Systems & Network Training

Linux for network engineers

A 5 day **Hands on** training course

Save on expenses. This course is also available on your premises.

Description

A Linux foundation appropriate for all flavours of Linux, focussed on getting network engineers up and running with Linux. The command line is used throughout. The course progresses from the basics of Linux commands onto useful tools such as grep, then shell features such as piping and then onto shell scripting. Administration aspects covered are the tasks network engineers are most likely to encounter such as software installation. Hands on exercises concentrate on network related tasks such as installing net-snmp and using shell scripts to provide network automation.

Key outcomes

By the end of the course delegates will be able to:

- ✔ Use Linux commands to perform a variety of tasks from manipulating files to handling processes.
- ✔ Create and edit files with vi.
- ✔ Work with permissions.
- ✔ Write simple shell scripts.
- ✔ Install software packages.
- ✔ Configure base networking.

Training Approach

This structured course uses Instructor Led Training to provide the best possible learning experience. Small class sizes ensure students benefit from our engaging and interactive style of teaching with delegates encouraged to ask questions throughout the course. Quizzes follow each major section allowing checking of learning. Hands on sessions are used throughout to allow delegates to consolidate their new skills.

Details

Who will benefit?
Network engineers.

Prerequisites
TCP/IP foundation for engineers.

Duration: 5 days

Customer rating: **New course.**

Generic Training	Small Class Sizes	Hands On Training	Our Courseware	Customise Your Course
Generic training compliments product specific courses covering the complete picture of all relevant devices including the protocols “on the wire”.	We limit our maximum class size to 8 delegates; often we have less than this. This ensures optimal interactivity between delegates and instructor.	The majority of our courses use hands on sessions to reinforce the theory.	We write our own courses; courseware does not just consist of slides and our slides are diagrams not bullet point text.	Please contact us if you would like a course to be customised to meet your specific requirements. Have the course your way.
“*Friendly environment with expert teaching that teaches the why before the how.”* G.C. Fasthosts	*“Excellent course. The small class size was a great benefit...”* M.B. IBM	*“Not many courses have practice added to it. Normally just the theoretical stuff is covered.”* J.W. Vodafone	*“Comprehensive materials that made the course easy to follow and will be used as a reference point.”* V.B. Rockwell Collins	*“I was very impressed by the combination of practical and theory. Very informative. Friendly approachable environment, lots of hands on.”* S.R. Qinetiq

Linux for network engineers

Course Content

What is Linux?
Linux distributions, open source software.

Getting started
Logging in, changing passwords, logging out. Hands on: Basics and root access.

Linux basics
Command structure. The Linux manuals, basic commands (who, date, tty, uname, echo, banner...). Hands on: Using the CLI.

Connecting to a network
IP configuration, DHCP, static addressing, routing, ifconfig, ping, netstat, traceroute, dig. Hands on: Network configuration and testing.

Managing Software
Package Concepts, Comparison of package formats, RPM, rpm Commands, Yum, Debian Packages, dpkg, apt-cache, apt-get, dselect, aptitude, Converting Between Package Formats, Dependencies and Conflicts, Startup Script Problems, Shared Libraries, Library Management, Hands on: Installing network packages such as nmap and net-snmp.

Processes and log files
ps, kill, background processes, at, exec, priorities. Managing Linux log files. Syslogd. Setting the time. Cron and cronjobs. Managing Processes, the Kernel: The First Process. Hands on: Controlling daemons and services. Setting up a TFTP server.

Filesystem commands
Home directories, manipulating files and directories, Filesystem layout, Pathnames, hard and symbolic links. Viewing files. Hands on: Exploring the filesystem, working with network device configuration files.

The Linux editors
ed, vi, shell escapes, .exrc. Hands on: Editing network device configuration files.

Extracting data from files
grep, find, cut, sort and paste… Hands on: Working with syslog files.

Permissions
Theory, chmod, chown, newgrp.. Hands on: Handling permission problems.

The shell
Metacharacters, piping and redirection. Hands on: Running SNMP commands and working with their output.

Basic shell scripting
What are shell scripts? Simple scripts, control structures. Variable. Setting variables, using variables, set, scope, export, sourcing, environmental variables, read. Positional parameters: $0 to $9, $#, $* and others. shift parameter substitution. Control statements: The test command, if , while loops, for loops, the case statement. Hands on: Automating network tasks.

Customising your environment
Environmental variables, stty, .profile and other startup files. Hands on: Customising Linux.

Introduction to administration
The root user, su. Managing users and groups. Hands on: The power of root.

Archiving files
Backups, tar, cpio, dd, gzip. Hands on: Working with tar files.

Booting Linux and Editing Files
Installing Boot Loaders, GRUB Legacy, GRUB 2, Alternative Boot Loaders, the Boot Process, Boot Messages, Runlevels and the Initialization Process, Runlevel Functions, Runlevel Services, Alternative Boot Systems , Upstart, system. Hands on: Installing network services on Linux.