

# Cisco

## Exam Questions CCST-Networking

Cisco Certified Support Technician (CCST) NetworkingExam



### NEW QUESTION 1

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 2

You need to connect a computer's network adapter to a switch using a 1000BASE-T cable. Which connector should you use?

- A. Coax
- B. RJ-11
- C. OS2 LC
- D. RJ-45

**Answer: D**

#### Explanation:

- 1000BASE-T Cable: This refers to Gigabit Ethernet over twisted-pair cables (Cat 5e or higher).
- Connector: RJ-45 connectors are used for Ethernet cables, including those used for 1000BASE-T.
- Coax: Used for cable TV and older Ethernet standards like 10BASE2.
- RJ-11: Used for telephone connections.
- OS2 LC: Used for fiber optic connections. References:
- Ethernet Standards and Cables: Ethernet Cable Guide

### NEW QUESTION 3

DRAG DROP

Move each protocol from the list on the left to its correct example on the right.

Move each protocol from the list on the left to its correct example on the right.

Protocols

DHCP

DNS

ICMP

Examples

Perform a query to translate companypro.net to an IP address.

Assign the reserved IP address 10.10.10.200 to a web server at your company.

Perform a ping to ensure that a server is responding to network connections.

- A. Mastered
- B. Not Mastered

**Answer: A**

#### Explanation:

The correct matching of the protocols to their examples is as follows:

? DHCP: Assign the reserved IP address 10.10.10.200 to a web server at your company.

? DNS: Perform a query to translate companypro.net to an IP address.

? ICMP: Perform a ping to ensure that a server is responding to network connections.

Here's how each protocol corresponds to its example:

? DHCP (Dynamic Host Configuration Protocol) is used to assign IP addresses to devices on a network. In this case, DHCP would be used to assign the reserved IP address 10.10.10.200 to a web server.

? DNS (Domain Name System) is used to translate domain names into IP addresses.

Therefore, to translate companypro.net to an IP address, DNS would be utilized.

? ICMP (Internet Control Message Protocol) is used for sending error messages and operational information indicating success or failure when communicating with

another IP address. An example of this is using the ping command to check if a server is responding to network connections.

These protocols are essential for the smooth operation of networks and the internet.

? Perform a query to translate companypro.net to an IP address.

? Assign the reserved IP address 10.10.10.200 to a web server at your company.

? Perform a ping to ensure that a server is responding to network connections.

? DNS (Domain Name System): DNS translates human-friendly domain names like "companypro.net" into IP addresses that computers use to identify each other on the network.

? DHCP (Dynamic Host Configuration Protocol): DHCP automatically assigns IP addresses to devices on a network, ensuring that no two devices have the same IP address.

? ICMP (Internet Control Message Protocol): ICMP is used for diagnostic or control purposes, and the ping command uses ICMP to test the reachability of a host on an IP network.

References:

? DNS Basics: What is DNS?

? DHCP Overview: What is DHCP?

? ICMP and Ping: Understanding ICMP

#### NEW QUESTION 4

A support technician examines the front panel of a Cisco switch and sees 4 Ethernet cables connected in the first four ports. Ports 1, 2, and 3 have a green LED. Port 4 has a blinking green light. What is the state of the Port 4?

- A. Link is up with cable malfunctions.
- B. Link is up and not stable.
- C. Link is up and active.
- D. Link is up and there is no activity.

**Answer: C**

#### Explanation:

On a Cisco switch, a port with a blinking green LED typically indicates that the port is up (active) and is currently transmitting or receiving data. This is a normal state indicating active traffic on the port.

- A. Link is up with cable malfunctions: Usually indicated by an amber or blinking amber light.
- B. Link is up and not stable: Not typically indicated by a green blinking light.
- D. Link is up and there is no activity: Would be indicated by a solid green light without blinking.

Thus, the correct answer is C. Link is up and active. References :=

- Cisco Switch LED Indicators
- Cisco Ethernet Switch LED Patterns

#### NEW QUESTION 5

What is the purpose of assigning an IP address to the management VLAN interface on a Layer 2 switch?

