

400-007 Dumps

Cisco Certified Design Expert (CCDE v3.0) Written Exam

<https://www.certleader.com/400-007-dumps.html>



NEW QUESTION 1

Which two mechanisms avoid suboptimal routing in a network with dynamic mutual redistribution between multiple OSPFv2 and EIGRP boundaries? (Choose two.)

- A. AD manipulation
- B. matching OSPF external routes
- C. route tagging
- D. route tagging
- E. route filtering
- F. matching EIGRP process ID

Answer: DE

Explanation:

<https://www.cisco.com/c/en/us/support/docs/ip/enhanced-interior-gateway-routing-protocol-eigrp/8606-redist.ht>

NEW QUESTION 2

Which solution component helps to achieve comprehensive threat protection and compliance for migration to multicloud SDX architectures?

- A. system-oriented architecture
- B. OSASE architecture
- C. platform-oriented architecture
- D. SASE architecture

Answer: D

NEW QUESTION 3

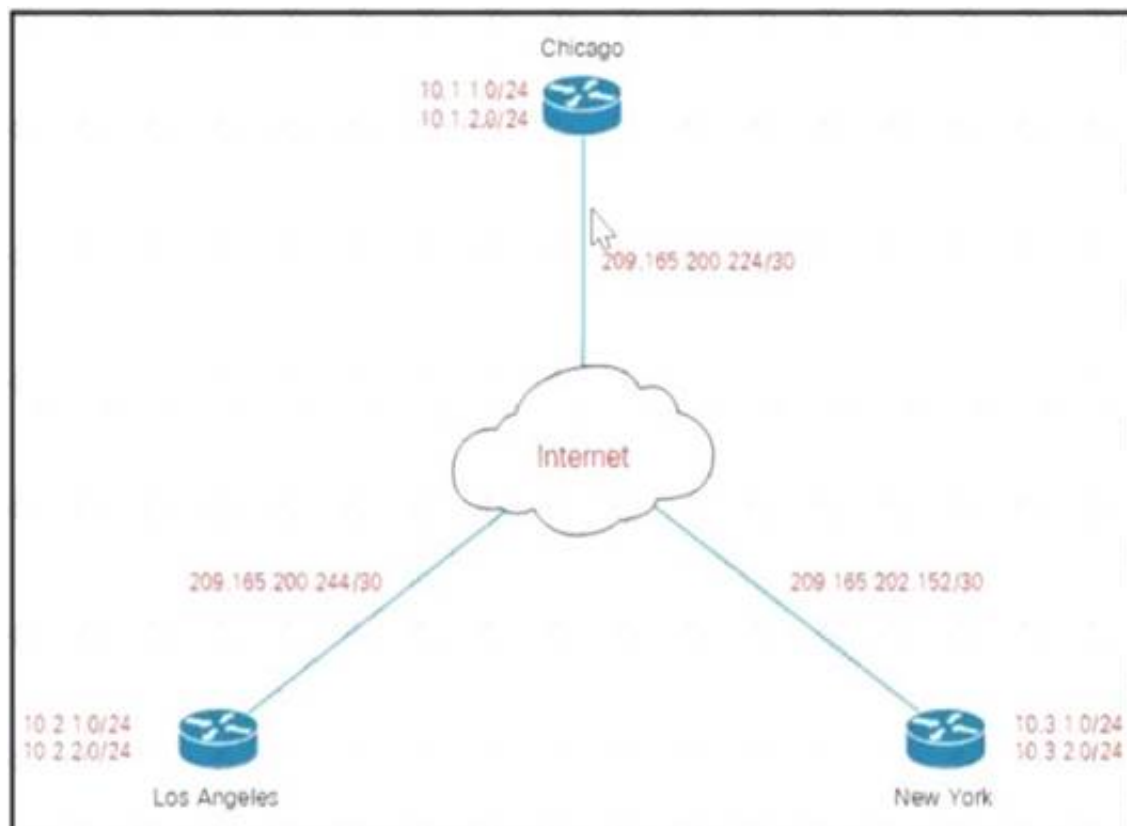
When consumers that leverage IaaS reach 100% resource capacity, what can be used to redirect the overflow of traffic to the public cloud so there is no disruption to service?

- A. cloud policing
- B. cloud spill
- C. cloud bursting
- D. cloud shaping

Answer: C

NEW QUESTION 4

Refer to the exhibit.



Company XYZ must design a DMVPN tunnel between the three sites. Chicago is going to act as the NHS, and the company wants DMVPN to detect peer endpoint failures. Which technology should be used in the design?

- A. VPLS
- B. IP SLA
- C. GRE
- D. L2TPv3

Answer: B

NEW QUESTION 5

According to the CIA triad principles for network security design, which principle should be priority for a Zero Trust network?

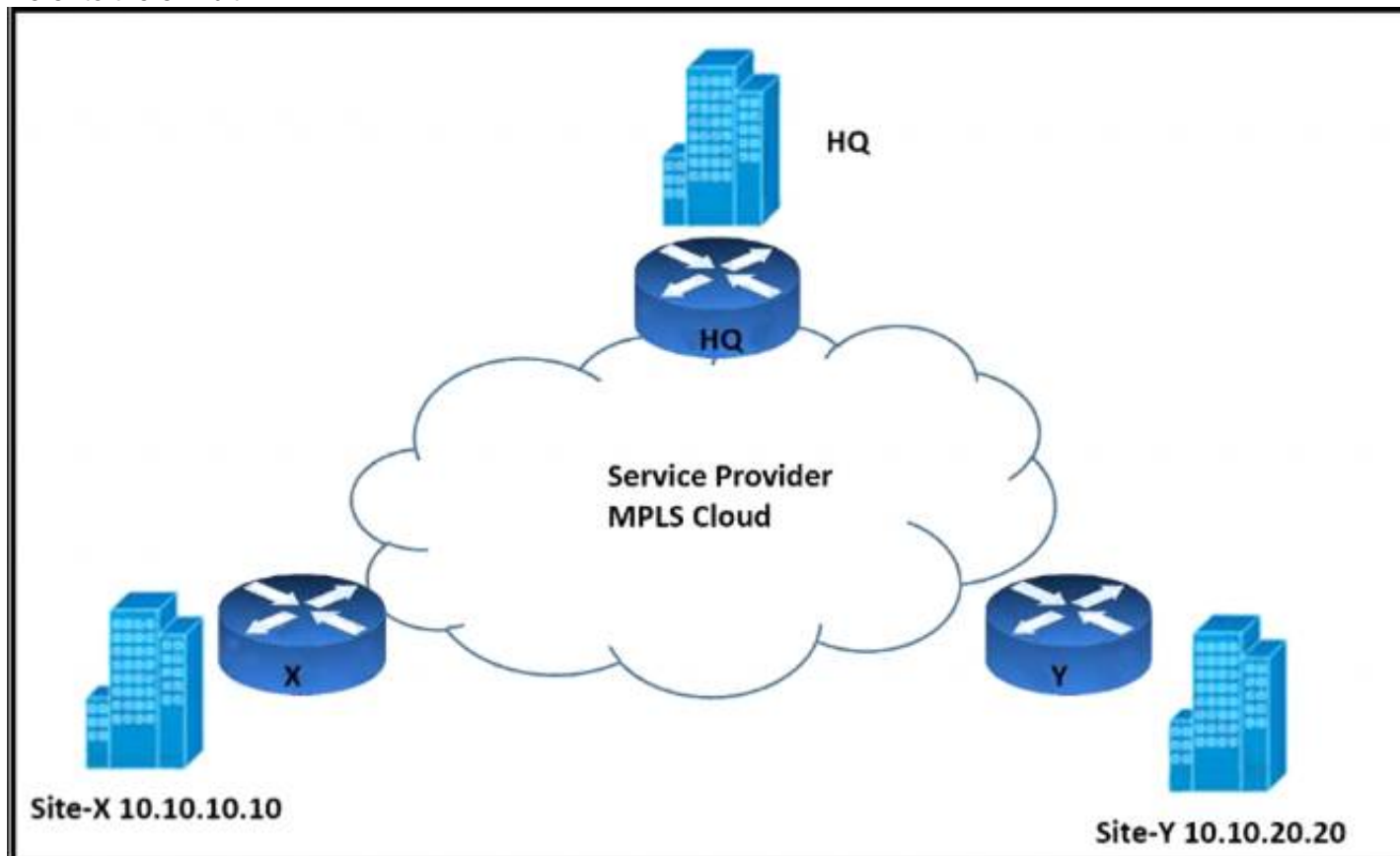
- A. requirement for data-in-motion encryption and 2FA authentication

- B. requirement for data-at-rest encryption for user identification within the VPN termination hardware
- C. categorization of systems, data, and enterprise BYOD assets that are connected to network zones based on individual privacy needs
- D. ensuring that authorized users have high-availability system access from defined zones to defined systems or zones

Answer: A

NEW QUESTION 6

Refer to the exhibit.



An architect must design an enterprise WAN that connects the headquarters with 22 branch offices. The number of remote sites is expected to triple in the next three years. The final solution must comply with these requirements:

- Only the loopback address of each of the enterprise CE X and Y routers must be advertised to the interconnecting service provider cloud network.
- The transport layer must carry the VPNv4 label and VPN payload over the MP-BGP control plane.
- The transport layer must not be under service provider control.

Which enterprise WAN transport virtualization technique meets the requirements?

- A. EIGRP Over the Top
- B. MPLS over BGP over multipoint GRE
- C. DMVPN per VRF
- D. point-to-point GRE per VRF

Answer: B

NEW QUESTION 7

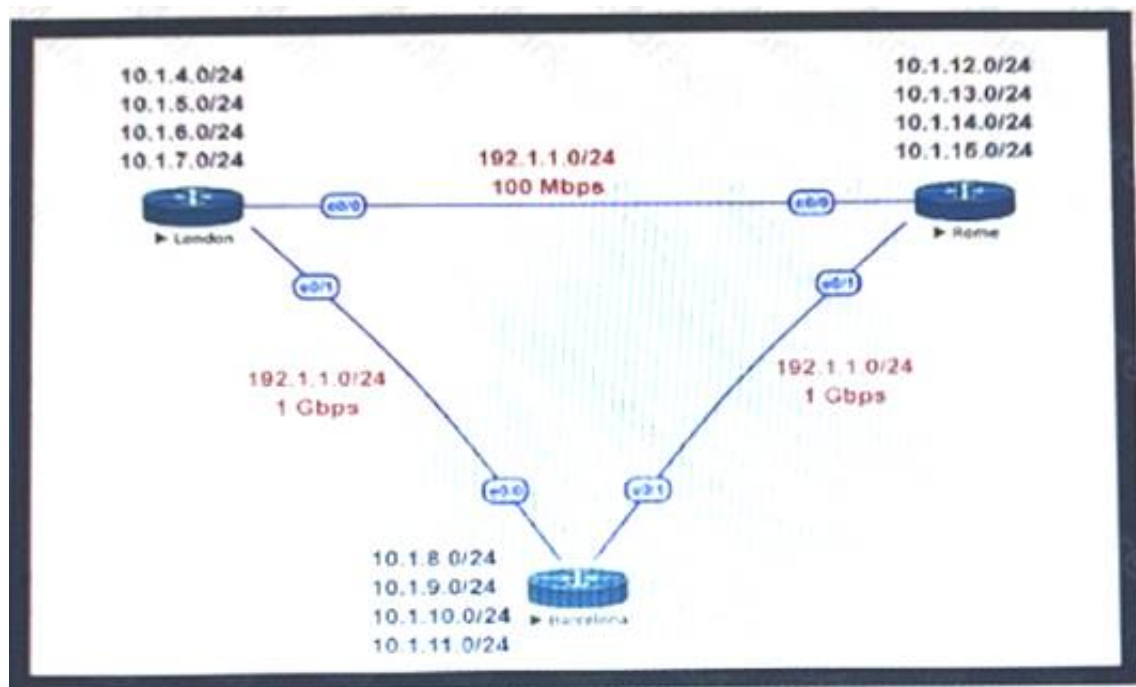
As a network designer you need to support an enterprise with hundreds of remote sites connected over a single WAN network that carries different types of traffic, including VoIP, video, and data applications which of following design considerations will not impact design decision?

- A. Focus on the solution instead of the problem, which helps to reduce downtime duration
- B. The location of the data collection
- C. What direction the data or flows should be metered
- D. Identify traffic types and top talkers over this link

Answer: A

NEW QUESTION 8

Refer to the exhibit.



This network is running OSPF as the routing protocol. The internal networks are being advertised in OSPF London and Rome are using the direct link to reach each other although the transfer rates are better via Barcelona Which OSPF design change allows OSPF to calculate the proper costs?

- A. Change the OSPF reference bandwidth to accommodate faster links.
- B. Filter the routes on the link between London and Rome
- C. Change the interface bandwidth on all the links.
- D. Implement OSPF summarisation to fix the issue

Answer: A

NEW QUESTION 9

Sometimes SDN leverages various overlay networking technologies to create layer(s) of network abstraction. What describes an overlay network?

- A. It transmits packets that traverse over network devices like switches and routers
- B. It encapsulates packets at source and destination, which incurs additional overhead
- C. Packet delivery and reliability occurs at Layer 3 and Layer 4
- D. It is responsible for the delivery of packets; NAT- or VRF-based segregation is required

Answer: B

NEW QUESTION 10

Enterprise XYZ wants to implement fast convergence on their network and optimize timers for OSPF However they also want to prevent excess flooding of LSAs if there is a constantly flapping link on the network Which timers can help prevent excess flooding of LSAs for OSPF?

- A. OSPF propagation timers
- B. OSPF throttling timers
- C. OSPF delay timers
- D. OSPF flooding timers

Answer: B

NEW QUESTION 10

What statement describes the application layer as defined in the software-defined networking architecture?

- A. This layer is responsible for collecting the network status such as network usage and topology.
- B. This layer contains programs that communicate their desired network behavior to controllers.
- C. This layer is responsible for handling packets based on the rules provided by the controller.
- D. This layer processes the instructions and requirements sent by networking components.

Answer: B

NEW QUESTION 13

Which two foundational aspects of IoT are still evolving and being worked on by the industry at large? (Choose two)

- A. WiFi protocols
- B. Regulatory domains
- C. Low energy Bluetooth sensors
- D. IoT consortia
- E. Standards

Answer: AC

NEW QUESTION 17

You have been asked to design a remote access VPN solution to support up to 2000 devices. You must ensure that only corporate assets are allowed to connect to the VPN, and users must authenticate to gain access of their based on their user role. Users must use a password that they are already using to access existing applications . A user may not always use the same device to access the VPN. Which two options combined meet the requirements? (Choose two)

- A. Use local usernames and passwords on the VPN device

- B. Deploy a central authentication directory that users can be authenticated and authorized against
- C. Deploy certificates that are unique to each user
- D. Deploy an IPsec VPN solution
- E. Deploy certificates that are unique to each device
- F. Deploy a SSL VPN solution

Answer: BF

NEW QUESTION 18

Which architecture does not require an explicit multicast signaling protocol, such as PIM or P2MP, to signal the multicast state hop-by-hop, but instead uses a link state protocol to advertise the multicast forwarding state?

- A. Binary indexed explicit routing
- B. Binary intermediate enhanced routing
- C. Bit indexed explicit replication
- D. Bi-directional implicit replication

Answer: C

NEW QUESTION 20

Company XYZ network runs IPv4 and IPv6 and they want to Introduce a multidomain, multicast-based network. The new design should use a flavor of PIM that forwards traffic using SPT. Which technology meets this requirement?

- A. PIM-DM
- B. PIM-SM
- C. PIM-SSM
- D. BIDIR-PIM

Answer: C

NEW QUESTION 25

Which technology supports antispoofing and does not have any impact on encryption performance regardless of packet size?

- A. MACsec
- B. IP source guard
- C. DHCP snooping with DAI
- D. IPsec

Answer: A

NEW QUESTION 26

A company uses equipment from multiple vendors in a data center fabric to deliver SDN, enable maximum flexibility, and provide the best return on investment. Which YANG data model should be adopted for comprehensive features to simplify and streamline automation for the SDN fabric?

- A. proprietary
- B. OpenConfig
- C. native
- D. IETF

Answer: B

NEW QUESTION 27

A network architect must redesign a service provider edge, where multiservice and multitenant PEs are currently present. Which design feature should be minimized in the new design to achieve reliability?

- A. bridging
- B. fate sharing
- C. redundancy
- D. unicast overlay routing

Answer: B

NEW QUESTION 28

You were tasked to enhance the security of a network with these characteristics:

- A pool of servers is accessed by numerous data centers and remote sites
- The servers are accessed via a cluster of firewalls
- The firewalls are configured properly and are not dropping traffic
- The firewalls occasionally cause asymmetric routing of traffic within the server data center.

Which technology should you recommend to enhance security by limiting traffic that could originate from a hacker compromising a workstation and redirecting flows at the servers?

- A. Poison certain subnets by adding static routes to Null0 on the core switches connected to the pool of servers.
- B. Deploy uRPF strict mode.
- C. Limit sources of traffic that exit the server-facing interface of the firewall cluster with ACLs.
- D. Deploy uRPF loose mode

Answer: C

NEW QUESTION 29

You are using iSCSI to transfer files between a 10 Gigabit Ethernet storage system and a 1 Gigabit Ethernet server. The performance is only approximately 700 Mbps and output drops are occurring on the server switch port. Which action will improve performance in a cost-effective manner?

- A. Change the protocol to CIFS.
- B. Increase the queue to at least 1 GB
- C. Use a WRED random drop policy
- D. Enable the TCP Nagle algorithm on the receiver

Answer: A

NEW QUESTION 33

You are designing the routing design for two merging companies that have overlapping IP address space. Which of these must you consider when developing the routing and NAT design?

- A. Local to global NAT translation is done after routing
- B. Global to local NAT translation is done before routing.
- C. Local to global NAT translation is done before policy-based routing
- D. Global to local NAT translation is done after policy-based routing.

Answer: B

NEW QUESTION 34

Company XYZ needs advice in redesigning their legacy Layer 2 infrastructure. Which technology should be included in the design to minimize or avoid convergence delays due to STP or FHRP and provide a loop-free topology?

- A. Use switch clustering in the access layer.
- B. Use switch clustering in the core/distribution layer.
- C. Use spanning-tree PortFast.
- D. Use BFD.

Answer: B

NEW QUESTION 37

Which two statements describe the hierarchical LAN design model? (Choose two)

- A. It is a well-understood architecture that provides scalability
- B. It is the best design for modern data centers
- C. It is the most optimal design but is highly complex
- D. It provides a simplified design
- E. Changes, upgrades, and new services can be introduced in a controlled and staged manner

Answer: AE

NEW QUESTION 42

A financial company requires that a custom TCP-based stock-trading application be prioritized over all other traffic for the business due to the associated revenue. The company also requires that VoIP be prioritized for manual trades. Which directive should be followed when a QoS strategy is developed for the business?

- A. Allow VoIP and the custom application to share the same priority queue,
- B. The custom application and VoIP must be assigned their own separate priority queue.
- C. Interleave the custom application with other TCP applications in the same CBWR
- D. Avoid placing the custom application in a CBWFQ queue that contains other

Answer: C

NEW QUESTION 46

Which two protocols are used by SDN controllers to communicate with switches and routers? (Choose two)

- A. OpenFlash
- B. OpenFlow
- C. NetFlash
- D. Open vSwitch Database
- E. NetFlow

Answer: BD

NEW QUESTION 48

Company XYZ wants to redesign the Layer 2 part of their network and wants to use all available uplinks for increased performance. They also want to have end host reachability supporting conversational learning. However, due to design constraints, they cannot implement port-channel on the uplinks. Which other technique can be used to make sure the uplinks are in active/active state?

- A. TRILL
- B. LISP
- C. MSTP
- D. switch stack

Answer: B

NEW QUESTION 51

A network attacker exploits application flaws to compromise critical systems in the organization with these objectives:

- Obtain sensitive data and export the data out of the network.
- Compromise developer and administrator credentials to potentially

What is the next step after application discovery is completed in Zero Trust networkings

- A. Establish visibility and behavior modeling
- B. Enforce policies and microsegmentation.
- C. Assess real-time security health.
- D. Ensure trustworthiness of systems.

Answer: A

Explanation:

<https://www.cisco.com/c/en/us/solutions/collateral/enterprise/design-zone-security/zt-arch-guide.html>

NEW QUESTION 53

Company XYZ wants to deploy OSPF. The design plan requires that two OSPF networks be mutually redistributed at multiple locations and ensure end-to-end connectivity to all of the company's networks Which technology can be used to fulfill the requirements while avoiding the creation of routing loops?

- A. Create a virtual link between ASBRs.
- B. Change the router ID for both ASBRs.
- C. Redistribute routes as external type 2 routes.
- D. Use route maps on ASBRs to filter routes with tags so they are not redistributed.

Answer: D

Explanation:

<https://www.cisco.com/c/en/us/support/docs/ip/open-shortest-path-first-ospf/4170-ospfprocesses.html>

NEW QUESTION 55

An enterprise organization currently provides WAN connectivity to their branch sites using MPLS technology, and the enterprise network team is considering rolling out SD-WAN services for all sites.

With regards to the deployment planning, drag and drop the actions from the left onto the corresponding steps on the right.

Select deployment models between virtual server software and hardware-based SD-WAN appliances.	step 1
Conduct a pilot test to observe and record unexpected issues.	step 2
Make an assessment of running protocols and application usage in the network.	step 3
Evaluate existing circuits and performance to get details of connectivity cost and reliability.	step 4
Layout transport plan based on business prioritizes traffic and the unique bandwidth requirements of each specific application.	step 5
Understand the traffic monitoring requirements and capabilities.	step 6

- A. Mastered
- B. Not Mastered

Answer: A

Explanation:

Table Description automatically generated with medium confidence

NEW QUESTION 58

Which three items do you recommend for control plane hardening of an infrastructure device? (Choose three.)

- A. redundant AAA servers
- B. Control Plane Policing
- C. warning banners
- D. to enable unused .services
- E. SNMPv3
- F. routing protocol authentication

Answer: BEF

NEW QUESTION 63

A network design includes a long signaling delay in notifying the Layer 3 control plane that an interface has failed Which two of these actions would reduce that delay? (Choose two.)

- A. Increase network stability.
- B. Reduce the time for the network to reconverge.
- C. Increase the notification of interface flaps.
- D. Enable lower data link layer recovery systems to have an opportunity to restore the interface

Answer: BD

NEW QUESTION 64

Refer to the exhibit.

	Equipment Cost	ISP Cost	Licenses Cost
SD-WAN over L3VPN	\$\$	\$\$	\$\$\$
SD-WAN over L2VPN	\$\$	\$	\$\$\$
Managed SD-WAN	\$	\$\$\$	-
DMVPN over L3VPN	\$\$	\$\$	\$

The WAN network of the General Bank of Greece has experienced several outages It takes too long to activate a new branch site The networking department of the bank plans to upgrade the legacy end-of-life WAN network with a new flexible manageable, and scalable in-house solution The number of branches will increase exponentially in the next fiscal year The CTO states that the bank's mam goal is OPEX reduction The network engineering team prepares a table to evaluate the available options Which WAN technology can be used for the solution?

- A. DMVPN over L3VPN
- B. Managed SD-WAN
- C. SD-WAN over L3VPN
- D. SD-WAN over L2VPN

Answer: B

NEW QUESTION 66

Refer to the table.

CONNECTIVITY	CAPEX	OPEX ANNUAL	INSTALLATION FEE	TERM
DWDM over dark fiber	\$250,000	\$100,000	\$30,000	12 months
CWDM over dark fiber	\$150,000	\$100,000	\$25,000	18 months
MPLS wires only	\$50,000	\$80,000	\$5,000	24 months
Metro Ethernet	\$45,000	\$100,000	\$5,000	36 months

A customer investigates connectivity options for a DCI between two production data centers to aid a large-scale migration project. The solution must provide a single 10G connection between locations and be able to run its own varying QoS profiles without service provider interaction based on the migration stages. All connectivity methods are at 10 Gbps. Which transport technology costs the least if the connectivity is required for just one year?

- A. MPLS wires only
- B. CWDM over dark fiber
- C. DWDM over dark fiber
- D. Metro Ethernet

Answer: A

NEW QUESTION 71

Company XYZ Is running a redundant private WAN network using OSPF as the underlay protocol The current design accommodates for redundancy In the network, but it Is taking over 30 seconds for the network to reconverge upon failure Which technique can be Implemented In the design to detect such a failure in a subsecond?

- A. STP
- B. fate sharing
- C. OSPF LFA
- D. BFD
- E. flex links

Answer: D

NEW QUESTION 73

Company XYZ has a hub-and-spoke topology over an SP-managed infrastructure. To measure traffic performance metrics, they implemented IP SLA senders on all spoke CE routers and an IP SLA responder on the hub CE router. What must they monitor to have visibility on the potential performance impact due to the constantly increasing number of spoke sites?

- A. CPU and memory usage on the spoke routers
- B. memory usage on the hub router
- C. CPU usage on the hub router
- D. interface buffers on the hub and spoke routers

Answer: C

NEW QUESTION 74

Company XYZ is planning to deploy primary and secondary (disaster recovery) data center sites. Each of these sites will have redundant SAN fabrics and data protection is expected between the data center sites. The sites are 100 miles (160 km) apart and target RPO/RTO are 3 hrs and 24 hrs, respectively. Which two considerations must Company XYZ bear in mind when deploying replication in their scenario? (Choose two.)

- A. Target RPO/RTO requirements cannot be met due to the one-way delay introduced by the distance between sites.
- B. VSANs must be routed between sites to isolate fault domains and increase overall availability.
- C. Synchronous data replication must be used to meet the business requirements
- D. Asynchronous data replication should be used in this scenario to avoid performance impact in the primary site.
- E. VSANs must be extended from the primary to the secondary site to improve performance and availability.

Answer: CD

Explanation:

synchronous data replication must be used to meet the business requirements, is incorrect. As described above, asynchronous replication would be a better choice in this scenario due to the distance between the data center sites and the target RPO/RTO requirements.

asynchronous data replication should be used in this scenario to avoid performance impact in the primary site, is correct. Asynchronous replication would allow Company XYZ to meet the target RPO/RTO requirements while avoiding the performance impact of synchronous replication.

NEW QUESTION 75

Which actions are performed at the distribution layer of the three-layer hierarchical network design model? (Choose two)

- A. Fast transport
- B. Reliability
- C. QoS classification and marking boundary
- D. Fault isolation
- E. Redundancy and load balancing

Answer: DE

NEW QUESTION 76

Company XYZ has 30 sites using MPLS L3 VPN and the company is now concerned about data integrity. The company wants to redesign the security aspect of their network based on these requirements:

- Securely transfer the corporate data over the private WAN
- Use a centralized configuration model.
- Minimize overhead on the tunneled traffic.

Which technology can be used in the new design to meet the company's requirements?

- A. S-VTI
- B. DMVPN
- C. MGRE
- D. GET VPN

Answer: D

NEW QUESTION 80

A business invests in SDN and develops its own SDN controller that, due to budget constraints, runs on a single controller. The controller actively places an exclusive lock on the configuration of the devices to ensure it is the only source of changes to the environment. What is the result if the controller fails?

- A. All device configurations are in read-only mode until the controller is restored.
- B. The control plane is unavailable until the controller is restored.
- C. If a device fails, the configuration backup is unavailable
- D. Manual changes are only possible until the controller is restored

Answer: B

NEW QUESTION 85

Company XYZ plans to run OSPF on a DMVPN network. They want to use spoke-to-spoke tunnels in the design What is a drawback or concern in this type of design?

- A. Additional host routes will be inserted into the routing tables
- B. Manual configuration of the spokes with the appropriate priority will be needed
- C. There will be split-horizon issue at the hub
- D. Manual configuration of the spoke IP address on the hub will be needed

Answer: B

NEW QUESTION 87

A multicast network is using Bidirectional PIM. Which two combined actions achieve high availability so that two RPs within the same network can act in a redundant manner? (Choose two)

- A. Use two phantom RP addresses
- B. Manipulate the administration distance of the unicast routes to the two RPs
- C. Manipulate the multicast routing table by creating static mroutes to the two RPs
- D. Advertise the two RP addresses in the routing protocol
- E. Use anycast RP based on MSDP peering between the two RPs
- F. Control routing to the two RPs through a longest match prefix

Answer: AF

Explanation:

<https://community.cisco.com/t5/networking-knowledge-base/rp-redundancy-with-pim-bidir-phantom-rp/ta-p/31>

NEW QUESTION 91

Company ABC uses IPv4-only. Recently they started deploying new endpoint devices. For operational reasons, IPv6 cannot be disabled on these new endpoint devices. Which security measure prevents the new endpoint from learning an IPv6 prefix from an attacker?

- A. Source Guard and Prefix Guard
- B. Router Advertisement Guard
- C. Prefix Guard
- D. Secure Neighbor Discovery

Answer: B

NEW QUESTION 95

Which design solution reduces the amount of IGMP state in the network?

- A. IGMP filtering
- B. IGMPv3 with PIM-SSM
- C. multiple multicast domains
- D. one multicast group address thorough network regardless of IGMP version

Answer: A

NEW QUESTION 96

Which two factors provide multifactor authentication for secure access to applications and data, no matter where the users are or which devices they are on? (Choose two.)

- A. persona-based
- B. power-based
- C. push-based
- D. possession-based
- E. pull-based

Answer: CD

NEW QUESTION 99

Which design principal improves network resiliency?

- A. Added load-balancing
- B. Added redundancy
- C. Added confidentiality
- D. Added reliability

Answer: B

NEW QUESTION 100

A key to maintaining a highly available network is building in the appropriate redundancy to protect against failure. This redundancy is carefully balanced with the inherent complexity of redundant systems. Which design consideration is relevant for enterprise WAN use cases when it comes to resiliency?

- A. Design in a way that expects outages and attacks on the network and its protected resources
- B. The design approach should consider simple and centralized management aspect
- C. Design in a way that it simplifies and improves ease of deployment
- D. Design automation tools wherever it is appropriate for greater visibility

Answer: A

NEW QUESTION 105

IPFIX data collection via standalone IPFIX probes is an alternative to flow collection from routers and switches. Which use case is suitable for using IPFIX probes?

- A. performance monitoring
- B. security
- C. observation of critical links
- D. capacity planning

Answer: A

NEW QUESTION 107

What are two design constraints in a standard spine and leaf architecture? (Choose two.)

- A. Spine switches can connect to each other.
- B. Each spine switch must connect to every leaf switch.
- C. Leaf switches must connect to each other.
- D. Endpoints connect only to the spine switches.
- E. Each leaf switch must connect to every spine switch.

Answer: BE

NEW QUESTION 111

While designing a switched topology, in which two options is UplinkFast recommended? (Choose two)

- A. when switches of different spanning-tree types are connected (for example, 802.1d connecting to 802.1w)
- B. 802.1d connecting to 802.1w)
- C. on distribution layer switches
- D. when hello timers are changed to more aggressive values
- E. on access layer switches
- F. on the core switches

Answer: AD

NEW QUESTION 114

Company XYZ wants to improve the security design of their network to include protection from reconnaissance and DoS attacks on their sub interfaces destined toward next hop routers. Which technology can be used to prevent these types of attacks?

- A. MPP
- B. CPPr
- C. CoPP
- D. DPP

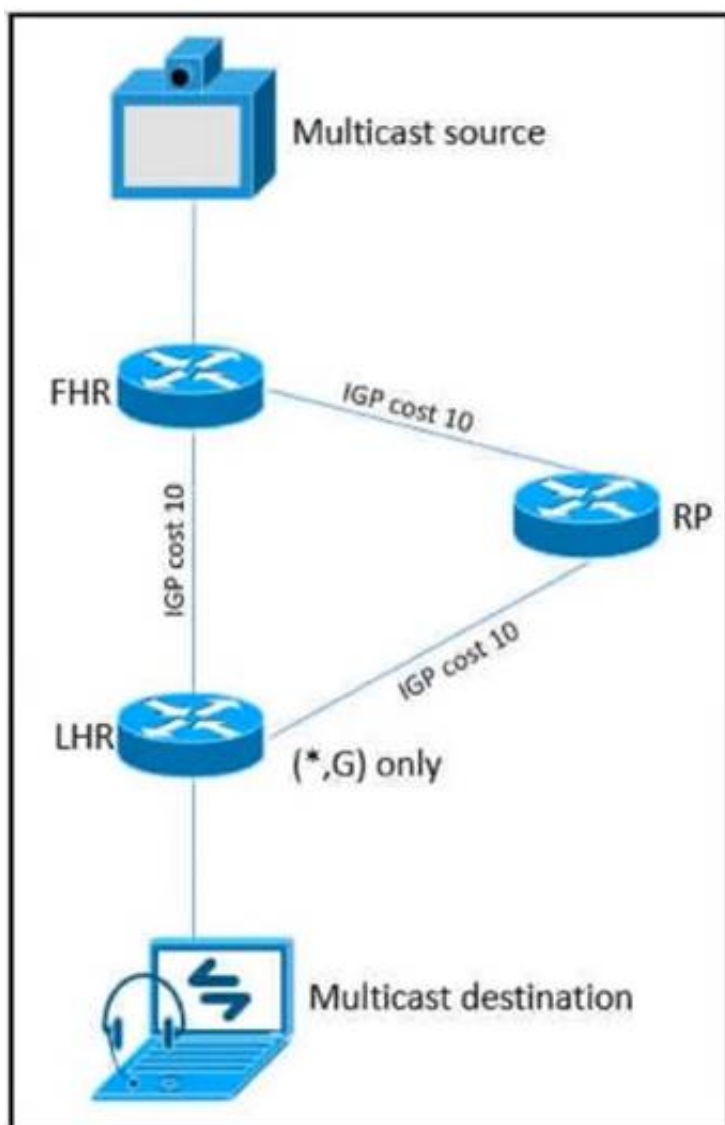
Answer: B

Explanation:

<https://learningnetwork.cisco.com/s/question/0D53i00000KsuyvCAB/copp-vs-cppr>

NEW QUESTION 115

Refer to the exhibit.



As part of a redesign project, you must predict multicast behavior. What happens to the multicast traffic received on the shared tree (*,G), if it is received on the LHR interface indicated*?

- A. It is dropped due to an unsuccessful RPF check against the multicast source
- B. It is switched given that no RPF check is performed
- C. It is switched due to a successful RPF check against the routing table
- D. It is dropped due to an unsuccessful RPF check against the multicast receiver.

Answer: A

Explanation:

<https://www.cisco.com/c/en/us/support/docs/ip/ip-multicast/16450-mcastguide0.html>

When a multicast packet arrives on an interface, the RPF process checks to ensure that this incoming interface is the outgoing interface used by unicast routing in order to reach the source of the multicast packet. This RPF check process prevents loops. Multicast routing does not forward a packet unless the source of the packet passes a RPF check. Once a packet passes this RPF check, multicast routing forwards the packet based only upon the destination address.

NEW QUESTION 117

Which two benefits can software defined networks provide to businesses? (Choose two.)

- A. provides additional redundancy
- B. decentralized management
- C. reduced latency
- D. enables innovation
- E. reduction of OpEx/CapEx
- F. meets high traffic demands

Answer: DE

NEW QUESTION 122

What are two examples of components that are part of an SDN architecture? (Choose two.)

- A. software plane
- B. control plane
- C. application plane
- D. management plane
- E. network plane

Answer: BD

NEW QUESTION 124

Which main IoT migration aspect should be reviewed for a manufacturing plant?

- A. Sensors
- B. Security
- C. Applications
- D. Wi-Fi Infrastructure
- E. Ethernet Switches

Answer: A

NEW QUESTION 125

Customer XYZ network consists of an MPLS core. IS-IS running as IGP a pair of BGP route reflectors for route propagation, and a few dozens of MPLS-TE tunnels for specific tactical traffic engineering requirements. The customer's engineering department has some questions about the use of the Overload Bit in the IS-IS networks and how it could be used to improve their current network design. Which two concepts about the Overload Bit are true? (Choose two.)

- A. It can be set on a router during the startup process for a fixed period of time
- B. Networks advertised within the LSPs of the respective node will become unreachable
- C. It forces the midpoint MPLS-TE node to reoptimize the primary tunnels going through the OL node.
- D. It can be set on a router until other interacting protocols have signaled convergence.
- E. It is not recommended on BGP Route Reflectors

Answer: AD

NEW QUESTION 126

Which two features are advantages of SD-WAN compared to MPLS-based connectivity? (Choose two.)

- A. uses FEC constructs for traffic forwarding, thereby improving efficiency
- B. separates infrastructure and policy
- C. uses policy-based forwarding of real-time traffic with less complexity
- D. unifies the WAN backbone
- E. manages failures through backup links

Answer: CD

NEW QUESTION 130

A customer migrates from a traditional Layer 2 data center network into a new SDN-based. spine-and-leaf VXLAN EVPN data center within the same location. The networks are joined to enable host migration at Layer 2 Which activity should be completed each time a legacy network is migrated?

- A. The migrated VLAN should be pruned from the Layer 2 interconnects.
- B. The migrated network should have a VXLAN VNID configured within the new network.
- C. The migrated network should be advertised to the EVPN network as a Type 2 network.
- D. The migrated network should be added to the EVPN BGP routing.

Answer: C

NEW QUESTION 131

What are two descriptions of network optimization? (Choose two.)

- A. maintain high availability
- B. proactive network management
- C. network redesign
- D. network health maintenance
- E. identify network requirements

Answer: AD

NEW QUESTION 133

Which methodology is the leading lifecycle approach to network design and implementation?

- A. PPDIOO
- B. Waterfall model
- C. Spiral model
- D. V model

Answer: A

NEW QUESTION 136

Which aspect of BGP-LS makes it scalable in large network when multiarea topology information must be gathered?

- A. transmit flow control
- B. open-loop flow control
- C. hardware flow control
- D. TCP-based flow control

Answer: A

NEW QUESTION 137

Which relationship between IBGP and the underlying physical topology is true?

- A. iBGP full mesh requirement does not dictate any specific network topology.
- B. iBGP can work only on a ring network topology with a link-state protocol like OSPF or IS-IS
- C. iBGP full mesh requires an underlying fully meshed network topology.
- D. iBGP does not work on a ring network topology even with an underlying IGP.

Answer: A

Explanation:

iBGP peers can be multiple hops away. not like eBGP that needs direct connection (or ebgp-multihop defined). thus, only IP connectivity between two peers is required for an adjacency to form.

NEW QUESTION 140

A consultant needs to evaluate project management methodologies for a new service deployment on the existing network of a customer. The customer wants to be involved in the end-to-end project progress and be provided with frequent updates. The customer also wants the ability to change the requirements if needed, as the project progresses. Which project management methodology should be used?

- A. three principles
- B. phased
- C. Agile
- D. Waterfall

Answer: C

NEW QUESTION 141

Company XYZ has implemented policy-based routing in their network. Which potential problem must be kept in mind about network reconvergence and PBR?

- A. It can limit network scalability
- B. It can create microloops during reconvergence
- C. It increases convergence time.
- D. It reduces convergence time.

Answer: B

NEW QUESTION 145

Company XYZ has two routing domains in their network, EIGRP and OSPF. The company wants to provide full reachability between the two domains by implementing redistribution on a router running both protocols. They need to design the redistribution in a way that the OSPF routers will see link costs added to external routes. How must the redistribution strategy be designed for this network?

- A. Redistribute using metric type 2 into OSPF.
- B. Redistribute using metric type 1 into OSPF.
- C. Redistribute using metric type 1 into EIGRP.

D. Redistribute using metric type 2 into EIGRP.

Answer: B

Explanation:

[https://www.ciscopress.com/articles/article.asp?p=27573&seqNum=4#:~:text=Routes%20are%20redistributed%](https://www.ciscopress.com/articles/article.asp?p=27573&seqNum=4#:~:text=Routes%20are%20redistributed%20)

NEW QUESTION 146

Which best practice ensures data security in the private cloud?

- A. Use IPsec for communication between unsecured network connection
- B. Encrypt data at rest and in transition.
- C. Use the same vendor for consistent encryption.
- D. Anonymize data ownership to comply with privacy rules.

Answer: B

NEW QUESTION 149

An engineer is designing the QoS strategy for Company XYZ. Based on initial analysis, a lot of scavenger type of traffic is traversing the network's 20Mb Internet link toward the service provider. The new design must use a QoS technique that limits scavenger traffic to 2 Mbps, which helps avoid oversubscription of the link during times of congestion. Which QoS technique can be used to facilitate this requirement?

- A. class-based traffic policing
- B. LLQ
- C. CBWFQ
- D. class-based traffic shaping

Answer: D

NEW QUESTION 153

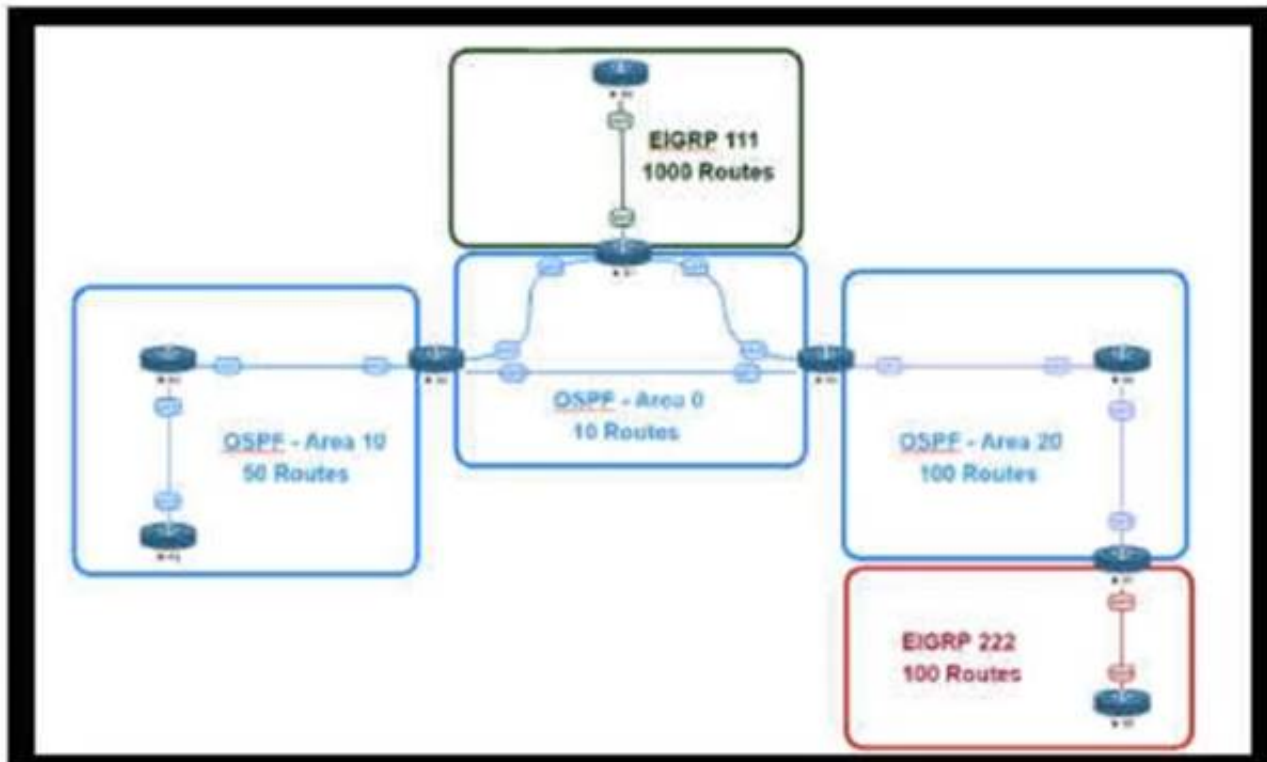
When designing a WAN that will be carrying real-time traffic, what are two important reasons to consider serialization delay? (Choose two)

- A. Serialization delays are invariable because they depend only on the line rate of the interface
- B. Serialization delays are variable because they depend on the line rate of the interface and on the type of the packet being serialized.
- C. Serialization delay is the time required to transmit the packet on the physical media.
- D. Serialization delays are variable because they depend only on the size of the packet being serialized
- E. Serialization delay depends not only on the line rate of the interface but also on the size of the packet

Answer: BD

NEW QUESTION 157

Refer to the exhibit.



An engineer is designing a multiarea OSPF network for a client who also has a large EIGRP domain. EIGRP routes are getting redistributed into OSPF. OSPF area 20 has routers with limited memory and CPU resources. The engineer wants to block routes from EIGRP 111 from propagating into area 20 and allow EIGRP 222 routes to flow. In which OSPF area type fulfills this design requirement?

- A. area 20 as a stub area
- B. type 5 LSA filtering on the ASBR between EIGRP 111 and area 0
- C. area 20 as a NSSA area
- D. type 3 LSA filtering on the ABR between area 0 and area 20

Answer: C

NEW QUESTION 162

Which two advantages of using DWDM over traditional optical networks are true? (Choose two.)

- A. inherent topology flexibility and service protection provided without penalty through intelligent oversubscription of bandwidth reservation
- B. ability to expand bandwidth over existing optical Infrastructure
- C. inherent topology flexibility with built-in service protection
- D. inherent topology flexibility with intelligent chromatic dispersion
- E. inherent topology flexibility with a service protection provided through a direct integration with an upper layer protocol

Answer: BC

NEW QUESTION 163

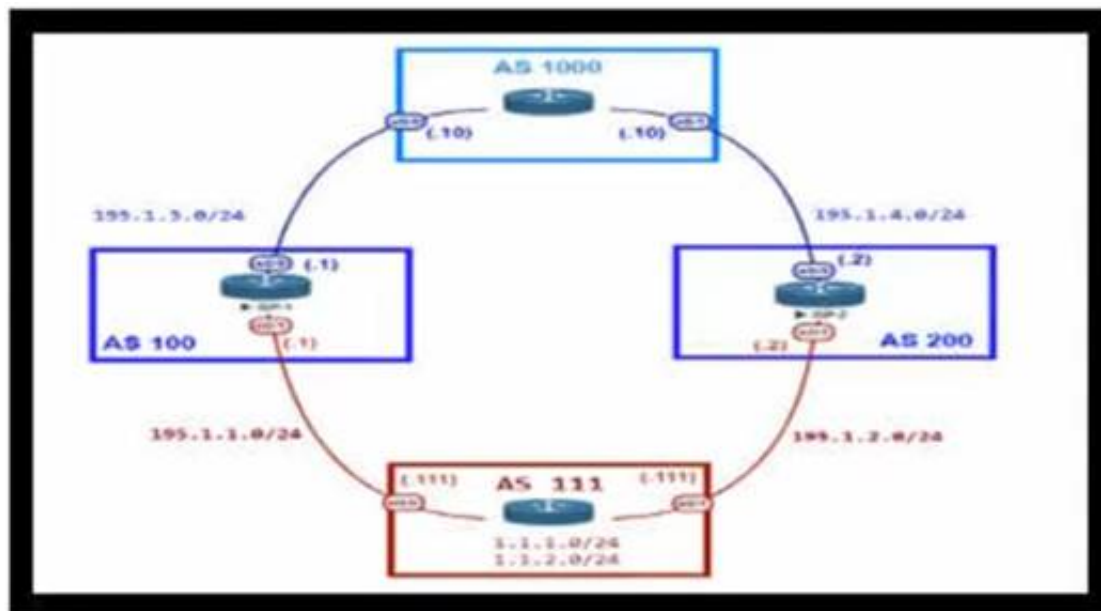
A BGP route reflector in the network is taking longer than expected to coverage during large network changes. Troubleshooting shows that the router cannot handle all the TCP acknowledgements during route updates. Which action can be performed to tune the device performance?

- A. Increase the size of the hold queue.
- B. Increase the size of the large buffers.
- C. Decrease the size of the small buffers.
- D. Increase the keepalive timers for each BGP neighbor.

Answer: A

NEW QUESTION 166

Refer to the exhibit.



An engineer is designing the network for a multihomed customer running in AS 111 does not have any other Ass connected to it. Which technology is more comprehensive to use in the design to make sure that the AS is not being used as a transit AS?

- A. Configure the AS-set attribute to allow only routes from AS 111 to be propagated to the neighbor ASs.
- B. Use the local preference attribute to configure your AS as a non-transit" AS.
- C. include an AS path access list to send routes to the neighboring ASs that only have AS 111 in the AS path field.
- D. Include a prefix list to only receive routes from neighboring ASs.

Answer: C

NEW QUESTION 167

During evaluation of migrating current on premises infrastructure to add cloud-based infrastructure, a network planning team must meet three core requirements as they make recommendations on which cloud strategy to adopt going forward

- Technology is changing rapidly, therefore the enterprise must be open to adopting new ways of doing things, and be ready to invest CapEx-funds in the next three years
- Network bandwidth capacity requirements are dynamic and are expected to change over the next year
- If new technologies are to be introduced, operational expenses must be kept at a minimum.

Which cloud strategy meets these requirements?

- A. private
- B. hybrid
- C. public
- D. multicloud

Answer: D

NEW QUESTION 170

An architect designs a multi-controller network architecture with these requirements:

- Achieve fast failover to control traffic when controllers fail.
- Reduce connectivity loss and enable smart recovery to improve the SDN survivability.
- Improve connectivity by adding path diversity and capacity awareness for controllers.

Which control plane component of the multi-controller must be built to meet the requirements?

- A. control node reliability
- B. controller stale consistency
- C. control path reliability
- D. controller clustering

Answer: B

NEW QUESTION 173

Which action must be taken before new VoIP systems are implemented on a network to ensure that the network is ready to handle the traffic?

- A. Evaluate bandwidth utilization and connection quality
- B. Enable special requirements such as direct DID lines on pickup
- C. Make recommendations to limit the size of the half-open session table on routers
- D. Check if anomaly detection is enabled for SIP and H.323 on Layer 3 devices

Answer: B

NEW QUESTION 175

Which three components are part of the foundational information security principles of the CIA triad? (Choose three.)

- A. cryptography
- B. confidentiality
- C. authorization
- D. identification
- E. integrity
- F. availability

Answer: BEF

NEW QUESTION 176

The network team in XYZ Corp wants to modernize their infrastructure and is evaluating an implementation and migration plan to allow integration MPLS-based, Layer 2 Ethernet services managed by a service provider to connect branches and remote offices. To decrease OpEx and improve response times when network components fail, XYZ Corp decided to acquire and deploy new routers. The network currently is operated over E1 leased lines (2 Mbps) with a managed CE service provided by the telco.

Drag and drop the implementation steps from the left onto the corresponding targets on the right in the correct order.

Activation of the MPLS-based L2VPN service.	Step 1
Monitor performance of the Ethernet service for a predefined period of time.	Step 2
Decomission E1 leased line.	Step 3
Deployment of new branch routers.	Step 4
Test and validation of SLA parameters in the L2VPN.	Step 5
Migrate E1 to the new Ethernet service.	Step 6

- A. Mastered
- B. Not Mastered

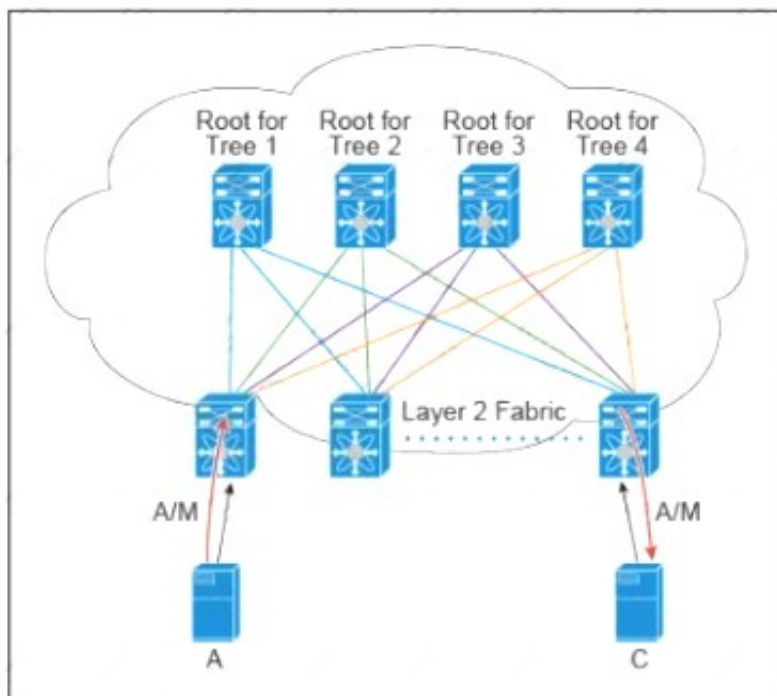
Answer: A

Explanation:

Table Description automatically generated

NEW QUESTION 181

Refer to the exhibit.



There are multiple trees in the Cisco FabricPath. All switches in the Layer 2 fabric share the same view of each tree. Which two concepts describe how the multicast traffic is load-balanced across this topology? (Choose two)

- A. A specific (S,G) traffic is not load-balanced
- B. All trees are utilized at the same level of the traffic rate
- C. Every leaf node assigns the specific (S,G) to the same tree.
- D. A specific (S,G) multicast traffic is load-balanced across all trees due to better link utilization efficiency.
- E. The multicast traffic is generally load-balanced across all trees

Answer: BD

NEW QUESTION 186

You want to mitigate failures that are caused by STP loops that occur before UDLD detects the failure or that are caused by a device that is no longer sending BPDUs. Which mechanism do you use along with UDLD?

- A. Root guard
- B. BPDU guard
- C. Loop guard
- D. BPDU filtering

Answer: C

NEW QUESTION 187

What are two key design principles when using a hierarchical core-distribution-access network model? (Choose two)

- A. A hierarchical network design model aids fault isolation
- B. The core layer is designed first, followed by the distribution layer and then the access layer
- C. The core layer provides server access in a small campus.
- D. A hierarchical network design facilitates changes
- E. The core layer controls access to resources for security

Answer: AD

NEW QUESTION 191

Which two actions must merchants do to be compliant with the Payment Card Industry Data Security Standard? (Choose two.)

- A. conduct risk analyses
- B. install firewalls
- C. use antivirus software
- D. establish monitoring policies
- E. establish risk management policies

Answer: BC

NEW QUESTION 193

An enterprise campus is adopting a network virtualization design solution with these requirements

- It must include the ability to virtualize the data plane and control plane by using VLANs and VRFs
- It must maintain end-to-end logical path transport separation across the network
- resources available grouped at the access edge

Which two primary models can this network virtualization design be categorized? (Choose two)

- A. Path isolation
- B. Session isolation
- C. Group virtualization
- D. Services virtualization
- E. Edge isolation

Answer: AD

NEW QUESTION 194

How many fully established neighbour relationships exist on an Ethernet with five routers running OSPF as network type broadcast?

- A. 5
- B. 6
- C. 7
- D. 10
- E. 20

Answer: C

Explanation:

Assuming routers R1-R5, R1 is elected DR, R2 BDR. Fully established neighborships only occur to DR and BDR, all other neighbors are in 2Way DR other state.
DR|BDRFull relationships:
R2-R1 R3-R1 R3-R2 R4-R1 R4-R2 R5-R1 R5-R2

NEW QUESTION 198

A Tier-3 Service Provider is evolving into a Tier-2 Service Provider due to the amount of Enterprise business it is receiving. The network engineers are re-evaluating their IP/MPLS design considerations in order to support duplicate/overlapping IP addressing from their Enterprise customers within each Layer3 VPN. Which concept would need to be reviewed to ensure stability in their network?

