CompTIA

Exam Questions N10-009

CompTIA Network+ Exam

NEW QUESTION 1
- (Topic 3)
Which of the following would most likely affect design considerations when building out an IDF?

A. The source panel amperage
B. The fire suppression system
C. The humidity levels
D. The cable transmission speeds

Answer: B

Explanation:
The fire suppression system is a design consideration when building out an IDF because it can affect the safety and reliability of the network equipment and cabling. A fire suppression system is a system that detects and extinguishes fires in a building, using water, gas, or chemicals. Depending on the type of fire suppression system, it can have different impacts on the IDF design, such as:
? Water-based systems, such as sprinklers, can damage the network equipment and cabling if they are activated by a fire or a false alarm. Therefore, the IDF should be designed to protect the equipment and cabling from water exposure, such as using waterproof cabinets, drip pans, and conduits.
? Gas-based systems, such as clean agent systems, can displace the oxygen in the IDF and cause suffocation for anyone inside. Therefore, the IDF should be designed to allow for ventilation and air circulation, as well as warning signs and alarms to alert anyone in the IDF before the gas is released.
? Chemical-based systems, such as dry chemical systems, can leave a residue on the network equipment and cabling that can affect their performance and lifespan. Therefore, the IDF should be designed to minimize the contact between the chemical and the equipment and cabling, as well as provide a means for cleaning and restoring them after a fire.
The other options are not correct because:
? The source panel amperage is not a design consideration when building out an IDF, as it is determined by the electrical circuit and the power needs of the network equipment and cabling. The source panel amperage does not affect the layout, location, or protection of the IDF.
? The humidity levels are not a design consideration when building out an IDF, as they are controlled by the HVAC system and the ventilation of the IDF. The humidity levels do not affect the layout, location, or protection of the IDF.
? The cable transmission speeds are not a design consideration when building out an IDF, as they are determined by the type and quality of the network cabling and the network equipment. The cable transmission speeds do not affect the layout, location, or protection of the IDF.

NEW QUESTION 2
- (Topic 3)
A network technician is troubleshooting a port channel issue. When logging in to one of the switches, the technician sees the following information displayed:
Native VLAN mismatch detected on interface g0/1
Which of the following layers of the OSI model is most likely to be where the issue resides?

A. Layer 2
B. Layer 3
C. Layer 5
D. Layer 6

Answer: A

Explanation:
Layer 2 of the OSI model is the data link layer, which is responsible for transferring data between adjacent nodes on a network. It uses protocols such as Ethernet, PPP, and HDLC to encapsulate data into frames and add MAC addresses for source and destination identification. It also uses protocols such as STP, LACP, and CDP to manage the physical links and prevent loops, aggregate bandwidth, and discover neighboring devices12
A native VLAN mismatch is a common Layer 2 issue that occurs when two switches are connected by a trunk port, but have different native VLANs configured on their interfaces. A native VLAN is the VLAN that is assigned to untagged frames on a trunk port. If the native VLANs do not match, the switches will drop the untagged frames and generate an error message. This can cause connectivity problems and security risks on the network345
To resolve a native VLAN mismatch, the network technician should ensure that both switches have the same native VLAN configured on their trunk ports, or use a different port mode such as access or general.

NEW QUESTION 3
- (Topic 3)
A technician is trying to install a VoIP phone, but the phone is not turning on. The technician checks the cable gong from the phone to the switch, and the cable is good. Which of the following actions IS needed for this phone to work?

A. Add a POE injector
B. Enable MDIX.
C. Use a crossover cable.
D. Reconfigure the port.

Answer: A

NEW QUESTION 4
- (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 5
- (Topic 3)
A company streams video to multiple devices across a campus. When this happens, several users report a degradation of network performance. Which of the following would MOST likely address this issue?

A. Enable IGMP snooping on the switches.
B. Implement another DHCP server.
C. Reconfigure port tagging for the video traffic.
D. Change the SSID of the APs

Answer: A

NEW QUESTION 6
- (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 cycles123.
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 discarded12. 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 cost12. 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 protocol12.

NEW QUESTION 7
- (Topic 3)
Which of the following types of attacks can be used to gain credentials by setting up rogue APs with identical corporate SSIDs?

A. VLAN hopping
B. Evil twin
C. DNS poisoning
D. Social engineering

Answer: B

NEW QUESTION 8
- (Topic 3)
A network engineer needs to create a subnet that has the capacity for five VLANs. with the following number of clients lo be allowed on each:

VLAN 10	50 users
VLAN 20	35 users
VLAN 30	20 users
VLAN 40	75 users
VLAN 50	130 users

Which of the following is the SMALLEST subnet capable of this setup that also has the capacity to double the number of clients in the future?

A. 10.0.0.0/21
B. 10.0.0.0/22
C. 10.0.0.0/23
D. 10.0.0.0/24

Answer: B

NEW QUESTION 9
- (Topic 3)
Which of the following protocols is widely used in large-scale enterprise networks to support complex networks with multiple routers and balance traffic load on multiple links?

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

Answer: A

NEW QUESTION 10
- (Topic 3)
Which of the following combinations of single cables and transceivers will allow a server to have 40GB of network throughput? (Select two).

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

Answer: CD

Explanation:
QSFP+ is a type of transceiver that supports 40 gigabit Ethernet (40GbE) over four lanes of 10 gigabit Ethernet (10GbE) each. QSFP+ stands for quad small form-factor pluggable plus, and it is a compact and hot-swappable module that plugs into a QSFP+ port on a network device. QSFP+ transceivers can support various types of cables and connectors, such as direct attach copper (DAC), active optical cable (AOC), or fiber optic cable. Multimode is a type of fiber optic cable that supports multiple modes of light propagation within the core. Multimode fiber optic cable can carry higher bandwidth and data rates than single-mode fiber optic cable, but over shorter distances. Multimode fiber optic cable is commonly used for short-reach applications, such as within a data center or a campus network. Multimode fiber optic cable can be paired with QSFP+ transceivers to achieve 40GbE connectivity.
The other options are not correct because they do not support 40GbE. They are:
? SFP+. SFP+ is a type of transceiver that supports 10 gigabit Ethernet (10GbE) over a single lane. SFP+ stands for small form-factor pluggable plus, and it is a compact and hot-swappable module that plugs into an SFP+ port on a network device. SFP+ transceivers can support various types of cables and connectors, such as direct attach copper (DAC), active optical cable (AOC), or fiber optic cable. However, SFP+ transceivers cannot support 40GbE by themselves, unless they are used in a breakout configuration with a QSFP+ transceiver.
? SFP. SFP is a type of transceiver that supports 1 gigabit Ethernet (1GbE) over a single lane. SFP stands for small form-factor pluggable, and it is a compact and hot-swappable module that plugs into an SFP port on a network device. SFP transceivers can support various types of cables and connectors, such as twisted-pair copper, coaxial cable, or fiber optic cable. However, SFP transceivers cannot
support 40GbE by themselves, unless they are used in a breakout configuration with a QSFP+ transceiver.
? Cat 6a. Cat 6a is a type of twisted-pair copper cable that supports 10 gigabit
Ethernet (10GbE) over distances up to 100 meters. Cat 6a stands for category 6 augmented, and it is an enhanced version of Cat 6 cable that offers better performance and reduced crosstalk. Cat 6a cable can be paired with 10Gbase-T transceivers to achieve 10GbE connectivity. However, Cat 6a cable cannot support 40GbE by itself, unless it is used in a breakout configuration with a QSFP+ transceiver.
? Cat 5e. Cat 5e is a type of twisted-pair copper cable that supports 1 gigabit
Ethernet (1GbE) over distances up to 100 meters. Cat 5e stands for category 5 enhanced, and it is an improved version of Cat 5 cable that offers better performance and reduced crosstalk. Cat 5e cable can be paired with 1000base-T transceivers to achieve 1GbE connectivity. However, Cat 5e cable cannot support 40GbE by itself, unless it is used in a breakout configuration with a QSFP+ transceiver.
References1: QSFP+ - an overview | ScienceDirect Topics2: Multimode Fiber - an overview | ScienceDirect Topics3: Network+ (Plus) Certification | CompTIA IT Certifications4: SFP+ - an overview | ScienceDirect Topics5: SFP - an overview | ScienceDirect Topics6: Cat 6a - an overview | ScienceDirect Topics7: [Cat 5e - an overview | ScienceDirect Topics]

NEW QUESTION 10
- (Topic 3)
Which of the following devices Is used to configure and centrally manage access points Installed at different locations?

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

Answer: A

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

NEW QUESTION 14
- (Topic 3)
A customer connects a firewall to an ISP router that translates traffic destined for the internet. The customer can connect to the internet but not to the remote site. Which of the following will verify the status of NAT?

A. tcpdump
B. nmap
C. ipconfig
D. tracert

Answer: A

Explanation:
tcpdump is a command-line tool that can capture and analyze network traffic on a given interface. tcpdump can verify the status of NAT by showing the source and destination IP addresses of the packets before and after they pass through the ISP router that translates traffic destined for the internet. tcpdump can also show the NAT protocol and port numbers used by the router. nmap, ipconfig, and tracert are not suitable tools for verifying the status of NAT, as they do not show the IP address translation process.
References
? 1: Network Address Translation – N10-008 CompTIA Network+ : 1.4
? 2: CompTIA Network+ N10-008 Certification Study Guide, page 95-96

? 3: CompTIA Network+ N10-008 Exam Subnetting Quiz, question 16
? 4: CompTIA Network+ N10-008 Certification Practice Test, question 7

NEW QUESTION 19
- (Topic 3)
A network technician wants to find the shortest path from one node to every other node in the network. Which of the following algorithms will provide the FASTEST convergence time?

A. A static algorithm
B. A link-state algorithm
C. A distance-vector algorithm
D. A path-vector algorithm

Answer: B

Explanation:
A link-state algorithm is a routing algorithm that uses information about the state of each link in the network to calculate the shortest path from one node to every other node. A link-state algorithm requires each router to maintain a complete map of the network topology and exchange link-state advertisements with its neighbors periodically or when a change occurs. A link-state algorithm uses a mathematical formula called Dijkstra's algorithm to find the shortest path based on the link costs. A link-state algorithm provides the fastest convergence time because it can quickly detect and adapt to network changes. References: [CompTIA Network+ Certification Exam Objectives], [Link-state routing protocol - Wikipedia]

NEW QUESTION 24
- (Topic 3)
A customer is hosting an internal database server. None of the users are able to connect to the server, even though it appears to be working properly. Which of the following is the best way to verify traffic to and from the server?

