CCST Networking – Module 13 Quiz

Questions

1. What variant of Cisco IOS maintains the same basic set of commands as traditional Cisco IOS while running as a Linux process?

    a. Cisco Cat OS
    b. Cisco IOS XR
    c. Cisco IOS XE
    d. Cisco NX-OS

2. You're working on a Cisco IOS router and find yourself at the ">" prompt. When you enter a "?" to view available commands, only five commands are available. What is your current privilege level?

    a. 0
    b. 1
    c. 15
    d. 16

3. Which of the following is not offered by Cisco IOS?

    a. Context-Sensitive Help
    b. Man Pages
    c. Tab Autocomplete
    d. Filtered Output

4. You issue the “show ip interface brief” command on a Cisco IOS router and receive the following output:

```
R1#show ip interface brief
Interface              IP-Address      OK?   Method Status                    Protocol
GigabitEthernet0/0     172.16.1.1      YES   NVRAM  up                        up
GigabitEthernet0/1     10.1.1.1        YES   NVRAM  up                        up
GigabitEthernet0/2     unassigned      YES   NVRAM  down                      down
GigabitEthernet0/3     unassigned      YES   NVRAM  administratively down     down
R1#
```

   Based on this output, which of the four interfaces has not been configured with the “no shutdown” command?

   a. GigabitEthernet0/0
   b. GigabitEthernet0/1
   c. GigabitEthernet0/2
   d. GigabitEthernet0/3

5. You want to create a user account on a Cisco router. You want the username to be “jacob” and the password to be “$3cr3TP@$$WORd”. Also, you don’t want the password to appear as clear text in the router’s running-config. What command should you issue in global configuration mode?

   a. username jacob password $3cr3TP@$$WORd
   b. username jacob secret $3cr3TP@$$WORd
   c. username jacob type 9 $3cr3TP@$$WORd
   d. username jacob hash $3cr3TP@$$WORd

6. You’re in interface configuration mode for interface GigabitEthernet0/0 on a Cisco router, and you wish to configure that interface with an IP address of 172.16.1.14 /27. Which of the following commands should you issue?

   a. ip address 172.16.1.14 /27
   b. ip address 172.16.1.14 255.255.255.192
   c. ip address 172.16.1.14 255.255.255.224
   d. ip address dhcp 172.16.1.14

7. You just finished performing a few configuration changes on a Cisco router. Even though your new configuration is active, if the router were to reboot, your configuration changes would be lost. What command should you enter to copy of your router's running configuration (which resides in RAM) to your router's startup configuration (which resides in Non-Volatile RAM)?

    a. copy ram nvram
    b. copy running-configuration startup-configuration
    c. copy startup-config running-config
    d. copy run star

Questions and Answers

1. What variant of Cisco IOS maintains the same basic set of commands as traditional Cisco IOS while running as a Linux process?

    a. Cisco Cat OS
    b. Cisco IOS XR
    c. Cisco IOS XE
    d. Cisco NX-OS

    Answer: c

    Explanation: Cisco Cat OS is a legacy operating system found on older Cisco Catalyst switches (e.g., Cisco Catalyst 5000 Series) acquired from Crescendo.

    Cisco IOS XR is a variant of Cisco IOS (with its own set of commands) used in large enterprise or service provider environments (e.g., on Cisco 12000 Series routers).

    Cisco IOS XE is a variant of Cisco IOS that runs as a Linux process, while retaining the same set of commands found in traditional Cisco IOS.

    Cisco NX-OS is a variant of Cisco IOS (with its own set of commands) used on Cisco Nexus switches, which are primarily found in data center environments.

    Video Reference: Cisco IOS

2. You're working on a Cisco IOS router and find yourself at the ">" prompt. When you enter a "?" to view available commands, only five commands are available. What is your current privilege level?

    a. 0
    b. 1
    c. 15
    d. 16

    Answer: a

    Explanation: Cisco IOS supports a maximum of sixteen privilege levels, in the range 0 – 15. By default, only three of those levels are active: Level 0, Level 1, and Leve 15.

    Level 0 only supports five commands: logout, enable, disable, help, and exit.

    Level 1, also known as "User EXEC mode," has a much larger set of commands, that support limited read-only access to a router.

Level 15, also known as “Privileged EXEC mode,” supports all Cisco IOS commands, which support both read-only and read-write access to a router.

Video Reference: Cisco IOS Privilege Levels

3. Which of the following is not offered by Cisco IOS?

    a. Context-Sensitive Help
    b. Man Pages
    c. Tab Autocomplete
    d. Filtered Output

Answer: b

Explanation: The Cisco IOS CLI allows you to type a “?” at any time to see available commands or options based on your current configuration mode and/or privilege level.

Man (i.e., “Manual”) Pages offer documentation for commands found in Linux (and other UNIX-like) operating systems. However, Cisco IOS does not support Man Pages.

The Cisco IOS Tab Autocomplete feature allows to you press the Tab key to automatically complete a command or option that you’ve partially typed, if the characters you’ve typed are unique to a single command or option, based on your current configuration mode and/or privilege level.

