

# Linux Shell Programming

Duration: 2 days

## COURSE OBJECTIVES

This Linux/Unix Shell Programming training course is designed to give delegates practical experience in developing and writing Linux/UNIX shell scripts. Most of the built-in shell commands are introduced together with the main program control structures. This course is not suitable for C shell programmers.

- Writing simple scripts to enhance basic command output
- Using the various shell quoting mechanisms appropriately
- Manipulating shell variables and user-defined variables in scripts
- Implementing conditional execution facilities
- Using the shell's built-in loop constructs where appropriate
- Writing scripts to trap user interrupts
- User defined Functions

## COURSE OUTLINE

### Day 1

#### Module 1: UNIX COMMAND REVIEW

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

#### Module 2: GETTING STARTED

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

#### Module 3: USING VARIABLES

- Environment variables
- Local variables
- Assigning values to variables
- Assessing variable values
- Using quotes
- Delimiting variable names
- Echo control sequences

#### Module 4: INTEGER ARITHMETIC

- Using the expr command

- Using the (( )) notation
- Exercise: Add integer arithmetic to a shell script
- Session 5: HANDLING RUN TIME DATA
- The read command
- Command line arguments

#### Module 5: CONDITION EXECUTION

- The if statement
- The test command
- Other test notations
- Default and substitute variables
- Exit status codes

#### Module 6: Q&A

##### Day 2

#### Module 1: LOOP CONSTRUCTS

- The while loop
- The until loop
- The for loop
- The while true and until false loops
- Loop control commands

#### Module 2: MULTI-BRANCH DECISIONS

- The case statement
- Menu driven applications

#### Module 3: FUNCTIONS

- What is a function?
- Syntax
- Examples

#### Module 4: INTERRUPT HANDLING

- Interrupt signals
- Trapping interrupts

#### Module 5: ADDITIONAL FEATURES AND FACILITIES

- The exec commands
- The includes notation
- More about loops
- Arrays
- Here Documents

#### Module 6: Q&A

#### Prerequisites

Basic LINUX/UNIX knowledge, VI editor