A. Protocol analyzer
B. nmap
C. ipconfig
D. Speed test

Answer: A

Explanation:
A protocol analyzer is the best way to verify traffic to and from the server. A protocol analyzer, also known as a packet sniffer or network analyzer, is a tool that captures and analyzes the network packets that are sent and received by a device. A protocol analyzer can show the source and destination IP addresses, ports, protocols, and payload of each packet, as well as any errors or anomalies in the network communication. A protocol analyzer can help troubleshoot network connectivity issues by identifying the root cause of the problem, such as misconfigured firewall rules, incorrect routing, or faulty network devices12.
To use a protocol analyzer to verify traffic to and from the server, the customer can follow these steps:
? Install a protocol analyzer tool on a device that is connected to the same network
as the server, such as Wireshark3 or Microsoft Network Monitor4.
? Select the network interface that is used to communicate with the server, and start capturing the network traffic.
? Filter the captured traffic by using the IP address or hostname of the server, or by using a specific port or protocol that is used by the database service.
? Analyze the filtered traffic and look for any signs of successful or failed connection attempts, such as TCP SYN, ACK, or RST packets, or ICMP messages.
? If there are no connection attempts to or from the server, then there may be a problem with the network configuration or device settings that prevent the traffic from reaching the server.
? If there are connection attempts but they are rejected or dropped by the server, then there may be a problem with the server configuration or service settings that prevent the traffic from being accepted by the server.
The other options are not the best ways to verify traffic to and from the server. nmap is a tool that can scan a network and discover hosts and services, but it cannot capture and analyze the network packets in detail. ipconfig is a command that can display and configure the IP settings of a device, but it cannot monitor or test the network communication with another device. Speed test is a tool that can measure the bandwidth and latency of a network connection, but it cannot diagnose or troubleshoot specific network problems.

NEW QUESTION 25
- (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: ef82:0000:00O0:000O:0O00:1ab1:1234:1bc2. Which of the following is the MOST appropriate shortened version?

A. ef82:0:lab1:1234:1bc2
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 ef82:0000:00O0:000O:0O00:1ab1:1234:1bc2 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 26
- (Topic 3)
A technician installed an 8-port switch in a user's office. The user needs to add a second computer in the office, so the technician connects both PCs to the switch and connects the switch to the wall jack. However, the new PC cannot connect to network resources. The technician then observes the following:
• The new computer does not get an IP address on the client's VLAN.
• Both computers have a link light on their NICs.

• The new PC appears to be operating normally except for the network issue.
• The existing computer operates normally.
Which of the following should the technician do NEXT to address the situation?

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

Answer: A

NEW QUESTION 28
- (Topic 3)
A technician is troubleshooting reports that a networked printer is unavailable. The printer's IP address is configured with a DHCP reservation, but the address cannot be pinged from the print server in the same subnet. Which of the following is MOST likely the cause of me connectivity failure?

A. Incorrect VLAN
B. DNS failure
C. DHCP scope exhaustion
D. Incorrect gateway

Answer: D

NEW QUESTION 31
- (Topic 3)
A VOIP phone is plugged in to a port but cannot receive calls. Which Of the following needs to be done on the port to address the issue?

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

Answer: C

Explanation:
To enable a VOIP phone to receive calls on a port, the traffic needs to be tagged to the voice VLAN that is configured on the switch. This allows the phone to communicate with the voice network and the PBX server. Tagging the traffic also separates the voice traffic from the data traffic that may be coming from a computer connected to the phone. The port should be configured to tag the traffic for the voice VLAN and untag the traffic for the data VLAN1. Trunking all VLANs on the port is unnecessary and may cause security issues. Configuring the native VLAN is not relevant for this issue. Disabling VLANs would prevent the phone from working at all.
References:
Optical Fiber Connectors – CompTIA Network+ N10-007 – 2.13
? VoIP and computer on separate VLANs through one cable1

NEW QUESTION 33
- (Topic 3)
A network engineer designed and implemented a new office space with the following characteristics:

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

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

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

Answer: D

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

NEW QUESTION 34
- (Topic 3)

An IT intern moved the location of a WAP from one conference room to another. The WAP was unable to boot following the move. Which of the following should be used to fix the issue?

A. Antenna
B. WLAN controller
C. Media converter
D. PoE injector

Answer: D

Explanation:
A PoE injector is a device that provides power over Ethernet (PoE) to a WAP or other network device that does not have a built-in power supply. A PoE injector connects to a power outlet and an Ethernet cable, and sends both power and data to the WAP. If the WAP was moved to a location where there is no power outlet or PoE switch, it would need
a PoE injector to boot up. References:
? Part 3 of the current page talks about PoE and PoE injectors as a way to power WAPs.
? [This article] explains how PoE injectors work and how to use them.

NEW QUESTION 39
- (Topic 3)
Which of the following is the IEEE link cost for a Fast Ethernet interface in STP calculations?

A. 2
B. 4
C. 19
D. 100

Answer: D

Explanation:
The IEEE standard for link cost for a Fast Ethernet interface is 100, and for a Gigabit Ethernet interface is 19. These values are based on the bandwidth of the interface, with lower values indicating a higher-bandwidth interface.

NEW QUESTION 42
- (Topic 3)
A network administrator is preparing new switches that will be deployed to support a network extension project. The lead network engineer has already provided documentation to ensure the switches are set up properly Which of the following did the engineer most likely provide?

A. Physical network diagram
B. Site survey reports
C. Baseline configurations
D. Logical network diagram

Answer: C

Explanation:
Baseline configurations are the standard settings and parameters that are applied to network devices, such as switches, routers, firewalls, etc., to ensure consistent performance, security, and functionality across the network. Baseline configurations can include aspects such as IP addresses, VLANs, passwords, protocols, access lists, firmware versions, etc. Baseline configurations are usually documented and updated regularly to reflect any changes or modifications made to the network devices.
The lead network engineer most likely provided baseline configurations to the network administrator to ensure that the new switches are set up properly and in accordance with the network design and policies. Baseline configurations can help to simplify the deployment process, reduce errors and inconsistencies, and facilitate troubleshooting and maintenance.
The other options are not correct because they are not the most likely documentation that the lead network engineer provided to the network administrator. They are:
? Physical network diagram. A physical network diagram is a graphical representation of the physical layout and connections of the network devices and components, such as cables, ports, switches, routers, servers, etc. A physical network diagram can help to visualize the network topology, identify the locations and distances of the devices, and plan for cabling and power requirements. However, a physical network diagram does not provide the specific settings and parameters that need to be configured on the network devices, such as the switches.
? Site survey reports. A site survey report is a document that summarizes the findings and recommendations of a site survey, which is a process of assessing the suitability and readiness of a location for installing and operating network devices and components. A site survey report can include aspects such as environmental conditions, power and cooling availability, security and safety measures, interference and noise sources, signal coverage and quality, etc. A site survey report can help to identify and resolve any potential issues or challenges that may affect the network performance and reliability. However, a site survey report does not provide the specific settings and parameters that need to be configured on the network devices, such as the switches.
? Logical network diagram. A logical network diagram is a graphical representation of the logical structure and functionality of the network devices and components, such as subnets, IP addresses, VLANs, protocols, routing, firewall rules, etc. A logical network diagram can help to understand the network design, architecture, and policies, as well as the data flow and communication paths between the devices. However, a logical network diagram does not provide the specific settings and parameters that need to be configured on the network devices, such as the switches.
References1: Network+ (Plus) Certification | CompTIA IT Certifications2: What is a Baseline Configuration? - Definition from Techopedia3: What is a Physical Network Diagram? - Definition from Techopedia4: What is a Site Survey? - Definition from Techopedia5: [What is a Logical Network Diagram? - Definition from Techopedia]

NEW QUESTION 44
- (Topic 3)
A network administrator needs to monitor traffic on a specific port on a switch. Which of the following should the administrator configure to accomplish the task?

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

Answer: C

Explanation:
Port mirroring is a technique that allows a network administrator to monitor the traffic on a specific port on a switch by sending a copy of the packets seen on that port to another port where a monitoring device is connected1. Port mirroring can be used to analyze and debug data, diagnose errors, or perform security audits on the network without affecting the normal operation of the switch

NEW QUESTION 49
- (Topic 3)
While setting up a new workstation, a technician discovers that the network connection is only 100 full duplex (FD), although it is connected to a gigabit switch. While reviewing the interface information in the switch CLI, the technician notes the port is operating at IOOFD but Shows many RX and TX errors. The technician moves the computer to another switchport and experiences the same issues.
Which of the following is MOST likely the cause of the low data rate and port errors?

A. Bad switch ports
B. Duplex issues
C. Cable length
D. Incorrect pinout

Answer: B

NEW QUESTION 50
- (Topic 3)
Which of the following is the most secure connection used to inspect and provide controlled internet access when remote employees are connected to the corporate network?

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

Answer: B

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

NEW QUESTION 52
- (Topic 3)
A customer needs to distribute Ethernet to multiple computers in an office. The customer would like to use non-proprietary standards. Which of the following blocks does the technician need to install?

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

Answer: A

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

NEW QUESTION 55
- (Topic 3)
A WAN technician reviews activity and identifies newly installed hardware that is causing outages over an eight-hour period. Which of the following should be considered FIRST?

A. Network performance baselines
B. VLAN assignments
C. Routing table
D. Device configuration review

Answer: D

Explanation:
The most likely cause of outages due to newly installed hardware is a misconfiguration of the device settings. Therefore, the first step should be to review the device configuration and check for any errors or inconsistencies that might affect the WAN connectivity. References: Network+ Study Guide Objective 2.1: Explain the importance of network documentation.

NEW QUESTION 58
- (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 die 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 loopoack 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, tracert, etc.)

NEW QUESTION 61
- (Topic 3)
A help desk technician is concerned that a client's network cable issues may be causing intermittent connectivity. Which of the following would help the technician determine if this is the issue?

