

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

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:

low latency queuing	traffic shaping
CB-WFQ	policing
policing	low latency queuing
traffic shaping	CB-WFQ

NEW QUESTION 3

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 4

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 5

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 6

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

Answer: ADE

NEW QUESTION 7

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 8

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 9

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

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

Answer: B

NEW QUESTION 10

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 10

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 14

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 be used in the routing policy design so that the rest of the network is not affected by the flapping issue?

- A. Use route dampening on LA router for the 10.1.5.0/24 network so that it does not get propagated when it flaps up and down
- B. Use route filtering on Chicago router to block the 10.1.5.0/24 network from coming in from the LA router
- C. Use route filtering on LA router to block the 10.1.5.0/24 network from getting propagated toward Chicago and New York
- D. Use route aggregation on LA router 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

Answer: D

NEW QUESTION 19

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

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

Answer: C

NEW QUESTION 22

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 24

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

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

Answer: B

NEW QUESTION 27

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 30

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 33

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 38

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 40

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 41

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 43

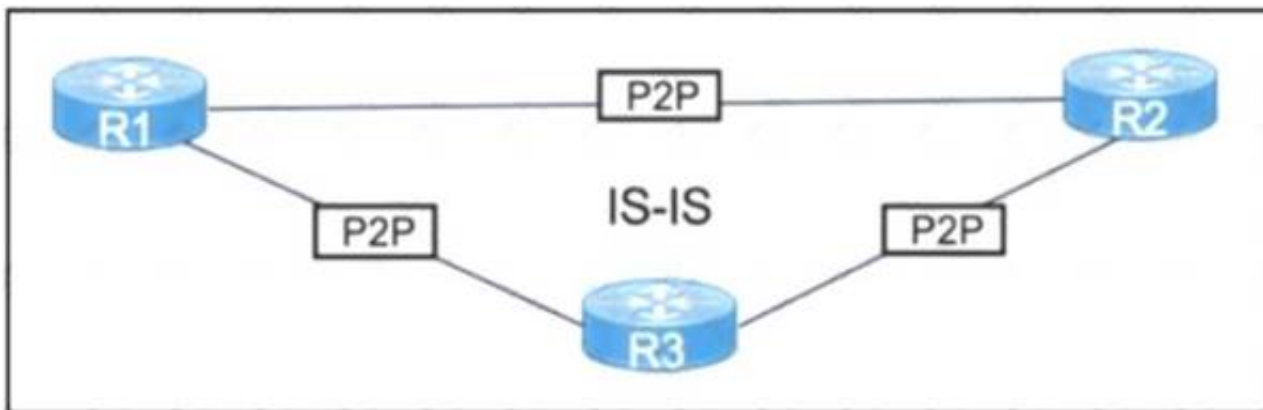
Which Interconnectivity method offers the fastest convergence in the event of a unidirectional issue between three Layer 3 switches connected together with routed links in the same rack in a data center?

- 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 48

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 53

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 58

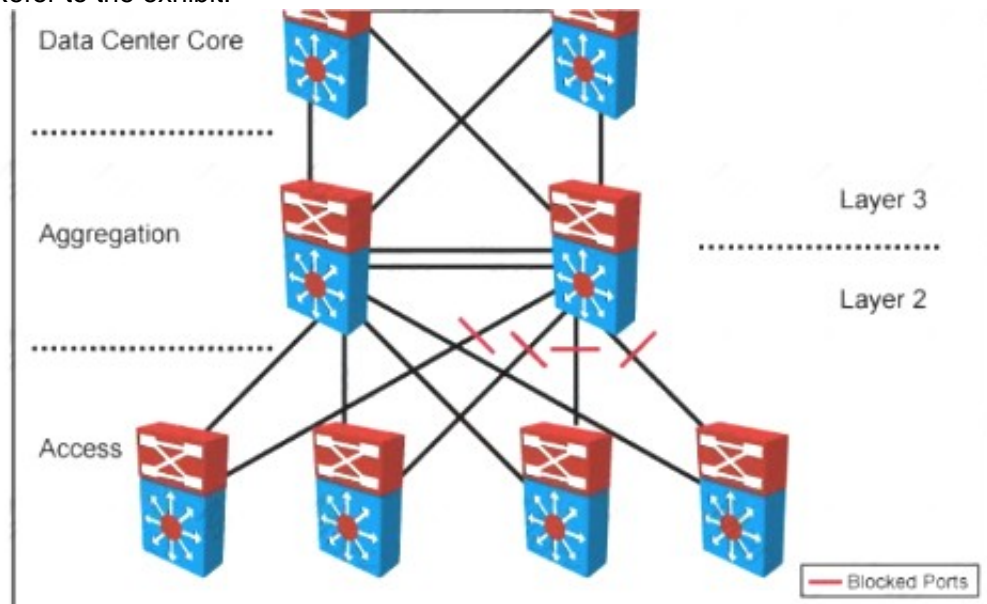
Which two features control multicast traffic in a VLAN environment? (Choose two)

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

Answer: AB

NEW QUESTION 61

Refer to the exhibit.



