

Cisco

Exam Questions 400-007

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



NEW QUESTION 1

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 2

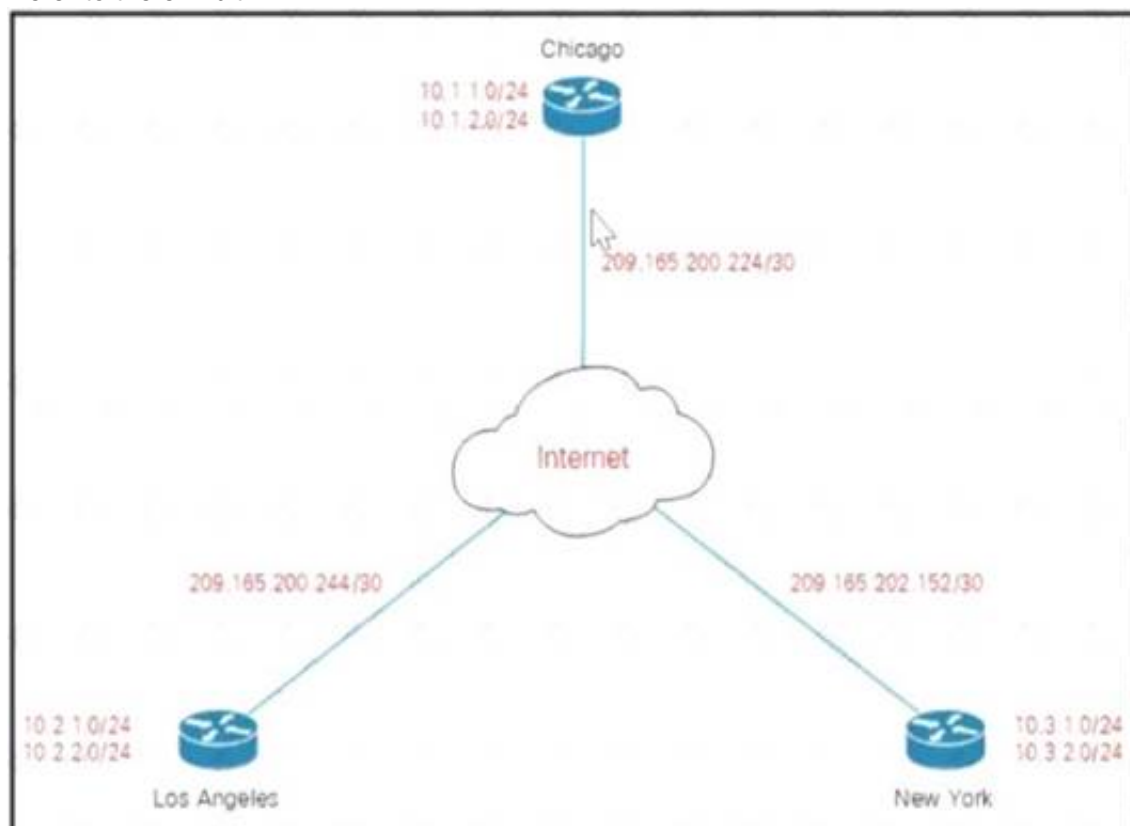
When consumers that leverage IaaS reach 100% resource capacity, what can be used to redirect the overflow of traffic to the public cloud so there is no disruption to service?

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

Answer: C

NEW QUESTION 3

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 4

Which management category is not part of FCAPS framework?

- A. Configuration
- B. Security
- C. Performance
- D. Authentication
- E. Fault-management

Answer: D

NEW QUESTION 5

A legacy enterprise is using a Service Provider MPLS network to connect its head office and branches. Recently, they added a new branch to their network. Due to physical security concerns, they want to extend their existing IP CCTV network of the head office to the new branch, without any routing changes in the network. They are also under some time constraints. What is the best approach to extend the existing IP CCTV network to the new branch, without incurring any IP address changes?

- A. GRE
- B. L2TPv3
- C. VXLAN

D. EoMPLS

Answer: B

NEW QUESTION 6

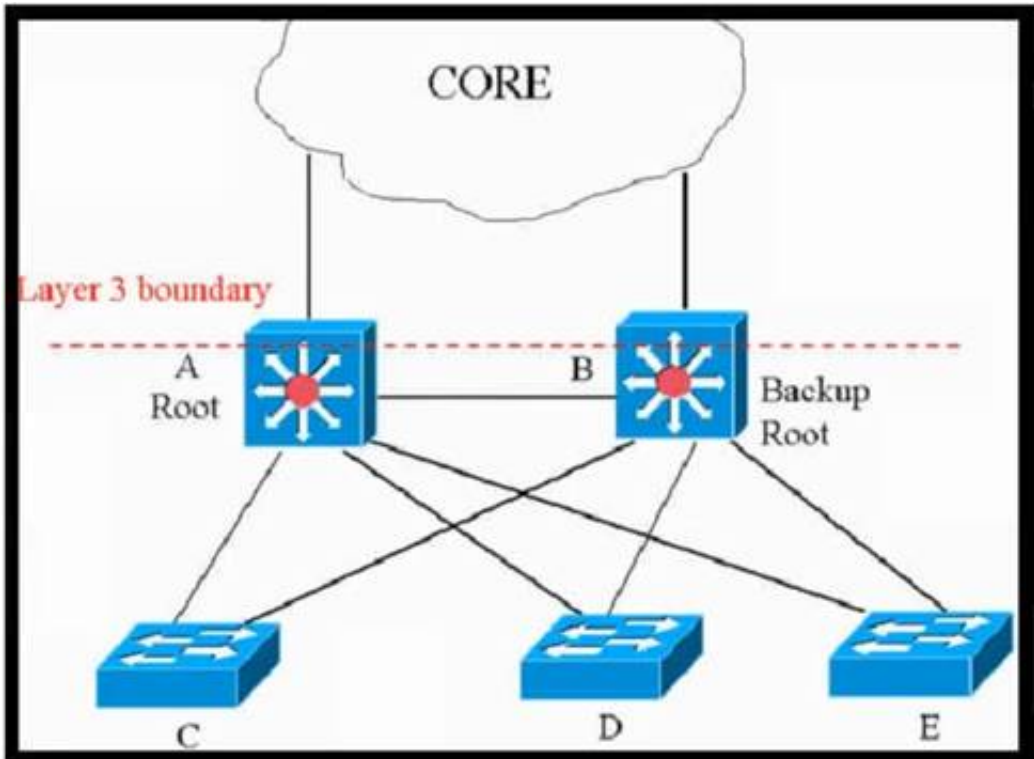
You have been tasked with designing a data center interconnect to provide business continuity You want to encrypt the traffic over the DCI using IEEE 802 1AE MACsec to prevent the deployment of any firewall or IPS. Which two interconnect technologies support MACsec? (Choose two.)

- A. EoMPLS
- B. MPLS Layer 3 VPN
- C. DMVPN
- D. GET VPN
- E. KVPLS

Answer: AE

NEW QUESTION 7

Refer to the exhibit.



This network is running legacy STP 802.1 d. Assuming "hello_timer" is fixed to 2 seconds, which parameters can be modified to speed up convergence times after single link/node failure?

- A. The transit_delay=5 and dpdu_delay=20 are recommended values, considering helto_timer=2 and specified
- B. Only the maximum_transmission_halt_delay and diameter parameters are configurable parameters in 802. to speed up STP convergence process
- C. The max_age and forward delay parameters can be adjusted to speed up STP convergence process.
- D. Only the transit_delay and bpdu_delay timers are configurable parameters in 802.1d to speed up STP convergence process.

Answer: C

NEW QUESTION 8

Drag and drop the end-to-end network virtualization elements from the left onto the correct network areas on the right.

Network Functions Virtualization (NFV)	Edge Control
IP Tunneling	option A
VRF	option B
MPLS + MP-BGP	Transport Virtualization
VLAN	option A
Service Containers	option B
	Service Virtualization
	option A
	option B

- A. Mastered
- B. Not Mastered

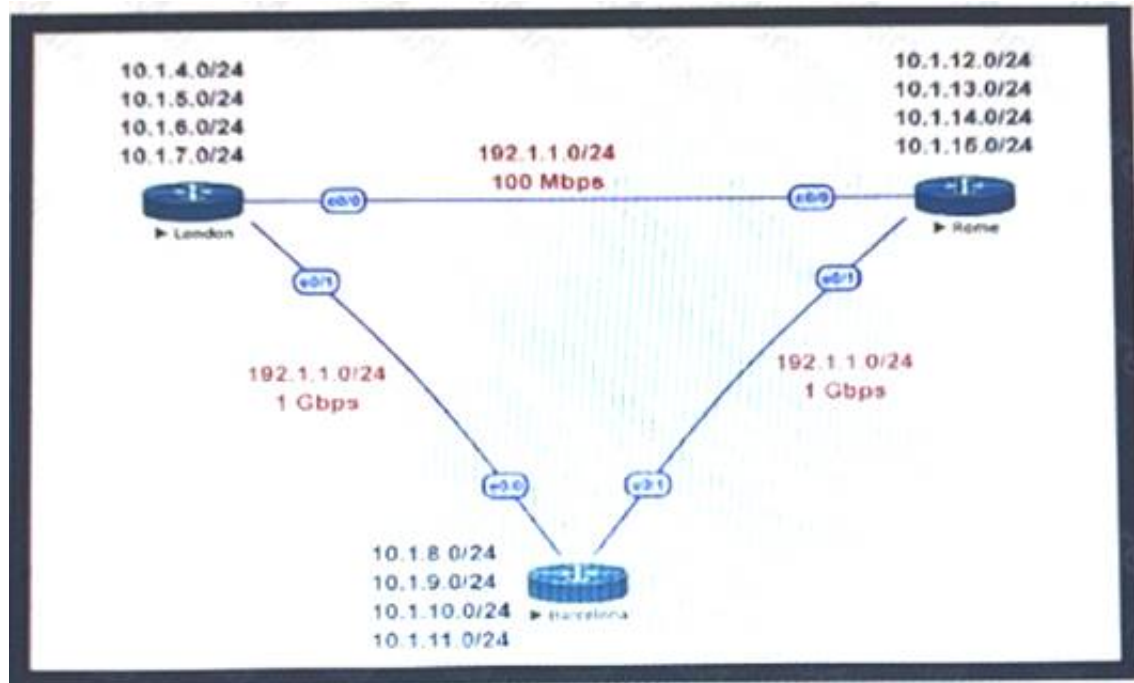
Answer: A

Explanation:

