Linux Web Servers and IPv6

How to upgrade and manage your Linux Web Servers for IPv6   **(4 days)**

Relevant Platform:
- Linux

Relevant Products:
- DNS
- Apache
- Sendmail
- POP/IMAP
- Perl (CGI)

You will learn how to
- Plan and manage the migration of your web servers to IPv6
- Implement new versions of critical networking software to support IPv6
- Configure your Linux Server for networking with IPv6
- Upgrade and configure name servers for IPv6 (DNS)
- Upgrade and configure the Apache Web Server for IPv6
- Implement an IPv6 version of Sendmail.
- Obtain and implement IPv6 enabled POP and IMAP daemons
- Update and configure other common networking applications, such as telnet, SSH, ping and FTP.

Course Benefits
The implementation of IPv6 is inevitable and will impact on all companies that maintain, implement or use IP networks.

IPv6 is the result of many years of research and activity by the international Internet community. IPv6 provides increased addressing space, improved routing, better security and support for new applications.

Preparing for IPv6 will be crucial for all Internet Service Providers and other companies who run Web-Servers and associated systems.

In this course, you will learn how to obtain and implement IPv6 protocols within your organisation on your Linux servers. You will also be taught how to configure the Apache Web-Server for IPv6 operation.

This course provides extensive hands-on sessions and in-depth technical analysis.

Who Should Attend
This course is intended for Linux Web Server administrators.

A good knowledge of general networking concepts is assumed, including the operation of IPv4. A good working knowledge of Unix or Linux is necessary. It is helpful if the delegate is experienced with configuring and running an IPv4 based Web-Server.

Course Contents

Introduction
The problems with IPv4
The solution - IPv6
What does this mean for us?

The IPv6 Protocol Basics
IPv6 datagram header
IPv6 Addressing
Optional headers

Autoconfiguration
Stateless & Stateful
DHCPv6
Link-Local Addresses
Neighbour Discovery
Router Discovery

Routing and Internetworking
Network Addressing
Routing Protocols
Fragmentation

IPv6 Security
IPSec
AH and ESP Headers
ISAKMP
Authentication & Confidentiality

IPv6 Quality of Service
The type of service header
Flow Identifiers
Prioritisation

Transport Layer
Changes to TCP & UDP

DNS (BIND)
DNS and IPv6
The new IPv6 records
Configuring BIND for IPv6

Application Changes
Basic Internet commands

Superdaemons: inetd xinetd
ping, telnet, FTP
SSH
Web Browsers

The Apache Web-Server
Installing Apache with IPv6
Configuration Apache with IPv6
Changes to Apache for IPv6
Security Considerations

E-mail and IPv6
Upgrading E-mail systems
Upgrading Sendmail for IPv6
Sendmail Configuration for IPv6
Changes to POP and IMAP
Security Considerations

The Programming Interface
The updated Socket API
How this affects Perl CGI
Changes to other languages
(Java Servlets, JSP, PHP)

Practicals
During the course there will be many opportunities for hands-on work. Each module has detailed exercises associated with it. Every delegate has at least one server provided for his or her own use during the course.

Practicals are run on Linux.

Hands-On includes:
- Upgrading to IPv6
- Basic IPv6 Configuration
- Security Configuration
- Upgrading and configuring BIND for IPv6
- Installing SSH with IPv6
- Running Apache over IPv6
- Configuring Sendmail, POP and IMAP for IPv6 operation

The Trainers
All our trainers are practising network consultants with extensive experience with IPv6 networking on Linux Web Servers. They are ideally suited to bringing you the highest quality of training.

The Company
For further information about the training and our company see our web-site at
http://www.erion.co.uk/

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