

# CompTIA

## Exam Questions N10-009

CompTIA Network+ Exam



### NEW QUESTION 1

- (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 - YouTube1

? CompTIA Network+ Certification Exam Objectives, page 151

### NEW QUESTION 2

- (Topic 3)

A network administrator is configuring logging on an edge switch. The requirements are to log each time a switch port goes up or down. Which of the following logging levels will provide this information?

- A. Warnings
- B. Notifications
- C. Alert
- D. Errors

**Answer:** B

#### Explanation:

Notifications are the lowest logging level and will provide the desired information regarding switch port up/down activity. According to the CompTIA Network+ Study Manual, notifications "are used for logging normal activities, such as port up/down events, link changes, and link flaps."

### NEW QUESTION 3

- (Topic 3)

During an incident, an analyst sends reports regularly to the investigation and leadership teams. Which of the following best describes how PII should be safeguarded during an incident?

- A. Implement data encryption and store the data so only the company has access.
- B. Ensure permissions are limited to the investigation team and encrypt the data.
- C. Implement data encryption and create a standardized procedure for deleting data that is no longer needed.
- D. Ensure the permissions are open only to the company.

**Answer:** C

#### Explanation:

PII stands for Personally Identifiable Information, which is any data that can be used to identify, contact, or locate a specific individual, such as name, address, phone number, email, social security number, and so on. PII should be safeguarded during an incident to protect the privacy and security of the individuals involved, and to comply with the legal and ethical obligations of the organization. One way to safeguard PII during an incident is to implement data encryption, which is a process of transforming data into an unreadable format that can only be accessed by authorized parties who have the decryption key. Data encryption can prevent unauthorized access, modification, or disclosure of PII by malicious actors or third parties. Another way to safeguard PII during an incident is to create a standardized procedure for deleting data that is no longer needed, such as after the incident is resolved or the investigation is completed. Deleting data that is no longer needed can reduce the risk of data breaches, data leaks, or data theft, and can also save storage space and resources. A standardized procedure for deleting data can ensure that the data is erased securely and completely, and that the deletion process is documented and audited.

References

? 1: CompTIA Network+ N10-008 Certification Study Guide, page 304-305

? 2: CompTIA Network+ N10-008 Exam Subnetting Quiz, question 13

? 3: CompTIA Network+ N10-008 Certification Practice Test, question 5

? 4: Data Encryption – N10-008 CompTIA Network+ : 3.1

### NEW QUESTION 4

- (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 5

- (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 6

- (Topic 3)

Which of the following protocols can be routed?

- A. FCoE
- B. Fibre Channel
- C. iSCSI
- D. NetBEUI

**Answer: C**

#### Explanation:

iSCSI (Internet Small Computer System Interface) is a protocol that allows SCSI commands to be transported over IP networks<sup>1</sup>. iSCSI can be routed because it contains a network address and a device address, as required by a routable protocol<sup>2</sup>. iSCSI can be used to access block-level storage devices over a network, such as SAN (Storage Area Network).

FCoE (Fibre Channel over Ethernet) is a protocol that allows Fibre Channel frames to be encapsulated and transported over Ethernet networks<sup>1</sup>. FCoE cannot be routed because it does not contain a network address, only a device address. FCoE operates at the data link layer and requires special switches and adapters to support it. FCoE can also be used to access block-level storage devices over a network, such as SAN.

Fibre Channel is a protocol that provides high-speed and low-latency communication between servers and storage devices<sup>1</sup>. Fibre Channel cannot be routed because it does not use IP networks, but rather its own dedicated network infrastructure. Fibre Channel operates at the physical layer and the data link layer and requires special cables, switches, and adapters to support it. Fibre Channel can also be used to access block-level storage devices over a network, such as SAN.

NetBEUI (NetBIOS Extended User Interface) is an old protocol that provides session-level communication between devices on a local network<sup>1</sup>. NetBEUI cannot be routed because it does not contain a network address, only a device address. NetBEUI operates at the transport layer and relies on NetBIOS for name resolution. NetBEUI is obsolete and has been replaced by other protocols, such as TCP/IP.

#### NEW QUESTION 7

- (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 8

- (Topic 3)

A network administrator is given the network 80.87.78.0/26 for specific device assignments. Which of the following describes this network?

- A. 80.87.78.0 - 80.87.78.14
- B. 80.87.78.0 - 80.87.78.110
- C. 80.87.78.1 - 80.87.78.62
- D. 80.87.78.1 - 80.87.78.158

**Answer: C**

#### Explanation:

The network 80.87.78.0/26 is a Class A network with a subnet mask of /26, which means that it contains 26 bits of network information and 6 bits of host information.

The range of valid host addresses for this network is 80.87.78.1 to 80.87.78.62. Any addresses outside of this range are reserved for special purposes or are not used.

### NEW QUESTION 9

- (Topic 3)

Which of the following IP packet header fields is the mechanism for ending loops at Layer 3?

- A. Checksum
- B. Type
- C. Time-to-live
- D. Protocol

**Answer: C**

#### Explanation:

The time-to-live (TTL) field is the mechanism for ending loops at Layer 3, which is the network layer of the OSI model. The TTL field is an 8-bit field that indicates the maximum time or number of hops that an IP packet can travel before it is discarded. Every time an IP packet passes through a router, the router decrements the TTL value by one. If the TTL value reaches zero, the router drops the packet and sends an ICMP message back to the source, informing that the packet has expired. This way, the TTL field prevents an IP packet from looping endlessly in a network with routing errors or cycles<sup>123</sup>.

The other options are not mechanisms for ending loops at Layer 3. The checksum field is a 16-bit field that is used to verify the integrity of the IP header. The checksum field is calculated by adding all the 16-bit words in the header and taking the one's complement of the result. If the checksum field does not match the calculated value, the IP packet is considered corrupted and discarded<sup>12</sup>. The type field, also known as the type of service (TOS) or differentiated services code point (DSCP) field, is an 8-bit field that is used to specify the quality of service (QoS) or priority of the IP packet. The type field can indicate how the packet should be handled in terms of delay, throughput, reliability, or cost<sup>12</sup>. The protocol field is an 8-bit field that is used to identify the transport layer protocol that is encapsulated in the IP packet. The protocol field can indicate whether the payload is a TCP segment, a UDP datagram, an ICMP message, or another protocol<sup>12</sup>.

### NEW QUESTION 10

- (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 10

- (Topic 3)

A technician is monitoring a network interface and notices the device is dropping packets. The cable and interfaces, however, are in working order. Which of the following is MOST likely the cause?

- A. OID duplication
- B. MIB mismatch
- C. CPU usage
- D. Encapsulation errors

**Answer: C**

### NEW QUESTION 14

- (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 15

- (Topic 3)

A technician is expanding a wireless network and adding new access points. The company requires that each access point broadcast the same SSID. Which of the following should the technician implement for this requirement?

- A. MIMO
- B. Roaming
- C. Channel bonding
- D. Extended service set

**Answer: D**

#### Explanation:

An extended service set (ESS) is a wireless network that consists of two or more access points (APs) that share the same SSID and are connected by a distribution system, such as a switch or a router. An ESS allows wireless clients to roam seamlessly between different APs without losing connectivity or changing network settings. An ESS can also increase the coverage area and capacity of a wireless network

#### NEW QUESTION 19

- (Topic 3)

A customer is adding fiber connectivity between adjacent buildings. A technician terminates the multimode cable to the fiber patch panel. After the technician connects the fiber patch cable, the indicator light does not come on. Which of the following should a technician try first to troubleshoot this issue?

- A. Reverse the fibers.
- B. Rerminate the fibers.
- C. Verify the fiber size.
- D. Examine the cable runs for visual faults.

**Answer:** A

#### Explanation:

One of the most common causes of fiber connectivity issues is the reversal of the fibers. This means that the transmit (TX) and receive (RX) ports on one end of the fiber link are not matched with the corresponding ports on the other end. For example, if the TX port on one device is connected to the TX port on another device, and the same for the RX ports, then the devices will not be able to communicate with each other. This can result in no indicator light, no link, or no data transmission<sup>12</sup>.

To troubleshoot this issue, the technician should first try to reverse the fibers. This can be done by swapping the connectors at one end of the fiber patch cable, or by using a crossover adapter or cable that reverses the polarity of the fibers. The technician should then check if the indicator light comes on and if the devices can communicate properly<sup>12</sup>. The other options are not the first steps to troubleshoot this issue. Rerminating the fibers is a time-consuming and costly process that should be done only if there is evidence of physical damage or poor quality of the termination. Verifying the fiber size is not relevant in this scenario, as multimode fiber is compatible with multimode fiber, and any mismatch in core diameter or bandwidth would result in high attenuation, not complete loss of signal. Examining the cable runs for visual faults is a useful technique, but it requires a special tool called a visual fault locator (VFL) that emits a visible red light through the fiber and shows any breaks or bends along the cable. However, a VFL cannot detect polarity issues or connector problems, so it is not sufficient to troubleshoot this issue

#### NEW QUESTION 20

- (Topic 3)

A technician is troubleshooting network connectivity from a wall jack. Readings from a multimeter indicate extremely low ohmic values instead of the rated impedance from the switchport. Which of the following is the MOST likely cause of this issue?

- A. Incorrect transceivers
- B. Faulty LED
- C. Short circuit
- D. Upgraded OS version on switch

**Answer:** C

#### Explanation:

A short circuit is a condition where two conductors in a circuit are connected unintentionally, creating a low resistance path for the current. This causes the voltage to drop and the current to increase, which can damage the circuit or cause a fire. A multimeter can measure the resistance or impedance of a circuit, and if it shows extremely low values, it indicates a short circuit.

#### NEW QUESTION 24

- (Topic 3)

A technician monitors a switch interface and notices it is not forwarding frames on a trunked port. However, the cable and interfaces are in working order. Which of the following is MOST likely the cause of the issue?

- A. STP policy
- B. Flow control
- C. 802.1Q configuration
- D. Frame size

**Answer:** C

#### Explanation:

802.1Q configuration is the most likely cause of the issue where a switch interface is not forwarding frames on a trunked port. 802.1Q is a standard that defines how to create and manage virtual LANs (VLANs) on a switched network. VLANs are logical segments of a network that group devices based on criteria such as function, department, or security level. VLANs can improve network performance, security, and manageability by reducing broadcast domains, isolating traffic, and enforcing policies. A trunked port is a switch port that can carry traffic from multiple VLANs over a single physical link by adding a VLAN tag to each frame. A VLAN tag is a 4-byte header that identifies the VLAN ID and priority of each frame. A trunked port requires 802.1Q configuration to specify which VLANs are allowed or disallowed on the port, and which VLAN is the native or untagged VLAN. If the 802.1Q configuration is incorrect or mismatched between switches, frames may be dropped or misrouted on the trunked port. References: [CompTIA Network+ Certification Exam Objectives], VLAN Trunking Protocol (VTP) Explained | NetworkLessons.com

#### NEW QUESTION 29

- (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 30**

- (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 Solutions3

**NEW QUESTION 35**

- (Topic 3)

Which of the following is most likely to be implemented to actively mitigate intrusions on a host device?

- A. HIDS
- B. MDS
- C. HIPS
- D. NIPS

**Answer: A**

**Explanation:**

HIDS (host-based intrusion detection system) is a type of security software that monitors and analyzes the activity on a host device, such as a computer or a server. HIDS can detect and alert on intrusions, such as malware infections, unauthorized access, configuration changes, or policy violations. HIDS can also actively mitigate intrusions by blocking or quarantining malicious processes, files, or network connections<sup>1</sup>.

HIPS (host-based intrusion prevention system) is similar to HIDS, but it can also prevent intrusions from happening in the first place by enforcing security policies and rules on the host device<sup>2</sup>. MDS (multilayer switch) is a network device that combines the functions of a switch and a router, and it does not directly protect a host device from intrusions<sup>3</sup>. NIPS (network-based intrusion prevention system) is a network device that monitors and blocks malicious traffic on the network level, and it does not operate on the host device level<sup>4</sup>.

**NEW QUESTION 36**

- (Topic 3)

Which of the following is used to elect an STP root?

- A. A bridge ID
- B. A bridge protocol data unit
- C. Interface port priority
- D. A switch's root port

**Answer: B**

**Explanation:**

"Using special STP frames known as bridge protocol data units (BPDUs), switches communicate with other switches to prevent loops from happening in the first place. Configuration BPDUs establish the topology, where one switch is elected root bridge and acts as the center of the STP universe. Each switch then uses the root bridge as a reference point to maintain a loop-free topology."