A. Run the show interface command on the switch
B. Run the tracerouute command on the server
C. Run iperf on the technician's desktop
D. Ping the client's computer from the router
E. Run a port scanner on the client's IP address

Answer: A

Explanation:
To determine if a client's network cable issues may be causing intermittent connectivity, the help desk technician can run the show interface command on the switch.
This command allows the technician to view the status and statistics of the various interfaces on the switch, including the physical link status and the number of transmitted and received packets. If the interface is experiencing a large number of errors or dropped packets, this could indicate a problem with the network cable or with the connection between the client's device and the switch.
"Cisco routers and switches have a show interfaces IOS command that provides interface statistics/status information, including link state (up/down), speed/duplex, send/receive traffic, cyclic redundancy checks (CRCs), and protocol packet and byte counts."

NEW QUESTION 66
- (Topic 3)
After installing a new wireless access point, an engineer tests the device and sees that it is not performing at the rated speeds. Which of the following should the engineer do to troubleshoot the issue? (Select two).

A. Ensure a bottleneck is not coming from other devices on the network.
B. Install the latest firmware for the device.
C. Create a new VLAN for the access point.
D. Make sure the SSID is not longer than 16 characters.
E. Configure the AP in autonomous mode.
F. Install a wireless LAN controller.

Answer: AB

Explanation:
One possible cause of poor wireless performance is a bottleneck in the network, which means that other devices or applications are consuming too much bandwidth or resources and limiting the speed of the wireless access point. To troubleshoot this issue, the engineer should ensure that there is no congestion or interference from other devices on the network, such as wired clients, servers, routers, switches, or other wireless access points. The engineer can use tools such as network analyzers, bandwidth monitors, or ping tests to check the network traffic and latency12.
Another possible cause of poor wireless performance is outdated firmware on the device, which may contain bugs or vulnerabilities that affect the functionality or security of the wireless access point. To troubleshoot this issue, the engineer should install the latest firmware for the device from the manufacturer’s website or support portal. The engineer should follow the instructions carefully and backup the configuration before updating the firmware. The engineer can also check the release notes or changelog of the firmware to see if there are any improvements or fixes related to the wireless performance3 .
The other options are not relevant to troubleshooting poor wireless performance. Creating a new VLAN for the access point may help with network segmentation or security, but it will not improve the speed of the wireless connection. Making sure the SSID is not longer than 16 characters may help with compatibility or readability, but it will not affect the wireless performance. Configuring the AP in autonomous mode may give more control or flexibility to the engineer, but it will not enhance the wireless speed. Installing a wireless LAN controller may help with managing multiple access points or deploying advanced features, but it will not increase the wireless performance.

NEW QUESTION 70
- (Topic 3)
Which of the following would be BEST suited for a long cable run with a 40Gbps bandwidth?

A. Cat 5e
B. Cat 6a
C. Cat 7
D. Cat 8

Answer: C

Explanation:
Cat 7 is a type of twisted-pair copper cable that supports up to 40 Gbps bandwidth and up to 100 meters cable length. Cat 7 is suitable for long cable runs that require high-speed data transmission. Cat 7 has better shielding and crosstalk prevention than lower categories of cables.
References: Network+ Study Guide Objective 1.5: Compare and contrast network cabling types, features and their purposes.

NEW QUESTION 74
- (Topic 3)
Which of the following options represents the participating computers in a network?

A. Nodes
B. CPUs
C. Servers
D. Clients

Answer: A

NEW QUESTION 76
- (Topic 3)
A network administrator wants to test the throughput of a new metro Ethernet circuit to verify that its performance matches the requirements specified m the SLA. Which of the following would BEST help measure the throughput?

A. iPerf
B. Ping
C. NetFlow
D. Netstat

Answer: A

NEW QUESTION 77
- (Topic 3)
An employee working in a warehouse facility is experiencing interruptions in mobile applications while walking around the facility. According to a recent site survey, the WLAN comprises autonomous APs that are directly connected to the internet, providing adequate signal coverage. Which of the following is the BEST solution to improve network stability?

A. Implement client roaming using an extended service deployment employing a wireless controller.
B. Remove omnidirectional antennas and adopt a directional bridge.
C. Ensure all APs of the warehouse support MIMO and Wi-Fi 4.
D. Verify that the level of EIRP power settings is set to the maximum permitted by regulations.

Answer: A

Explanation:
Client roaming refers to the ability of a wireless device to seamlessly connect to a different access point (AP) as the user moves around the facility. This can help to improve network stability and reduce interruptions in mobile applications. An extended service deployment is a type of wireless network configuration that uses multiple APs to cover a large area, such as a warehouse facility. By using a wireless controller to manage the APs, the network can be better optimized for client roaming, which can improve network stability.
"Roaming With multiple WAPs in an ESS, clients will connect to whichever WAP has the strongest signal. As clients move through the space covered by the broadcast area, they will change WAP connections seamlessly, a process called roaming."

NEW QUESTION 78
- (Topic 3)
Which of the following commands can be used to display the IP address, subnet address, gateway address, and DNS address on a Windows computer?

A. netstat -a
B. ifconfig
C. ip addr
D. ipconfig /all

Answer: D

Explanation:
The ipconfig command is a utility that allows you to view and modify the network configuration of a Windows computer. By running the command "ipconfig /all", you can view detailed information about the network configuration of your computer, including the IP address, subnet mask, default gateway, and DNS server addresses.
Option A (netstat -a) is a command that displays active network connections and their status, but it does not display IP address or other network configuration information. Option B (ifconfig) is a command used on Linux and Unix systems to view and modify network configuration, but it is not available on Windows. Option C (ip addr) is a command used on Linux and Unix systems to view and modify network configuration, but it is not available on Windows.

NEW QUESTION 81
- (Topic 3)
A user from a remote office is reporting slow file transfers. Which of the following tools will an engineer MOST likely use to get detailed measurement data?

A. Packet capture
B. IPerf
C. SIEM log review
D. Internet speed test

Answer: B

Explanation:
An engineer will most likely use IPerf to get detailed measurement data about the user's slow file transfers. IPerf is a tool used for measuring network performance and bandwidth, and it can be used to measure the speed and throughput of file transfers from the remote office. It can also provide detailed information about the latency and jitter of the connection, which can be used to troubleshoot the slow file transfers. Reference: CompTIA Network+ Study Manual (Chapter 10, Page 214).

NEW QUESTION 84
- (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 89
- (Topic 3)
An online gaming company needs a cloud solution that will allow for more virtual resources to be deployed when tournaments are held. The number of users who access the service increases during tournaments. The company also needs the resources to return to baseline levels once the resources are not needed in order to reduce cost. Which of the following cloud concepts would provide the best solution?

A. Scalability
B. Hybrid
C. Multitenancy
D. Elasticity

Answer: D

Explanation:
Elasticity is the ability of a cloud service to automatically adjust the amount of resources allocated to meet the changing demand of the users. Elasticity enables a cloud service to scale up or down resources quickly and efficiently, without requiring manual intervention or planning. Elasticity is ideal for scenarios where the demand is unpredictable, dynamic, or seasonal, such as online gaming tournaments. By using elasticity, the online gaming company can ensure optimal performance and user experience during peak times, while also saving costs and avoiding overprovisioning during off-peak times.
The other options are not correct because they do not address the specific needs of the online gaming company. They are:
•Scalability is the ability of a cloud service to handle an increase or decrease in the demand of the users by adding or removing resources. Scalability is similar to elasticity, but it is more manual, planned, and predictive, while elasticity is automatic, prompt, and reactive. Scalability is suitable for scenarios where the demand is steady, predictable, or gradual, such as a growing business or a long-term project.
•Hybrid is a type of cloud model that combines two or more clouds, such as on-premises private, hosted private, or public, that can be centrally managed to enable interoperability for various use cases. Hybrid cloud can offer benefits such as flexibility, security, and cost- efficiency, but it does not directly address the need for dynamic resource allocation for the online gaming company.
•Multitenancy is a feature of cloud services that allows multiple users or customers to share the same physical or virtual resources, such as servers, databases, or applications, while maintaining isolation and privacy. Multitenancy can offer benefits such as efficiency, scalability, and cost-effectiveness, but it does not directly address the need for dynamic resource allocation for the online gaming company.
References
1: Understand cloud concepts | Microsoft Press Store 2: What Is Hybrid Cloud? - Cisco
3: Difference between Elasticity and Scalability in Cloud Computing 4: Scalability and Elasticity in Cloud Computing - GeeksforGeeks

NEW QUESTION 92
- (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 95
- (Topic 3)
During an annual review of policy documents, a company decided to adjust its recovery time frames. The company agreed that critical applications can be down for no more than six hours, and the acceptable amount of data loss is no more than two hours. Which of the following should be documented as the RPO?

A. Two hours
B. Four hours
C. Six hours
D. Eight hours

Answer: A

Explanation:
" RPO designates the variable amount of data that will be lost or will have to be re-entered during network downtime. RTO designates the amount of "real time" that can pass before the disruption begins to seriously and unacceptably impede the flow of normal business operations."

NEW QUESTION 99
- (Topic 3)
An engineer is using a tool to run an ICMP sweep of a network to find devices that are online. When reviewing the results, the engineer notices a number of workstations that are currently verified as being online are not listed in the report.
The tool was configured to scan using the following information: Network address: 172.28.16.0
CIDR: /22
The engineer collected the following information from the client workstation: IP address: 172.28.17.206
Subnet mask: 255.255.252.0
Which of the following MOST likely explains why the tool is failing to detect some workstations?

A. The scanned network range is incorrect.
B. The subnet mask on the client is misconfigured.
C. The workstation has a firewall enabled.
D. The tool is unable to scan remote networks.

Answer: C

Explanation:
A firewall is a device or software that filters and controls the incoming and outgoing network traffic based on predefined rules. A firewall can block ICMP packets, which are used for ping and other diagnostic tools. If the workstation has a firewall enabled, it may not respond to the ICMP sweep and appear as offline. The engineer should check the firewall settings on the workstation and allow ICMP traffic if needed.
References: Network+ Study Guide Objective 4.1: Given a scenario, use the appropriate tool.

NEW QUESTION 100
- (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 103
- (Topic 3)
A network administrator is installing a new server in the data center. The administrator is concerned the amount of traffic generated will exceed 1GB. and higher-throughput NiCs are not available for installation. Which of the following is the BEST solution for this issue?

