LINUX MODULE 2 ASSESSMENT SOLUTIONS

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Overview

This module demonstrates the execution of various Linux-based technical tasks that involve file management, text processing, log filtering, process management, and networking tools. Each task is solved using Linux commands and tools. Below, the tasks are explained along with the concepts and commands used.

Tasks and Technical Concepts

Task 1: List Files Larger Than 1 MB

➢ find Command: Used to search for files based on conditions like size, type, and name.
➢ Redirection (>): Redirects command output to a file.

Command:

find . -type f -size +1M > Task1_LargeFiles.txt

Task 2: Replace "localhost" with "127.0.0.1"

➢ sed: A stream editor for text manipulation.
➢ String Replacement: s/pattern/replacement/g replaces all occurrences of a pattern.

Command:

sed 's/localhost/127.0.0.1/g' config.txt > Task2_UpdatedConfig.txt

Task 3: Filter Logs

➢ grep: Searches for patterns in text.
➢ Piping (|): Passes the output of one command as input to another.
➢ Negated Search (-v): Excludes lines matching a pattern.

Command:

grep "ERROR" log.txt | grep -v "DEBUG" > Task3_FilteredLog.txt

Task 4: Identify and Terminate the Process with Highest Memory Usage

➢ ps Command: Displays process details.
➢ Sorting: Use --sort=-%mem to sort by memory usage.
➢ awk: Extracts specific columns of data.

➢ kill: Terminates a process by its PID.

Command:

PID=$(ps -eo pid,%mem --sort=-%mem | awk 'NR==2 {print $1}')

kill $PID

Task 5: List and Sort Gateways

➢ ip route: Displays routing table information.
➢ awk: Filters and formats output.
➢ sort: Sorts data in alphabetical or numerical order.

Command:

ip route | grep via | awk '{print $3}' | sort > Task5_SortedGateways.txt

OUTPUTS: