Cisco

Exam Questions 400-007

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

NEW QUESTION 1
Which two mechanisms avoid suboptimal routing in a network with dynamic mutual redistribution between multiple OSPFv2 and EIGRP boundaries? (Choose two.)

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

Answer: DE

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

NEW QUESTION 2
Which solution component helps to achieve comprehensive threat protection and compliance for migration to multicloud SDX architectures?

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

Answer: D

NEW QUESTION 3
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 4
Which management category is not part of FCAPS framework?

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

Answer: D

NEW QUESTION 5

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

A. GRE
B. L2TPv3
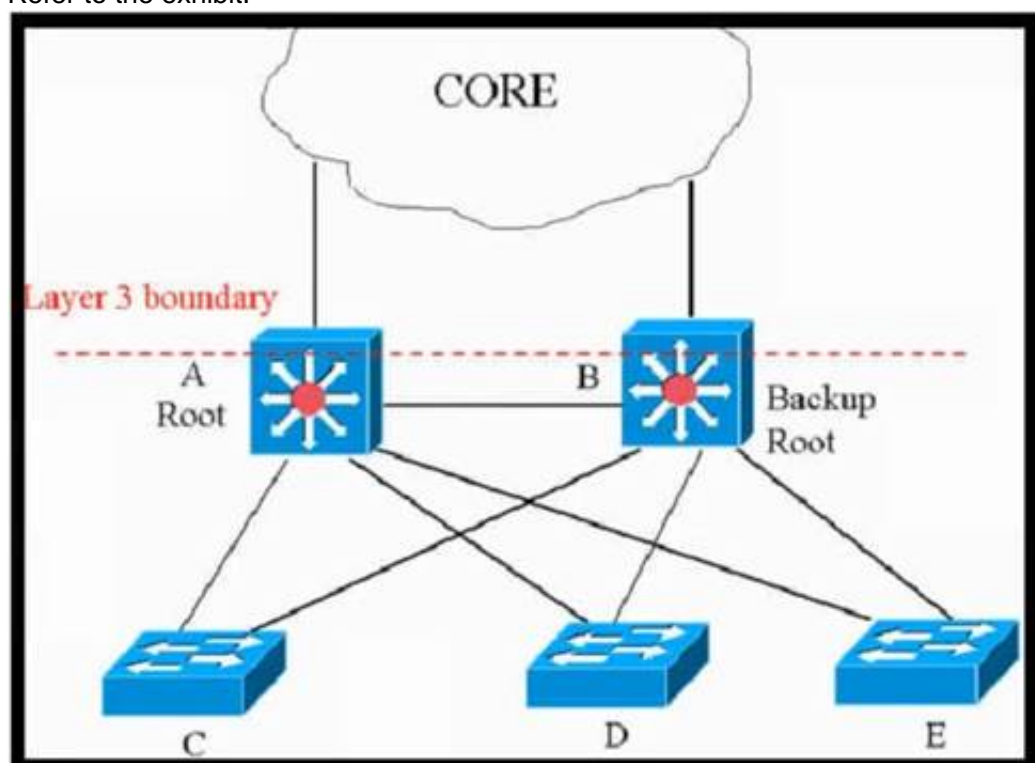C. VXLAN
D. EoMPLS

Answer: B

NEW QUESTION 6

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

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

Answer: AE

NEW QUESTION 7

Refer to the exhibit.

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

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

Answer: C

NEW QUESTION 8

Drag and drop the end-to-end network virtualization elements from the left onto the correct network areas on the right.
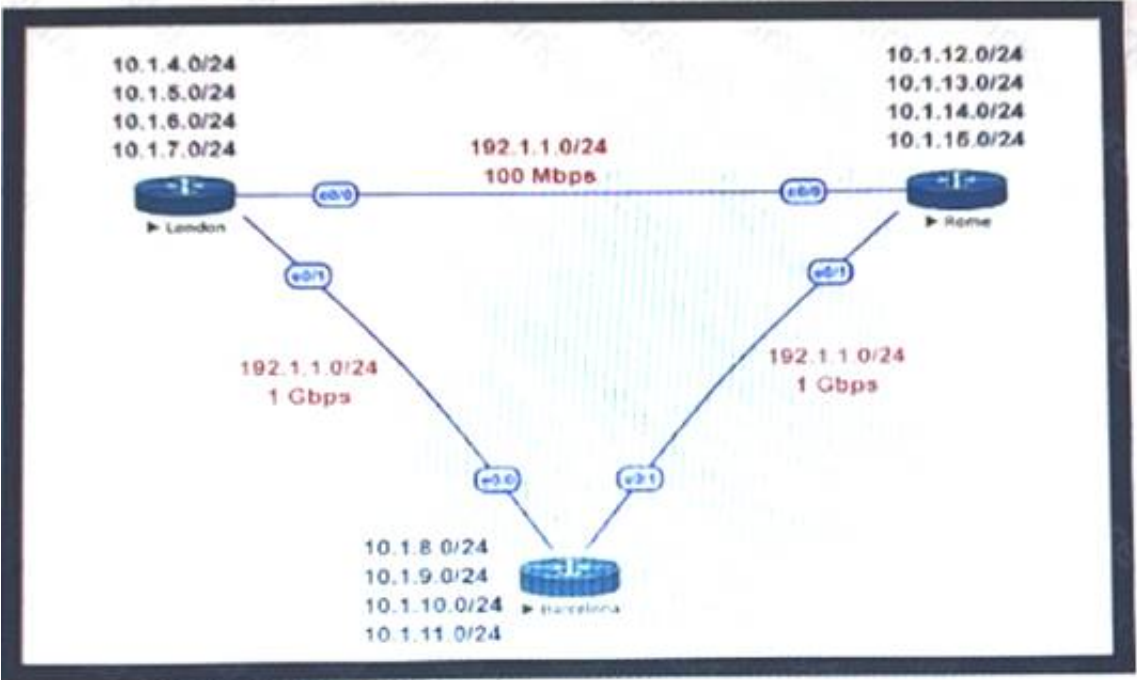
A. Mastered
B. Not Mastered

Answer: A

Explanation:
Graphical user interface Description automatically generated with medium confidence

NEW QUESTION 9
Refer to the exhibit.