A. Install an additional NIC and configure LACP.
B. Remove some of the applications from the server.
C. Configure the NIC to use fun duplex
D. Configure port mirroring to send traffic to another server.
E. Install a SSD to decrease data processing time.

Answer: A

NEW QUESTION 105
- (Topic 3)
Which of the following cloud deployment models involves servers that are hosted at a company's property and are only used by that company?

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

Answer: B

Explanation:
A private cloud deployment model involves servers that are hosted at a company's property and are only used by that company. A private cloud provides exclusive access and control over the cloud resources to the company, as well as higher security and privacy. However, a private cloud also requires more investment and maintenance from the company, compared to other cloud deployment models1

NEW QUESTION 109
- (Topic 3)
An engineer needs to verity the external record tor SMTP traffic. The engineer logged in to the server and entered the nslookup command. Which of the following commands should the engineer send before entering the DNS name?

A. set type=A
B. is -d company-mail.com
C. set domain=company.mail.com
D. set querytype=Mx

Answer: D

NEW QUESTION 110
- (Topic 3)
A network administrator is setting up a new phone system and needs to define the location where VoIP phones can download configuration files. Which of the following DHCP services can be used to accomplish this task?

A. Scope options
B. Exclusion ranges
C. Lease time
D. Relay

Answer: A

Explanation:
To define the location where VoIP phones can download configuration files, the network administrator can use scope options within the Dynamic Host Configuration Protocol (DHCP) service. Scope options are a set of values that can be configured within a DHCP scope, which defines a range of IP addresses that can be leased to clients on a network. One of the scope options that can be configured is the option for the location of the configuration file server, which specifies the URL or IP address of the server where the configuration files can be downloaded.
https://pbxbook.com/voip/dhcpcfg.html

NEW QUESTION 111
- (Topic 3)
A technician is concerned about unauthorized personnel moving assets that are installed in a data center server rack. The technician installs a networked sensor that sends an alert when the server rack door is opened. Which of the following did the technician install?

A. Cipher lock
B. Asset tags
C. Access control vestibule
D. Tamper detection

Answer: D

Explanation:
Tamper detection is a physical security feature that can alert the technician when someone opens the server rack door without authorization. Tamper detection sensors can be installed inside the equipment or on the rack itself, and they can send an alert via email, SMS, or other methods. Tamper detection can help prevent unauthorized access, theft, or damage to the network assets.
References:
? Physical Security – N10-008 CompTIA Network+ : 4.51

NEW QUESTION 113
- (Topic 3)
Following the implementation of a BYOO policy. some users in a high-density environment report slowness over the wireless connection. Some wireless controller reports indicate high latency and airtime contention. Which of the following is the most probable root cause?

A. The AP is configured with 2.4GHz frequency, which the new personal devices do not support.
B. The AP is configured with 2.4GHz frequency without band-steering capabilities.
C. The AP is configured with 5Ghz frequency with band-steering capabiäties.
D. The AP is configured with 5Ghz frequenc
E. which the new personal devices do not support

Answer: B

Explanation:
Band-steering is a feature that allows an AP to steer dual-band capable clients to the less congested 5GHz frequency, leaving the 2.4GHz frequency for legacy clients. Without band- steering, the AP may have more clients competing for the same channel on the 2.4GHz frequency, resulting in high latency and airtime contention.
References:
? According to the CompTIA Network+ Certification Exam Objectives, one of the topics covered in the exam is "Given a scenario, use appropriate wireless technologies and configurations". One of the subtopics is "Band steering" 1.
? According to the PoliFi: Airtime Policy Enforcement for WiFi paper, "Band steering allows the access point to disable the 2.4 GHz band from probing the client device, so it responds only to the 5 GHz band, reducing the congestion on the 2.4 GHz band while taking advantage of the faster 5GHz band to improve user's network experience." 2.
? According to the Aruba Air Slice Tech Brief, "Air Slice minimizes airtime contention and efficiently groups Wi-Fi 6 and non-Wi-Fi 6 client devices to guarantee bit

rate, and provide bounded latency and jitter simultaneously." 3.

NEW QUESTION 115
- (Topic 3)
A technician is configuring a static IP address on a new device in a newly created subnet. The work order specifies the following requirements:
• The IP address should use the highest address available in the subnet.
• The default gateway needs to be set to 172.28.85.94.
• The subnet mask needs to be 255.255.255.224.
Which of the following addresses should the engineer apply to the device?

A. 172.28.85.93
B. 172.28.85.95
C. 172.28.85.254
D. 172.28.85.255

Answer: A

Explanation:
https://www.tunnelsup.com/subnet-calculator/
IP Address: 172.28.85.95/27 Netmask: 255.255.255.224
Network Address: 172.28.85.64
Usable Host Range: 172.28.85.65 - 172.28.85.94
Broadcast Address: 172.28.85.95

NEW QUESTION 117
- (Topic 3)
Which of the following is a benefit of the spine-and-leaf network topology?

A. Increased network security
B. Stable network latency
C. Simplified network management
D. Eliminated need for inter-VLAN routing

Answer: A

NEW QUESTION 121
- (Topic 3)
AGRE tunnel has been configured between two remote sites. Which of the following features, when configured, ensures me GRE overhead does not affect payload?

A. jumbo frames
B. Auto medium-dependent Interface
C. Interface crossover
D. Collision detection

Answer: A

Explanation:
One of the features that can be configured to ensure that GRE overhead does not affect payload is A. jumbo frames. Jumbo frames are Ethernet frames that have a payload size larger than 1500 bytes, which is the standard maximum transmission unit (MTU) for Ethernet. By using jumbo frames, more data can be sent in each packet, reducing the overhead ratio and improving efficiency.
Auto medium-dependent interface (MDI), interface crossover, and collision detection are features related to Ethernet physical layer connectivity, but they do not affect GRE overhead or payload.

NEW QUESTION 122
- (Topic 3)
Which of the following can be used to identify users after an action has occurred?

A. Access control vestibule
B. Cameras
C. Asset tag
D. Motion detectors

Answer: B

Explanation:
Cameras can be used to identify users after an action has occurred by recording their faces, clothing, or other distinctive features. Cameras are often used as a deterrent and a forensic tool for security purposes. Access control vestibules, asset tags, and motion detectors are not effective in identifying users, but rather in controlling access, tracking assets, and detecting movement.
References:
CompTIA Network+ N10-008 Certification Exam Objectives, Domain 5.0: Network Security, Subobjective 5.1: Summarize the importance of physical security controls, page 231 CompTIA Network+ Certification All-in-One Exam Guide, Eighth Edition (Exam N10-008), Chapter 18: Network Security, Section: Physical Security, page 7372

NEW QUESTION 124
- (Topic 3)
Which of the following is most likely to have the HIGHEST latency while being the most accessible?

A. Satellite
B. DSL
C. Cable
D. 4G

Answer: A

NEW QUESTION 128
- (Topic 3)
Which of the following situations would require an engineer to configure subinterfaces?

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

Answer: A

Explanation:
A router-on-a-stick is a configuration that allows a single router interface to route traffic between multiple VLANs on a network1. A router-on-a-stick requires sub-interfaces to be configured on the router interface, one for each VLAN. Each sub-interface is assigned a VLAN ID and an IP address that belongs to the corresponding VLAN subnet. The router interface is connected to a switch port that is configured as a trunk port, which allows traffic from multiple VLANs to pass through. The router then performs inter-VLAN routing by forwarding packets between the sub-interfaces based on their destination IP addresses. Inter-VLAN routing is a process that allows devices on different VLANs to communicate with each other. Inter-VLAN routing can be performed by a router-on-a-stick configuration, as explained above, or by a multilayer switch that has routing capabilities. A multilayer switch does not require sub-interfaces to be configured for inter-VLAN routing; instead, it uses switch virtual interfaces (SVIs) that are associated with each VLAN. An SVI is a logical interface that represents a VLAN on a switch and has an IP address that belongs to the VLAN subnet. The switch then performs inter-VLAN routing by forwarding packets between the SVIs based on their destination IP addresses.
VLAN trunking is a method that allows traffic from multiple VLANs to be carried over a single link between switches or routers. VLAN trunking requires the use of a tagging protocol, such as 802.1Q, that adds a header to each frame that identifies its VLAN ID. VLAN trunking does not require sub-interfaces to be configured on the switches or routers; instead, it uses trunk ports that are configured to allow or deny traffic from specific VLANs. The switches or routers then forward packets between the trunk ports based on their VLAN IDs.
* 802.1Q is a standard that defines how VLAN tagging and trunking are performed on Ethernet networks.
* 802.1Q adds a 4-byte header to each frame that contains a 12-bit field for the VLAN ID and a 3-bit field for the priority level. 802.1Q does not require sub-interfaces to be configured on the switches or routers; instead, it uses trunk ports that are configured to support 802.1Q tagging and untagging. The switches or routers then forward packets between the trunk ports based on their VLAN IDs and priority levels.

NEW QUESTION 133
- (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 137
- (Topic 3)
Which of me following security controls indicates unauthorized hardware modifications?

A. Biometric authentication
B. Media device sanitization
C. Change management policy
D. Tamper-evident seals

Answer: A

NEW QUESTION 138
- (Topic 3)
An ISP is unable to provide services to a user in a remote area through cable and DSL. Which of the following is the NEXT best solution to provide services without adding external infrastructure?

A. Fiber
B. Leased line
C. Satellite
D. Metro optical

Answer: C

Explanation:

If an ISP is unable to provide services to a user in a remote area through cable and DSL, the next best solution to provide services without adding external infrastructure would likely be satellite. Satellite is a wireless communication technology that uses a network of satellites orbiting the Earth to transmit and receive data. It is well-suited for providing connectivity to remote or rural areas where other types of infrastructure may not be available or may be cost-prohibitive to install.

NEW QUESTION 143
- (Topic 3)
An attacker sends more connection requests than a server can handle, causing the server to crash- Which of the following types of attacks is this an example of?

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

Answer: B

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

NEW QUESTION 146
- (Topic 3)
A desktop support department has observed slow wireless speeds for a new line of laptops using the organization's standard image. No other devices have experienced the same issue. Which of the following should the network administrator recommend troubleshooting FIRST to resolve this issue?

A. Increasing wireless signal power
B. Installing a new WAP
C. Changing the protocol associated to the SSID
D. Updating the device wireless drivers

Answer: D

Explanation:
Wireless drivers can affect the performance and compatibility of your wireless connection5. If only a new line of laptops using the organization’s standard image has experienced slow wireless speeds, it could be that their wireless drivers are outdated or incompatible with the network. Updating the device wireless drivers could resolve this issue.
Wireless drivers play an important role in the performance of a wireless connection, as they control how the device interacts with the wireless network. If the laptops in question are using an outdated version of the wireless driver, it could be causing the slow speeds. The network administrator should recommend updating the device wireless drivers first to see if this resolves the issue.

NEW QUESTION 149
- (Topic 3)
A network security engineer is responding to a security incident. The engineer suspects that an attacker used an authorized administrator account to make configuration changes to the boundary firewall. Which of the following should the network security engineer review?

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

Answer: B

Explanation:
Audit logs are records of the actions performed by users or processes on a system or network device. They can provide information about who made what changes, when, and why. Audit logs are essential for detecting and investigating security incidents, as well as for ensuring compliance with policies and regulations. Audit logs can help the network security engineer to identify the source of the unauthorized configuration changes to the boundary firewall, as well as the scope and impact of the changes.
References1 - Changes to Cyber Essentials requirements – April 2021 update2 - 8 Firewall Best Practices for Securing the Network3 - How to secure your network boundaries with a firewall

NEW QUESTION 154
- (Topic 3)
Which of the following is most likely responsible for the security and handling of personal data in Europe?

A. GDPR
B. SCADA
C. SAML
D. PCI DSS

Answer: A

Explanation:
GDPR stands for General Data Protection Regulation, which is a European Union
regulation on information privacy and security. It applies to any organization that collects or processes personal data of individuals in the EU, and it sets out rules and requirements for data protection, consent, breach notification, and enforcement1
References1: https://en.wikipedia.org/wiki/General_Data_Protection_Regulation

NEW QUESTION 159
- (Topic 3)
A company with multiple routers would like to implement an HA network gateway with the least amount of downtime possible. This solution should not require changes on the gateway setting of the network clients. Which of the following should a technician configure?

A. Automate a continuous backup and restore process of the system's state of the active gateway.
B. Use a static assignment of the gateway IP address on the network clients.
C. Configure DHCP relay and allow clients to receive a new IP setting.
D. Configure a shared VIP and deploy VRRP on the routers.

Answer: D

Explanation:
The open standard protocol Virtual Router Redundancy Protocol (VRRP) is similar to HSRP, the differences mainly being in terminology and packet formats. In VRRP, the active router is known as the master, and all other routers in the group are known as backup routers. There is no specific standby router; instead, all backup routers monitor the status of the master, and in the event of a failure, a new master router is selected from the available backup routers based on priority

NEW QUESTION 162
- (Topic 3)
An IT technician needs to increase bandwidth to a server. The server has multiple gigabit ports. Which of the following can be used to accomplish this without replacing hardware?

A. STP
B. 802. IQ
C. Duplex
D. LACP

Answer: D

Explanation:
LACP stands for Link Aggregation Control Protocol and is a protocol that allows multiple physical ports to be combined into a single logical port. This can increase bandwidth, redundancy, and load balancing for a server. LACP is part of the IEEE 802.3ad standard for link aggregation. STP stands for Spanning Tree Protocol and is a protocol that prevents loops in a network by blocking redundant links. 802.1Q is a standard for VLAN (Virtual Local Area Network) tagging, which allows multiple logical networks to share the same physical infrastructure. Duplex is a mode of communication that determines how data is transmitted and received on a link. Full duplex allows simultaneous transmission and reception, while half duplex allows only one direction at a time.
References: CompTIA Network+ Certification Exam Objectives Version 7.0 (N10-007), Objective 1.5: Compare and contrast network cabling types, standards and speeds.

NEW QUESTION 163
- (Topic 3)
Which of the following types of connections would need to be set up to provide access from the internal network to an external network so multiple satellite offices can communicate securely using various ports and protocols?

A. Client-to-site VPN
B. Clientless VPN
C. RDP
D. Site-to-site VPN
E. SSH

Answer: D

NEW QUESTION 167
- (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 172
- (Topic 3)
A network consultant is installing a new wireless network with the following specifications:
5GHz
1,300Mbps 20/40/80MHz
Which of the following standards should the network consultant use?

A. 802.11a
B. 802.11ac
C. 802.11b

D. 802.11n

Answer: B

NEW QUESTION 176
- (Topic 3)
A network administrator walks into a data center and notices an unknown person is following closely. The administrator stops and directs the person to the security desk.
Which of the following attacks did the network administrator prevent?

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

Answer: B

Explanation:

Tailgating is a type of physical security attack in which an unauthorized person follows an authorized person into a restricted area, such as a data center, without proper identification or authentication. Tailgating can allow attackers to access sensitive data, equipment, or network resources, or to plant malicious devices or software. The network administrator prevented tailgating by stopping and directing the unknown person to the security desk, where they would have to verify their identity and purpose.
ReferencesDigital Threats and Cyberattacks at the Network LevelNetwork attacks and how to prevent them

NEW QUESTION 180
- (Topic 3)
A technician reviews a network performance report and finds a high level of collisions happening on the network. At which of the following layers of the OSI model would these collisions be found?

A. Layer 1
B. Layer 3
C. Layer 4
D. Layer 7

Answer: A

Explanation:

Collisions occur when two or more devices try to transmit signals on the same physical medium at the same time. This causes interference and data loss. Collisions can only happen at the physical layer of the OSI model, which is responsible for transmitting and receiving raw bits over a physical medium such as a cable or a wireless channel. The physical layer does not have any mechanism to prevent or resolve collisions. Therefore, higher layers of the OSI model, such as the data link layer, need to implement protocols to detect and recover from collisions, such as CSMA/CD for Ethernet networks. ReferencesCollision in computer networkingData Link Layer | Layer 2 | The OSI-Model

NEW QUESTION 182
- (Topic 3)
A customer runs a DNS lookup service and needs a network technician to reconfigure the network to improve performance. The customer wants to ensure that servers are accessed based on whichever one is topographically closest to the destination. If the server does not respond, then the next topographically closest server should respond Which of the following does the technician need to configure to meet the requirements?

A. Multicast addressing
B. Anycast addressing
C. Broadcast addressing
D. Unicast addressing

Answer: B

Explanation:
Anycast addressing is a network addressing and routing methodology in which a single destination address has multiple routing paths to two or more endpoint destinations. Routers will select the desired path on the basis of number of hops, distance, lowest cost, latency measurements or based on the least congested route. Anycast addressing is designed to provide high availability and low latency for services that have multiple instances across the world, such as DNS servers. By using anycast addressing, the customer can ensure that servers are accessed based on whichever one is topographically closest to the destination. If the server does not respond, then the next topographically closest server should respond. References: [CompTIA Network+ Certification Exam Objectives], [Anycast - Wikipedia]

NEW QUESTION 184
- (Topic 3)
Which of the following would be used to indicate when unauthorized access to physical internal hardware has occurred?

A. Motion detectors
B. Radio frequency identification tags
C. Tamper evident seal
D. Locking racks

Answer: C

Explanation:
A tamper evident seal is a device or material that provides a visible indication of unauthorized access to physical internal hardware. Tamper evident seals can be

stickers, labels, tapes, locks, or seals that are designed to break, tear, or change color when someone tries to open, remove, or tamper with them. Tamper evident seals can help deter and detect physical security breaches, such as theft, vandalism, or sabotage of hardware devices12. Tamper evident seals can also provide evidence for forensic analysis and legal action3.
References
1 - What Is Hardware Security? Definition, Threats, and Best Practices 2 - Device Physical Security Guideline | Information Security Office
3 - What is unauthorized physical access? – Heimduo

NEW QUESTION 186
- (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 189
- (Topic 3)
An international company is transferring its IT assets including a number of WAPs from the United States to an office in Europe for deployment. Which of the following considerations should the company research before Implementing the wireless hardware?

A. WPA2 cipher
B. Regulatory Impacts
C. CDMA configuration
D. 802.11 standards

Answer: B

Explanation:
When transferring IT assets, including wireless access points (WAPs), from one country to another, it's important to research the regulatory impacts of the move. Different countries have different regulations and compliance requirements for wireless devices, such as frequency bands, power levels, and encryption standards. Failing to comply with these regulations can result in fines or other penalties.

NEW QUESTION 190
- (Topic 3)
A hacker used a packet sniffer on the network to capture the hardware address of the server. Which of the following types of attacks can the hacker perform now?

A. Piggybacking
B. MAC spoofing
C. Evil twin
D. VLAN hopping

Answer: B

Explanation:
MAC spoofing is a technique that allows a hacker to change the media access control (MAC) address of their network interface card (NIC) to impersonate another device on the network. By capturing the hardware address of the server, the hacker can spoof their MAC address to match the server’s and bypass any MAC-based security measures, such as MAC filtering or MAC authentication. MAC spoofing can also be used to perform man-in- the-middle attacks, where the hacker intercepts and alters the traffic between two devices on the network. References: CompTIA Network+ N10-008 Cert Guide, Chapter 7, Section 7.3

NEW QUESTION 193
- (Topic 3)
A company wants to implement a disaster recovery site for non-critical applications, which can tolerate a short period of downtime. Which of the following types of sites should the company implement to achieve this goal?

A. Hot
B. Cold
C. warm
D. Passive

Answer: C

Explanation:
The type of site that the company should implement for non-critical applications that can tolerate a short period of downtime is a warm site. A warm site is a disaster recovery site that has some pre-installed equipment and software, but not as much as a hot site, which is fully operational and ready to take over the primary site’s functions in case of a disaster. A warm site requires some time and effort to activate and synchronize with the primary site, but not as much as a cold site, which has no equipment or software installed and requires a lot of configuration and testing. A passive site is not a common term for a disaster recovery site, but it could refer to a site that only receives backups from the primary site and does not actively participate in the network operations. References: CompTIA Network+ N10- 008 Certification Study Guide, page 347; The Official CompTIA Network+ Student Guide (Exam N10-008), page 13-10.

