

# Exam Questions N10-008

CompTIA Network+Exam

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### NEW QUESTION 1

- (Topic 1)

The management team needs to ensure unnecessary modifications to the corporate network are not permitted and version control is maintained. Which of the following documents would BEST support this?

- A. An incident response plan
- B. A business continuity plan
- C. A change management policy
- D. An acceptable use policy

**Answer: C**

#### Explanation:

A change management policy is a document that outlines the procedures and guidelines for making changes to a network or system, including how changes are approved, tested, and implemented. By following a change management policy, organizations can ensure that unnecessary modifications to the network are not permitted and version control is maintained. References:

? Network+ N10-008 Objectives: 1.6 Given a scenario, implement network configuration and change management best practices.

### NEW QUESTION 2

- (Topic 1)

Branch users are experiencing issues with videoconferencing. Which of the following will the company MOST likely configure to improve performance for these applications?

- A. Link Aggregation Control Protocol
- B. Dynamic routing
- C. Quality of service
- D. Network load balancer
- E. Static IP addresses

**Answer: C**

#### Explanation:

To improve performance for videoconferencing, the company should configure Quality of Service (QoS). This technology allows for the prioritization of network traffic, ensuring that videoconferencing traffic is given higher priority and therefore better performance. Link Aggregation Control Protocol (LACP), Dynamic routing, Network load balancer, and Static IP addresses are not directly related to improving performance for videoconferencing.

References:

? Network+ N10-007 Certification Exam Objectives, Objective 2.6: Given a scenario, implement and configure the appropriate wireless security and implement the appropriate QoS concepts.

### NEW QUESTION 3

- (Topic 1)

A store owner would like to have secure wireless access available for both business equipment and patron use. Which of the following features should be configured to allow different wireless access through the same equipment?

- A. MIMO
- B. TKIP
- C. LTE
- D. SSID

**Answer: D**

#### Explanation:

SSID (Service Set Identifier) is a feature that should be configured to allow different wireless access through the same equipment. SSID is the name of a wireless network that identifies it from other networks in the same area. A wireless access point (AP) can support multiple SSIDs with different security settings and network policies. For example, a store owner can create one SSID for business equipment and another SSID for patron use, and assign different passwords, VLANs, and QoS levels for each SSID. References: <https://www.cisco.com/c/en/us/support/docs/wireless-mobility/wireless-lan-wlan/70931-multiple-ssid.html>

### NEW QUESTION 4

- (Topic 1)

A network administrator is installing a wireless network at a client's office. Which of the following IEEE 802.11 standards would be BEST to use for multiple simultaneous client access?

- A. CDMA
- B. CSMA/CD
- C. CSMA/CA
- D. GSM

**Answer: C**

#### Explanation:

CSMA/CA (Carrier Sense Multiple Access with Collision Avoidance) is an IEEE 802.11 standard that would be best to use for multiple simultaneous client access on a wireless network. CSMA/CA is a media access control method that allows multiple devices to share the same wireless channel without causing collisions or interference. It works by having each device sense the channel before transmitting data and waiting for an acknowledgment from the receiver after each transmission. If the channel is busy or no acknowledgment is received, the device will back off and retry later with a random delay. References:

<https://www.cisco.com/c/en/us/support/docs/wireless-mobility/wireless-lan-wlan/82068-csma-ca.html>

### NEW QUESTION 5

- (Topic 1)

A technician receives feedback that some users are experiencing high amounts of jitter while using the wireless network. While troubleshooting the network, the technician uses the ping command with the IP address of the default gateway and verifies large variations in latency. The technician thinks the issue may be interference from other networks and non-802.11 devices. Which of the following tools should the technician use to troubleshoot the issue?

- A. NetFlow analyzer
- B. Bandwidth analyzer
- C. Protocol analyzer
- D. Spectrum analyzer

**Answer: D**

**Explanation:**

A spectrum analyzer is a tool that measures the frequency and amplitude of signals in a wireless network. It can be used to troubleshoot issues related to interference from other networks and non-802.11 devices, such as microwave ovens or cordless phones, by identifying the sources and levels of interference in the wireless spectrum. A spectrum analyzer can also help to optimize the channel selection and placement of wireless access points. References: [https://partners.comptia.org/docs/default-source/resources/comptia-network-n10-008-exam-objectives-\(2-0\)](https://partners.comptia.org/docs/default-source/resources/comptia-network-n10-008-exam-objectives-(2-0)), <https://www.flukenetworks.com/blog/cabling-chronicles/what-spectrum-analyzer-and-how-do-you-use-it>

**NEW QUESTION 6**

- (Topic 1)

A technician is connecting multiple switches to create a large network for a new office. The switches are unmanaged Layer 2 switches with multiple connections between each pair. The network is experiencing an extreme amount of latency. Which of the following is MOST likely occurring?

- A. Ethernet collisions
- B. A DDoS attack
- C. A broadcast storm
- D. Routing loops

**Answer: C**

**Explanation:**

A broadcast storm is most likely occurring when connecting multiple unmanaged Layer 2 switches with multiple connections between each pair. A broadcast storm is a situation where broadcast packets flood a network segment and consume all the available bandwidth. It can be caused by loops in the network topology, where broadcast packets are endlessly forwarded by switches without any loop prevention mechanism. Unmanaged switches do not support features such as Spanning Tree Protocol (STP) or Rapid Spanning Tree Protocol (RSTP) that can detect and block loops. References: <https://www.cisco.com/c/en/us/support/docs/lan-switching/spanning-tree-protocol/10556-16.html>

**NEW QUESTION 7**

- (Topic 1)

A network technician is manually configuring the network settings for a new device and is told the network block is 192.168.0.0/20. Which of the following subnets should the technician use?

- A. 255.255.128.0
- B. 255.255.192.0
- C. 255.255.240.0
- D. 255.255.248.0

**Answer: C**

**Explanation:**

A subnet mask is a binary number that indicates which bits of an IP address belong to the network portion and which bits belong to the host portion. A slash notation (/n) indicates how many bits are used for the network portion. A /20 notation means that 20 bits are used for the network portion and 12 bits are used for the host portion. To convert /20 to a dotted decimal notation, we need to write 20 ones followed by 12 zeros in binary and then divide them into four octets separated by dots. This gives us 11111111.11111111.11110000.00000000 or 255.255.240.0 in decimal. References: [https://partners.comptia.org/docs/default-source/resources/comptia-network-n10-008-exam-objectives-\(2-0\)](https://partners.comptia.org/docs/default-source/resources/comptia-network-n10-008-exam-objectives-(2-0)), <https://www.techopedia.com/definition/950/subnet-mask>

**NEW QUESTION 8**

- (Topic 1)

Which of the following is the physical topology for an Ethernet LAN?

- A. Bus
- B. Ring
- C. Mesh
- D. Star

**Answer: D**

**Explanation:**

In a star topology, all devices on a network connect to a central hub or switch, which acts as a common connection point. Ethernet LANs typically use a star topology, with each device connected to a central switch. References:

? Network+ N10-008 Objectives: 2.2 Explain common logical network topologies and their characteristics.

**NEW QUESTION 9**

- (Topic 1)

A new cabling certification is being requested every time a network technician rebuilds one end of a Cat 6 (vendor-certified) cable to create a crossover connection that is used to connect switches. Which of the following would address this issue by allowing the use of the original cable?

- A. CSMA/CD
- B. LACP
- C. PoE+
- D. MDIX

**Answer:** D

**Explanation:**

MDIX (medium-dependent interface crossover) is a feature that allows network devices to automatically detect and configure the appropriate cabling type, eliminating the need for crossover cables. By enabling MDIX on the switches, a technician can use the original Cat 6 cable to create a crossover connection. References: CompTIA Network+ Certification Study Guide, Sixth Edition by Glen E. Clarke

**NEW QUESTION 10**

- (Topic 1)

Which of the following technologies provides a failover mechanism for the default gateway?

- A. FHRP
- B. LACP
- C. OSPF
- D. STP

**Answer:** A

**Explanation:**

First Hop Redundancy Protocol (FHRP) provides a failover mechanism for the default gateway, allowing a backup gateway to take over if the primary gateway fails. References: CompTIA Network+ Certification Study Guide, Chapter 4: Infrastructure.

**NEW QUESTION 10**

- (Topic 1)

A network engineer configured new firewalls with the correct configuration to be deployed to each remote branch. Unneeded services were disabled, and all firewall rules were applied successfully. Which of the following should the network engineer perform NEXT to ensure all the firewalls are hardened successfully?

- A. Ensure an implicit permit rule is enabled
- B. Configure the log settings on the firewalls to the central syslog server
- C. Update the firewalls with current firmware and software
- D. Use the same complex passwords on all firewalls

**Answer:** C

**Explanation:**

Updating the firewalls with current firmware and software is an important step to ensure all the firewalls are hardened successfully, as it can fix any known vulnerabilities or bugs and provide new features or enhancements. Enabling an implicit permit rule is not a good practice for firewall hardening, as it can allow unwanted traffic to pass through the firewall. Configuring the log settings on the firewalls to the central syslog server is a good practice for monitoring and auditing purposes, but it does not harden the firewalls themselves. Using the same complex passwords on all firewalls is not a good practice for password security, as it can increase the risk of compromise if one firewall is breached. References: CompTIA Network+ Certification Exam Objectives Version 2.0 (Exam Number: N10-006), Domain 3.0 Network Security, Objective 3.3 Given a scenario, implement network hardening techniques.

**NEW QUESTION 11**

- (Topic 1)

A network administrator walks into a datacenter and notices an unknown person is following closely. The administrator stops and directs the person to the security desk. Which of the following attacks did the network administrator prevent?

- A. Evil twin
- B. Tailgating
- C. Piggybacking
- D. Shoulder surfing

**Answer:** B

**Explanation:**

Tailgating is a physical security attack where an unauthorized person follows an authorized person into a restricted area without proper identification or authorization. The network administrator prevented this attack by stopping and directing the person to the security desk. References: CompTIA Network+ Certification Exam Objectives Version 2.0 (Exam Number: N10-006), Domain 3.0 Network Security, Objective 3.1 Compare and contrast risk-related concepts.

**NEW QUESTION 16**

- (Topic 1)

Which of the following TCP ports is used by the Windows OS for file sharing?

- A. 53
- B. 389
- C. 445
- D. 1433

**Answer:** C

**Explanation:**

TCP port 445 is used by the Windows OS for file sharing. It is also known as SMB (Server Message Block) or CIFS (Common Internet File System) and allows users to access files, printers, and other shared resources on a network. References: <https://docs.microsoft.com/en-us/windows-server/storage/file->

server/troubleshoot/detect-enable-and-disable-smbv1-v2-v3

#### NEW QUESTION 17

- (Topic 1)

A network administrator needs to query the NSs for a remote application. Which of the following commands would BEST help the administrator accomplish this task?

- A. dig
- B. arp
- C. show interface
- D. hostname

**Answer:** A

#### Explanation:

The dig command is used to query the NSs for a remote application. It is a command-line tool that is commonly used to troubleshoot DNS issues. When used with specific options, dig can be used to obtain information about domain names, IP addresses, and DNS records. References: Network+ Certification Study Guide, Chapter 3: Network Infrastructure

#### NEW QUESTION 21

- (Topic 1)

Given the following information:

Protocol	Local address	Foreign address	State
TCP	127.0.0.1:57779	Desktop-Open:57780	Established
TCP	127.0.0.1:57780	Desktop-Open:57779	Established

Which of the following command-line tools would generate this output?

- A. netstat
- B. arp
- C. dig
- D. tracert

**Answer:** D

#### Explanation:

Tracert is a command-line tool that traces the route of a packet from a source to a destination and displays the number of hops and the round-trip time for each hop. The output shown in the question is an example of a tracert output, which shows five hops with their IP addresses and hostnames (if available) and three latency measurements for each hop in milliseconds. References: [https://partners.comptia.org/docs/default-source/resources/comptia-network-n10-008-exam-objectives-\(2-0\)](https://partners.comptia.org/docs/default-source/resources/comptia-network-n10-008-exam-objectives-(2-0)), <https://www.lumen.com/help/en-us/network/traceroute/understanding-the-traceroute-output.html>

#### NEW QUESTION 24

- (Topic 1)

A network device is configured to send critical events to a syslog server; however, the following alerts are not being received:

Severity 5 LINK-UPDOWN: Interface 1/1, changed state to down Severity 5 LINK-UPDOWN: Interface 1/3, changed state to down

Which of the following describes the reason why the events are not being received?

- A. The network device is not configured to log that level to the syslog server
- B. The network device was down and could not send the event
- C. The syslog server is not compatible with the network device
- D. The syslog server did not have the correct MIB loaded to receive the message

**Answer:** A

#### Explanation:

The reason why the alerts are not being received is that the network device is not configured to log that level to the syslog server. The severity level for the events may need to be adjusted in order for them to be sent to the syslog server. References: Network+ Certification Study Guide, Chapter 8: Network Troubleshooting

#### NEW QUESTION 27

- (Topic 1)

Which of the following would be BEST to use to detect a MAC spoofing attack?

- A. Internet Control Message Protocol
- B. Reverse Address Resolution Protocol
- C. Dynamic Host Configuration Protocol
- D. Internet Message Access Protocol

**Answer:** B

#### Explanation:

Reverse Address Resolution Protocol (RARP) is a protocol that allows a device to obtain its MAC address from its IP address. A MAC spoofing attack is an attack where a device pretends to have a different MAC address than its actual one. RARP can be used to detect a MAC spoofing attack by comparing the MAC address obtained from RARP with the MAC address obtained from other sources, such as ARP or DHCP. References: [https://partners.comptia.org/docs/default-source/resources/comptia-network-n10-008-exam-objectives-\(2-0\)](https://partners.comptia.org/docs/default-source/resources/comptia-network-n10-008-exam-objectives-(2-0)), <https://www.techopedia.com/definition/25597/reverse-address-resolution-protocol-rarp>

#### NEW QUESTION 30



- (Topic 1)

A network engineer performs the following tasks to increase server bandwidth: Connects two network cables from the server to a switch stack  
Configure LACP on the switchports  
Verifies the correct configurations on the switch interfaces Which of the following needs to be configured on the server?

