

Version : **2024.01**

Last updated : 2024/05/16 12:16

RH124 - Course Presentation

Contents

Training Program

- **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

- **LCE501 - Managing Users and Groups**

- Presentation
 - /etc/nsswitch.conf
 - The getent Command
 - The /etc/group and /etc/gshadow files
 - The /etc/passwd and /etc/shadow files
- Commands
 - Groups
 - groupadd
 - groupdel
 - groupmod
 - newgrp

- gpasswd
 - Users
 - useradd
 - userdel
 - usermod
 - passwd
 - chage
 - Configuration
 - LAB #1 - Managing Users and Groups
 - LAB #2 - su and su -
 - sudo
- **LCE502 - Package Management**
 - LAB #1 - Compiling Software
 - 1.1 - ./configure
 - 1.2 - make
 - 1.3 - make check
 - 1.4 - make install
 - LAB #2 - The rpm Command
 - 2.1 - Configuration
 - 2.2 - Usage
 - LAB #3 - The dnf Command
 - 3.1 - Presentation
 - 3.2 - Configuration
 - 3.3 - Repositories
 - 3.4 - Searching for Packages
 - 3.5 - Viewing Information on and Downloading a Package
 - 3.6 - Installing a Package
 - 3.7 - Updating Packages
 - 3.8 - Deleting Packages
 - Shared Libraries
 - Presentation
 - Introduction
 - Shared Object Locations

- ld-linux.so.2
- The ldd Command
- The /etc/ld.so.conf File
- The ldconfig Command

- **LCE503 - Managing File Permissions**

- Presentation
- Preparation
- LAB #1 - Basic Unix File Permissions
 - 1.1 - Changing Permissions with chmod
 - Symbolic Mode
 - Octal Mode
 - The umask Command
 - 1.2 - Changing the Owner or the Group with chown and chgrp
 - The chown Command
 - The chgrp Command
- LAB #2 - Advanced Unix Permissions
 - 2.1 - SUID/SGID bit
 - 2.2 - Inheritance Flag
 - 2.3 - Sticky bit
- LAB #3 - Extending Linux Permissions using ACLs and Attributes
 - 3.1 - ACLs
 - 3.2 - Attributes

- **LCE505 - Process Scheduling**

- cron
 - The /etc/crontab file
 - Time Fields
 - User Crontabs
- anacron
- at

- **LCE507 - Process Management**

- Presentation
- Process Types

- Process Commands
 - The ps Command
 - The pgrep Command
 - The pstree Command
 - The top Command
 - The fg, bg and jobs Commands
 - The wait Command
 - The nice Command
 - The renice Command
 - The nohup Command
 - The kill Command
 - The pkill Command

- **LCE508 - Managing Logs**

- Presentation
- The dmesg Command
- Security Logging
 - The last Command
 - The lastlog Command
 - The lastb Command
 - The /var/log/secure File
- The /var/log/audit/audit.log File
 - Managing Audit Events
 - auditd
 - auditctl
 - Viewing Audit Events
 - The aureport Command
 - The ausearch Command
- The /var/log/messages File
- Applications
- rsyslog
 - Priorities
 - Facilitiess
 - The /etc/rsyslog.conf File

- Modules
- Global Directives
- Rules
 - Facility.Priority
 - Facility!Priority
 - Facility=Priority
 - Using the * Wildcard
 - n Facilities with Identical Priorities
 - n Selectors with Identical Actions
- The logger Command
- The logrotate Command
- journald
 - Using Journald
 - Application Specific Messages
 - Boot Messages
 - Priority Specific Messages
 - Messages from a Specific Date Range
 - Real Time Messages
 - Searching with Key Words
- **LCE510 - System Startup and Shutdown**
 - System Startup
 - Boot Loader
 - BIOS Systems
 - EFI Systems
 - GRUB 2
 - The /boot/grub/grub.cfg File
 - The /etc/default/grub file
 - Files in the /etc/grub.d directory
 - Initramfs
 - The init Script
 - Kernel Booting Process
 - Systemd
 - LAB #1 - The systemctl Command

- LAB #2 - Configuration Files
 - 2.1 - Default Configuration Files
 - 2.1 - Overloading Default Configuration Files
- LAB #3 - The systemd-analyze Command
- LAB #4 - Targets
 - 4.1 - Checking the Target Dependencies
 - 4.2 - The Default Target
 - Checking the Default Target
 - Changing the Default Target
 - Changing the Default Target for the Current Session
- LAB #5 - Managing Services
 - 5.1 - Single Service Instances
 - 5.2 - Multiple Instance Services
 - 5.3 - Disallowing Modifications to a Service Status
- LAB #6 - System Shutdown
 - 6.1 - The shutdown Command
 - 6.2 - The reboot Command
 - 6.3 - The halt Command
 - 6.4 - The poweroff Command
- **LCE603 - Managing the Network**
 - Presentation
 - The nmcli Command
 - LAB #1 - Configuring the Network
 - 1.1 - Connections and Profiles
 - 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 Deactivating a Device
 - 1.7 - Static Routing
 - The ip Command
 - Deactivating/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 Asymmetric Keys
-

Copyright © 2024 Hugh Norris - Non-contractual document. The Training Program may be modified without notice.