

Linux System Admin

ABOUT MASTERING LINUX

Mastering Linux is a flagship, **industry-oriented learning initiative by OpenPath**, designed to empower aspiring IT professionals with in-depth knowledge of **Linux Operating Systems** and **enterprise-grade open-source technologies**.

This comprehensive and affordable program serves as a strong career foundation for **B.Tech, BCA, MCA, and Diploma students**, preparing them for roles in **System Administration, DevOps, and IT Infrastructure Management**.

WHAT MAKES IT DIFFERENT?

- **Real Industrial Projects** – Gain authentic, hands-on exposure to enterprise Linux environments.
- **Career-Ready Curriculum** – Designed and curated by active industry experts.
- **Applied Learning** – Focused on practical command-line mastery and infrastructure deployment skills.

PRE-REQUISITES

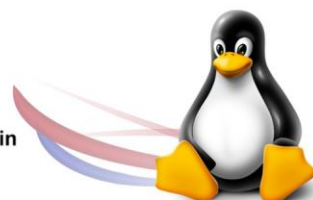
- **Basic networking knowledge** is recommended.
- **New to IT?** No problem — we include a **free patch-up networking course** to help you start confidently.

PROGRAM DETAILS

- **Duration:** 1.3 Months (Approx. 6 Weeks)
- **Course Fee:** ₹15,000 (All-Inclusive)
- **Mode:** Hybrid (Online + Practical Labs)
- **Certification:** “Mastering Linux – Industry Ready Certification” by OpenPath

205, Red Rose Building
Near Eros Corporate Tower
49-50, Nehru Place
New Delhi -110019

M : 98100-28374
E : kvit@kvit.in
W : www.linuxsolutions.org.in



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COURSE CURRICULUM OVERVIEW

1. LINUX CONCEPTS & EDITORS

- Linux History, Evolution & Ecosystem
- Proprietary vs Open Source Fundamentals
- System Administrator's Role in Modern IT
- VI/VIM Mastery – Text Editing Essentials
- Virtual Lab Setup with VMware, VirtualBox, Oracle VM
- Linux Installation (Minimal + GUI Modes)

2. DIRECTORY STRUCTURE & REMOTE CONNECTIVITY

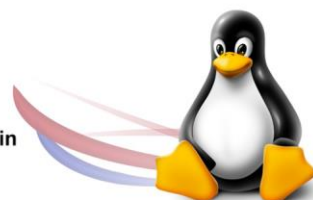
- Deep Dive into Linux Directory Tree (/etc, /var, /home, etc.)
- Superuser (Root) vs Standard Users
- Remote Connectivity Tools: Putty, MobaXterm, VNC, RDP
- CLI vs GUI – Mastering the Shell Environment
- File & Directory Management Commands

3. LINUX BOOT PROCESS

- Power-On to Login: Understanding Boot Sequence
- BIOS/UEFI, GRUB, Kernel & Systemd Explained
- Boot Targets, systemctl & Recovery Modes
- GRUB Security: Setting Boot Password

4. MOUNTING FILE SYSTEMS

- Understanding Mounting & File Systems (ext3, ext4, xfs)
- Disk Partitioning, Formatting & Persistent Mounts



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- Journaling, fstab, and Mount Binding Explained

5. LINUX NETWORKING

- IP Addressing, Subnetting, DNS & Gateway Basics
- Static/Dynamic IP Configuration
- Routing Tables, MAC, and Network Manager Tools
- Networking Commands: ip, nmcli, netstat, traceroute
- Linux as a Router – Real-World Implementation

6. USER ESSENTIALS

- System vs Application Users
- User & Group Management (useradd, passwd, usermod)
- Ownership, Permissions & Environment Configuration
- /etc/passwd, /etc/group & /etc/skel Essentials

7. LINUX PERMISSIONS

- File & Directory Permissions Explained
- Octal & Symbolic Permission Modes
- UMASK & Default Permissions
- Special Bits (SUID, SGID, Sticky Bit)
- Secure Privilege Escalation with sudo
- Access Control Lists (ACL) & File Attributes

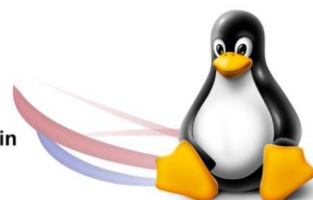
8. LINUX SCHEDULING & AUTOMATION

- Task Scheduling Concepts: cron, anacron, at
- Backup & Monitoring Job Automation

- System Maintenance

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Scheduling Best Practices

- crond Daemon & Security Considerations

9. LINUX ESSENTIAL COMMANDS

- Core Commands (ls, cd, cp, mv, rm, etc.)
- Advanced System Monitoring (top, ps, htop, df, du)
- Package Management (rpm, yum, dnf)
- Managing Services & Daemons with systemctl
- Real-time Process & Resource Monitoring

🔍 WHY CHOOSE OPENPATH?

- ✓ **Industry-Driven Training** – Designed around real-world system environments.
- ✓ **Mentorship by Senior Linux & DevOps Professionals.**
- ✓ **Affordable & Accessible Learning Plans.**
- ✓ **Career Support:** Resume Building, Interview Guidance & Placement Assistance.

Mr. Vikas Debnath

Founder Director – KV IT-Solutions Pvt. Ltd.

Founder – OpenPath

He believes that “Linux is for everyone — with the right guidance, anyone can master it.”

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