

Cisco

Exam Questions 100-150

Cisco Certified Support Technician (CCST) Networking



NEW QUESTION 1

DRAG DROP

Move the security options from the list on the left to its characteristic on the right. You may use each security option once, more than once, or not at all.

Note: You will receive partial credit for each correct answer.

Move the security options from the list on the left to its characteristic on the right. You may use each security option once, more than once, or not at all.

Note: You will receive partial credit for each correct answer.

Security Options

WEP

WPA2-Personal

WPA2-Enterprise

Characteristics

Uses a RADIUS server for authentication

Uses a minimum of 40 bits for encryption

Uses AES and a pre-shared key for authentication

Security Option

Security Option

Security Option

- A. Mastered
B. Not Mastered

Answer: A

Explanation:

The correct matching of the security options to their characteristics is as follows:

? WPA2-Enterprise: Uses a RADIUS server for authentication

? WEP: Uses a minimum of 40 bits for encryption

? WPA2-Personal: Uses AES and a pre-shared key for authentication Here??s why each security option matches the characteristic:

? WPA2-Enterprise uses a RADIUS server for authentication, which provides centralized Authentication, Authorization, and Accounting (AAA) management for users who connect and use a network service.

? WEP (Wired Equivalent Privacy) is an outdated security protocol that uses a minimum of 40 bits for encryption (and up to 104 bits), which is relatively weak by today??s standards.

? WPA2-Personal (Wi-Fi Protected Access 2 - Personal) uses the Advanced Encryption Standard (AES) for encryption and a pre-shared key (PSK) for authentication, which is shared among users to access the network.

These security options are essential for protecting wireless networks from unauthorized access and ensuring data privacy.

NEW QUESTION 2

Which two statements are true about the IPv4 address of the default gateway configured on a host? (Choose 2.)

Note: You will receive partial credit for each correct selection.

- A. The IPv4 address of the default gateway must be the first host address in the subnet.
B. The same default gateway IPv4 address is configured on each host on the local network.
C. The default gateway is the Loopback0 interface IPv4 address of the router connected to the same local network as the host.
D. The default gateway is the IPv4 address of the router interface connected to the same local network as the host.
E. Hosts learn the default gateway IPv4 address through router advertisement messages.

Answer: BD

Explanation:

•Statement B: "The same default gateway IPv4 address is configured on each host on the local network." This is true because all hosts on the same local network (subnet) use the same default gateway IP address to send packets destined for other networks.

•Statement D: "The default gateway is the IPv4 address of the router interface connected to the same local network as the host." This is true because the default gateway is the IP address of the router's interface that is directly connected to the local network.

•Statement A: "The IPv4 address of the default gateway must be the first host address in the subnet." This is not necessarily true. The default gateway can be any address within the subnet range.

•Statement C: "The default gateway is the Loopback0 interface IPv4 address of the router connected to the same local network as the host." This is not true; the default gateway is the IP address of the router's physical or logical interface connected to the local network.

•Statement E: "Hosts learn the default gateway IPv4 address through router advertisement messages." This is generally true for IPv6 with Router Advertisement (RA) messages, but not typically how IPv4 hosts learn the default gateway address.

References:

•Cisco Default Gateway Configuration: Cisco Default Gateway

NEW QUESTION 3

Which address is included in the 192.168.200.0/24 network?

- A. 192.168.199.13
B. 192.168.200.13
C. 192.168.201.13
D. 192.168.1.13

Answer: B

Explanation:

- 192.168.200.0/24 Network: This subnet includes all addresses from 192.168.200.0 to 192.168.200.255. The /24 indicates a subnet mask of 255.255.255.0, which allows for 256 addresses.
- 192.168.199.13: This address is in the 192.168.199.0/24 subnet, not the 192.168.200.0/24 subnet.
- 192.168.200.13: This address is within the 192.168.200.0/24 subnet.
- 192.168.201.13: This address is in the 192.168.201.0/24 subnet, not the 192.168.200.0/24 subnet.
- 192.168.1.13: This address is in the 192.168.1.0/24 subnet, not the 192.168.200.0/24 subnet.

References:

- Subnetting Guide: Subnetting Basics

NEW QUESTION 4

Which command will display all the current operational settings configured on a Cisco router?

