

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

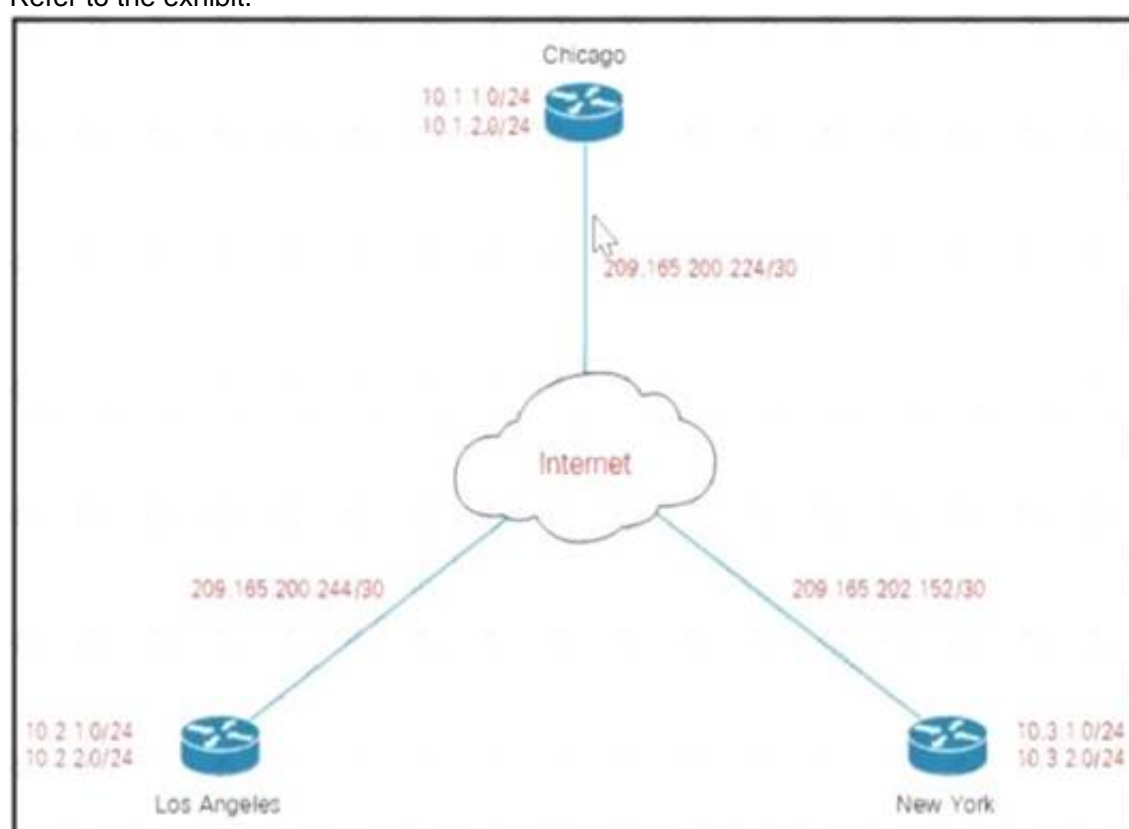
When consumers that leverage IaaS reach 100% resource capacity, what can be used to redirect the overflow of traffic to the public cloud so there is no disruption to service?

- 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

Drag and drop the QoS technologies from the left onto the correct capabilities on the right.

low latency queuing	allows you to buffer traffic so that it adheres to the bandwidth provided by the service provider
CB-WFQ	used for scavenger traffic when it exceeds a specified limit
policing	allows you to prioritize traffic
traffic shaping	allows you to reserve bandwidth

A. Mastered

B. Not Mastered

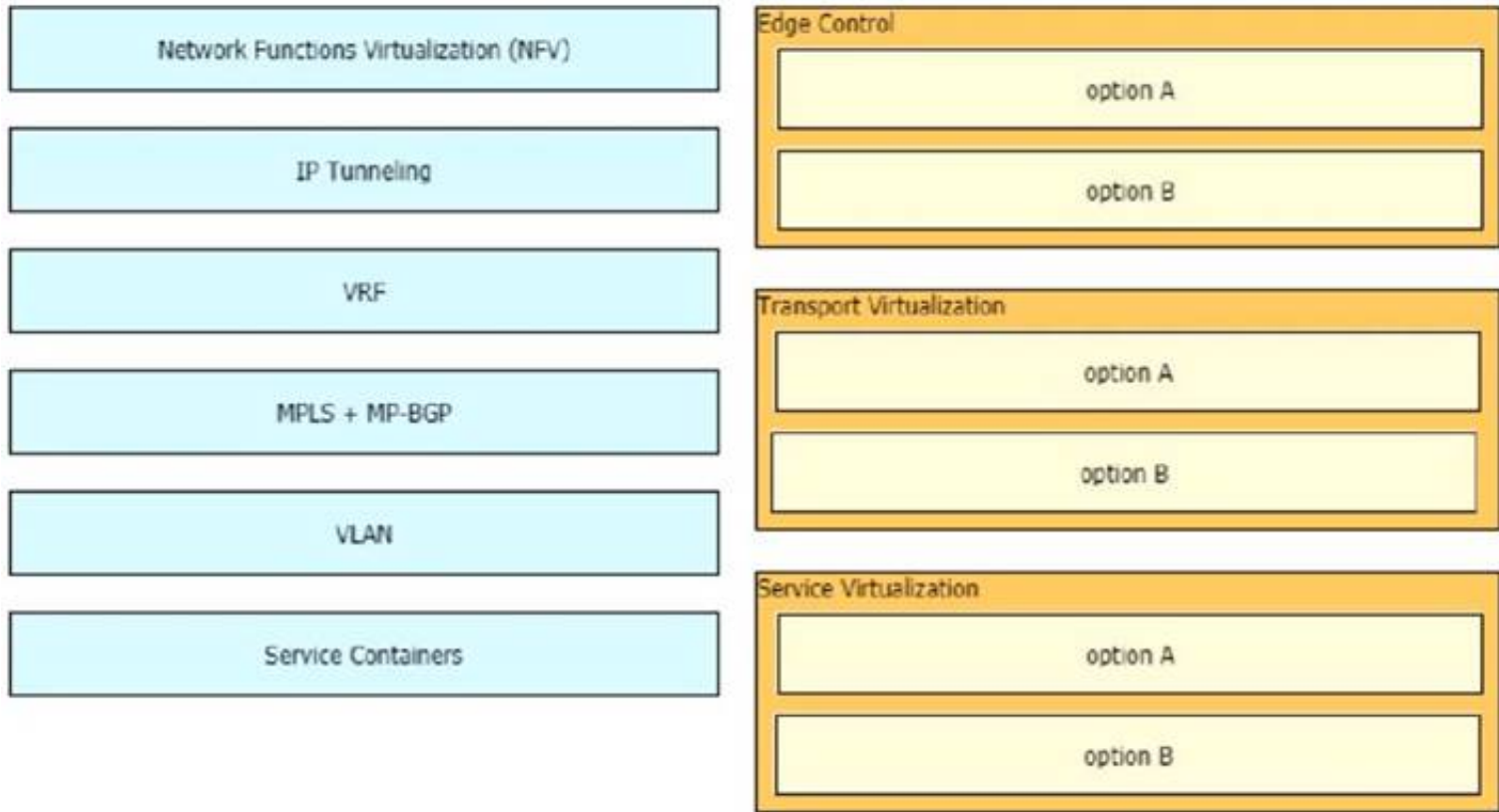
Answer: A

Explanation:



NEW QUESTION 5

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



A. Mastered
B. Not Mastered

Answer: A

Explanation:

Graphical user interface Description automatically generated with medium confidence

NEW QUESTION 6

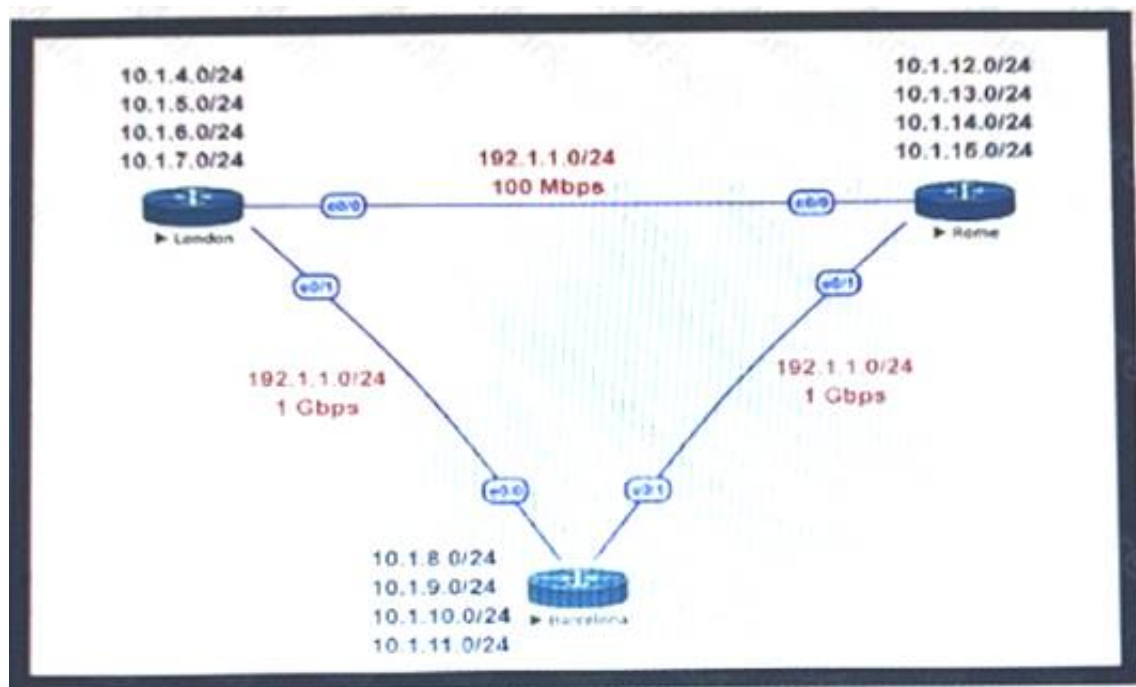
As a network designer you need to support an enterprise with hundreds of remote sites connected over a single WAN network that carries different types of traffic, including VoIP, video, and data applications which of following design considerations will not impact design decision?

- 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 7

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 8

A customer has a functional requirement that states HR systems within a data center should be segmented from other systems that reside in the same data center and same VLAN. The systems run legacy applications by using hard-coded IP addresses. Which segmentation method is suitable and scalable for the customer?

- A. data center perimeter firewalling
- B. VACLs on data center switches
- C. transparent firewalling
- D. routed firewalls

Answer: B

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

Which three elements help network designers to construct secure systems that protect information and resources (such as devices, communication, and data) from unauthorized access, modification, inspection, or destruction? (Choose three.)

- A. confidentiality
- B. serviceability
- C. reliability
- D. availability
- E. integrity
- F. scalability

Answer: ADE

NEW QUESTION 10

Company XYZ connects its sites over a private WAN. Their overlay network is running a DMVPN setup where the headquarters site is the hub. The company is planning on implementing multicast routing on the network. What should be used in the multicast routing design?

- A. PIM dense mode with RP located at the hub
- B. PIM sparse mode with RP located at each remote site
- C. PIM sparse mode with RP located at the hub
- D. PIM dense mode with RP located at each remote site

Answer: C

Explanation:

<https://www.ccexpert.us/routing-switching-2/dynamic-multipoint-vpn.html>

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 18

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 27

Which design consideration is valid when you contrast fabricPath and trill?

- A. FabricPath uses IS-IS, but TRILL uses VxLAN
- B. FabricPath permits active-active FHRP and TRILL support anycast gateway.
- C. FabricPath Permits ECMP, but TRILL does not
- D. FabricPath permits active-active mode, but TRILL supports only active-standby mode.

Answer: B

NEW QUESTION 31

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 36

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 DA
- D. IPsec

Answer: A

NEW QUESTION 41

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 42

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 46

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 51

What is a web-based model in which a third-party provider hosts applications that are available to customers over the Internet?

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

Answer: B

NEW QUESTION 52

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

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

Answer: BE

NEW QUESTION 55

Which two points must network designers consider when designing a new network design or when evaluating an existing network design to help them understand the high-level design direction with regards to the security aspects? (Choose two)

- A. Consider Business objectives and goals
- B. Consider organization's security policy standards
- C. Consider for only multi-site networks
- D. Consider for only new network technologies and components

Answer: AB

NEW QUESTION 56

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 60

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.

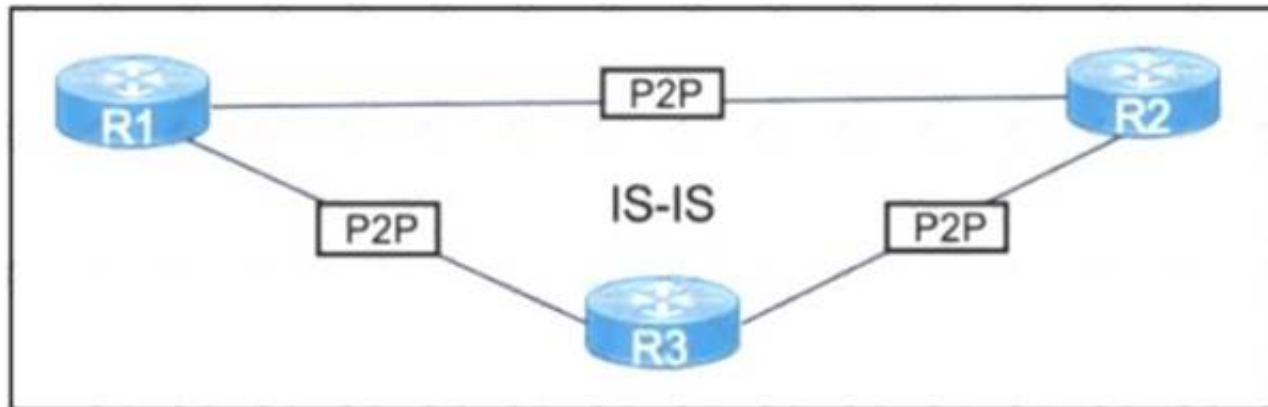
Which technology should you recommend to enhance security by limiting traffic that could originate from a hacker compromising a workstation and redirecting flows at the servers?

- 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 61

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 66

As part of workspace digitization, a large enterprise has migrated all their users to Desktop as a Service (DaaS), by hosting the backend system in their on-premises data center. Some of the branches have started to experience disconnections to the DaaS at periodic intervals, however, local users in the data center and head office do not experience this behavior. Which technology can be used to mitigate this issue?

- A. tail drop
- B. traffic shaping
- C. WRED
- D. traffic policing

Answer: B

Explanation:

Traffic Shaping does help with congestion and better bandwidth utilization over the WAN.

NEW QUESTION 70

Company ABC wants to minimize the risk of users plugging unauthorized switches and hubs into the network. Which two features can be used on the LAN access ports to support this design requirement? (Choose two.)

- A. Loop Guard
- B. PortFast
- C. DTF
- D. Root Guard
- E. BPDU Guard

Answer: BE

NEW QUESTION 71

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 76

Which two control plane policer designs must be considered to achieve high availability? (Choose two.)

- A. Control plane policers are enforced in hardware to protect the software path, but they are hardware platform dependent in terms of classification ability.
- B. Control plane policers are really needed only on externally facing devices.
- C. Control plane policers can cause the network management systems to create false alarms.
- D. Control plane policers must be processed before a forwarding decision is made.
- E. Control plane policers require that adequate protocols overhead are factored in to allow protocol convergence.

Answer: AD

NEW QUESTION 78

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:

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

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

Loose Reverse Path Forwarding

It is used as a filtering technique for Martian IP addresses

NEW QUESTION 79

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 82

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 86

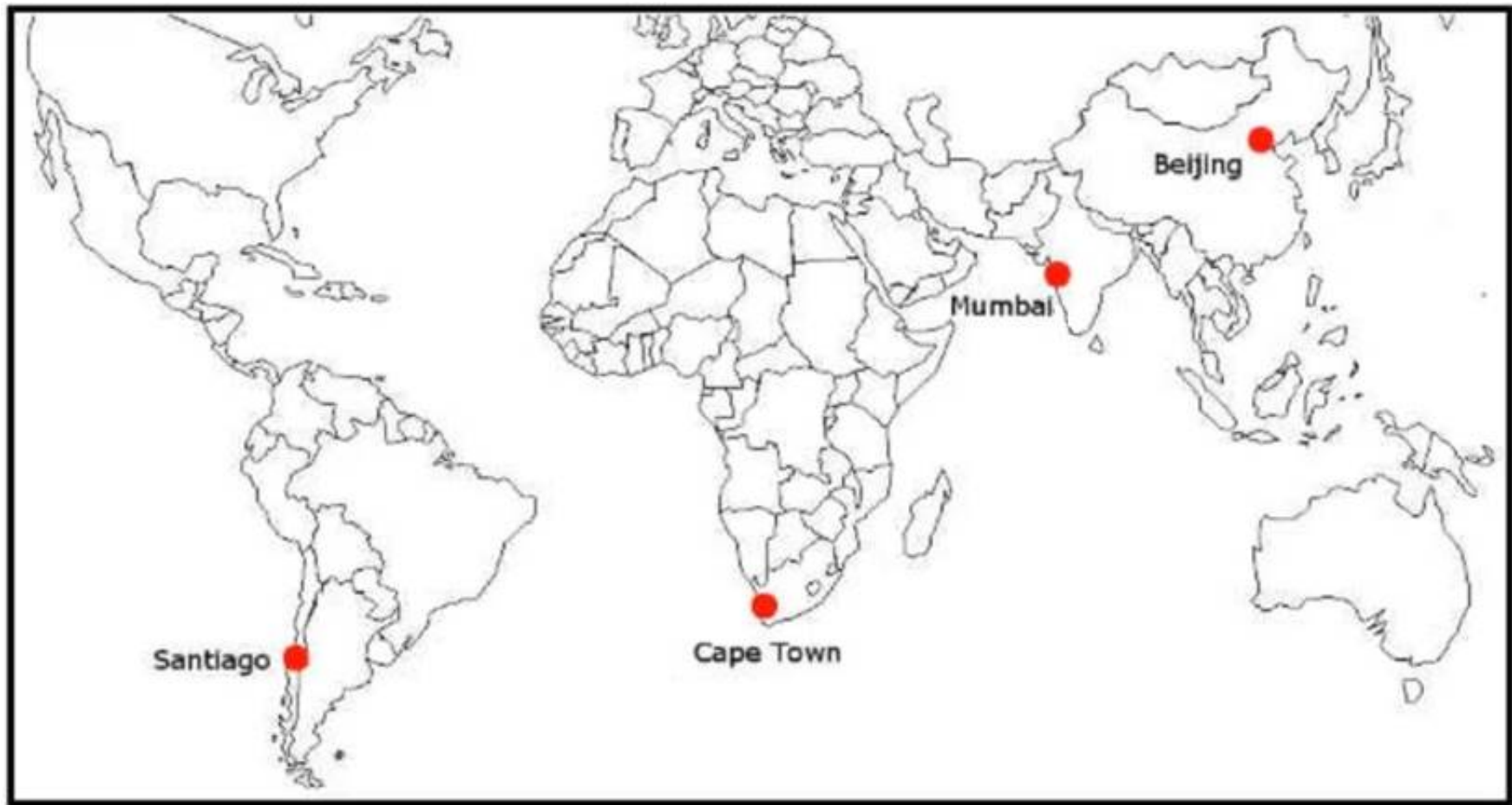
A financial company requires that a custom TCP-based stock-trading application be prioritized over all other traffic for the business due to the associated revenue. The company also requires that VoIP be prioritized for manual trades. Which directive should be followed when a QoS strategy is developed 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 90

Refer to the exhibit.



ACME Mining has four data centers in Santiago. Cape Town. Mumbai, and Beijing, full-mesh connected via a 400 Mb/s EVP-LAN They want to deploy a new mission-critical application with these requirements:

- > cluster heartbeat 2 Mb/s continuous (250 KB/s)
- > cluster heartbeat one-way maximum latency 100 ms

These are the current ping tests results between the four data centers:

	Santiago	Cape Town	Mumbai	Beijing
Santiago	-	280 ms	378 ms	409 ms
Cape Town	280 ms	-	185 ms	445 ms
Mumbai	383 ms	176 ms	-	443 ms
Beijing	430 ms	448 ms	442 ms	-

Which hosting data center pair can host the new application?

- A. Mumbai and Beijing
- B. Santiago and Cape Town
- C. Santiago and Mumbai
- D. Cape Town and Mumbai
- E. Cape Town and Beijing
- F. Santiago and Beijing

Answer: D

NEW QUESTION 95

Drag and drop the FCAPS network management reference models from the left onto the correct definitions on the right.

Fault Management	ensures that network transit quality remains at acceptable levels
Configuration Management	gathers usage statistics for users and business units
Accounting Management	gathers and stores configuration code from network devices
Performance Management	recognizes, isolates, corrects, and logs events that occur in the network
Security Management	controls access to assets in the network

- A. Mastered
B. Not Mastered

Answer: A

Explanation:

Fault Management	= Recognize, isolates, corrects, and logs events that occur in the network
Configuration Management	= Gathers and stores configuration code from network devices
Performance Management	= ensures that network transit quality remains at acceptable levels
Security Management	= Controls access to assets in the network
Accounting Management	= gathers usage statistics for users and business units

NEW QUESTION 100

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 103

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 104

An enterprise wants to migrate an on-premises network to a cloud network, and the design team is finalizing the overall migration process. Drag and drop the options from the left into the correct order on the right.

Identify the right applications and portfolio for cloud migration and cloud viability.	step 1
Maintain data integrity and operational continuity.	step 2
Adopt end-to-end approach and transition workloads to the cloud environment.	step 3
Develop cloud strategy and ensure alignment with business requirements.	step 4
Secure the cloud by setting up a secure cloud environment based on the workload requirements.	step 5
Monitor and manage cloud-based systems, including customer services.	step 6

- A. Mastered
B. Not Mastered

Answer: A

Explanation:

Table Description automatically generated

NEW QUESTION 105

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 108

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

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

Answer: B

NEW QUESTION 110

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 113

A healthcare provider discovers that protected health information of patients was altered without patient consent. The healthcare provider is subject to HIPAA compliance and is required to protect PHI data. Which type of security safeguard should be implemented to resolve this issue?

- A. technical and physical access control
B. administrative security management processes
C. physical device and media control

D. technical integrity and transmission security

Answer: D

Explanation:

https://www.cisco.com/en/US/docs/solutions/Enterprise/Compliance/HIPAA/HIP_AppC.html#wp1085353

NEW QUESTION 117

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 118

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 122

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 127

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 132

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 134

Which two data plane hardening techniques are true? (Choose two)

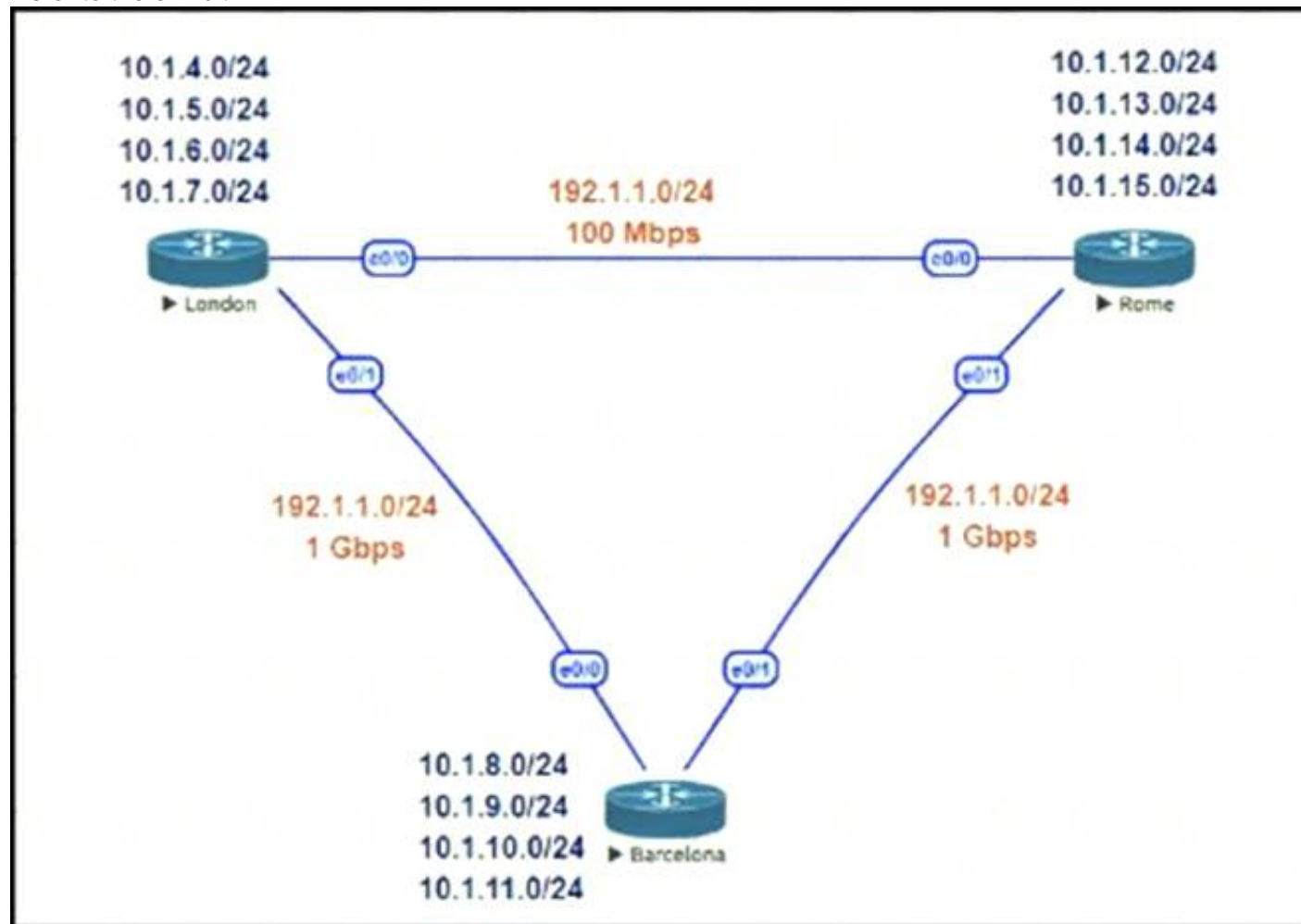
- A. warning banners
- B. redundant AAA servers

- C. Control Plane Policing
- D. SNMPv3
- E. infrastructure ACLs
- F. disable unused services
- G. routing protocol authentication

Answer: EF

NEW QUESTION 136

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 139

A network architect in an enterprise is designing a network policy for certain database applications. The goal of the policy is to allow these applications to access the internet directly, whereas other user and network applications that communicate with systems or users outside their own network must be routed through the data center. The focus is on achieving higher availability and a better user experience for the database applications, but switching between different network paths based on performance characteristics must be supported. Which solution meets these requirements?

- A. MPLS L3VPN with QoS
- B. Cloud onRamp for IaaS
- C. Cloud onRamp for SaaS
- D. MPLS direct connect

Answer: C

Explanation:

<https://www.cisco.com/c/en/us/solutions/collateral/enterprise-networks/sd-wan/nb-06-cloud-onramp-saas-faq-ct>

NEW QUESTION 143

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 148

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 149

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 154

Which two features describe controller-based networking solutions compared to traditional networking solutions? (Choose two.)

- A. inflate licensing costs
- B. reduce network configuration complexity
- C. provide centralization of primary IT functions
- D. allow for fewer network failures
- E. increase network bandwidth usage

Answer: BC

NEW QUESTION 156

An engineer is designing a DMVPN network where OSPF has been chosen as the routing protocol A spoke-to-spoke 'J<ita propagation model must be set up Which two design considerations must be taken into account? (Choose two)

- A. Configure all the sites as network type broadcast
- B. The network type on all sites should be point-to-multipoint
- C. The network type should be point-to-multipoint for the hub and point-to-point for the spokes.
- D. The hub should be set as the DR by specifying the priority to 255.
- E. The hub should be the DR by changing the priority of the spokes to 0.

Answer: AE

NEW QUESTION 160

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 165

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

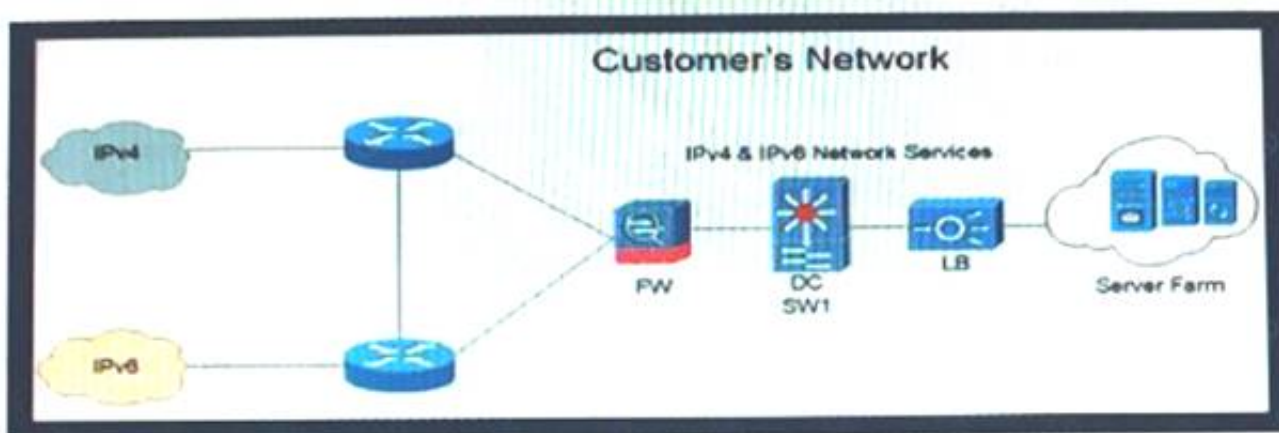
Answer: CD

Explanation:

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

NEW QUESTION 169

Refer to the exhibit.



Company XYZ is currently running IPv4 but has decided to start the transition into IPv6. The initial objective is to allow communication based on IPv6 wherever possible, and there should still be support in place for devices that only support IPv4. These devices must be able to communicate to IPv6 devices as well. Which solution must be part of the design?

- A. address family translation
- B. dual stack
- C. host-to-host tunneling
- D. 6rd tunneling

Answer: B

NEW QUESTION 170

A European national bank considers migrating its on-premises systems to a private cloud offering in a non-European location to significantly reduce IT costs. What is a primary factor prior to migration?

- A. data governance
- B. additional latency
- C. security
- D. cloud connectivity

Answer: C

NEW QUESTION 172

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 177

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 179

You are designing a large-scale DMVPN network with more than 500 spokes using EIGRP as the IGP protocol. Which design option eliminates potential tunnel down events on the spoke routers due to the holding time expiration?

- A. Increase the hold queue on the physical interface of the hub router.
- B. Increase the hold queue on the tunnel interface of the spoke routers
- C. Increase the hold queue on the tunnel interface of the hub router
- D. Apply QoS for pak_priority class
- E. Increase the hold queue on the physical interface of the spoke routers.

Answer: C

NEW QUESTION 184

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 188

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 191

Which two possible drawbacks should you consider when introducing Network Functions Virtualization in a network design? (Choose two.)

- A. Bandwidth utilization increases
- B. Traffic flows are suboptimal
- C. High-end routers are required to support NFV
- D. OpenFlow must be supported in the network
- E. An SDN orchestration layer is required to support NFV

Answer: CE

NEW QUESTION 196

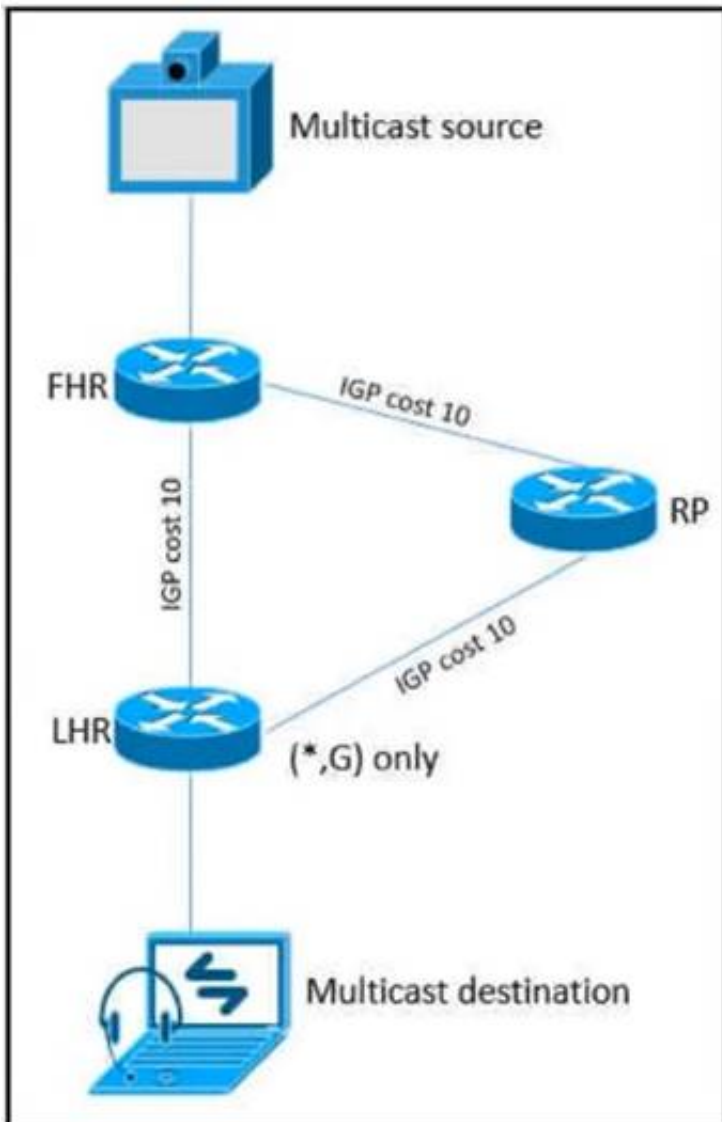
You have been tasked with designing a data center interconnect as part of business continuity. You want to use FCoE over this DCI to support synchronous replication. Which two technologies allow for FCoE via lossless Ethernet or data center bridging? (Choose two.)

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

Answer: AC

NEW QUESTION 199

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 201

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 203

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 208

As network designer, which option is your main concern with regards to virtualizing multiple network zones into a single hardware device?

- A. Feature sharing
- B. CPU resource allocation
- C. Congestion control
- D. Security
- E. Bandwidth allocation

Answer: A

NEW QUESTION 209

What are two advantages of controller-based networks versus traditional networks? (Choose two.)

- A. the ability to have forwarding tables at each device
- B. more flexible configuration per device
- C. more consistent device configuration
- D. programmatic APIs that are available per device
- E. the ability to configure the features for the network rather than per device

Answer: CE

NEW QUESTION 213

The Agile Manifesto is a document that defines the key values and principles behind the Agile philosophy and helps development teams work more efficiently and sustainably Each of the four key values is split into two sections a left-hand side and a right-hand side In other words, though there is value in the items on the right we value the items on the left more What is one of the key values of the Agile Manifesto?

- A. comprehensive documentation over working software
- B. contract negotiation over customer collaboration
- C. individuals and interactions over processes and tools
- D. following a plan over responding to change

Answer: C

NEW QUESTION 216

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 221

An architect receives a functional requirement for a NAC system from a customer security policy stating that if a corporate Wi-Fi device does not meet current AV definitions, then it cannot access the corporate network until the definitions are updated. Which component should be built into the NAC design?

- A. posture assessment with remediation VLAN
- B. quarantine SGTs
- C. dACLs with SGTs
- D. quarantine VLAN

Answer: A

NEW QUESTION 224

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 226

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 231

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 235

Company XYZ wants to use the FCAPS ISO standard for network management design. The focus of the design should be to monitor and keep track of any performance issues by continuously collecting and analyzing statistical information to monitor, correct, and optimize any reduced responsiveness across the network. Which layer accomplishes this design requirement?

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

Answer: C

NEW QUESTION 238

The Layer 3 control plane is the intelligence over the network that steers traffic toward its intended destination. Which two techniques can be used in service provider-style networks to offer a more dynamic, flexible, controlled, and secure control plane design? (Choose two.)