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

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

Answer: A

NEW QUESTION 10
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 What is the final migration step after hosts have physically migrated to have traffic flowing through the new network without changing any host configuration?

A. Shut down legacy Layer 3 SVI
B. clear ARP caches on all hosts being migrated and then configure the legacy VRRP address onto new VXLAN core switches
C. Increase VRRP priorities on new infrastructure over legacy VRRP values, then shut down legacy SVIs
D. Shut down legacy infrastructure to allow VXLAN gateways to become active
E. Shut down legacy Layer 3 SVIs and activate new preconfigured Layer 3 SVIs on VXLAN

Answer: D

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 11
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 12
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 13
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 14
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.
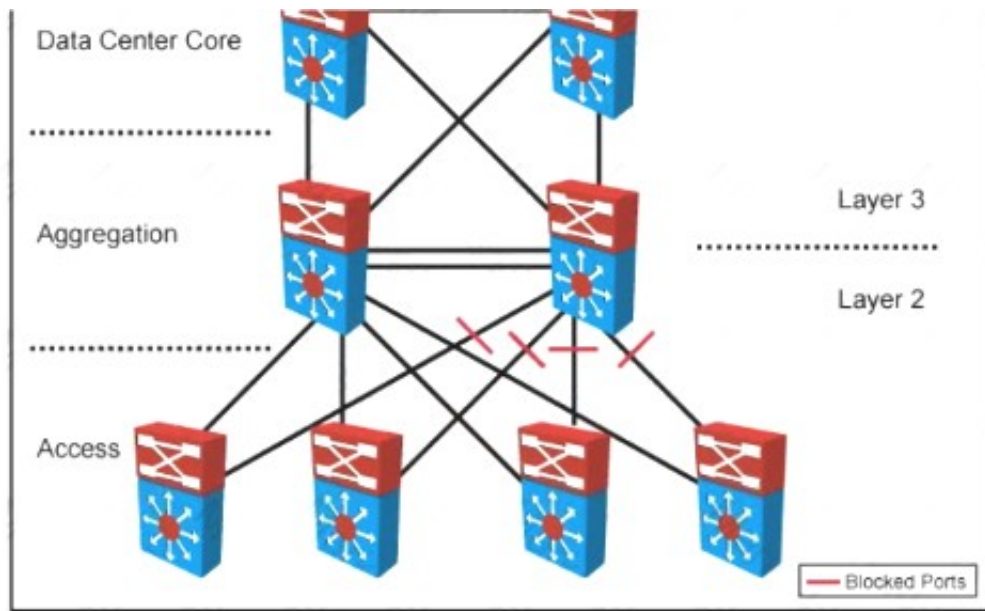

NEW QUESTION 17
Company XYZ, a global content provider, owns data centers on different continents Their data center design involves a standard three-layer design with a Layer 3-only core VRRP is used as the FHRP They require VLAN extension across access switches in all data centers, and they plan to 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 21
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 22
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 23
Which three Cisco products are used in conjunction with Red Hat to provide an NFVi solution? (Choose three.)

A. Cisco Prime Service Catalog
B. Cisco Open Virtual Switch
C. Cisco Nexus switches
D. Cisco UCS
E. Cisco Open Container Platform
F. Cisco Virtual Network Function

Answer: CDF

NEW QUESTION 24
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.
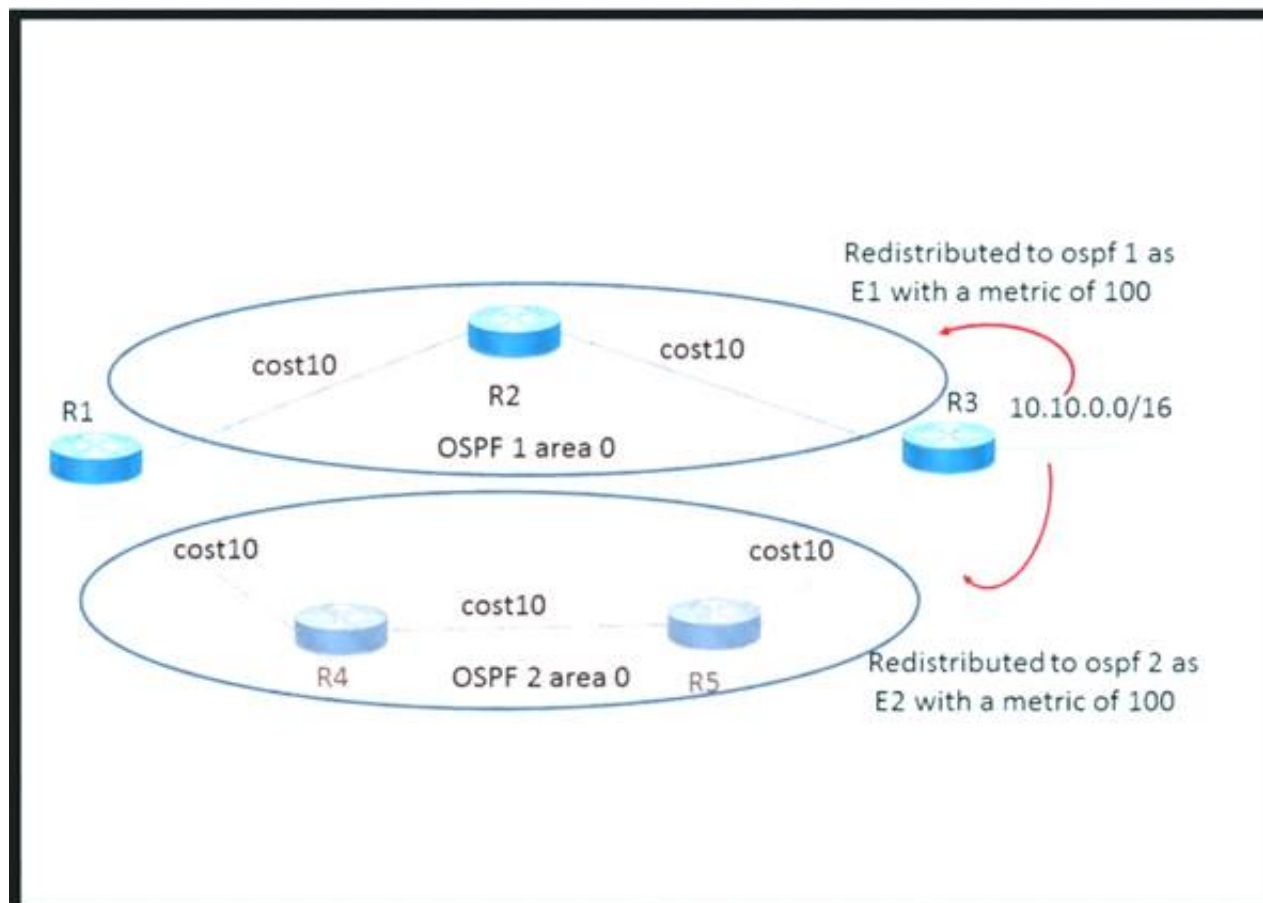
Answer: AD

NEW QUESTION 28
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 33
Refer to the exhibit.

The network 10.10.0 .0/16 has been redistributed to OSPF processes and the best path to the destination from R1 has been chosen as R1-R2-R3 A failure occurred on the link between R2 and R3 and the path was changed to R1-R4-R5-R3 What happens when the link between R2 and R3 is restored'?

A. The path R1-R4-R5-R3 continues to be the best path because the metric is better
B. The path reverts back to R1-R2-R3 because the route type is E1
C. The path R1-R4-R5-R3 continues to be the best path because OSPF does not compare the metrics between two domains
D. The path reverts to R1-R2-R3 because this was the previous best path

Answer: D

Explanation:
When the link between R2 and R3 is restored, the path reverts back to R1-R2-R3 because this was the previous best path. This is because OSPF uses the Dijkstra algorithm to calculate the shortest path tree (SPT) and the path with the lowest cost is chosen as the best path. In this case, the cost of the path R1-R2-R3 is lower than the cost of the path R1-R4-R5-R3, so the path R1-R2-R3 is chosen as the best path. OSPF also has a preference order for different types of routes, such as intra-area, inter-area, external type 1, external type 2, NSSA type 1, and NSSA type 2. However, this preference order only applies when OSPF has to choose between routes of different types to the same destination. In this scenario, both paths are external type 2 routes so the preference order does not affect the path selection

NEW QUESTION 36
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 37
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 42
Company XYZ wants to deploy OSPF. The design plan requires that two OSPF networks be mutually redistributed at multiple locations and ensure end-to-end connectivity to all of the company's networks Which technology can be used to fulfill the requirements while avoiding the creation of routing loops?

A. Create a virtual link between ASBRs.
B. Change the router ID for both ASBRs.
C. Redistribute routes as external type 2 routes.

D. Use route maps on ASBRs to filter routes with tags so they are not redistributed.

Answer: D

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

NEW QUESTION 47
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 48
Which two actions ensure voice quality in a branch location with a low-speed, high-latency WAN connection? (Choose two.)

A. Increase WAN bandwidth
B. Increase memory branch switch.
C. Fragment data packets.
D. Replace any electrical links with optical links
E. Prioritize voice packets

Answer: CE

NEW QUESTION 53
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
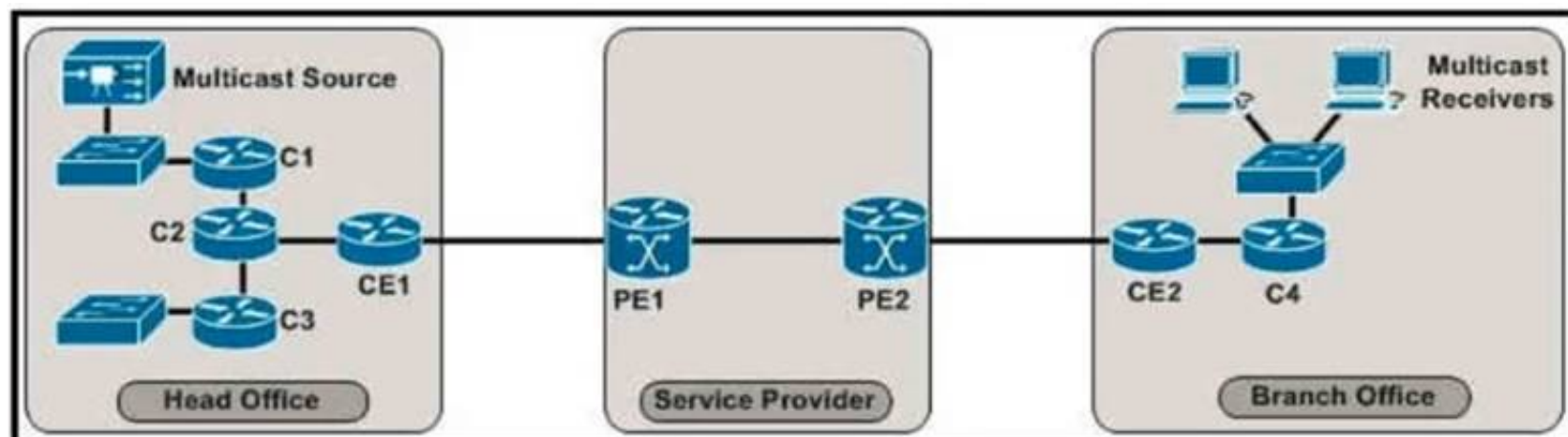

NEW QUESTION 55
Company XYZ is running SNMPv1 in their network and understands that it has some flaws. They want to change the security design to implement SNMPv3 in the network Which network threat is SNMPv3 effective against?

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

Answer: D

NEW QUESTION 59
Refer to the exhibit.

The enterprise customer wants to stream one-way video from their head office to eight branch offices using multicast. Their current service provider provides a Layer3 VPN solution and manages the CE routers, but they do not currently support multicast. Which solution quickly allows this multicast traffic to go through while allowing for future scalability?

A. Enable a GRE tunnel between nodes CE1 and CE2
B. Enable a GRE tunnel between nodes C2 and C4
C. Enable a GRE tunnel between nodes C1 and C4
D. Implement hub and spoke MPLS VPN over DMVPN (also known as 2547o DMVPN) between CE1 and CE2
E. The service provider must provide a Draft Rosen solution to enable a GRE tunnel between nodes PE1 and PE2

Answer: B

NEW QUESTION 62
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 67
An engineer must design a network for a company that uses OSPF LFA to reduce loops. Which type of loop would be reduced by using this design?

A. DTP
B. micro loops
C. STP
D. REP

Answer: B

NEW QUESTION 70
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 72
Company XYZ Is running a redundant private WAN network using OSPF as the underlay protocol The current design accommodates for redundancy In the network, but it Is taking over 30 seconds for the network to reconverge upon failure Which technique can be Implemented In the design to detect such a failure in a subsecond?

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

Answer: D

NEW QUESTION 74
Company XYZ is planning to deploy primary and secondary (disaster recovery) data center sites. Each of these sites will have redundant SAN fabrics and data protection is expected between the data center sites. The sites are 100 miles (160 km) apart and target RPO/RTO are 3 hrs and 24 hrs, respectively. Which two considerations must Company XYZ bear in mind when deploying replication in their scenario? (Choose two.)

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

Answer: CD

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

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

NEW QUESTION 75
Which actions are performed at the distribution layer of the three-layer hierarchical network design model? (Choose two)

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

Answer: DE

NEW QUESTION 78
Company XYZ has 30 sites using MPLS L3 VPN and the company is now concerned about data integrity. The company wants to redesign the security aspect of their network based on these requirements:
• Securely transfer the corporate data over the private WAN
• Use a centralized configuration model.
• Minimize overhead on the tunneled traffic.
Which technology can be used in the new design to meet the company's requirements?

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

Answer: D

NEW QUESTION 83
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 86
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 88
Which design benefit of bridge assurance is true?

A. It supposes a spanning-tee topology change upon connecting and disconnecting a station on a port
B. It prevents switched traffic from traversing suboptimal paths on the network.
C. It allows small, unmanaged switches to be plugged into ports of access switches without the risk of switch loops.
D. It prevents switch loops caused by unidirectional point-to-point link condition on Rapid PVST + and MST

Answer: D

NEW QUESTION 90
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 93
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 97
A product manufacturing organization is integrating cloud services into their IT solution The IT team is working on the preparation phase of the implementation approach, which includes the Define Strategy step. This step defines the scope of IT, the application, and the service What is one topic that should be considered in the Define Strategy step?

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

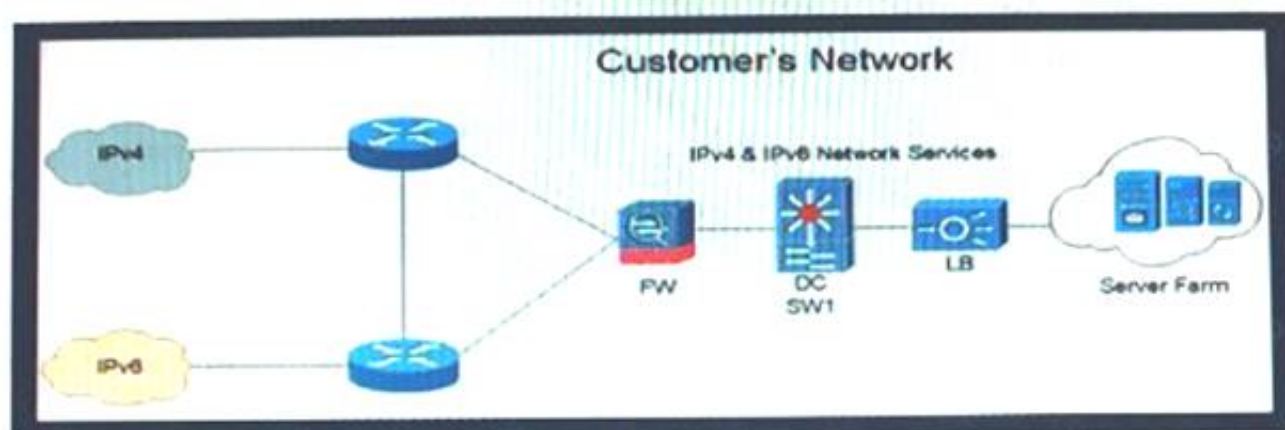**Answer:** D

NEW QUESTION 100
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 102
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 104
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 106
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 107
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 109
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 113
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 115
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 119
Which two application requirements are mandatory tor traffic to receive proper treatment when placed in the priority queue? (Choose two.)

