

Linux Network Admin

ABOUT MASTERING LINUX

MasteringLinux is a flagship, **industry-aligned initiative** by **OpenPath**, designed to equip students and IT professionals with the skills required to manage, deploy, and secure **Linux-based networking and open-source server infrastructures**.

This program is ideal for **B.Tech, BCA, MCA, and Diploma students** who aspire to build a strong foundation in **Linux System Administration, Server Management, and Enterprise Infrastructure Technologies** — all at an **affordable and accessible cost**.

□ 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

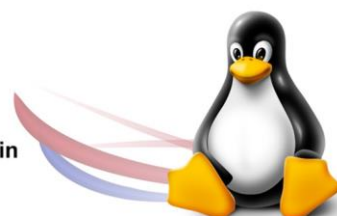
- A **basic understanding of networking** is recommended.
- **Freshers Welcome!** A **complimentary patch-up course** on networking fundamentals is included to ensure you start with confidence.

□ 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**

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□ COURSE CURRICULUM

□ BASIC SERVERS – NFS (Network File System)

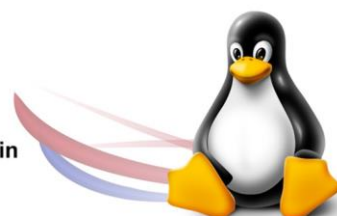
- Understanding NFS and its relevance in Linux/Oracle ecosystems
- Installing and configuring NFS Servers and Clients
- Centralized file sharing for distributed systems
- Exporting shared storage across Oracle servers
- Real-world implementation: Remote filesystem access

□ LVM – Logical Volume Management

- Core concepts: PV, VG, LV architecture
- Tools and utilities: pvcreate, vgcreate, lvcreate, etc.
- Flexible storage management and live volume resizing
- LVM advantages in production environments
- Hands-on lab: Dynamic disk allocation and resizing

□ TELNET AND FTP SERVER

- Overview of Telnet and FTP protocols
- Secure file transfer configuration using **vsftpd**
- Xinetd, encryption, and access control techniques
- Anonymous vs authenticated access with logging
- Web-based control and file management integration



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□ PROXY SERVER (Squid or Equivalent)

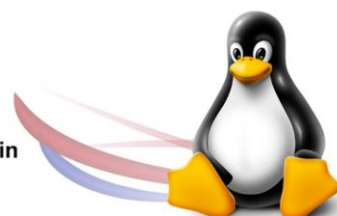
- Understanding Forward, Reverse, and Transparent Proxies
- Implementing ACLs and IP/MAC/user-based restrictions
- Enhancing security through content filtering and caching
- Developing a simple Proxy Control Panel
- Optimizing browsing, caching, and traffic management

□ DHCP SERVER (Dynamic Host Configuration Protocol)

- Deep dive into DORA (Discover, Offer, Request, Acknowledge)
- Installing and configuring DHCP for dynamic/static IPs
- MAC-based IP reservations and DNS integration
- Developing an administrative DHCP control panel
- DHCP Server vs Client behavior explained

□ DNS SERVER (Domain Name System)

- DNS record types: A, AAAA, NS, MX, CNAME, PTR, TXT
- Internal, forwarder, and dynamic DNS configuration
- Master-slave DNS setup with SPF, DKIM, DMARC integration
- Root server resolution and advanced DNS tools
- Create a DNS management interface for simulation



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□ **WEB SERVER (Apache/HTTPD)**

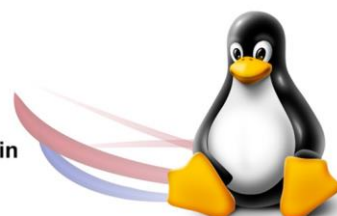
- HTTP vs HTTPS: Core web concepts
- Apache installation and configuration
- Hosting multiple domains using Virtual Hosts
- Implementing SSL certificates for HTTPS
- Securing websites with .htaccess and mod_ssl
- Integration with Awstats and MySQL/MariaDB

□ **MYSQL SERVER (or MariaDB)**

- Understanding MySQL architecture and key components
- Data management using SQL queries
- Installation, configuration, and phpMyAdmin management
- Backup, restoration, and replication strategies
- Master-slave replication setup for HA (High Availability)

□ **SAMBA SERVER**

- Role of Samba in Windows–Linux integration
- File sharing via CIFS/SMB
- Setting up Samba as a Backup Server & AD alternative
- Implementing roaming profiles, login scripts, and group policies
- Managing users, ACLs, and SSO with RSAT Tools
- Ideal setup for mixed environments (Windows 7/8/10 + Linux)



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□ MAIL SERVER

- Mail flow architecture: MTA, MUA, MDA, SMTP AUTH
- DNS integration (MX, SPF, DKIM, DMARC)
- Spam control, disclaimers, and auto-replies
- Secure email system with TLS/SSL and antivirus integration
- Mailbox management (MBOX, MDIR), filters, and whitelisting
- LDAP and Active Directory connectivity

□ LINUX SECURITY

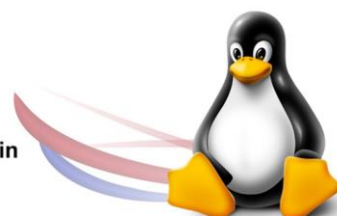
- Importance of Linux server hardening
- Key tools: **IPTables, FirewallD, TCP Wrappers, SELinux**
- Secure remote access (SSH hardening)
- Patch management and system updates
- **101 Server Hardening Tips & Best Practices**
- Deploying firewalls and open-source protection solutions

□ WHY CHOOSE OPENPATH?

- ✓ **Live Project Work** simulating real enterprise environments
- ✓ **Learn from Industry Experts** with practical implementation experience
- ✓ **Affordable & Accessible** training designed for all learners
- ✓ **Career-Ready Skills:** Interview preparation, resume building, and hands-on labs

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Mr. Vikas Debnath

Founder Director – KV IT-Solutions Pvt. Ltd.

Founder – OpenPath

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anyone can master it.”**

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