- A. access control lists
- B. firewalls
- C. QoS policy propagation with BGP
- D. remote black-holing trigger
- E. prefix lists

Answer: DE

NEW QUESTION 240

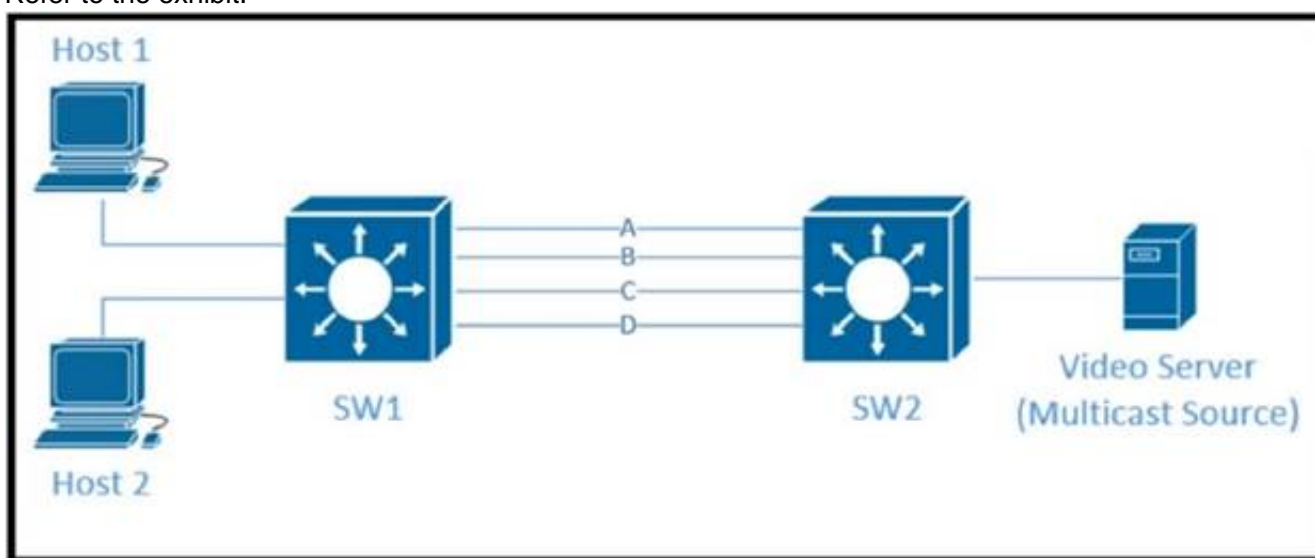
A customer migrates from a traditional Layer 2 data center network into a new SDN-based, spine-and-leaf VXLAN EVPN data center within the same location. The networks are joined to enable host migration at Layer 2. Which activity should be completed each time a legacy network is migrated?

- 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 243

Refer to the exhibit.



Traffic was equally balanced between Layer 3 links on core switches SW1 and SW2 before an introduction of the new video server in the network. This video server uses multicast to send video streams to hosts and now one of the links between core switches is over utilized. Which design solution solves this issue?

- A. Add more links between core switches.
- B. Aggregate links Layer 2 link aggregation.
- C. Apply a more granular load-balancing method on SW1.
- D. Apply a more granular load-balancing method on SW2.
- E. Filter IGMP joins on an over-utilized link.

Answer: B

NEW QUESTION 246

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 248

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 249

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 251

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 256

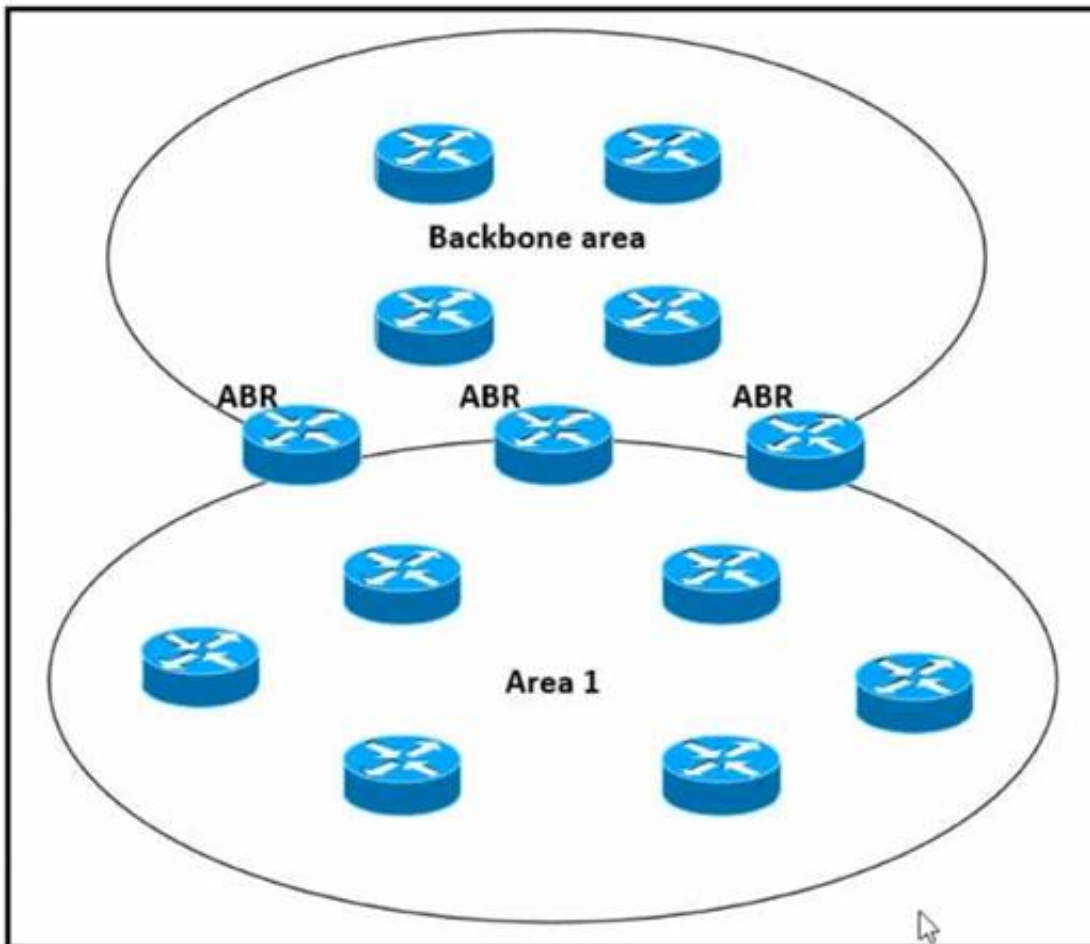
The major business applications of an enterprise are largely monolithic and hard-coded. As part of a major modernization and overhaul of the applications, the goal is to move to a modular and containerized application architecture. At the same time, decoupling from the hardware is desired to move to an on-demand provisioning. However, the CyberOps team mandated that the final architecture must provide the same security levels as an air-gapped data center. Which cloud architecture meets these requirements?

- A. IaaS
- B. private cloud
- C. PaaS
- D. hybrid cloud
- E. public cloud

Answer: B

NEW QUESTION 259

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 263

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 265

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 268

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 270

Which mechanism provides Layer 2 fault isolation between data centers?

- A. fabric path
- B. OTL
- C. advanced VPLS
- D. LISP
- E. TRILL

Answer: D

NEW QUESTION 271

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 273

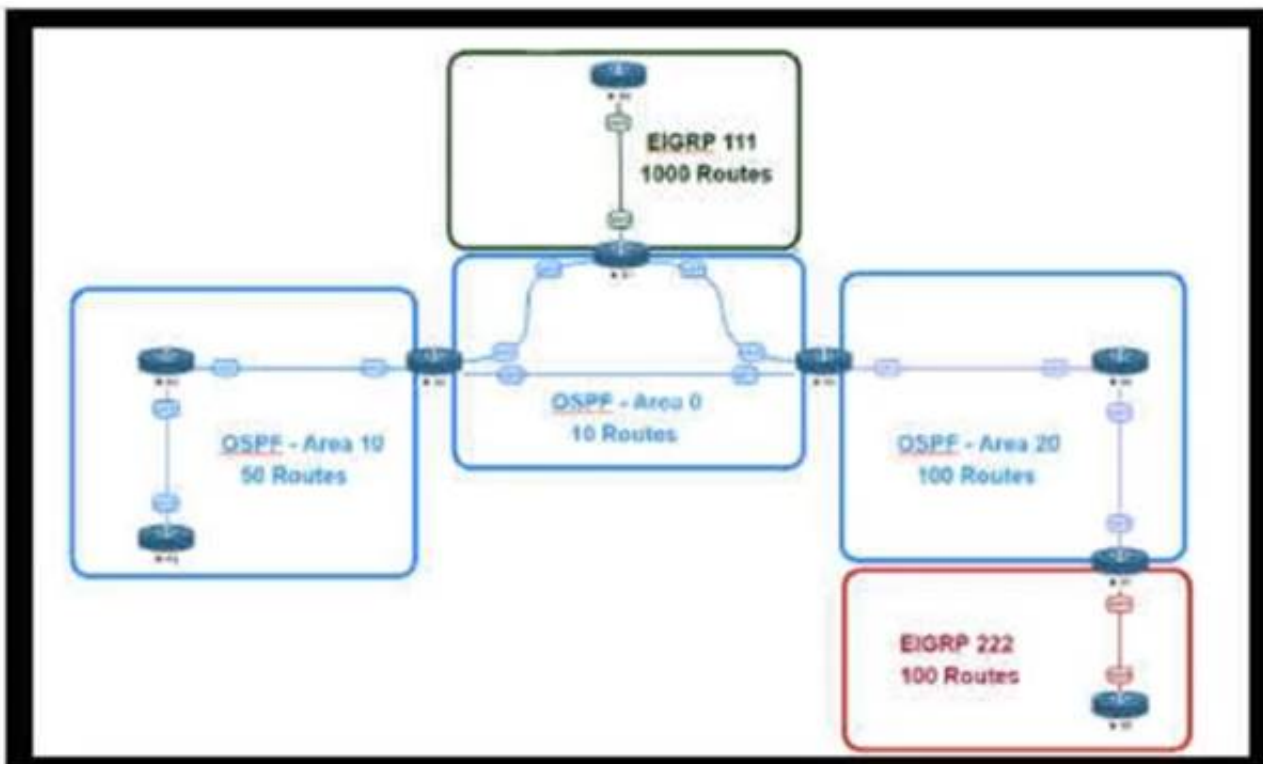
What are two primary design constraints when a robust infrastructure solution is created? (Choose two.)