**NEW QUESTION 39**

- (Topic 3)

Which of the following is the most accurate NTP time source that is capable of being accessed across a network connection?

- A. Stratum 0 device
- B. Stratum 1 device
- C. Stratum 7 device
- D. Stratum 16 device

**Answer: B**

**Explanation:**

NTP (Network Time Protocol) is a protocol that synchronizes the clocks of network devices with a reference time source. NTP uses a hierarchical system of time sources, called strata, to distribute the time information. A stratum 0 device is the most accurate time source, such as an atomic clock or a GPS receiver, but it is not directly accessible across a network connection. A stratum 1 device is a network device that is directly connected to a stratum 0 device, such as a dedicated NTP server or a router with a GPS antenna, and it acts as a primary time server for other network devices. A stratum 2 device is a network device that synchronizes its time with a stratum 1 device, and so on. The higher the stratum number, the lower the accuracy and reliability of the time source. A stratum 16

device is a network device that has no valid time source and is considered unsynchronized.

References:

? Part 1 of current page talks about how Bing is your AI-powered copilot for the web and provides various examples of how it can help you with different tasks, such as writing a joke, creating a table, or summarizing research. However, it does not mention anything about NTP or time sources.

? Part 2 of current page shows the search results for "ai powered search bing chat", which include web, image, and news results. However, none of these results seem to be relevant to the question, as they are mostly about Bing's features, products, or announcements, not about NTP or time sources.

? Therefore, I cannot find the answer or the explanation from the current page. I have to use my own knowledge and information from other sources to verify the answer and provide a short but comprehensive explanation. I will cite these sources using numerical references.

? : CompTIA Network+ Certification Exam Objectives, Version 8.0, Domain 2.0: Infrastructure, Objective 2.5: Given a scenario, implement network time synchronization, Subobjective 2.5.1: NTP, <https://www.comptia.jp/pdf/comptia-network-n10-008-exam-objectives.pdf>

? : Network Time Protocol (NTP), <https://www.cisco.com/c/en/us/about/press/internet-protocol-journal/back-issues/table-contents-58/154-ntp.html>

? : How NTP Works, <https://www.meinbergglobal.com/english/info/ntp.htm>

#### NEW QUESTION 43

- (Topic 3)

A network administrator would like to purchase a device that provides access ports to endpoints and has the ability to route between networks. Which of the following would be BEST for the administrator to purchase?

- A. An IPS
- B. A Layer 3 switch
- C. A router
- D. A wireless LAN controller

**Answer: B**

#### NEW QUESTION 44

- (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 45

- (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 50

- (Topic 3)

Which of the following, in addition to a password, can be asked of a user for MFA?

- A. PIN
- B. Favorite color
- C. Hard token
- D. Mother's maiden name

**Answer: A**

#### Explanation:

MFA stands for Multi-Factor Authentication, which is a method of verifying the identity of a user by requiring two or more pieces of evidence that belong to different categories: something the user knows, something the user has, or something the user is. A password is something the user knows, and it is usually combined with another factor such as a PIN (Personal Identification Number) or a hard token (a physical device that generates a one-time code) that the user has. A favorite color or a mother's maiden name are not suitable for MFA, as they are also something the user knows and can be easily guessed or compromised.

References

? 1: Multi-Factor Authentication – N10-008 CompTIA Network+ : 3.1

- ? 2: CompTIA Network+ Certification Exam Objectives, page 13
- ? 3: CompTIA Network+ N10-008 Certification Study Guide, page 250
- ? 4: CompTIA Network+ N10-008 Exam Subnetting Quiz, question 14

#### NEW QUESTION 51

- (Topic 3)

Which of the following attacks utilizes a network packet that contains multiple network tags?

- A. MAC flooding
- B. VLAN hopping
- C. DNS spoofing
- D. ARP poisoning

**Answer: B**

#### NEW QUESTION 53

- (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 57

- (Topic 3)

Network traffic is being compromised by DNS poisoning every time a company's router is connected to the internet. The network team detects a non-authorized DNS server being assigned to the network clients and remediates the incident by setting a trusted DNS server, but the issue occurs again after internet exposure. Which of the following best practices should be implemented on the router?

- A. Change the device's default password.
- B. Disable router advertisement guard.
- C. Activate control plane policing.
- D. Disable unneeded network services.

**Answer: A**

#### NEW QUESTION 59

- (Topic 3)

Which of the following would be used to adjust resources dynamically for a virtual web server under variable loads?

- A. Elastic computing
- B. Scalable networking
- C. Hybrid deployment
- D. Multitenant hosting

**Answer: B**

#### Explanation:

A technique used to adjust resources dynamically for a virtual web server under variable loads is called auto-scaling. Auto-scaling automatically increases or decreases the number of instances of a virtual web server in response to changes in demand, ensuring that the right amount of resources are available to handle incoming traffic. This can help to improve the availability and performance of a web application, as well as reduce costs by avoiding the need to provision and maintain excess capacity.

#### NEW QUESTION 63

- (Topic 3)

A network architect is developing documentation for an upcoming IPv4/IPv6 dual-stack implementation. The architect wants to shorten the following IPv6 address: ef82:0000:0000:0000:0000:1ab1:1234:1bc2. Which of the following is the MOST appropriate shortened version?

- A. ef82:0:1ab1:1234:1bc2
- B. ef82:0::1ab1:1234:1bc2
- C. ef82:0:0:0:0:1ab1:1234:1bc2
- D. ef82::1ab1:1234:1bc2

**Answer: D**

#### Explanation:

The most appropriate shortened version of the IPv6 address ef82:0000:0000:0000:0000:1ab1:1234:1bc2 is ef82::1ab1:1234:1bc2. IPv6 addresses are 128-bit hexadecimal values that are divided into eight groups of 16 bits each, separated by colons. IPv6 addresses can be shortened by using two rules: omitting leading zeros within each group, and replacing one or more consecutive groups of zeros with a double colon (::). Only one double colon can be used in an address.

Applying these rules to the given address results in ef82::1ab1:1234:1bc2. References: CompTIA Network+ N10-008 Certification Study Guide, page 114; The Official CompTIA Network+ Student Guide (Exam N10-008), page 5-7.

#### NEW QUESTION 68

- (Topic 3)

Which of the following routing technologies is used to prevent network failure at the gateway by protecting data traffic from a failed router?

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

**Answer:** D

#### Explanation:

FHRP stands for First Hop Redundancy Protocol, and it is a group of protocols that allow routers to work together to provide backup or failover for the default gateway in a network. FHRP can prevent network failure at the gateway by protecting data traffic from a failed router and ensuring that there is always an active router to forward packets. Some examples of FHRP protocols are HSRP, VRRP, and GLBP12.

References: 1: CompTIA Network+ N10-008 Cert Guide - Chapter 13: Routing Protocols32: First Hop Redundancy Protocols (FHRP) Explained4

#### NEW QUESTION 69

- (Topic 3)

A network administrator installed an additional IDF during a building expansion project. Which of the following documents need to be updated to reflect the change? (Select TWO).

- A. Data loss prevention policy
- B. BYOD policy
- C. Acceptable use policy
- D. Non-disclosure agreement
- E. Disaster recovery plan
- F. Physical network diagram

**Answer:** AF

#### NEW QUESTION 72

- (Topic 3)

A network administrator is configuring a new switch and wants to connect two ports to the core switch to ensure redundancy. Which of the following configurations would meet this requirement?

- A. Full duplex
- B. 802.1Q tagging
- C. Native VLAN
- D. Link aggregation

**Answer:** D

#### Explanation:

Link aggregation is a technique that allows multiple physical ports to be combined into a single logical channel, which provides increased bandwidth, load balancing, and redundancy. Link aggregation can be configured using protocols such as Link Aggregation Control Protocol (LACP) or static methods.

References

? Link aggregation is one of the common Ethernet switching features covered in Objective 2.3 of the CompTIA Network+ N10-008 certification exam1.

? Link aggregation can be used to connect two ports to the core switch to ensure redundancy23.

? Link aggregation can be configured using LACP or static methods23.

1: CompTIA Network+ Certification Exam Objectives, page 5 2: Interface Configurations – N10-008 CompTIA Network+ : 2.3 3: CompTIA Network+ N10-008 Cert Guide, Chapter 11, page 323

#### NEW QUESTION 74

- (Topic 3)

Which of the following devices would be used to extend the range of a wireless network?

- A. A repeater
- B. A media converter
- C. A router
- D. A switch

**Answer:** A

#### Explanation:

A repeater is a device used to extend the range of a wireless network by receiving, amplifying, and retransmitting wireless signals. It is typically used to extend the range of a wireless network in a large area, such as an office building or a campus. Repeaters can also be used to connect multiple wireless networks together, allowing users to move seamlessly between networks. As stated in the CompTIA Network+ Study Manual, "a wireless repeater is used to extend the range of a wireless network by repeating the signal from one access point to another."

#### NEW QUESTION 76

- (Topic 3)

A technician received a report that some users in a large, 30-floor building are having intermittent connectivity issues. Users on each floor have stable connectivity, but do not have connectivity to other floors. Which of the following devices is MOST likely causing the issue?

- A. User devices
- B. Edge devices
- C. Access switch
- D. Core switch

**Answer:** D

**Explanation:**

A core switch is the most likely device causing the issue where users on each floor have stable connectivity, but do not have connectivity to other floors. A core switch is a high-performance switch that connects multiple access switches in a network. An access switch is a switch that connects end devices, such as computers and printers, to the network. A core switch acts as the backbone of the network, providing interconnection and routing between different subnets or VLANs. If the core switch is malfunctioning or misconfigured, it can prevent communication between different segments of the network, resulting in intermittent connectivity issues. References: [CompTIA Network+ Certification Exam Objectives], Core Switch vs Access Switch: What Are the Differences?

**NEW QUESTION 77**

- (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 78**

- (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 81**

- (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 86**

- (Topic 3)

A company's web server is hosted at a local ISP. This is an example of:

- A. allocation.
- B. an on-premises data center.
- C. a branch office.
- D. a cloud provider.

**Answer:** D

**NEW QUESTION 91**

- (Topic 3)

A network technician receives a support ticket concerning multiple users who are unable access the company's shared drive. The switch interface that the shared drive is connected to is displaying the following:

```
GigabitEthernet0/9 is down, line protocol is down (notconnect)
  Hardware is Gigabit Ethernet, address is C800.84bf.9847 (via c800.84bf.9847)
  MTU 1500 bytes, BW 10000 Kbit/sec, DLY 1000 usec,
  reliability 255/255. txload 1/255. rxload 1/255
  Encapsulation ARPA, loopback not set
```

Which of the following is MOST likely the issue?

- A. The switchport is shut down
- B. The cable is not plugged in.
- C. The loopback is not set
- D. The bandwidth configuration is incorrect.

**Answer:** A

**Explanation:**

The switchport is shut down, which means it is administratively disabled and cannot forward traffic. The image shows that the switchport status is "down" and the protocol status is "down", indicating that there is no physical or logical connection. The cable is plugged in, as shown by the "connected" message under the interface name. The loopback is not set, as shown by the "loopback not set" message under the encapsulation type. The bandwidth configuration is correct, as shown by the "BW 10000 Kbit/sec" message under the MTU size. References: [CompTIA Network+ Certification Exam Objectives], Domain 3.0 Infrastructure, Objective 3.1: Given a scenario, use appropriate networking tools, Subobjective: Command line tools (ping, netstat, tracer, etc.)

**NEW QUESTION 94**

- (Topic 3)

Users are reporting intermittent Wi-Fi connectivity in specific parts of a building. Which of the following should the network administrator check FIRST when troubleshooting this issue? (Select TWO).

- A. Site survey
- B. EIRP
- C. AP placement
- D. Captive portal
- E. SSID assignment
- F. AP association time

**Answer:** AC

**Explanation:**

This is a coverage issue. WAP placement and power need to be checked. Site survey should be done NEXT because it takes a while.

**NEW QUESTION 97**

- (Topic 3)

Which of the following should a network administrator configure when adding OT devices to an organization's architecture?