A. small transactions (HTTP-like behavior)
B. WRED drop treatment
C. tolerance to packet loss
D. intolerance to jitter
E. TCP-based application

Answer: AD

NEW QUESTION 121
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 122
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 124
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 126
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 131
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 worn 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 136
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:
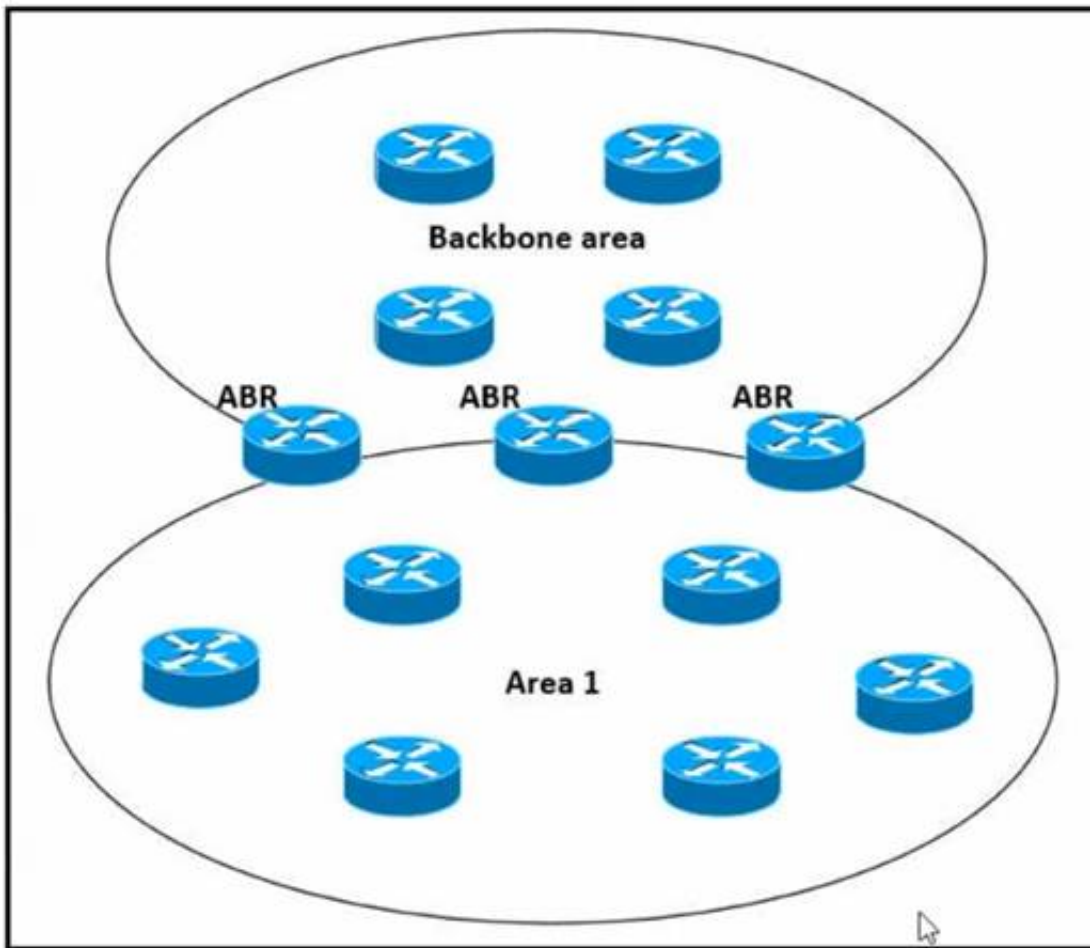https://community.cisco.com/t5/wireless/channel-utilization/td-p/2716667

NEW QUESTION 139
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 142
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 A6R 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 147
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 149
A consultant needs to evaluate project management methodologies for a new service deployment on the existing network of a customer. The customer wants to be involved in the end-to-end project progress and be provided with frequent updates. The customer also wants the ability to change the requirements if needed, as the project progresses. Which project management methodology should be used?

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

Answer: C

NEW QUESTION 153
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 156
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%

NEW QUESTION 160
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
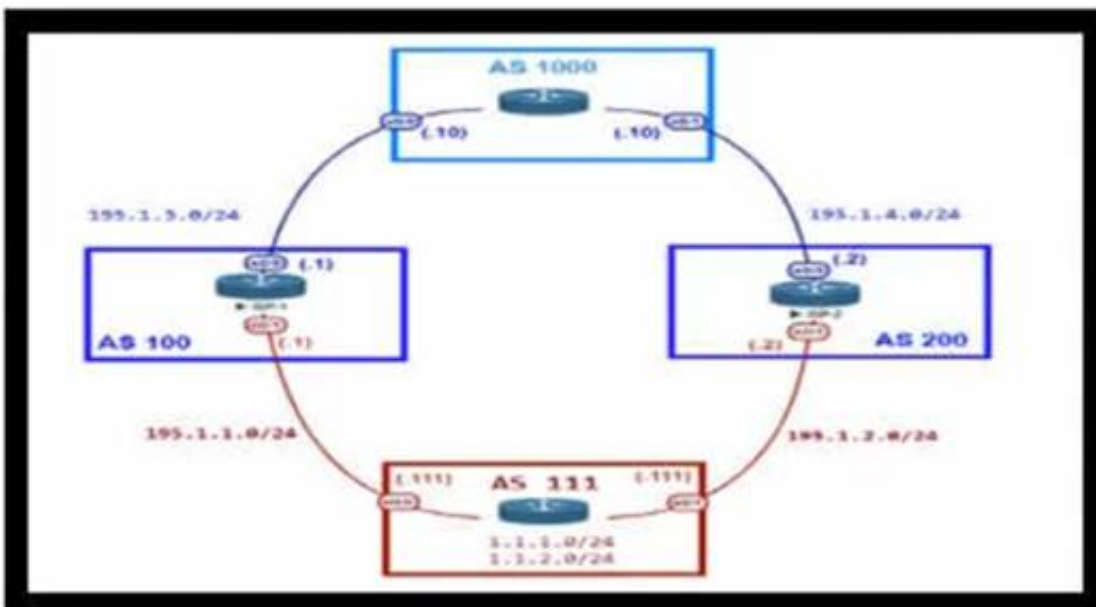E. redundancy and load balancing

Answer: B

NEW QUESTION 163
While reviewing an existing network design, you are discussing the characteristics of different STP versions. Which protocol minimizes unicast flooding during a Topology Change Notification in a Layer 2 switched network with many VLANs?