Your company designed a network to allow server VLANs to span all access switches in a data center. In the design, Layer 3 VLAN interfaces and HSRP are configured on the aggregation switches. Which two features improve STP stability within the network design? (Choose two.)

- A. BPDU guard on access ports
- B. BPDU guard on the aggregation switch downlinks toward access switches
- C. root guard on the aggregation switch downlinks toward access switches
- D. root guard on access ports
- E. edge port on access ports
- F. access switch pairs explicitly determined to be root and backup root bridges

Answer: AE

NEW QUESTION 64

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

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

Answer: A

NEW QUESTION 68

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 71

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

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

Answer: B

NEW QUESTION 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 80

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	Ingress Access Lists target 1
It is used to check the existence of a route without regard to the incoming interface	Strict Reverse Path Forwarding target 2
It is a dynamic filter	Feasible Path Reverse Path Forwarding target 3
It requires manual configuration	Loose Reverse Path Forwarding target 4
It is used as a filtering technique for Martian IP addresses	

- 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	Ingress Access Lists It requires manual configuration
It is used to check the existence of a route without regard to the incoming interface	Strict Reverse Path Forwarding It is a dynamic filter
It is a dynamic filter	Feasible Path Reverse Path Forwarding It is used to prevent spoofing attacks when there are alternate routes to a given IP address
It requires manual configuration	Loose Reverse Path Forwarding It is used as a filtering technique for Martian IP addresses
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NEW QUESTION 81

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 mutlipoint 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 82

A senior network designer suggests that you should improve network convergence times by reducing BGP timers between your CE router and the PE router of the service provider. Which two factors should you consider to adjust the timer values? (Choose two.)

- A. service provider agreement to support tuned timers
- B. manual updates to the peer groups
- C. service provider scheduling of changes to the PE
- D. number of routes on the CE router
- E. number of VRFs on the PE router

Answer: AD

NEW QUESTION 86

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 88

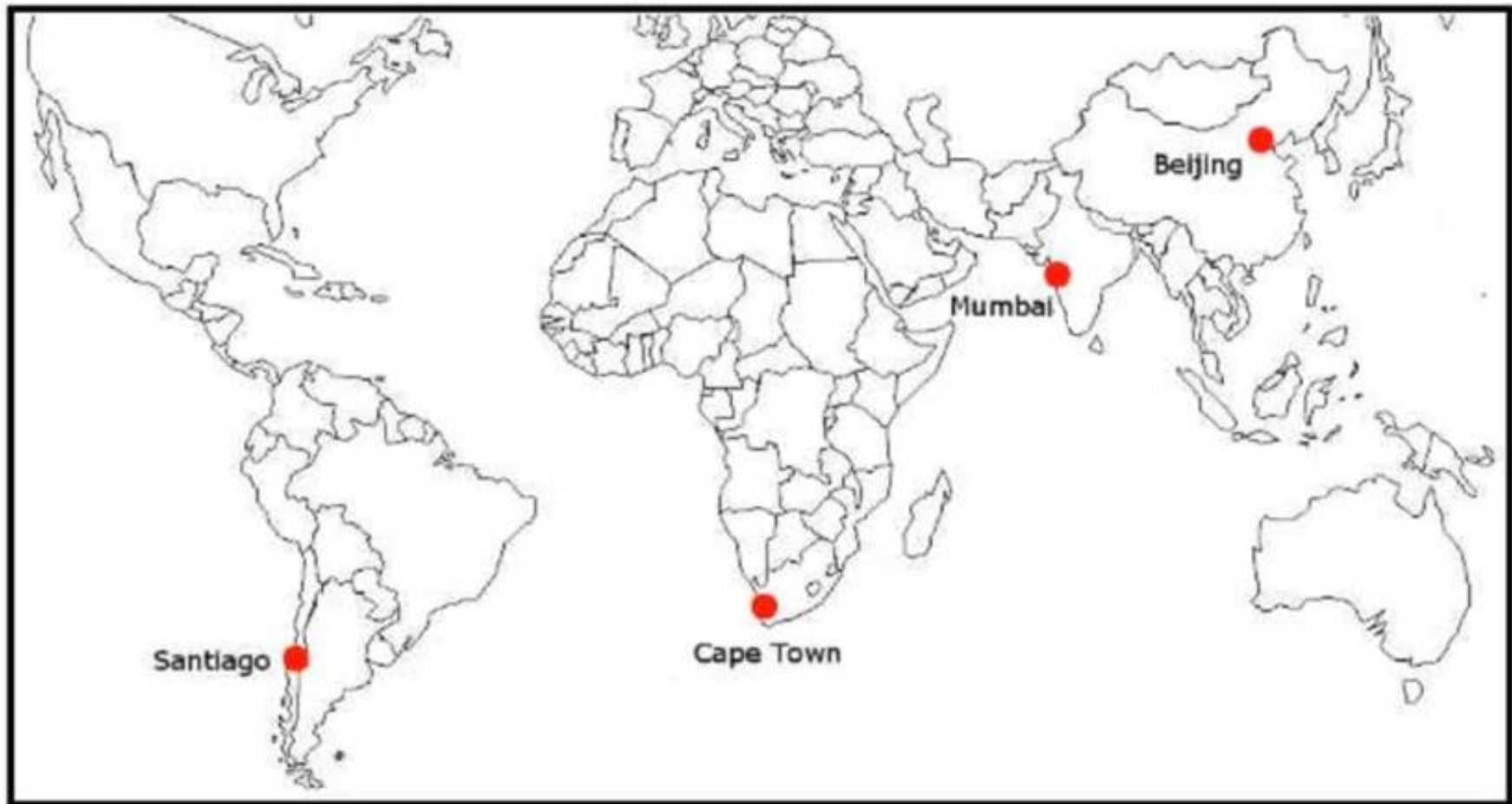
A business wants to centralize services via VDI technology and to replace remote WAN desktop PCs with thin client-type machines to reduce operating costs Which consideration supports the new business requirement?

