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.