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## LPIC-2: Linux Engineer

**Duration: 5 Days**      **Course Code: LPIC-2**

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### Overview:

LPIC-2 is the second certification in LPI's multi-level professional certification program. The LPIC-2 will validate the candidate's ability to administer small to medium-sized mixed networks. The candidate must have an active LPIC-1 certification to receive LPIC-2 certification, but the LPIC-1 and LPIC-2 exams may be taken in any order.

In this course students will learn how to plan, implement, keep consistent, secure and troubleshoot a small mixed (Microsoft, Linux) network, including a:

- LAN server (Samba, NFS, DNS, DHCP, client management)
- Internet Gateway (firewall, VPN, SSH, web cache/proxy, mail)
- Internet Server (web server and reverse proxy, FTP server)

Student will also learn about how to advise management on automation and purchases.

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### Target Audience:

Anyone who is already familiar with Linux and material covered in LPIC-1 Linux Administrator course

- Anyone wishing to prepare for the LPIC-2 201-450 and 202-450 exams

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### Objectives:

- Perform advanced system administration, including common tasks regarding the Linux kernel, system start-up and maintenance;
- Perform advanced Management of block storage and file systems as well as advanced networking and authentication and system security, including firewall and VPN;
- Install and configure fundamental network services, including DHCP, DNS, SSH, Web servers, file servers using FTP, NFS and Samba, email delivery;
- Supervise assistants and advise management on automation and purchases.

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### Prerequisites:

Before attending this course, delegates must have:

- Attended the LPIC-1 Linux Administrator or CompTIA Linux+ Powered by LPI courses

### Testing and Certification

This course will prepare delegates to write the LPIC-2 exams, 201-450 and 202-450

Successfully passing exams 201-450 and 202-450 will result in the attainment of the LPIC-2 Linux Engineer Certification.

## Content:

### **Module 1: System Start-up & Advanced System Management**

- ① Customizing system startup and boot processes
- ① System recovery
- ① Notify users on system-related issues
- ① Make and install programs from source

### **Module 2: Linux Kernel Configuration**

- ① Kernel Components
- ① Compiling a kernel
- ① Patching a kernel
- ① Customize, build, and install a custom kernel and kernel modules
- ① Manage/query kernel and kernel modules at runtime

### **Module 3: Basic Filesystem Management**

- ① Operating the Linux filesystem
- ① Maintaining a Linux filesystem
- ① Creating and configuring filesystem options
- ① udev Device Management

### **Module 4: Advanced Disk Management**

- ① Configuring RAID
- ① Adjusting Storage Device Access
- ① Logical Volume Manager
- ① Backup Operations

### **Module 5: Networking Configuration**

- ① Basic networking configuration
- ① Advanced network configuration and troubleshooting
- ① Troubleshooting network issues

### **Module 6: DNS Server Configuration**

- ① Basic DNS Server Configuration
- ① Create and Maintain DNS Zones
- ① Securing a DNS Server

### **Module 7: Advanced Network Configuration**

- ① DHCP configuration
- ① LDAP client usage
- ① Configuring a router
- ① Secure shell

### **Module 8: Configuring File Servers**

- ① SAMBA Server Configuration
- ① NFS Server Configuration

- ① Securing FTP Servers

### **Module 9: Configuring Web and E-mail Servers**

- ① Implementing a Web server
- ① Maintaining a Web server
- ① Implementing a proxy server
- ① Using e-mail servers
- ① Managing Local e-mail delivery
- ① Managing remote email delivery

### **Module 10: Security**

- ① PAM Authentication
- ① TCP Wrapper
- ① Security tasks

### **Module 11: System Troubleshooting I: Boot and**

- ① Kernel Problems
- ① Identifying boot stages and troubleshooting
- ① General troubleshooting

### **Module 12: System Troubleshooting II: System**

- ① Resources and the User Environment
- ① Troubleshooting system resources
- ① Troubleshooting environment
- ① configuration