NEW QUESTION 194
- (Topic 3)
A newly installed VoIP phone is not getting the DHCP IP address it needs to connect to the phone system. Which of the following tasks needs to be completed to allow the phone to operate correctly?

A. Assign the phone's switchport to the correct VLAN
B. Statically assign the phone's gateway address.
C. Configure a route on the VoIP network router.
D. Implement a VoIP gateway

Answer: A

NEW QUESTION 195
- (Topic 3)
A network administrator is notified that a user cannot access resources on the network. The network administrator checks the physical connections to the workstation labeled User 3 and sees the Ethernet is properly connected. However, the network interface's indicator lights are not blinking on either the computer or the switch. Which of the following is the most likely cause?

A. The switch failed.
B. The default gateway is wrong.
C. The port is shut down.
D. The VLAN assignment is incorrect.

Answer: C

Explanation:
If the port is shut down, it means that the switch has disabled the port and is not sending or receiving any traffic on it. This would explain why the network interface’s indicator lights are not blinking on either the computer or the switch, and why the user cannot access resources on the network. The port could be shut down manually by the network administrator, or automatically by the switch due to security or error conditions.
References
? Port shutdown is one of the common switch configuration options covered in Objective 2.3 of the CompTIA Network+ N10-008 certification exam1.
? Port shutdown can cause the network interface’s indicator lights to stop blinking2.
? Port shutdown can prevent the user from accessing resources on the network3.
1: CompTIA Network+ Certification Exam Objectives, page 5 2: CompTIA Network+ N10- 008: Switch not forwarding frames on trunked port3 3: Cable Management – N10-008 CompTIA Network+ : 1.3

NEW QUESTION 200
- (Topic 3)
Which of the following devices and encapsulations are found at the data link layer? (Select two).

A. Session
B. Frame
C. Firewall
D. Switch
E. Packet
F. Router

Answer: BD

Explanation:
A frame is a unit of data that is transmitted at the data link layer of the OSI model. A frame consists of a header, a payload, and a trailer. The header contains information such as the source and destination MAC addresses, the frame type, and the error detection code. The payload contains the data from the upper layer protocols, such as IP packets. The trailer contains the frame check sequence, which is used to verify the integrity of the frame. A switch is a device that operates at the data link layer of the OSI model. A switch forwards frames based on the MAC addresses of the devices connected to its ports. A switch can create separate collision domains and reduce network congestion. A switch can also implement VLANs, which are logical groups of devices that share the same broadcast domain, regardless of their physical location. A session is a logical connection between two or more devices that allows the exchange of data at the transport layer of the OSI model. A session is not a device or an encapsulation at the data link layer. A firewall is a device that operates at the network layer or the application layer of the OSI model. A firewall filters packets based on the IP addresses, ports, protocols, or application rules. A firewall is not a device or an encapsulation at the data link layer. A packet is a unit of data that is transmitted at the network layer of the OSI model. A packet consists of a header and a payload. The header contains information such as the source and destination IP addresses, the protocol type, and the hop count. The payload contains the data from the upper layer protocols, such as TCP segments. A packet is not an encapsulation at the data link layer. A router is a device that operates at the network layer of the OSI model. A router forwards packets based on the IP addresses and the routing table. A router can create separate broadcast domains and connect different networks. A router is not a device or an
encapsulation at the data link layer. References: CompTIA Network+ N10-008 Cert Guide, Chapter 2, Section 2.2 and CompTIA Network+ N10-008 Cert Guide, Chapter 3, Section 3.1

NEW QUESTION 201
- (Topic 3)
A network security engineer is investigating a potentially malicious Insider on the network. The network security engineer would like to view all traffic coming from the user's PC to the switch without interrupting any traffic or having any downtime. Which of the following should the network security engineer do?

A. Turn on port security.
B. Implement dynamic ARP inspection.
C. Configure 802.1Q.
D. Enable port mirroring.

Answer: D

Explanation:
Port mirroring is a feature that allows a network switch to copy the traffic from one or more ports to another port for monitoring purposes. Port mirroring can be used to analyze the network traffic from a specific source, destination, or protocol without affecting the normal operation of the network. Port mirroring can also help to detect and troubleshoot network problems, such as performance issues, security breaches, or policy violations.
The other options are not correct because they do not meet the requirements of the question. They are:
? Turn on port security. Port security is a feature that restricts the number and type
of devices that can connect to a switch port. Port security can help to prevent unauthorized access, MAC address spoofing, or MAC flooding attacks. However,

port security does not allow the network security engineer to view the traffic from the user's PC to the switch.
? Implement dynamic ARP inspection. Dynamic ARP inspection (DAI) is a feature
that validates the ARP packets on a network and prevents ARP spoofing attacks. DAI can help to protect the network from man-in-the-middle, denial-of-service, or data interception attacks. However, DAI does not allow the network security engineer to view the traffic from the user's PC to the switch.
? Configure 802.1Q. 802.1Q is a standard that defines how to create and manage
virtual LANs (VLANs) on a network. VLANs can help to segment the network into logical groups based on function, security, or performance. However, 802.1Q does not allow the network security engineer to view the traffic from the user's PC to the switch.
References1: Port Mirroring - an overview | ScienceDirect Topics2: Network+ (Plus) Certification | CompTIA IT Certifications3: Port Security - an overview | ScienceDirect Topics4: Dynamic ARP Inspection - an overview | ScienceDirect Topics5: 802.1Q - an overview | ScienceDirect Topics

NEW QUESTION 205
- (Topic 3)
Which of the following attacks, if successful, would provide a malicious user who is connected to an isolated guest network access to the corporate network?

A. VLAN hopping
B. On-path attack
C. IP spoofing
D. Evil twin

Answer: A

Explanation:
The attack which, if successful, would provide a malicious user who is connected to an isolated guest network access to the corporate network is VLAN hopping. VLAN hopping is an attack technique which involves tricking a switch into sending traffic from one VLAN to another. This is done by sending specially crafted packets, which force the switch to send traffic from one VLAN to another, thus allowing the malicious user to gain access to the corporate network. According to the CompTIA Network+ N10-008 Exam Guide VLAN hopping is a type of attack that is used to gain access to network resources that are not meant to be accessible by a user on a guest network.

NEW QUESTION 209
- (Topic 3)
A network administrator is trying to add network redundancy for the server farm. Which of the following can the network administrator configure to BEST provide this capability?

A. VRRP
B. DNS
C. UPS
D. RPO

Answer: A

Explanation:
VRRP is an open standard protocol, which is used to provide redundancy in a network. It is a network layer protocol (protocol number-112). The number of routers (group members) in a group acts as a virtual logical router which will be the default gateway of all the local hosts. If one router goes down, one of the other group members can take place for the responsibilities for forwarding the traffic.

NEW QUESTION 210
- (Topic 3)
A Fortune 500 firm is deciding On the kind or data center equipment to install given its five- year budget Outlook. The Chief Information comparing equipment based on the life expectancy Of different models. Which Of the following concepts BEST represents this metric?

A. MTBF
B. MTRR
C. RPO
D. RTO

Answer: A

NEW QUESTION 215
- (Topic 3)
A new office space is being designed. The network switches are up. but no services are running yet A network engineer plugs in a laptop configured as a DHCP client to a switch Which ol the following IP addresses should be assigned to the laptop?

A. 10.1.1.1
B. 169.254.1.128
C. 172 16 128 128
D. 192 168.0.1

Answer: B

Explanation:
When a DHCP client is connected to a network and no DHCP server is available, the client can automatically configure a link-local address in the 169.254.0.0/16 range using the Automatic Private IP Addressing (APIPA) feature. So, the correct answer is option B, 169.254.1.128. This is also known as an APIPA address.
Reference: CompTIA Network+ Study Guide, Exam N10-007, Fourth Edition, by Todd
Lammle (Chapter 4: IP Addressing)

NEW QUESTION 217

- (Topic 3)
A technician is investigating an issue with connectivity at customer's location. The technician confirms that users can access resources locally but not over the internet The technician theorizes that the local router has failed and investigates further. The technician's testing results show that the route is functional: however, users still are unable to reach resources on the internal. Which of the following describes what the technician should do NEXT?

A. Document the lessons learned
B. Escalate the issue
C. identify the symptoms.
D. Question users for additional information

Answer: C

Explanation:
According to the CompTIA Network+ troubleshooting model123, this is the first step in troubleshooting a network problem. The technician should gather information about the current state of the network, such as error messages, device status, network topology, and user feedback. This can help narrow down the scope of the problem and eliminate possible causes.

NEW QUESTION 218
- (Topic 3)
A customer wants to log in t o a vendor's server using a web browser on a laptop. Which of the following would require the LEAST configuration to allow encrypted access to the server?

A. Secure Sockets Layer
B. Site-to-site VPN
C. Remote desktop gateway
D. Client-to-site VPN

Answer: A

Explanation:
SSL is a widely used protocol for establishing secure, encrypted connections between devices over the Internet. It is typically used to secure communication between web browsers and servers, and can be easily enabled on a server by installing an SSL certificate.

NEW QUESTION 220
- (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 222
- (Topic 3)
Which of the following should be used to associate an IPv6 address with a domain name?

A. AAAA
B. A
C. SOA
D. TXT

Answer: A

Explanation:
An AAAA record is a type of DNS record that maps a domain name to an IPv6 address. It is similar to an A record, which maps a domain name to an IPv4 address, but it uses a 128-bit address instead of a 32-bit one. An AAAA record allows a domain name to be resolved by both IPv4 and IPv6 clients, and it is necessary for accessing websites and services that use IPv6.

NEW QUESTION 223
- (Topic 3)
Classification using labels according to information sensitivity and impact in case of unauthorized access or leakage is a mandatory component of:

A. an acceptable use policy.
B. a memorandum of understanding.
C. data loss prevention,
D. a non-disclosure agreement.

Answer: C

Explanation:

Data loss prevention (DLP) is a set of tools and processes that aim to prevent unauthorized access or leakage of sensitive information. One of the components of DLP is data classification, which involves labeling data according to its information sensitivity and impact in case of unauthorized disclosure. Data classification helps to identify and protect the most critical and confidential data and apply appropriate security controls and policies. References: Network+ Study Guide Objective 5.1: Explain the importance of policies, processes and procedures for IT governance. Subobjective: Data loss prevention.