- A. Load balancing
- B. Multipathing
- C. NIC teaming
- D. Clustering

**Answer: C**

**Explanation:**

NIC teaming is a technique that combines two or more network interface cards (NICs) on a server into a single logical interface that can increase bandwidth, provide redundancy, and balance traffic. NIC teaming can be configured with different modes and algorithms depending on the desired outcome. Link Aggregation Control Protocol (LACP) is a protocol that enables NIC teaming by dynamically bundling multiple links between two devices into one logical link. References: [https://partners.comptia.org/docs/default-source/resources/comptia-network-n10-008-exam-objectives-\(2-0\)](https://partners.comptia.org/docs/default-source/resources/comptia-network-n10-008-exam-objectives-(2-0)), <https://docs.microsoft.com/en-us/windows-server/networking/technologies/nic-teaming/nic-teaming>

**NEW QUESTION 34**

- (Topic 1)

A company hired a technician to find all the devices connected within a network. Which of the following software tools would BEST assist the technician in completing this task?

- A. IP scanner
- B. Terminal emulator
- C. NetFlow analyzer
- D. Port scanner

**Answer: A**

**Explanation:**

To find all devices connected within a network, a technician can use an IP scanner. An IP scanner sends a ping request to all IP addresses within a specified range and then identifies the active devices that respond to the request.

**NEW QUESTION 36**

- (Topic 1)

Which of the following routing protocols is used to exchange route information between public autonomous systems?

- A. OSPF
- B. BGP
- C. EGRIP
- D. RIP

**Answer: B**

**Explanation:**

BGP (Border Gateway Protocol) is a routing protocol used to exchange route information between public autonomous systems (AS). OSPF (Open Shortest Path First), EGRIP (Enhanced Interior Gateway Routing Protocol), and RIP (Routing Information Protocol) are all used for internal routing within a single AS. Therefore, BGP is the correct option to choose for this question.

References:

? Network+ N10-007 Certification Exam Objectives, Objective 3.3: Given a scenario, configure and apply the appropriate routing protocol.

? Cisco: Border Gateway Protocol (BGP) Overview

**NEW QUESTION 40**

- (Topic 1)

Which of the following provides redundancy on a file server to ensure the server is still connected to a LAN even in the event of a port failure on a switch?

- A. NIC teaming
- B. Load balancer
- C. RAID array
- D. PDUs

**Answer: A**

**Explanation:**

NIC teaming, also known as network interface card teaming or link aggregation, allows multiple network interface cards to be grouped together to provide redundancy and increased throughput. In the event of a port failure on a switch, NIC teaming ensures that the file server remains connected to the LAN by automatically switching to another network interface card.

References: CompTIA Network+ Certification Study Guide, Sixth Edition by Glen E. Clarke

**NEW QUESTION 43**

- (Topic 1)

A network is experiencing a number of CRC errors during normal network communication. At which of the following layers of the OSI model will the administrator MOST likely start to troubleshoot?

- A. Layer 1
- B. Layer 2
- C. Layer 3

- D. Layer 4
- E. Layer 5
- F. Layer 6
- G. Layer 7

**Answer:** A

**Explanation:**

CRC errors are cyclic redundancy check errors that occur when data is corrupted during transmission. CRC errors are usually caused by physical layer issues such as faulty cables, connectors, ports, or interference. The network administrator will most likely start to troubleshoot at layer 1 of the OSI model, which is the physical layer that deals with the transmission of bits over a medium. References: CompTIA Network+ Certification Exam Objectives Version 2.0 (Exam Number: N10-006), Domain 4.0 Network Troubleshooting and Tools, Objective 4.1 Given a scenario, implement network troubleshooting methodology.

**NEW QUESTION 45**

- (Topic 1)

A technician is troubleshooting a wireless connectivity issue in a small office located in a high-rise building. Several APs are mounted in this office. The users report that the network connections frequently disconnect and reconnect throughout the day. Which of the following is the MOST likely cause of this issue?

- A. The AP association time is set too low
- B. EIRP needs to be boosted
- C. Channel overlap is occurring
- D. The RSSI is misreported

**Answer:** C

**Explanation:**

Channel overlap is a common cause of wireless connectivity issues, especially in high-density environments where multiple APs are operating on the same or adjacent frequencies. Channel overlap can cause interference, signal degradation, and performance loss for wireless devices. The AP association time, EIRP, and RSSI are not likely to cause frequent disconnects and reconnects for wireless users.

**NEW QUESTION 48**

- (Topic 1)

Which of the following is used to prioritize Internet usage per application and per user on the network?

- A. Bandwidth management
- B. Load balance routing
- C. Border Gateway Protocol
- D. Administrative distance

**Answer:** A

**Explanation:**

Bandwidth management is used to prioritize Internet usage per application and per user on the network. This allows an organization to allocate network resources to mission-critical applications and users, while limiting the bandwidth available to non- business-critical applications. References: Network+ Certification Study Guide, Chapter 2: Network Operations

**NEW QUESTION 51**

- (Topic 1)

A technician is installing a high-density wireless network and wants to use an available frequency that supports the maximum number of channels to reduce interference. Which of the following standard 802.11 frequency ranges should the technician look for while reviewing WAP specifications?

- A. 2.4GHz
- B. 5GHz
- C. 6GHz
- D. 900MHz

**Answer:** B

**Explanation:**

802.11a/b/g/n/ac wireless networks operate in two frequency ranges: 2.4 GHz and 5 GHz. The 5 GHz frequency range supports more channels than the 2.4 GHz frequency range, making it a better choice for high-density wireless networks.

References: CompTIA Network+ Certification Study Guide, Sixth Edition by Glen E. Clarke

**NEW QUESTION 52**

- (Topic 1)

Wireless users are reporting intermittent internet connectivity. Connectivity is restored when the users disconnect and reconnect, utilizing the web authentication process each time. The network administrator can see the devices connected to the APs at all times. Which of the following steps will MOST likely determine the cause of the issue?

- A. Verify the session time-out configuration on the captive portal settings
- B. Check for encryption protocol mismatch on the client's wireless settings
- C. Confirm that a valid passphrase is being used during the web authentication
- D. Investigate for a client's disassociation caused by an evil twin AP

**Answer:** A

**Explanation:**

A captive portal is a web page that requires users to authenticate before they can access the internet. If the session time-out configuration is too short, users may

experience intermittent internet connectivity and have to reconnect using the web authentication process each time. The network administrator can verify the session time-out configuration on the captive portal settings and adjust it if needed. References: CompTIA Network+ Certification Exam Objectives Version 2.0 (Exam Number: N10-006), Domain 1.0 Network Architecture, Objective 1.8 Explain the purposes and use cases for advanced networking devices.

#### NEW QUESTION 56

- (Topic 1)

An IT director is setting up new disaster and HA policies for a company. Limited downtime is critical to operations. To meet corporate requirements, the director set up two different datacenters across the country that will stay current on data and applications. In the event of an outage, the company can immediately switch from one datacenter to another. Which of the following does this BEST describe?

- A. A warm site
- B. Data mirroring
- C. Multipathing
- D. Load balancing
- E. A hot site

**Answer:** E

#### Explanation:

A hot site is a fully redundant site that can take over operations immediately if the primary site goes down. In this scenario, the company has set up two different datacenters across the country that are current on data and applications, and they can immediately switch from one datacenter to another in case of an outage.

References:

? Network+ N10-008 Objectives: 1.5 Compare and contrast disaster recovery concepts and methodologies.

#### NEW QUESTION 61

- (Topic 1)

Which of the following connector types would have the MOST flexibility?

- A. SFP
- B. BNC
- C. LC
- D. RJ45

**Answer:** A

#### Explanation:

SFP (Small Form-factor Pluggable) is a connector type that has the most flexibility. It is a hot-swappable transceiver that can support different speeds, distances, and media types depending on the module inserted. It can be used for both copper and fiber connections and supports various protocols such as Ethernet, Fibre Channel, and SONET. References: <https://www.fs.com/what-is-sfp-transceiver-aid-11.html>

#### NEW QUESTION 65

- (Topic 1)

A network administrator is configuring a load balancer for two systems. Which of the following must the administrator configure to ensure connectivity during a failover?

- A. VIP
- B. NAT
- C. APIPA
- D. IPv6 tunneling
- E. Broadcast IP

**Answer:** A

#### Explanation:

A virtual IP (VIP) address must be configured to ensure connectivity during a failover. A VIP address is a single IP address that is assigned to a group of servers or network devices. When one device fails, traffic is automatically rerouted to the remaining devices, and the VIP address is reassigned to the backup device, allowing clients to continue to access the service without interruption.

References:

? CompTIA Network+ Certification Study Guide, Exam N10-007, Fourth Edition, Chapter 6: Network Servers, p. 300

#### NEW QUESTION 70

- (Topic 1)

A technician wants to deploy a new wireless network that comprises 30 WAPs installed throughout a three-story office building. All the APs will broadcast the same SSID for client access. Which of the following BEST describes this deployment?

- A. Extended service set
- B. Basic service set
- C. Unified service set
- D. Independent basic service set

**Answer:** A

#### Explanation:

An extended service set (ESS) is a wireless network that consists of multiple access points (APs) that share the same SSID and are connected by a wired network. An ESS allows wireless clients to roam seamlessly between different APs without losing connectivity. A basic service set (BSS) is a wireless network that consists of a single AP and its associated clients. An independent basic service set (IBSS) is a wireless network that consists of a group of clients that communicate directly without an AP. A unified service set is not a standard term for a wireless network. References: [https://partners.comptia.org/docs/default-source/resources/comptia-network-n10-008-exam-objectives-\(2-0\)](https://partners.comptia.org/docs/default-source/resources/comptia-network-n10-008-exam-objectives-(2-0)), [https://en.wikipedia.org/wiki/Service\\_set\\_\(802.11\\_network\)](https://en.wikipedia.org/wiki/Service_set_(802.11_network))



### NEW QUESTION 73

- (Topic 2)

A business is using the local cable company to provide Internet access. Which of the following types of cabling will the cable company MOST likely use from the demarcation point back to the central office?

- A. Multimode
- B. Cat 5e
- C. RG-6
- D. Cat 6
- E. 100BASE-T

**Answer:** C

#### Explanation:

RG-6 is a type of coaxial cable that is commonly used by cable companies to provide Internet access from the demarcation point back to the central office. It has a thicker conductor and better shielding than RG-59, which is another type of coaxial cable. Multimode and Cat 5e are types of fiber optic and twisted pair cables respectively, which are not typically used by cable companies. Cat 6 and 100BASE-T are standards for twisted pair cables, not types of cabling.

### NEW QUESTION 77

- (Topic 2)

Which of the following is a system that is installed directly on a server's hardware and abstracts the hardware from any guest machines?

- A. Storage array
- B. Type 1 hypervisor
- C. Virtual machine
- D. Guest QS

**Answer:** B

#### Explanation:

A type 1 hypervisor is a system that is installed directly on a server's hardware and abstracts the hardware from any guest machines. A hypervisor is a software layer that enables virtualization by creating and managing virtual machines (VMs) on a physical host. A type 1 hypervisor, also known as a bare-metal hypervisor or a native hypervisor, runs directly on the host's hardware without requiring an underlying operating system (OS). It provides better performance and security than a type 2 hypervisor, which runs on top of an existing OS and relies on it for hardware access. References:

<https://www.vmware.com/topics/glossary/content/hypervisor>

### NEW QUESTION 80

- (Topic 2)

A network technician is reviewing an upcoming project's requirements to implement IaaS. Which of the following should the technician consider?

- A. Software installation processes
- B. Type of database to be installed
- C. Operating system maintenance
- D. Server hardware requirements

**Answer:** D

#### Explanation:

IaaS stands for Infrastructure as a Service, which is a cloud computing model that provides virtualized computing resources such as servers, storage, and networking over the Internet. When implementing IaaS, the network technician should consider the server hardware requirements, such as CPU, RAM, disk space, and network bandwidth, that are needed to run the applications and services on the cloud. The other options are not relevant to IaaS, as they are either handled by the cloud provider or by the end-user. References: <https://www.comptia.org/blog/what-is-iaas>

### NEW QUESTION 81

- (Topic 2)

Which of the following protocol types describes secure communication on port 443?

- A. ICMP
- B. UDP
- C. TCP
- D. IP

**Answer:** C

#### Explanation:

TCP is the protocol type that describes secure communication on port 443. TCP (Transmission Control Protocol) is a connection-oriented protocol that provides reliable and ordered delivery of data packets over an IP network. TCP uses port numbers to identify different applications or services on a device. Port 443 is the default port for HTTPS (Hypertext Transfer Protocol Secure), which is an extension of HTTP that uses SSL (Secure Sockets Layer) or TLS (Transport Layer Security) encryption to protect data in transit between a web server and a web browser. References: <https://www.cisco.com/c/en/us/support/docs/ip/routing-information-protocol-rip/13788-3.html>

### NEW QUESTION 84

- (Topic 2)

A network technician has multimode fiber optic cable available in an existing IDF. Which of the following Ethernet standards should the technician use to connect the network switch to the existing fiber?

