Linux Fundamentals

Duration: 5 Days   Course Code: LF   Delivery Method: Company Event

Overview:

This Linux Operating System and Bash Shell Programming training course introduces the delegate to the main concepts of the LINUX Operating System. The most commonly used commands are described in detail as are the command line wildcard and redirection facilities. The mechanisms by which a user acquires a login environment are discussed and the main features of the Bash shell are introduced. The course is designed to give delegates practical experience in developing and writing shell scripts. Most of the built-in Bash shell commands are introduced together with the main program control structures.

Company Events

These events can be delivered exclusively for your company at our locations or yours, specifically for your delegates and your needs. The Company Events can be tailored or standard course deliveries.

Target Audience:

There are no formal pre-requisites for the Linux Fundamentals course,although an understanding of and exposure to information technology is advantageous.
Programmers,administrators and support personnel who need to understand the LINUX Operating system,existing shellscripts,automate procedures and write their own utilities.

Objectives:

- To provide the skills needed to work productively in a LINUX environment to develop and customise shell programs.

Prerequisites:

An understanding of IT is required.

Follow-on-Courses:
- Linux System Administration (LPI)
- Oracle SQL
- Linux Advanced Shell Programming Tools

NOTE: Course technical content is subject to change without notice.

Content:

Linux Fundamentals Training Course   Course Contents - DAY 1

Course Introduction

- Administration and Course Materials
- Course Structure and Agenda
- Delegate and Trainer Introductions

Session 1: INTRODUCTION TO THE LINUX OPERATING SYSTEM

- A brief history of UNIX
- The UNIX kernel
- The UNIX file system
- A login session
- Getting started navigating the file system
- The file system structure
- Directories and files
- Pathnames
- Navigating the file system
- Exercise: Logging on to the system
- Exercise: Navigating the file system

Session 2: BASIC COMMANDS

- Command line syntax
- Basic file handling commands
- Basic Directory handling commands
- Filename wildcard characters
- Exercise: Manipulating files and directories

Session 3: REDIRECTION AND PIPES

- Input redirection
- Output redirection
- Pipes
- Exercise: Using redirection and pipe facilities   Linux Fundamentals Training Course   Course Contents - DAY 2

Session 4: INTRODUCTION TO THE vi EDITOR

- Overview of the vi editor
- Basic functions
- Switching to input mode
- Other useful commands
- Exercises: Using the vi editor
- Exercise: Using more advanced vi features

Session 5: SEARCHING AND REPLACING TEXT

- Replacing text
- Using the vi editor
- Using sed for search and replace
- Searching for text with grep
- Exercises: Searching and Replacing Text

Session 6: RECALLING AND EDITING COMMANDS

Session 7: FILE PERMISSIONS AND ACCESS CONTROL

- Users and user groups
- File access permissions
- Changing file attributes
- Switching users and user groups
- Linking files
- Exercise: Setting and access permissions   Linux Fundamentals Training Course   Course Contents - DAY 3

Session 8: PROCESSES

- What is a process?
- Monitoring processes
- Killing processes
- Background processes
- Job Control
- Grouping commands
- Exercise: Monitoring and controlling processes

Session 9: THE USER ENVIRONMENT

- Customising the .profile or .bash_profile
- Customising the .kshrc or .bashrc
- Exercise: Setting up an environment

Session 10: MORE BASIC COMMANDS

- The find command
- The cut command
- The sort command
- The finger command
- Exercise: Using file handling commands   Linux Fundamentals Training Course   Course Contents - DAY 4

Session 11: UNIX COMMAND REVIEW

- Basic Unix commands
- General commands
- File and directory handling commands
- Filename generation characters
- I/O Redirection features
- Other commands

Session 12: GETTING STARTED

- What is a shell script?
- Development guidelines
- Creating and editing shell scripts
- Naming and storing shell scripts
- Executing shell scripts
- Exercise: Write a simple shell script

Session 13: USING VARIABLES

- Environment variables
- Local variables
- Assigning values to variables

Session 15: HANDLING RUN TIME DATA

- The read command
- Command line arguments
- Exercise: Writing a generic shell script
- Exercise: Writing an interactive shell script

Session 16: CONDITION EXECUTION

- The if statement
- The test command
- Other test notations
- Default and substitute variables
- Exit status codes
- Exercise: Adding validation to previous scripts   Linux Fundamentals Training Course   Course Contents - DAY 5

Session 17: LOOP CONSTRUCTS

- The while loop
- The until loop
- The for loop
- The while true and until false loops
- Loop control commands
- Exercise: Enhancing the previously written scripts
- Exercise: Writing a script to copy files using a 'for' loop
- Exercise: Writing a script to generate numbers with the 'while' loop

Session 18: MULTI-BRANCH DECISIONS

- The case statement
- Menu driven applications
- Exercise: Developing and writing a menu system

Session 19: FUNCTIONS

- What is a function?
- Syntax
- Examples
- Exercise: Add a function to a script

Session 20: INTERRUPT HANDLING

- Interrupt signals
- Trapping interrupts
- Exercise: Adding traps to the menu script

Session 21: ADDITIONAL FEATURES AND FACILITIES

- The exec commands
- The includes notation
- More about loops
- Arrays
- Here Documents
- Exercise: Create a here script

Further Information:

For More information, or to book your course, please call us on Head Office 01189 123456 / Northern Office 0113 242 5931

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