

Chapter 02 Linux Installation and Usage

TRUEFALSE

1. A swap partition contains a filesystem.

(A) True

(B) False

Answer : (B)

2. When a user interacts with his computer, he interacts directly with the kernel of the computer's operating system.

(A) True

(B) False

Answer : (B)

3. At minimum, Linux typically requires only two partitions to be created: a partition that is mounted to the root directory, and a partition for virtual memory.

(A) True

(B) False

Answer : (A)

4. In the past, SATA hard disks were referred to as Integrated Drive Electronics (IDE).

(A) True

(B) False

Answer : (B)

5. By default, Fedora 20 allows the root user to log into the GNOME desktop.

(A) True

(B) False

Answer : (B)

MULTICHOICE

6. What installation media source is the most common source for Linux packages?

- (A) DVD
- (B) NFS
- (C) hard disk
- (D) CD-ROM

Answer : (A)

7. What is the minimum number of user accounts that must be created at install time?

- (A) one
- (B) two
- (C) three
- (D) four

Answer : (B)

8. A hard drive or SSD can be divided into partitions. What is the maximum number of primary partitions that can be used on these devices?

- (A) 4
- (B) 8
- (C) 16
- (D) 32

Answer : (A)

9. What is the recommended size for the /home directory?

- (A) 100 MB
- (B) 200 MB
- (C) 500 MB
- (D) 1000 MB

Answer : (B)

10. Under the root directory in Linux, which directory contains system commands and utilities?

- (A) /opt
- (B) /var
- (C) /boot
- (D) /usr

Answer : (D)

11. After logging into a terminal, a user will receive an interface known as which option below?

- (A) processor
- (B) user interface
- (C) swap memory
- (D) shell

Answer : (D)

12. When using command-line terminal, specific letters that start with a dash ("-") and appear after command names are considered to be:

- (A) Arguments
- (B) Options
- (C) Keywords
- (D) Metacharacters

Answer : (B)

13. Which Linux command can be utilized to display your current login name?

- (A) who
- (B) whoami
- (C) id
- (D) w

Answer : (B)

14. After a shell is no longer needed, what command can be given to exit the shell?

- (A) exit

- (B) stop
- (C) reset
- (D) quit

Answer : (A)

15. A calendar for the current month can be shown on the command line by issuing which command?

- (A) date
- (B) cal
- (C) w
- (D) id

Answer : (B)

16. What metacharacter indicates background command execution?

- (A) @
- (B) ^
- (C) &
- (D) !

Answer : (C)

17. What metacharacter can be used to issue two commands to be run in consecutive order, without piping or redirecting output?

- (A) \
- (B) &
- (C) ;
- (D) |

Answer : (C)

18. The `apropos list` command produces the same results as which command below?

- (A) `man -j list`
- (B) `man -k list`

(C) `man -l list`

(D) `man -m list`

Answer : (B)

19. In Fedora 20, what terminal is used for graphical login?

(A) `tty0`

(B) `tty1`

(C) `tty2`

(D) `tty4`

Answer : (B)

20. What directory under / contains the log files and spools for a Linux system?

(A) `/boot`

(B) `/usr`

(C) `/opt`

(D) `/var`

Answer : (D)

21. Select the utility below that when run will start and perform a thorough check of RAM for hardware errors:

(A) `memcheck68`

(B) `memtest86`

(C) `fixram`

(D) `fsck`

Answer : (B)

22. Some Linux distributions have the ability to boot an image from install media and run entirely from RAM. What is the name for this kind of image?

(A) open media image

(B) live media image

(C) runtime media image

(D) forensic media image

Answer : (B)

23. Prior to performing an installation of Linux, the hardware components of the target system should be checked against what known compatible list below?