Graphical user interface Description automatically generated with medium confidence

NEW QUESTION 9

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 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

Which two characteristics are associated with 802.1s? (Choose two)

- A. 802.1s supports up to 1024 instances of 802.1
- B. 802.1 s is a Cisco enhancement to 802.1w.
- C. 802.1s provides for faster convergence over 802.1D and PVST+.
- D. CPU and memory requirements are the highest of all spanning-tree STP implementations.
- E. 802.1s maps multiple VLANs to the same spanning-tree instance

Answer: CE

NEW QUESTION 14

Which issue poses a challenge for security architects who want end-to-end visibility of their networks?

- A. too many overlapping controls
- B. too many disparate solutions and technology silos
- C. an overabundance of manual processes
- D. a network security skills shortage

Answer: B

NEW QUESTION 19

A healthcare customer requested that SNMP traps must be sent over the MPLS Layer 3 VPN service. Which protocol must be enabled?

- A. SNMPv3
- B. Syslog
- C. Syslog TLS
- D. SNMPv2
- E. SSH

Answer: A

NEW QUESTION 22

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 25

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 28

What is a disadvantage of the traditional three-tier architecture model when east west traffic between different pods must go through the distribution and core layers?

- A. low bandwidth
- B. security
- C. scalability
- D. high latency

Answer: A

NEW QUESTION 29

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 33

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 34

Company XYZ uses an office model where the employees can use any open desk and plug their laptops in. They want to authenticate the end users using their domain username and password before allowing them access to the network. The design must also accommodate the ability of controlling traffic within the same group or subnet if a macro (or micro) segmentation-based model is adopted in the future. Which protocol can be recommended for this design to authenticate end users?

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

Answer: D

Explanation:

<https://www.networkstraining.com/what-is-cisco-ise/>

NEW QUESTION 35

An architect receives a business requirement from a CTO that states the RTO and RPO for a new system should be as close as possible to zero. Which replication method and data center technology should be used?

- A. asynchronous replication over dual data centers via DWDM
- B. synchronous replication over geographically dispersed dual data centers via MPLS
- C. synchronous replication over dual data centers via Metro Ethernet
- D. asynchronous replication over geographically dispersed dual data centers via CWDM

Answer: B

Explanation:

RTO and RPO are measures of how quickly and accurately a system can be recovered after a disaster or failure. RTO refers to the amount of time it takes to restore a system to its normal operation after a failure, while RPO refers to the amount of data that can be lost as a result of a failure. In synchronous replication, data is written to both the primary and secondary systems at the same time. This ensures that the data on the secondary system is always up-to-date and ready for use in the event of a disaster or failure. Geographically dispersed dual data centers refer to two data centers that are located in different geographical locations, which can help to reduce the risk of a disaster or failure impacting both data centers at the same time.

NEW QUESTION 36

Company XYZ, a global content provider, owns data centers on different continents. Their data center design involves a standard three-layer design with a Layer 3-only core. VRRP is used as the FHRP. They require VLAN extension across access switches in all data centers, and they plan to purchase a Layer 2 interconnection between two of their data centers in Europe in the absence of other business or technical constraints. Which termination point is optimal for the Layer 2 interconnection?

- A. at the core layer, to offer the possibility to isolate STP domains
- B. at the access layer because the STP root bridge does not need to align with the VRRP active node
- C. at the core layer because all external connections must terminate there for security reasons
- D. at the aggregation layer because it is the Layer 2 to Layer 3 demarcation point

Answer: D

NEW QUESTION 41

Which interconnectivity method offers the fastest convergence in the event of a unidirectional issue between three Layer 3 switches connected together with routed links in the same rack in a data center?

- A. Copper Ethernet connectivity with BFD enabled
- B. Copper Ethernet connectivity with UDLD enabled
- C. Fiber Ethernet connectivity with BFD enabled
- D. Fiber Ethernet connectivity with UDLD enabled

Answer: C

NEW QUESTION 42

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.

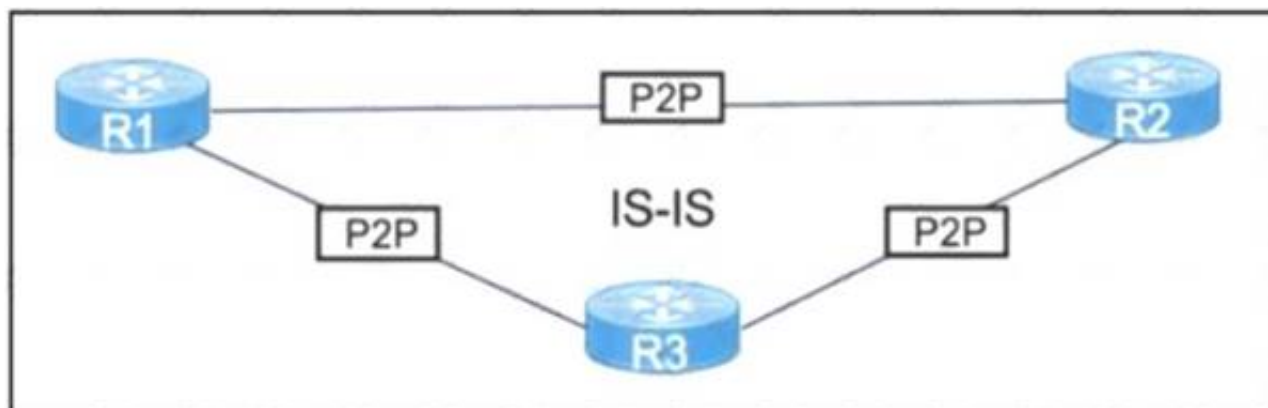
Which technology should you recommend to enhance security by limiting traffic that could originate from a hacker compromising a workstation and redirecting flows at the servers?

- 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 46

Refer to the exhibit.



After a network audit, a network engineer must optimize the current network convergence time. The proposed solution must consider link layer and control plane failures. Which solution meets the requirements?

- A. Configure debounce timers
- B. Increase fast hello timers
- C. Implement BFD

D. Enable LSP fast flood

Answer: C

NEW QUESTION 48

Which two features control multicast traffic in a VLAN environment? (Choose two)

- A. IGMP snooping
- B. MLD snooping
- C. RGMP
- D. PIM snooping
- E. pruning

Answer: AB

NEW QUESTION 49

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 52

Which two conditions must be met for EIGRP to maintain an alternate loop-free path to a remote network? (Choose two.)

- A. The Reported Distance from a successor is lower than the local Feasible Distance.
- B. The Reported Distance from a successor is higher than the local Feasible Distance.
- C. The feasibility condition does not need to be met.
- D. The Feasible Distance from a successor is lower than the local Reported Distance.
- E. A feasible successor must be present.

Answer: AE

NEW QUESTION 54

Which two statements describe the usage of the IS-IS overload bit technique? (Choose two)

- A. If overload-bit is set on a Level 2 intermediate system, the other Level 2 intermediate systems in the topology will stop using the overloaded IS to forward Level 2 traffic However, the intermediate system can still forward Level 1 traffic
- B. It can be set in intermediate systems (IS-IS routers) to prioritize control plane CSNP packets.
- C. It can be used to automatically synchronize the link-state database between Level 1 intermediate systems
- D. It can be set in intermediate systems (IS-IS routers) to avoid traffic black holes until routing protocols are fully converged after a reload operation.
- E. It can be set in intermediate systems (IS-IS routers) to attract transit traffic from other intermediate systems

Answer: AD

NEW QUESTION 55

Drag and drop the design characteristics from the left onto the correct network filter techniques on the right. Not all options are used.