- A. 10GBaseT
- B. 1000BaseT

- C. 1000BaseSX
- D. 1000BaseLX

**Answer:** C

**Explanation:**

1000BaseSX is an Ethernet standard that should be used to connect the network switch to the existing multimode fiber optic cable. 1000BaseSX is a Gigabit Ethernet standard that uses short-wavelength laser (850 nm) over multimode fiber optic cable. It can support distances up to 550 meters depending on the cable type and quality. It is suitable for short-range network segments such as campus or building backbone networks. References: [https://www.cisco.com/c/en/us/products/collateral/interfaces-modules/gigabit-ethernet-gbic-sfp-modules/product\\_data\\_sheet09186a008014cb5e.html](https://www.cisco.com/c/en/us/products/collateral/interfaces-modules/gigabit-ethernet-gbic-sfp-modules/product_data_sheet09186a008014cb5e.html)

**NEW QUESTION 86**

- (Topic 2)

There are two managed legacy switches running that cannot be replaced or upgraded. These switches do not support cryptographic functions, but they are password protected. Which of the following should a network administrator configure to BEST prevent unauthorized access?

- A. Enable a management access list
- B. Disable access to unnecessary services.
- C. Configure a stronger password for access
- D. Disable access to remote management
- E. Use an out-of-band access method.

**Answer:** E

**Explanation:**

Using an out-of-band access method is the best way to prevent unauthorized access to the legacy switches that do not support cryptographic functions. Out-of-band access is a method of accessing a network device through a dedicated channel that is separate from the main network traffic. Out-of-band access can use physical connections such as serial console ports or dial-up modems, or logical connections such as VPNs or firewalls. Out-of-band access provides more security and reliability than in-band access, which uses the same network as the data traffic and may be vulnerable to attacks or failures. References: <https://www.cisco.com/c/en/us/td/docs/ios-xml/ios/fundamentals/configuration/15mt/fundamentals-15-mt-book/cf-out-band-mgmt.html>

**NEW QUESTION 91**

- (Topic 2)

Which of the following would be used to expedite MX record updates to authoritative NSs?

- A. UDP forwarding
- B. DNS caching
- C. Recursive lookup
- D. Time to live

**Answer:** D

**Explanation:**

Time to live (TTL) is a value that indicates how long a DNS record can be cached by authoritative NSs (name servers) or other DNS servers before it expires and needs to be updated. A lower TTL value would expedite MX record updates to authoritative NSs, as they would refresh the record more frequently. UDP forwarding is not a DNS term, but a technique of sending UDP packets from one host to another. DNS caching is the process of storing DNS records locally for faster resolution, which does not expedite MX record updates. Recursive lookup is a type of DNS query where a DNS server queries other DNS servers on behalf of a client until it finds the answer, which does not expedite MX record updates.

**NEW QUESTION 96**

- (Topic 2)

An IT technician suspects a break in one of the uplinks that provides connectivity to the core switch. Which of the following command-line tools should the technician use to determine where the incident is occurring?

- A. nslookup
- B. show config
- C. netstat
- D. show interface
- E. show counters

**Answer:** D

**Explanation:**

show interface is a command-line tool that displays information about the status, configuration, and statistics of an interface on a network device. A technician can use show interface to determine where the incident is occurring in a network by checking the uplink status, speed, duplex mode, errors, collisions, and other parameters of each interface. References: <https://www.comptia.org/blog/what-is-show-interface>

**NEW QUESTION 101**

- (Topic 2)

A company is being acquired by a large corporation. As part of the acquisition process, the company's address should now redirect clients to the corporate organization page. Which of the following DNS records needs to be created?

- A. SOA
- B. NS
- C. CNAME
- D. TXT

**Answer:** C

**Explanation:**

Reference: <https://www.namecheap.com/support/knowledgebase/article.aspx/9604/2237/types-of-domain-redirects-301-302-url-redirects-url-frame-and-cname/#:~:text=CNAME%20record%20is%20actually%20not,often%20mistakenly%20used%20as%20such.&text=In%20other%20words%2C%20CNAME%20record,address%20of%20the%20destination%20hostname> CNAME (Canonical Name) is a type of DNS record that maps an alias name to another name, which can be either another alias or the canonical name of a host or domain. A CNAME record can be used to redirect clients from one domain name to another domain name, such as from the company's address to the corporate organization page. SOA (Start of Authority) is a type of DNS record that specifies authoritative information about a DNS zone, such as the primary name server, contact email address, serial number, refresh interval, etc., which does not redirect clients to another domain name. NS (Name Server) is a type of DNS record that specifies which name server is authoritative for a domain or subdomain, which does not redirect clients to another domain name. TXT (Text) is a type of DNS record that provides arbitrary text information about a domain or subdomain, such as SPF (Sender Policy Framework) records or DKIM (DomainKeys Identified Mail) records, which does not redirect clients to another domain name.

**NEW QUESTION 105**

- (Topic 2)

A user reports a weak signal when walking 20ft (61 m) away from the WAP in one direction, but a strong signal when walking 20ft in the opposite direction The technician has reviewed the configuration and confirmed the channel type is correct There is no jitter or latency on the connection Which of the following would be the MOST likely cause of the issue?

- A. Antenna type
- B. Power levels
- C. Frequency
- D. Encryption type

**Answer:** A

**Explanation:**

The antenna type affects the signal strength and coverage of a WAP. Different types of antennas have different radiation patterns and gain, which determine how far and wide the signal can reach. If the user experiences a weak signal in one direction but a strong signal in the opposite direction, it could mean that the antenna type is not suitable for the desired coverage area. The technician should consider changing the antenna type to one that has a more balanced or directional radiation pattern. References: <https://community.cisco.com/t5/wireless-small-business/wap200-poor-signal-strength/td-p/1565796>

**NEW QUESTION 110**

- (Topic 2)

An organization with one core and five distribution switches is transitioning from a star to a full-mesh topology Which of the following is the number of additional network connections needed?

- A. 5
- B. 7
- C. 10
- D. 15

**Answer:** C

**Explanation:**

10 additional network connections are needed to transition from a star to a full-mesh topology. A star topology is a network topology where each device is connected to a central device, such as a switch or a hub. A full-mesh topology is a network topology where each device is directly connected to every other device. The number of connections needed for a full-mesh topology can be calculated by the formula  $n(n-1)/2$ , where  $n$  is the number of devices. In this case, there are six devices (one core and five distribution switches), so the number of connections needed for a full-mesh topology is  $6(6-1)/2 = 15$ . Since there are already five connections in the star topology (one from each distribution switch to the core switch), the number of additional connections needed is  $15 - 5 = 10$ . References: <https://www.cisco.com/c/en/us/support/docs/ip/routing-information-protocol-rip/13788-3.html>

**NEW QUESTION 113**

- (Topic 2)

A network technician is investigating an issue with handheld devices in a warehouse. Devices have not been connecting to the nearest APs, but they have been connecting to an AP on the far side of the warehouse. Which of the following is the MOST likely cause of this issue?

- A. The nearest APs are configured for 802.11g.
- B. An incorrect channel assignment is on the nearest APs.
- C. The power level is too high for the AP on the far side.
- D. Interference exists around the AP on the far side.

**Answer:** C

**Explanation:**

The power level is a setting that determines how strong the wireless signal is from an access point (AP). If the power level is too high for an AP on the far side of a warehouse, it can cause interference and overlap with other APs on the same channel or frequency. This can result in handheld devices not connecting to the nearest APs, but connecting to the AP on the far side instead. A technician should adjust the power level of the AP on the far side to reduce interference and improve connectivity. References: <https://www.comptia.org/blog/what-is-power-level>

**NEW QUESTION 118**

- (Topic 2)

A company wants to implement a large number of WAPs throughout its building and allow users to be able to move around the building without dropping their connections Which of the following pieces of equipment would be able to handle this requirement?

- A. A VPN concentrator
- B. A load balancer
- C. A wireless controller
- D. A RADIUS server

**Answer:** C

**Explanation:**

A wireless controller would be able to handle the requirement of implementing a large number of WAPs throughout the building and allowing users to move around without dropping their connections. A wireless controller is a device that centrally manages and configures multiple wireless access points (WAPs) on a network. It can provide features such as load balancing, roaming, security, QoS, and monitoring for the wireless network. A wireless controller can also support wireless mesh networks, where some WAPs act as relays for other WAPs to extend the wireless coverage. References:  
<https://www.cisco.com/c/en/us/products/wireless/wireless-lan-controller/index.html>

**NEW QUESTION 122**

- (Topic 2)

A lab environment hosts Internet-facing web servers and other experimental machines, which technicians use for various tasks. A technician installs software on one of the web servers to allow communication to the company's file server, but it is unable to connect to it. Other machines in the building are able to retrieve files from the file server. Which of the following is the MOST likely reason the web server cannot retrieve the files, and what should be done to resolve the problem?

- A. The lab environment's IDS is blocking the network traffic. The technician can whitelist the new application in the IDS.
- B. The lab environment is located in the DMZ, and traffic to the LAN zone is denied by default.
- C. The technician can move the computer to another zone or request an exception from the administrator.
- D. The lab environment has lost connectivity to the company router, and the switch needs to be rebooted.
- E. The technician can get the key to the wiring closet and manually restart the switch.
- F. The lab environment is currently set up with hubs instead of switches, and the requests are getting bounced back. The technician can submit a request for upgraded equipment to management.

**Answer:** B

**Explanation:**

The lab environment is located in the DMZ, and traffic to the LAN zone is denied by default. This is the most likely reason why the web server cannot retrieve files from the file server, and the technician can either move the computer to another zone or request an exception from the administrator to resolve the problem. A DMZ (Demilitarized Zone) is a network segment that separates the internal network (LAN) from the external network (Internet). It usually hosts public-facing servers such as web servers, email servers, or FTP servers that need to be accessed by both internal and external users. A firewall is used to control the traffic between the DMZ and the LAN zones, and usually denies traffic from the DMZ to the LAN by default for security reasons. Therefore, if a web server in the DMZ needs to communicate with a file server in the LAN, it would need a special rule or permission from the firewall administrator. References:  
<https://www.cisco.com/c/en/us/support/docs/ip/access-lists/13608-21.html>

**NEW QUESTION 125**

- (Topic 2)

A network administrator decided to use SLAAC in an extensive IPv6 deployment to alleviate IP address management. The devices were properly connected into the LAN, but autoconfiguration of the IP address did not occur as expected. Which of the following should the network administrator verify?

- A. The network gateway is configured to send router advertisements.
- B. A DHCP server is present on the same broadcast domain as the clients.
- C. The devices support dual stack on the network layer.
- D. The local gateway supports anycast routing.

**Answer:** A

**Explanation:**

SLAAC (Stateless Address Autoconfiguration) is a method for IPv6 devices to automatically configure their IP addresses based on the network prefix advertised by a router. The router sends periodic router advertisements (RAs) that contain the network prefix and other parameters for the devices to use. If the network gateway is not configured to send RAs, then SLAAC will not work. A DHCP server is not needed for SLAAC, as the devices generate their own addresses without relying on a server. Dual stack and anycast routing are not related to SLAAC.

**NEW QUESTION 128**

- (Topic 2)

A network technician is investigating an IP phone that does not register in the VoIP system. Although it received an IP address, it did not receive the necessary DHCP options. The information that is needed for the registration is distributed by the DHCP scope. All other IP phones are working properly. Which of the following does the technician need to verify?

- A. VLAN mismatch
- B. Transceiver mismatch
- C. Latency
- D. DHCP exhaustion

**Answer:** A

**Explanation:**

A VLAN mismatch is the most likely reason why an IP phone does not receive the necessary DHCP options for registration. A VLAN mismatch occurs when a device is connected to a switch port that belongs to a different VLAN than the device's intended VLAN. This can cause communication problems or prevent access to network resources. For example, if an IP phone is connected to a switch port that belongs to the data VLAN instead of the voice VLAN, it may not receive the DHCP options that contain information such as the TFTP server address, the NTP server address, or the default gateway address for the voice VLAN. These DHCP options are essential for the IP phone to register with the VoIP system and function properly. References:  
<https://www.cisco.com/c/en/us/support/docs/voice-unified-communications/unified-communications-manager-callmanager/13979-dhcp-option-150-00.html>

**NEW QUESTION 130**

- (Topic 2)

A network technician is observing the behavior of an unmanaged switch when a new device is added to the network and transmits data. Which of the following BEST describes how the switch processes this information?

- A. The data is flooded out of every port.



- B. including the one on which it came in.
- C. The data is flooded out of every port but only in the VLAN where it is located.
- D. The data is flooded out of every port, except the one on which it came in
- E. The data is flooded out of every port, excluding the VLAN where it is located

**Answer:** C

**Explanation:**

The switch processes the data by flooding it out of every port, except the one on which it came in. Flooding is a process where a switch sends a data frame to all ports except the source port when it does not have an entry for the destination MAC address in its MAC address table. Flooding allows the switch to learn the MAC addresses of the devices connected to its ports and update its MAC address table accordingly. Flooding also ensures that the data frame reaches its intended destination, even if the switch does not know its location. References: <https://www.cisco.com/c/en/us/support/docs/lan-switching/spanning-tree-protocol/10556-16.html>

**NEW QUESTION 134**

- (Topic 2)

An organization wants to implement a method of centrally managing logins to network services. Which of the following protocols should the organization use to allow for authentication, authorization and auditing?

- A. MS-CHAP
- B. RADIUS
- C. LDAPS
- D. RSTP

**Answer:** B

**Explanation:**

RADIUS (Remote Authentication Dial-In User Service) is a protocol that should be used by the organization to allow for authentication, authorization, and auditing of network services. RADIUS is an AAA (Authentication, Authorization, and Accounting) protocol that manages network access by verifying user credentials, granting access permissions, and logging user activities. RADIUS uses a client-server model where a RADIUS client (such as a router, switch, or VPN server) sends user information to a RADIUS server (such as an authentication server) for verification and authorization. The RADIUS server can also send accounting information to another server for billing or reporting purposes. References: <https://www.cisco.com/c/en/us/support/docs/security-vpn/remote-authentication-dial-user-service-radius/13838-10.html>

**NEW QUESTION 139**

- (Topic 2)

Which of the following policies is MOST commonly used for guest captive portals?

