Solution and Answer Guide

ECKERT, COMPTIA LINUX+ AND LPIC-1: GUIDE TO LINUX CERTIFICATION, 6E 2024, 9798214000800; CHAPTER 01: INTRODUCTION TO LINUX

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REVIEW QUESTIONS

1. Which of the following components comprise an operating system? (Choose all that apply.)
   a. user interface
   b. kernel
   c. device drivers
   d. services

   Answer: a, b, c, d

   An operating system is comprised of a kernel and associated hardware drivers, as well as software (user interfaces, frameworks, libraries, services, and applications).

2. Which of the following kernels are development kernels? (Choose all that apply.)
   a. 2.3.4
   b. 4.5.5
   c. 5.10-rc5
   d. 6.0.0

   Answer: a, c

   For early Linux kernels (<2.6), odd minor numbers denoted a development kernel. Later Linux kernels appended release candidate (rc) numbers to development kernels.

3. Many types of software are available today. Which type of software does Linux represent?
   a. open source
   b. closed source
   c. freeware

d. shareware

Answer: a

Linux is open source software.

4. Which of the following are characteristics of OSS? (Choose all that apply.)
   a. The value of the software is directly related to its price.
   b. The software is developed collaboratively.
   c. The source code for software is available for a small fee.
   d. Bugs are fixed quickly.

   Answer: b, d

   Open source software is developed collaboratively, and source code is distributed free of charge. As a result, bugs are fixed and new features added quickly.

5. To which license does Linux adhere?
   a. BSD
   b. MlT
   c. GNU GPL
   d. Apache

   Answer: c

   Linux is licensed under the GNU General Public License (GPL).

6. What are some good reasons for using Linux in a corporate environment? (Choose all that apply.)
   a. Linux software is unlikely to be abandoned by its developers.
   b. Linux is secure and has a lower total cost of ownership than other operating systems.
   c. Linux is widely available for many hardware platforms and supports many programming languages.
   d. Most Linux software is closed source.

   Answer: a, b, c

   Because Linux is open source, it is supported for a long period of time, has greater security, lower costs, and supports nearly all hardware platforms and programming languages.

7. Which of the following are common methods for gaining support for Linux?
   a. websites
   b. Linux User Groups
   c. online forums
   d. all these methods

   Answer: d

You can find Linux support online at many different websites and forums, as well as at local Linux User Groups (LUGs).

8. Which two people are credited with creating the UNlX operating system? (Choose two answers.)
   a. Dennis Ritchie
   b. Richard Stallman
   c. Linus Torvalds
   d. Ken Thompson

   Answer: a, d

   UNlX was created by Ken Thompson and Dennis Ritchie.

9. On which types of systems can Linux be installed? (Choose all that apply.)
   a. loT devices
   b. supercomputers
   c. servers
   d. workstations

   Answer: a, b, c, d

   Linux can be installed on any type of computers from embedded/loT devices to supercomputers.

10. Who formed the Free Software Foundation to promote open development?
    a. Dennis Ritchie
    b. Richard Stallman
    c. Linus Torvalds
    d. Ken Thompson

    Answer: b

    Richard Stallman created the Free Software Foundation (FSF).

11. Which culture embraced the term “GNU” (GNU’s Not UNIX) and laid the free software groundwork for Linux?
    a. the hacker culture
    b. the BSD culture
    c. the cracker culture
    d. the artificial intelligence culture

    Answer: a

    The hacker culture from the Massachusetts lnstitute of Technology (MlT) directly led to the free and open source software movement and Linux.

12. Linux was developed by_____to resemble the _____operating system.

a. Linus Torvalds, MlNlX
b. Linus Torvalds, GNU
c. Richard Stallman, GNU
d. Richard Stallman, MlNlX

Answer: a

Linus Torvalds created Linux as an improved version of the MlNlX operating system.

13. When the core components of the Linux operating system are packaged together with other OSS, it is called a_____.
    a. new kernel
    b. new platform
    c. Linux distribution
    d. GNU Project

    Answer: c

    A Linux distribution consists of a Linux kernel alongside core open source software libraries and other software.

14. Which common desktop environments are available in most Linux distributions? (Choose all that apply.)
    a. GNOME
    b. CDE
    c. KDE
    d. RPM

    Answer: a, c

    GNOME and KDE are the two most common desktop environments on Linux systems.

15. Which of the following are factors that determine which Linux distribution a user will use? (Choose all that apply.)
    a. package manager support
    b. hardware platform
    c. kernel features
    d. language support

    Answer: a, b, c

    Different Linux distributions may support different package managers, hardware platforms, and kernel features.

16. What is a common open source web server available for Linux?
    a. Samba
    b. Apache

c. Squid
d. NFS

Answer: b

Apache is the most common web server used on Linux systems.

17. Which of the following components is required to run Linux virtual machines?
    a. container runtime
    b. desktop environment
    c. hypervisor
    d. orchestration software

Answer: c

To run a virtual machine, hypervisor software must be present on the system.

18. Which of the following Linux distributions is likely to be used by a cybersecurity worker?
    a. Fedora
    b. Ubuntu
    c. Kali
    d. Gentoo

Answer: c

Kali Linux is a security-focused Linux distribution designed specifically for cybersecurity workers. lt includes tools used for penetration testing and vulnerability assessments.

19. When Linux is hosted within a container on a cloud provider, what cloud delivery model is being used?
    a. laaS
    b. PaaS
    c. XaaS
    d. SaaS

Answer: b

Containers are hosted on a cloud provider using the Platform as a Service (PaaS) delivery model.

20. What component within a CD workflow creates a new virtual machine or container to host the web app?
    a. orchestration server
    b. testing server
    c. code repository server
    d. build automation server