- 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 89

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 91

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 95

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 99

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

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

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

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

Answer: A

Explanation:

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

NEW QUESTION 103

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 107

A European government passport agency considers upgrading its IT systems to increase performance and workload flexibility in response to constantly changing requirements. The budget manager wants to reduce capital expenses and IT staff and must adopt the lowest-cost technology. Which technology choice is suitable?

- A. on premises
- B. private cloud
- C. public cloud
- D. hybrid cloud

Answer: C

NEW QUESTION 108

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 revenue
- E. EBITDA, and cash.
- F. Marketing and product management divisions must reduce their CAPEX budgets significantly to drive the change.

Answer: C

NEW QUESTION 110

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

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

Answer: BEF

NEW QUESTION 115

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 120

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 125

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 127

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 128

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 132

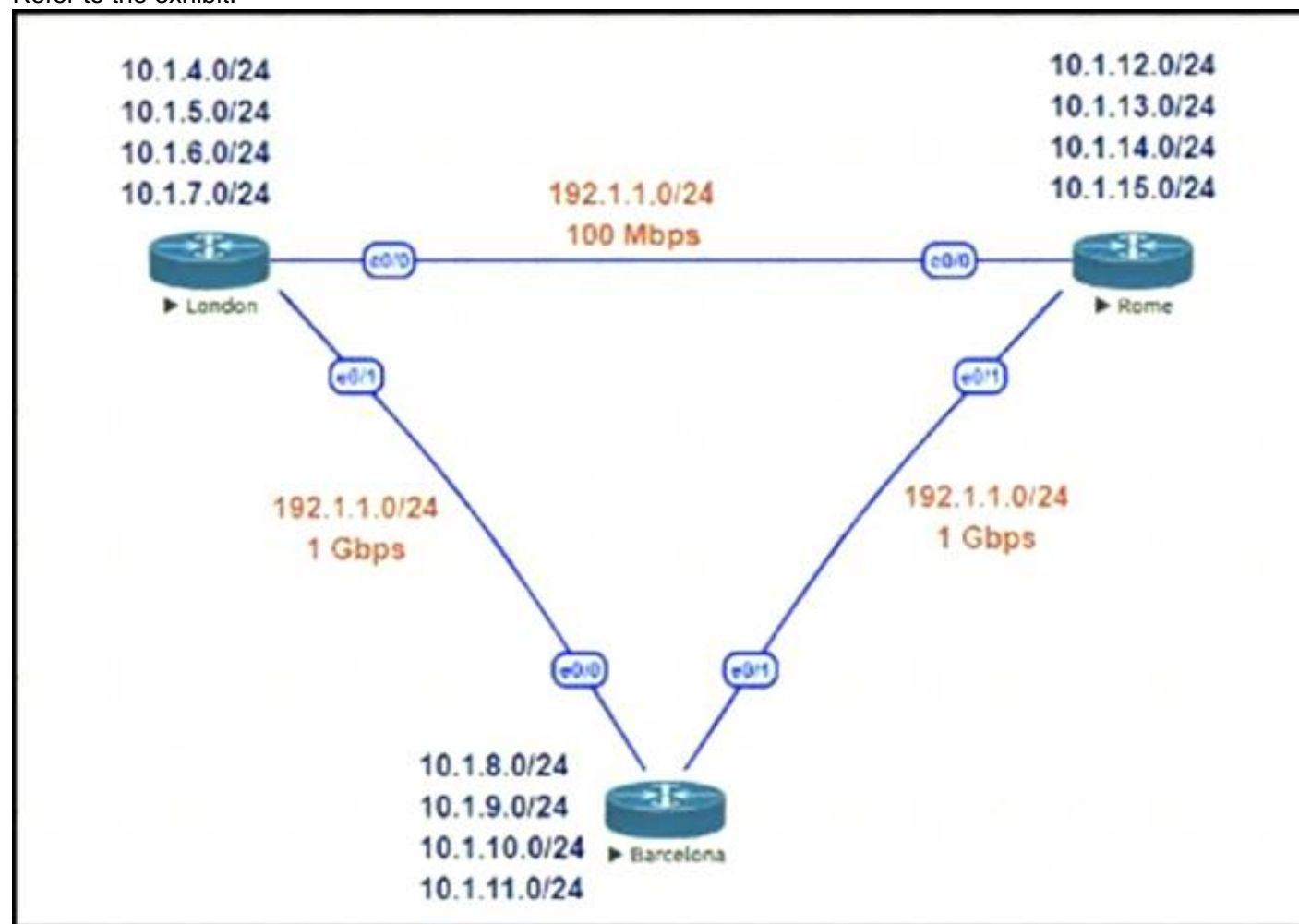
Which two data plane hardening techniques are true? (Choose two)

