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LCE400 - Course Presentation

Contents

- **LCE400 - Course Presentation**
 - Contents
 - 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
 - 7.1 - The expand Command
 - 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
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