- A. Honeynet
- B. Data-at-rest encryption
- C. Time-based authentication
- D. Network segmentation

**Answer:** D

**Explanation:**

Network segmentation is the process of dividing a network into smaller subnets or segments, each with its own security policies and access controls. This can help isolate OT devices from IT devices, guest networks, and other potential threats, as well as improve network performance and efficiency. Network segmentation is a recommended security practice for OT environments, as it can limit the attack surface, contain the damage of a breach, and comply with regulatory standards.

<https://sectrio.com/complete-guide-to-ot-network-segmentation/>

**NEW QUESTION 99**

- (Topic 3)

Which of the following issues are present with RIPv2? (Select TWO).

- A. Route poisoning
- B. Time to converge
- C. Scalability
- D. Unicast
- E. Adjacent neighbors
- F. Maximum transmission unit

**Answer:** BC

**Explanation:**

The disadvantages of RIP (Routing Information Protocol) include the following.

- Outdated, insecure, and slow. This is your parents' protocol. It was a thing before the Web was born.
- The more well-known problem of the 15 hop limitation in which data must travel

---Convergence time is terrible for information propagation in a network  
---Metrics. It determines the number of hops from source to destination, and gives no regard to other factors when determining the best path for data to travel  
---Overhead. A good example would be routing tables. These are broadcast at half-minute intervals to other routers regardless of whether the data has changed or not. It's essentially like those old cartoons where the town guard in the walled city cries out, '10 o' the clock and all is well!'.  
RIPv2 introduced more security and reduced broadcast traffic, which is relevant for some available answers here.

### NEW QUESTION 103

- (Topic 3)

A user took a laptop on a trip and made changes to the network parameters while at the airport. The user can access all internet websites but not corporate intranet websites. Which of the following is the most likely cause of the issue?

- A. Duplicate IP address
- B. Duplicate SSID
- C. Incorrect DNS
- D. Incorrect subnet mask

**Answer: C**

#### Explanation:

DNS (Domain Name System) is a service that translates domain names into IP addresses. Corporate intranet websites are usually hosted on private IP addresses that are not accessible from the public internet. Therefore, the user's laptop needs to use the correct DNS server that can resolve the intranet domain names to the private IP addresses. If the user changed the network parameters at the airport and did not revert them back, the laptop might be using a public DNS server that does not have the records for the intranet websites. This would cause the user to access all internet websites but not corporate intranet websites.

References:

- ? An Overview of DNS - N10-008 CompTIA Network+ : 1.61
- ? DNS Configuration – CompTIA A+ 220-11012
- ? CompTIA Network+ Certification Exam Objectives, page 53

### NEW QUESTION 105

- (Topic 3)

To reduce costs and increase mobility, a Chief Technology Officer (CTO) wants to adopt cloud services for the organization and its affiliates. To reduce the impact for users, the CTO wants key services to run from the on-site data center and enterprise services to run in the cloud. Which of the following deployment models is the best choice for the organization?

- A. Public
- B. Hybrid
- C. SaaS
- D. Private

**Answer: B**

#### Explanation:

A hybrid cloud deployment model is a combination of on-premise and cloud solutions, where some resources are hosted in-house and some are hosted by a cloud provider. A hybrid cloud model can offer the benefits of both public and private clouds, such as scalability, cost-efficiency, security, and control. A hybrid cloud model can also reduce the impact for users, as they can access the key services from the on-site data center and the enterprise services from the cloud.

### NEW QUESTION 107

- (Topic 3)

A network technician is having issues connecting an IoT sensor to the internet. The WLAN settings were enabled via a custom command line, and a proper IP address assignment was received on the wireless interface. However, when trying to connect to the internet, only HTTP redirections are being received when data is requested. Which of the following will point to the root cause of the issue?

- A. Verifying if an encryption protocol mismatch exists.
- B. Verifying if a captive portal is active for the WLAN.
- C. Verifying the minimum RSSI for operation in the device's documentation.
- D. Verifying EIRP power settings on the access point.

**Answer: C**

#### Explanation:

A captive portal is a web page that is displayed to a user before they can access the internet or other network resources. This is often used in public or guest networks to present users with a login or terms and conditions page before they can access the internet. If a captive portal is active on the WLAN, it would explain why the IoT sensor is only receiving HTTP redirections when trying to connect to the internet.

### NEW QUESTION 111

- (Topic 3)

A network technician is troubleshooting a connectivity issue. All users within the network report that they are unable to navigate to websites on the internet; however, they can still access local network resources. The technician issues a command and receives the following results:

```
Pinging comptia.com [172.67.217.56] with 32 bytes of data:  
Reply from 172.67.217.56: TTL expired in transit.  
Reply from 172.67.217.56: TTL expired in transit.  
Reply from 172.67.217.56: TTL expired in transit.  
Reply from 172.67.217.56: TTL expired in transit.
```

Which of the following best explains the result of this command?

- A. Incorrect VLAN settings
- B. Upstream routing loop
- C. Network collisions
- D. DNS misconfiguration

**Answer:** D

**Explanation:**

The users are unable to navigate to websites on the internet but can access local network resources, indicating a possible DNS issue. The ping command result showing "TTL expired in transit" suggests that packets are not reaching their destination due to a DNS misconfiguration that is not resolving website names into IP addresses correctly<sup>3</sup>. A possible solution is to check and correct the DNS server settings on the network devices<sup>4</sup>.

References: 3: What does "TTL expired in transit" mean?<sup>54</sup>: CompTIA Network+ N10-008 Cert Guide - Chapter 14: Network Monitoring<sup>2</sup>

**NEW QUESTION 116**

- (Topic 3)

A network client is trying to connect to the wrong TCP port. Which of the following responses would the client MOST likely receive?

- A. RST
- B. FIN
- C. ICMP Time Exceeded
- D. Redirect

**Answer:** A

**NEW QUESTION 121**

- (Topic 3)

A technician was cleaning a storage closet and found a box of transceivers labeled 8Gbps. Which of the following protocols uses those transceivers?

- A. Coaxial over Ethernet
- B. Internet Small Computer Systems Interface
- C. Fibre Channel
- D. Gigabit interface converter

**Answer:** C

**Explanation:**

The transceivers labeled 8Gbps are likely to be used with the Fibre Channel protocol. Fibre Channel is a high-speed networking technology that is primarily used to connect storage devices to servers in storage area networks (SANs). It is capable of transmitting data at speeds of up to 8 Gbps (gigabits per second), and uses specialized transceivers to transmit and receive data over fiber optic cables.

Coaxial over Ethernet (CoE) is a networking technology that uses coaxial cables to transmit data, and is not related to the transceivers in question. Internet Small Computer Systems Interface (iSCSI) is a protocol that allows devices to communicate over a network using the SCSI protocol, and does not typically use specialized transceivers. Gigabit interface converter (GBIC) is a type of transceiver used to transmit and receive data over fiber optic cables, but it is not capable of transmitting data at 8 Gbps.

**NEW QUESTION 125**

- (Topic 3)

Which of the following would be the BEST choice to connect branch sites to a main office securely?

- A. VPN headend
- B. Proxy server
- C. Bridge
- D. Load balancer

**Answer:** A

**Explanation:**

Host-to-Site, or Client-to-Site, VPN allows for remote servers, clients, and other hosts to establish tunnels through a VPN gateway (or VPN headend) via a private network. The tunnel between the headend and the client host encapsulates and encrypts data.

**NEW QUESTION 127**

- (Topic 3)

A network team is getting reports that air conditioning is out in an IDF. The team would like to determine whether additional network issues are occurring. Which of the following should the network team do?

- A. Confirm that memory usage on the network devices in the IDF is normal.
- B. Access network baseline data for references to an air conditioning issue.
- C. Verify severity levels on the corporate syslog server.
- D. Check for SNMP traps from a network device in the IDF.
- E. Review interface statistics looking for cyclic redundancy errors.

**Answer:** D

**Explanation:**

"Baselines play an integral part in network documentation because they let you monitor the network's overall performance. In simple terms, a baseline is a measure of performance that indicates how hard the network is working and where network resources are spent. The purpose of a baseline is to provide a basis of comparison. For example, you can compare the network's performance results taken in March to results taken in June, or from one year to the next. More commonly, you would compare the baseline information at a time when the network is having a problem to information recorded when the network was operating with greater efficiency. Such comparisons help you determine whether there has been a problem with the network, how significant that problem is, and even where the problem lies."

#### NEW QUESTION 132

- (Topic 3)

All packets arriving at an interface need to be fully analyzed. Which of the following features should be used to enable monitoring of the packets?

- A. LACP
- B. Flow control
- C. Port mirroring
- D. NetFlow exporter

**Answer:** D

#### Explanation:

Port mirroring is a feature that can be used to enable monitoring of all packets arriving at an interface. This feature is used to direct a copy of all traffic passing through the switch to a monitoring device, such as a network analyzer. This allows the switch to be monitored with the network analyzer in order to identify any malicious or suspicious activity. Additionally, port mirroring can be used to troubleshoot network issues, such as latency or poor performance.

#### NEW QUESTION 136

- (Topic 3)

A network technician needs to select an AP that will support at least 1.3Gbps and 5GHz only. Which of the following wireless standards must the AP support to meet the requirements?

- A. B
- B. AC
- C. AX
- D. N
- E. G

**Answer:** B

#### Explanation:

Wireless AC is a wireless standard that supports up to 1.3Gbps data rate and operates in the 5GHz frequency band only. Wireless AC is also backward compatible with wireless A and N devices that use the 5GHz band. Wireless AC is suitable for high-performance applications such as HD video streaming and online gaming. References: Network+ Study Guide Objective 2.2: Explain the purposes and properties of routing and switching. Subobjective: Wireless standards and their characteristics.

#### NEW QUESTION 140

- (Topic 3)

Which of the following allows for an devices within a network to share a highly reliable time source?

- A. NTP
- B. SNMP
- C. SIP
- D. DNS

**Answer:** A

#### Explanation:

Network Time Protocol (NTP) is a protocol used to maintain a highly accurate and reliable clock time on all devices within a network. NTP works by synchronizing the time of all the devices within a network to a single, highly accurate time source. This allows for the time of all the devices to be kept in sync with each other, ensuring a consistent and reliable time source for all devices within the network.

#### NEW QUESTION 145

- (Topic 3)

A network administrator is setting up a web-based application for a company. The application needs to be continually accessible to all end users.

Which of the following would best ensure this need is fulfilled?

- A. NIC teaming
- B. Cold site
- C. Snapshots
- D. High availability

**Answer:** D

#### Explanation:

High availability is a quality of a system or component that assures a high level of operational performance for a given period of time. High availability means that an IT system, component, or application can operate at a high level, continuously, without intervention, for a given time period. High-availability infrastructure is configured to deliver quality performance and handle different loads and failures with minimal or zero downtime. High availability is important for web-based applications, as it ensures that the application is always accessible to the end users, even in the event of a server or component failure. High availability can be achieved by eliminating single points of failure, implementing redundancy, load balancing, and failover mechanisms.

#### NEW QUESTION 150

- (Topic 3)

A technician is investigating packet loss to a device that has varying data bursts throughout the day. Which of the following will the technician MOST likely configure to resolve the issue?

- A. Flow control
- B. Jumbo frames
- C. Duplex

D. Port mirroring

**Answer:** A

**Explanation:**

Ethernet flow control is a mechanism for temporarily stopping the transmission of data on Ethernet family computer networks. The goal of this mechanism is to avoid packet loss in the presence of network congestion.

Flow control is a mechanism that allows a device to regulate the amount of data it receives from another device, ensuring that the receiving device is not overwhelmed with data. If the device experiencing packet loss is receiving large bursts of data at times when it is not able to process it quickly enough, configuring flow control could help prevent packets from being lost.

"In theory, flow control can help with situations like a host that can't keep up with the flow of traffic. It enables the host to send an Ethernet PAUSE frame, which asks the switch to hold up for some amount of time so the host can catch its breath. If the switch can, it'll buffer transmissions until the pause expires, and then start sending again. If the host catches up early, it can send another PAUSE frame with a delay of zero to ask the switch to resume. In practice, flow control can cause latency trouble for modern real-time applications such as VoIP, and the same needs are usually met by QoS"

**NEW QUESTION 154**

- (Topic 3)

An infrastructure company is implementing a cabling solution to connect sites on multiple continents. Which of the following cable types should the company use for this project?