To help you better focus on the output you’re interested in, Cisco IOS offers multiple ways to filter your output. For example, you could “pipe” the output of a command to “include” a specific string. To illustrate, consider the following command:

show run | include router

The vertical bar in the command is the “pipe” symbol, and it is redirecting the output of the “show run” command to “include” only lines in the running-config that contain the word “router”.

Video Reference: Working in the CLI

4. You issue the “show ip interface brief” command on a Cisco IOS router and receive the following output:

```
R1#show ip interface brief
Interface              IP-Address      OK?   Method Status                Protocol
GigabitEthernet0/0     172.16.1.1      YES   NVRAM  up                    up
GigabitEthernet0/1     10.1.1.1        YES   NVRAM  up                    up
GigabitEthernet0/2     unassigned      YES   NVRAM  down                  down
GigabitEthernet0/3     unassigned      YES   NVRAM  administratively down down
R1#
```

Based on this output, which of the four interfaces has not been configured with the “no shutdown” command?

a. GigabitEthernet0/0
b. GigabitEthernet0/1
c. GigabitEthernet0/2
d. GigabitEthernet0/3

Answer: d

Explanation: By default, interfaces on a Cisco IOS router are administratively shutdown. This is indicated with the “administratively down” status in the output of the “show ip interface brief” command.

To enable an interface that is administratively shutdown, you can enter the “no shutdown” command.

The output in this instance indicates that the only interface still in its default state of “administratively down” is GigabitEthernet0/3.

Note that even though interface GigabitEthernet0/2 is “down,” it is not “administratively down.” This indicates the “no shutdown” command has been issued for that interface. However, that interface does not have an established network connection to another device (e.g., an Ethernet switch). Therefore, the interface is “down” while not being “administratively down.”

Video Reference: Examining Router and Switch Configurations

5. You want to create a user account on a Cisco router. You want the username to be "jacob" and the password to be "$3cr3TP@$$WORd". Also, you don't want the password to appear as clear text in the router's running-config. What command should you issue in global configuration mode?

    a. username jacob password $3cr3TP@$$WORd
    b. username jacob secret $3cr3TP@$$WORd
    c. username jacob type 9 $3cr3TP@$$WORd
    d. username jacob hash $3cr3TP@$$WORd

    Answer: b

    Explanation: The "username [*username*] secret [*password*]" command, issued in global configuration mode, creates a user account in a Cisco IOS router. The "secret" option causes the password to appear as a hash digest in the router's running-config, as opposed to appearing as clear text.

    Video Reference: Password Protecting Cisco Routers and Switches

6. You're in interface configuration mode for interface GigabitEthernet0/0 on a Cisco router, and you wish to configure that interface with an IP address of 172.16.1.14 /27. Which of the following commands should you issue?

    a. ip address 172.16.1.14 /27
    b. ip address 172.16.1.14 255.255.255.192
    c. ip address 172.16.1.14 255.255.255.224
    d. ip address dhcp 172.16.1.14

    Answer: c

    Explanation: You can have an interface on a Cisco router attempt to automatically obtain its IP address via DHCP (e.g., from an Internet Service Provider (ISP)) with the interface configuration mode command "ip address dhcp".

    However, if you wish to statically configure that interface with a specific IP address, you can use the command "ip address [*ip_address*] [*subnet_mask*]". Please note the subnet mask must be specified in dotted decimal notation, as opposed to prefix notation (a.k.a. slash notation or CIDR (Classless Inter-Domain Routing) notation).

    In this example, you want to use a 27-bit subnet mask, which is 255.255.255.224 in dotted decimal notation. Therefore, the command you would enter is "ip address 172.16.1.14 255.255.255.224".

    Video Reference: Configuring a Router Interface

7. You just finished performing a few configuration changes on a Cisco router. Even though your new configuration is active, if the router were to reboot, your configuration changes would be lost. What command should you enter to copy of your router's running configuration (which resides in RAM) to your router's startup configuration (which resides in Non-Volatile RAM)?

    a. copy ram nvram
    b. copy running-configuration startup-configuration
    c. copy startup-config running-config
    d. copy run star

    Answer: d

    Explanation: A router's configuration that is currently running in the router's RAM is named "running-config" not "running-configuration." Similarly, a router's startup configuration that is stored in Non-Volatile RAM is named "startup-config" not "startup-configuration."

    The "copy" command has the syntax of "copy [*source*] [*destination*]". In this example, the source is the router's RAM (i.e., running-config) and the destination is the router's NVRAM "(i.e., startup-config)."

    Therefore, a command you could issue to accomplish the desired result is: "copy running-config startup-config".

    However, Cisco IOS will allow you to enter abbreviated forms of commands and/or options if you provide sufficient characters to make your commands and/or options unique for your configuration mode and/or privilege level. As a result, the "copy run star" command would also accomplish the desired result.

    Video Reference: Working with Configuration Files