

Getting Started with Linux: Novell's Guide to CompTIA's Linux+ (Course 3060) 1-4188-3730-x

Chapter 8 Answers

Review Questions

1. Which of the following terms refers to a system service that does not run on a terminal?
 - a. Program
 - b. User Process
 - c. Daemon Process
 - d. Child Process

ANSWER: c

2. What is the PID of init? _____

ANSWER: 1

3. Which of the following statements are true? (Choose all that apply.)
 - a. A parent process may only have one child process
 - b. Each process is given a PPID that is used to uniquely identify it on the system
 - c. A child process may only have one parent process
 - d. All background processes have a PID and a job ID

ANSWER: c,d

4. Which of the following commands can quickly identify the child processes started by a particular daemon?
 - a. top
 - b. lsof
 - c. ps
 - d. pstree

ANSWER: d

5. Which processes are regular users allowed to send kill signals to? _____

ANSWER: Their own processes only.

6. You have just run the **ps aux** command and notice that most daemons have an S in the STAT column. What does this mean? _____

ANSWER: It indicates that they are sleeping (waiting for an event to occur).

7. What key can you press in the **top** command to send the process a signal?
- a. s
 - b. k
 - c. R
 - d. N

ANSWER: b

8. What can you type at a command prompt to run the **updatedb** command in the background? _____

ANSWER: **updatedb &**

9. Which of the following key combinations can you use to pause a foreground process such that it may be sent to the background with the **bg** command?
- a. Ctrl+c
 - b. Ctrl+p
 - c. Ctrl+z
 - d. Ctrl+r

ANSWER: c

10. Which of the following kill commands may be used to send the second background job a SIGINT?
- a. kill -2 %2
 - b. kill -1 -b 2
 - c. kill -9 %2
 - d. kill -15 2

ANSWER: a

11. If you do not specify the type of signal when using the **kill** or **killall** commands, which signal is used by default?
- a. SIGHUP
 - b. SIGINT
 - c. SIGKILL
 - d. SIGTERM

ANSWER: d

12. What command could you use change the priority of a process (PID=592) to run with the highest priority? _____

ANSWER: **renice -20 592** or **renice -n -20 592**

13. Which action in the /etc/inittab file is used to determine the default runlevel at system initialization? _____

ANSWER: initdefault

14. What is the default runlevel in SLES _____

ANSWER: 5

15. What runlevel loads all networking daemons (including NFS) but does not start a display manager?

- a. 1
- b. 2
- c. 3
- d. 5

ANSWER: c

16. What command can you type to change your runlevel to Single User Mode? _____

ANSWER: **init 1**

17. Which of the following commands will force your system to reboot? (Choose all that apply.)

- a. init 0
- b. reboot
- c. powerwait
- d. init 6

ANSWER: b,d

18. Which of the following commands may be used to stop the SSH daemon (sshd)? (Choose all that apply.)

- a. rcsshd stop
- b. kstopsys sshd
- c. /etc/init.d/sshd stop
- d. /etc/rc/stopsshd

ANSWER: a,c

19. Which template can you copy to create a script that is used to start or stop daemons in the /etc/init.d directory _____

ANSWER: /etc/init.d/skeleton

20. Which of the following methods can you use to start the SSH daemon (sshd) upon entering runlevel 3? (Choose all that apply.)

- a. Create a shortcut to the /etc/init.d/sshd script called /etc/init.d/rc3.d/S88sshd
- b. Create a shortcut to the /etc/init.d/sshd script called /etc/init.d/rc3.d/K88sshd
- c. Change the INIT INFO section of the /etc/init.d/sshd script and run the **insserv** command
- d. Run the YaST Runlevel Editor Ext3

ANSWER: a,c,d

21. You have a script that is used to remove temporary files and would like this script to run on a daily basis. Which directory could you place this script in to have the cron daemon execute it each day? _____

ANSWER: /etc/cron.daily

22. Which command could a regular user use to edit their crontab? _____

ANSWER: crontab -e

23. What lines would you add to your crontab to schedule the /bin/false command to run at 10:30am and 2:50pm from Monday to Friday? _____

ANSWER: **30 10 * * 1-5 /bin/false** and **50 14 * * 1-5 /bin/false**

24. Which command can you use to run the contents of the file **cleanup** at noon hour? _____

ANSWER: **at noon -f cleanup**

25. Which command can you use to view **at** jobs that have been scheduled on your system?

- a. at --view
- b. atq
- c. atrm
- d. cron --view

ANSWER: b

Discovery Exercises

Viewing Processes using ps

Answers may vary – there are many available options to the **ps** command.

Using Kill Signals

Log into `tty1` as the root user and perform the following actions in order. For each action, write down the command(s) that you used.

- a. **ps**
PID will vary
- b. **kill -2 PID**
Nothing – the process ignored the signal – the bash shell ignores (or traps) most signals to prevent accidental logout.
- c. **kill -15 PID**
Nothing – the process ignored the signal – the bash shell ignores (or traps) most signals to prevent accidental logout.
- d. **kill -18 PID**
Nothing – the process ignored the signal – the bash shell ignores (or traps) most signals to prevent accidental logout.
- e. **kill -9 PID**
You are logged out since the bash shell can not ignore a SIGKILL.

Process Priorities

Log into `tty1` as the root user and perform the following actions in order. For each action, write down the command(s) that you used. When finished, log out of `tty1`.

- a. **ps -l** (a nice value of 0 is shown)
- b. **nice -n -20 ps -l** (a nice value of -20 is shown, which is a high priority – only the root user can run this command)
- c. **nice -n 19 ps -l** (a nice value of 19 is shown, which is a low priority – any user can run this command)

Manipulating Background Processes

Log into `tty1` as the root user and perform the following actions in order. For each action, write down the command(s) that you used. When finished, log out of `tty1`.

- a. **sleep 50000 &** (repeated four times)
- b. **jobs**
- c. **fg 3**
Ctrl+z
jobs (once stopped, job 3 will have a status of STOPPED)
- d. **bg 3**
jobs

- e. **kill %5
jobs**
- f. **killall -2 sleep**

Starting a Daemon in a Runlevel

The `/etc/init.d/sampledaemon` script will be run in runlevel 3 because a link to it exists in the `/etc/init.d/rc3.d/` directory that starts with S.

Scheduling Processes using the at Daemon

The time for tea is 4:00pm. Since there are many time formats available for **at**, answers will vary.

Cron Tables

- a. `30 1 * * 5 /bin/sample`
- b. `30 16 15 5 * /bin/sample`
- c. `0,30 16 1-6 * 0 /bin/sample`
- d. `*/10 9-17 * * 1 /bin/sample`
- e. `15 8 * * 1-5 /bin/sample`
`30 18 * * 1-5 /bin/sample`