- A. Cat 7
- B. Single-mode
- C. Multimode
- D. Cat 6

**Answer:** B

**Explanation:**

Single-mode fiber is a type of optical fiber that has a small core diameter and allows only one mode of light to propagate. This reduces signal attenuation and increases transmission distance, making it suitable for long-distance communication networks.

Single-mode fiber can carry data over thousands of kilometers without requiring repeaters or amplifiers. Single-mode fiber is also immune to electromagnetic interference and has a higher bandwidth than multimode fiber. Therefore, single-mode fiber is the best cable type for connecting sites on multiple continents.

References: [CompTIA Network+ Certification Exam Objectives], [Single-mode optical fiber - Wikipedia]

Single-mode fiber optic cable uses a single ray of light to transmit data. This allows it to achieve very low attenuation and high bandwidth.

Multimode fiber optic cable uses multiple rays of light to transmit data. This results in higher attenuation and lower bandwidth than single-mode cable.

Twisted pair copper cable uses two insulated copper wires to transmit data. It is less expensive than fiber optic cable, but it has higher attenuation and lower bandwidth. When choosing a cable type for a long-distance application, it is important to consider the following factors:

? Attenuation: The amount of signal loss that occurs over the length of the cable.

? Bandwidth: The amount of data that can be transmitted over the cable per second.

? Cost: The cost of the cable and installation.

Single-mode fiber optic cable is the best choice for long-distance applications because it

has the lowest attenuation and highest bandwidth of any cable type. However, it is also the most expensive cable type.

**NEW QUESTION 158**

- (Topic 3)

Which of the following is a valid alternative to maintain a deployed proxy technology while saving physical space in the data center by moving the network service to the virtualization infrastructure?

- A. NFV
- B. SDWAN
- C. Networking as code
- D. VIP

**Answer:** A

**Explanation:**

The valid alternative to maintain a deployed proxy technology while saving physical space in the data center by moving the network service to the virtualization infrastructure is NFV (Network Function Virtualization). NFV is a technique that allows network functions, such as proxies, firewalls, routers, or load balancers, to be implemented as software applications running on virtual machines or containers. NFV reduces the need for dedicated hardware devices and improves scalability and flexibility of network

services. References: CompTIA Network+ N10-008 Certification Study Guide, page 440; The Official CompTIA Network+ Student Guide (Exam N10-008), page 16-11.

NFV can be used to virtualize a wide variety of network functions, including proxy servers. By virtualizing proxy servers, organizations can save physical space in the data center and

improve the scalability and efficiency of their networks.

To virtualize a proxy server using NFV, an organization would need to deploy a virtualization platform, such as VMware ESXi or Microsoft Hyper-V. The organization would then need to install a virtual proxy server appliance on the virtualization platform.

Once the virtual proxy server appliance is installed, it can be configured and used just like a physical proxy server.

NFV is a relatively new technology, but it is quickly gaining popularity as organizations look for ways to improve the efficiency and scalability of their networks.

**NEW QUESTION 161**

- (Topic 3)

A user stores large graphic files. The time required to transfer the files to the server is excessive due to network congestion. The user's budget does not allow for the current switches to be replaced. Which of the following can be used to provide FASTER transfer times?

- A. Half duplex
- B. Jumbo frames
- C. LACP
- D. 802.1Q

**Answer:** B

**Explanation:**

Jumbo frames are Ethernet frames that can carry more than 1500 bytes of payload data. Jumbo frames can reduce the overhead and improve the throughput of large file transfers, as fewer frames are needed to send the same amount of data. Jumbo frames can be used to provide faster transfer times, as long as the network devices support them

**NEW QUESTION 165**

- (Topic 3)

Which of the following network types is composed of computers that can all communicate with one another with equal permissions and allows users to directly share what is on or attached to their computers?

- A. Local area network
- B. Peer-to-peer network
- C. Client-server network
- D. Personal area network

**Answer:** B

**Explanation:**

A peer-to-peer network is a type of network in which each computer (or node) can communicate directly with any other node, without requiring a central server or authority. Each node can act as both a client and a server, and can share its own resources, such as files, printers, or internet connection, with other nodes. A peer-to-peer network allows users to directly access and exchange what is on or attached to their computers, with equal permissions and responsibilities

**NEW QUESTION 166**

- (Topic 3)

A technician is equipped with a tablet, a smartphone, and a laptop to troubleshoot a switch with the help of support over the phone. However, the technician is having issues interconnecting all these tools in troubleshooting the switch. Which Of the following should the technician use to gain connectivity?

- A. PAN
- B. WAN
- C. LAN
- D. MAN

**Answer:** A

**Explanation:**

A PAN stands for Personal Area Network and it is a type of network that connects devices within a small range, such as a few meters. A PAN can use wireless technologies such as Bluetooth or Wi-Fi to interconnect devices such as tablets, smartphones, and laptops. A technician can use a PAN to gain connectivity among these tools and troubleshoot the switch.

References: Network+ Study Guide Objective 1.2: Explain devices, applications, protocols and services at their appropriate OSI layers.

**NEW QUESTION 169**

- (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 customer45.

CompTIA Network+ N10-008 Cert Guide - Chapter 15: Network Troubleshooting Methodology35: What is a Service Level Agreement (SLA)? | ITIL | AXELOS

**NEW QUESTION 170**

- (Topic 3)

A company has been added to an unapproved list because of spam. The network administrator confirmed that a workstation was infected by malware. Which of the following processes did the administrator use to identify the root cause?

- A. Traffic analysis
- B. Availability monitoring
- C. Baseline metrics
- D. Network discovery

**Answer:** A

**Explanation:**

One possible process that the administrator used to identify the root cause of the spam issue is traffic analysis. Traffic analysis is a technique that monitors and analyzes the network traffic that flows between devices or applications. Traffic analysis can help troubleshoot network problems by identifying the source, destination, volume, frequency, and content of the network packets12.

To use traffic analysis to identify the root cause of the spam issue, the administrator could follow these steps:

- ? Install a traffic analysis tool on the server or a device that is connected to the same network as the server, such as Wireshark<sup>3</sup>, tcpdump<sup>4</sup>, or Microsoft Network Monitor<sup>5</sup>.
- ? Start capturing the network traffic and filter it by using the IP address or hostname of the server, or by using a specific port or protocol that is used by the email service, such as SMTP (port 25), POP3 (port 110), or IMAP (port 143).
- ? Analyze the filtered traffic and look for any signs of abnormal or malicious activity, such as high volume of outgoing emails, unknown recipients, suspicious attachments, or spam keywords.
- ? Trace back the source of the spam emails to the infected workstation by using its IP address or MAC address.
- ? Isolate and clean up the infected workstation by using an antivirus or malware removal tool.

The other options are not processes that the administrator used to identify the root cause of the spam issue. Availability monitoring is a technique that measures and reports the uptime and downtime of a network device or service. Availability monitoring can help troubleshoot network problems by detecting any failures or outages that affect the network performance. Baseline metrics are a set of standard measurements that establish the normal behavior or performance of a network device or service. Baseline metrics can help troubleshoot network problems by comparing the current state of the network with the expected state and identifying any deviations or anomalies. Network discovery is a technique that scans and maps the network devices and services that are connected to a network. Network discovery can help troubleshoot network problems by providing a comprehensive and updated view of the network topology and configuration.

#### NEW QUESTION 174

- (Topic 3)

An on-call network technician receives an automated email alert stating that a power supply on a firewall has just powered down. Which of the following protocols would best allow for this level of detailed device monitoring?

- A. TFTP
- B. TLS
- C. SSL
- D. SNMP

**Answer: D**

#### Explanation:

SNMP stands for Simple Network Management Protocol, and it is a protocol that allows network devices to communicate their status, performance, and configuration information to a central management system. SNMP can be used to monitor and manage various aspects of network devices, such as CPU usage, memory utilization, interface statistics, temperature, voltage, power supply, etc. SNMP can also generate alerts or notifications when certain events or thresholds are reached, such as a power supply failure, a link down, or a high traffic volume. SNMP is widely used for network monitoring and troubleshooting purposes, as it provides a comprehensive and detailed view of the network health and performance.

The other options are not correct because they are not protocols that allow for detailed device monitoring. They are:

? TFTP. TFTP stands for Trivial File Transfer Protocol, and it is a protocol that allows for simple and fast file transfer between network devices. TFTP is often used to transfer configuration files, firmware updates, or boot images to network devices, such as routers, switches, or firewalls. TFTP does not provide any monitoring or management capabilities for network devices, nor does it generate any alerts or notifications.

? TLS. TLS stands for Transport Layer Security, and it is a protocol that provides encryption and authentication for data transmission over a network. TLS is often used to secure web traffic, email, or other applications that use TCP as the transport protocol. TLS does not provide any monitoring or management capabilities for network devices, nor does it generate any alerts or notifications.

? SSL. SSL stands for Secure Sockets Layer, and it is a protocol that provides encryption and authentication for data transmission over a network. SSL is the predecessor of TLS, and it is still used to secure some web traffic, email, or other applications that use TCP as the transport protocol. SSL does not provide any monitoring or management capabilities for network devices, nor does it generate any alerts or notifications.

References<sup>1</sup>: What is SNMP? - Definition from WhatIs.com<sup>2</sup>: Network+ (Plus) Certification

| CompTIA IT Certifications<sup>3</sup>: What is TFTP? - Definition from WhatIs.com<sup>4</sup>: What is TLS? - Definition from WhatIs.com<sup>5</sup>: What is SSL? - Definition from WhatIs.com

#### NEW QUESTION 179

- (Topic 3)

Which of the following steps of the troubleshooting methodology would most likely include checking through each level of the OSI model after the problem has been identified?

- A. Establish a theory.
- B. Implement the solution.
- C. Create a plan of action.
- D. Verify functionality.

**Answer: C**

#### Explanation:

Creating a plan of action is the step of the troubleshooting methodology that would most likely include checking through each level of the OSI model after the problem has been identified. According to the web search results, the troubleshooting methodology consists of the following steps: 12

? Define the problem: Identify the symptoms and scope of the problem, and gather relevant information from users, devices, and logs.

? Establish a theory: Based on the information collected, hypothesize one or more possible causes of the problem, and rank them in order of probability.

? Test the theory: Test the most probable cause first, and if it is not confirmed, eliminate it and test the next one. Repeat this process until the root cause is found or a new theory is needed.

? Create a plan of action: Based on the confirmed cause, devise a solution that can resolve the problem with minimal impact and risk. The solution may involve checking through each level of the OSI model to ensure that all layers are functioning properly and that there are no configuration errors, physical damages, or logical inconsistencies<sup>34</sup>

? Implement the solution: Execute the plan of action, and monitor the results. If the problem is not solved, revert to the previous state and create a new plan of action.

? Verify functionality: Confirm that the problem is fully resolved and that the network is restored to normal operation. Perform preventive measures if possible to avoid recurrence of the problem.

? Document the findings: Record the problem description, the solution, and the outcome. Update any relevant documentation, such as network diagrams, policies, or procedures.