- 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 135

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

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 144

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 149

An IT service provider is upgrading network infrastructure to comply with PCI security standards. The network team finds that 802.1X and VPN authentication based on locally-significant certificates are not available on some legacy phones.
Which workaround solution meets the requirement?

- A. Replace legacy phones with new phones because the legacy phones will lose trust if the certificate is renewed.
- B. Enable phone VPN authentication based on end-user username and password.
- C. Temporarily allow fallback to TLS 1.0 when using certificates and then upgrade the software on legacy phones.
- D. Use authentication-based clear text password with no EAP-MD5 on the legacy phones.

Answer: B

NEW QUESTION 153

Which SDN architecture component is used by the application layer to communicate with the control plane layer to provide instructions about the resources required by applications?

- A. southbound APIs
- B. northbound APIs
- C. orchestration layer
- D. SDN controller

Answer: B

NEW QUESTION 157

A multinational enterprise integrates a cloud solution with these objectives

- Achieve seamless connectivity across different countries and regions
- Extend data center and private clouds into public clouds and provider-hosted clouds

What are two outcomes of deploying data centers and fabrics that interconnect different cloud networks? (Choose two.)

- A. enhanced security
- B. data and network ownership
- C. ability to place workloads across clouds
- D. centralized visibility
- E. unidirectional workload mobility across the cloud

Answer: AC

NEW QUESTION 162

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 165

You are designing a network for a branch office. In order to improve convergence time, you are required to use the BFD feature Which four routing protocols can you use to facilitate this? (Choose four.)

- A. IS-IS
- B. static
- C. RIP
- D. EIGRP
- E. BGP

Answer: ABDE

NEW QUESTION 169

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 172

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

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

Answer: A

NEW QUESTION 176

Which design principal improves network resiliency?

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

Answer: B

NEW QUESTION 181

An enterprise that runs numerous proprietary applications has major issues with its on-premises server estate hardware, to the point where business-critical functions are compromised. The enterprise accelerates plans to migrate services to the cloud. Which cloud service should be used if the enterprise wants to avoid hardware issues yet have control of its applications and operating system?

- A. SaaS
- B. PaaS
- C. IaaS
- D. hybrid cloud

Answer: C

NEW QUESTION 183

A company plans to use BFD between its routers to detect a connectivity problem inside the switched network. An IPS is transparently installed between the switches. Which packets should the IPS forward for BFD to work under all circumstances?

- A. Fragmented packet with the do-not-fragment bit set
- B. IP packets with broadcast IP source addresses
- C. IP packets with the multicast IP source address
- D. IP packet with the multicast IP destination address
- E. IP packets with identical source and destination IP addresses
- F. IP packets with the destination IP address 0.0.0.0.

Answer: E

NEW QUESTION 185

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 190

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 195

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 200

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 204

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 207

Your network operations team is deploying Access Control Lists (ACLs) across your Internet gateways. They wish to place an ACL inbound on the Internet gateway interface facing the core network (the "trusted" interface). Which IP address would the ACL need for traffic sourced from the inside interface, to match the source address of the traffic?