- A. show protocols
- B. show startup-config
- C. show version
- D. show running-config

Answer: D

Explanation:



Router

The show running-config command is used on a Cisco router to display the current operational settings that are actively configured in the router's RAM. This command outputs all the configurations that are currently being executed by the router, which includes interface configurations, routing protocols, access lists, and other settings. Unlike show startup-config, which shows the saved configuration that the router will use on the next reboot, show running-config reflects the live, current configuration in use.

References := The information is supported by multiple sources that detail the use of Cisco commands, particularly the show running-config command as the standard for viewing the active configuration on a Cisco device¹²³.

? show running-config: This command displays the current configuration running on the router. It includes all the operational settings and configurations applied to the router.

? show protocols: This command shows the status of configured protocols on the router but not the entire configuration.

? show startup-config: This command displays the configuration saved in NVRAM, which is used to initialize the router on startup, but not necessarily the current running configuration.

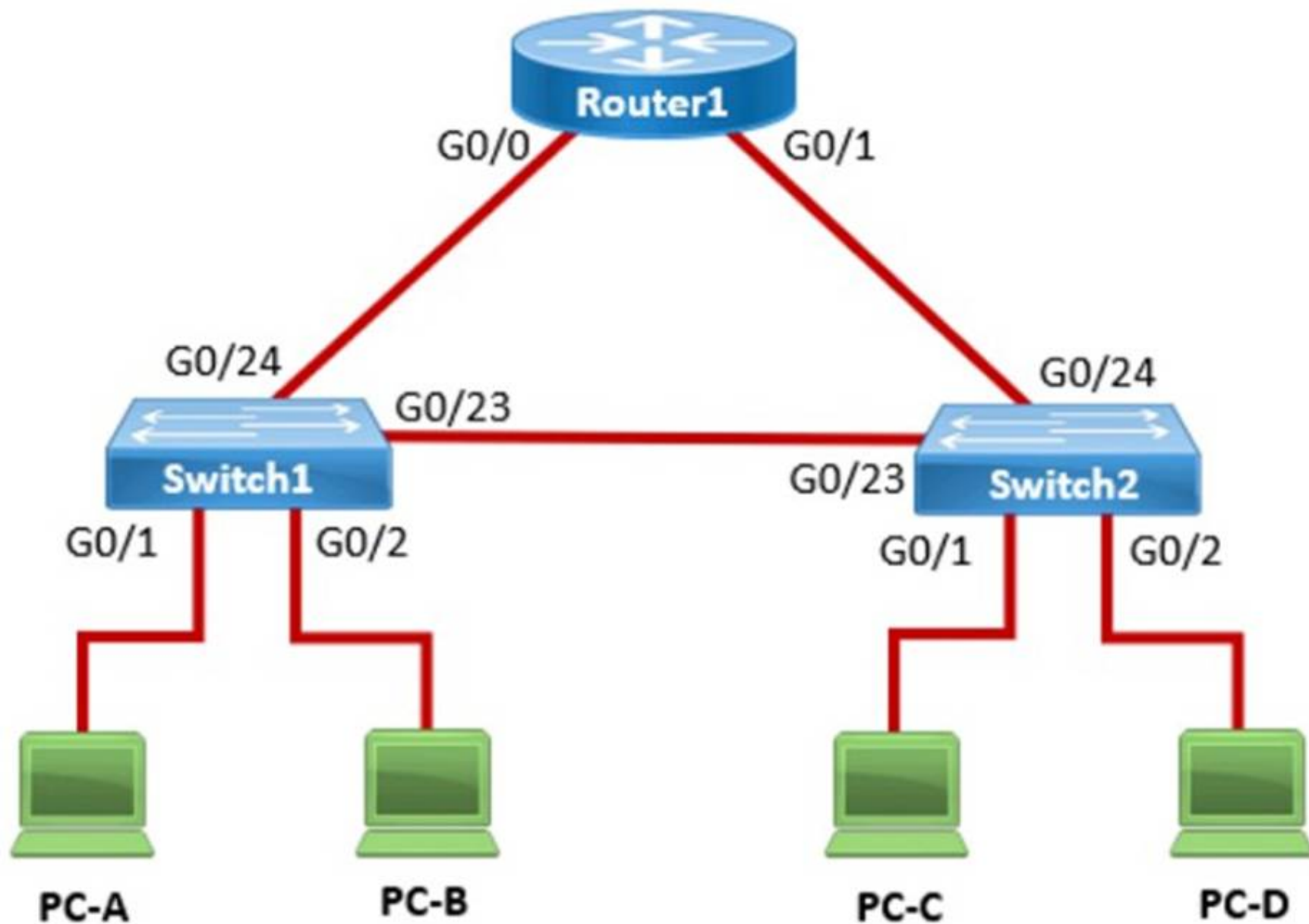
? show version: This command provides information about the router's software version, hardware components, and uptime but does not display the running configuration.

