

GL275 - Enterprise Linux Network Services

Days: 5



Prerequisites: Students should have experience administering Linux systems and be comfortable with the Linux command line, file systems, user management, networking fundamentals, and basic system administration tasks. Prior Linux administration experience or equivalent knowledge is recommended

Audience: Linux system administrators, network administrators, DevOps engineers, and IT professionals responsible for deploying, configuring, securing, and troubleshooting enterprise Linux network services.

Description: This course provides hands-on experience configuring and securing the network services commonly found in enterprise Linux environments. Students learn to deploy DNS, web, email, directory, file sharing, proxy, and database services while implementing security best practices using SELinux, firewalls, and authentication technologies. Extensive labs reinforce real-world administration and troubleshooting techniques.

Course Objectives: With a focus on practical applications, the course covers:

- DNS Administration
- Apache Web Services
- Email Services
- LDAP Directory Services
- Samba File Sharing
- Squid Proxy Services
- MariaDB
- SELinux Security
- Netfilter / Firewalls
- Linux Network Troubleshooting

OUTLINE:

LEARNING PATH: IMPLEMENT LINUX SECURITY SERVICES

LESSONS:

- Configure SELinux security policies
- Manage SELinux contexts and booleans
- Configure firewall rules with Netfilter
- Secure enterprise network services
- Troubleshoot security policies

LEARNING PATH: CONFIGURE DNS SERVICES

LESSONS:

- Understand DNS architecture
- Install and configure BIND
- Create forward and reverse lookup zones
- Configure caching and forwarding
- Troubleshoot DNS services

LEARNING PATH: DEPLOY APACHE WEB SERVICES

LESSONS:

- Install and configure Apache HTTP Server
- Configure virtual hosts
- Enable SSL/TLS encryption
- Configure authentication and access controls
- Secure web applications

LEARNING PATH: CONFIGURE EMAIL SERVICES

LESSONS:

- Configure Postfix mail services
- Manage SMTP relay
- Configure local mail delivery
- Secure email communications
- Troubleshoot mail services

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Network Services

LEARNING PATH: IMPLEMENT LDAP DIRECTORY SERVICES

LESSONS:

- Install OpenLDAP
- Configure directory databases
- Manage users and groups
- Configure client authentication
- Secure LDAP communications

LEARNING PATH: CONFIGURE FILE SHARING SERVICES

LESSONS:

- Configure Samba shares
- Manage SMB authentication
- Configure permissions
- Integrate Linux and Windows systems
- Troubleshoot file sharing

LEARNING PATH: IMPLEMENT PROXY AND DATABASE SERVICES

LESSONS:

- Configure Squid proxy services
- Implement access controls
- Configure MariaDB
- Manage database users and permissions
- Secure database services