- A. To enable the switch to act as a default gateway for the attached devices
- B. To enable the switch to resolve URLs for the attached the devices
- C. To enable the switch to provide DHCP services to other switches in the network
- D. To enable access to the CLI on the switch through Telnet or SSH

**Answer: D**

#### Explanation:

The primary purpose of assigning an IP address to the management VLAN interface on a Layer 2 switch is to facilitate remote management of the switch. By configuring an IP address on the management VLAN, network administrators can access the switch's Command Line Interface (CLI) remotely using protocols such as Telnet or Secure Shell (SSH). This allows for convenient configuration changes, monitoring, and troubleshooting without needing physical access to the switch.

References :=

- Understanding the Management VLAN
- Cisco - VLAN Configuration Guide
- Remote Management of Switches

Assigning an IP address to the management VLAN interface (often the VLAN 1 interface by default) on a Layer 2 switch allows network administrators to remotely manage the switch using protocols such as Telnet or SSH. This IP address does not affect the switch's ability to route traffic between VLANs but provides a means to access and configure the switch through its Command Line Interface (CLI).

- A: The switch does not act as a default gateway; this is typically a function of a Layer 3 device like a router.
- B: The switch does not resolve URLs; this is typically a function of DNS servers.
- C: The switch can relay DHCP requests but does not typically provide DHCP services itself; this is usually done by a dedicated DHCP server or router.

Thus, the correct answer is D. To enable access to the CLI on the switch through Telnet or SSH.

References :=

- Cisco VLAN Management Overview
- Cisco Catalyst Switch Management

#### NEW QUESTION 6

Which command will display the following output?

Image is command output that states the following.

Capability Codes: R - Router, T - Trans Bridge, B - Source Route Bridge, S - Switch, H - Host, I - IGMP,

Device ID	Local Intrfce	Holdtme	Capability	Platform	Port ID
esxi	Gig 0/5	177	S	VMware ES	vmnic0
esxi	Gig 0/7	177	S	VMware ES	vmnic1
esxi	Gig 0/6	177	S	VMware ES	vmnic2
981888fc23a7	Gig 0/47	160	R S	Meraki MR	Port 0
3456fec1d08	Gig 0/1	178	S	MS120-8LP	Port 9"

- A. show mac-address-table
- B. show cdp neighbor
- C. show inventory
- D. show ip interface

**Answer:** B

**Explanation:**

The command that will display the output provided, which includes capability codes, local interface details, device IDs, hold times, and platform port ID capabilities, is the show cdp neighbor command. This command is used in Cisco devices to display current information about neighboring devices detected by Cisco Discovery Protocol (CDP), which includes details such as the interface through which the neighbor is connected, the type of device, and the port ID of the device<sup>1</sup>.

References :=

- Cisco - show cdp neighbors

The provided output is from the Cisco Discovery Protocol (CDP) neighbor table. The show cdp neighbor command displays information about directly connected Cisco devices, including Device ID, Local Interface, Holdtime, Capability, Platform, and Port ID.

- A. show mac-address-table: Displays the MAC address table on the switch.
- C. show inventory: Displays information about the hardware inventory of the device.
- D. show ip interface: Displays IP interface status and configuration. Thus, the correct answer is B. show cdp neighbor.

References :=

- Cisco CDP Neighbor Command
- Understanding CDP

**NEW QUESTION 7**

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 GHz<sup>1</sup>. 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

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**NEW QUESTION 8**

An engineer configured a new VLAN named VLAN2 for the Data Center team. When the team tries to ping addresses outside VLAN2 from a computer in VLAN2, they are unable to reach them. What should the engineer configure?

- A. Additional VLAN
- B. Default route
- C. Default gateway
- D. Static route

**Answer:** C

**Explanation:**

When devices within a VLAN are unable to reach addresses outside their VLAN, it typically indicates that they do not have a configured path to external networks. The engineer should configure a default gateway for VLAN2. The default gateway is the IP address of the router's interface that is connected to the VLAN, which will route traffic from the VLAN to other networks<sup>12</sup>.

