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LCE600 - CentOS 8 Linux (RHEL 8 / Oracle Linux 8) - Senior System Administrator

Presentation

Objectives: Master CentOS 8 / RHEL 8 / Oracle Linux 8 System Administration.
Who can benefit: Linux Administrators.
Prerequisites: Taken the LCE500 - CentOS 8 Linux (RHEL 8 / Oracle Linux 8) - System Administrator course or possess equivalent skills.
Learning technique: Clear, theoretical course content divided into lessons and extensive LABS.
Student Progression: Student progression is monitored in terms of comprehension using self-assessment tests.
Duration: 4 days (28 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

- **LCE601 - Managing Integrated Peripherals**
    - Special Files

- LAB #1 - Commands
    - 1.1 - The lspci Command
    - 1.2 - The lsusb Command
    - 1.3 - The dmidecode Command
- LAB #2 - The sysctl Command
    - 2.1 - The /proc Directory
        - Files
            - /proc/cpuinfo
            - /proc/interrupts
            - /proc/dma
            - /proc/ioports
            - /proc/devices
            - /proc/module
            - /proc/diskstats
            - /proc/partitions
            - /proc/swaps
            - /proc/loadavg
            - /proc/meminfo
            - /proc/version
        - Directories
            - ide/scsi
            - acpi
            - bus
            - net
            - sys
    - 2.2 - Using the sysctl Command
- LAB #3 - Interpreting Information in /proc
    - 3.1 - free
    - 3.2 - uptime ou w
    - 3.3 - iostat
    - 3.4 - hdparm
    - 3.5 - vmstat
    - 3.6 - mpstat
    - 3.7 - sar
- USB Modules
- udev
    - The udevadm Command
- The /sys Filesystem
- LAB #4 - Limiting Ressources
    - 4.1 - ulimit
    - 4.2 - CGroups
        - Limiting Memeory Usage
        - The cgcreate Command
        - The cgdelete Command
        - The /etc/cgconfig.conf File
        - The cgconfigparser Command

- **LCE602 - Compiling the Kernel and Managing Quotas**
    - The Linux Kernel
    - LAB #1 - Modules
    - LAB #2 - Compiling and Installing a Kernel and Modules

- 2.1 - Move /home
- 2.2 - Preparing the Environment
- 2.3 - Preparing the Kernel Source Tree
  - The .config file
  - The Makefile file
- 2.4 - Configuring the Kernel
- 2.5 - Compiling the Kernel
- 2.6 - Installing the Kernel
- LAB #3 - Managing Quotas
  - 3.1 - The quotacheck Command
  - 3.2 - The edquota Command
  - 3.3 - The quotaon Command
  - 3.4 - The repquota Command
  - 3.5 - The quota Command
  - 3.6 - The warnquota Command

- **LCE603 - Managing the Network**
  - Presentation
    - The nmcli Command
  - LAB #1 - Configuring the Network
    - 1.1 - Connections and Profils
    - 1.2 - Name Resolution
    - 1.3 - Adding a Second IP Address to a Profile
    - 1.4 - The hostname Command
    - 1.5 - The ip Command
    - 1.6 - Manually Activating and Disactivating a Device
    - 1.7 - Static Routing
      - The ip Command
      - Disactivating/Activating Internal Routing on a Server
  - LAB #2 - Diagnostics
    - 2.1 - The ping Command
    - 2.2 - The netstat Command
    - 2.3 - The traceroute Command
  - LAB #3 - SSH
    - 3.1 - Presentation
      - SSH-1
      - SSH-2
    - 3.2 - Configuring the Server
    - 3.3 - Configuring the Client
    - 3.4 - SCP
      - Presentation
      - Usage
    - 3.5 - Authentication with Asymetric Keys