- A. inside global
- B. outside global
- C. inside local
- D. outside local

Answer: C

NEW QUESTION 209

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 212

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

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

Answer: B

Explanation:

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

NEW QUESTION 215

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 217

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 219

A software-defined networking (SDN) controller teams network topology information by using BGP link-state sessions with the route reflectors of an MPLS-enabled network. The controller then uses the topology information to apply on-demand traffic policies to the network through a protocol that is supported from all Layer 3 routers. Each policy is represented as a RIB entry in the control plane of the router. Which SDN model has been implemented?

- A. SDN centralized
- B. SDN traffic engineering
- C. SD-WAN
- D. SDN hybrid

Answer: B

NEW QUESTION 222

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 223

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 224

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

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

Answer: A

NEW QUESTION 227

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

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

Answer: A

NEW QUESTION 231

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 234

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 238

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 243

A green data center is being deployed and a design requirement is to be able to readily scale server virtualization Which IETF standard technology can provide this requirement?

- A. data center bridging
- B. unified fabric
- C. Transparent Interconnection of Lots of Links
- D. fabric path

Answer: C

NEW QUESTION 246

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 251

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 254

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 258

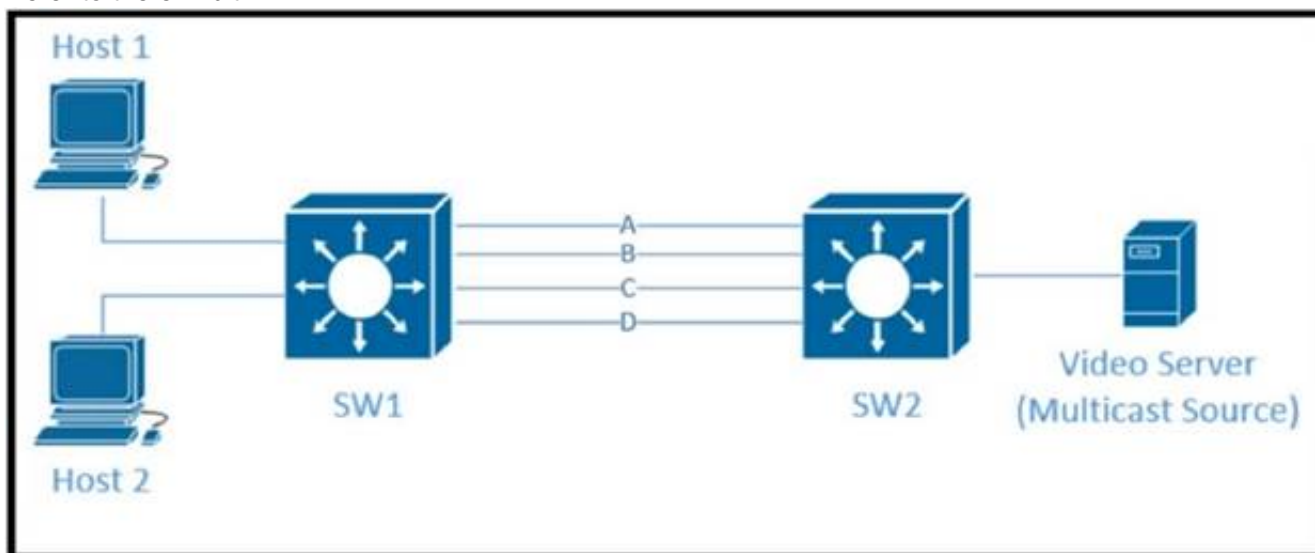
The Layer 3 control plane is the intelligence over the network that steers traffic toward its intended destination. Which two techniques can be used in service provider-style networks to offer a more dynamic, flexible, controlled, and secure control plane design? (Choose two.)

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

Answer: DE

NEW QUESTION 260

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 262

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

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

Answer: A

NEW QUESTION 264

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 267

Which two actions must be taken when assessing an existing wireless network implementation for its readiness to support voice traffic? (Choose two.)

- A. Check for high roaming delay.
- B. Check for uniform radio coverage across the floors.
- C. Check for high channel utilization.
- D. Check for latency over wireless.
- E. Identify frequent TX power changes.

Answer: AC

Explanation:

<https://community.cisco.com/t5/wireless/channel-utilization/td-p/2716667>

NEW QUESTION 271

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 275

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 mode. 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 277

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 282

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

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

Answer: B

NEW QUESTION 285

Company XYZ must design a strategy to protect their routers from DoS attacks, such as traffic destined to the router's own route processor, using separate control plane categories. Which two capabilities can be used to achieve this requirement? (Choose two.)

- A. Control Plane Protection using queue thresholding on the transit subinterface
- B. Control Plane Protection using port filtering on the transit subinterface
- C. Control Plane Protection using port filtering on the main interface
- D. Control Plane Protection using queue thresholding on the host subinterface
- E. Control Plane Protection using port filtering on the host subinterface

Answer: DE

NEW QUESTION 289

Which DCI technology utilizes a "flood and learn" technique to populate the Layer2 forwarding table?

