Intermediate Linux | Shell, Bash, Text Manipulation, Multitasking & More - TTLX2104

Explore File Systems, Shell Scripting, Text Manipulation Utilities, Multitasking and Batch Processing and More

Duration: 2 Days
Skill Level: Intermediate
Available Format: Instructor-Led Online; Instructor-Led, Onsite In Person ; Blended; On Public Schedule

Intermediate Linux: Shell, Bash, Text Manipulation, Multitasking & More is a two-day course designed to provide you with hands-on experience using standard Linux commands and utilities used for day-to-day tasks including file manipulation, program execution and control, and effective use of the shell and desktop environments.

What You'll Learn

Overview

Intermediate Linux: Shell, Bash, Text Manipulation, Multitasking & More is a two-day course designed to provide you with hands-on experience using standard Linux commands and utilities used for day-to-day tasks including file manipulation, program execution and control, and effective use of the shell and desktop environments. Throughout the course you'll explore key concepts to Linux core functionality, while learning the system's most commonly used commands. You'll also learn the Bourne shell, Bash shell and Korn shell programming techniques you'll need to read and modify existing shell scripts, and create your own. Data manipulation utilities and shell syntax for synthesizing command pipelines are also emphasized throughout the course.

Objectives

This skills-focused course combines expert instructor-led discussions with practical hands-on labs that emphasize useful, current techniques, best practices and standards. Working in this hands-on lab environment, guided by our expert practitioner, you'll learn about and explore:

- Review of the File System
- Introduction to Shells: sh, bash, and ksh
- Shell Programming
- Advanced Shell Features
- Text Manipulation Utilities
- File Processing Utilities
- Multitasking and Batch Processing
- Regular Expressions

Need different skills or topics? If your team requires different topics or tools, additional skills or custom approach, this course may be further adjusted to accommodate. We offer additional Unix, Linux, Scripting, administration, networking, programming, data science / machine learning and security courses which may be blended with this course for a track that best suits your learning objectives.

Audience

This is an intermediate-level course for attendees with basic Linux experience. Attendees should have experience with common UNIX/Linux user-level commands, such as moving, copying and editing files. Experience with the vi editor is a plus.

Pre-Requisites

Experience with the vi editor is a plus.

Take Before:
- **TTLX2103** Introduction to Linux Basics | Linux Essentials JumpStart - 3 days

TTLX2103   Introduction to Linux / Linux Essentials

Agenda

Please note that this list of topics is based on our standard course offering, evolved from typical industry uses and trends. We will work with you to tune this course and level of coverage to target the skills you need most. Course agenda, topics and labs are subject to adjust during live delivery in response to student skill level, interests and participation.

Review of the File System
- File System Organization
- File Types
- File and Directory Naming Rules and Conventions
- Commands for Navigating the File System
- Introduction to Inodes
- Ownership, Permissions, and Dates
- Manipulating Files and Links
- Manipulating Directories
- Determining Disk Usage
- Other File System Utilities

Introduction to Shells: sh, bash, and ksh
- Shell Functions
- I/O Redirection and Pipes
- Command Separation and Grouping
- Background Execution
- Filename Expansion
- Shell Variables
- Command Substitution
- Quoting and Escaping Metacharacters
- Bash Shell Features
- Korn Shell Features
- Command Execution
- Startup Files
- Customizing the User Environment

Shell Programming

- Shell Script Features and Capabilities
- Creating and Running a Script
- Working With Variables
- Environment Variables
- Working With Data Types
- Formatting
- Base Conversion
- Setting Special Attributes
- Input/Output Techniques
- Conditional Constructs
- if/then
- else/elif
- Looping Constructs
- for, while, until
- Math Operators

Advanced Shell Features

- Manipulating Strings
- Writing and Calling Functions
- Controlling Process Priorities
- Interpreting Command Line Arguments
- Making Scripts Interactive
- Special Shell Variables
- Advanced I/O with Streams
- Improving Performance of Scripts

Text Manipulation Utilities

- Editing a File from a Script
- Scripting with ed or sed
- UNIX and Linux Utilities to Manipulate Files
- Regular Expressions
- grep and egrep

- The Stream Editor sed
- Sorting in Scripts
- Generating Reports with awk
- Splitting Large Files
- Counting Words, Lines, and Characters
- Transforming File Contents

File Processing Utilities

- Examining and Comparing Files
- Reporting Differences Between Files
- Comparing Files of Any Format
- Displaying Data in Octal and Hex
- Compressing Data
- Converting File Formats
- Extracting Text Strings

Multitasking and Batch Processing

- Multitasking
- Scheduled Execution Using cron
- The at and batch Commands

Regular Expressions

- Regular Expression Overview
- Regular Expression Implementations
- Regular Expressions
- RE Character Classes
- Regex Quantifiers
- RE Parenthesis

Related Courses

TTLX2103   Introduction to Linux / Linux Essentials

| TTLX2104 | Intermediate Linux \| Shell, Bash, Text Manipulation, Multitasking & More |
| TTLX2220 | Linux System Administration |

All course software (limited versions, for course use only), digital courseware files or course notes, labs / data sets and solutions (as applicable) are provided for you in our "easy access / no install required" high-speed remote lab environment. Our tech team works with every student to ensure everyone is set up with working access and ready to go prior to every course start date, ensuring a smooth delivery and great hands-on experience. Please ask for details.

For More Information

Please contact us or call 844-475-4559 toll free for more information about our training services (instructor-led, self-paced or blended), coaching and mentoring services, public course enrollment or questions, partner programs, courseware licensing options and more.