References :=

- Understanding and Configuring VLAN Routing and Bridging on a Router Using the IRB Feature
- VLAN 2 not able to ping gateway - Cisco Community



- =====
- VLANs: Virtual Local Area Networks (VLANs) logically segment network traffic to improve security and performance. Devices within the same VLAN can communicate directly.
  - Default Gateway: For devices in VLAN2 to communicate with devices outside their VLAN, they need a default gateway configured. The default gateway is typically a router or Layer 3 switch that routes traffic between different VLANs and subnets.
  - Additional VLAN: Not needed in this scenario as the issue is related to routing traffic outside VLAN2, not creating another VLAN.
  - Default Route: While a default route on the router may be necessary, the primary issue for devices within VLAN2 is to have a configured default gateway.
  - Static Route: This is used on routers to manually specify routes to specific networks but does not address the need for a default gateway on the client devices.
- References:
- Cisco VLAN Configuration Guide: Cisco VLAN Configuration
  - Understanding and Configuring VLANs: VLANs Guide

#### NEW QUESTION 9

A user initiates a trouble ticket stating that an external web page is not loading. You determine that other resources both internal and external are still reachable. Which command can you use to help locate where the issue is in the network path to the external web page?

- A. ping -t
- B. tracer
- C. ipconfig/all
- D. nslookup

**Answer: B**

#### Explanation:

The tracer command is used to determine the route taken by packets across an IP network. When a user reports that an external web page is not loading, while other resources are accessible, it suggests there might be an issue at a certain point in the network path to the specific web page. The tracer command helps to diagnose where the breakdown occurs by displaying a list of routers that the packets pass through on their way to the destination. It can identify the network segment where the packets stop progressing, which is valuable for pinpointing where the connectivity issue lies. References := Cisco CCST Networking Certification FAQs – CISCONET Training Solutions, Command Prompt (CMD): 10 network-related commands you should know, Network Troubleshooting Commands Guide: Windows, Mac & Linux - Comparitech, How to Use the Traceroute and Ping Commands to Troubleshoot Network, Network Troubleshooting Techniques: Ping, Traceroute, PathPing.

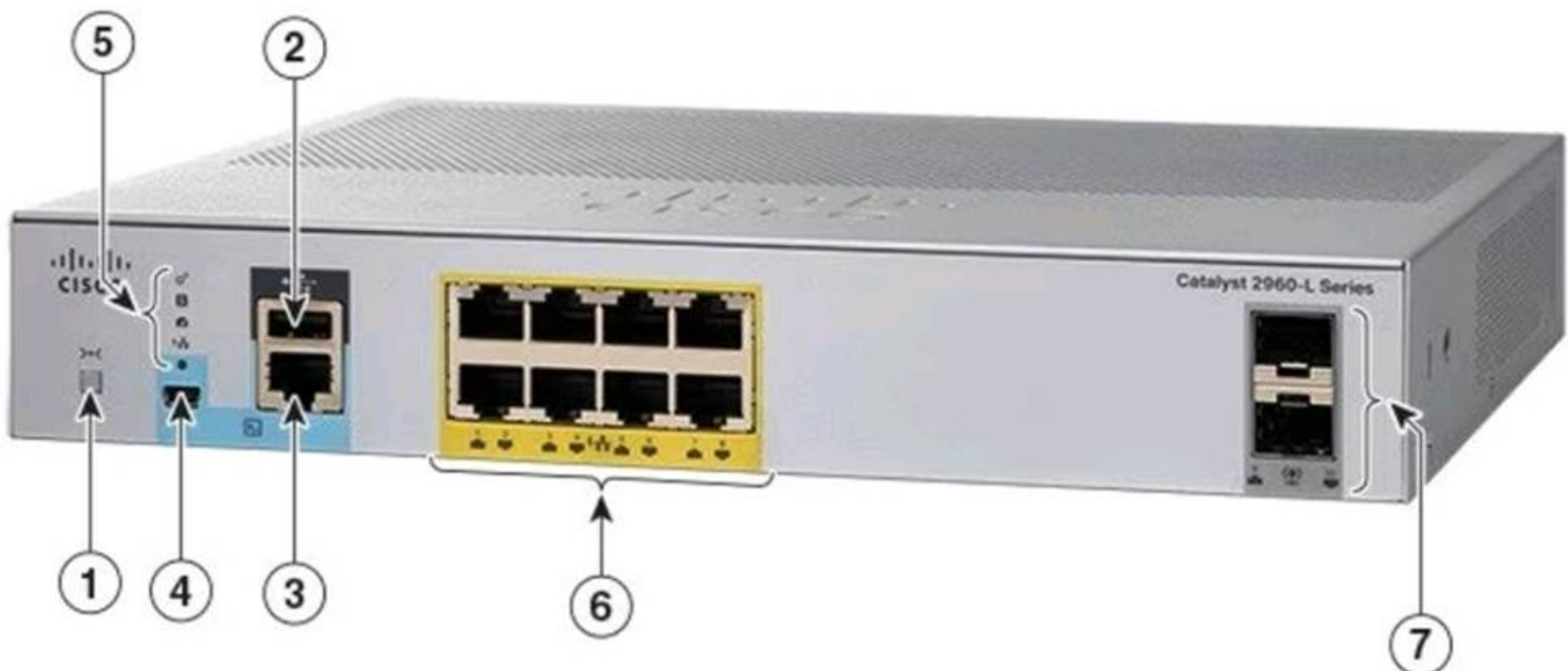
- tracer Command: This command is used to determine the path packets take to reach a destination. It lists all the hops (routers) along the way and can help identify where the delay or failure occurs.
- ping -t: This command sends continuous ping requests and is useful for determining if a host is reachable but does not provide path information.
- ipconfig /all: This command displays all current TCP/IP network configuration values and can be used to verify network settings but not to trace a network path.
- nslookup: This command queries the DNS to obtain domain name or IP address mapping, useful for DNS issues but not for tracing network paths.

