Assignment:1

Task:5

Introduction:

htop is a powerful and user-friendly command-line tool for monitoring system resources on a Linux system. It provides a visual representation of resource utilization, making it easier to identify processes that may be causing performance issues. In this tutorial, we will cover the key features of htop and demonstrate how to use it effectively.

Step 1: Installing htop (if not installed):

sudo apt update

sudo apt install htop

Step 2: involves initiating the htop program.

To access the htop interface, open a terminal window and type "htop" followed by pressing Enter.

Step 3: involves familiarizing oneself with this user-friendly interface.

The Top Bar displays information related to the system, such as CPU usage, memory consumption and uptime. The various Columns show several aspects of each process including its CPU utilization, allocated memory size or Process ID number. Meanwhile,the scrollable Process List contains all processes currently running on the system.In addition,a Color-coded Display makes it effortless for users to distinguish different types of resource involvement like higher processing power(CPU), increased demand for more RAM(memory) or IO-intensive operations.

To navigate within htop interface (Step 4):

To navigate through the process list, employ arrow keys going up and down. To arrange processes according to CPU usage, memory usage or other criteria, press F6. Meanwhile,F9 is used for accessing the options menu which enables one to modify htop settings and personalized display appearance.

Step 5: Process Interaction

To terminate a process, you can pick one and hit the F9 key to bring up the menu. From there, navigate towards "Signal" then select "SIGKILL."

If you wish to modify a process's priority level, first click on it followed by pressing either F7 for decreasing or F8 for increasing.

For Step 6 of this guide which covers real-time monitoring examples:

Detecting the Utilization of Central Processing Unit:

Observe the CPU usage bar located at the top and identify processes that exhibit high levels of utilization. Doing so allows for identification of resource-intensive applications. Next, monitor memory usage to further optimize system performance.

To identify processes that are consuming a large amount of memory, observe the section on memory usage. Additionally, check for I/O usage.

To spot disk-bound processes, examine the process list's color-coded bars indicating high I/O usage. By utilizing htop, a Linux system monitoring tool known for its interactive interface and real-time updates, both novices and experts can effectively track resource utilization. This instructional guide will enable you to use htop with confidence in managing your system resources efficiently.