References<sup>1</sup>: Troubleshooting Methods for Cisco IP Networks<sup>2</sup>: Troubleshooting Methodologies - CBT IT Certification Training<sup>3</sup>: How to use the OSI Model to Troubleshoot Networks<sup>4</sup>: How is the OSI model used in troubleshooting? – Sage-Answer

#### NEW QUESTION 184

**SIMULATION - (Topic 3)**

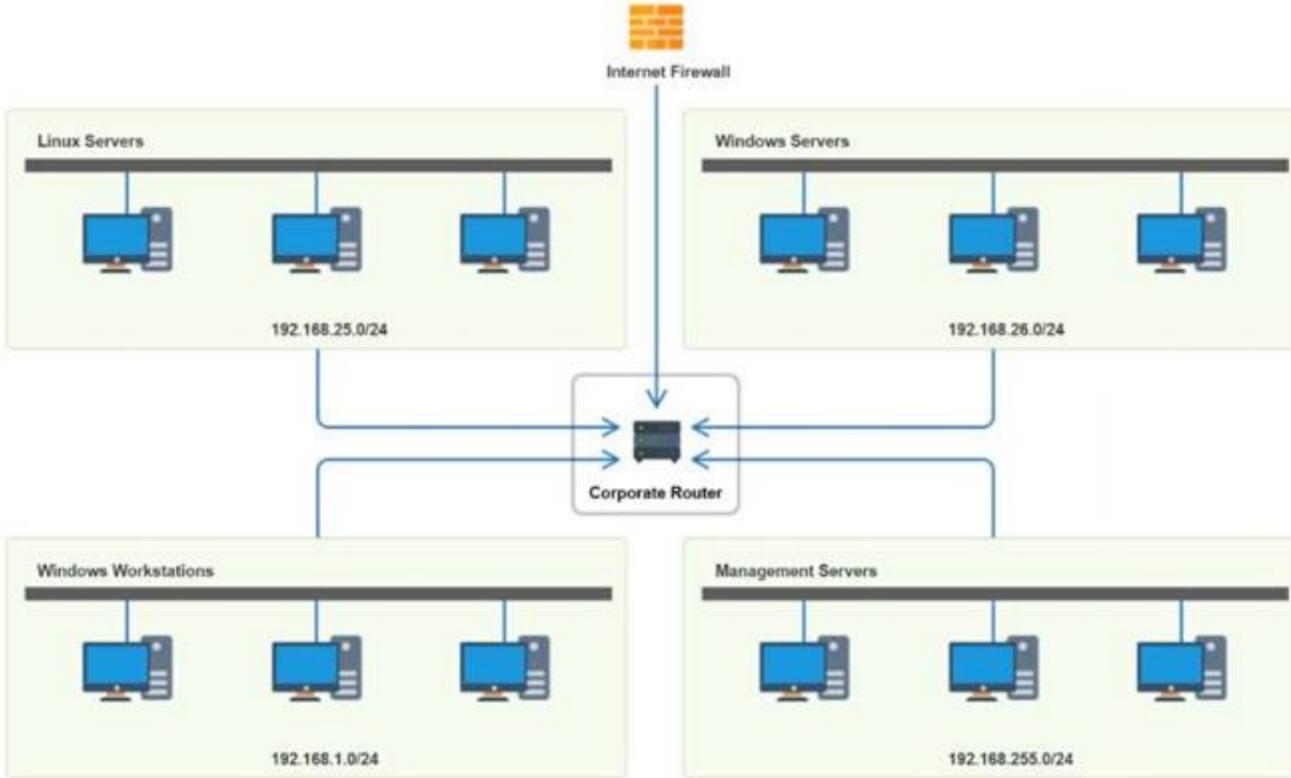
You have been tasked with implementing an ACL on the router that will:

- \* 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 <span style="float: right;">✕</span>					
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 186**

- (Topic 3)

A network security administrator needs to monitor the contents of data sent between a secure network and the rest of the company. Which of the following monitoring methods will accomplish this task?

- A. Port mirroring
- B. Flow data
- C. Syslog entries
- D. SNMP traps

**Answer:** A

**Explanation:**

Port mirroring is a method of monitoring network traffic by copying the data packets from one port to another port on the same switch or router. This allows the network security administrator to analyze the contents of the data sent between different networks without affecting the performance or security of the original traffic. Port mirroring can be configured to capture all traffic or only specific types of traffic, such as VLANs, protocols, or IP addresses.

References:

- ? Port Mirroring - CompTIA Network+ N10-008 Domain 3.1 - YouTube1
- ? CompTIA Network+ Certification Exam Objectives, page 142

**NEW QUESTION 190**

- (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 194**

- (Topic 3)

After a company installed a new IPS, the network is experiencing speed degradation. A network administrator is troubleshooting the issue and runs a speed test. The results from the different network locations are as follows:

Which of the following is the most likely issue?

- A. Packet loss
- B. Bottlenecking
- C. Channel overlap
- D. Network congestion

**Answer:** B

**Explanation:**

The most likely issue is bottlenecking. Bottlenecking occurs when a component or device limits the performance or capacity of the network. In this case, the IPS (intrusion prevention system) may be causing a bottleneck by inspecting and filtering the incoming and outgoing traffic, which reduces the speed and bandwidth.

available for the network devices<sup>12</sup>

To confirm this issue, the network administrator can compare the speed test results before and after installing the IPS, and check the IPS configuration and logs for any errors or warnings. The network administrator can also try to bypass the IPS temporarily and run the speed test again to see if there is any improvement<sup>3</sup>

If the IPS is indeed the cause of the bottleneck, the network administrator can try to optimize the IPS settings, such as adjusting the inspection rules, thresholds, and priorities, to reduce the processing overhead and latency. Alternatively, the network administrator can upgrade the IPS hardware or software, or add more IPS devices to balance the load and increase the throughput<sup>45</sup>

1: What is Network Congestion? Common Causes and How to Fix Them? -

GeeksforGeeks 2: Network congestion - Wikipedia 3: How to Fix Packet Loss - Lifewire 4: How to Optimize Your IPS Performance - Cisco 5: How to Avoid Network Bottlenecks - TechRepublic

#### NEW QUESTION 197

- (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 202

- (Topic 3)

Which of the following can be used to store various types of devices and provide contactless delivery to users?

- A. Asset tags
- B. Biometrics
- C. Access control vestibules
- D. Smart lockers

**Answer: D**

#### NEW QUESTION 207

- (Topic 3)

An engineer is troubleshooting poor performance on the network that occurs during work hours. Which of the following should the engineer do to improve performance?

- A. Replace the patch cables.
- B. Create link aggregation.
- C. Create separation rules on the firewall.
- D. Create subinterfaces on the existing port.

**Answer: B**

#### Explanation:

Link aggregation is a technique that allows multiple network interfaces to act as a single logical interface, increasing the bandwidth and redundancy of the network connection. Link aggregation can improve the performance of the network by balancing the traffic load across multiple links and providing failover in case one link fails. Link aggregation is also known as port trunking, port channeling, or NIC teaming.

References: CompTIA Network+ N10-008 Cert Guide, Chapter 3, Section 3.3

#### NEW QUESTION 208

- (Topic 3)

A network architect needs to create a wireless field network to provide reliable service to public safety vehicles. Which of the following types of networks is the best solution?

- A. Mesh
- B. Ad hoc
- C. Point-to-point
- D. Infrastructure

**Answer: A**

#### Explanation:

A mesh network is the best solution for creating a wireless field network to provide reliable service to public safety vehicles. A mesh network is a type of wireless network that consists of multiple nodes that communicate with each other directly or through intermediate nodes, forming a web-like topology. A mesh network does not rely on a central access point or router, but rather on the cooperation and coordination of the nodes themselves. A mesh network has several advantages for public safety applications, such as<sup>12</sup>:

? High availability and resilience: A mesh network can automatically route around failures or congestion, ensuring that the network remains operational even if some nodes are damaged or disconnected. A mesh network can also self-heal and self-configure, adapting to changes in the network topology or environment.

? Extended coverage and scalability: A mesh network can extend the wireless signal beyond the range of a single node, by using other nodes as relays or repeaters. A mesh network can also accommodate more nodes and devices, by adding more links and paths between them.

? Low cost and easy deployment: A mesh network can reduce the cost and complexity of installing and maintaining a wireless infrastructure, by eliminating the need for expensive cabling, towers, or antennas. A mesh network can also be deployed quickly and flexibly, by simply adding or removing nodes as needed.

A mesh network is especially suitable for public safety vehicles, because it can provide reliable wireless communication in challenging scenarios, such as<sup>12</sup>:

? Disaster response: A mesh network can be deployed rapidly in areas where the existing wireless infrastructure is damaged or unavailable, such as after an earthquake, flood, or fire. A mesh network can also support emergency services, such as fire fighting, search and rescue, or medical assistance, by enabling data, voice, and video transmission among the responders and command centers.

? Mobile surveillance: A mesh network can enable real-time monitoring and control of public safety vehicles, such as police cars, ambulances, or drones, by

providing high-bandwidth and low-latency wireless connectivity. A mesh network can also support video streaming, location tracking, remote sensing, or analytics applications for public safety purposes.

? Event management: A mesh network can enhance the security and efficiency of large-scale events, such as concerts, festivals, or parades, by providing wireless coverage and capacity for the event organizers and participants. A mesh network can also support crowd management, traffic control, or public announcement applications for event management.

The other options are not the best solutions for creating a wireless field network to provide reliable service to public safety vehicles. An ad hoc network is a type of wireless network that consists of devices that communicate with each other directly without any central coordination or infrastructure. An ad hoc network is simple and flexible, but it has limited scalability and performance<sup>3</sup>. A point-to-point network is a type of wireless network that consists of two devices that communicate with each other over a single link. A point-to-point network is fast and secure, but it has limited coverage and functionality. An infrastructure network is a type of wireless network that consists of devices that communicate with each other through an access point or router. An infrastructure network is stable and robust, but it has high cost and complexity.

#### NEW QUESTION 213

- (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 218

- (Topic 3)

A network engineer has added a new route on a border router and is trying to determine if traffic is using the new route. Which of the following commands should the engineer use?

- A. ping
- B. arp
- C. tracert
- D. route

**Answer:** C

#### Explanation:

The tracert command is a network diagnostic tool that traces the route of packets from the source host to the destination host. It displays the IP addresses and hostnames of the routers along the path, as well as the time taken for each hop. The tracert command can be used to determine if traffic is using the new route by comparing the output before and after adding the route. If the new route is effective, the tracert command should show a different or shorter path to the destination host.

ReferencesNetworking Commands For Troubleshooting Windows - GeeksforGeeksNine Switch Commands Every Cisco Network Engineer Needs to Know

#### NEW QUESTION 223

- (Topic 3)

A network administrator needs to create a way to redirect a network resource that has been on the local network but is now hosted as a SaaS solution. Which of the following records should be used to accomplish the task?

- A. TXT
- B. AAA
- C. PTR
- D. CNAME

**Answer:** D

#### Explanation:

CNAME stands for Canonical Name, and it is a type of DNS record that creates an alias for another domain name. A CNAME record can be used to redirect a network resource that has been moved to a different location, such as a SaaS solution. For example, if a web server that was previously hosted on the local network with the domain name `www.example.com` is now hosted by a SaaS provider with the domain name `www.saasprovider.com`, a CNAME record can be created to point `www.example.com` to `www.saasprovider.com`. This way, the users can still access the web server using the original domain name, and the DNS server will resolve it to the new domain name. References

? CNAME is one of the common DNS record types covered in Objective 1.6 of the CompTIA Network+ N10-008 certification exam<sup>1</sup>.

? CNAME can be used to redirect a network resource that has been moved to a different location<sup>23</sup>.

? CNAME creates an alias for another domain name<sup>23</sup>.

1: CompTIA Network+ Certification Exam Objectives, page 4 2: DNS Record Types – N10- 008 CompTIA Network+ : 1.6 3: The Official CompTIA Network+ Student Guide (Exam N10-008), Chapter 1, page 32

#### NEW QUESTION 226

- (Topic 3)

A network technician is implementing a solution that will allow end users to gain access to multiple applications after logging on. Which of the following authentication methods would allow this type of access?

- A. SSO
- B. LDAP
- C. EAP
- D. TACACS+

**Answer:** A

#### NEW QUESTION 229

- (Topic 3)

Two users on a LAN establish a video call. Which of the following OSI model layers ensures the initiation coordination, and termination of the call?

- A. Session
- B. Physical
- C. Transport
- D. Data link

**Answer:** A

#### Explanation:

The OSI model layer that ensures the initiation, coordination, and termination of a video call is the session layer. The session layer is responsible for establishing, maintaining, and terminating communication sessions between two devices on a network.

#### NEW QUESTION 231

- (Topic 3)

An auditor assessing network best practices was able to connect a rogue switch into a network Jack and get network connectivity. Which of the following controls would BEST address this risk?

- A. Activate port security on the switchports providing end user access.
- B. Deactivate Spanning Tree Protocol on network interfaces that are facing public areas.
- C. Disable Neighbor Resolution Protocol in the Layer 2 devices.
- D. Ensure port tagging is in place for network interfaces in guest areas

**Answer:** A

#### NEW QUESTION 232

- (Topic 3)

Which of the following OSI model layers would allow a user to access and download files from a remote computer?

- A. Session
- B. Presentation
- C. Network
- D. Application

**Answer:** D

#### Explanation:

The application layer of the OSI model (Open Systems Interconnection) is responsible for providing services to applications that allow users to access and download files from a remote computer. These services include file transfer, email, and web access, as well as other related services. In order for a user to access and download files from a remote computer, the application layer must provide the necessary services that allow the user to interact with the remote computer.

