
Linux Bash Shell Programming

Duración: 5 Días Código del Curso: LBSP

Temario:

English - Please note this course is only available in English.

Español - Por favor, tenga en cuenta que esta formación solo está disponible en inglés.

Linux Bash Shell Programming Course Overview

The Linux Bash Shell Programming course is designed to give delegates practical experience in developing and writing Bash shell scripts.

Dirigido a:

Who will the Course Benefit?

Programmers, developers and system administrators who need to construct shell scripts and process text files using advanced text handling facilities.

The Linux Bash Shell Programming course assumes knowledge of the Linux Operating System to the level covered in the Linux Introduction Course. Some programming experience may also prove advantageous.

Objetivos:

■ Course Objectives

- To provide the skills needed to develop and customise shell programs and to make effective use of a wide range of standard Linux programming and development tools.
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Prerequisites:

- The Linux Bash Shell Programming course assumes knowledge of the Linux Operating System to the level covered in the Linux Introduction course. Some programming experience may also prove advantageous.
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Siguientes cursos recomendados:

Further Learning

- Linux System Administration (LPI)
 - Oracle SQL
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Contenido:

Linux Bash Shell Programming Training Course Course Contents - DAY 1

Course Introduction

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

Session 1: UNIX COMMAND REVIEW

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

Session 2: 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 3: USING VARIABLES

- Environment variables
- Local variables
- Assigning values to variables
- Assessing variable values
- Using quotes
- Delimiting variable names
- Echo control sequences
- Exercise: Add variables to a script

Session 4: INTEGER ARITHMETIC

- Using the expr command
- Using the (()) notation
- Exercises: Add integer arithmetic to a shell script

Session 5: HANDLING RUN TIME DATA

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

Session 6: CONDITIONAL EXECUTION

- The if statement
- The test command
- Exercise: Adding validation to previous scripts

Session 7: ADDITIONAL KORN,BASH ; POSIX SYNTAX

Session 10: SCRIPTING WITH AWK

- Fundamentals of AWK
- Basic AWK scripts
- AWK within Bash constructs
- Exercise: AWK scripts

Session 11: FUNCTIONS

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

Session 12: INTERRUPT HANDLING

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

Appendix A: ADDITIONAL FEATURES AND FACILITIES

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

Appendix B: VIM QUICK REFERENCE

Appendix C: UNIX COMMANDS QUICK REFERENCE

Appendix D: ADDITIONAL EXERCISES

Session 13: BACKUP AND RESTORE UTILITIES

- Backing-up and restoring files
- Basic and advanced use of tar
- Compression utilities gzip,bzip2,zip and compress
- Exercise: Backing up and restoring files using tar
- Exercises: Compressing files

Session 14: BACKGROUND JOB SCHEDULING

- Scheduling jobs with the cron command
- Scheduling jobs with the at command
- Exercises: Running background jobs

Session 15: COMMANDS FOR COMPARING FILES

- Compare files with the cmp command
- Compare and format files with pr

Session 17: IDENTIFYING AND TRANSLATING CHARACTERS

- od - octal dump
- Use cat to display non-printing characters
- View and format files with nl
- The expand and unexpand commands to convert between tab and space characters
- The tr command for character translation
- Exercises: Translating characters with tr

Session 18: REGULAR EXPRESSION NOTATION REVIEW

- Standard regular expressions
- Searching with grep
- Metacharacters, positional characters and quantifiers
- Extended regular expressions
- POSIX character classes
- PERL expressions

Session 19: THE STREAM EDITOR sed

- sed command line syntax
- sed script files
- sed command processing
- sed addresses and simple instructions
- sed pattern space and hold space
- Grouping sed commands
- Hold and get functions
- Advanced flow control
- Write output to temporary files
- Exercises: Text processing with sed

Session 20: FUNDAMENTALS OF AWK

- Basic AWK usage
- AWK program-files
- AWK scripts
- AWK variables
- Pattern matching with AWK
- AWK extended patterns

Session 21: AWK OPERATORS

- AWK operators
- AWK arithmetic operations
- AWK output
- Formatting output with printf
- Exercises: Create awk scripts to extract selected data from a file and generate reports Linux Bash Shell Programming Training Course Course Contents - DAY 5

Session 22: AWK PROGRAM CONTROL STRUCTURES

- The BEGIN and END functions
- The AWK if construct
- The AWK else if construct
- The AWK while construct

- Other test notations
- Default and substitute variables
- Exit status codes
- Exercise: Linux Bash Shell Programming Training Course Course Contents - DAY 2

Session 8: 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 9: MULTI-BRANCH DECISIONS

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

- Compare files with the comm command
- Compare files with the diff and sdiff commands
- Compare large files with the bdiff command
- Exercises: Identifying file differences

Session 16: SPLITTING FILES

- The fold command
- Split files using context and content rules
- Exercises: Splitting files Linux Bash Shell Programming Training Course Course Contents - DAY 4

- Other program control statements
- The AWK break, continue and exit statements
- User defined functions
- Exercises: Create AWK scripts and program-files utilising program control structures

Session 23: AWK FUNCTIONS

- AWK string functions
- AWK length, tolower, toupper, index, sub, gsub, match, substr, split, sprintf, system and getline functions
- Exercises: Generate AWK scripts and program-files to extract and format data using AWK functions

Session 24: AWK ARRAYS

- AWK associative arrays
- Multi-dimensional arrays
- Exercises: Create AWK associative arrays to process text files and generate reports

Session 25: MISCELLANEOUS TOOLS

- bc (calculator)
- fuser (testing for files in use)
- getops (checking options passed to shell scripts)
- printf (formatting screen output)
- logger (script logging)
- xargs (generating arguments for a command)
- eval (re-evaluating variables)
- Exercises: Using tools within a shell script

Más información:

Para más información o para reservar tu plaza llámanos al (34) 91 425 06 60

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