References:

- ? Cisco IOS Commands: Cisco IOS Commands

NEW QUESTION 5

In the network shown in the following graphic, Switch1 is a Layer 2 switch.



PC-A sends a frame to PC-C. Switch1 does not have a mapping entry for the MAC address of PC-C. Which action does Switch1 take?

- A. Switch1 queries Switch2 for the MAC address of PC-C.
- B. Switch1 drops the frame and sends an error message back to PC-A.
- C. Switch1 floods the frame out all active ports except port G0/1.
- D. Switch1 sends an ARP request to obtain the MAC address of PC-C.

Answer: C

Explanation:

Understanding How Layer 2 Switches Handle Unknown MAC Addresses Switches operate at Layer 2 (Data Link Layer) of the OSI model and maintain a MAC address table (CAM table) to forward frames efficiently.

? When a switch receives a frame, it checks its MAC address table to see if it knows the destination MAC address.

? If the destination MAC address is not in the table (meaning the switch does not know which port leads to PC-C), the switch follows the flooding behavior.

What Happens When Switch1 Receives a Frame from PC-A to PC-C?

? Switch1 checks its MAC table:

? Switch1 does not know where PC-C is:

? Switch2 receives the frame and follows the same process:

? Once PC-C responds, Switch1 and Switch2 learn its MAC address and update their tables.

Why Other Options Are Incorrect:

* A. Switch1 queries Switch2 for the MAC address of PC-C.

? Incorrect: Switches do not query other switches directly for MAC addresses.

Instead, they rely on learning MAC addresses dynamically through frame forwarding.

* B. Switch1 drops the frame and sends an error message back to PC-A.

? Incorrect: Switches do not drop frames for unknown MAC addresses. Instead, they flood the frames out all ports except the incoming port.

* D. Switch1 sends an ARP request to obtain the MAC address of PC-C.

? Incorrect:

Conclusion

Since Switch1 does not know the destination MAC address, it floods the frame out all active ports except the port it was received on. This is the default behavior of Layer 2 switches when they encounter an unknown MAC address.

Thus, the correct answer is: C. Switch1 floods the frame out all active ports except port G0/1.

References

? Cisco CCNA 200-301 Official Guide – MAC Address Table & Frame Forwarding

? RFC 894 – Standard for Ethernet Frame Forwarding

? Cisco Networking Essentials – Switch Flooding Behavior

NEW QUESTION 6

What is the most compressed valid format of the IPv6 address 2001:0db8:0000:0016:0000:001b: 2000:0056?

- A. 2001:db8: : 16: : 1b:2:56
- B. 2001:db8: : 16: : 1b: 2000: 56
- C. 2001:db8: 16: :1b:2:56
- D. 2001:db8: 0:16: :1b: 2000:56

Answer: D

Explanation:

IPv6 addresses can be compressed by removing leading zeros and replacing consecutive groups of zeros with a double colon (::). Here's how to compress the address 2001:0db8:0000:0016:0000:001b:2000:0056:

? Remove leading zeros from each segment:

? Replace the longest sequence of consecutive zeros with a double colon (::). In this case, the two consecutive zeros between the 16 and 1b:

Thus, the most compressed valid format of the IPv6 address is 2001:db8:0:16::1b:2000:56.

References :=

? Cisco Learning Network

? IPv6 Addressing (Cisco)

NEW QUESTION 7

HOTSPOT

Computers in a small office are unable to access companypro.net. You run the ipconfig command on one of the computers. The results are shown in the exhibit.