#### NEW QUESTION 233

- (Topic 3)

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 stands for Service Set Identifier and is the name of a wireless network. A wireless access point (WAP) can support multiple SSIDs, which allows different wireless access through the same equipment. For example, the store owner can create one SSID for business equipment and another SSID for patron use, and assign different security settings and bandwidth limits for each SSID. MIMO stands for Multiple Input Multiple Output and is a technology that uses multiple antennas to improve wireless performance. TKIP stands for Temporal Key Integrity Protocol and is an encryption method for wireless networks. LTE stands for Long Term Evolution and is a cellular network technology. References: CompTIA Network+ Certification Exam Objectives Version 7.0 (N10-007), Objective 3.1: Given a scenario, install and configure wireless LAN infrastructure and implement the appropriate technologies in support of wireless capable devices.

#### NEW QUESTION 236

- (Topic 3)

A newly installed multifunction copier needs to be set up so scanned documents can be emailed to recipients. Which of the following ports from the copier's IP address should be allowed?

- A. 22
- B. 25
- C. 53
- D. 80

**Answer:** B

**Explanation:**

Port 25 is the port number that is commonly used for Simple Mail Transfer Protocol (SMTP), which is a protocol that allows sending and receiving email messages over a network. Port 25 from the copier's IP address should be allowed so that scanned documents can be emailed to recipients.

Port 22 is the port number that is commonly used for Secure Shell (SSH), which is a protocol that allows secure and encrypted remote access and control of a device over a network. Port 22 from the copier's IP address is not necessary for emailing scanned documents.

Port 53 is the port number that is commonly used for Domain Name System (DNS), which is a protocol that allows resolving domain names to IP addresses and vice versa on a network. Port 53 from the copier's IP address is not necessary for emailing scanned documents.

Port 80 is the port number that is commonly used for Hypertext Transfer Protocol (HTTP), which is a protocol that allows transferring web pages and other resources over a network. Port 80 from the copier's IP address is not necessary for emailing scanned documents.

**NEW QUESTION 240**

- (Topic 3)

A network administrator is creating a subnet for a remote office that has 53 network devices. An additional requirement is to use the most efficient subnet. Which of the following CIDR notations indicates the appropriate number of IP addresses with the LEAST amount of unused addresses? (Choose Correct option and give explanation directly from CompTIA Network+ Study guide or documents)

- A. /24
- B. /26
- C. /28
- D. /32

**Answer:** B

**Explanation:**

This CIDR notation indicates that there are 64 IP addresses, of which 62 are usable for network devices. This provides the LEAST amount of unused addresses, making it the most efficient subnet for a remote office with 53 network devices. According to the CompTIA Network+ Study Guide, "Subnetting allows you to divide one large network into smaller, more manageable networks or subnets."

**NEW QUESTION 242**

- (Topic 3)

A Wi-Fi network was originally configured to be able to handle interference from a microwave oven. The microwave oven was recently removed from the office. Now the network administrator wants to optimize the system to maximize the range of the signal. The main sources of signal degradation are the numerous cubicles and wooden walls between the WAP and the intended destination. Which of the following actions should the administrator take?

- A. Implement CDMA.
- B. Change from omni to directional.
- C. Change the SSID.
- D. Change the frequency.

**Answer:** D

**Explanation:**

- the microwave was already removed from the office

- the signal is OK now

- Notice that the question mentions "numerous cubicles and wooden walls" - meaning the signal now won't have the interference as before

- KEY POINT: the admin wants to "maximize the range of the signal:"

Manually change the frequency to 2.4 GHz for more reliable speeds and range. While 5 GHz gives you a stronger signal, it doesn't travel through walls or ceilings as well, so it doesn't give you the best range.

"Microwave ovens: Older microwave ovens, which might not have sufficient shielding, can emit relatively high-powered signals in the 2.4GHz band, resulting in significant interference with WLAN devices operating in the 2.4GHz band."

**NEW QUESTION 243**

- (Topic 3)

Which of the following can be used to validate domain ownership by verifying the presence of pre-agreed content contained in a DNS record?

- A. SOA
- B. SRV
- C. AAA
- D. TXT

**Answer:** D

**Explanation:**

"One final usage of the TXT resource record is how some cloud service providers, such as Azure, validate ownership of custom domains. You are provided with data to include in your TXT record, and once that is created, the domain is verified and able to be used. The thought is that if you control the DNS, then you own the domain name."

**NEW QUESTION 247**

- (Topic 3)

An engineer needs to restrict the database servers that are in the same subnet from communicating with each other. The database servers will still need to communicate with the application servers in a different subnet. In some cases, the database servers will be clustered, and the servers will need to communicate with other cluster members. Which of the following technologies will be BEST to use to implement this filtering without creating rules?

- A. Private VLANs
- B. Access control lists
- C. Firewalls
- D. Control plane policing

**Answer:** A

**Explanation:**

"Use private VLANs: Also known as port isolation, creating a private VLAN is a method of restricting switch ports (now called private ports) so that they can communicate only with a particular uplink. The private VLAN usually has numerous private ports and only one uplink, which is usually connected to a router, or firewall."

**NEW QUESTION 248**

- (Topic 3)

An engineer is gathering data to determine the effectiveness of UPSs in use at remote retail locations. Which of the following statistics can the engineer use to determine the availability of the remote network equipment?

- A. Uptime
- B. NetFlow baseline
- C. SNMP traps
- D. Interface statistics

**Answer:** A

**Explanation:**

Uptime is a statistic that can be used to determine the availability of the remote network equipment. Uptime is the amount of time that a device or system has been running without experiencing any failures or disruptions. It is commonly expressed as a percentage of total time, such as 99.99% uptime. By measuring the uptime of the network equipment at the remote retail locations, the engineer can determine how reliable and available the equipment is.

**NEW QUESTION 249**

- (Topic 3)

Which of the following will reduce routing table lookups by performing packet forwarding decisions independently of the network layer header?

- A. MPLS
- B. mGRE
- C. EIGRP
- D. VRRP

**Answer:** A

**Explanation:**

Multiprotocol Label Switching, or MPLS, is a networking technology that routes traffic using the shortest path based on "labels," rather than network addresses, to handle forwarding over private wide area networks. As a scalable and protocol-independent solution, MPLS assigns labels to each data packet, controlling the path the packet follows. MPLS greatly improves the speed of traffic, so users don't experience downtime when connected to the network.

**NEW QUESTION 251**

- (Topic 3)

Which of the following bandwidth management techniques uses buffers at the client side to prevent TCP retransmissions from occurring when the ISP starts to drop packets of specific types that exceed the agreed traffic rate?

- A. Traffic shaping
- B. Traffic policing
- C. Traffic marking
- D. Traffic prioritization

**Answer:** D

**NEW QUESTION 256**

- (Topic 3)

A company's data center is hosted at its corporate office to ensure greater control over the security of sensitive data. During times when there are increased workloads, some of the company's non-sensitive data is shifted to an external cloud provider. Which of the following cloud deployment models does this describe?

- A. Hybrid
- B. Community
- C. Public
- D. Private

**Answer:** A

**NEW QUESTION 257**

- (Topic 3)

A technician wants to monitor and provide traffic segmentation across the network. The technician would like to assign each department a specific identifier. Which of the following will the technician MOST likely use?

- A. Flow control
- B. Traffic shaping
- C. VLAN tagging

D. Network performance baselines

**Answer:** C

**Explanation:**

To monitor and provide traffic segmentation across the network, a technician may use the concept of VLANs (Virtual Local Area Networks). VLANs are a way of dividing a single physical network into multiple logical networks, each with its own unique identifier or "tag."

By assigning each department a specific VLAN identifier, the technician can segment the network traffic and ensure that the different departments' traffic is kept separate from one another. This can help to improve network security, performance, and scalability, as well as allowing for better monitoring and control of the network traffic.

To implement VLANs, the technician will need to configure VLAN tagging on the network devices, such as switches and routers, and assign each department's devices to the appropriate VLAN. The technician may also need to configure VLAN trunking to allow the different VLANs to communicate with each other.

By using VLANs, the technician can effectively monitor and segment the network traffic, providing better control and visibility into the network.

**NEW QUESTION 261**

- (Topic 3)

Logs show an unauthorized IP address entering a secure part of the network every night at 8:00 pm. The network administrator is concerned that this IP address will cause an issue to a critical server and would like to deny the IP address at the edge of the network. Which of the following solutions would address these concerns?

- A. Changing the VLAN of the web server
- B. Changing the server's IP address
- C. Implementing an ACL
- D. Instating a rule on the firewall connected to the web server

**Answer:** D

**NEW QUESTION 265**

- (Topic 3)

An IT technician installs five old switches in a network. In addition to the low port rates on these switches, they also have improper network configurations. After three hours, the network becomes overwhelmed by continuous traffic and eventually shuts down. Which Of the following is causing the issue?

- A. Broadcast storm
- B. Collisions
- C. IP settings
- D. Routing loops

**Answer:** A

**Explanation:**

A broadcast storm is a situation where a network is flooded with broadcast packets, which are sent to all devices on the network. This can consume bandwidth, cause congestion, and degrade performance. A broadcast storm can be caused by improper network configurations, such as loops or misconfigured switches. In this scenario, the old switches may have created loops or failed to filter broadcast packets, resulting in a broadcast storm that overwhelmed the network.

References: CompTIA Network+ Certification Exam Objectives Version 7.0 (N10-007), Objective 2.4: Given a scenario, use appropriate software tools to troubleshoot connectivity issues.

**NEW QUESTION 267**

- (Topic 3)

A network administrator is preparing answers for an annual risk assessment that is required for compliance purposes. Which of the following would be an example of an internal threat?

- A. An approved vendor with on-site offices
- B. An infected client that pulls reports from the firm
- C. A malicious attacker from within the same country
- D. A malicious attacker attempting to socially engineer access into corporate offices

**Answer:** A

**Explanation:**

Insider threat= insider threat is defined as the threat that an employee or a contractor will use his or her authorized access, wittingly or unwittingly, to do harm

**NEW QUESTION 272**

- (Topic 3)

Which of the following is the NEXT step to perform network troubleshooting after identifying an issue?

- A. Implement a solution.
- B. Establish a theory.
- C. Escalate the issue.
- D. Document the findings.

**Answer:** B

**Explanation:**

- 1 Identify the Problem.
- 2 Develop a Theory. 3 Test the Theory.
- 4 Plan of Action.
- 5 Implement the Solution.
- 6 Verify System Functionality.
- 7 Document the Issue.

#### NEW QUESTION 275

- (Topic 3)

A global company has acquired a local company. The companies are geographically separate. The IP address ranges for the two companies are as follows:

- Global company: 10.0.0.0/16
- Local company: 10.0.0.0/24

Which of the following can the network engineer do to quickly connect the two companies?

- A. Assign static routing to advertise the local company's network.
- B. Assign an overlapping IP address range to both companies.
- C. Assign a new IP address range to the local company.
- D. Assign a NAT range to the local company.

**Answer: C**

#### Explanation:

Assigning a new IP address range to the local company is the best option to quickly connect the two companies without causing any IP address conflicts or overlaps. This option requires reconfiguring the local company's network devices and updating the routing tables on both sides, but it avoids the need for any NAT or static routing solutions that may introduce additional complexity, cost, or performance issues. References: 1: Connecting Networks with Overlapping IP Ranges 2: What Is Network Address Translation (NAT)?

#### NEW QUESTION 277

- (Topic 3)

Which of the following most likely determines the size of a rack for installation? (Select two).

- A. KVM size
- B. Switch depth
- C. Hard drive size
- D. Cooling fan speed
- E. Outlet amperage
- F. Server height

**Answer: BF**

#### Explanation:

The size of a rack for installation depends on several factors, such as the available space, the power and cooling requirements, and the dimensions of the equipment to be installed. Two of the most important dimensions to consider are the switch depth and the server height. Switch depth refers to the length of the switch from front to back, which determines how much space is needed inside the rack. Server height refers to the vertical space occupied by the server, which is measured in rack units (RU) or U. One rack unit is equal to 1.75 inches. The height of the rack should be able to accommodate the total number of rack units needed for the servers and other devices, as well as some extra space for cable management and airflow. References: CompTIA Network+ N10-008 Cert Guide, Chapter 2, Section 2.5

#### NEW QUESTION 278

- (Topic 3)

Which of the following is the most likely reason an insurance brokerage would enforce VPN usage?