NEW QUESTION 224
- (Topic 3)
An organization has a guest network with a network IP range of 192.168.1.0/28 using a DHCP pool. One visitor reported difficulties connecting and configured a static IP address. Following this action, another visitor reported intermittent connection issues. Which of the following is the most likely reason?

A. Address pool exhaustion
B. Duplicate IP addresses
C. Misconfigured default gateway
D. Incorrect subnet mask

Answer: B

Explanation:
A duplicate IP address occurs when two devices on the same network have the same IP address assigned to them. This can cause intermittent connection issues, as the network devices may not be able to distinguish between the two conflicting devices. A duplicate IP address can be caused by a visitor manually configuring a static IP address that is already in use by another device on the guest network. The network IP range of 192.168.1.0/28 has only 14 usable host addresses, so the chances of a duplicate IP address are higher than a larger network.
References
? 1: Troubleshooting IP Configurations – CompTIA Network+ N10-006 – 4.6
? 2: Troubleshooting Duplicate IP Addresses - CompTIA Network+ N10-005: 2.5
? 3: Network Address Translation – N10-008 CompTIA Network+ : 1.4

NEW QUESTION 227
- (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 230
- (Topic 3)
Which of the following common agreements would a company most likely have an employee sign as a condition of employment?

A. NDA
B. ISP
C. SLA
D. MOU

Answer: A

Explanation:
An NDA, or non-disclosure agreement, is a legal contract that binds an employee to keep certain information confidential and not share it with unauthorized parties. This information may include trade secrets, intellectual property, business strategies, customer data, or other sensitive or proprietary information that gives the company a competitive advantage. An NDA protects the company’s interests and prevents the employee from disclosing or using the information for personal gain or malicious purposes1.
References1 - 10 Types of Employment Contracts | Indeed.com

NEW QUESTION 235
- (Topic 3)
Which of the following bandwidth management techniques uses buffers al 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 236
- (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 240
- (Topic 3)
Which of the following best describes what an organization would use port address translation for?

A. VLANs on the perimeter
B. Public address on the perimeter router
C. Non-routable address on the perimeter router
D. Servers on the perimeter

Answer: B

Explanation:
The best answer is B. Public address on the perimeter router.
Port address translation (PAT) is a function that allows multiple users within a private network to make use of a minimal number of IP addresses. Its basic function is to share a single IP public address between multiple clients who need to use the Internet publicly. It is an extension of network address translation (NAT)1.
PAT works by creating dynamic NAT mapping, in which a global (public) IP address and a unique port number are selected. The router keeps a NAT table entry for every unique combination of the private IP address and port, with translation to the global address and a unique port number2.
Therefore, an organization would use PAT for having a public address on the perimeter router, which can be shared by many hosts on the private network using different port numbers. This can reduce the bandwidth consumption and cost of the organization's internet connection, as well as provide some security benefits by hiding the internal network structure3.
The other options are not correct because:
? VLANs on the perimeter are not related to PAT, as they are used to segment the network into logical groups based on different criteria, such as function, security, or performance4.
? Non-routable address on the perimeter router would not allow the organization to access the Internet or the cloud, as non-routable addresses are not valid on the public network and cannot be translated by PAT5.
? Servers on the perimeter are not a reason to use PAT, as servers usually have static IP addresses and do not need to share a public address with other hosts. Servers on the perimeter may use NAT, but not PAT, to map their private IP addresses to a public IP address2.

NEW QUESTION 245
- (Topic 3)
A false camera is installed outside a building to assist with physical security. Which of the following is the device assisting?

A. Detection
B. Recovery
C. Identification
D. Prevention

Answer: A

NEW QUESTION 247
- (Topic 3)
A systems operator is granted access to a monitoring application, configuration application,
and timekeeping application. The operator is denied access to the financial and project management applications by the system's security configuration. Which of the following BEST describes the security principle in use?

A. Network access control
B. Least privilege
C. Multifactor authentication
D. Separation of duties

Answer: D

NEW QUESTION 249
- (Topic 3)
Which of the following routing protocols has routes that are classified with an administrative distance of 110?

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

Answer: B

Explanation:
Administrative distance is a measure of the trustworthiness of a routing protocol. The smaller the administrative distance value, the more reliable the protocol. Each routing protocol has its own default administrative distance value. OSPF has a default administrative distance of 110, which means it is more reliable than RIP (120) but less reliable than EIGRP (90) or BGP (20).
References := Administrative Distance of Routing Protocols - Networks Training, What is Administrative Distance? - Cisco, Adjust Administrative Distance for Route Selection in Cisco IOS Routers …, Administrative Distance (AD) and Autonomous System (AS)

NEW QUESTION 254

- (Topic 3)
A consultant is working with two international companies. The companies will be sharing cloud resources for a project. Which of the following documents would provide an agreement on how to utilize the resources?

A. MOU
B. NDA
C. AUP
D. SLA

Answer: A

Explanation:
A memorandum of understanding (MOU) is a document that describes an agreement between two or more parties on how to utilize shared resources for a project. An MOU is not legally binding, but it outlines the expectations and responsibilities of each party involved in the collaboration. An MOU can be used when two international companies want to share cloud resources for a project without creating a formal contract. References: https://www.comptia.org/training/books/network-n10-008-study-guide (page 405)

NEW QUESTION 259
- (Topic 3)
At which of the following OSI model layers does routing occur?

A. Data link
B. Transport
C. Physical
D. Network

Answer: D

NEW QUESTION 263
- (Topic 3)
Given the following Information:

Connection	Cable length	Cable type	Configuration
PC A to switch 1	394ft (120m)	Cat 5	Straight through
Switch 1 to switch 2	3.3ft (1m)	Cat 6	Crossover
Switch 2 to PC B	16ft (5m)	Cat 5	Straight through

Which of the following would cause performance degradation between PC A and PC B'?

A. Attenuation
B. Interference
C. Decibel loss
D. Incorrect pinout

Answer: D

NEW QUESTION 268
- (Topic 3)
A company's VolP phone connection is cutting in and out. Which of the following should be configured to resolve this issue?

A. 802.1 Q tagging
B. Jumbo frames
C. Native VLAN
D. Link aggregation

Answer: A

Explanation:
* 802.1 Q tagging is a method of adding a VLAN identifier to an Ethernet frame to indicate which VLAN the frame belongs to. This allows different VLANs to share the same physical link and device without interfering with each other. 802.1 Q tagging also supports a quality of service (QoS) scheme that can prioritize different classes of traffic based on the priority code point (PCP) field in the tag12
VoIP phone connection issues can be caused by network congestion, packet loss, jitter, or latency, which affect the quality and reliability of voice transmission over the Internet. By using 802.1 Q tagging, VoIP traffic can be separated from other data traffic and assigned a higher priority level, which reduces the chances of dropping or delaying voice packets. 802.1 Q tagging can also improve the security and scalability of VoIP networks by isolating different voice domains and preventing unauthorized access34

NEW QUESTION 270
- (Topic 3)
A technician is investigating a misconfiguration on a Layer 3 switch. When the technician logs in and runs a command, the following data is shown:
Which of the following commands generated this output?

A. show route
B. show config
C. show interface
D. tcpdump
E. netstat —s

Answer: C

Explanation:
The output shown in the image is from the show interface command, which displays information about the status and configuration of a network interface on a switch or router. The output includes the interface name, description, MAC address, IP address, speed, duplex mode, status, and statistics. The show route command displays the routing table of the device. The show config command displays the current configuration of the device. The tcpdump command captures and analyzes network traffic. The netstat -s command displays statistics for each protocol.
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 275
- (Topic 3)
Network users reported that a recent firmware upgrade to a firewall did not resolve the issue that prompted the upgrade. Which of the following should be performed NEXT?

A. Reopen the service ticket, request a new maintenance window, and roll back to the anterior firmware version.
B. Gather additional information to ensure users' concerns are not been caused by a different issue with similar symptoms.
C. Employ a divide-and-conquer troubleshooting methodology by engaging the firewall vendor's support.
D. Escalate the issue to the IT management team in order to negotiate a new SLA with the user's manager.

Answer: B

Explanation:
Before taking any further action, it is important to verify that the problem reported by the users is the same as the one that prompted the firmware upgrade. It is possible that the firmware upgrade did resolve the original issue, but a new or different issue has arisen with similar symptoms. By gathering additional information from the users, such as error messages, screenshots, logs, or network traces, the technician can confirm or rule out this possibility and avoid wasting time and resources on unnecessary steps.
Reopening the service ticket, requesting a new maintenance window, and rolling back to the anterior firmware version (A) is a possible option if the firmware upgrade did not resolve the original issue and caused more problems. However, this should not be done without first verifying that the users' concerns are related to the firmware upgrade and not a different issue.
Employing a divide-and-conquer troubleshooting methodology by engaging the firewall vendor's support © is another possible option if the technician needs assistance from the vendor to diagnose or resolve the issue. However, this should also not be done without first gathering additional information from the users to narrow down the scope of the problem and provide relevant details to the vendor.
Escalating the issue to the IT management team in order to negotiate a new SLA with the user's manager (D) is not a relevant option at this stage. An SLA (Service Level Agreement) is a contract that defines the expectations and responsibilities of both parties in terms of service quality, availability, performance, and response time. Negotiating a new SLA does not address the root cause of the issue or help to resolve it. Moreover, escalating an issue to management should only be done when all other options have been exhausted or when there is a significant impact or risk to the business.

NEW QUESTION 279
- (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 283
- (Topic 3)
A senior administrator has been directed to incorporate AAA services within a domain environment for regulatory compliance purposes. Which of the following standards
will enable the use of an AAA server in a domain environment?

A. 802.1Q
B. 802.1X
C. 802.3bt
D. 802.11h

Answer: B

Explanation:
* 802.1X is a standard that enables the use of an AAA server in a domain environment by providing port-based network access control. 802.1X authenticates users or devices before granting them access to the network resources, and can also authorize them based on their roles or policies. 802.1X can work with different AAA protocols, such as RADIUS or TACACS+, to communicate with the AAA server.
References:
? CompTIA Network+ N10-008 Certification Study Guide, page 211
? CompTIA Network+ N10-008 Cert Guide, Deluxe Edition, page 382
? Configuring AAA Services - Cisco3

NEW QUESTION 284
- (Topic 3)
Which of the following is used to provide disaster recovery capabilities to spin up an critical devices using internet resources?