(A) Software / Hardware List (SHL)

(B) Known Working Devices (KWD)

(C) Hardware Compatibility List (HCL)

(D) Compatible Hardware List (CHL)

Answer : (C)

24. What term describes the physical hardware and the underlying operating system upon which a virtual machine runs?

(A) virtual gateway

(B) virtual leader

(C) virtual host

(D) virtual center

Answer : (C)

25. The Linux kernel exists as a file named:

(A) vmlinuz

(B) vmlinux

(C) kernel.0

(D) krn.linux

Answer : (A)

SHORTANSWER

26. A(n) _____ specifies the parameters that tailor a command to the particular needs of the user.**Answer :** argument

27. To print the current date and time, type the command _____.**Answer :** date

28. In Linux, the command _____ displays currently logged-in users.**Answer :**
who

29. The process of _____ requires that each user must log in with a valid user name and password before gaining access to a user interface.**Answer :** authentication

30. Older systems often use _____ hard disks that physically connect to the computer in one of four different configurations.**Answer :** Parallel Advanced Technology Attachment (PATA)

ESSAY

31. Describe virtual memory, and explain how it is used.

Graders Info :

Virtual memory consists of an area on the hard disk that, when the physical memory (RAM) is being used excessively, can be used to store information that would normally reside in the physical memory. When programs are executed that require a great deal of resources on the computer, information is continuously swapped from the physical memory to the virtual memory on the hard disk, and vice versa.

32. Explain what a journaling file system is, and detail the benefits of using such a filesystem.

Graders Info :

A journaling filesystem keeps track of the information written to the hard disk in a journal. If you copy a file on the hard disk from one directory to another, that file must pass into physical memory and then be written to the new location on the hard disk. If the power to the computer is turned off during this process, information might not be transmitted as expected and data might be lost or corrupted. With a journaling filesystem, each step required to copy the file to the new location is first written to a journal; this means the system can retrace the steps the system took prior to a power outage and complete the file copy.

33. Describe what a terminal is, and detail why it is necessary.

Graders Info :

A terminal is the channel that allows a certain user to log in to a Linux kernel, and there can be many terminals in Linux that allow you to log in to the computer locally or across a network. After a user logs in to a terminal, she receives a user interface called a shell, which then accepts input from the user and passes this input to the kernel for processing. Since Linux is a multiuser and multitasking operating system, thousands of terminals can be used. Each terminal can represent a separate logged-in user that has its own shell.

34. Explain what a metacharacter is, and detail the significance of the \$ metacharacter.

Graders Info :

A metacharacter is a keyboard character that has a special meaning. One of the most commonly used metacharacters is the `$` character, which tells the shell that the following text refers to a variable. A variable is simply a piece of information that is stored in memory; variable names are typically uppercase words and most variables are set by the Linux system automatically when you log in.

35. Explain what the `man` pages and `info` pages are, and describe the differences between the two.

Graders Info :

The most common form of documentation for Linux commands is manual pages (commonly referred to as `man` pages). Simply type the `man` command followed by a command name, and extensive information about that Linux command is displayed page-by-page on the terminal screen. This information includes a description of the command and its syntax as well as available options, related files, and commands.

Another utility, originally intended to replace the `man` command in Linux, is the GNU `info` pages. You can access this utility by typing the `info` command followed by the name of the command in question. The `info` command returns an easy-to-read description of each command and also contains links to other information pages (called hyperlinks). Today however, both the `info` pages and the manual pages are used to find documentation because manual pages have been utilized in Linux since its conception and for over two decades in the UNIX operating system.

MATCH

36. Match each correct item with the statement below.

MULTICHOICE

37. Which filesystems below perform journaling?

- (A) VFAT
- (B) REISER
- (C) ext2
- (D) ext4

Answer :

38. What two disk systems allow for the use of more than four hard drives or SSDs in a single system?

- (A) SATA
- (B) SCSI
- (C) PATA
- (D) SAN

Answer :

39. What two commands below will halt a Linux system immediately?

- (A) `shutdown -H now`
- (B) `shutdown -r now`
- (C) `halt`
- (D) `poweroff`

Answer :

40. Which two filesystems below do not perform journaling?

- (A) ext2
- (B) VFAT
- (C) ext3
- (D) REISER

Answer :

41. In order to switch between terminals in Linux, a user can press what two keys in combination with the F1-F6 keys?

- (A) Shift
- (B) Ctrl
- (C) Alt
- (D) Tab

Answer :