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LCE400 - Course Presentation

Contents

- **LCE400 - Course Presentation**
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  - What you will need
    - Hardware
    - Software
    - Internet
  - Training Program
  - Skills Assessment

What you will need

Hardware

- A computer running either MacOS, Linux, Windows™ or Solaris™,
- QWERTY Keyboard,
- 4 GB of RAM.

Software

- Browser :

- Web Chrome version 72+ or,
- Microsoft Edge version 79+ or,
- Firefox version 65+.
- Oracle VM VirtualBox for :
  - [Windows(tm)](#) or,
  - [Linux](#) or,
  - [Mac](#) or,
  - [Solaris(tm)](#) or,
  - [Solaris 11 IPS](#).
- Virtual disk image :
  - OSBoxes - [CentOS 8.5.2111](#)

Internet

- A fast, **direct** (no proxy or VPN), Internet connection (4G minimum),
- Access to ports 80 and 443 at https://ittraining.network.

Training Program

- **LCE400 - Course Presentation**
  - Prerequisites
    - Hardware
    - Software
    - Internet
  - Training Program
  - Skills Assessment

- **LCE401 - File Hierarchy System**
  - Linux File Hierarchy System
  - File Types
  - The mount Command
  - The /etc/fstab file

- Understanding the /etc/fstab file
- Mount Options
- The umount Command
- Unix File Systems
  - Superblock
  - Inodes
  - Data Blocks
  - Hard (Physical) Links
  - Soft (Symbolic) Links

- **LCE402 - The VIsual Editor**
  - Presentation
  - LAB #1 - Creating, Opening and Closing files with VI
    - 1.1 - Commands
    - 1.2 - Creating a new file with VI
    - 1.3 - Opening a file in read-only mode using view
    - 1.4 - Opening a file in read-write mode using VI
  - LAB #2 - The set Command
    - 2.1 - Commands
    - 2.2 - Turning on line numbering using set
  - LAB #3 - Moving around within the file
    - 3.1 - Commands
  - LAB #4 - Inserting Text
    - 4.1 - Commands
    - 4.2 - Inserting text
  - LAB #5 - Searching for Text
    - 5.1 - Commands
    - 5.2 - Searching for and replacing text
  - LAB #6 - Deleting Text
    - 6.1 - Commands
    - 6.2 - Deleting lines
  - LAB #7 - Copy, Cut and Paste
    - 7.1 - Commands
    - 7.2 - Copying, Cutting and pasting text

- LAB #8 - Configuring a Personalised Interface

- **LCE403 - Help and Documentation**
  - Help on external commands
  - Help on built-in commands
  - The man command
    - Command Line Switches
  - The apropos command
    - Command Line Switches
  - The makewhatis and whatis Commands under RHEL/CentOS 6
    - Command Line Switches
  - The mandb and whatis commands with RHEL/CentOS 8
    - Command Line Switches
  - The info command
    - Command Line Switches

- **LCE404 - Basic Shell Commands and Text Manipulation Tools**
  - LAB #1 - Use of Basic Shell Commands
    - 1.1 - The stty Command
    - 1.2 - The date command
    - 1.3 - The who Command
    - 1.4 - The df Command
    - 1.5 - The free Command
    - 1.6 - The whoami Command
    - 1.7 - The pwd Command
    - 1.8 - The cd Command
    - 1.9 - The ls Command
    - 1.10 - The lsof Command
    - 1.11 - The touch Command
    - 1.12 - The echo Command
    - 1.13 - The cp Command
    - 1.14 - The file Command
    - 1.15 - The cat Command
    - 1.16 - The mv Command
    - 1.17 - The mkdir Command

- 1.18 - The rmdir Command
- 1.19 - The rm Command
- 1.20 - The sort Command
- 1.21 - The more Command
- 1.22 - The less Command
- 1.23 - The find Command
- 1.24 - The su Command
- 1.25 - The updatedb and locate Commands
- 1.26 - The whereis Command
- 1.27 - The which Command
- 1.28 - The uptime Command
- 1.29 - The w Command
- 1.30 - The uname Command
- 1.31 - The du Command
- 1.32 - The clear Command
- 1.33 - The exit Command
- 1.34 - The logout Command
- 1.35 - The sleep Command
- 1.36 - The wall Command
- 1.37 - The seq Command
- 1.38 - The screen Command
- LAB #2 - Switches and Arguments
- LAB #3 - Regular Expressions
  - BREs
  - EREs
- Manipulating Text Files
  - Text-search Utilities
    - The grep Command
    - The egrep Command
    - The fgrep Command
    - LAB #4 - Using grep, egrep and fgrep
  - The Stream EDitor SED
    - LAB #5 - 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
    - LAB 7 - Other Useful Commands
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        - 7.2 - The unexpand Command
        - 7.3 - The cut Command
        - 7.4 - The uniq Command
        - 7.5 - The tr Command
        - 7.6 - The paste Command
        - 7.7 - The split Command
        - 7.8 - The diff Command
        - 7.9 - The cmp Command
        - 7.10 - The patch Command
        - 7.11 - The strings Command
        - 7.12 - The comm Command
        - 7.13 - The head Command
        - 7.14 - The tail Command
    - LAB #8 - Use the grep, tr and cut commands to extract your IPv4 address from the output of ifconfig
    - LAB #9 - Use the grep, awk and sed commands to extract your IPv4 address from the output of ip

- **LCE405 -Command Line Interface**
  - Contents
  - The Shell
  - /bin/bash
    - Internal And External Commands
    - Aliases
    - The Prompt
    - The history Command
    - The TAB key
    - Metacharacters
    - 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
    - The test Command
    - The [[expression]] Command
    - Shell Operators
    - The expr Command
    - The let Command
    - Control Structures

- Loops
- Start-up Scripts
- LAB #1 - Start-up Scripts

- **LCE406 - Training Evaluation and Validation**
  - Course Materials
  - Reminder of the Training Program
    - Day #1
    - Day #2
  - Training Evaluation
  - Exam - Acquired knowledge