- A. To encrypt sensitive data in transit
- B. To secure the endpoints
- C. To maintain contractual agreements
- D. To comply with data retention requirements

**Answer: A**

#### Explanation:

The most likely reason an insurance brokerage would enforce VPN usage is to encrypt sensitive data in transit. A VPN (Virtual Private Network) is a technology that creates a secure and encrypted tunnel between two or more devices over a public network, such as the internet. A VPN allows users to access remote resources or services as if they were on the same private network, while protecting their data from interception, modification, or spoofing by malicious actors. An insurance brokerage would use a VPN to protect the confidentiality and integrity of sensitive data, such as customer information, financial records, or insurance policies, that are transmitted over the internet. References: CompTIA Network+ N10-008 Certification Study Guide, page 403; The Official CompTIA Network+ Student Guide (Exam N10-008), page 15-5.

#### NEW QUESTION 280

- (Topic 3)

An employee reports to a network administrator that internet access is not working. Which of the following should the administrator do FIRST?

- A. Establish a theory of probable cause.
- B. Identify symptoms.
- C. Determine if anything has changed.
- D. Ask the user to restart the computer.

**Answer: C**

#### Explanation:

When a user reports that internet access is not working, it is important to first determine if there have been any recent changes to the network or the user's computer that could have caused the issue. This could include changes to the network configuration, the installation of new software or hardware, or other events that could have impacted the user's ability to access the internet. By determining if anything has changed, the administrator can narrow down the possible causes of the issue and focus on addressing the most likely cause.

#### NEW QUESTION 285

- (Topic 3)

A company cell phone was stolen from a technician's vehicle. The cell phone has a passcode, but it contains sensitive information about clients and vendors. Which of the following should also be enabled?

- A. Factory reset
- B. Autolock
- C. Encryption
- D. Two-factor authentication

**Answer: C**

#### NEW QUESTION 286

- (Topic 3)

A security engineer wants to provide a secure, dedicated, alternate access method into an IT network infrastructure to administer connected devices and IT assets. Which of the following is the engineer most likely to implement?

- A. Remote desktop gateway
- B. Authentication and authorization controls
- C. Out-of-band management
- D. Secure Shell

**Answer: C**

#### Explanation:

Out-of-band management is a method of accessing network devices and IT assets through a dedicated channel that is separate from the normal data traffic. This provides a secure and alternate way to administer the network infrastructure, especially in case of failures or emergencies. Remote desktop gateway is a service that allows remote access to desktops and applications on a network. Authentication and authorization controls are mechanisms that verify the identity and permissions of users and devices on a network. Secure Shell is a protocol that encrypts the communication between a client and a server on a network.

#### NEW QUESTION 290

- (Topic 3)

Which of the following architectures reduces network latency by enforcing a limit on the number of switching devices on the frame's path between any internal hosts?

- A. Spine and leaf
- B. Software-defined network
- C. Three-tiered
- D. Collapsed core

**Answer: A**

#### Explanation:

It does this by using a two-level hierarchy of switches, where the spine switches connect to the leaf switches, which in turn connect to the end hosts. This reduces the number of hops a packet must take from one host to another, thus reducing latency. According to the CompTIA Network+ N10-008 Exam Guide, the Spine and Leaf topology is a modern architecture that is used to reduce latency in large networks.

#### NEW QUESTION 293

- (Topic 3)

A customer called the help desk to report a network issue. The customer recently added a hub between the switch and the router in order to duplicate the traffic flow to a logging device. After adding the hub, all the other network components that were connected to the switch slowed more than expected. Which of the following is the MOST likely cause of the issue?

- A. Duplex mismatch
- B. Flow control failure
- C. STP malfunction
- D. 802.1Q disabled

**Answer: A**

#### Explanation:

A duplex mismatch is a situation where two devices on a network have different duplex settings, such as full-duplex or half-duplex. Full-duplex means that a device can send and receive data simultaneously, while half-duplex means that a device can only send or receive data at a time. A duplex mismatch can cause performance issues, such as collisions, errors, or slow throughput. In this scenario, the customer added a hub between the switch and the router. A hub is a device that operates at half-duplex and broadcasts all traffic to all ports. A switch and a router are devices that operate at full-duplex and forward traffic to specific ports. Therefore, adding a hub between the switch and the router can cause a duplex mismatch and slow down all the other network components that were connected to the switch.

References: <https://www.comparitech.com/net-admin/hub-vs-switch-vs-router/> <https://www.cisco.com/c/en/us/support/docs/lan-switching/ethernet/10561-3.html>

#### NEW QUESTION 294

- (Topic 3)

A network technician is investigating a trouble ticket for a user who does not have network connectivity. All patch cables between the wall jacks and computers in the building were upgraded over the weekend from Cat 5 to Cat 6. The newly installed cable is crimped with a TIA/EIA 568A on one end and a TIA/EIA 568B on the other end. Which of the following should the technician do to most likely fix the issue?

- A. Ensure the switchport has POE enabled.
- B. Crimp the cable as a straight-through cable.
- C. Ensure the switchport has STP enabled.
- D. Crimp the cable as a rollover cable.

**Answer:** B

**Explanation:**

Crimping the cable as a straight-through cable is the most likely fix for the issue where users are unable to access any network resources after upgrading from Cat 5 to Cat 6 cables. Crimping is a process of attaching connectors to the ends of cables using a tool called a crimper. A straight-through cable is a type of twisted-pair cable that has the same wiring scheme on both ends, meaning that each pin on one end is connected to the same pin on the other end. A straight-through cable is used to connect devices that operate on different layers of the OSI model, such as a computer and a switch, or a switch and a router. If the newly installed cable is crimped with TIA/EIA 568A on one end and TIA/EIA 568B on the other end, it becomes a crossover cable. A crossover cable is a type of twisted-pair cable that has opposite wiring schemes on both ends, meaning that each pin on one end is connected to a different pin on the other end. A crossover cable is used to connect devices that operate on the same layer of the OSI model, such as two computers or two switches. Using a crossover cable instead of a straight-through cable can cause network communication errors or failures. References: [CompTIA Network+ Certification Exam Objectives], Straight Through vs Crossover Cable: What's The Difference?

**NEW QUESTION 295**

- (Topic 3)

Which of the following policies outlines the software and hardware requirements for using personally owned devices to conduct business?

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

**Answer:** C

**Explanation:**

The policy that outlines the software and hardware requirements for using personally owned devices to conduct business is BYOD (Bring Your Own Device). BYOD is a practice that allows employees to use their own devices, such as laptops, tablets, or smartphones, to access corporate resources and applications. BYOD can offer benefits such as increased productivity, flexibility, and satisfaction for employees, as well as reduced costs for employers. However, BYOD also poses challenges and risks, such as security, compatibility, and support issues. Therefore, a BYOD policy is needed to define the rules and expectations for using personal devices in a business environment. A BYOD policy typically covers topics such as device eligibility, security requirements, acceptable use, data ownership, privacy, and liability. References: CompTIA Network+ N10-008 Certification Study Guide, page 362; The Official CompTIA Network+ Student Guide (Exam N10-008), page 14-2.

**NEW QUESTION 299**

- (Topic 3)

A security analyst found the following vulnerability on the company's website:

```
<INPUT TYPE="IMAGE" SRC="javascript : alert ('test') ; ">
```

Which of the following should be implemented to prevent this type of attack in the future?

- A. Input sanitization
- B. Output encoding
- C. Code obfuscation
- D. Prepared statements

**Answer:** A

**Explanation:**

Input sanitization is the process of validating and filtering the user input to prevent malicious code or commands from being executed on the web server or the web browser. Input sanitization can prevent this type of attack, which is called cross-site scripting (XSS), by removing or escaping any special characters or scripts that are not expected or allowed in the input field. Input sanitization can be implemented on the server-side or the client-side, or both, to enhance the security of the web application.

References

- ? 1: Web Application Attacks – N10-008 CompTIA Network+ : 3.2
- ? 2: CompTIA Network+ N10-008 Certification Study Guide, page 317
- ? 3: CompTIA Network+ N10-008 Exam Subnetting Quiz, question 15
- ? 4: CompTIA Network+ N10-008 Certification Practice Test, question 6

**NEW QUESTION 300**

- (Topic 3)

Which of the following needs to be tested to achieve a Cat 6a certification for a company's data cawing?

- A. RJ11
- B. LC ports
- C. Patch panel
- D. F-type connector

**Answer:** D

**NEW QUESTION 305**

- (Topic 3)

At which of the following OSI model layers does a MAC filter list for a wireless infrastructure operate?

- A. Physical
- B. Network
- C. Session
- D. Data link

**Answer:** D

**Explanation:**

A MAC filter list is a security feature that allows or denies access to a wireless network based on the MAC address of the device. A MAC address is a unique identifier assigned to a network interface card (NIC) at the physical layer of the OSI model. However, MAC filtering operates at the data link layer of the OSI model, where MAC addresses are used to encapsulate and deliver data frames between devices on the same network segment.

References: CompTIA Network+ Certification Exam Objectives Version 7.0 (N10-007), Objective 3.1: Given a scenario, install and configure wireless LAN infrastructure and implement the appropriate technologies in support of wireless capable devices.

**NEW QUESTION 309**

- (Topic 3)

Which of the following compromises internet-connected devices and makes them vulnerable to becoming part of a botnet? (Select TWO)

- A. Deauthentication attack
- B. Malware infection
- C. IP spoofing
- D. Firmware corruption
- E. Use of default credentials
- F. Dictionary attack

**Answer:** BF

**NEW QUESTION 314**

- (Topic 3)

An IT administrator needs to connect older smart-plug devices to the network. The administrator wants to prevent future issues from occurring by using an 802.11 standard that only operates on the 2.4GHz frequency. Which of the following standards should the administrator choose?

- A. 802.11a
- B. 802.11ac
- C. 802.11ax
- D. 802.11b

**Answer:** D

**Explanation:**

802.11b is a wireless networking standard that operates on the 2.4 GHz frequency band. It supports a maximum data rate of 11 Mbps and has a range of about 35 meters indoors and 140 meters outdoors. 802.11b is compatible with older smart-plug devices that use the same frequency band, but it may suffer from interference from other devices that also use the 2.4 GHz band, such as microwave ovens, Bluetooth devices, and cordless phones.

**NEW QUESTION 315**

- (Topic 3)

A network contains 25 access points. Which of the following devices would be best to change configurations on all the devices remotely?

- A. WLAN controller
- B. Load balancer
- C. Bridge
- D. Layer 3 switch

**Answer:** A

**Explanation:**

A WLAN controller is a device that can centrally manage and configure multiple access points in a wireless network. A WLAN controller can change settings on all the devices remotely, such as SSIDs, security policies, firmware updates, and channel assignments. A WLAN controller can also monitor the performance and status of the access points and provide load balancing and fault tolerance.

**NEW QUESTION 318**

SIMULATION - (Topic 3)

A network technician needs to resolve some issues with a customer's SOHO network.

The customer reports that some of the devices are not connecting to the network, while others appear to work as intended.

**INSTRUCTIONS**

Troubleshoot all the network components and review the cable test results by Clicking on each device and cable.

Diagnose the appropriate component(s) by identifying any components with a problem and recommend a solution to correct each problem.