You need to determine if you can reach the router.

```
DHCP Enabled. . . . . : Yes
Autoconfiguration Enabled . . . . : Yes
IPv4 Address. . . . . : 192.168.0.14(Preferred)
Subnet Mask . . . . . : 255.255.255.0
Lease Obtained. . . . . : Sunday, January 8, 2023 11:00:02 AM
Lease Expires . . . . . : Sunday, January 8, 2023 12:00:12 PM
Default Gateway . . . . . : 192.168.0.1
DHCP Server . . . . . : 192.168.0.1
DNS Servers . . . . . : 8.8.8.8
                        8.8.4.4
NetBIOS over Tcpip. . . . . : Enabled
```

Which command should you use? Complete the command by selecting the correct options from each drop-down lists.

netstat
ping
ftp
nslookup

companypro.net
192.168.0.1
localhost
8.8.8.8

- A. Mastered
- B. Not Mastered

Answer: A

Explanation:

To determine if you can reach the router, you should use the ping command followed by the IP address of the router. The ping command is a network utility used to test the reachability of a host on an Internet Protocol (IP) network and to measure the round-trip time for messages sent from the originating host to a destination computer.

The Default Gateway in the ipconfig results is typically the router's IP address in a home or small office network. In this case, the Default Gateway is 192.168.0.1, which is the address you would ping to check connectivity to the router.

References :=

? How to Use the Ping Command

? Testing Network Connectivity with the Ping Command

=====

To determine if you can reach the router, you should use the ping command with the IP address of the router.

? Command: ping

? Target: 192.168.0.1 So, the completed command is:

? ping 192.168.0.1

Step by Step Comprehensive and Detailed Explanation:

? ping: The ping command sends ICMP Echo Request messages to the target IP address and waits for an Echo Reply. It is commonly used to test the reachability of a network device.

? 192.168.0.1: This is the IP address of the default gateway (the router) as shown in the ipconfig output. Pinging this address will help determine if the computer can communicate with the router.

References:

? Using the ping Command: ping Command Guide

NEW QUESTION 8

Which standard contains the specifications for Wi-Fi networks?

- A. GSM
- B. LTE
- C. IEEE 802.11

- D. IEEE 802.3
- E. EIA/TIA 568A

Answer: C

Explanation:

The IEEE 802.11 standard contains the specifications for Wi-Fi networks. It is a set of media access control (MAC) and physical layer (PHY) specifications for implementing wireless local area network (WLAN) computer communication in various frequencies, including but not limited to 2.4 GHz, 5 GHz, and 6 GHz¹. This standard is maintained by the Institute of Electrical and Electronics Engineers (IEEE) and is commonly referred to as Wi-Fi. The standard has evolved over time to include several amendments that improve speed, range, and reliability of wireless networks.

References :=

- The Most Common Wi-Fi Standards and Types, Explained
- 802.11 Standards Explained: 802.11ax, 802.11ac, 802.11b/g/n, 802.11a
- Wi-Fi Standards Explained - GeeksforGeeks

=====

NEW QUESTION 9

Which information is included in the header of a UDP segment?

- A. IP addresses
- B. Sequence numbers
- C. Port numbers
- D. MAC addresses

Answer: C

Explanation:

The header of a UDP (User Datagram Protocol) segment includes port numbers. Specifically, it contains the source port number and the destination port number, which are used to identify the sending and receiving applications. UDP headers do not include IP addresses or MAC addresses, as those are part of the IP and Ethernet frame headers, respectively. Additionally, UDP does not use sequence numbers, which are a feature of TCP (Transmission Control Protocol) for ensuring reliable delivery of data segments¹.

References :=

- ? Segmentation Explained with TCP and UDP Header
- ? User Datagram Protocol (UDP) - GeeksforGeeks
- ? Which three fields are used in a UDP segment header

=====

? UDP Header: The header of a UDP segment includes the following key fields:

? IP Addresses: These are included in the IP header, not the UDP header.

? Sequence Numbers: These are part of the TCP header, not UDP.

? MAC Addresses: These are part of the Ethernet frame header and are not included in the UDP header.

References:

- ? RFC 768 - User Datagram Protocol: RFC 768
- ? Cisco Guide on UDP: Cisco UDP Guide

NEW QUESTION 10

.....

Thank You for Trying Our Product

We offer two products:

1st - We have Practice Tests Software with Actual Exam Questions

2nd - Questions and Answers in PDF Format

100-150 Practice Exam Features:

- * 100-150 Questions and Answers Updated Frequently
- * 100-150 Practice Questions Verified by Expert Senior Certified Staff
- * 100-150 Most Realistic Questions that Guarantee you a Pass on Your First Try
- * 100-150 Practice Test Questions in Multiple Choice Formats and Updates for 1 Year

100% Actual & Verified — Instant Download, Please Click
[Order The 100-150 Practice Test Here](#)