- A. monitoring capabilities
- B. project time frame
- C. staff experience
- D. component availability
- E. total cost

Answer: BE

NEW QUESTION 274

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 276

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 278

Which tool automates network implementation activities and shortens the implementation lifecycle?

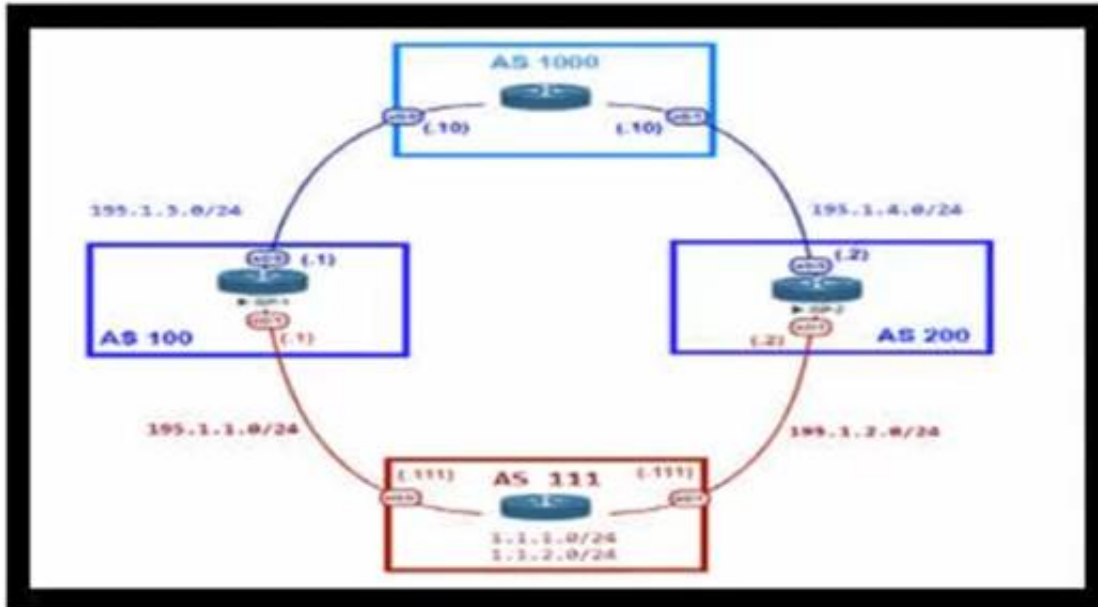
- A. LISP
- B. Java
- C. Conclusion

D. Python

Answer: D

NEW QUESTION 280

Refer to the exhibit.



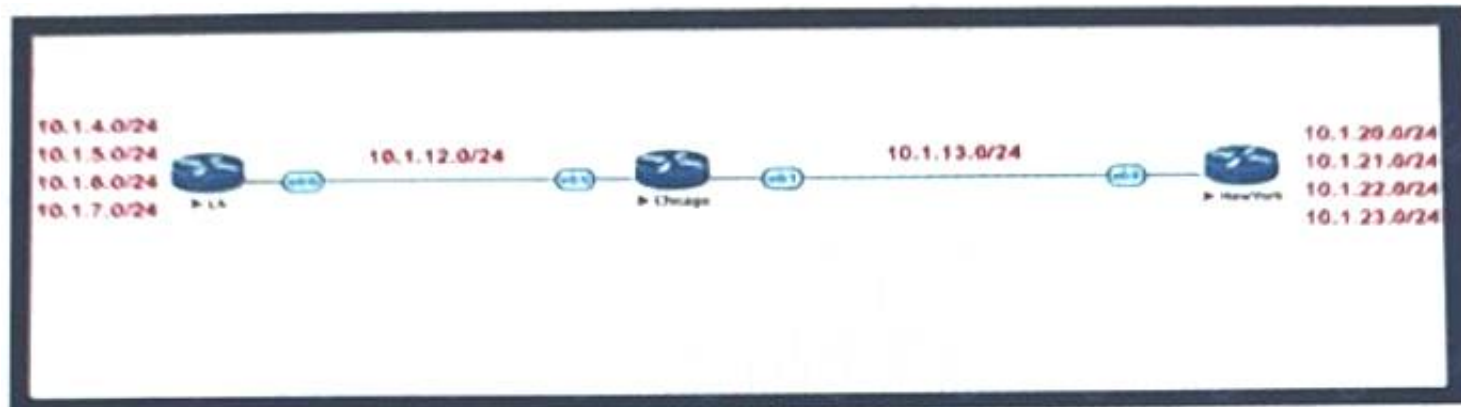
An engineer is designing the network for a multihomed customer running in AS 111 does not have any other Ass connected to it. Which technology is more comprehensive to use in the design to make sure that the AS is not being used as a transit AS?

- 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 284

Refer to the exhibit.



Company XYZ BGP topology is as shown in the diagram. The interface on the LA router connected toward the 10 1.5.0/24 network is faulty and is going up and down, which affects the entire routing domain. Which routing technique can the network administrator use so that the rest of the network is not affected by the flapping issue?

- A. The LA administrator should use route aggregation to summarize the 10 1 4.0/24, 10 1 5 0/24, 10.1.6.0/24, and 10 1 7 0/24 networks toward Chicago
- B. The LA administrator should use route dampening for the 10.1.5 0/24 network so that it does not get propagated when it flaps up and down.
- C. The LA administrator should use route filtering to block the 10.1.5.0/24 network from getting propagated toward Chicago and New York.
- D. The Chicago administrator should use route filtering to block the 10.1.5.0/24 network from coming in from the LA router.

Answer: B

NEW QUESTION 286

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 288

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 state consistency
- C. control path reliability
- D. controller clustering

Answer: B

NEW QUESTION 293

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 297

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 299

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 301

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 303

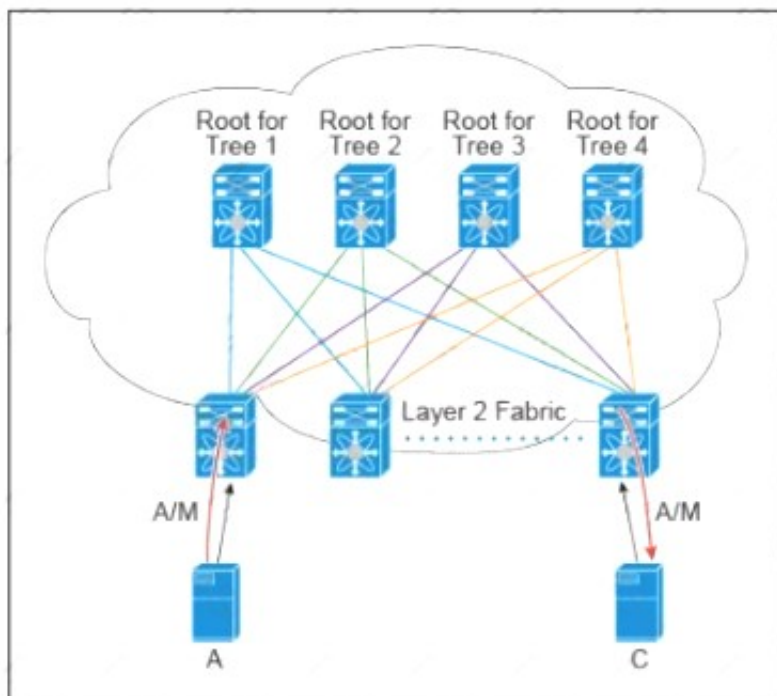
Which extensions to GRE tunneling provide session tracking and in-order packet delivery in exchange for additional state stored in tunnel endpoints?

- 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 306

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 308

A business wants to refresh its legacy Frame Relay WAN. It currently has product specialists in each of its 200 branches but plans to reduce and consolidate resources. The goal is to have product specialists available via video link when customers visit the nationwide branch offices. Which technology should be used to meet this objective?

- A. DMVPN phase 1 network over the Internet
- B. Layer 3 MPLS VPN hub and spoke
- C. Layer2VPLS
- D. Layer 3 MPLS VPN full mesh

Answer: D

NEW QUESTION 313

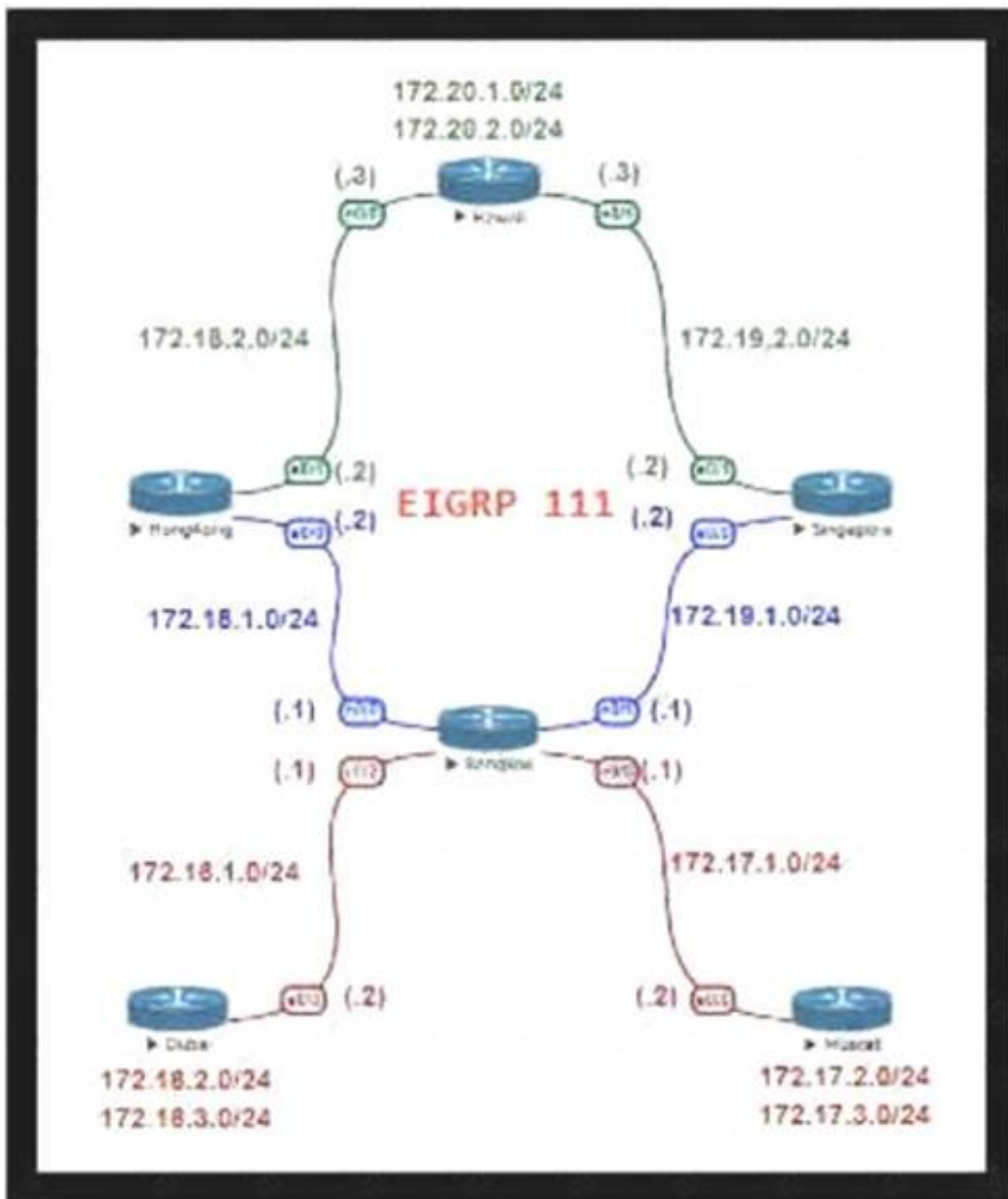
Which technology is an open-source infrastructure automation tool that automates repetitive tasks for users who work in networks such as cloud provisioning and intraservice orchestration?

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

Answer: A

NEW QUESTION 317

Refer to the exhibit.



For Company XYZ Bangkok is using ECMP to reach the 172.20.2.0/24 network. The company wants a design that would allow them to forward traffic from 172.16.2.0/24 toward 172.20.2.0/24 via the Singapore router as the preferred route. The rest of the traffic should continue to use ECMP. Which technology fulfills this design requirement?

- A. policy-based routing
- B. route summarization
- C. unequal-cost load balancing using variance
- D. LFA

Answer: A

NEW QUESTION 318

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 319

Two routers R1 and R2 are directly connected through an Ethernet link. Both routers are running OSPF over the Ethernet link and OSPF has been registered with BFD. R1 has been set up to transmit BFD at a 50 ms interval, but R2 can receive only at a 100 ms rate due to platform limitations. What does this mean?

- A. After the initial timer exchange
- B. R2 sets its transmission rate to the R1 Desired Min TX interval
- C. After the initial timer exchange
- D. R1 sets its transmission rate to the R2 Required Min RX interval
- E. Timers renegotiate indefinitely, so the timer exchange phase never converges
- F. R2 sets the P-bit on all BFD control packets until R2 sends a packet with the F-bit set

Answer: B

NEW QUESTION 324

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 328

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 330

Which two aspects are considered when designing a dual hub dual DMVPN cloud topology? (Choose two)

- A. will only work with single-tier headend architecture
- B. hub sites must connect to both DMVPN clouds
- C. recommended for high availability
- D. spoke-to-spoke traffic will transit the hub unless spokes exchange dynamic routing directly
- E. requires all sites to have dual Internet connections

Answer: AC

NEW QUESTION 334

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 337

What advantage of placing the IS-IS layer 2 flooding domain boundary at the core Layer in a three-layer hierarchical network is true?

- A. The Layer 1 and Layer 2 domains can easily overlap
- B. It reduces the complexity of the Layer 1 domains
- C. It can be applied to any kind of topology
- D. The Layer 2 domain is contained and more stable

Answer: D

NEW QUESTION 338

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 340

Which effect of using ingress filtering to prevent spoofed addresses on a network design is true?

- A. It reduces the effectiveness of DDoS attacks when associated with DSCP remarking to Scavenger.
- B. It protects the network Infrastructure against spoofed DDoS attacks.
- C. It Classifies bogus traffic and remarks it with DSCP bulk.
- D. It filters RFC 1918 IP addresses.

Answer: B

NEW QUESTION 344

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 349

Which two statements describe the functionality of OSPF packet-pacing timers? (Choose two) The group-pacing timer controls the interval that is used for group and individual LSA refreshment

- A. OSPF flood-pacing timers allow dynamic control of the OSPF transmission queue size
- B. OSPF retransmission-pacing timers allow control of interpacket spacing between consecutive link-state update packets in the OSPF retransmission queue.
- C. OSPF retransmission-pacing timers allow control of packet interleaving between nonconsecutive link-state update packets in the OSPF retransmission queue.
- D. OSPF flood-pacing timers allow control of interpacket spacing between consecutive link-state update packets in the OSPF transmission queue

Answer: BD

NEW QUESTION 353

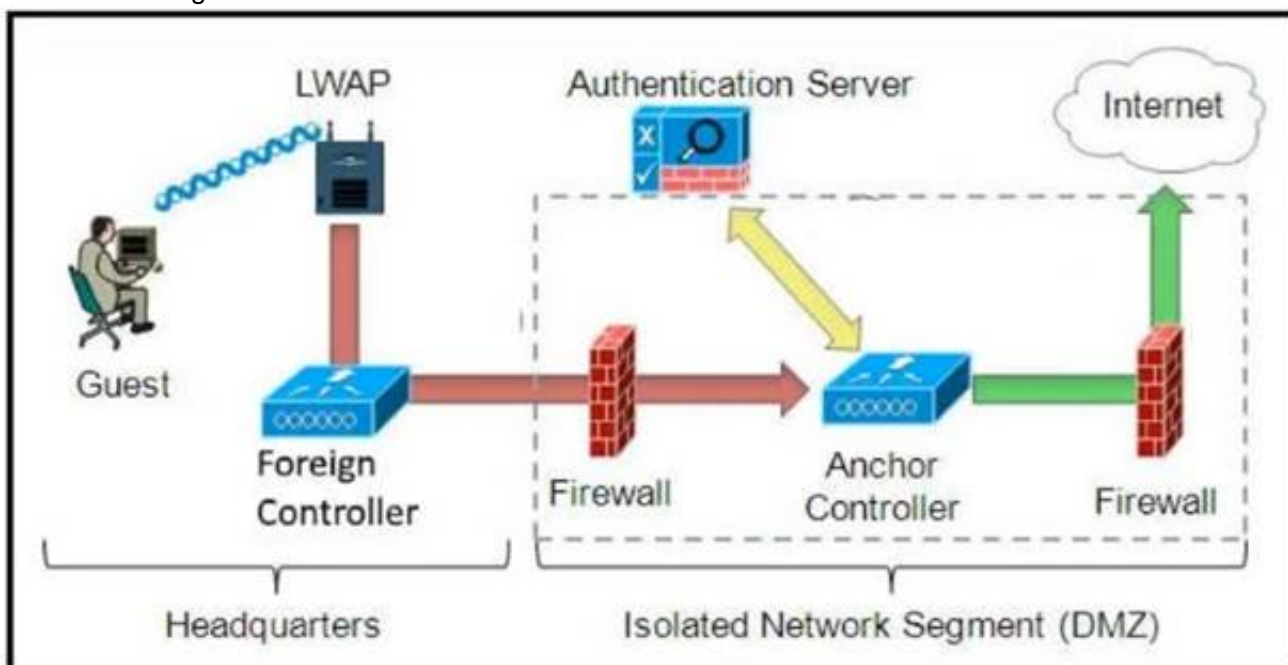
Which mechanism enables small, unmanaged switches to plug into ports of access switches without risking switch loops?

