Debian Linux : Basics

Presentation

Objectives : Master Debian Linux basics.
Who can benefit : Anyone.
Prerequisites : Knowledge of another operating system.
Learning technique : Clear, theoretical course content divided into lessons and extensive LABS available on-line 24/24 7/7.
Student Progression : Student progression is monitored both in terms of effective course duration and in terms of student comprehension using self-assessment tests.

Cursus

- **File Hierarchy System**
  - Directory Contents
  - Directory Structure
  - File Types
  - The mount command
    - Command Line Switches
  - The /etc/fstab file
    - Understanding the /etc/fstab file
      - Mountpoint Options
  - The umount command
    - Command Line Switches
  - Unix File Systems
    - Superblock
    - Inodes
    - Data Blocks
    - Hard (Physical) Links

- Soft (Symbolic) Links
    - **Commands**: mount, umount.

- **The VIsual Editor**
    - Presentation
    - Creating, Opening and Closing files with VI
        - Commands
        - LAB #1 - Creating a new file with VI
        - LAB #2 - Opening a file in read-only mode using view
        - LAB #3 - Opening a file in read-write mode using VI
    - The set Command
        - Commands
        - LAB #4 - Turning on line numbering using set
    - Moving around within the file
        - Commands
    - Inserting Text
        - Commands
        - LAB #5 - Inserting text
    - Searching for Text
        - Commands
        - LAB #6 - Searching for and replacing text
    - Deleting Text
        - Commands
        - LAB #7 - Deleting lines
    - Copy, Cut and Paste
        - Commands
        - LAB #8 - Copying, Cutting and pasting text
    - Configuring a Personalised Interface
    - **Commands**: view, vi

- **Help and Documentation**
    - Help on external commands
    - Help on built-in commands
    - The man command
    - The apropos command

- The mandb and whatis commands
- The info command
    - Command Line Switches
- **Commands**: help, man, info, apropos, mandb, whatis.

- **Basic Shell Commands and Text Manipulation Tools**
    - Use of Basic Shell Commands
        - The stty Command
        - The date command
        - The who Command
        - The df Command
        - The free Command
        - The whoami Command
        - The pwd Command
        - The cd Command
        - The ls Command
        - The lsof Command
        - The touch Command
        - The echo Command
        - The cp Command
        - The file Command
        - The cat Command
        - The mv Command
        - The mkdir Command
        - The rmdir Command
        - The rm Command
        - The sort Command
        - The more Command
        - The less Command
        - The find Command
        - The su Command
        - The updatedb and locate Commands
        - The whereis Command
        - The which Command

- The uptime Command
- The w Command
- The uname Command
- The du Command
- The clear Command
- The exit Command
- The logout Command
- The sleep Command
- The wall Command
- The seq Command
- The screen Command
  - Switches and Arguments
  - Manipulating Text Files
    - Regular Expressions
      - BREs
      - EREs
    - Text-search Utilities
      - The grep Command
      - The egrep Command
      - The fgrep Command
      - LAB #1 - Using grep, egrep and fgrep
    - The Stream EDitor SED
      - LAB #2 - Using sed
    - The Text Processor AWK
      - Presentation
      - Field Separation
      - Conditions
        - A regular expression applied to a record
        - A regular expression applied to a field
        - Comparisons
        - Logical Operators
        - Built-in Variables
      - Awk Scripts
      - The printf function

- Control Statements
  - if
  - for
  - while
  - do-while
- LAB #3 - Using awk
- Other Useful Commands
  - The expand Command
  - La Commande unexpand
  - The cut command
  - The uniq Command
  - The tr Command
  - The paste Command
  - The split Command
  - The diff Command
  - The cmp Command
  - The patch Command
  - The strings Command
  - The comm Command
  - The head Command
  - The tail Command
  - LAB #4 - Use the grep, tr and cut to extract your IP address from the output of ifconfig
- **Commands**: stty, date, who, df, free, whoami, pwd, cd, ls, touch, echo, cp, file, cat, mv, mkdir, rmdir, rm, sort, more, find, su, locate, updatedb, whereis, which, uptime, w, uname, du, lsmod, modprobe, rmmod, modinfo, clear, exit, logout, sleep, grep, egrep, fgrep, sed, awk, tr, paste, cut, split, diff, cmp, uniq, patch, strings, comm, od, head, tail, wall, screen.

- **Command Line Interface**
  - The Shell
  - /bin/bash
    - Internal And External Commands
    - Aliases
    - The Prompt
    - The history Command
    - The TAB key

- Metacharacters
  - The * Metacharacter
  - The ? Metacharacter
  - The [] Metacharacter
  - The extglob Option
  - ?(expression)
  - *(expression)
  - +(expression)
  - @(expression)
  - !(expression)
- Protecting Metacharacters
- Exit Status
- Redirections
- Pipes
- Command Substitution
- Conditional Command Execution
  - Environment Variables
    - Principal Variables
    - Internationalisation and Localisation
    - Special Variables
    - The env Command
  - Bash Shell Options
    - noclobber
    - noglob
    - nounset
  - Basic Shell Scripting
    - Execution
    - The read command
      - Code de retour
      - The IFS Variable
    - The test Command
      - Testing Files
        - LAB #1
      - Testing Strings

- LAB #2
- Testing Numbers
  - LAB #3
- Expressions
  - LAB #4
- Testing the User Environment
  - LAB #5
  - The [[expression]] Command
    - LAB #6
  - Shell Operators
    - LAB #7
  - The expr Command
    - Maths
    - Comparisons
    - Logic
      - LAB #8
    - The let Command
      - Maths
      - Comparisons
      - Logic
      - Binary
        - LAB #9
    - Control Structures
      - If
      - case
      - Loops
        - for
        - while
          - Example
      - Start-up Scripts
      - LAB #10
        - ~~/.bash_profile
        - ~/.bashrc
- **Commands**: type, alias, unalias, chsh, history, wc, tee, set, vi, script, read, test, expr, let, if, case, for, while.