A. Cloud site
B. Hot site
C. Cold site
D. Warm site

Answer: A

NEW QUESTION 289
- (Topic 3)
A client utilizes mobile tablets to view high-resolution images and videos via Wi-Fi within a corporate office building. The previous administrator installed multiple high-density APs with Wi-Fi 5, providing maximum coverage, but the measured performance is still below expected levels. Which of the following would provide the best solution?

A. Channel bonding
B. EIRP power settings
C. Antenna polarization
D. A directional antenna

Answer: A

Explanation:
Channel bonding is a technique that allows two or more adjacent channels to be combined into a wider channel, increasing the data rate and throughput of the wireless network. Channel bonding can improve the performance of the Wi-Fi network by utilizing more of the available spectrum and reducing interference from other devices. Channel bonding is supported by Wi-Fi 5 (802.11ac) and Wi-Fi 6 (802.11ax) standards.
References: CompTIA Network+ N10-008 Cert Guide, Chapter 4, Section 4.2

NEW QUESTION 293
- (Topic 3)
A network engineer turned on logging to assist with troubleshooting a suspected configuration issue informative log information?

A. FATAL
B. ERROR
C. DEBUG
D. WARN

Answer: C

Explanation:
DEBUG is the log level that provides the most informative log information for troubleshooting a suspected configuration issue. Logging is a feature that allows network devices to record events and messages related to their operation and status. Logging can help network engineers to monitor, diagnose, and resolve network problems. Log levels are categories that indicate the severity or importance of a log message. Different log levels provide different amounts of detail and verbosity. DEBUG is the lowest log level, which means it provides the most detailed and verbose information about every action and event that occurs on a network device. DEBUG can help network engineers to identify configuration errors, misbehaving processes, or unexpected outcomes. However, DEBUG can also generate a lot of noise and overhead, which can affect the performance and availability of the network device. Therefore, DEBUG should be used sparingly and only when necessary. References: [CompTIA Network+ Certification Exam
Objectives], Understanding Logging Levels - Cisco

NEW QUESTION 298
- (Topic 3)
Which of the following is the MOST effective security control to keep a company's physical perimeter protected against intrusions leveraged by social-engineering techniques?

A. Employee training
B. Biometric lockers
C. Access control vestibule
D. Motion detection

Answer: A

Explanation:
The most effective security control to keep a company’s physical perimeter protected against intrusions leveraged by social-engineering techniques is employee training. Employee training is a process of educating and raising awareness among staff members about security policies, procedures, and best practices. Employee training can help prevent social-engineering attacks, which are attempts to manipulate or deceive people into revealing sensitive information or granting unauthorized access to resources. Social-engineering techniques can include phishing, impersonation, tailgating, dumpster diving, or baiting. References: CompTIA Network+ N10-008 Certification Study Guide, page 343; The Official CompTIA Network+ Student Guide (Exam N10-008), page 13-8.

NEW QUESTION 302
- (Topic 3)
A technician is trying to determine whether an LACP bundle is fully operational. Which of the following commands will the technician MOST likely use?

A. show interface
B. show config
C. how route
D. show arp

Answer: A

Explanation:
https://www.cisco.com/c/en/us/td/docs/optical/cpt/r9_3/command/reference/cpt93_cr/cpt93_cr_chapter_01000.html

NEW QUESTION 305
- (Topic 3)
Which of the following uses the link-state routing algorithm and operates within a single autonomous system?

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

Answer: B

Explanation:
OSPF uses a link state routing algorithm and falls into the group of interior routing protocols, operating within a single autonomous system (AS). OSPF is perhaps the most widely used interior gateway protocol (IGP) in large enterprise networks

NEW QUESTION 309
- (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 314
- (Topic 3)
An administrator needs to connect two laptops directly to each other using 802.11ac but does not have an AP available. Which of the following describes this configuration?

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

Answer: C

NEW QUESTION 316
- (Topic 3)
An engineer was asked to update an MX record for an upcoming project. Which of the following server types is MOST likely to be in scope for the project?

A. Email
B. Web
C. File
D. Database

Answer: A

Explanation:
An MX record is a type of DNS record that specifies the mail server responsible for accepting email messages on behalf of a domain name. Therefore, an engineer who needs to update an MX record is most likely working on an email server project

NEW QUESTION 320
- (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 methodology1, 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 | CompTIA1

NEW QUESTION 323
- (Topic 3)
A network administrator determines that even when optimal wireless coverage is configured, the network users still report constant disconnections After troubleshooting, the administrator determines that moving from one location to another causes the disconnection Which of the following settings should provide better network stability?

A. Client association timeout
B. RSSl roaming threshold
C. RF attenuation ratio
D. EIRP power setting

Answer: B

Explanation:
In this case, the most likely cause of the constant disconnections when moving from one location to another is likely due to a problem with the roaming functionality of the wireless network. The setting that would likely provide better network stability in this situation is the RSSI roaming threshold, which determines the signal strength required for a client device to remain connected to the wireless network. If the roaming threshold is set too low, the client device may disconnect and reconnect to the network too frequently as it moves between different access points. On the other hand, if the threshold is set too high, the client device may not roam to a new access point when necessary, leading to a loss of connectivity. Adjusting the RSSI roaming threshold to an appropriate value may help to improve the stability of the wireless network in this situation.

NEW QUESTION 325
- (Topic 3)
A corporate client is experiencing global system outages. The IT team has identified multiple potential underlying causes throughout the enterprise Each team member has been assigned an area to trouble shoot. Which of the following approaches is being used?

A. Divide-and-conquer
B. Top-to-bottom
C. Bottom-to-top
D. Determine if anything changed

Answer: A

NEW QUESTION 327
- (Topic 3)
Which of the following is considered a physical security detection device?

A. Cameras
B. Biometric readers
C. Access control vestibules
D. Locking racks

Answer: A

NEW QUESTION 332
- (Topic 3)
A technician is checking network devices to look for opportunities to improve security Which of the following toots would BEST accomplish this task?

A. Wi-Fi analyzer
B. Protocol analyzer
C. Nmap
D. IP scanner

Answer: B

Explanation:
A protocol analyzer is a tool that can capture and analyze network traffic and identify security issues such as unauthorized devices, malicious packets, or misconfigured settings.
A Wi-Fi analyzer is a tool that can measure the signal strength, interference, and channel usage of wireless networks, but it cannot provide detailed information about network security.
Nmap and IP scanner are tools that can scan network hosts and ports for open services, vulnerabilities, or operating systems, but they cannot monitor network traffic in real time.

NEW QUESTION 333
- (Topic 3)
Which of the following is an advanced distance vector routing protocol that automates routing tables and also uses some features of link-state routing protocols?

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

Answer: C

Explanation:
EIGRP is an advanced distance vector routing protocol that is able to automatically update routing tables and also uses features of link-state routing protocols, such as the ability to send updates about the current topology of the network. EIGRP also has the ability to use a variety of algorithms to determine the best route for a packet to take, allowing for more efficient routing across the network.

NEW QUESTION 338
- (Topic 3)
A network is secured and is only accessible via TLS and IPSec VPNs. Which of the following would need to be present to allow a user to access network resources on a laptop without logging in to the VPN application?

A. Site-to-site
B. Secure Shell
C. In-band management
D. Remote desktop connection

Answer: A

Explanation:
A site-to-site VPN is a type of VPN that connects two or more networks over the Internet using a secure tunnel. A site-to-site VPN allows users to access network resources on a laptop without logging in to the VPN application, as long as the laptop is connected to one of the networks in the VPN. A site-to-site VPN is transparent to the users and does not require any additional software or configuration on the client devices. References: Network+ Study Guide Objective 3.4: Explain the purposes and use cases for VPNs.

NEW QUESTION 343
- (Topic 3)
A network administrator received reports that a 40Gb connection is saturated. The only server the administrator can use for data collection in that location has a 10Gb connection to the network. Which of the following is the best method to use on the server to determine the source of the saturation?

A. Port mirroring
B. Log aggregation
C. Flow data
D. Packet capture

Answer: C

Explanation:
Flow data is a summary of network traffic that can be used to monitor and analyze network performance, utilization, and security. Flow data can provide information such as source and destination IP addresses, ports, protocols, bytes, packets, and timestamps. Flow data can be collected using protocols such as NetFlow, sFlow, or IPFIX. Flow data can help identify the source of network saturation without requiring a full packet capture, which would be impractical on a 40Gb connection with a 10Gb server.
References:
? CompTIA Network+ N10-008 Certification Exam Objectives, page 51
? CompTIA Network+ N10-008 Cert Guide, Chapter 11: Switching Technologies2

NEW QUESTION 348
- (Topic 3)
Which of the following BEST describes a spirt-tunnel client-to-server VPN connection?

A. The client sends an network traffic down the VPN tunnel
B. The client has two different IP addresses that can be connected to a remote site from two different ISPs to ensure availability
C. The client sends some network traffic down the VPN tunnel and other traffic to the local gateway.
D. The client connects to multiple remote sites at the same time

Answer: C

Explanation:
In a split-tunnel VPN, the client can access both the local network and the remote network simultaneously, with some network traffic sent through the VPN tunnel and other traffic sent to the local gateway. This approach allows for more efficient use of bandwidth and reduces the load on the VPN server. It also allows the client to continue accessing local resources while connected to the remote network.

NEW QUESTION 353
- (Topic 3)
An IT technician successfully connects to the corporate wireless network at a hank. While performing some tests, the technician observes that the physical address of the DHCp server has changed even though the network connection has not been lost. Which of the following would BEST explain this change?

A. Server upgrade
B. Duplicate IP address
C. Scope exhaustion
D. Rogue server

Answer: D

Explanation:
A rogue server is a DHCP server on a network that is not under the administrative control of the network staff1. It may provide incorrect IP addresses or other network configuration information to devices on the network, causing them to lose connectivity or be vulnerable to attacks2. The physical address of the DHCP server may change if a rogue server takes over the role of assigning IP addresses to devices on the network. This can be detected by monitoring DHCP traffic or

using tools such as RogueChecker2.

NEW QUESTION 355

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