- A. AUP
- B. DLP
- C. BYOD
- D. NDA

**Answer:** A

**Explanation:**

AUP stands for Acceptable Use Policy, which is a policy that defines the rules and guidelines for using a network or service. A guest captive portal is a web page that requires users to agree to the AUP before accessing the Internet or other network resources. This is a common way to enforce security and legal compliance for guest users. References: [https://www.arubanetworks.com/techdocs/Instant\\_87\\_WebHelp/Content/instant-ug/captive-portal/captive-portal.htm](https://www.arubanetworks.com/techdocs/Instant_87_WebHelp/Content/instant-ug/captive-portal/captive-portal.htm)

**NEW QUESTION 144**

- (Topic 2)

A network technician is investigating an issue with a desktop that is not connecting to the network. The desktop was connecting successfully the previous day, and no changes were made to the environment. The technician locates the switchport where the device is connected and observes the LED status light on the switchport is not lit even though the desktop is turned on Other devices that are plugged into the switch are connecting to the network successfully Which of the following is MOST likely the cause of the desktop not connecting?

- A. Transceiver mismatch
- B. VLAN mismatch
- C. Port security
- D. Damaged cable
- E. Duplex mismatch

**Answer:** D

**Explanation:**

A damaged cable is most likely the cause of the desktop not connecting to the network. A damaged cable can cause physical layer issues such as loss of signal, attenuation, interference, or crosstalk. These issues can prevent the desktop from establishing a link with the switch and result in the LED status light on the switchport being off. Other possible causes of physical layer issues are faulty connectors, ports, or transceivers. References: <https://www.cisco.com/c/en/us/support/docs/lan-switching/ethernet/14119-37.html>

**NEW QUESTION 145**

- (Topic 2)

Two remote offices need to be connected securely over an untrustworthy MAN. Each office needs to access network shares at the other site. Which of the following will BEST provide this functionality?

- A. Client-to-site VPN
- B. Third-party VPN service
- C. Site-to-site VPN



D. Split-tunnel VPN

**Answer:** C

**Explanation:**

A site-to-site VPN is a type of VPN that connects two or more remote offices securely over an untrustworthy network, such as the Internet. A site-to-site VPN allows each office to access network shares and resources at the other site, as if they were on the same local network. A site-to-site VPN encrypts and tunnels the traffic between the offices, ensuring privacy and integrity of the data. References: <https://www.comptia.org/blog/what-is-a-site-to-site-vpn>

**NEW QUESTION 147**

- (Topic 2)

A network administrator is talking to different vendors about acquiring technology to support a new project for a large company. Which of the following documents will MOST likely need to be signed before information about the project is shared?

- A. BYOD policy
- B. NDA
- C. SLA
- D. MOU

**Answer:** B

**Explanation:**

NDA stands for Non-Disclosure Agreement, which is a legal contract between two or more parties that outlines confidential material, knowledge, or information that the parties wish to share with one another for certain purposes, but wish to restrict access to by others. A network administrator may need to sign an NDA before sharing information about a new project with different vendors, as the project may involve sensitive or proprietary data that the company wants to protect from competitors or unauthorized use. References: <https://www.adobe.com/sign/esignature-resources/sign-nda.html>

**NEW QUESTION 152**

- (Topic 2)

A network administrator wants to improve the security of the management console on the company's switches and ensure configuration changes made can be correlated to the administrator who conformed them Which of the following should the network administrator implement?

- A. Port security
- B. Local authentication
- C. TACACS+
- D. Access control list

**Answer:** C

**Explanation:**

TACACS+ is a protocol that provides centralized authentication, authorization, and accounting (AAA) for network devices and users. TACACS+ can help improve the security of the management console on the company's switches by verifying the identity and credentials of the administrators, enforcing granular access policies and permissions, and logging the configuration changes made by each administrator. This way, the network administrator can ensure only authorized and authenticated users can access and modify the switch settings, and also track and correlate the changes made by each user. References: <https://www.comptia.org/blog/what-is-tacacs>

**NEW QUESTION 153**

- (Topic 2)

A technician is troubleshooting a previously encountered issue. Which of the following should the technician reference to find what solution was implemented to resolve the issue?

- A. Standard operating procedures
- B. Configuration baseline documents
- C. Work instructions
- D. Change management documentation

**Answer:** D

**Explanation:**

Change management documentation is a record of the changes that have been made to a system or process, including the reason, date, time, and impact of each change. A technician can reference this documentation to find what solution was implemented to resolve a previously encountered issue, as well as any potential side effects or dependencies of the change. References: <https://www.comptia.org/blog/what-is-change-management>

**NEW QUESTION 154**

- (Topic 2)

A technician wants to install a WAP in the center of a room that provides service in a radius surrounding a radio. Which of the following antenna types should the AP utilize?

- A. Omni
- B. Directional
- C. Yagi
- D. Parabolic

**Answer:** A

**Explanation:**

An omni antenna should be used by the AP to provide service in a radius surrounding a radio. An omni antenna is a type of antenna that has a 360-degree horizontal radiation pattern. It can provide wireless coverage in all directions from the antenna with varying degrees of vertical coverage. It is suitable for indoor

environments where users are located around the AP1. References: <https://www.cisco.com/c/en/us/support/docs/wireless-mobility/wireless-lan-wlan/82068-omni-vs-direct.html> 1

#### NEW QUESTION 159

- (Topic 2)

A network administrator is reviewing interface errors on a switch. Which of the following indicates that a switchport is receiving packets in excess of the configured MTU?

- A. CRC errors
- B. Giants
- C. Runts
- D. Flooding

**Answer:** B

#### Explanation:

Giants are packets that exceed the configured MTU (Maximum Transmission Unit) of a switchport or interface, which causes them to be dropped or fragmented by the switch or router. The MTU is the maximum size of a packet that can be transmitted without fragmentation on a given medium or protocol. Giants can indicate misconfiguration or mismatch of MTU values between devices or interfaces on a network, which can cause performance issues or errors. CRC errors are errors that occur when the cyclic redundancy check (CRC) value of a packet does not match the calculated CRC value at the destination, which indicates corruption or alteration of data during transmission due to noise, interference, faulty cabling, etc., but not necessarily exceeding MTU values. Runts are packets that are smaller than the minimum size allowed by the medium or protocol, which causes them to be dropped or ignored by the switch or router. Flooding is a technique where a switch sends packets to all ports except the source port when it does not have an entry for the destination MAC address in its MAC address table, which can cause congestion or broadcast storms on a network.

#### NEW QUESTION 161

- (Topic 2)

Which of the following uses the destination IP address to forward packets?

- A. A bridge
- B. A Layer 2 switch
- C. A router
- D. A repeater

**Answer:** C

#### Explanation:

A router is a device that uses the destination IP address to forward packets between different networks. A bridge and a Layer 2 switch operate at the data link layer and use MAC addresses to forward frames within the same network. A repeater is a device that amplifies or regenerates signals at the physical layer.

#### NEW QUESTION 163

- (Topic 3)

A security administrator is trying to prevent incorrect IP addresses from being assigned to clients on the network. Which of the following would MOST likely prevent this and allow the network to continue to operate?

- A. Configuring DHCP snooping on the switch
- B. Preventing broadcast messages leaving the client network
- C. Blocking ports 67/68 on the client network
- D. Enabling port security on access ports

**Answer:** A

#### Explanation:

To prevent incorrect IP addresses from being assigned to clients on the network and allow the network to continue to operate, the security administrator should consider configuring DHCP (Dynamic Host Configuration Protocol) snooping on the switch. DHCP snooping is a security feature that is used to prevent unauthorized DHCP servers from operating on a network. It works by allowing the switch to monitor and validate DHCP traffic on the network, ensuring that only legitimate DHCP messages are forwarded to clients. This can help to prevent incorrect IP addresses from being assigned to clients, as it ensures that only authorized DHCP servers are able to provide IP addresses to clients on the network.

#### NEW QUESTION 166

- (Topic 3)

A technician notices that equipment is being moved around and misplaced in the server room, even though the room has locked doors and cabinets. Which of the following would be the BEST solution to identify who is responsible?

- A. Install motion detection
- B. Install cameras.
- C. Install tamper detection.
- D. Hire a security guard.

**Answer:** B

#### Explanation:

Installing cameras in the server room is the best solution to identify who is responsible for the equipment being moved and misplaced. Cameras provide a way to monitor the server room in real time and can be used to identify suspicious activity. Additionally, they provide a way to review past activity and allow you to review footage to determine who may be responsible for the misplacement of equipment.

#### NEW QUESTION 171

- (Topic 3)

A network technician is configuring a wireless access point and wants to only allow company-owned devices to associate with the network. The access point uses PSKs, and a network authentication system does not exist on the network. Which of the following should the technician implement?

- A. Captive portal
- B. Guest network isolation
- C. MAC filtering
- D. Geofencing

**Answer:** C

**Explanation:**

MAC filtering is a method of allowing only company-owned devices to associate with the network by using their MAC addresses as identifiers. A MAC address is a unique identifier assigned to each network interface card (NIC) by the manufacturer. MAC filtering can be configured on the wireless access point to allow or deny access based on the MAC address of the device. This way, only devices with known MAC addresses can connect to the network. References: <https://www.comptia.org/training/books/network-n10-008-study-guide> (page 323)

**NEW QUESTION 172**

- (Topic 3)

A technician is troubleshooting airport about network connectivity issues on a workstation. Upon investigation, the technician notes the workstation is showing an APIPA address on the network interface. The technician verifies that the VLAN assignment is correct and that the network interface has connectivity. Which of the following is most likely the issue the workstation is experiencing?

- A. DHCP exhaustion
- B. A rogue DHCP server
- C. A DNS server outage
- D. An incorrect subnet mask

**Answer:** A

**Explanation:**

DHCP exhaustion is a situation where the DHCP server runs out of available IP addresses to assign to clients. This can happen due to misconfiguration, malicious attacks, or high demand. When a client requests an IP address from the DHCP server and does not receive a response, it may resort to using an APIPA address, which is a self-assigned address in the range of 169.254.0.1 to 169.254.255.254. APIPA addresses are only valid for local communication and cannot access the internet or other networks. Therefore, a workstation showing an APIPA address indicates that it failed to obtain a valid IP address from the DHCP server, most likely due to DHCP exhaustion

**NEW QUESTION 174**

- (Topic 3)

A network resource was accessed by an outsider as a result of a successful phishing campaign. Which of the following strategies should be employed to mitigate the effects of phishing?

- A. Multifactor authentication
- B. Single sign-on
- C. RADIUS
- D. VPN

**Answer:** A

**Explanation:**

Multifactor authentication is a security measure that requires users to provide multiple pieces of evidence before they can access a network resource. This could include requiring users to enter a username, password, and a code sent to the user's mobile phone before they are allowed access. This ensures that the user is who they say they are, reducing the risk of malicious actors gaining access to network resources as a result of a successful phishing campaign.

**NEW QUESTION 176**

- (Topic 3)

A customer needs to distribute Ethernet to multiple computers in an office. The customer would like to use non-proprietary standards. Which of the following blocks does the technician need to install?

- A. 110
- B. 66
- C. Bix
- D. Krone

**Answer:** A

**Explanation:**

A 110 block is a type of punch-down block that is used to distribute Ethernet to multiple computers in an office. A punch-down block is a device that connects one group of wires to another group of wires by using a special tool that pushes the wires into slots on the block. A 110 block is a non-proprietary standard that supports up to Category 6 cabling and can be used for voice or data applications. References: <https://www.comptia.org/training/books/network-n10-008-study-guide> (page 64)

**NEW QUESTION 178**

- (Topic 3)

A network administrator is concerned about a rainbow table being used to help access network resources. Which of the following must be addressed to reduce the likelihood of a rainbow table being effective?

- A. Password policy
- B. Remote access policy

- C. Acceptable use policy
- D. Data loss prevention policy

**Answer:** A

**Explanation:**

A password policy must be addressed to reduce the likelihood of a rainbow table being effective. A rainbow table is a precomputed table of hashed passwords and their corresponding plaintext values. A rainbow table can be used to crack hashed passwords by performing a reverse lookup of the hash value in the table. A password policy is a set of rules and guidelines that define how passwords should be created, used, and managed in an organization. A password policy can help prevent rainbow table attacks by enforcing strong password requirements, such as length, complexity, expiration, and history. A strong password is one that is hard to guess or crack by using common methods such as brute force or dictionary attacks. References: [CompTIA Network+ Certification Exam Objectives], What Is Rainbow Table Attack? | Kaspersky, Password Policy Best Practices | Thycotic

**NEW QUESTION 180**

- (Topic 3)

Which of the following is the most secure connection used to inspect and provide controlled internet access when remote employees are connected to the corporate network?

