Operating Systems
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L-13

1. Unix Commands in Terms of Processing:

- **PID:** PID is a command for Process identifier, a PID is a unique number that ids each running process in an operating system. This unique number is for the operating system to identify the process as the UNIX Kernel is a multitasking operating system. You can even find unique PIDs with the pidof command
- **User: ps aux** is commonly associated with this command as the ps aux command will display every process owner of the task and process. To display a specific user task you can use the `top -u <command>` pressing the z command while inside of the top interactive view will provide system highlighting in your terminal
- **PR: PR or PRI:** is the process's actual priority as seen by the Linux kernel
- **NI:** is the nice value of a process which is user-space processing. If no Nice value is provided it will have a default process value of 10
- **VIRT:** stands for the virtual size of a process, which is the combination of the memory being used and is usually displayed from the TOP command. It is also a total memory used shared or private that the process has access to.
- **RES:** is the total physical memory used shared or private that the process has available access to on the system.
- **SHR:** is the total physical memory used that the process is able to access on the system, it basically shows the shared memory of a task
- **STATUS: ps** or process status command is used to display the currently running processes, with their process identification numbers

- **CPU:** Represents the CPU usage of a program
- **MEM:** Commonly seen as %MEM this shows the Memory usage of tasks from the TOP command being executed inside of the terminal
- **TIME+:** This represents the CPU time, the same as 'TIME' from the terminal but displays the time in hundredths of a second

2. What Does the TOP command do?

The top command executed inside of a command shell will display process activities on your Linux system, it will display all tasks managed by your Kernel in real-time and display the majority of the defined commands listed above. There will be two halves displayed on your system the top half will feature the resource utilizations on your system and the bottom half with feature a list of currently executing processes.

3. What is BASH?

Bash is a shell program, the program has executable binaries that take commands and allow you to type once the command has returned, the Born again Shell or Bash will translate your commands into system calls to return results once the command has been Entered

4. Enter

Form the System Standard input device or KB also known an STDIN will take commands from the shell once the enter button is pressed inside of a shell.

5. Ps -ef | grep yourname What does this do?

This command is intended to display the process status of -ef, e generates a list of information about every process running -f consisely narrows the information on each process running. The pipe filters the list of all running processes with your associated user name on the system.