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LCE400 - CentOS 8 / RHEL 8: Fundamentals

Presentation

Objectives: Master CentOS 8 fundamentals.
Who can benefit: Users of any operating system.
Prerequisites: Basic computer knowledge at a user level.
Learning technique: Clear, theoretical course content divided into lessons and extensive LABS.
Student Evaluation: Self-correcting, end-of-course questionnaire.
Duration: 2 days (14 hours).

Prerequisites

Hardware

- A computer running either MacOS, Linux, Windows™ or Solaris™,
- QWERTY US Keyboard,
- 4 GB of RAM,
- Headphones,
- A mic (optional).

Software

- Chrome, Edge or Firefox web browser.

Internet

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

Training Program

- **LCE400 - CentOS 8 Linux (RHEL 8 / Oracle Linux 8) - Fundamentals**
  - Prerequisites
    - Hardware
    - Software
    - Internet
  - Using our infrastructure

- ○ 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 7
    - 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 Validation**
  - Course Materials
  - Reminder of the Training Program
    - Day #1
    - Day #2
  - Training Evaluation
  - Exam - Acquired knowledge