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

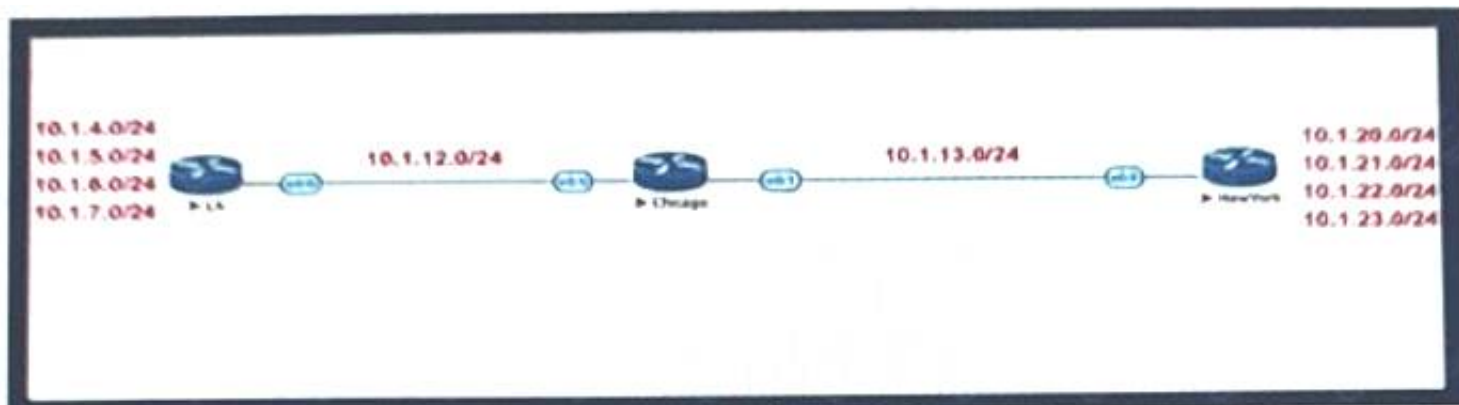**Answer:** A

NEW QUESTION 167
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 169
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 174
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 176
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 178
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 183
Company XYZ is designing their network using the three-layer hierarchical model. At which layer must the QoS design classify or mark the traffic?

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

Answer: A

NEW QUESTION 186
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 otter the possibility to isolate STP domains
B. at me 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 189
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 194
Agile and Waterfall are two popular methods for organizing projects. What describes any Agile network design development process?

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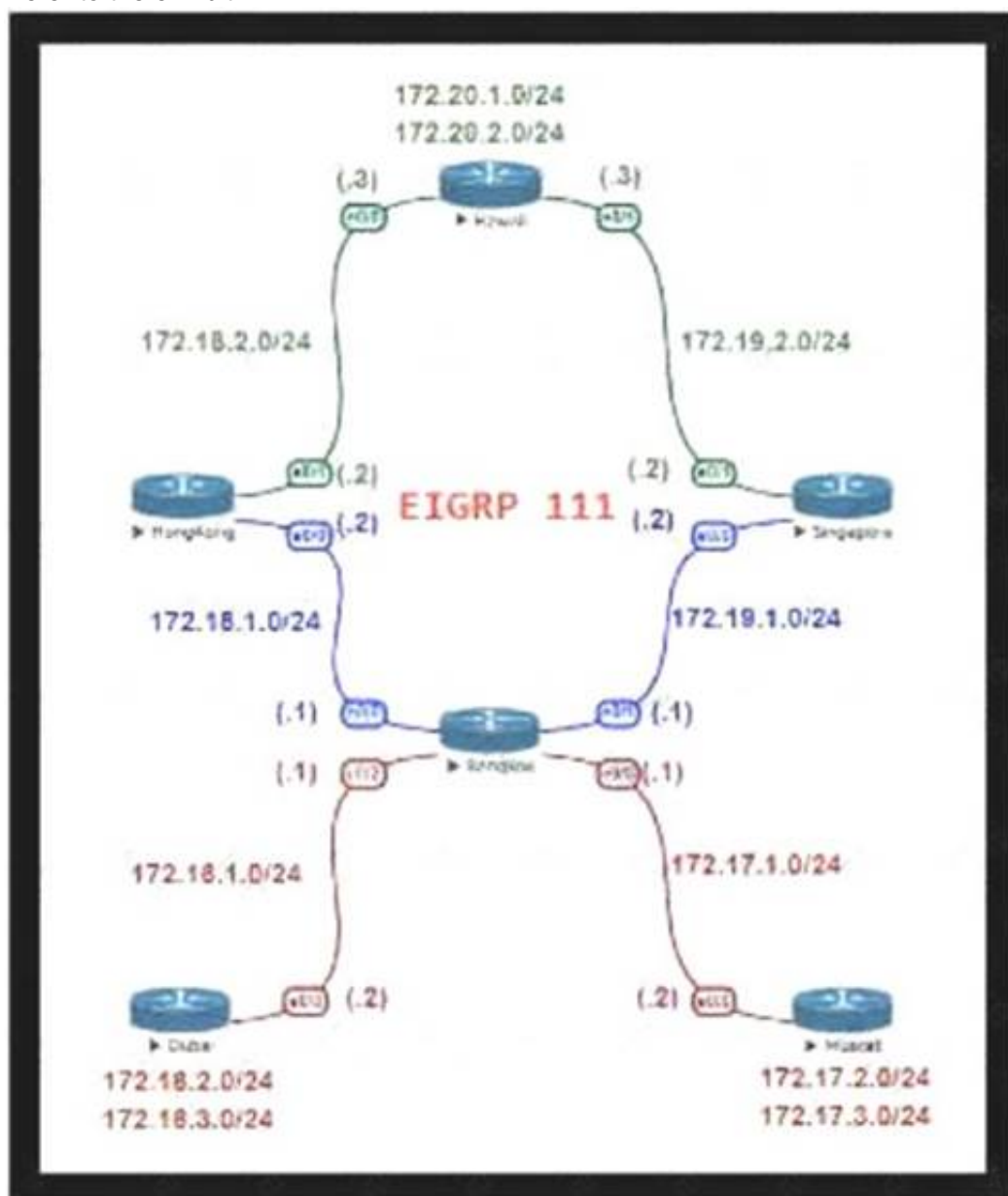
Answer: A

