 10. Linux and the Operating System

- Chapter 11. Graphical Environments and Interfaces
- Chapter 12. System Administration
- Chapter 13. Getting Help
- Chapter 14. Text Editors
- Chapter 15. Shells, bash, and the Command Line
- Chapter 16. Filesystem Layout, Partitions, Paths and Links
- Chapter 17. System Initialization
- Chapter 18. Memory
- Chapter 19. Networking
- Chapter 20. Command Details
- Chapter 21. Users and Groups
- Chapter 22. Linux Filesystems
- Chapter 23. Essential Command Line Tools
- Chapter 24. Bash Scripting
- Chapter 25. Files and Filesystems
- Chapter 26. Compiling, Linking, and Libraries
- Chapter 27. Java Installation and Environment
- Chapter 28. Building RPM and Debian Packages
- Chapter 29. Introduction to Git
- Chapter 30. Git Installation
- Chapter 31. Git and Revision Control Systems
- Chapter 32. Using Git: An Example
- Chapter 33. Git Concepts and Architecture
- Chapter 34. Managing Files and the Index
- Chapter 35. Commits

- Chapter 36. Branches
- Chapter 37. Diffs
- Chapter 38. Merges
- Chapter 39. Managing Local and Remote Repositories
- Chapter 40. Using Patches
- Chapter 41. Advanced Git Interfaces: Gerrit