- A. LISP
- B. OTV
- C. VPLS
- D. EVPN

Answer: C

NEW QUESTION 294

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

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

Answer: B

Explanation:

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

NEW QUESTION 296

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 300

In the case of outsourced IT services, the RTO is defined within the SLA. Which two support terms are often included in the SLA by IT and other service providers? (Choose two.)

- A. network size and cost
- B. support availability
- C. network sustainability
- D. network reliability
- E. resolution time

Answer: BE

NEW QUESTION 301

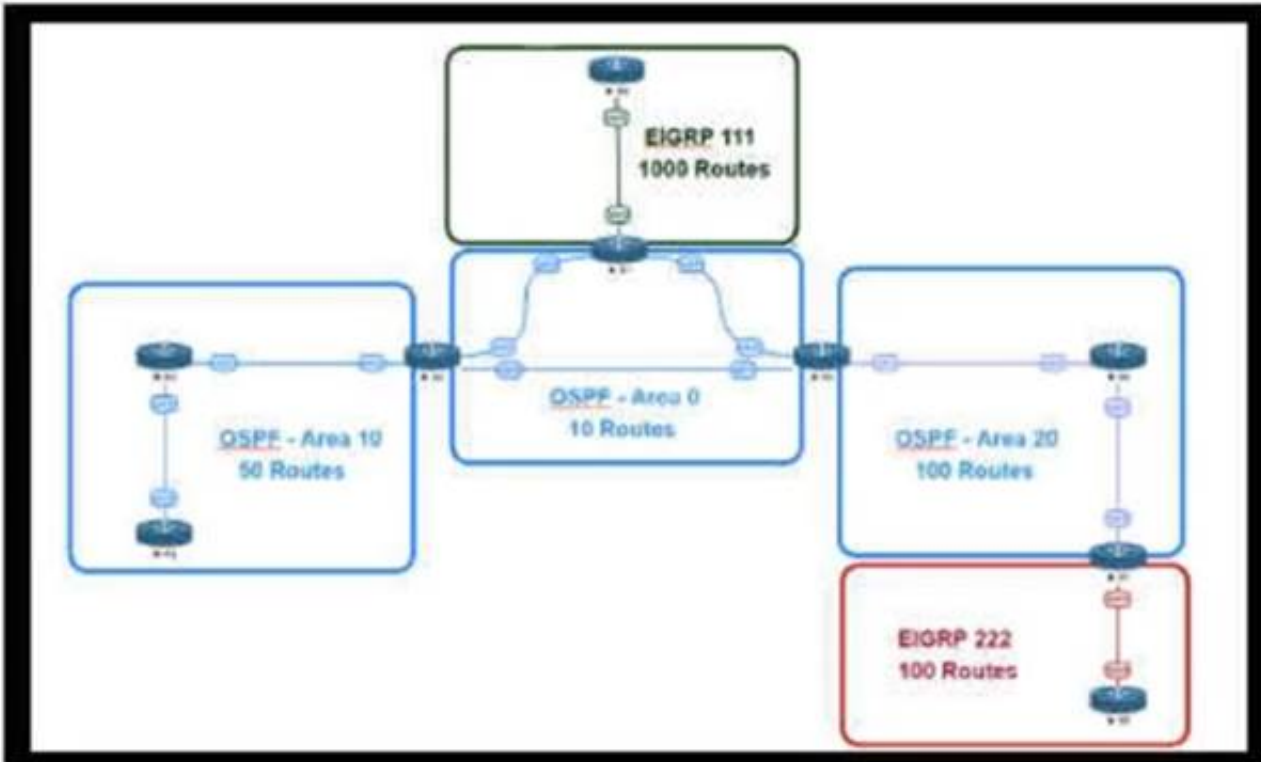
Which mechanism provides Layer 2 fault isolation between data centers?

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

Answer: D

NEW QUESTION 303

Retef 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. How 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 308

What are two common approaches to analyzing and designing networks? (Choose two.)

- A. bottom-up approach
- B. high-low security approach
- C. top-down approach
- D. left-right approach
- E. three-tier approach