- A. Site-to-site VPN
- B. Full-tunnel VPN
- C. Split-tunnel VPN
- D. SSH

**Answer:** B

**Explanation:**

A full-tunnel VPN is a type of virtual private network (VPN) that encrypts and routes all the traffic from the remote device to the corporate network, regardless of the destination or protocol. This provides a secure connection for the remote employees to access the corporate resources, as well as inspect and control the internet access through the corporate firewall and proxy servers. A full-tunnel VPN also prevents any leakage of sensitive data or exposure to malicious attacks from the public internet. A full-tunnel VPN is more secure than a split-tunnel VPN, which only encrypts and routes the traffic destined for the corporate network, while allowing the traffic for other destinations to bypass the VPN and use the local internet connection. A site-to-site VPN is a type of VPN that connects two or more networks, such as branch offices or data centers, over the internet. It is not suitable for connecting individual remote employees to the corporate network. SSH stands for Secure Shell, and it is a protocol that allows secure remote login and command execution over an encrypted channel. It is not a type of VPN, and it does not provide controlled internet access. References: CompTIA Network+ N10-008 Cert Guide, Chapter 5, Section 5.3

**NEW QUESTION 181**

- (Topic 3)

A network technician has determined the cause of a network disruption. Which of the following is the NEXT step for the technician to perform?

- A. Validate the findings in a top-to-bottom approach
- B. Duplicate the issue, if possible
- C. Establish a plan of action to resolve the issue
- D. Document the findings and actions

**Answer:** C

**NEW QUESTION 182**

- (Topic 3)

Which of the following best describe the functions of Layer 2 of the OSI model? (Select two).

- A. Local addressing
- B. Error preventing
- C. Logical addressing
- D. Error detecting
- E. Port addressing
- F. Error correcting

**Answer:** AD

**Explanation:**

Layer 2 of the OSI model, also known as the data link layer, is responsible for physical addressing and error detecting. Physical addressing refers to the use of MAC addresses to identify and locate devices on a network segment. Error detecting refers to the use of techniques such as checksums and CRCs to identify and correct errors in the data frames.

References:

? OSI Model | Computer Networking | CompTIA1

**NEW QUESTION 187**

- (Topic 3)

A network administrator needs to monitor traffic on a specific port on a switch. Which of the following should the administrator configure to accomplish the task?

- A. Port security
- B. Port tagging
- C. Port mirroring
- D. Media access control

**Answer:** C

**Explanation:**



Port mirroring is a technique that allows a network administrator to monitor the traffic on a specific port on a switch by sending a copy of the packets seen on that port to another port where a monitoring device is connected<sup>1</sup>. Port mirroring can be used to analyze and debug data, diagnose errors, or perform security audits on the network without affecting the normal operation of the switch

#### NEW QUESTION 190

- (Topic 3)

A network technician needs to ensure the company's external mail server can pass reverse lookup checks. Which of the following records would the technician MOST likely configure? (Choose Correct option and give explanation directly from CompTIA Network+ Study guide or documents)

- A. PTR
- B. AAAA
- C. SPF
- D. CNAME

**Answer:** A

#### Explanation:

A PTR (Pointer) record is used to map an IP address to a domain name, which is necessary for reverse lookup checks. Reverse lookup checks are performed by external mail servers to verify the identity of the sender of the email. By configuring a PTR record, the network technician can ensure that the company's external mail server can pass these checks. According to the CompTIA Network+ Study Guide, "A PTR record is used to map an IP address to a domain name, and it is often used for email authentication."

#### NEW QUESTION 192

- (Topic 3)

A VOIP phone is plugged in to a port but cannot receive calls. Which Of the following needs to be done on the port to address the issue?

- A. Trunk all VLANs on the port.
- B. Configure the native VLAN.
- C. Tag the traffic to voice VLAN.
- D. Disable VLANs.

**Answer:** C

#### Explanation:

To enable a VOIP phone to receive calls on a port, the traffic needs to be tagged to the voice VLAN that is configured on the switch. This allows the phone to communicate with the voice network and the PBX server. Tagging the traffic also separates the voice traffic from the data traffic that may be coming from a computer connected to the phone. The port should be configured to tag the traffic for the voice VLAN and untag the traffic for the data VLAN<sup>1</sup>. Trunking all VLANs on the port is unnecessary and may cause security issues. Configuring the native VLAN is not relevant for this issue. Disabling VLANs would prevent the phone from working at all.

References:

Optical Fiber Connectors – CompTIA Network+ N10-007 – 2.13

? VoIP and computer on separate VLANs through one cable<sup>1</sup>

#### NEW QUESTION 193

- (Topic 3)

A network engineer designed and implemented a new office space with the following characteristics:

Building construction type:	Brick
Layout:	10,764sq ft (1,000sq m) commercial office space
Users:	50
Servers:	2
Laptops:	50

One month after the office space was implemented, users began reporting dropped signals when entering another room and overall poor connections to the 5GHz network. 'which of the following should the engineer do to best resolve the issue?

- A. use non-overlapping channels
- B. Reconfigure the network to support 2.4GHz\_
- C. Upgrade to WPA3.
- D. Change to directional antennas-

**Answer:** D

#### Explanation:

The best solution to resolve the issue of dropped signals and poor connections to the 5GHz network is to change to directional antennas. Directional antennas are antennas that focus the wireless signal in a specific direction, increasing the range and strength of the signal. Directional antennas are suitable for environments where there are obstacles or interference that can weaken or block the wireless signal. In the image, the office space has several walls and doors that can reduce the signal quality of the 5GHz network, which has a shorter wavelength and higher frequency than the 2.4GHz network. By using directional antennas, the network engineer can aim the wireless signal towards the desired areas and avoid the signal loss caused by the walls and doors. References: CompTIA Network+ N10-008 Certification Study Guide, page 76; The Official CompTIA Network+ Student Guide (Exam N10-008), page 2-19.

#### NEW QUESTION 195

- (Topic 3)

An IT administrator is creating an alias to the primary customer's domain. Which of the following DNS record types does this represent?



- A. CNAME
- B. MX
- C. A
- D. PTR

**Answer:** A

**Explanation:**

A CNAME record is a type of DNS record that maps an alias name to a canonical name, or the primary domain name. A CNAME record is used to create subdomains or alternative names for the same website, without having to specify the IP address for each alias. For example, a CNAME record can map [www.example.com](http://www.example.com) to [example.com](http://example.com), or [mail.example.com](http://mail.example.com) to [example.com](http://example.com). References: CompTIA Network+ N10-008 Cert Guide, Chapter 2, Section 2.4

**NEW QUESTION 196**

- (Topic 3)

A technician installed an 8-port switch in a user's office. The user needs to add a second computer in the office, so the technician connects both PCs to the switch and connects the switch to the wall jack. However, the new PC cannot connect to network resources. The technician then observes the following:

- The new computer does not get an IP address on the client's VLAN.
- Both computers have a link light on their NICs.
- The new PC appears to be operating normally except for the network issue.
- The existing computer operates normally.

Which of the following should the technician do NEXT to address the situation?

- A. Contact the network team to resolve the port security issue.
- B. Contact the server team to have a record created in DNS for the new PC.
- C. Contact the security team to review the logs on the company's SIEM.
- D. Contact the application team to check NetFlow data from the connected switch.

**Answer:** A

**NEW QUESTION 200**

- (Topic 3)

A company is opening a new building on the other side of its campus. The distance from the closest building to the new building is 1,804ft (550m). The company needs to connect the networking equipment in the new building to the Other buildings on the campus without using a repeater. Which Of the following transceivers should the company use?

- A. 10GBASE-SW
- B. 10GBASE-LR
- C. 10GBASE-LX4 over multimode fiber
- D. 10GBASE-SR

**Answer:** B

**Explanation:**

10GBASE-LR is a standard for 10 Gbps Ethernet over single-mode fiber optic cable. It can support a maximum distance of 6.2 miles (10 km), which is much longer than the distance between the buildings. 10GBASE-SW, 10GBASE-LX4, and 10GBASE-SR are all standards for 10 Gbps Ethernet over multimode fiber optic cable, which have shorter maximum distances ranging from 984ft (300m) to 1,312ft (400m).

References: CompTIA Network+ Certification Exam Objectives Version 7.0 (N10-007), Objective 1.5: Compare and contrast network cabling types, standards and speeds.

**NEW QUESTION 203**

- (Topic 3)

A company has multiple offices around the world. The computer rooms in some office locations are too warm Dedicated sensors are in each room, but the process of checking each sensor takes a long time. Which of the following options can the company put In place to automate temperature readings with internal resources?

- A. Implement NetFlow.
- B. Hire a programmer to write a script to perform the checks
- C. Utilize ping to measure the response.
- D. Use SNMP with an existing collector server

**Answer:** D

**Explanation:**

SNMP (Simple Network Management Protocol) is a protocol that allows network devices to communicate with a management server. By using SNMP, the company can set up an SNMP agent on each sensor, which will report its temperature readings to an existing collector server. This will enable the company to monitor the temperatures of all their sensors in real-time without the need for manual checks. Additionally, SNMP's scalability means that even if the company adds more rooms or sensors, the existing system can be easily expanded to accommodate them.

**NEW QUESTION 204**

- (Topic 3)

A network administrator is adding a new switch to the network. Which of the following network hardening techniques would be BEST to use once the switch is in production?

- A. Disable unneeded ports
- B. Disable SSH service
- C. Disable MAC filtering
- D. Disable port security

**Answer:** A

#### NEW QUESTION 206

- (Topic 3)

A network technician wants to deploy a new wireless access point to reduce user latency. Currently, the organization has the following deployed: Which of the following channels should the new device broadcast on?

- A. Channel 3
- B. Channel 9
- C. Channel 10
- D. Channel 11

**Answer:** D

#### Explanation:

The best channel for a new wireless access point is one that does not overlap with the existing channels used by other devices. Overlapping channels can cause interference and degrade the performance of the wireless network. According to the web search results, the 2.4 GHz band has 11 channels in the U.S., but only channels 1, 6, and 11 are non-overlapping. Since the existing devices are using channels 1 and 6, the new device should use channel 11 to avoid adjacent-channel interference<sup>12</sup>

References<sup>1</sup>: Why Channels 1, 6 and 11? | MetaGeek <sup>2</sup>: How to Choose the Best Wi-Fi Channels for Your Network - Lifewire

#### NEW QUESTION 209

- (Topic 3)

Users are reporting poor wireless performance in some areas of an industrial plant The wireless controller is measuring a low EIRP value compared to the recommendations noted on the most recent site survey. Which of the following should be verified or replaced for the EIRP value to meet the site survey's specifications? (Select TWO).

- A. AP transmit power
- B. Channel utilization
- C. Signal loss
- D. Update ARP tables
- E. Antenna gain
- F. AP association time

**Answer:** AE

#### Explanation:

? AP transmit power: You should check if your APs have sufficient power output and adjust them if needed. You should also make sure they are not exceeding regulatory limits for your region.

? Antenna gain: You should check if your antennas have adequate gain for your coverage area and replace them if needed. You should also make sure they are aligned properly and not obstructed by any objects.

In the scenario described, the wireless controller is measuring a low EIRP value compared to the recommendations noted in the most recent site survey. EIRP is the combination of the power transmitted by the access point and the antenna gain. Therefore, to increase the EIRP value to meet the site survey's specifications, the administrator should verify or replace the AP transmit power (option A) and the antenna gain (option E). This can be achieved by adjusting the transmit power settings on the AP or by replacing the AP's antenna with one that has a higher gain

#### NEW QUESTION 213

- (Topic 3)

A company is considering shifting its business to the cloud. The management team is concerned at the availability of the third-party cloud service. Which of the following should the management team consult to determine the promised availability of the cloud provider?

- A. Memorandum of understanding
- B. Business continuity plan
- C. Disaster recovery plan
- D. Service-level agreement

**Answer:** D

#### Explanation:

A Service-level agreement (SLA) is a document that outlines the responsibilities of a cloud service provider and the customer. It typically includes the agreed-upon availability of the cloud service provider, the expected uptime for the service, and the cost of any downtime or other service interruptions. Consulting the SLA is the best way for the management team to determine the promised availability of the cloud provider. Reference: CompTIA Cloud+ Study Guide, 6th Edition, page 28.

#### NEW QUESTION 218

- (Topic 3)

Which of the following architectures would allow the network-forwarding elements to adapt to new business requirements with the least amount of operating effort?

- A. Software-defined network
- B. Spine and leaf
- C. Three-tier
- D. Backbone

**Answer:** A

#### Explanation:

Software-defined network (SDN) is a network architecture that allows the network-forwarding elements to be controlled by a centralized software application. This enables the network to adapt to new business requirements with the least amount of operating effort, as the network administrator can configure and manage the network from a single console, without having to manually configure each device individually. SDN also provides more flexibility, agility, and scalability for the network, as it can dynamically adjust the network resources and policies based on the application needs and traffic conditions.

References:

? CompTIA Network+ Certification Exam Objectives, page 5, section 1.3: "Explain the concepts and characteristics of routing and switching."

? Software-Defined Networking – CompTIA Network+ N10-007 – 1.3, video lecture by Professor Messer.

#### NEW QUESTION 221

- (Topic 3)

Which of the following BEST describes a north-south traffic flow?

- A. A public internet user accessing a published web server
- B. A database server communicating with another clustered database server
- C. A Layer 3 switch advertising routes to a router
- D. A management application connecting to managed devices

**Answer:** A

#### Explanation:

A north-south traffic flow is a term used to describe the communication between a user or device outside the network and a server or service inside the network. For example, a public internet user accessing a published web server is a north-south traffic flow. This type of traffic flow typically crosses the network perimeter and requires security measures such as firewalls and VPNs. References: CompTIA Network+ N10-008 Certification Study Guide, page 16; The Official CompTIA Network+ Student Guide (Exam N10-008), page 1- 9.

North-south traffic flow refers to the flow of traffic between the internal network of an organization and the external world. This type of traffic typically flows from the internet to the organization's internal network, and back again.

Examples of north-south traffic flow include:

- ? A public internet user accessing a published web server
- ? A remote employee connecting to a VPN
- ? An email client sending email to an external server
- ? A customer connecting to an e-commerce website

References:

? CompTIA Network+ N10-008 Exam Objectives, Version 5.0, August 2022, page 12

? CompTIA Network+ Certification Study Guide, Seventh Edition, Todd Lammle, Sybex, 2022, page 17

#### NEW QUESTION 225

- (Topic 3)

Users are reporting performance issues when attempting to access the main fileshare server. Which of the following steps should a network administrator perform next based on the network troubleshooting methodology?