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

Answer: D

NEW QUESTION 357

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 358

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 363

An external edge router provides connectivity from a service provider to an enterprise Which two Internet edge best practices meet compliance regulations'? (Choose two)

- A. Implement filtering to control traffic that is sourced from the infrastructure IP space.
- B. Enable and use only secure protocols.
- C. Send logs to a centralized logging collection server.
- D. Implement EBGP to advertise all owned IP blocks.
- E. Use login banners and interface access lists to restrict administrative access to the system

Answer: BE

NEW QUESTION 364

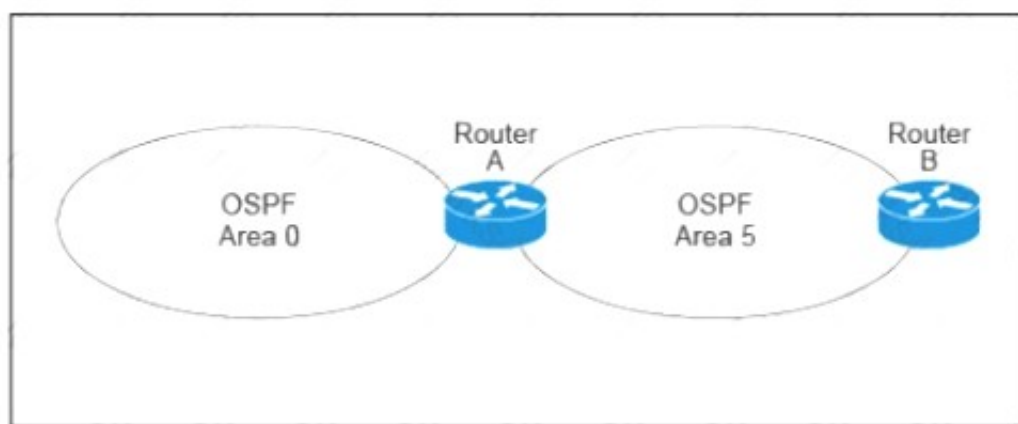
SDWAN networks capitalize the usage of broadband Internet links over traditional MPLS links to offer more cost benefits to enterprise customers. However, due to the insecure nature of the public Internet, it is mandatory to use encryption of traffic between any two SDWAN edge devices installed behind NAT gateways. Which overlay method can provide optimal transport over unreliable underlay networks that are behind NAT gateways?

- A. TLS
- B. DTLS
- C. IPsec
- D. GRE

Answer: C

NEW QUESTION 366

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 370

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 373

An enterprise plans to evolve from a traditional WAN network to a software-defined WAN network. The existing devices have limited capability when it comes to virtualization. As the migration is carried out, enterprise applications and services must not experience any traffic impact. Which implementation plan can be used to accommodate this during the migration phase?

- A. Deploy controllers, deploy SD-WAN edge router
- B. In the data center, and migrate branch sites.
- C. Migrate data center WAN routers, migrate branch sites, and deploy SD-WAN edge routers.
- D. Migrate branch sites, migrate data center WAN routers, and deploy controllers.
- E. Deploy SD-WAN edge routers in the data center, deploy controllers, and migrate branch sites

Answer: A

NEW QUESTION 378

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 383

Which feature must be part of the network design to wait a predetermined amount of time before notifying the routing protocol of a change in the path in the network?

- A. Transmit delay
- B. Throttle timer
- C. SPF hold time
- D. Interface dampening

Answer: B

NEW QUESTION 386

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 387

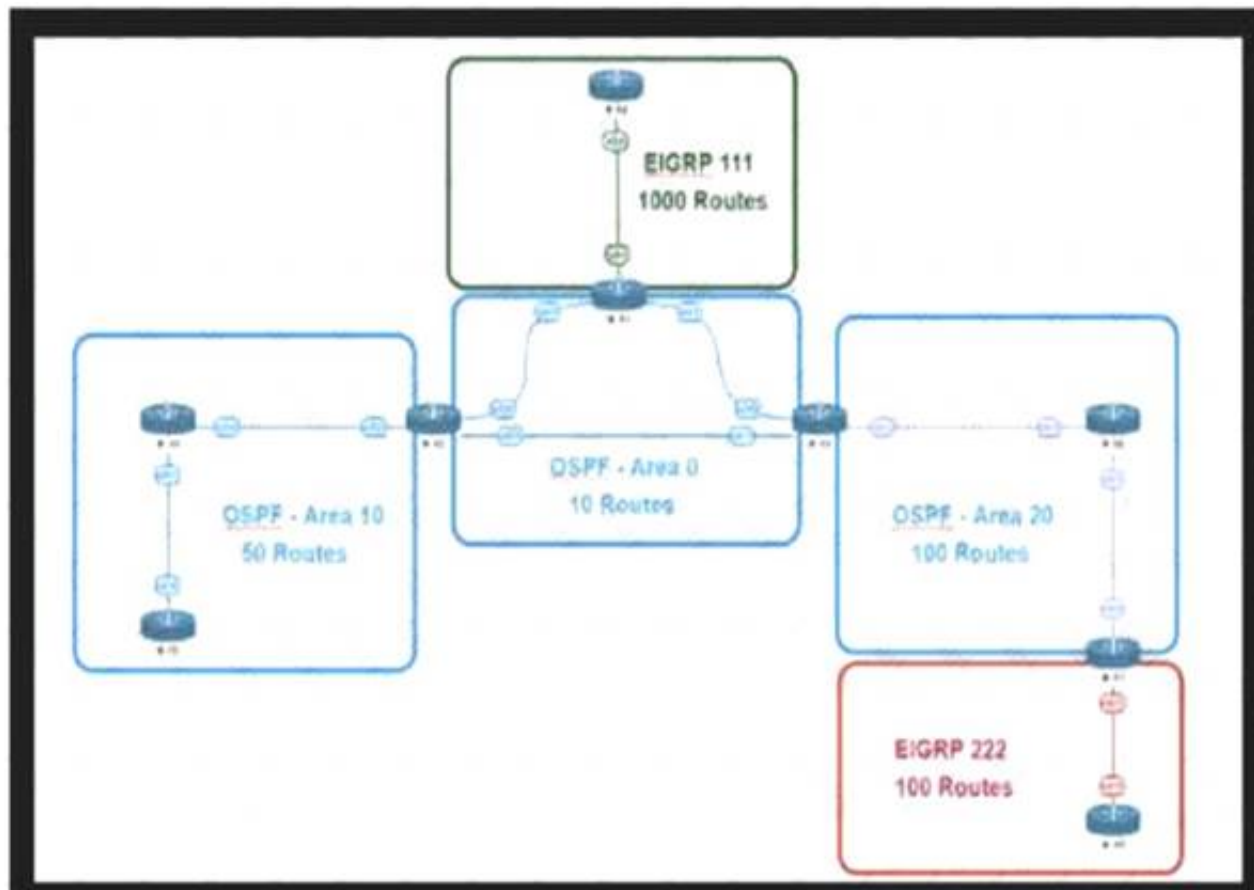
You are tasked to design a QoS policy for a service provider so they can include it in the design of their MPLS core network. If the design must support an MPLS network with six classes, and CEs will be managed by the service provider, which QoS policy should be recommended?

- A. map IP CoS bits into the IP Precedence field
- B. map flow-label bits into the Exp field
- C. map IP precedence bits into the DSCP field
- D. map DSCP bits into the Exp field

Answer: D

NEW QUESTION 390

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 ABRs.
- D. route summarization on EIGRP routers connecting toward the ASBR

Answer: B

NEW QUESTION 395

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 edge¹²³. 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 396

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 399

How can EIGRP topologies be designed to converge as fast as possible in the event of a point-to-point link failure?

- A. Limit the query domain by use of distribute lists.
- B. Build neighbor adjacencies in a triangulated fashion.
- C. Build neighbor adjacencies in squared fashion.
- D. Limit the query domain by use of summarization.
- E. Limit the query domain by use of default routes.

Answer: D

NEW QUESTION 403

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 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 406

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 408

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 412

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 417

The Company XYZ network is experiencing attacks against their router. Which type of Control Plane Protection must be used on the router to protect all control plane IP traffic that is destined directly for one of the router interfaces?

- A. Control Plane Protection host subinterface
- B. Control Plane Protection main interface
- C. Control Plane Protection transit subinterface
- D. Control Plane Protection CEF-exception subinterface

Answer: A

NEW QUESTION 418

Which network management framework can be used to develop a network architecture that contains business requirements analysis, gap analysis, and network diagrams as artifacts to be used for design and implementation later?

- A. TOG
- B. ITIL
- C. FCAPS
- D. Cobit

Answer: A

NEW QUESTION 423

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 426

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 427

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