Answer: AC

NEW QUESTION 310

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 313

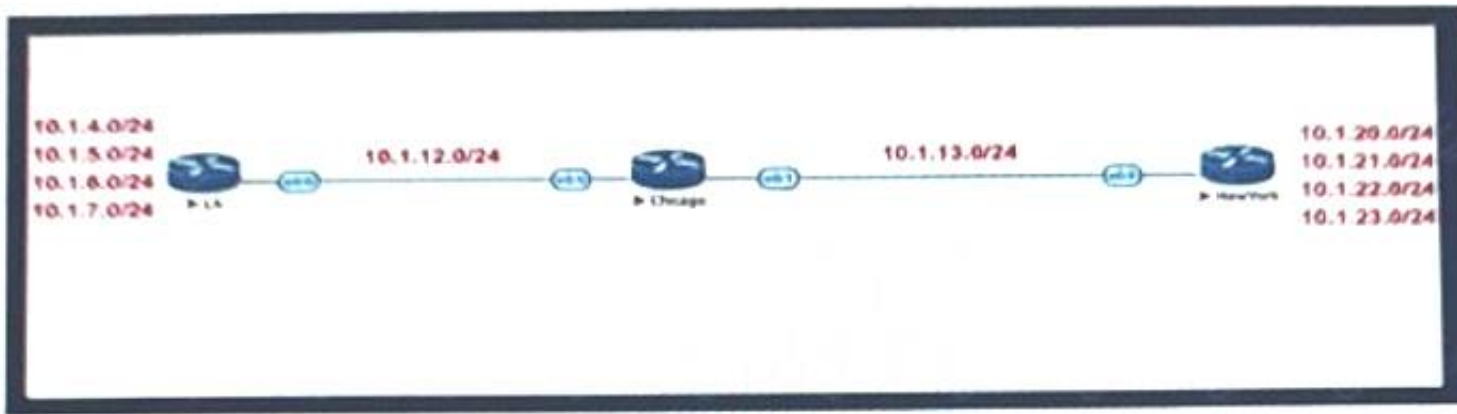
Which tool automates network implementation activities and shortens the implementation lifecycle?

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

Answer: D

NEW QUESTION 316

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 317

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 318

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 323

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 324

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

Answer: B

NEW QUESTION 328

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 331

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 334

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 338

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

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

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

- A. Mastered
- B. Not Mastered

Answer: A

Explanation:

Table Description automatically generated

NEW QUESTION 340

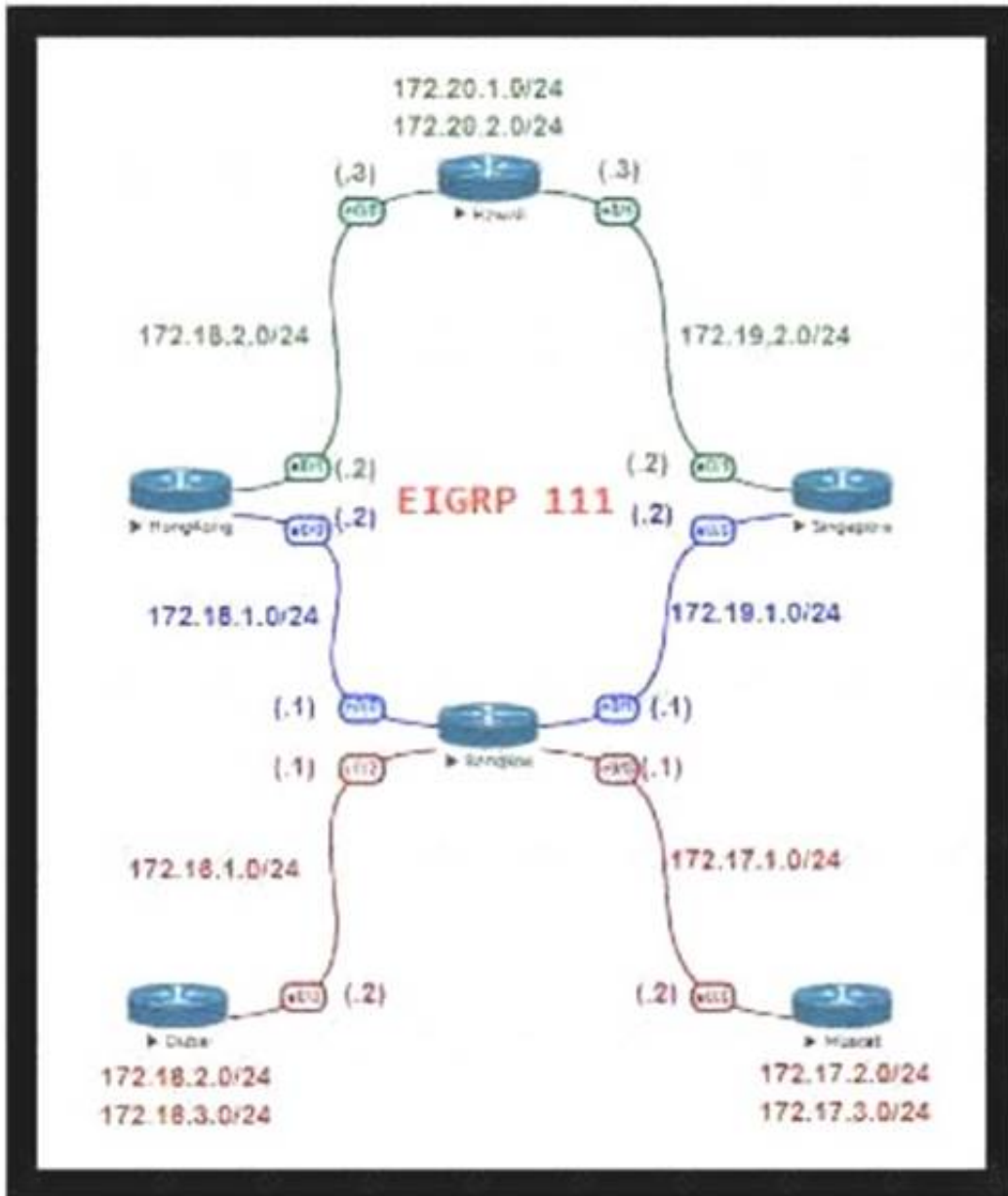
Which technology is an open-source infrastructure automation tool that automates repetitive tasks for users who work in networks such as cloud provisioning and intraservice orchestration?