NEW QUESTION 198
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 201
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 205
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 209
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
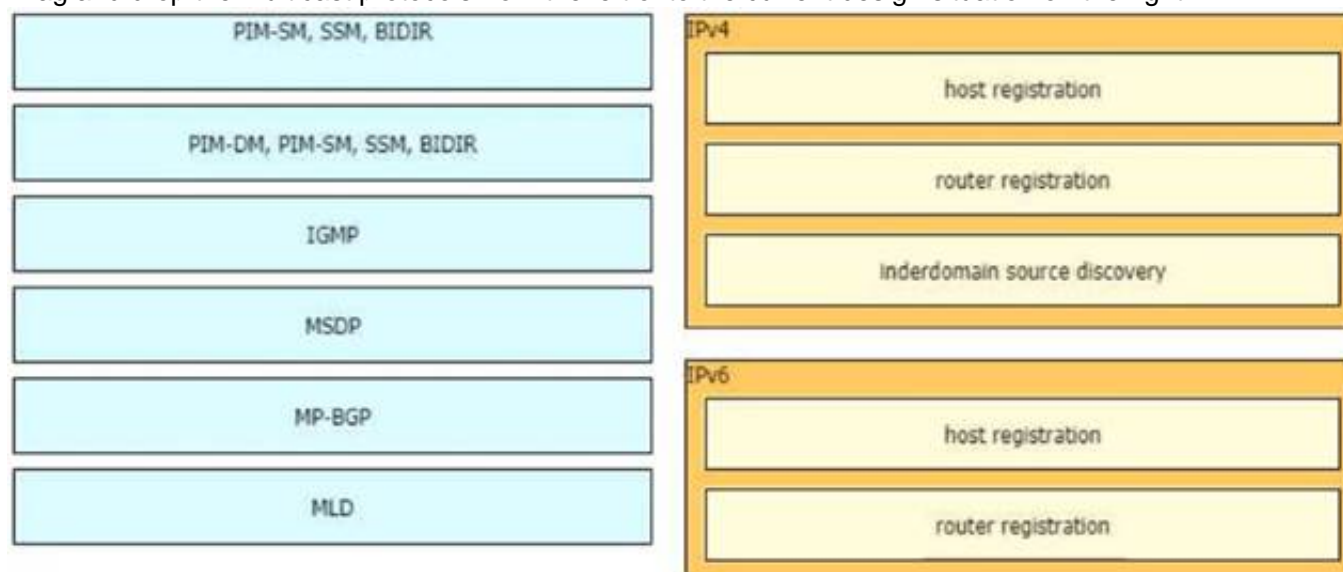
Answer: AD

NEW QUESTION 211
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 214
Drag and drop the multicast protocols from the left onto the current design situation on the right.

A. Mastered
B. Not Mastered

Answer: A

Explanation:
A picture containing table Description automatically generated

NEW QUESTION 217
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 221
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 222
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 spaang 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 226
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 230
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 232
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 233
How many fully established neighbour relationships exist on an Ethernet with five routers running OSPF as network type broadcast?
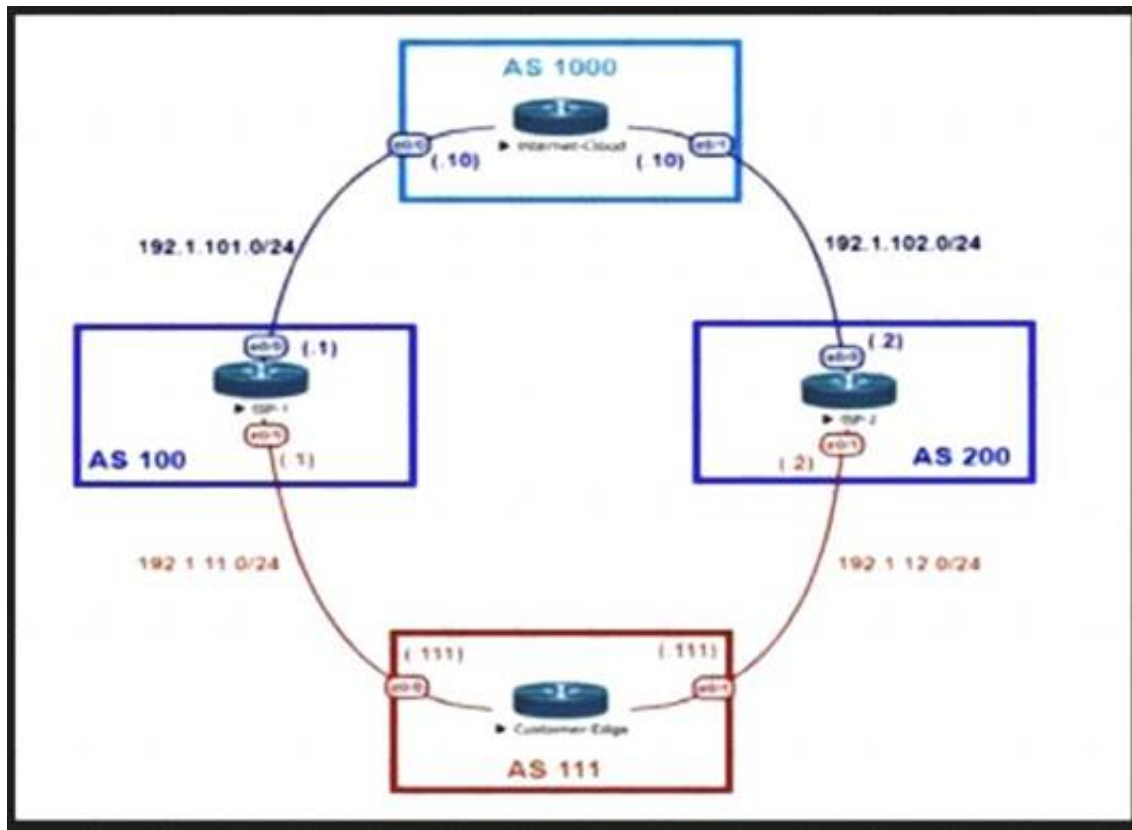
A. 5
B. 6
C. 7
D. 10
E. 20