It is used to prevent spoofing attacks when there are alternate routes to a given IP address

It is used to check the existence of a route without regard to the incoming interface

It is a dynamic filter

It requires manual configuration

It is used as a filtering technique for Martian IP addresses

Ingress Access Lists

target 1

Strict Reverse Path Forwarding

target 2

Feasible Path Reverse Path Forwarding

target 3

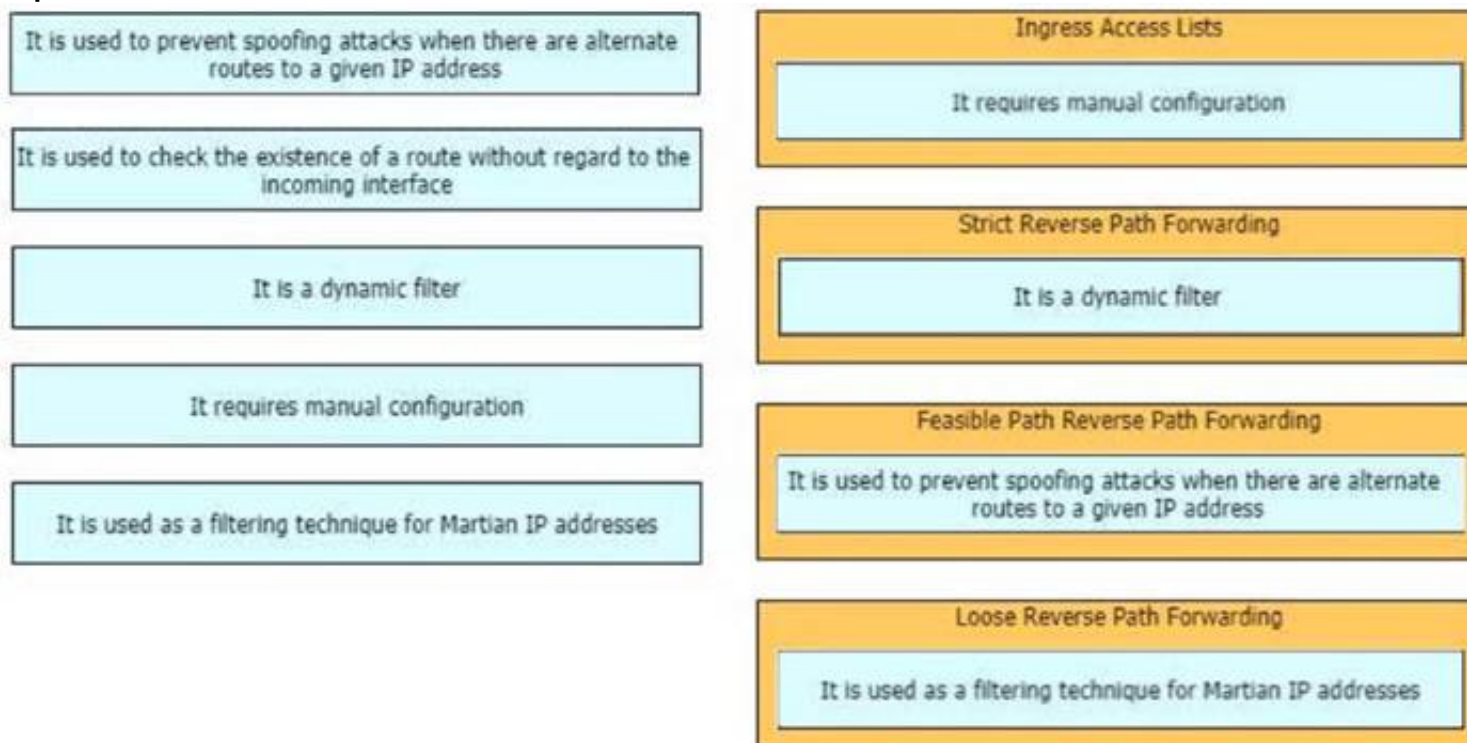
Loose Reverse Path Forwarding

target 4

- A. Mastered
- B. Not Mastered

Answer: A

Explanation:



NEW QUESTION 60

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 61

A customer asks you to perform a high level review of their upcoming WAN refresh for remote sites. The review is specially focused on their retail store operations consisting of 500+ locations connected via multipoint IPsec VPN solution. Which routing protocol would be valid but would also be the most restrictive for the expansion of this deployment model?

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

Answer: B

NEW QUESTION 63

The administrator of a small branch office wants to implement the Layer 2 network without running STP. The office has some redundant paths. Which mechanism can the administrator use to allow redundancy without creating Layer 2 loops?

- A. Use double-sided VPC on both switches
- B. Use two port channels as Flex links
- C. Use fabric path with ECMP
- D. Use 802.3ad link bundling.

Answer: B

NEW QUESTION 67

A business wants to centralize services via VDI technology and to replace remote WAN desktop PCs with thin client-type machines to reduce operating costs. Which consideration supports the new business requirement?

- A. VDI servers should be contained centrally within a DMZ
- B. The thin client traffic should be placed in a WAN QoS priority queue
- C. VDI servers should be contained within dedicated VLANs in each branch location
- D. The WAN should offer low latency and be resized

Answer: D

NEW QUESTION 68

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 71

Company XYZ is designing the IS-IS deployment strategy for their multiarea IS-IS domain. They want IS-IS neighbour relationships to be minimized on each network segment and want to optimize the size of the IS-IS LSDB on each router. Which can design can be used to meet these requirements?

- A. Design all routers as Level 2 router
- B. Set the links between the routers as Level 1 with the area
- C. Design the network so that the routers connecting to other areas are Level 2 routers and internal routers are Level 1
- D. Design the network so that all routers are Level 1 routers
- E. Design the network so that the routers connecting to other areas are Level 1/Level 2 routers and internal routers are Level 1

Answer: D

NEW QUESTION 72

What is the most important operational driver when building a resilient and secure modular network design?

- A. Reduce the frequency of failures requiring human intervention
- B. Minimize app downtime
- C. Increase time spent on developing new features
- D. Dependencies on hardware or software that is difficult to scale

Answer: A

NEW QUESTION 73

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 75

What are two examples of business goals to be considered when a network design is built? (Choose two.)

- A. standardize resiliency
- B. minimize operational costs
- C. integrate endpoint posture
- D. ensure faster obsolescence
- E. reduce complexity

Answer: BE

NEW QUESTION 76

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 81

An enterprise has identified these causes for inefficient CAPEX spending:

- CAPEX planning is driven by technology and not by business objectives.
- The CAPEX planning team lacks the data it needs to perform due diligence tasks.
- The organizational structure lacks sufficient accountability and incentives.

Which corporate cultural change contributes to improving the effectiveness of CAPEX spending?

- A. Build a financial control function that delivers high-quality reports on operational expenses for business insight and financial reporting.
B. CxO-level staff must have a full technical understanding but the should not trust their technical leaders fully.
C. Adopt new organizational models that promote real accountability for RO
D. not just revenu
E. EBITDA, and cash.
F. Marketing and product management divisions must reduce their CAPEX budgets significantly to drive the change.

Answer: C

NEW QUESTION 83

Company XYZ is revisiting the security design for their data center because they now have a requirement to control traffic within a subnet and implement deep packet inspection Which technology meets the updated requirements and can be incorporated into the design?

- A. routed firewall
B. VLAN ACLs on the switch
C. transparent firewall
D. zone-based firewall on the Layer 3 device

Answer: C

NEW QUESTION 86

You have been asked to design a high-density wireless network for a university campus. Which two principles would you apply in order to maximize the wireless network capacity? (Choose two.)

- A. Implement a four-channel design on 2.4 GHz to increase the number of available channels
B. Choose a high minimum data rate to reduce the duty cycle.
C. increases the number of SSIDs to load-balance the client traffic.
D. Make use of the 5-GHz band to reduce the spectrum utilization on 2.4 GHz when dual-band clients are used.
E. Enable 802.11n channel bonding on both 2.4 GHz and 5 GHz to increase the maximum aggregated cell throughput.

Answer: BD

NEW QUESTION 87

Which two actions ensure voice quality in a branch location with a low-speed, high-latency WAN connection? (Choose two.)

- A. Increase WAN bandwidth
B. Increase memory branch switch.

- C. Fragment data packets.
- D. Replace any electrical links with optical links
- E. Prioritize voice packets

Answer: CE

NEW QUESTION 89

Company XYZ wants to prevent switch loops caused by unidirectional point-point-link condition on Rapid FVST + and MST. Which technology can be used in the design to meet this requirement?

- A. STPBPDU guard
- B. STP bridge assurance
- C. MSTP
- D. TRILL

Answer: B

NEW QUESTION 91

Which parameter is the most important factor to consider when deciding service placement in a cloud solution?

- A. data replication cost
- B. application structure
- C. security framework Implementation time
- D. data confidentiality rules

Answer: D

NEW QUESTION 93

Company XYZ is running SNMPv1 in their network and understands that it has some flaws. They want to change the security design to implement SNMPv3 in the network Which network threat is SNMPv3 effective against?

- A. man-in-the-middle attack
- B. masquerade threats
- C. DDoS attack
- D. brute force dictionary attack

Answer: D

NEW QUESTION 96

Which purpose of a dynamically created tunnel interface on the design of IPv6 multicast services Is true?

- A. first-hop router registration to the RP
- B. multicast client registration to the RP
- C. multicast source registration to the RP
- D. transport of all IPv6 multicast traffic

Answer: D

NEW QUESTION 99

In an OSPF network with routers connected together with Ethernet cabling, which topology typically takes the longest to converge?

- A. partial mesh
- B. full mesh
- C. ring
- D. squared
- E. triangulated

Answer: B

NEW QUESTION 100

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 101

A service provider recently migrated to an SD-WAN solution for delivering WAN connections to its customers. One of the main challenges with the SD-WAN deployment is that branch site volume increases every year, which causes management complexity. Which action resolves the issue?

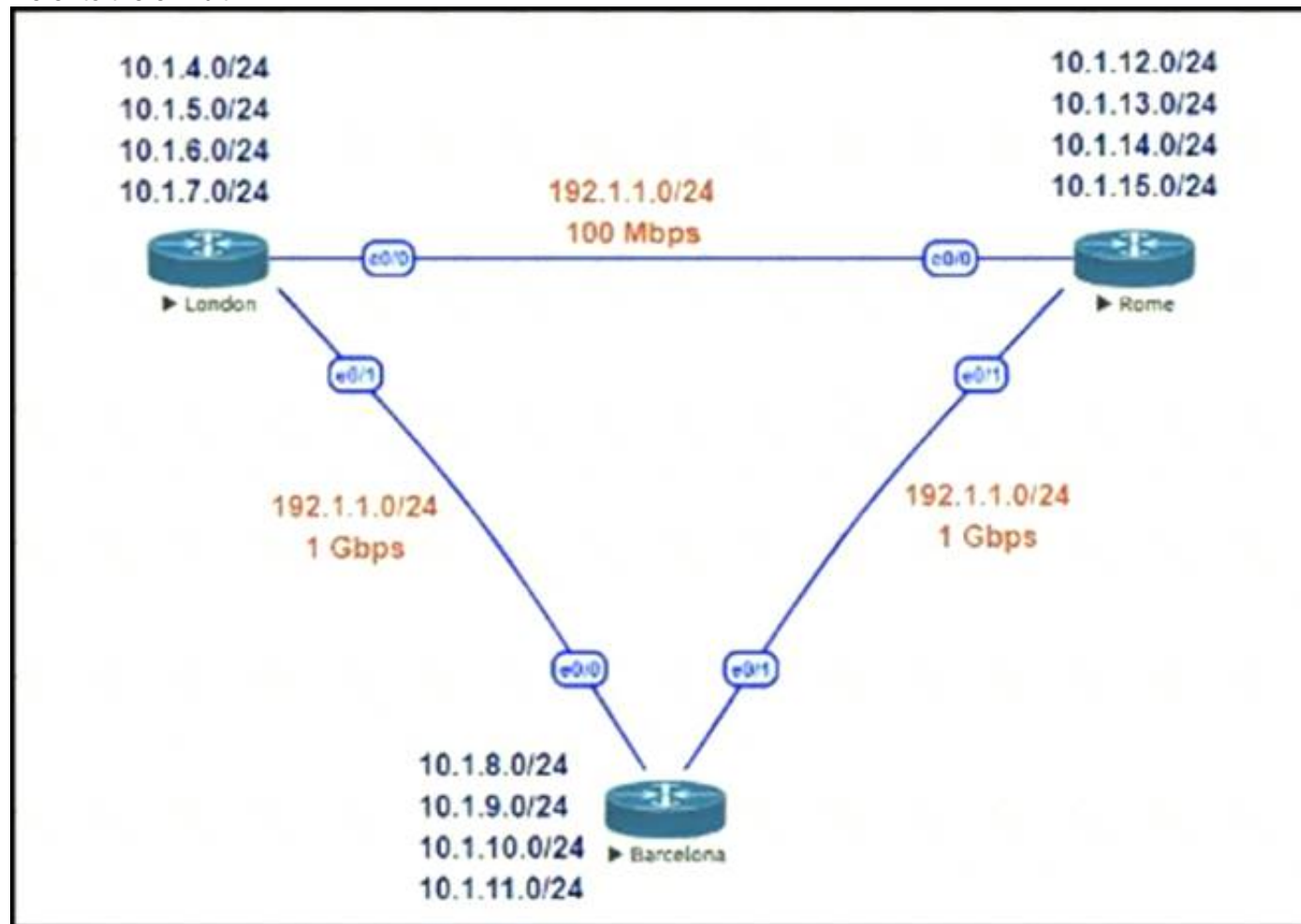
- A. Implement a scalable network management system to manage all sites.

- B. Adopt a well-structured SD-WAN service management lifecycle model
- C. Build a service orchestration platform on top of the network controller
- D. Set up a dedicated team to monitor and provision new customers

Answer: C

NEW QUESTION 102

Refer to the exhibit.



This network is running EIGRP as the routing protocol and the internal networks are being advertised in EIGRP. Based on the link speeds, all traffic between London and Rome is getting propagated via Barcelona and the direct link between London and Rome is not being utilized under normal working circumstances. The EIGRP design should allow for efficiency in the routing table by minimizing the routes being exchanged. The link between London and Rome should be utilized for specific routes. Which two steps accomplish this task? (Choose two.)

- A. Configure EIGRP route summarization on all the interfaces to summarize the internal LAN routes
- B. Filter the routes on the link between London and Barcelona
- C. Filter the routes on the link between London and Rome
- D. Configure route leaking of summary routes on the link between London and Rome

Answer: AD

NEW QUESTION 107

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 111

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 113

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 118

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 119

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 122

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 123

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 throughout network regardless of IGMP version

Answer: A

NEW QUESTION 127

A product manufacturing organization is integrating cloud services into their IT solution. The IT team is working on the preparation phase of the implementation approach, which includes the Define Strategy step. This step defines the scope of IT, the application, and the service. What is one topic that should be considered in the Define Strategy step?

- A. financial and governance models
- B. innovate and align with business according to volume
- C. due diligence and financial scenarios
- D. contingency exit strategy steps

Answer: D

NEW QUESTION 129

Company XYZ is designing the network for IPv6 security and they have these design requirements:

- A switch or router must deny access to traffic from sources with addresses that are correct, but are topologically incorrect
- Devices must block Neighbor Discovery Protocol resolution for destination addresses that are not found in the binding table.

Which two IPv4 security features are recommended for this company? (Choose two)

- A. IPv6 DHCP Guard
- B. IPv6 Source Guard
- C. IPv6 Destination Guard

- D. IPv6 Prefix Guard
- E. IPv6 RA Guard

Answer: CD

Explanation:

https://www.cisco.com/c/dam/global/ja_jp/td/docs/ios-xml/ios/ipv6_fhsec/configuration/xe-16/ip6f-xe-16-book.

NEW QUESTION 134

Which feature is supported by NETCONF but is not supported by SNMP?

- A. distinguishing between configuration data and operational data
- B. taking administrative actions
- C. collecting the status of specific fields
- D. changing the configuration of specific fields

Answer: A

NEW QUESTION 135

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 139

Which two statements explain the operation of BFD asynchronous mode? (Choose two)

- A. BFD asynchronous mode with echo packets combines the control packets and echo packets into a single packet.
- B. BFD asynchronous mode without echo packets uses control packets, and BFD asynchronous mode with echo packets does not.
- C. BFD asynchronous mode with and without echo packets use control packets.
- D. BFD asynchronous without echo packets has control packets sent back to the originating router, which echoes the control packet to detect failures.
- E. BFD asynchronous mode with echo packets uses separate control packets and echo packets.

Answer: CE

NEW QUESTION 141

A business requirement is supplied to an architect from a car manufacturer stating their business model is changing to just-in-time manufacturing and a new network is required, the manufacturer does not produce all of the specific components m-house. which area should the architect focus on initially?

- A. Automation
- B. Zero Trust Networking
- C. Low Latency Infrastructure
- D. Modularity

Answer: D

NEW QUESTION 142

Company XYZ branch offices connect to the headquarter sites using two links, MPLS and Internet. The company wants to design the traffic flow so that voice traffic goes through the MPLS link and all other traffic uses either the MPLS link or the Internet link. Which technique can the company use in their design to ensure that the traffic is not process switched?

- A. policy-based routing
- B. virtual links
- C. visualization
- D. floating static route

Answer: A

NEW QUESTION 143

Software-defined networking architecture is used for cost-effective, adaptable, and easily manageable applications. In which two software-defined networks is SDN commonly used? (Choose two.)

- A. wide area network
- B. mobile network
- C. metro network
- D. application network
- E. control network

Answer: AE

NEW QUESTION 146

Which component of the SDN architecture automatically ensures that application traffic is routed according to policies established by network administrators?

- A. packet forwarding engine
- B. northbound API
- C. southbound API
- D. SDN controller

Answer: D

NEW QUESTION 150

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 155

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 159

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 164

Company XYZ has designed their network to run GRE over IPsec on their Internet-based VPN to connect two sites. Which IPsec tunneling feature can they enable to optimize the data flow while ensuring that the headers contain no duplicate IP addresses?

- A. Transport Mode in IPsec Phase I
- B. Transport Mode in IPsec Phase II
- C. Tunnel Mode in IPsec Phase II
- D. Tunnel Mode in IPsec Phase I

Answer: B

NEW QUESTION 167

You have been tasked with designing a data center interconnect as part of business continuity. You want to use FCoE over this DCI to support synchronous replication. Which two technologies allow for FCoE via lossless Ethernet or data center bridging? (Choose two.)

- A. DWDM
- B. EoMPLS
- C. SONET/SDH
- D. Multichassis EtherChannel over Pseudowire
- E. VPLS

Answer: AC

NEW QUESTION 172

Which two characteristics apply to firewall transparent mode operations in a firewall solution design? (Choose two.)

- A. Changes in the existing IP addressing and subnets are required.
- B. The firewall can participate actively on spanning tree.
- C. Multicast traffic can traverse the firewall.
- D. OSPF adjacencies can be established through the firewall.
- E. The firewall acts like a router hop in the network.

Answer: CD

NEW QUESTION 174

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

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

Answer: ABC

NEW QUESTION 177

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 179

Company XYZ wants to use the FCAPS ISO standard for network management design. The focus of the design should be to minimize network outages by employing a set of procedures and activities to detect and isolate network issues and the appropriate corrective actions to overcome current issues and prevent them from occurring again. Which layer accomplishes this design requirement?

- A. fault management
- B. performance management
- C. security management
- D. accounting management

Answer: A

NEW QUESTION 180

What is a characteristic of a secure cloud architecture model?

- A. limited access to job function
- B. dedicated and restricted workstations
- C. multi-factor authentication
- D. software-defined network segmentation

Answer: C

NEW QUESTION 181

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 184

The SD-WAN architecture is composed of separate orchestration management, control, and data planes Which activity happens at the orchestration plane?

- A. automatic onboarding of the SD-WAN routers into the SD-WAN overlay
- B. decision-making process on where traffic flows
- C. packet forwarding
- D. central configuration and monitoring

Answer: D

NEW QUESTION 188

A company requires an RPO of less than 10 seconds to ensure business continuity. Which technology should be deployed?

- A. geographically dispersed data centers with asynchronous replication
- B. a single data center with duplicated infrastructure, dual PSUs, and a UPS
- C. geographically dispersed data centers with synchronous replication
- D. a single data center with duplicated infrastructure and dual PSUs

Answer: C

NEW QUESTION 189

A network security team observes phishing attacks on a user machine from a remote location. The organization has a policy of saving confidential data on two different systems using different types of authentication. What is the next step to control such events after the security team verifies all users in Zero Trust modeling?

- A. Enforce risk-based and adaptive access policies.
- B. Assess real-time security health of devices.
- C. Apply a context-based network access control policy for users.
- D. Ensure trustworthiness of devices.

Answer: B

NEW QUESTION 193

An architect prepares a network design for a startup company. The design must be able to meet business requirements while the business grows and divests due to rapidly changing markets. What is the highest priority in this design?

- A. The network should be hierarchical
- B. The network should be modular.
- C. The network should be scalable.
- D. The network should have a dedicated core.

Answer: A

NEW QUESTION 196

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 199

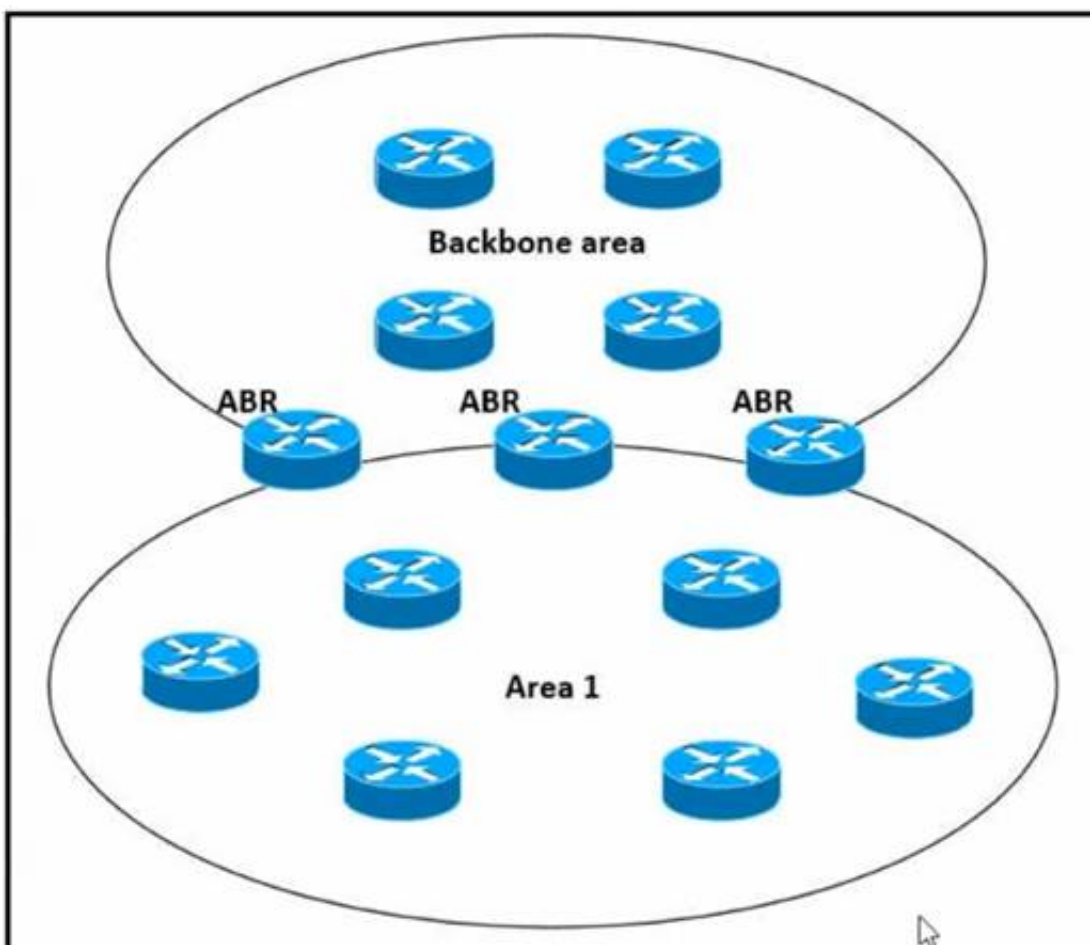
Which two factors must be considered for high availability in campus LAN designs to mitigate concerns about unavailability of network resources? (Choose two.)

- A. device resiliency
- B. device type
- C. network type
- D. network resiliency
- E. network size

Answer: AD

NEW QUESTION 203

Refer to the exhibit.



Which impact of using three or more ABRs between the backbone area and area 1 is true?

- A. In a large-scale network LSA replication by all ABRs can cause serious scalability issues
- B. Multiple ABRs reduce the CPU processing on each ABR due to splitting prefix advertisement
- C. In a large-scale network multiple ABRs can create microloops.
- D. Prefixes from the non-backbone area are advertised by one ABR to the backbone

Answer: A

NEW QUESTION 206

A business requirement stating that failure of WAN access for dual circuits into an MPLS provider for a Data Centre cannot happen due to related service credits that would need to be paid has led to diversely routed circuits to different points of presence on the providers network? What should a network designer also consider as part of the requirement?

- A. Provision of an additional MPLS provider
- B. Out of band access to the MPLS routers
- C. Ensuring all related remote branches are dual homed to the MPLS network
- D. Dual PSUs & Supervisors on each MPLS router

Answer: A

NEW QUESTION 207

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 211

A network engineering team is in the process of designing a lab network for a customer demonstration. The design engineer wants to show that the resiliency of the MPLS traffic Engineering Fast Reroute solution has the same failover/failback times as a traditional SONET/SDH network (around 50MSEC). In order to address both link failure and node failure within the lab typology network, which type of the MPLS TE tunnels must be considered for this demonstration?

- A. TE backup tunnel
- B. Next-hop (NHop) tunnel
- C. FRR Backup tunnel
- D. next-next-hop (NNHop) tunnel

Answer: D

NEW QUESTION 216

Which function is performed at the access layer of the three-layer hierarchical network design model?

- A. fault isolation
- B. QoS classification and marking boundary
- C. reliability
- D. fast transport
- E. redundancy and load balancing

Answer: B

NEW QUESTION 217

Company XYZ has a multicast domain that spans across multiple autonomous systems. The company wants to choose a technology that provides simplified and controlled approach to interconnecting the multicast domains. Which technology is the best fit for this purpose?

- A. MSDP
- B. PIM SSM
- C. MPLS
- D. PIM sparse mode

Answer: A

NEW QUESTION 218

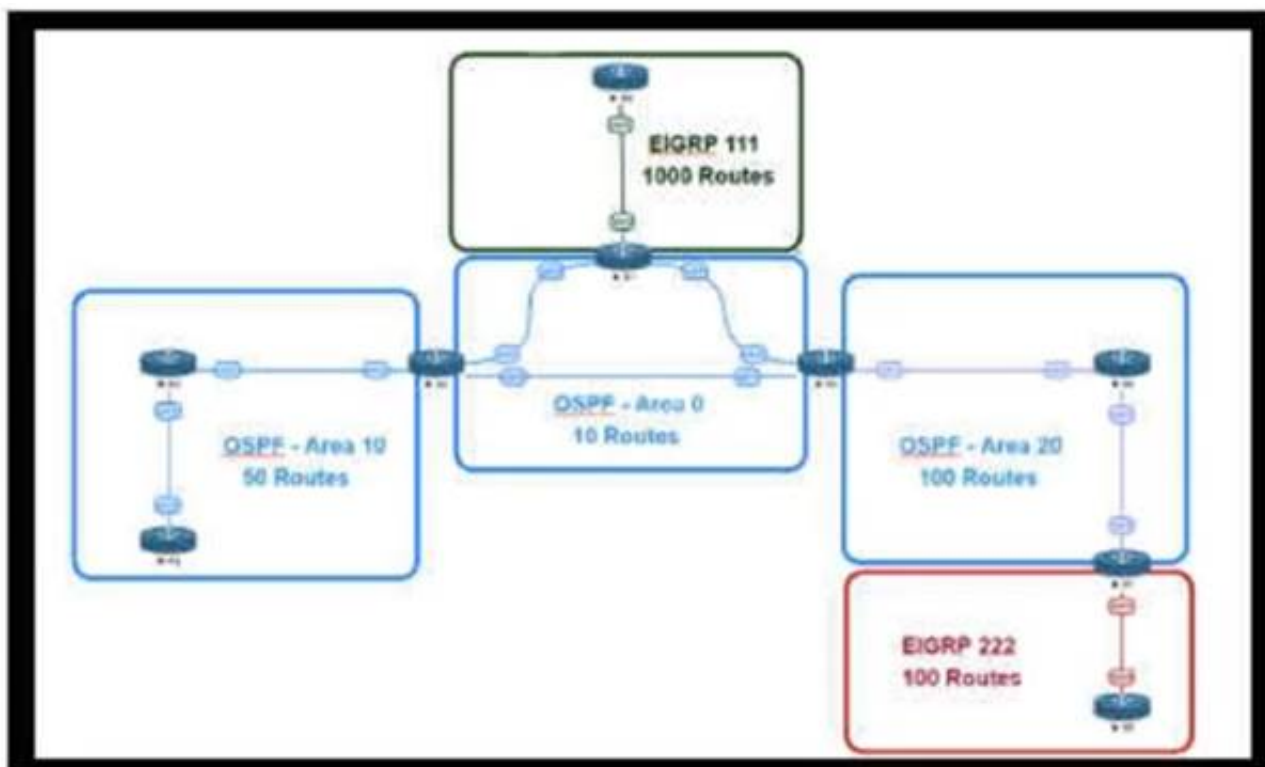
While reviewing an existing network design, you are discussing the characteristics of different STP versions. Which protocol minimizes unicast flooding during a Topology Change Notification in a Layer 2 switched network with many VLANs?

- A. PVRSTP
- B. MST
- C. STP
- D. PVSTP+

Answer: A

NEW QUESTION 219

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 220

A BGP route reflector in the network is taking longer than expected to converge 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 224

Company XYZ asks for design recommendations for Layer 2 redundancy. The company wants to prioritize fast convergence and resiliency elements. In the design, which two technologies are recommended? (Choose two.)

- A. Design MLAG/MC-LAG into the network wherever possible.
- B. Configure DHCP snooping on the switches.
- C. Use root guard.
- D. Use BPDU guard.
- E. Use UniDirectional Link Detection.

Answer: AE

NEW QUESTION 225

Company XYZ was not satisfied with the reconvergence time OSPF is taking. BFD was implemented to try to reduce the reconvergence time, but the network is still experiencing delays when having to reconverge. Which technology will improve the design?

- A. OSPF fast hellos
- B. BFD echo
- C. Change the protocol to BGP
- D. Change the OSPF hello and dead intervals

Answer: B

NEW QUESTION 229

A business customer deploys workloads in the public cloud. Now the customer network faces governance issues with the flow of IT traffic and must ensure the security of data and intellectual property. Which action helps to identify the issue for further resolution?

- A. Set up a secure tunnel from customer routers to ensure that traffic is protected as it travels to the cloud service providers.
- B. Send IPFIX telemetry data from customer routers to a centralized collector to identify traffic to cloud service providers.
- C. Build a zone-based firewall policy on Internet edge firewalls that collects statistics on traffic sent to cloud service providers.
- D. Apply workload policies that dictate the security requirements to the workloads that are placed in the cloud.

Answer: B

NEW QUESTION 234

Hybrid cloud computing allows organizations to take advantage of public and private cloud models. Which best practice should organizations follow to ensure data security in the private cloud?

- A. Use standard protocols for data transmission over the network.
- B. Encrypt data when it is at rest and in motion.
- C. Communicate all data security risks to customers and end users.
- D. Use standard network protocols for data communication between unsecured network connections.

Answer: B

NEW QUESTION 236

Which three tools are used for ongoing monitoring and maintenance of a voice and video environment? (Choose three.)

- A. flow-based analysis to measure bandwidth mix of applications and their flows
- B. call management analysis to identify network convergence-related failures
- C. call management analysis to identify CAC failures and call quality issues
- D. active monitoring via synthetic probes to measure loss, latency, and jitter
- E. passive monitoring via synthetic probes to measure loss, latency, and jitter
- F. flow-based analysis with PTP time-stamping to measure loss, latency, and jitter

Answer: ACD

NEW QUESTION 238

An international media provider is an early adopter of Docker and micro services and is using an open-source homegrown container orchestration system. A few years ago, they migrated from on-premises data centers to the cloud. Now they are faced with challenges related to management of the deployed services with their current homegrown orchestration system.

Which platform is well-suited as a state-aware orchestration system?

- A. Puppet
- B. Kubernetes
- C. Ansible
- D. Terraform

Answer: B

NEW QUESTION 239

Company XYZ is designing their network using the three-layer hierarchical model. At which layer must the QoS design classify or mark the traffic?

- A. access
- B. core
- C. collapsed core
- D. distribution

Answer: A

NEW QUESTION 244

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 247

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 248

Agile and Waterfall are two popular methods for organizing projects. What describes any Agile network design development process?

- A. working design over comprehensive documentation
- B. contract negotiation over customer collaboration

- C. following a plan over responding to change
- D. processes and tools over individuals and interactions over time

Answer: A

NEW QUESTION 250

Which extensions to GRE tunneling provide session tracking and in-order packet delivery in exchange for additional state stored in tunnel endpoints?

- A. GRE Protocol Type and Checksum extension fields.
- B. GRE Version and Reserved0 extension fields.
- C. No extension fields are available in the GRE header to track session data and packet sequences.
- D. GRE Key and Sequence number extensions.

Answer: D

NEW QUESTION 255

A service provider hires you to design its new managed CE offering to meet these requirements

- The CEs cannot run a routing protocol with the PE
- Provide the ability for equal or unequal ingress load balancing in dual-homed CE scenarios.
- Provide support for IPv6 customer routes
- Scale up to 250,000 CE devices per customer.
- Provide low operational management to scale customer growth.
- Utilize low-end (inexpensive) routing platforms for CE functionality. Which tunneling technology do you recommend?

- A. FlexVPN
- B. point-to-point GRE
- C. DMVPN
- D. LISP

Answer: D

NEW QUESTION 258

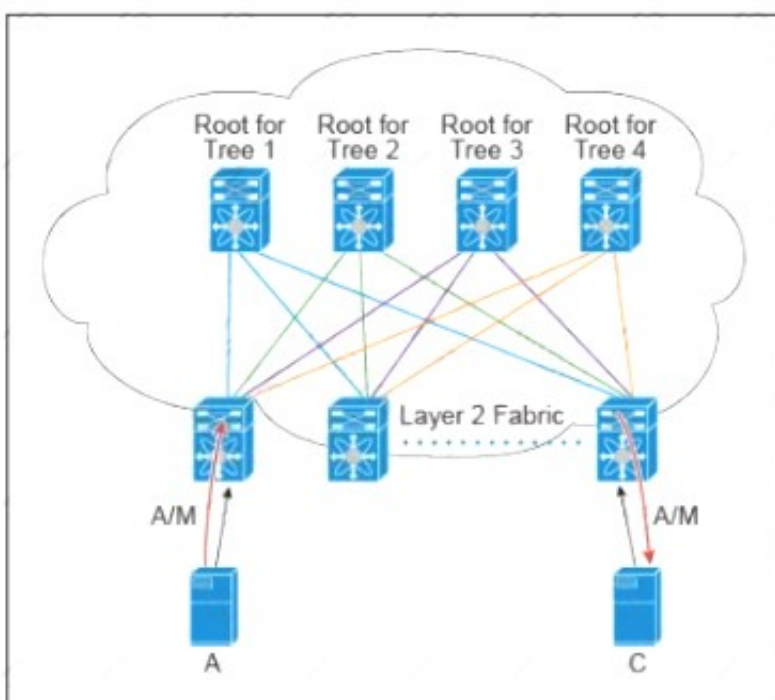
Which optimal use of interface dampening on a fast convergence network design is true?

- A. When occasional flaps of long duration occur
- B. when numerous adjacent flaps of very short duration occur
- C. when the router hardware is slower than the carrier delay down detection
- D. when the switch hardware is faster than the debounce timer down detection

Answer: B

NEW QUESTION 263

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 264

Which technology is an open-source infrastructure automation tool that automates repetitive tasks for users who work in networks such as cloud provisioning and intraservice orchestration?

- A. Ansible
- B. Contrail
- C. Java
- D. Jinja2

Answer: A

NEW QUESTION 266

Router R1 is a BGP speaker with one peering neighbor over link "A". When the R1 link/interface "A" fails, routing announcements are terminated, which results in the tearing down of the state for all BGP routes at each end of the link. What is this a good example of?

- A. fault isolation
- B. resiliency
- C. redundancy
- D. fate sharing

Answer: D

NEW QUESTION 268

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 270

What is an architectural framework created by ETSI that defines standards to decouple network functions from proprietary hardware-based appliances and have them run in software on standard x86 servers?

- A. NPIV
- B. NFVIS
- C. NFV
- D. VNF

Answer: C

NEW QUESTION 273

Drag and drop the multicast protocols from the left onto the current design situation on the right.

PIM-SM, SSM, BIDIR

PIM-DM, PIM-SM, SSM, BIDIR

IGMP

MSDP

MP-BGP

MLD

IPv4

host registration

router registration

intra-domain source discovery

IPv6

host registration

router registration

- A. Mastered
- B. Not Mastered

Answer: A

Explanation:

A picture containing table Description automatically generated

NEW QUESTION 278

Refer to the table.

CONNECTIVITY	CAPEX	OPEX ANNUAL	INSTALLATION FEE	TERM
DWDM over dark fiber	\$200,000	\$100,000	\$30,000	12 months
CWDM over dark fiber	\$150,000	\$100,000	\$25,000	18 months
MPLS wires only	\$50,000	\$180,000	\$5,000	12 months
Metro Ethernet	\$65,000	\$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 migration is estimated to take 20 months to complete but might extend an additional 10 months if issues arise. All connectivity options meet the requirements to migrate workloads. Which transport technology provides the best ROI based on cost and flexibility?

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

Answer: D

NEW QUESTION 283

Company XYZ has a new network based on IPv6. Some of the subnets that they are planning to use will be confidential and need an addressing scheme that confines them to the local campus network. Which type of IPv6 addresses can be used for these networks in the IPv6 addressing design?

- A. local addresses
- B. private addresses
- C. link-local addresses
- D. unique local addresses

Answer: D

NEW QUESTION 285

Organizations that embrace Zero Trust initiatives ranging from business policies to technology infrastructure can reap business and security benefits. Which two domains should be covered under Zero Trust initiatives? (Choose two)

- A. workload
- B. work domain
- C. workplace
- D. workgroup
- E. workspace

Answer: AC

NEW QUESTION 288

An enterprise requires MPLS connected branches to access cloud-based Microsoft 365 services over an SD-WAN solution. Internet access is available only at dual regional hub sites that are connected to the MPLS network. Which connectivity method provides an optimum access method to the cloud-based services if one ISP suffers loss or latency?

- A. Cloud onRamp gateway site
- B. Cloud onRamp SWG
- C. Cloud onRamp
- D. Cloud onRamp SaaS

Answer: D

Explanation:

<https://www.cisco.com/c/en/us/td/docs/routers/sdwan/configuration/cloudonramp/vedge-20-x/cloud-onramp-boo>

NEW QUESTION 293

A banking customer determines that it is operating POS and POI terminals that are noncompliant with PCI DSS requirements, as it is running TLSv1.0. The customer plans to migrate the terminals to TLSv1.2. What are two requirements to complete the migration? (Choose two.)

- A. Ensure that strong cryptography is applied for users who have administrative access through networks
- B. Apply strong cryptography and security protocols to safeguard sensitive cardholder data.
- C. Apply strong encryption for transmission of cardholder data across public networks.
- D. Protect all user systems against malware and frequently update antivirus software
- E. Maintain a policy that addresses information security for employees and third parties.

Answer: CE

NEW QUESTION 297

Which mechanism enables small, unmanaged switches to plug into ports of access switches without risking switch loops?

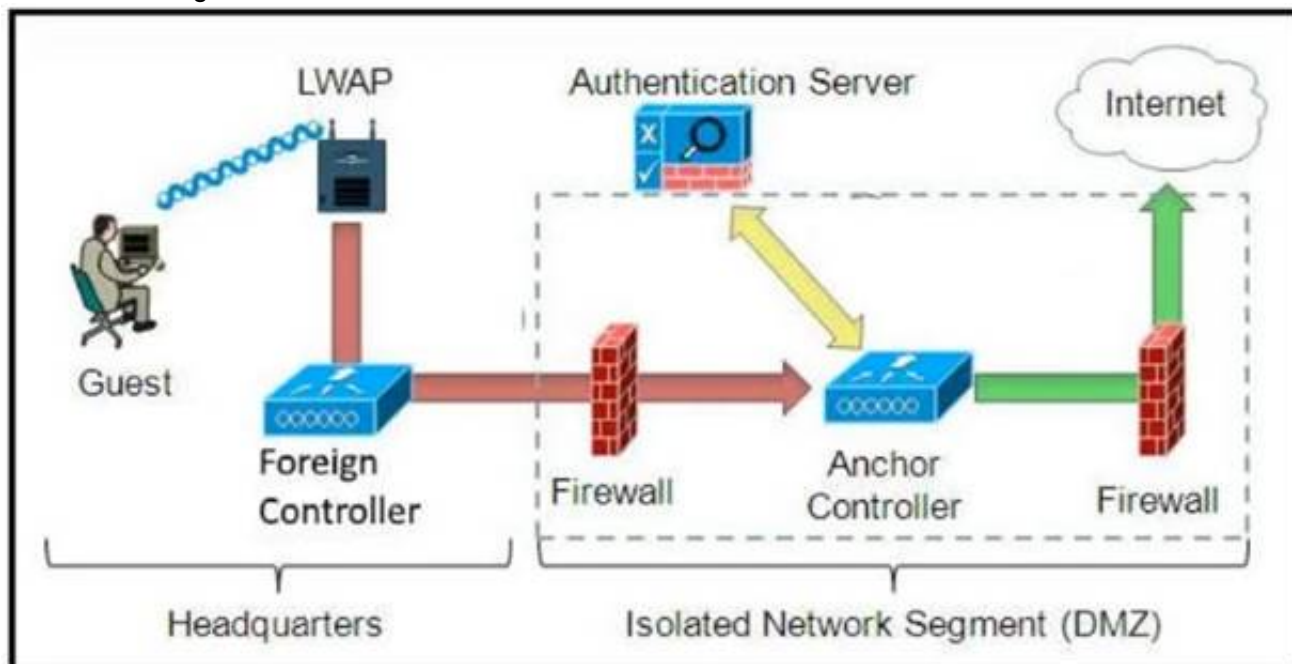
- A. PortFast
- B. UDLD
- C. Root guard

D. BPDU guard

Answer: D

NEW QUESTION 302

Refer to the diagram.



Which solution must be used to send traffic from the foreign wireless LAN controller to the anchor wireless LAN controller?

- A. Send packets from the foreign controller to the anchor controller via Layer 3 MPLS VPN or VRF-Lite
- B. Send packets without encapsulation to the anchor controller over the routed network.
- C. Encapsulate packets into an EoIP tunnel and send them to the anchor controller.
- D. Send packets from the foreign controller to the anchor controller via IPinIP or IPsec tunnel.

Answer: C

NEW QUESTION 304

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 308

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 311

Which BGP feature provides fast convergence?

- A. BGP PIC |
- B. BGP-EVPN
- C. BGP FlowSpec
- D. BGP-LS

Answer: A

NEW QUESTION 315

What is a description of a control plane action?

- A. de-encapsulating and re-encapsulating a packet in a data-link frame
- B. matching the destination MAC address of an Ethernet frame to the MAC address table
- C. matching the destination IP address of an IP packet to the IP routing table
- D. hosts locating routers that reside on attached links using the IPv6 Neighbor Discover Protocol

Answer: D

NEW QUESTION 319

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 324

Identity and access management between multiple users and multiple applications has become a mandatory requirement for Company XYZ to fight against ever increasing cybersecurity threats. To achieve this, federated identity services have been deployed in the Company XYZ network to provide single sign-on and Multi-Factor Authentication for the applications and services. Which protocol can be used by Company XYZ to provide authentication and authorization services?

- A. OAuth2
- B. OpenID Connect
- C. OpenID
- D. SAML2.0

Answer: D

NEW QUESTION 325

Which service abstracts away the management of the operating system, middleware, and runtime?

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

Answer: B

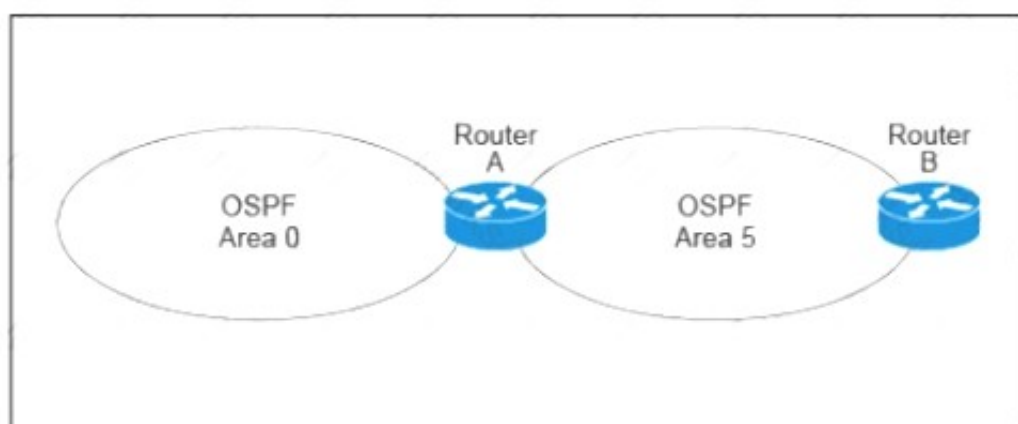
Explanation:

IaaS, PaaS, and SaaS each offer a progressive layer of abstraction after that. IaaS abstracts away the physical compute, network, storage, and the technology needed to virtualize those resources. PaaS goes a step further and abstracts away the management of the operating system, middleware, and runtime.

<https://www.ibm.com/topics/iaas#:~:text=IaaS%20abstracts%20away%20the%20physical,system%2C%20mid>

NEW QUESTION 329

Refer to the exhibit.



A customer runs OSPF with Area 5 between its aggregation router and an internal router. When a network change occurs in the backbone, Area 5 starts having connectivity issues due to the SPF algorithm recalculating an abnormal number of times in Area 5. You are tasked to redesign this network to increase resiliency on the customer network with the caveat that Router B does not support the stub area. How can you accomplish this task*?

- A. Increase the bandwidth on the connection between Router A and Router B
- B. Implement LSA filtering on the ABR, allowing summary routes and preventing more specific routes into Area 5
- C. Create a virtual link to Area 0 from Router B to the ABR
- D. Turn on LSA throttling on all devices in Area 5
- E. Set Area 5 to stubby at the ABR anyway

Answer: B

NEW QUESTION 332

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

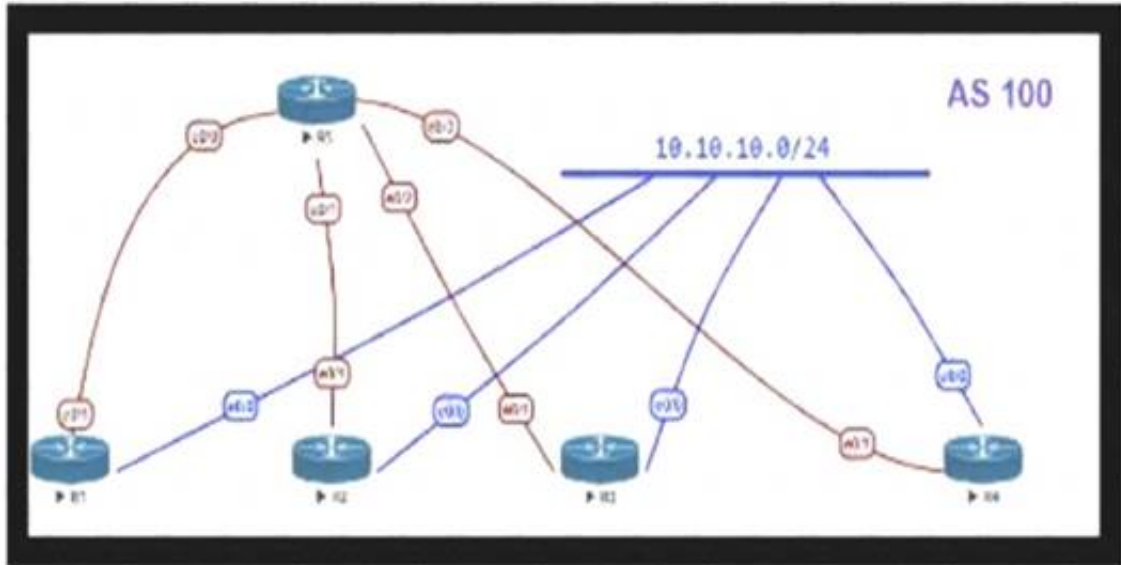
• a technology that is cost-effective
Which WAN technology(ies) should be included in the design of company XYZ?

- 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 use
- 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 334

Refer to the exhibit.



OSPF is running as the IGP to provide reachability to all AS100 networks R3 and R4 are the current ABRs at the boundary of OSPF Area0 and Areal Now BGP must be deployed within AS 100 because it will be receiving Internet routes from its eBGP peers (the service provider) connected to R1 and R2 What is an optimal solution for this deployment to configure BGP relationships and redistribute BGP learned routes into OSPF?

- A. R5 should be configured as a route reflector for R1, R2, R3 and R4. BGP routes must be redistributed at R1 and R2 into OSPF.
- B. Configuration should be set up with R1 and R2, and R3 in one sub AS, with and R4 in another, and redistribution at R1 and R2.
- C. A full mesh should be deployed between all the routers with mutual redistribution to take place at R1 and R2.
- D. R1, R2, R3 and R4 must be set up with a neighbor relationship with R5 only must not be a route reflector.

Answer: C

NEW QUESTION 335

Drag and drop the multicast protocols from the left onto the current design situation on the right.

PIM-SM, SSM, BIDIR	IPv4 Group Management
PIM-DM, PIM-SM, SSM, BIDIR	IPv4 Forwarding
IGMP	IPv4 Interdomain Source Discovery
MSDP	IPv6 Group Management
MLD	IPv6 Forwarding

- A. Mastered
- B. Not Mastered

Answer: A

Explanation:

A picture containing table Description automatically generated

IPv4:

Host Registration - IGMP

Router Registration - PIM-DM, PIM-SM, SSM, BIDIR Inter-Domain Source Discovery - MSDP

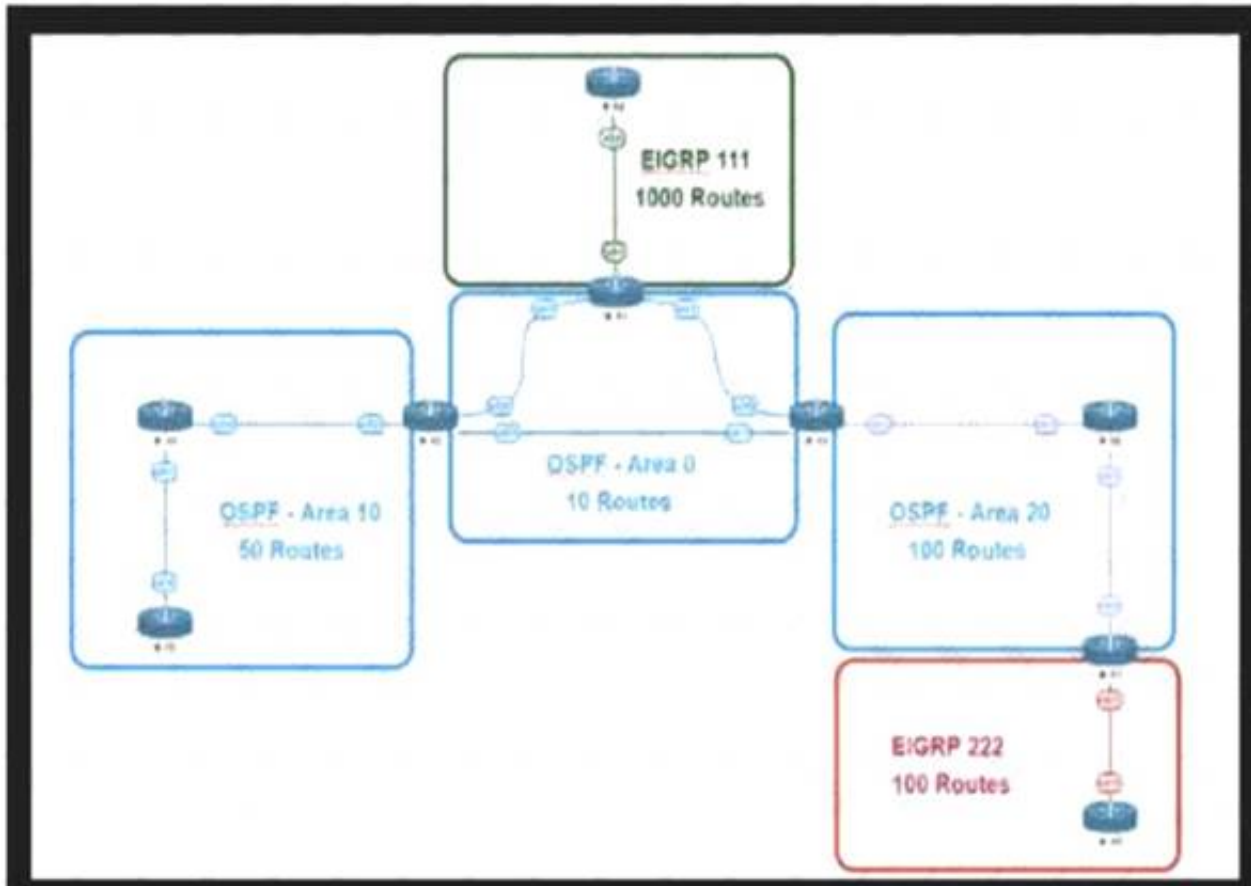
IPv6:

Host Registration - MLD

Router Registration - PIM-SM, SSM, BIDIR

NEW QUESTION 338

Refer to the exhibit.



This network is running OSPF and EIGRP as the routing protocols. Mutual redistribution of the routing protocols has been configured on the appropriate ASBRs. The OSPF network must be designed so that flapping routes in EIGRP domains do not affect the SPF runs within OSPF. The design solution must not affect the way EIGRP routes are propagated into the EIGRP domains. Which technique accomplishes the requirement?

- A. route summarization on the ASBR interfaces facing the OSPF domain
- B. route summarization on the appropriate ASBRs.
- C. route summarization on the appropriate ASRS.
- D. route summarization on EIGRP routers connecting toward the ASBR

Answer: B

NEW QUESTION 339

If the desire is to connect virtual network functions together to accommodate different types of network service connectivity, what must be deployed?

- A. bridging
- B. service chaining
- C. linking
- D. daisy chaining
- E. switching

Answer: B

Explanation:

Service chaining is the technique of connecting virtual network functions together to provide different types of network service connectivity. Service chaining uses software-defined networking (SDN) programmability to create a chain of connected network services, such as firewalls, load balancers, NAT, and intrusion protection. Service chaining can automate the provisioning of network applications that have different characteristics and requirements, such as security, latency, or quality of service (QoS). Service chaining can also optimize the use of network resources and improve application performance by using SDN analytics and performance tools to select the best available network paths and avoid network congestion. Service chaining is being used in many SDN and network functions virtualization (NFV) use cases and deployments, such as data centers, carrier networks, and virtual customer edge. References:

- 1: What is Network Service Chaining or Service Function Chaining - SDxCentral
- 2: On service chaining using Virtual Network Functions in Network-enabled Cloud systems | IEEE Conference Publication | IEEE Xplore
- 3: Service function chaining - Gini5

NEW QUESTION 343

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. DUMPS 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 344

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 IGMP snooping must be replaced.

- C. Upgrade the nonsupporting 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 348

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 351

Company XYZ has 30 sites running a legacy private WAN architecture that connects to the Internet via multiple high- speed connections The company is now redesigning their network and must comply with these design requirements :

- Use a private WAN strategy that allows the sites to connect to each other directly and caters for future expansion.
- Use the Internet as the underlay for the private WAN.
- Securely transfer the corporate data over the private WAN.

Which two technologies should be Incorporated into the design of this network? (Choose two.)

- A. S-VTI
- B. IPsec
- C. DMVPN
- D. GET VPN
- E. PPTP

Answer: BC

NEW QUESTION 352

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 353

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 355

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 360

Which two types of planning approaches are used to develop business-driven network designs and to facilitate the design decisions? (Choose two)

- A. cost optimization approach
- B. strategic planning approach
- C. modular approach
- D. tactical planning approach
- E. business optimization approach

Answer: BD

NEW QUESTION 363

The General Bank of Greece plans to upgrade its legacy end-of-life WAN network with a new flexible, manageable, and scalable solution. The main requirements are ZTP support, end-to-end encryption application awareness and segmentation. The CTO states that the main goal of the bank is CAPEX reduction. Which WAN technology should be used for the solution?

- A. SD-branch
- B. DMVPN with PfR
- C. managed SD-WAN
- D. SD-WAN

Answer: C

NEW QUESTION 366

Which undesired effect of increasing the jitter compensation buffer is true?

- A. The overall transport jitter decreases and quality improves.
- B. The overall transport jitter increases and quality issues can occur.
- C. The overall transport delay increases and quality issues can occur.
- D. The overall transport delay decreases and quality improves.

Answer: C

NEW QUESTION 368

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