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

Answer: A

NEW QUESTION 343

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 344

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 349

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 354

An existing wireless network was designed to support data traffic only. You must now install context-aware services for location tracking. Changes must be applied to the existing wireless network to increase the location accuracy? (Choose two)

- A. Add access points along the perimeter of the coverage area.
- B. Increase the access point density to create an average inter-access point distance of less than 40 feet or 12.2 meters
- C. Use directional antennas to provide more cell overlapping
- D. Install additional access points in monitor mode where the co-channel interference would otherwise be affected
- E. Fine-tune the radio configuration of the access point to have a higher average transmission power to achieve better coverage

Answer: BE

NEW QUESTION 357

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 358

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 359

When an SDN-based model is used to transmit multimedia traffic, which aspect should an architect consider while designing the network?

- A. QoE estimation
- B. security
- C. traffic patterns
- D. flow forwarding

Answer: A

NEW QUESTION 360

Your company wants to deploy a new data center infrastructure Based on the requirements you have chosen VXLAN as encapsulation technology The customer is concerned about miss-configuration of Layer 2 devices and DC wide outages caused by Layer 2 loops What do you answer?

- A. VXLAN offers native loop avoidance mechanism
- B. Storm Control should be enabled on all ports
- C. VPC+ could prevent L2 loop on access ports
- D. BPDU Guard should be enabled on all VTEP access ports

Answer: D

NEW QUESTION 364

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 365

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 370

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 374

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 379

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 384

You are designing a network running both IPv4 and IPv6 to deploy QoS. Which consideration is correct about the QoS for IPv4 and IPv6?

- A. IPv4 and IPv6 traffic types can use queuing mechanisms such as LLQ, PQ and CQ.
- B. IPv6 packet classification is only available with process switching, whereas IPv4 packet classification is available with both process switching and CEF.
- C. IPv6 and IPv4 traffic types can use a single QoS policy to match both protocols
- D. Different congestion management mechanisms need to be used for IPv4 and IPv6 traffic types

Answer: C

NEW QUESTION 387

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 390

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 filterng 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 394

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 396

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 400

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

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

Answer: BD

NEW QUESTION 405

Company XYZ is redesigning their QoS policy. Some of the applications used by the company are real-time applications. The QoS design must give these applications preference in terms of transmission. Which QoS strategy can be used to fulfill the requirement?

- A. weighted fair queuing
- B. weighted random early detection
- C. low-latency queuing
- D. first-in first-out

Answer: C

NEW QUESTION 409

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

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

Answer: D

NEW QUESTION 410

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 412

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 413

The controller has a global view of the network, and it can easily ensure that the network is in a consistent and optimal configuration. Which two statements describe a centralized SDN control path? (Choose two.)

- A. Scaling of the centralized controller cluster is challenging for services like DHCP and load-balancing.
- B. It is highly-available by design with no single-point-of-failure risks present.
- C. Integrating smart NIC capabilities on the local host level is made easier through rest APIs.
- D. It significantly improves the latency when performing reactive handling of PACKET_IN events.
- E. It centralized controller can support all southbound APIs, which allows for easy integration with legacy equipment.

Answer: AE

NEW QUESTION 414

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 419

How must the queue sizes be designed to ensure that an application functions correctly?

- A. Each individual device queuing delay in the chain must be less than or equal to the application required delay.
- B. The queuing delay on every device in the chain must be exactly the same to the application required delay.
- C. The default queue sizes are good for any deployment as it compensates the serialization delay.
- D. The sum of the queuing delay of all devices plus serialization delay in the chain must be less than or equal to the application required delay.

Answer: D

NEW QUESTION 423

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 428

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 431

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 433

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 437

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 441

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 446

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 451

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