Module :2- Linux server - Operate running systems

1. **View running processes with ps.**

➔ The ps command is used to display information about the running processes on your system.

- Basic command to see all processes:
  `ps aux`
- To display a specific process, use grep to filter the output

  ```
  ps aux | grep process_name
  ```

- For a tree-like view of processes, use:
  `ps -ejH`

2. **Terminate processes with kill.**

➔ The kill command is used to terminate processes by sending them signals. The most common signal is SIGTERM (15), which requests a graceful shutdown of the process.

- To kill a process by its PID (Process ID):

  ```
  kill <PID>
  ```

- If a process does not respond to SIGTERM, use SIGKILL (9), which forces the process to terminate:
  `kill -9 <PID>`
- You can find the PID of a process with ps or top.

3. **Use top or htop to monitor system resources and processes.**

➔ **top**: Displays real-time system statistics and the list of running processes.

```
top
```

To quit top, press q.

- **htop**: A more user-friendly version of top. It provides a color-coded, interactive display of system processes.
  `htop`

If htop isn't installed by default, you can install it:

```
sudo apt install htop    # For Debian/Ubuntu-based systems

sudo yum install htop    # For CentOS/RHEL-based systems
```

To quit htop, press F10 or q.

4. **Configure one of your lab COMPUTERS to boot to the CLI using systemd, and reboot Assignment: Linux Server to confirm that you were successful**

➔ By default, many systems boot into a graphical user interface (GUI). we can change this to boot into the command-line interface (CLI) using systemd.

1. **Edit the systemd default target**: To change the default boot target, we'll need to modify the systemd target. The default target for a GUI is typically graphical.target, and for CLI it's multi-user.target.
   Run the following command to set the default boot target to CLI (multi-user mode):
   sudo systemctl set-default multi-user.target
2. **Reboot the system**: After changing the default target, reboot our system to ensure the changes take effect:
   sudo reboot

The system should boot to the command line instead of the graphical user interface.

3.To confirm the default target: After rebooting, you can verify that the system is set to boot into CLI mode by running:
systemctl get-default

This should output multi-user.target, confirming that the system will boot into CLI mode.

4.To return to GUI mode (if needed): If we want to go back to the GUI, run:
sudo systemctl set-default graphical.target

Then reboot again.