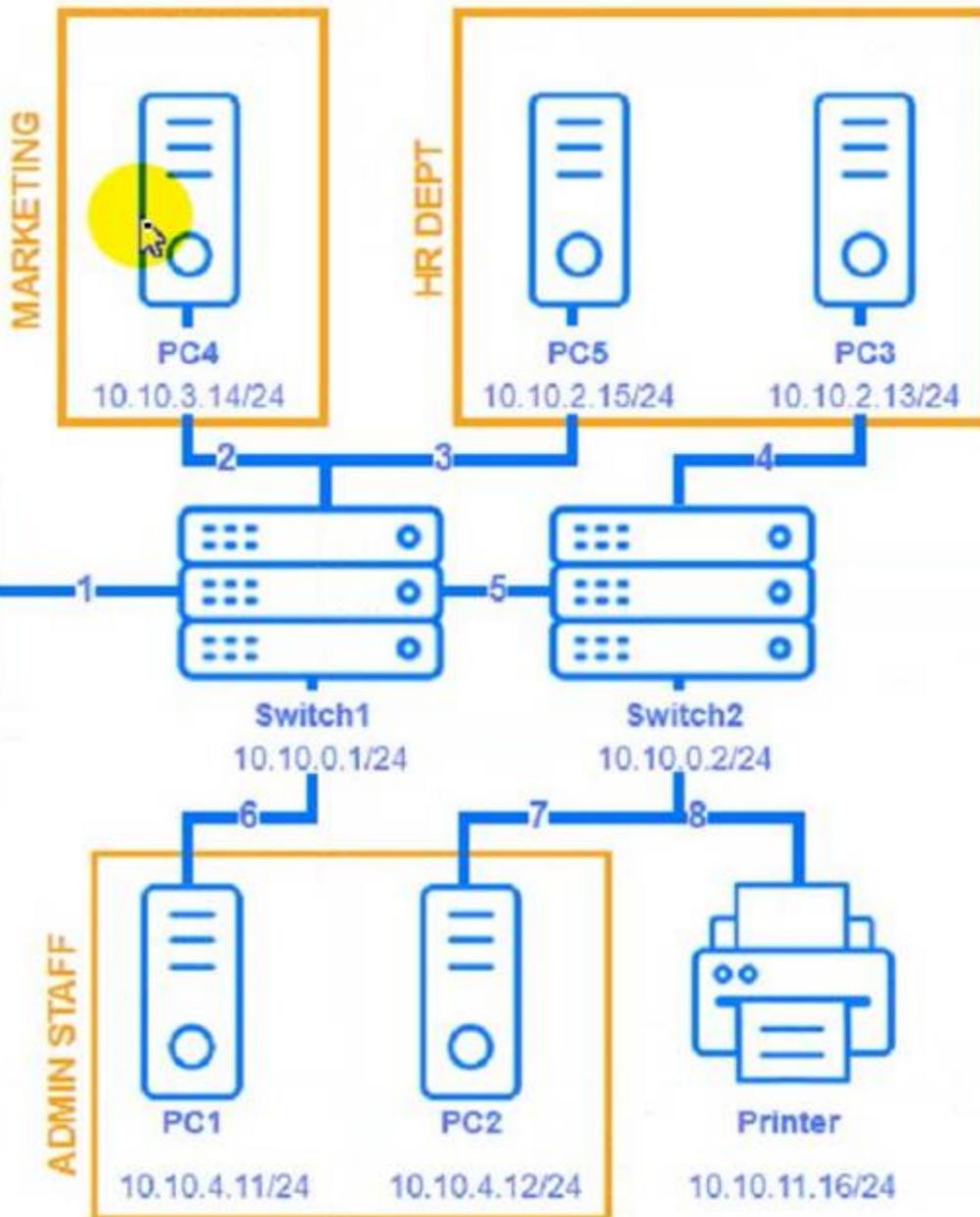
Cable Test Results



Server1  
10.10.2.5/24



VLAN Usage



PC1 - ADMIN STAFF



C:\>

PC3 - HR DEPT



```
C:\>
```

PC4 - MARKETING



```
C:\>
```

PC5 - HR DEPT



```
C:\>
```



Cable Test Results:

Cable 1:

Cable 1	Cable 2	Cable 3	Cable 4	Cable 5	Cable 6	Cable 7	Cable 8			
Length:	22M		1	2	3	6	4	5	7	8
VLAN:	VLAN 2									
Speed:	1000 FDX									
Port:	GigabitEthernet0/1									
			1	2	3	6	4	5	7	8

Cable 2:

Cable 2	Cable 3	Cable 4	Cable 5	Cable 6	Cable 7	Cable 8				
Length:	103M		1	2	3	6	4	5	7	8
VLAN:	VLAN 3									
Speed:	1000 FDX									
Port:	GigabitEthernet0/4									
			1	2	3	6	4	5	7	8

Cable 3:

Cable 1	Cable 2	Cable 3	Cable 4	Cable 5	Cable 6	Cable 7	Cable 8			
Length:	18M		1	2	3	6	4	5	7	8
VLAN:	VLAN 2									
Speed:	1000 FDX									
Port:	GigabitEthernet0/3									
			1	2	3	6	4	5	7	8

Cable 4:

Cable 1	Cable 2	Cable 3	Cable 4	Cable 5	Cable 6	Cable 7	Cable 8				
Length: 20M				1	2	3	6	4	5	7	8
VLAN: VLAN 1											
Speed: 1000 FDX				1	2	3	6	4	5	7	8
Port: GigabitEthernet0/2											

**Cable Test Results** ✕

Cable 1	Cable 2	Cable 3	Cable 4	Cable 5	Cable 6	Cable 7	Cable 8				
Length: 16M				1	2	3	6	4	5	7	8
VLAN: VLAN 1											
Speed: 1000 FDX											
Port: GigabitEthernet0/5											

**Cable Test Results** ✕

Cable 1	Cable 2	Cable 3	Cable 4	Cable 5	Cable 6	Cable 7	Cable 8				
Length: 42M				1	2	3	6	4	5	7	8
VLAN: VLAN 4											
Speed: 1000 FDX											
Port: GigabitEthernet0/2											

**Cable Test Results** ✕

Cable 1	Cable 2	Cable 3	Cable 4	Cable 5	Cable 6	Cable 7	Cable 8				
Length: 12M				1	2	3	6	4	5	7	8
VLAN: VLAN 1											
Speed: 1000 FDX											
Port: GigabitEthernet0/1											

### Cable Test Results

Cable 1	Cable 2	Cable 3	Cable 4	Cable 5	Cable 6	Cable 7	Cable 8				
Length: 90M				1	2	3	6	4	5	7	8
VLAN: VLAN 1											
Speed: 1000 FDX											
Port: GigabitEthernet0/3											
				1	2	3	6	4	5	7	8

### Printer

#### HP Network Configuration Page

Model: HP Officejet Pro 8610

---

#### General Information

Network Status	Ready
Active Connection Type	Wired
URL(s) for Embedded Web Server	<a href="http://HP4D30EC">http://HP4D30EC</a> , <a href="http://192.168.2.9">http://192.168.2.9</a>
Firmware Revision	FDP1CN1347A
Hostname	HP4D30EC
Serial Number	CN3AO1KG42
Internet	Not Connected

---

#### 802.3 Wired

Hardware Address (MAC)	9c:b6:54:4d:30:ec
------------------------	-------------------

### Printer

Internet	Not Connected
<b>802.3 Wired</b>	
Hardware Address (MAC)	9c:b6:54:4d:30:ec
Link Configuration	None
<b>IPv4</b>	
IP Address	10.10.11.56
Subnet Mask	255.255.255.0
Default Gateway	10.10.11.1
Configuration Source	DHCP
Primary DNS Server	8.8.8.8
Secondary DNS Server	8.8.4.4
Total Packets Transmitted	15655
Total Packets Received	394068

### Remediation

Select Device/Cable

- Select Device/Cable
- PC1
- PC2
- PC3
- PC4
- PC5
- Printer
- Server1
- Switch1
- Switch2
- Cable1
- Cable2
- Cable3
- Cable4
- Cable5
- Cable6
- Cable7
- Cable8

A. Mastered

B. Not Mastered

**Answer:** A

**Explanation:**

(Note: Ips will be change on each simulation task, so we have given example answer for the understanding)

To troubleshoot all the network components and review the cable test results, you can use the following steps:

- ? Click on each device and cable to open its information window.
- ? Review the information and identify any problems or errors that may affect the network connectivity or performance.
- ? Diagnose the appropriate component(s) by identifying any components with a problem and recommend a solution to correct each problem.
- ? Fill in the remediation form using the drop-down menus provided. Here is an example of how to fill in the remediation form for PC1:
- ? The component with a problem is PC1.
- ? The problem is Incorrect IP address.
- ? The solution is Change the IP address to 192.168.1.10.

You can use the same steps to fill in the remediation form for other components.

To enter commands in each device, you can use the following steps:

- ? Click on the device to open its terminal window.
- ? Enter the command ipconfig /all to display the IP configuration of the device, including its IP address, subnet mask, default gateway, and DNS servers.
- ? Enter the command ping <IP address> to test the connectivity and reachability to another device on the network by sending and receiving echo packets. Replace <IP address> with the IP address of the destination device, such as 192.168.1.1 for Core Switch 1.
- ? Enter the command tracert <IP address> to trace the route and measure the latency of packets from the device to another device on the network by sending and receiving packets with increasing TTL values. Replace <IP address> with the IP address of the destination device, such as 192.168.1.1 for Core Switch 1.

Here is an example of how to enter commands in PC1:

- ? Click on PC1 to open its terminal window.
  - ? Enter the command ipconfig /all to display the IP configuration of PC1. You should see that PC1 has an incorrect IP address of 192.168.2.10, which belongs to VLAN 2 instead of VLAN 1.
  - ? Enter the command ping 192.168.1.1 to test the connectivity to Core Switch 1. You should see that PC1 is unable to ping Core Switch 1 because they are on different subnets.
  - ? Enter the command tracert 192.168.1.1 to trace the route to Core Switch 1. You should see that PC1 is unable to reach Core Switch 1 because there is no route between them.
- You can use the same steps to enter commands in other devices, such as PC3, PC4, PC5, and Server 1.

**NEW QUESTION 321**

- (Topic 3)

A network engineer is designing a wireless network that has the following requirements:

- Network speed must be higher than 100Mbps
- Must use the 2.4GHz and 5GHz bands

Which of the following 802.11 standards should the engineer select?

- A. 802.11a
- B. 802.11b
- C. 802.11g
- D. 802.11n

**Answer:** D

**Explanation:**

\* 802.11n is a wireless standard that supports up to 600 Mbps data rate and operates in both the 2.4 GHz and 5 GHz frequency bands. 802.11n uses multiple-input multiple-output (MIMO) technology to increase the number of spatial streams and improve the wireless performance and range. 802.11n meets the requirements of the wireless network design. References: Network+ Study Guide Objective 1.6: Explain the functions of network services.

**NEW QUESTION 322**

- (Topic 3)

A network administrator is checking to see if anything has changed. Which of the following steps of the troubleshooting methodology is involved?

- A. Identify the problem.
- B. Test the theory.
- C. Establish a theory.
- D. Document findings.

**Answer:** B

**Explanation:**

According to the CompTIA troubleshooting methodology<sup>1</sup>, testing the theory is the step where the network administrator verifies if the problem is caused by a specific factor or change. This step involves checking the system logs, running diagnostic tools, or performing other tests to confirm or eliminate the possible cause.

References:

- ? Troubleshooting Methodology | IT Support and Help Desk | CompTIA<sup>1</sup>

**NEW QUESTION 325**

- (Topic 3)

A network administrator needs to implement a solution to mediate access to the internet- Which of the following should the administrator most likely implement?

- A. Router
- B. Cloud gateway
- C. proxy
- D. Intrusion prevention system

**Answer:** C

**Explanation:**

A proxy is a solution that can mediate access to the internet. A proxy is a server that acts as an intermediary between a client and a destination server on the internet. A proxy can perform various functions, such as filtering, caching, logging, or modifying requests and responses. A proxy can help improve network performance, security, and privacy by reducing bandwidth consumption, blocking malicious or unwanted content, monitoring network activity, and hiding the client's identity or location. References: [CompTIA Network+ Certification Exam Objectives], What Is a Proxy Server? | Proxy Server Definition | Avast

**NEW QUESTION 329**

- (Topic 3)

Two network technicians are installing a fiber-optic link between routers. The technicians used a light meter to verify the correct fibers. However, when they connect the fibers to the router interface the link does not connect. Which of the following would explain the issue? (Select TWO).

- A. They used the wrong type of fiber transceiver.
- B. Incorrect TX/RX polarity exists on the link
- C. The connection has duplexing configuration issues.
- D. Halogen light fixtures are causing interference.
- E. One of the technicians installed a loopback adapter.
- F. The RSSI was not strong enough on the link

**Answer:** AB

**NEW QUESTION 333**

- (Topic 3)

An administrator would like to have two servers at different geographical locations provide fault tolerance and high performance while appearing as one URL to users. Which of the following should the administrator implement?

- A. Load balancing
- B. Multipathing
- C. NIC teaming
- D. Warm site

**Answer:** B

**Explanation:**

Load balancing is a technique that can be used to provide fault tolerance and high performance while appearing as one URL to users. It is achieved by distributing the workload across multiple servers, which are usually located in different geographical locations. This allows for high performance and fault tolerance, as if one server fails, the other will take its place. Additionally, the multiple servers appear as one URL to the users, eliminating the need for the users to switch between servers.

**NEW QUESTION 337**

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