Publication date : 02/22/2024

Course : Linux, network services under Red Hat

Practical course - 5d - 35h00 - Ref. LIZ
Price : 2710 € E.T.

This course will show you how to administer the network services of an enterprise Linux Red Hat server in a secure and stable way. You'll learn how to implement basic services such as DNS and DHCP, set up a secure network and centralize accounts with an LDAP directory.

Teaching objectives

At the end of the training, the participant will be able to:

- Building and configuring a TCP/IP network
- Managing LDAP accounts
- Understanding how Samba works
- Install and configure DNS servers and clients under RedHat
- Setting up Postfix
- Manage external access and security

Intended audience

Administrators, system engineers.

Prerequisites

Basic knowledge of how to use a Linux or Unix system.

Course schedule

1 TCP/IP configuration

- IP protocol (v4/v6).
- Analysis of operation and traffic.

Hands-on work

Building an IP network.

PARTICIPANTS

Administrators, system engineers.

PREREQUISITES

Basic knowledge of how to use a Linux or Unix system.

TRAINER QUALIFICATIONS

The experts leading the training are specialists in the covered subjects. They have been approved by our instructional teams for both their professional knowledge and their teaching ability, for each course they teach. They have at least five to ten years of experience in their field and hold (or have held) decision-making positions in companies.

ASSESSMENT TERMS

The trainer evaluates each participant's academic progress throughout the training using multiple choice, scenarios, hands-on work and more.
Participants also complete a placement test before and after the course to measure the skills they've developed.

TEACHING AIDS AND TECHNICAL RESOURCES

• The main teaching aids and instructional methods used in the training are audiovisual aids, documentation and course material, hands-on application exercises and corrected exercises for practical training courses, case studies and coverage of real cases for training seminars.
• At the end of each course or seminar, ORSYS provides participants with a course evaluation questionnaire that is analysed by our instructional teams.
• A check-in sheet for each half-day of attendance is provided at the end of the training, along with a course completion certificate if the trainee attended the entire session.

2 Domain Name System (DNS) configuration

- DNS concepts and terminology.
- Bind software installation.
- DNS client configuration.
- Details of RR records (SOA, NS, A).
- Slave server configuration.
- Notions of root-server, TLD, zone, registration.
- DHCP configuration, interaction with Bind.

Hands-on work

Installation and configuration of DNS servers and clients. Setting up a DHCP server. Testing from clients.

TERMS AND DEADLINES

Registration must be completed 24 hours before the start of the training.

ACCESSIBILITY FOR PEOPLE WITH DISABILITIES

Do you need special accessibility accommodations? Contact Mrs. Fosse, Disability Manager, at psh-accueil@orsys.fr to review your request and its feasibility.

3 Basic administration and analysis

- Integrated remote administration tool.
- SSH and Telnet, two remote administration services.
- Interaction between systemctl and SSH.
- Super-servers: inetd and xinetd daemons.
- Securing services with tcp-wrappers.

Hands-on work

Installation of a server program managed by xinetd. Setting up sshd. Time synchronization.

4 Centralize accounts with LDAP

- The directory principle.
- The differences with conventional management.
- Identification strategy under Linux (pam, nss...).
- LDAP authentication server.
- The Squid (proxy) example.

5 Samba

- Samba architecture. File sharing.
- Role of various demons (smbd, nmbd).
- Samba logs. SWAT administration tool.
- Linux and Windows mounting (mount).
- Installation and configuration of cups server.

6 Messaging

- SMTP, POP3, IMAP4 protocols.
- Postfix SMTP server: installation, configuration.
- Access to the directory from customer e-mails.

Hands-on work

Install and configure Postfix. Set up POP3 and IMAP4 servers.

7 External access

- Implementation of IP routing (route).
- IP forwarding. NAT.
- Configuration, ACL management, sizing.
- Different FTP servers: wu-ftpd vs ProFTPD.
- The rsync service. Replication, backup.

Hands-on work

Setting up different types of routing, tests, proftpd server and proxy.

8 Safety

- @IP/service filtering.
- Netfilter: IP packet filtering: iptables.
- Standard rules with iptables.

Hands-on work

Set up TCPD, prohibit access to certain services. Set up filtering firewall rules (iptables).