Answer: C

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

NEW QUESTION 235
Refer to the exhibit.

An engineer is designing the traffic flow for AS 111. Traffic from AS 111 should be preferred via AS 100 for all external routes. A method must be used that only affects AS 111. Which BGP attributes are best suited to control outbound traffic?

A. community
B. MED
C. local preference
D. As path

Answer: C

NEW QUESTION 239
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 filtenng 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 241
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 245
A Tier-3 Service Provider is evolving into a Tier-2 Service Provider due to the amount of Enterprise business it is receiving The network engineers are re-evaluating their IP/MPLS design considerations in order to support duplicate/overlapping IP addressing from their Enterprise customers within each Layer3 VPN. Which concept would need to be reviewed to ensure stability in their network?

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

Answer: A

NEW QUESTION 247
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
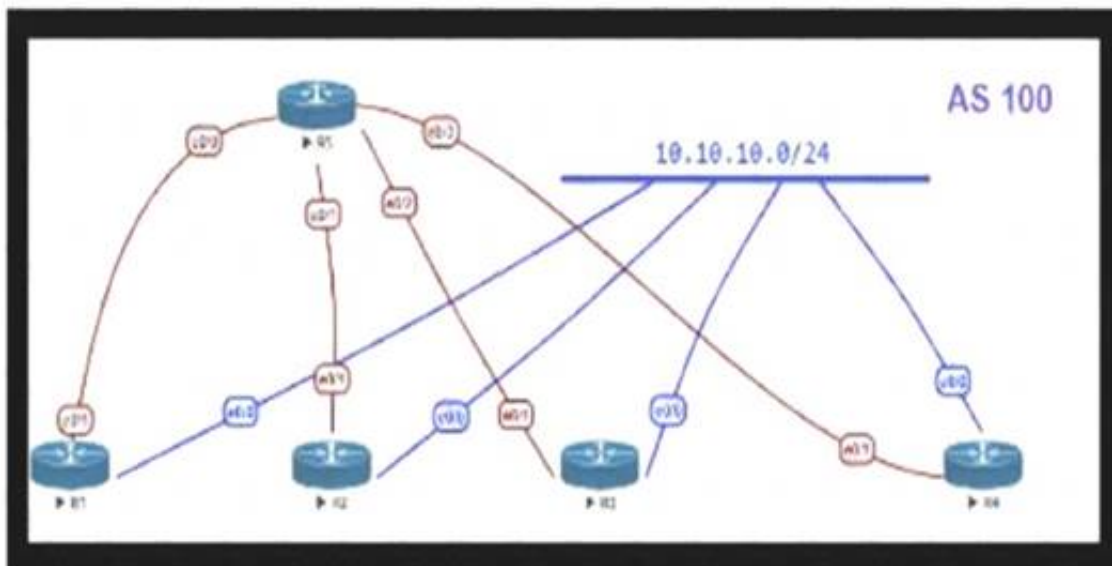Which WAN technology(ies) should be included in the design of company XYZ?

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 Interne
G. It is widely used with defined best practices and an industry standard.

Answer: A

NEW QUESTION 250
Refer to the exhibit.

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

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

Answer: C

NEW QUESTION 251
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 256
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 258
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 262
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 266
SDN emerged as a technology trend that attracted many industries to move from traditional networks to SDN. Which challenge is solved by SDN for cloud service providers?

A. need for intelligent traffic monitoring
B. exponential growth of resource-intensive application
C. complex and distributed management flow
D. higher operating expense and capital expenditure

Answer: B

NEW QUESTION 269
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 270
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 275
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 279
Refer to the table.

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

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

A. Metro Ethernet
B. DWDM
C. CWDM

D. MPLS

Answer: B

NEW QUESTION 283
You are tasked with the design of a high available network. Which two features provide fail closed environments? (Choose two.)

A. EIGRP
B. RPVST+
C. MST
D. L2MP

Answer: AB

NEW QUESTION 286
A network security team uses a purpose-built tool to actively monitor the campus network, applications, and user activity. The team also analyzes enterprise telemetry data from IPFIX data records that are received from devices in the campus network. Which action can be taken based on the augmented data?

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

Answer: A

NEW QUESTION 291
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 292
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 297
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 299
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