- A. Implement a fix to resolve the connectivity issues.
- B. Determine if anything has changed.
- C. Establish a theory of probable cause.
- D. Document all findings, actions, and lessons learned.

**Answer:** B

#### Explanation:

According to the network troubleshooting methodology, the first step is to identify the problem and gather information about the current state of the network using the network troubleshooting tools that are available<sup>1</sup>. The next step is to determine if anything has changed in the network configuration, environment, or usage that could have caused or contributed to the performance issues<sup>1</sup>. This step helps to narrow down the possible causes and eliminate irrelevant factors. For example, the network administrator could check if there were any recent updates, patches, or modifications to the fileshare server or the network devices that connect to it. They could also check if there was an increase in network traffic or demand for the fileshare server resources<sup>2</sup>.

The other options are not correct because they are not the next steps in the network troubleshooting methodology. Implementing a fix to resolve the connectivity issues (A) is premature without determining the root cause of the problem. Establishing a theory of probable cause © is a later step that requires testing and verification. Documenting all findings, actions, and lessons learned (D) is the final step that should be done after resolving the problem and restoring normal network operations<sup>1</sup>.

#### NEW QUESTION 229

- (Topic 3)

A network administrator is reviewing the network device logs on a syslog server. The messages are normal but the stamps on the messages are incorrect. Which of the following actions should the administrator take to ensure the log message time stamps are correct?

- A. Change the NTP settings on the network device
- B. Change the time on the syslog server
- C. Update the network device firmware
- D. Adjust the timeout settings on the syslog server
- E. Adjust the SSH settings on the network device.

**Answer:** A

#### NEW QUESTION 233

- (Topic 3)

Which of the following focuses on application delivery?

- A. DaaS
- B. IaaS
- C. SaaS
- D. PaaS

**Answer:** C

#### Explanation:

SaaS is the cloud computing model that focuses on application delivery. SaaS stands for Software as a Service, which is a cloud computing model that provides software applications over the internet. SaaS allows customers to access and use software applications without installing or maintaining them on their own devices or servers. SaaS offers advantages such as scalability, accessibility, compatibility, and cost-effectiveness.

Customers can use SaaS applications on demand and pay only for what they use. References: [CompTIA Network+ Certification Exam Objectives], What Is

Software as a Service (SaaS)? | IBM

#### NEW QUESTION 236

- (Topic 3)

Which of the following devices is used to configure and centrally manage access points installed at different locations?

- A. Wireless controller
- B. Load balancer
- C. Proxy server
- D. VPN concentrator

**Answer:** A

#### Explanation:

Access points (APs) can be configured and centrally managed using a wireless LAN controller (WLC). A WLC is a device that connects to multiple APs and provides centralized management and control of those APs. The WLC can be used to configure settings such as wireless network parameters, security settings, and quality of service (QoS) policies. Additionally, the WLC can be used to monitor the status of connected APs, track client connections, and gather statistics on network usage. Some vendors such as Cisco, Aruba, Ruckus, etc. provide wireless LAN controllers as part of their wireless networking solutions.

#### NEW QUESTION 238

- (Topic 3)

An engineer recently decided to upgrade the firmware on a router. During the upgrade, the help desk received calls about a network outage, and a critical ticket was opened. The network manager would like to create a policy to prevent this from happening in the future. Which of the following documents should the manager create?

- A. Change management
- B. incident response
- C. Standard operating procedure
- D. System life cycle

**Answer:** A

#### NEW QUESTION 241

- (Topic 3)

Which of the following combinations of single cables and transceivers will allow a server to have 40GB of network throughput? (Select two).

- A. SFP+
- B. SFP
- C. QSFP+
- D. Multimode
- E. Cat 6a
- F. Cat5e

**Answer:** CD

#### Explanation:

QSFP+ is a type of transceiver that supports 40 gigabit Ethernet (40GbE) over four lanes of 10 gigabit Ethernet (10GbE) each. QSFP+ stands for quad small form-factor pluggable plus, and it is a compact and hot-swappable module that plugs into a QSFP+ port on a network device. QSFP+ transceivers can support various types of cables and connectors, such as direct attach copper (DAC), active optical cable (AOC), or fiber optic cable. Multimode is a type of fiber optic cable that supports multiple modes of light propagation within the core. Multimode fiber optic cable can carry higher bandwidth and data rates than single-mode fiber optic cable, but over shorter distances. Multimode fiber optic cable is commonly used for short-reach applications, such as within a data center or a campus network. Multimode fiber optic cable can be paired with QSFP+ transceivers to achieve 40GbE connectivity.

The other options are not correct because they do not support 40GbE. They are:

? SFP+. SFP+ is a type of transceiver that supports 10 gigabit Ethernet (10GbE) over a single lane. SFP+ stands for small form-factor pluggable plus, and it is a compact and hot-swappable module that plugs into an SFP+ port on a network device. SFP+ transceivers can support various types of cables and connectors, such as direct attach copper (DAC), active optical cable (AOC), or fiber optic cable. However, SFP+ transceivers cannot support 40GbE by themselves, unless they are used in a breakout configuration with a QSFP+ transceiver.

? SFP. SFP is a type of transceiver that supports 1 gigabit Ethernet (1GbE) over a single lane. SFP stands for small form-factor pluggable, and it is a compact and hot-swappable module that plugs into an SFP port on a network device. SFP transceivers can support various types of cables and connectors, such as twisted-pair copper, coaxial cable, or fiber optic cable. However, SFP transceivers cannot support 40GbE by themselves, unless they are used in a breakout configuration with a QSFP+ transceiver.

? Cat 6a. Cat 6a is a type of twisted-pair copper cable that supports 10 gigabit Ethernet (10GbE) over distances up to 100 meters. Cat 6a stands for category 6 augmented, and it is an enhanced version of Cat 6 cable that offers better performance and reduced crosstalk. Cat 6a cable can be paired with 10Gbase-T transceivers to achieve 10GbE connectivity. However, Cat 6a cable cannot support 40GbE by itself, unless it is used in a breakout configuration with a QSFP+ transceiver.

? Cat 5e. Cat 5e is a type of twisted-pair copper cable that supports 1 gigabit Ethernet (1GbE) over distances up to 100 meters. Cat 5e stands for category 5 enhanced, and it is an improved version of Cat 5 cable that offers better performance and reduced crosstalk. Cat 5e cable can be paired with 1000base-T transceivers to achieve 1GbE connectivity. However, Cat 5e cable cannot support 40GbE by itself, unless it is used in a breakout configuration with a QSFP+ transceiver.

References1: QSFP+ - an overview | ScienceDirect Topics2: Multimode Fiber - an overview | ScienceDirect Topics3: Network+ (Plus) Certification | CompTIA IT Certifications4: SFP+ - an overview | ScienceDirect Topics5: SFP - an overview | ScienceDirect Topics6: Cat 6a - an overview | ScienceDirect Topics7: [Cat 5e - an overview | ScienceDirect Topics]

#### NEW QUESTION 242

- (Topic 3)

A security engineer is trying to connect cameras to a 12-port PoE switch, but only eight cameras turn on. Which of the following should the engineer check first?

- A. Ethernet cable type
- B. Voltage



- C. Transceiver compatibility
- D. DHCP addressing

**Answer:** B

**Explanation:**

The most likely reason why only eight cameras turn on is that the PoE switch does not have enough power budget to supply all 12 cameras. The engineer should check the voltage and wattage ratings of the PoE switch and the cameras, and make sure they are compatible and sufficient. The Ethernet cable type, transceiver compatibility, and DHCP addressing are less likely to cause this problem, as they would affect the data transmission rather than the power delivery.

References:

- ? CompTIA Network+ N10-008 Certification Study Guide, page 181
- ? CompTIA Network+ N10-008 Cert Guide, Deluxe Edition, page 352
- ? PoE Troubleshooting: The Common PoE Errors and Solutions<sup>3</sup>

**NEW QUESTION 247**

- (Topic 3)

While troubleshooting a network, a VoIP systems engineer discovers a significant inconsistency in the amount of time required for data to reach its destination and return. Which of the following terms best describes this issue?

- A. Bandwidth
- B. Latency
- C. Jitter
- D. Throughput

**Answer:** C

**Explanation:**

Jitter is the variation in the delay of data packets over a network. It is caused by factors such as network congestion, routing changes, packet loss, or improper queuing. Jitter affects the quality of VoIP calls because it can cause gaps, distortion, or out-of-order delivery of voice data. Jitter can be measured by the difference between the expected and actual arrival times of packets<sup>2</sup>. To reduce jitter, VoIP systems use buffers to store and reorder packets before playing them back. However, too much buffering can also increase latency, which is the total time it takes for data to travel from one point to another<sup>3</sup>.

References<sup>2</sup> - VoIP Troubleshooting: 5 Fixes for Common Connection Issues - Nextiva<sup>3</sup> - Troubleshooting VoIP — Is it You or the Network? - PingPlotter

**NEW QUESTION 249**

- (Topic 3)

Which of the following records can be used to track the number of changes on a DNS zone?

- A. SOA
- B. SRV
- C. PTR
- D. NS

**Answer:** A

**Explanation:**

The DNS 'start of authority' (SOA) record stores important information about a domain or zone such as the email address of the administrator, when the domain was last updated, and how long the server should wait between refreshes. All DNS zones need an SOA record in order to conform to IETF standards. SOA records are also important for zone transfers.

**NEW QUESTION 254**

- (Topic 3)

Which of the following documents is MOST likely to be associated with identifying and documenting critical applications?

- A. Software development life-cycle policy
- B. User acceptance testing plan
- C. Change management policy
- D. Business continuity plan

**Answer:** D

**Explanation:**

A business continuity plan (BCP) is a document that outlines the procedures and strategies to ensure the continuity of critical business functions in the event of a disaster or disruption. A BCP is most likely to be associated with identifying and documenting critical applications that are essential for the organization's operations and recovery. A BCP also defines the roles and responsibilities of the staff, the backup and restore processes, the communication channels, and the testing and maintenance schedules.

References: Network+ Study Guide Objective 5.2: Explain disaster recovery and business continuity concepts.

**NEW QUESTION 255**

- (Topic 3)

Which of the following is the best action to take before sending a network router to be recycled as electronic waste?

- A. Turn on port security.
- B. Shred the switch hard drive.
- C. Back up and erase the configuration.
- D. Remove the company asset ID tag.

**Answer:** C



**Explanation:**

Before disposing of a network router, it is important to back up and erase the configuration to prevent unauthorized access to sensitive data and network settings. A network router may contain information such as passwords, IP addresses, firewall rules, VPN settings, and other network parameters that could be exploited by hackers or malicious users. By backing up the configuration, you can preserve the network settings for future reference or reuse. By erasing the configuration, you can wipe out the data and restore the router to its factory default state.

**NEW QUESTION 256**

- (Topic 3)

Which of the following protocols is widely used in large-scale enterprise networks to support complex networks with multiple routers and balance traffic load on multiple links?

- A. OSPF
- B. RIPv2
- C. QoS
- D. STP

**Answer:** A

**NEW QUESTION 261**

- (Topic 3)

A company receives a cease-and-desist order from its ISP regarding prohibited torrent activity. Which of the following should be implemented to comply with the cease-and-desist order?

- A. MAC security
- B. Content filtering
- C. Screened subnet
- D. Perimeter network

**Answer:** B

**Explanation:**

Content filtering is a technique that blocks or allows access to certain types of web content, based on predefined criteria or policies. Content filtering can be used to comply with the cease-and-desist order by preventing users from accessing torrent sites or downloading torrent files, which are often used for illegal file sharing or piracy. Content filtering can also protect the network from malware, phishing, or inappropriate content. References: CompTIA Network+ N10-008 Cert Guide - O'Reilly Media, Chapter 14: Securing a Basic Network, page 520

**NEW QUESTION 264**

- (Topic 3)

A network technician is troubleshooting a specific port on a switch. Which of the following commands should the technician use to see the port configuration?

- A. show route
- B. show Interface
- C. show arp
- D. show port

**Answer:** B

**Explanation:**

To see the configuration of a specific port on a switch, the network technician should use the "show interface" command. This command provides detailed information about the interface, including the current configuration, status, and statistics for the interface.

**NEW QUESTION 265**

- (Topic 3)

The following DHCP scope was configured for a new VLAN dedicated to a large deployment of 325 IoT sensors:

```
DHCP network scope: 10.10.0.0/24
Exclusion range: 10.10.10.1-10.10.10.10
Gateway: 10.10.0.1
DNS: 10.10.0.2
DHCP option 66 (TFTP): 10.10.10.4
DHCP option 4 (NTP): 10.10.10.5
```

The first 244 IoT sensors were able to connect to the TFTP server, download the configuration file, and register to an IoT management system. The other sensors are being shown as offline. Which of the following should be performed to determine the MOST likely cause of the partial deployment of the sensors?

- A. Check the gateway connectivity to the TFTP server.
- B. Check the DHCP network scope.
- C. Check whether the NTP server is online.
- D. Check the IoT devices for a hardware failure.

**Answer:** B

#### NEW QUESTION 268

- (Topic 3)

During the troubleshooting of an E1 line, the point-to-point link on the core router was accidentally unplugged and left unconnected for several hours. However, the network management team was not notified. Which of the following could have been configured to allow early detection and possible resolution of the issue?