References:

- Microsoft tracer Command: tracer Command Guide
- Troubleshooting Network Issues with tracer: Network Troubleshooting Guide

#### NEW QUESTION 10

A Cisco PoE switch is shown in the following image. Which type of port will provide both data connectivity and power to an IP phone?



- A. Port identified with number 2
- B. Ports identified with numbers 3 and 4
- C. Ports identified with number 6
- D. Ports identified with number 7

**Answer: C**

#### Explanation:

In the provided image of the Cisco PoE switch, the ports identified with number 6 are the standard RJ-45 Ethernet ports typically found on switches that provide both data connectivity and Power over Ethernet (PoE). PoE ports are designed to supply power to devices such as IP phones, wireless access points, and other PoE-enabled devices directly through the Ethernet cable.

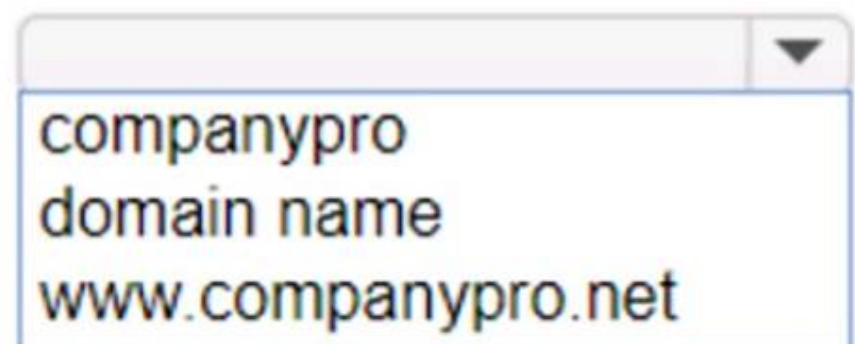
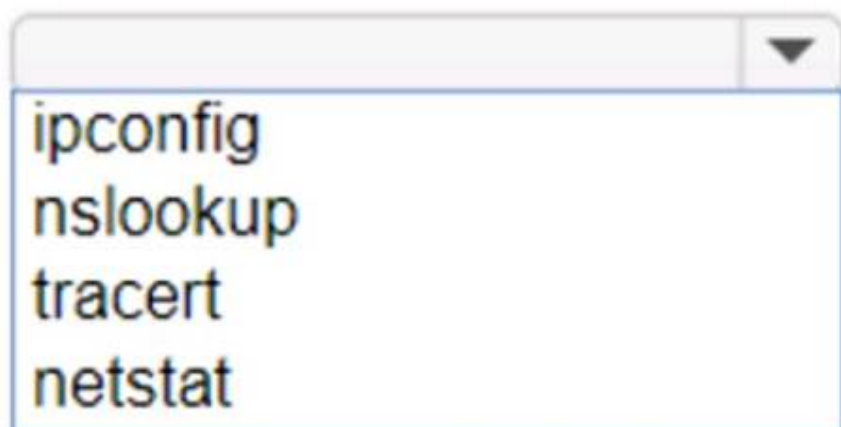
Ports:

- 2: Console port (for management and configuration)
- 3 and 4: Specific function ports (often for management)
- 6: RJ-45 Ethernet ports (capable of providing PoE)
- 7: SFP ports (for fiber connections, typically do not provide PoE) Thus, the correct answer is C. Ports identified with number 6. References :=
- Cisco Catalyst 2960-L Series Switches Data Sheet
- Cisco PoE Overview

### NEW QUESTION 10

#### HOTSPOT

You want to list the IPv4 addresses associated with the host name `www.companypro.net`. Complete the command by selecting the correct option from each drop-down list.



- A. Mastered
- B. Not Mastered

**Answer:** A

#### Explanation:

To list the IPv4 addresses associated with the host name `www.companypro.net`, you should use the following command:

`nslookup www.companypro.net`

This command will query the DNS servers to find the IP address associated with the hostname provided. If you want to ensure that it returns the IPv4 address, you can specify the `-type=A` option, which stands for Address records that hold IPv4 addresses<sup>1</sup>. However, the `nslookup` command by default should return the IPv4 address if available.

To list the IPv4 addresses associated with the host name `www.companypro.net`, you should use the `nslookup` command.

? Command: `nslookup`

? Target: `www.companypro.net` So, the completed command is:

? `nslookup www.companypro.net`

? `nslookup`: This command is used to query the Domain Name System (DNS) to obtain domain name or IP address mapping or for any other specific DNS record.

? `www.companypro.net`: This is the domain name you want to query to obtain its associated IP addresses. References:

? Using `nslookup`: `nslookup` Command Guide

### NEW QUESTION 11

Which protocol allows you to securely upload files to another computer on the internet?

- A. SFTP
- B. ICMP
- C. NTP
- D. HTTP

**Answer:** A

#### Explanation:

SFTP, or Secure File Transfer Protocol, is a protocol that allows for secure file transfer capabilities between networked hosts. It is a secure extension of the File Transfer Protocol (FTP). SFTP encrypts both commands and data, preventing passwords and sensitive information from being transmitted openly over the network. It is typically used for secure file transfers over the internet and is built on the Secure Shell (SSH) protocol<sup>1</sup>. References :=

- What Is SFTP? (Secure File Transfer Protocol)

- How to Use SFTP to Safely Transfer Files: A Step-by-Step Guide

- Secure File Transfers: Best Practices, Protocols And Tools

The Secure File Transfer Protocol (SFTP) is a secure version of the File Transfer Protocol (FTP) that uses SSH (Secure Shell) to encrypt all commands and data. This ensures that sensitive information, such as usernames, passwords, and files being transferred, are securely transmitted over the network.

- ICMP (Internet Control Message Protocol) is used for network diagnostics and is not designed for file transfer.

- NTP (Network Time Protocol) is used to synchronize clocks between computer systems and is not related to file transfer.

- HTTP (HyperText Transfer Protocol) is used for transmitting web pages over the internet and does not inherently provide secure file transfer capabilities.

Thus, the correct protocol that allows secure uploading of files to another computer on the internet is SFTP.

References :=

- Cisco Learning Network

- SFTP Overview (Cisco)

### NEW QUESTION 16

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