

Mastering Shell Scripting

Mastering Shell Scripting by **MasteringLinux | OpenPath** is a **comprehensive online training program** designed for **B.Tech, BCA, MCA, and Diploma students**. This course equips learners with **hands-on scripting skills** to automate Linux tasks, manage systems efficiently, and gain practical experience with **live industrial projects** in real-world IT environments.

With a focus on **automation, efficiency, and enterprise-ready scripting practices**, this course ensures trainees are **job-ready for roles such as Linux Engineer, DevOps Engineer, and System Administrator**.

What Sets Us Apart?

Live Industrial Projects

Gain authentic hands-on experience through real-world deployment scenarios.

Career-Focused Learning

Develop confidence and technical proficiency for long-term professional growth.

Mentorship from Experts

Learn directly from industry professionals who work on enterprise-grade systems.

Pre-Requisites

- Basic understanding of Linux commands and file system
- Optional patch-up course for beginners available

Program Details

Duration	1.3 Months (Approx. 6 Weeks)
Course Fee	₹15,000 (All-Inclusive)
Mode of Learning	Hybrid (Instructor-led Online Sessions + Practical Labs)
Certification	"Mastering Linux – Enterprise Server Administration" by OpenPath

Comprehensive Course Curriculum

Our "Mastering Shell Scripting" program is meticulously designed to cover essential concepts and advanced techniques, ensuring you gain a deep understanding and practical expertise. The curriculum is structured into progressive modules, each building upon the last to foster a strong foundation in Linux shell scripting and equip you with job-ready skills.

CHAPTER 1

Introduction to Shell Scripting

- What is Shell & Shell Scripting
- Types of shells: Bash, Sh, Zsh, Ksh
- Script execution: CLI vs script files
- Shebang (`#!/bin/bash`) usage

CHAPTER 2

Linux Commands & Editors for Scripting

- File & directory commands: `ls`, `cd`, `mkdir`, `rm`
- Viewing and editing files: `cat`, `less`, `vi/vim`
- Text processing tools: `grep`, `cut`, `awk`, `sed`
- Using VirtualBox/VMware for lab environments

CHAPTER 3

Variables & Data Types

- Declaring variables and environment variables
- Special variables: `$0`, `$1`, `$#`, `$@`, `$?`
- String operations and arithmetic operations

CHAPTER 4

Conditional Statements

- `if`, `if-else`, `if-elif-else`
- Nested conditions and logical operators
- `test` command `[]` and `[[]]` usage

CHAPTER 5

Loops in Shell Scripting

- `for`, `while`, `until` loops
- Loop control: `break`, `continue`
- Practical automation examples

CHAPTER 6

Functions in Shell Scripting

- Defining and calling functions
- Passing arguments and returning values
- Modular scripting practices

CHAPTER 7

File & Directory Handling in Scripts

- Reading/writing files (>, >>)
- File tests and permissions
- Automating directory structure management

CHAPTER 8

Advanced String & Pattern Manipulation

- String length, concatenation, substring
- Pattern matching & regular expressions
- Using `grep`, `awk`, `sed` in scripts

CHAPTER 9

Command-line Arguments & Script Automation

- Handling \$1, \$2...
- Debugging scripts with `set -x`, `set -e`
- Error handling and exit status
- Scheduling scripts with `cron` and `systemd-timers`

CHAPTER 10

Real-world Projects & Automation Labs

- Backup automation scripts
- Log monitoring and reporting scripts
- User and group management automation
- System monitoring scripts (CPU, Memory, Disk)

CHAPTER 11

Best Practices & Security in Shell Scripting

- Writing readable and maintainable scripts
- Secure scripting techniques
- Commenting, documentation, and modular code

Why Choose OpenPath for Your Linux Journey?

Choosing the right program is a pivotal decision for your career trajectory in the ever-evolving IT landscape. OpenPath's Mastering Linux program is meticulously designed to offer more than just technical training; it provides a holistic ecosystem of support, expertise, and real-world relevance to ensure your success.

Industry-Driven Training

Our curriculum is not just theoretical; it's forged in the crucible of real-world enterprise system environments. You'll gain practical skills directly applicable to the challenges and demands of modern IT infrastructure.

Mentorship by Senior Professionals

Benefit from direct guidance and insights from senior Linux and DevOps professionals who are actively shaping the industry. Their experience provides invaluable context and advanced problem-solving techniques.

Affordable & Accessible Learning

We are committed to making high-quality, career-defining education accessible. Our learning plans are structured to be both cost-effective and flexible, removing barriers to entry for aspiring IT professionals.

Comprehensive Career Support

Our commitment extends beyond the classroom. We offer dedicated career services, including expert resume building, targeted interview preparation, and active placement assistance to help you seamlessly transition into a rewarding role.

Meet Our Visionary Founder

OpenPath is guided by the profound vision of **Mr. Vikas Debnath**, the esteemed Founder Director of KV IT-Solutions Pvt. Ltd. and the driving force behind OpenPath. His extensive experience and dedication to fostering talent underpin the philosophy of our programs.

"Linux is for everyone — with the right guidance, anyone can master it."

Mr. Debnath's unwavering dedication to making Linux knowledge accessible to all is not just a principle, but the very heartbeat of OpenPath's curriculum, ensuring every student, regardless of their background, is empowered with unparalleled mentorship and resources to truly excel.

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