- A. Traps
- B. MIB
- C. OID
- D. Baselines

**Answer:** A

#### Explanation:

Traps are unsolicited messages sent by network devices to a network management system (NMS) when an event or a change in status occurs. Traps can help notify the network management team of any issues or problems on the network, such as a link failure or a device reboot. Traps can also trigger actions or alerts on the NMS, such as sending an email or logging the event. MIB stands for Management Information Base and is a database of information that can be accessed and managed by an NMS using SNMP (Simple Network Management Protocol). OID stands for Object Identifier and is a unique name that identifies a specific variable in the MIB. Baselines are measurements of normal network performance and behavior that can be used for comparison and analysis. References: CompTIA Network+ Certification Exam Objectives Version 7.0 (N10-007), Objective 2.5: Given a scenario, use remote access methods.

#### NEW QUESTION 270

- (Topic 3)

A technician removes an old PC from the network and replaces it with a new PC that is unable to connect to the LAN. Which of the following is MOST likely the cause of the issue?

- A. Port security
- B. Port tagging
- C. Port aggregation
- D. Port mirroring

**Answer:** A

#### Explanation:

It is most likely that the issue is caused by port security, as this is a feature that can prevent new devices from connecting to the LAN. Port tagging, port aggregation, and port mirroring are all features that are used to manage traffic on the network, but they are not related to the connectivity of new devices. If the technician has configured port security on the network and the new PC does not meet the security requirements, it will not be able to connect to the LAN.

#### NEW QUESTION 271

- (Topic 3)

A customer needs six usable IP addresses. Which of the following best meets this requirement?

- A. 255.255.255.128
- B. 255.255.255.192
- C. 255.255.255.224
- D. 255.255.255.240

**Answer:** C

#### NEW QUESTION 275

- (Topic 3)

A user is required to log in to a main web application, which then grants the user access to all other programs needed to complete job-related tasks. Which of the following authentication methods does this setup describe?

- A. SSO
- B. RADIUS
- C. TACACS+
- D. Multifactor authentication
- E. 802.1X

**Answer:** A

#### Explanation:

The authentication method that this setup describes is SSO (Single Sign-On). SSO is a technique that allows a user to log in once to a main web application and then access multiple other applications or services without having to re-enter credentials. SSO simplifies the user experience and reduces the number of passwords to remember and manage. References: CompTIA Network+ N10-008 Certification Study Guide, page 371; The Official CompTIA Network+ Student Guide (Exam N10-008), page 14-5.

#### NEW QUESTION 280

- (Topic 3)

A user in a branch office reports that access to all files has been lost after receiving a new PC. All other users in the branch can access fileshares. The IT engineer who is troubleshooting this incident is able to ping the workstation from the branch router, but the machine cannot ping the router. Which of the following is MOST likely the cause of the incident?

- A. Incorrect subnet mask
- B. Incorrect DNS server
- C. Incorrect IP class
- D. Incorrect TCP port

**Answer:** A

#### NEW QUESTION 283

- (Topic 3)

A company is moving to a new building designed with a guest waiting area that has existing network ports. Which of the following practices would BEST secure the network?

- A. Ensure all guests sign an NDA.
- B. Disable unneeded switchports in the area.
- C. Lower the radio strength to reduce Wi-Fi coverage in the waiting area.
- D. Enable MAC filtering to block unknown hardware addresses.

**Answer: B**

#### Explanation:

One of the best practices to secure the network would be to disable unneeded switchports in the guest waiting area. This will prevent unauthorized users from connecting to the network through these ports. It's important to identify which switchports are not in use and disable them, as this will prevent unauthorized access to the network. Other practices such as ensuring all guests sign an NDA, lowering the radio strength to reduce Wi-Fi coverage in the waiting area and enabling MAC filtering to block unknown hardware addresses are not as effective in securing the network as disabling unneeded switchports. Enforcing an NDA with guests may not stop a malicious user from attempting to access the network, reducing the radio strength only limits the Wi-Fi coverage, and MAC filtering can be easily bypassed by hackers.

#### NEW QUESTION 286

- (Topic 3)

Which of the following is required for hosts to receive DHCP addresses from a server that is located on a different subnet?

- A. DHCP scope
- B. DHCP snooping
- C. DHCP reservations
- D. DHCP relay

**Answer: D**

#### Explanation:

A DHCP relay is a network device that forwards DHCP requests from clients on one subnet to a DHCP server on another subnet. This allows the DHCP server to assign IP addresses and other network configuration parameters to clients across different subnets. A DHCP scope is a range of IP addresses that a DHCP server can assign to clients. A DHCP snooping is a security feature that filters and validates DHCP messages on a switch. A DHCP reservation is a way to assign a specific IP address to a specific client based on its MAC address. References: Part 2 of the current page talks about DHCP relay and its functions. You can also find more information about DHCP relay on [this page].

#### NEW QUESTION 290

- (Topic 3)

A network is experiencing extreme latency when accessing a particular website. Which of the following commands will BEST help identify the issue?

- A. ipconfig
- B. netstat
- C. tracert
- D. ping

**Answer: C**

#### NEW QUESTION 295

- (Topic 3)

A network administrator needs to create an SVI on a Layer 3-capable device to separate voice and data traffic. Which of the following best explains this use case?

- A. A physical interface used for trunking logical ports
- B. A physical interface used for management access
- C. A logical interface used for the routing of VLANs
- D. A logical interface used when the number of physical ports is insufficient

**Answer: C**

#### Explanation:

An SVI, or switched virtual interface, is a logical interface that is created on a Layer 3- capable device, such as a multilayer switch or a router. An SVI is associated with a VLAN and can be used to route traffic between different VLANs on the same device or across multiple devices. An SVI can also provide management access, security features, and quality of service (QoS) for the VLAN. An SVI is different from a physical interface, which is a port that connects to a physical device or network. A physical interface can be used for trunking, which is a method of carrying multiple VLANs over a single link, or for connecting to a single VLAN. An SVI is also different from a subinterface, which is a logical division of a physical interface that can be assigned to different VLANs.

References:

? VLANs and Trunking – N10-008 CompTIA Network+ : 2.11

? Switched Virtual Interfaces – N10-008 CompTIA Network+ : 2.22

#### NEW QUESTION 298

- (Topic 3)

A network technician is attempting to harden a commercial switch that was recently purchased. Which of the following hardening techniques best mitigates the use of publicly available information?

- A. Changing the default password
- B. Blocking inbound SSH connections

- C. Removing the gateway from the network configuration
- D. Restricting physical access to the switch

**Answer:** A

**Explanation:**

Changing the default password is a hardening technique that best mitigates the use of publicly available information, such as vendor documentation, online forums, or hacking tools, that may reveal the default credentials of a commercial switch. By changing the default password to a strong and unique one, the network technician can prevent unauthorized access to the switch configuration and management. References:

? Network Hardening - N10-008 CompTIA Network+ : 4.3 - YouTube<sup>1</sup>

? CompTIA Network+ Certification Exam Objectives, page 151

**NEW QUESTION 302**

- (Topic 3)

A user reports that a crucial fileshare is unreachable following a network upgrade that was completed the night before. A network technician confirms the problem exists. Which of the following troubleshooting Steps should the network technician perform NEXT?

- A. Establish a theory of probable cause.
- B. Implement a solution to fix the problem.
- C. Create a plan of action to resolve the problem.
- D. Document the problem and the solution.

**Answer:** A

**Explanation:**

Establishing a theory of probable cause is the third step in the general troubleshooting process, after identifying the problem and gathering information. Establishing a theory of probable cause involves using the information gathered to formulate one or more possible explanations for the problem and testing them to verify or eliminate them. In this scenario, the network technician has confirmed the problem exists and should proceed to establish a theory of probable cause based on the information available, such as the network upgrade that was completed the night before. Implementing a solution to fix the problem is the fifth step in the general troubleshooting process, after establishing a plan of action. Implementing a solution involves applying the chosen method or technique to resolve the problem and verifying its effectiveness. In this scenario, the network technician has not established a plan of action yet and should not implement a solution without knowing the cause of the problem. Creating a plan of action to resolve the problem is the fourth step in the general troubleshooting process, after establishing a theory of probable cause. Creating a plan of action involves selecting the best method or technique to address the problem based on the available resources, constraints, and risks. In this scenario, the network technician has not established a theory of probable cause yet and should not create a plan of action without knowing the cause of the problem. Documenting the problem and the solution is the seventh and final step in the general troubleshooting process, after implementing preventive measures. Documenting the problem and the solution involves recording the details of the problem, its symptoms, its cause, its solution, and its preventive measures for future reference and improvement. In this scenario, the network technician has not implemented preventive measures yet and should not document the problem and the solution without resolving and preventing it.

**NEW QUESTION 305**

- (Topic 3)

An AP uses a 98ft (30m) Cat 6 cable to connect to an access switch. The cable is wired through a duct close to a three-phase motor installation. Anytime the three-phase is turned on, all users connected to the switch experience high latency on the network. Which Of the following is MOST likely the cause Of the issue?

- A. Interference
- B. Attenuation
- C. Open circuit
- D. Short circuit

**Answer:** A

**Explanation:**

Interference is a phenomenon that occurs when unwanted signals or noise affect the transmission or reception of data signals on a network. Interference can cause network issues such as high latency, low throughput, packet loss, or errors. Interference can be caused by various sources, such as electromagnetic fields, radio waves, power lines, or electrical devices. In this scenario, the three-phase motor installation is a source of interference that affects the Cat 6 cable that connects the AP to the access switch. The cable is wired through a duct close to the motor installation, which exposes it to the electromagnetic fields generated by the motor. Anytime the motor is turned on, the interference causes high latency for all users connected to the switch.

**NEW QUESTION 308**

- (Topic 3)

Which of the following fouling protocols is generally used by major ISPs for handing large- scale internet traffic?

- A. RIP
- B. EIGRP
- C. OSPF
- D. BGP

**Answer:** D

**NEW QUESTION 310**

- (Topic 3)

A network technician 13 troubleshooting a network issue for employees who have reported Issues with speed when accessing a server in another subnet. The server is in another building that is 410ft (125m) away from the employees' building. The 10GBASE-T connection between the two buildings uses Cat 5e. Which of the following BEST explains the speed issue?

- A. The connection type is not rated for that distance
- B. A broadcast storm is occurring on the subnet.

- C. The cable run has interference on it
- D. The connection should be made using a Cat 6 cable

**Answer:** D

**Explanation:**

The 10GBASE-T connection between the two buildings uses Cat 5e, which is not rated for a distance of 410ft (125m). According to the CompTIA Network+ Study Manual, for 10GBASE-T connections, "Cat 5e is rated for up to 55m, Cat 6a is rated for 100m, and Cat 7 is rated for 150m." Therefore, the speed issue is likely due to the fact that the connection type is not rated for the distance between the two buildings. To resolve the issue, the technician should consider using a Cat 6a or Cat 7 cable to increase the distance the connection is rated for.

**NEW QUESTION 311**

- (Topic 3)

A coffee shop owner hired a network consultant to provide recommendations for installing a new wireless network. The coffee shop customers expect high speeds even when the network is congested. Which of the following standards should the consultant recommend?

- A. 802.11ac
- B. 802.11ax
- C. 802.11g
- D. 802.11n

**Answer:** B

**Explanation:**

802.11ax is the latest and most advanced wireless standard, providing higher speeds, lower latency, and more capacity than previous standards. It also supports OFDMA, which allows multiple devices to share a channel and reduce congestion. The other options are older standards that have lower bandwidth, range, and efficiency than 802.11ax. Therefore, 802.11ax is the best option for the coffee shop owner who wants to provide high speeds even when the network is congested.

**NEW QUESTION 313**

- (Topic 3)

A network security engineer is responding to a security incident. The engineer suspects that an attacker used an authorized administrator account to make configuration changes to the boundary firewall. Which of the following should the network security engineer review?

- A. Network traffic logs
- B. Audit logs
- C. Syslogs
- D. Event logs

**Answer:** B

**Explanation:**

Audit logs are records of the actions performed by users or processes on a system or network device. They can provide information about who made what changes, when, and why. Audit logs are essential for detecting and investigating security incidents, as well as for ensuring compliance with policies and regulations. Audit logs can help the network security engineer to identify the source of the unauthorized configuration changes to the boundary firewall, as well as the scope and impact of the changes.

