

LINUX BASH SHELL PROGRAMMING

This course is designed for delegates with some Linux experience who wish to become familiar with bash Shell Scripts.

Overall Objective

The course will enable the delegate to write both basic and complicated scripts to automate tasks using the facilities of the shell, and will especially benefit system administrators who need to run everyday administration tasks.

Audience

System Administrators, System support personnel, Installation personnel, Network administrators, Programmers and other users, who have a broad-based understanding of Linux and who may need to write or maintain shell scripts.

Prerequisites

Familiarity with the Linux (or UNIX) environment and commands is useful. Knowledge of the *vim* editor is assumed. For those delegates **new** to Linux, attendance of the three-day **Introduction to Linux** course is recommended.

Duration

2 - 3 days, hands-on (up to 5 days if *sed* and *awk* included).

Course Objectives

On completion of this course, the delegate will be able to:

- Understand the structure of the shell environment and the commands to manipulate it
- Use the main features of the scripting language
- Carry out arithmetic within a shell script
- Use commands to effect decision making and flow-control
- Understand how to use functions
- Write interactive scripts to improve productivity

- In addition to the above, learn to use the Linux utilities: **sed** and **awk** (*also can be run as a separate course: UNIX/Linux Tools and Utilities*)

Course Contents

- Introduction to bash (the "Bourne-Again Shell")
- Review of the basics
- The command structure
- *Here* documents
- Job Control
- The bash Environment
- Environment Variables
- Using Command History
- bash Variables
- Creating and executing bash scripts
- Debugging bash scripts
- Processing command-line parameters
- Comments in scripts
- The *read* statement
- Conditional statements (*if*, *case* and *select*)
- The *test*, [...] and [[...]] commands
- The *let* and ((...)) command
- The *exit*, *break* and *continue* statements
- Operators
- Testing strings and numbers
- The *declare* command
- Creating loops (*for*, *while* and *until*)
- Handling arrays
- The *getopts* command
- Functions
- Using the *trap* command
- *sed* and *awk* (*optional*)