- A. Assigning unique Route Distinguishers
- B. Assigning unique Route Target ID'S
- C. Assigning unique IP address space for the Enterprise NAT/Firewalls
- D. Assigning unique VRF ID's to each L3VPN

Answer: A

NEW QUESTION 199

SD-WAN can be used to provide secure connectivity to remote offices, branch offices, campus networks, data centers, and the cloud over any type of IP-based underlay transport network. Which two statements describe SD WAN solutions? (Choose two.)

- A. SD-WAN networks are inherently protected against slow performance.
- B. Control and data forwarding planes are kept separate.
- C. Improved operational efficiencies result in cost savings.
- D. Solutions include centralized orchestration, control, and zero-touch provisioning.
- E. Solutions allow for variations of commodity and specialized switching hardware.

Answer: BD

NEW QUESTION 201

Company XYZ is in the process of identifying which transport mechanism(s) to use as their WAN technology. Their main two requirements are.

- a technology that could offer DPI, SLA, secure tunnels, privacy, QoS, scalability, reliability, and ease of management
- a technology that is cost-effective

Which WAN technology(ies) should be included in the design of company XYZ?

- A. Software-defined WAN should be the preferred choice because it complements both technologies, covers all the required features, and it is the most cost-effective solution.
- B. Internet should be the preferred option because it is cost effective and supports BFD, IP SL
- C. and IPsec for secure transport over the public Internet.
- D. Both technologies should be used
- E. Each should be used to back up the other one; where the primary links are MPLS, the internet should be used as a backup link with IPsec (and vice versa).
- F. MPLS meets all these requirements and it is more reliable than using the Internet
- G. It is widely used with defined best practices and an industry standard.

Answer: A

NEW QUESTION 206

Company XYZ runs OSPF in their network. A design engineer decides to implement hot-potato routing architecture. How can this implementation be achieved?

- A. Enable iBGP and apply prepend to ensure all prefixes will have the same length of the AS path attribute value.
- B. Redistribute the external prefixes onto OSPF and ensure the total metric calculation includes only the ext value and the value is the same in all ASBRs.
- C. Enable OSPF load-balancing over unequal cost path.
- D. Redistribute the external prefixes onto OSPF and ensure that the total metric calculation includes external internal values.

Answer: D

NEW QUESTION 210

An MPLS service provider is offering a standard EoMPLS-based VPLS service to Customer A. providing Layer 2 connectivity between a central site and approximately 100 remote sites. Customer A wants to use the VPLS network to carry its internal multicast video feeds which are sourced at the central site and consist of 20 groups at Mbps each. Which service provider recommendation offers the most scalability?

- A. EoMPLS-based VPLS can carry multicast traffic in a scalable manner
- B. Use a mesh of GRE tunnels to carry the streams between sites
- C. Enable snooping mechanisms on the provider PE routers.

D. Replace VPLS with a Layer 3 MVPN solution to carry the streams between sites

Answer: D

NEW QUESTION 214

Company XYZ is running OSPF in their network. They have merged with another company that is running EIGRP as the routing protocol. Company XYZ now needs the two domains to talk to each other with redundancy, while maintaining a loop free environment. The solution must scale when new networks are added into the network in the near future. Which technology can be used to meet these requirements?

- A. multipoint route-redistribution with route filtering using ACLs
- B. DUMP multipoint route-redistribution with route filtering using route tags
- C. DUMPS single point route-redistribution with route filtering using route tags
- D. DUMPS single point route-redistribution with route filtering using ACLs

Answer: B

NEW QUESTION 216

Which two impacts of adding the IP event dampening feature to a network design are true? (Choose two.)

- A. It protects against routing loops.
- B. It switches traffic immediately after a link failure.
- C. It speeds up link failure detection.
- D. It reduces the utilization of system processing resources.
- E. It improves overall network stability.

Answer: DE

NEW QUESTION 220

The Company XYZ network requires OSPF dead neighbor detection in a subsecond manner. However, the company network does not support BFD. Which other feature can be used to fulfill the design requirement?

- A. STP
- B. fast hello
- C. LFA
- D. DPD

Answer: B

NEW QUESTION 224

Company XYZ is migrating their existing network to IPv6 and they must plan for Layer 2 and Layer 3 devices. Some of the access layer switches do not support IPv6, however, core and distribution switches fully support unicast and multicast routing. The company wants to minimize cost of the migration. Which migration strategy should be used in the design?

- A. The access layer switches must support IGMP snooping at a minimum.
- B. Any switches that do not support IGM snooping must be replaced.
- C. Upgrade the non-supporting switches. Otherwise, it will cause an issue with the migration.
- D. Layer 2 switches will not affect the implementation of IPv6. They can be included in the design in their current state.
- E. The access layer switches must support DHCPv6. Any switches that do not support DHCPv6 must be replaced.

Answer: C

NEW QUESTION 228

Various teams in different organizations within an enterprise are preparing low-level design documents to capture network parameters using a Waterfall project model:

- hardware sizing and power consumption
- Layer 2 and layer 3 services parameters
- configuration of all control plane protocols

Input from relevant stakeholders was captured at the start of the project, and the project scope has been defined based on the parameters above. What impact will it have on documentation and project deliverables if the stakeholders ask to have changes carried out in the network before the information has been captured?

- A. This provides more opportunity to think outside the box.
- B. Rework is expected before the delivery.
- C. Significant effort and time are required.
- D. This provides a flexible approach to incorporate changes.

Answer: B

NEW QUESTION 232

Which development model is closely associated with traditional project management?

- A. static model
- B. Agile model
- C. evolutionary delivery model
- D. lifecycle model

Answer: D

NEW QUESTION 233

Refer to the table.

CONNECTIVITY	CAPEX	OPEX ANNUAL	INSTALLATION FEE	TERM
DWDM over dark fiber	\$250,000	\$100,000	\$30,000	60 months
CWDM over dark fiber	\$150,000	\$100,000	\$25,000	60 months
MPLS	\$50,000	\$150,000	\$75,000	12 months
Metro Ethernet	\$45,000	\$125,000	\$5,000	36 months

A customer investigates connectivity options for a DCI between two production data centers. The solution must provide dual 10G connections between locations with no single points of failure for Day 1 operations. It must also include an option to scale for up to 20 resilient connections in the second year to accommodate isolated SAN over IP and isolated, dedicated replication IP circuits. All connectivity methods are duplex 10 Gbps. Which transport technology costs the least over two years, in the scenario?

- A. Metro Ethernet
- B. DWDM
- C. CWDM
- D. MPLS

Answer: B

NEW QUESTION 237

A small organization of 20 employees is looking to deliver a network design service for modernizing customer networks to support advanced solutions.

- Project scope and weekly progress should be visualized by the management.
- Always consider feedback and make changes accordingly during the project.
- Should consider flexibility to change scope at the point of time.

Which project methodology meets the requirements and have the least impact on the outcome?

- A. Scrum
- B. LEAN
- C. Kanban
- D. Six-Sigma

Answer: A

Explanation:

<https://firebrand.training/uk/blog/scrum-vs-six-sigma-which-one-is-right-for-you>

NEW QUESTION 239

SDN is still maturing Throughout the evolution of SDN which two things will play a key role in enabling a successful deployment and avoiding performance visibility gaps in the infrastructure? (Choose two.)

- A. rapid on-demand growth
- B. dynamic real-time change
- C. falling back to old behaviors
- D. peer-to-peer controller infrastructure
- E. integration of device context

Answer: BE

NEW QUESTION 244

A network security team uses a purpose-built tool to actively monitor the campus network, applications, and user activity. The team also analyzes enterprise telemetry data from IPFIX data records that are received from devices in the campus network. Which action can be taken based on the augmented data?

- A. reduction in time to detect and respond to threats
- B. integration with an incident response plan
- C. adoption and improvement of threat-detection response
- D. asset identification and grouping decisions

Answer: A

NEW QUESTION 247

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