IT 1100: Introduction to Operating Systems

Chapter 10 Processes

Textbook Time

Read and Complete the Exercises in the Book

- WES-10 Processes

init - Receives PID of 1. program that runs when Linux starts. init will launch several processes and call init scripts.

**Process Related Commands**

ps - list processes for the current user on the current terminal

pstree - lists the processes in a tree structure identifying parent processes

top - dynamically lists the top processes running

jobs - lists the jobs run from this terminal

bg - put a program in the background

fg - put a program in the foreground

kill - kills a process based on the PID

killall - kills a process based on the name

shutdown

poweroff

reboot

halt

**key commands**

ctrl-c kills a process

ctrl-z puts a process in the background without killing it

**ps options**

a - list all processes

x - lift the BSD style

u - list processes for all users example: ps aux

o - customize the process list

ps xao pid,ppid,comm #will list all processes sorted in columns listed for pid, ppid (the parent), and the command

**kill**

kill -9 pid # will kill a process ID
**shutdown options**

System Shutdown and Restart commands

<table>
<thead>
<tr>
<th>Command</th>
<th>Example</th>
</tr>
</thead>
<tbody>
<tr>
<td>shutdown -r time message</td>
<td>sudo shutdown -r +5 &quot;Server will restart in 5 minutes. Please save your work.&quot;</td>
</tr>
<tr>
<td>halt - leaves the machine powered on</td>
<td>sudo shutdown -h now</td>
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<tr>
<td>Example: sudo halt</td>
<td></td>
</tr>
<tr>
<td>Poweroff</td>
<td>Example: sudo poweroff</td>
</tr>
<tr>
<td>Example: shutdown -p now</td>
<td></td>
</tr>
<tr>
<td>Reboot</td>
<td>Example: sudo reboot</td>
</tr>
<tr>
<td>Example: sudo shutdown -r now</td>
<td></td>
</tr>
<tr>
<td>Example: sudo shutdown -r09:35 # reboots the machine at 09:35am</td>
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</tbody>
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