References1 - Changes to Cyber Essentials requirements – April 2021 update2 - 8 Firewall Best Practices for Securing the Network3 - How to secure your network boundaries with a firewall

**NEW QUESTION 314**

SIMULATION - (Topic 3)

You have been tasked with implementing an ACL on the router that will:

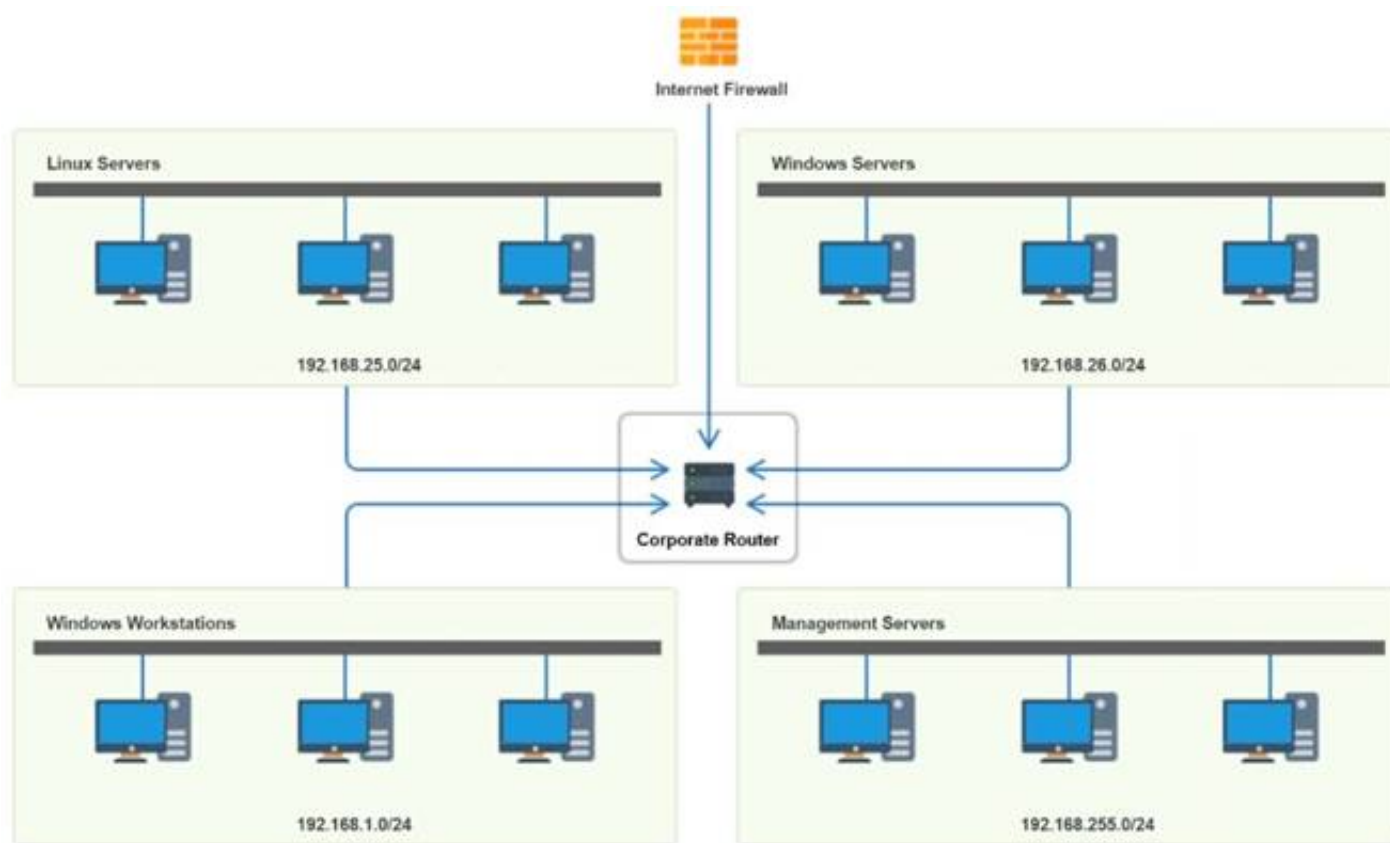
- \* 1. Permit the most commonly used secure remote access technologies from the management network to all other local network segments
- \* 2. Ensure the user subnet cannot use the most commonly used remote access technologies in the Linux and Windows Server segments.
- \* 3. Prohibit any traffic that has not been specifically allowed.

**INSTRUCTIONS**

Use the drop-downs to complete the ACL

If at any time you would like to bring back the initial state of the simulation, please click the Reset All button.





Router Access Control List					
Rule	Source	Destination	Protocol	Service	Action
1	192.168.1.0 192.168.25.0 192.168.255.0 192.168.26.0 Any	192.168.1.0 192.168.25.0 192.168.255.0 192.168.26.0 Any	TCP	SSH Telnet HTTP RDP VNC SMB Any	Allow Deny
2	192.168.1.0 192.168.25.0 192.168.255.0 192.168.26.0 Any	192.168.1.0 192.168.25.0 192.168.255.0 192.168.26.0 Any	TCP	SSH Telnet HTTP RDP VNC SMB Any	Allow Deny
3	192.168.1.0 192.168.25.0 192.168.255.0 192.168.26.0 Any	192.168.1.0 192.168.25.0 192.168.255.0 192.168.26.0 Any	TCP	SSH Telnet HTTP RDP VNC SMB Any	Allow Deny
4	192.168.255.0	192.168.26.0	TCP	SMB	Allow
5	192.168.255.0	Any	Any	Any	Deny
6	192.168.1.0 192.168.25.0 192.168.255.0 192.168.26.0 Any	192.168.1.0 192.168.25.0 192.168.255.0 192.168.26.0 Any	TCP	SSH Telnet HTTP RDP VNC SMB Any	Allow Deny
7	192.168.1.0 192.168.25.0 192.168.255.0 192.168.26.0 Any	192.168.1.0 192.168.25.0 192.168.255.0 192.168.26.0 Any	TCP	SSH Telnet HTTP RDP VNC SMB Any	Allow Deny
8	192.168.1.0	Any	Any	Any	Allow
9	192.168.1.0 192.168.25.0 192.168.255.0 192.168.26.0 Any	192.168.1.0 192.168.25.0 192.168.255.0 192.168.26.0 Any	Any	SSH Telnet HTTP RDP VNC SMB Any	Allow Deny

- A. Mastered
- B. Not Mastered

Answer: A

Explanation:

Router Access Control List					
Rule	Source	Destination	Protocol	Service	Action
1	192.168.255.0	192.168.26.0	TCP	SSH	Allow
2	192.168.255.0	192.168.25.0	TCP	SSH	Allow
3	192.168.255.0	192.168.1.0	TCP	SSH	Allow
4	192.168.255.0	192.168.26.0	TCP	SMB	Allow
5	192.168.255.0	Any	Any	Any	Deny
6	192.168.1.0	Any	TCP	RDP	Deny
7	192.168.1.0	Any	TCP	VNC	Deny
8	192.168.1.0	Any	Any	Any	Allow
9	Any	Any	Any	Any	Deny

### NEW QUESTION 319

- (Topic 3)

A technician uses a badge to enter a security checkpoint on a corporate campus. An unknown individual quickly walks in behind the technician without speaking. Which of the following types of attacks did the technician experience?

- A. Tailgating
- B. Evil twin
- C. On-path
- D. Piggybacking

**Answer:** A

#### Explanation:

Tailgating is a type of physical security attack where an unauthorized person follows an authorized person into a restricted area without their consent or knowledge. Tailgating can allow an attacker to bypass security measures and gain access to sensitive information or resources. In this scenario, the technician experienced tailgating when the unknown individual walked in behind the technician without speaking. Piggybacking is similar to tailgating, but it involves the consent or cooperation of the authorized person. Evil twin is a type of wireless network attack where an attacker sets up a rogue access point that mimics a legitimate one. On-path is a type of network attack where an attacker intercepts and modifies traffic between two parties.

References: CompTIA Network+ Certification Exam Objectives Version 7.0 (N10-007), Objective 3.2: Given a scenario, use appropriate network hardening techniques.

### NEW QUESTION 321

- (Topic 3)

A network administrator is configuring a firewall to allow for a new cloud-based email server. The company standard is to use SMTP to route email traffic. Which of the following ports, by default, should be reserved for this purpose?

- A. 23
- B. 25
- C. 53
- D. 110

**Answer:** B

#### Explanation:

Port 25, by default, should be reserved for SMTP traffic to allow for a new cloud-based email server. SMTP stands for Simple Mail Transfer Protocol, which is a network protocol that enables email communication between mail servers and clients. SMTP uses port 25 as its default port for sending and receiving email messages over TCP/IP networks. A cloud-based email server is an email server that is hosted on a cloud service provider's infrastructure, rather than on-premise or in-house. A cloud-based email server can offer advantages such as scalability, reliability, security, and cost-effectiveness. To allow for a new cloud-based email server, a firewall should be configured to open port 25 for SMTP traffic. References: [CompTIA Network+ Certification Exam Objectives], What Is SMTP? | Mailtrap Blog, Cloud Email Server: What Is It & How Does It Work? | Zoho Mail

### NEW QUESTION 322

- (Topic 3)

An attacker sends more connection requests than a server can handle, causing the server to crash- Which of the following types of attacks is this an example of?

- A. ARP poisoning
- B. Denial-of-service
- C. MAC flooding
- D. On-path

**Answer:** B

#### Explanation:

A denial-of-service (DoS) attack is an example of an attack where an attacker sends more connection requests than a server can handle, causing the server to crash. A DoS attack is a type of cyberattack that aims to disrupt the normal functioning of a network service or resource by overwhelming it with excessive or malformed traffic. A DoS attack can prevent legitimate users from accessing the service or resource, resulting in degraded performance, unavailability, or data loss. A DoS attack can target various network layers, protocols, or components, such as servers, routers, firewalls, or applications. References: [CompTIA Network+ Certification Exam Objectives], What Is a Denial-of-Service (DoS) Attack? | Cisco

#### NEW QUESTION 325

- (Topic 3)

Which of the following describes a network in which users and devices need to mutually authenticate before any network resource can be accessed?

- A. Least privilege
- B. Local authentication
- C. Zero trust
- D. Need to know

**Answer: C**

#### Explanation:

A zero trust network is a network in which users and devices need to mutually authenticate before any network resource can be accessed. A zero trust network assumes that no one and nothing can be trusted by default, even if they were previously verified or are within the network perimeter. A zero trust network uses various technologies and practices, such as data and log aggregation, cybersecurity analytics, continuous diagnostics and mitigation, user behavior analytics, microsegmentation, and identity and access management, to enforce granular and dynamic policies based on the context and behavior of the users and devices<sup>123</sup>.

References:

? What is Zero Trust? | Internet of Things | CompTIA<sup>3</sup>

? The Death of the Perimeter: Zero Trust is (Almost) Here to Stay | Cybersecurity | CompTIA<sup>2</sup>

? CompTIA Network+ Certification Exam N10-008 Practice Test 17 - ExamCompass<sup>1</sup>

#### NEW QUESTION 328

- (Topic 3)

A network technician is responding to an issue with a local company. To which of the following documents should the network technician refer to determine the scope of the issue?

- A. MTTR
- B. MOU
- C. NDA
- D. SLA

**Answer: D**

#### Explanation:

SLA stands for Service Level Agreement, and it is a contract that defines the expectations and responsibilities between a service provider and a customer. SLA can specify the quality, availability, and performance metrics of the service, as well as the penalties for non-compliance and the procedures for resolving issues. SLA can help the network technician determine the scope of the issue by providing the baseline and target values for the service, the escalation process and contacts, and the service credits or remedies for the customer<sup>45</sup>.

CompTIA Network+ N10-008 Cert Guide - Chapter 15: Network Troubleshooting Methodology<sup>35</sup>: What is a Service Level Agreement (SLA)? | ITIL | AXELOS

#### NEW QUESTION 333

- (Topic 3)

Which of the following situations would require an engineer to configure subinterfaces?

- A. In a router-on-a-stick deployment with multiple VLANs
- B. In order to enable inter-VLAN routing on a multilayer switch
- C. When configuring VLAN trunk links between switches
- D. After connecting a router that does not support 802.1Q VLAN tags

**Answer: A**

#### Explanation:

A router-on-a-stick is a configuration that allows a single router interface to route traffic between multiple VLANs on a network<sup>1</sup>. A router-on-a-stick requires sub-interfaces to be configured on the router interface, one for each VLAN. Each sub-interface is assigned a VLAN ID and an IP address that belongs to the corresponding VLAN subnet. The router interface is connected to a switch port that is configured as a trunk port, which allows traffic from multiple VLANs to pass through. The router then performs inter-VLAN routing by forwarding packets between the sub-interfaces based on their destination IP addresses. Inter-VLAN routing is a process that allows devices on different VLANs to communicate with each other. Inter-VLAN routing can be performed by a router-on-a-stick configuration, as explained above, or by a multilayer switch that has routing capabilities. A multilayer switch does not require sub-interfaces to be configured for inter-VLAN routing; instead, it uses switch virtual interfaces (SVIs) that are associated with each VLAN. An SVI is a logical interface that represents a VLAN on a switch and has an IP address that belongs to the VLAN subnet. The switch then performs inter-VLAN routing by forwarding packets between the SVIs based on their destination IP addresses.

VLAN trunking is a method that allows traffic from multiple VLANs to be carried over a single link between switches or routers. VLAN trunking requires the use of a tagging protocol, such as 802.1Q, that adds a header to each frame that identifies its VLAN ID. VLAN trunking does not require sub-interfaces to be configured on the switches or routers; instead, it uses trunk ports that are configured to allow or deny traffic from specific VLANs. The switches or routers then forward packets between the trunk ports based on their VLAN IDs.

\* 802.1Q is a standard that defines how VLAN tagging and trunking are performed on Ethernet networks.

\* 802.1Q adds a 4-byte header to each frame that contains a 12-bit field for the VLAN ID and a 3-bit field for the priority level. 802.1Q does not require sub-interfaces to be configured on the switches or routers; instead, it uses trunk ports that are configured to support 802.1Q tagging and untagging. The switches or routers then forward packets between the trunk ports based on their VLAN IDs and priority levels.

#### NEW QUESTION 335



- (Topic 3)

A network technician is investigating why a core switch is logging excessive amounts of data to the syslog server. The running configuration of the switch showed the following logging information:

ip ssh logging events logging level debugging logging host 192.168.1.100 logging synchronous

Which of the following changes should the technician make to best fix the issue?

- A. Update the logging host IP.
- B. Change to asynchronous logging.
- C. Stop logging SSH events.
- D. Adjust the logging level.

**Answer:** D

**Explanation:**

The logging level debugging is the highest level of logging, which means that the switch will log every possible event, including low-priority and verbose messages. This can result in excessive amounts of data being sent to the syslog server, which can affect the performance and storage of the server. To fix the issue, the technician should adjust the logging level to a lower value, such as informational, warning, or error, depending on the desired level of detail and severity. This will reduce the amount of log data generated by the switch and only send the relevant and necessary messages to the syslog server.

<https://betterstack.com/community/guides/logging/log-levels-explained/>

**NEW QUESTION 336**

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