

Cisco

Exam Questions 400-007

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



NEW QUESTION 1

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

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

Answer: C

NEW QUESTION 2

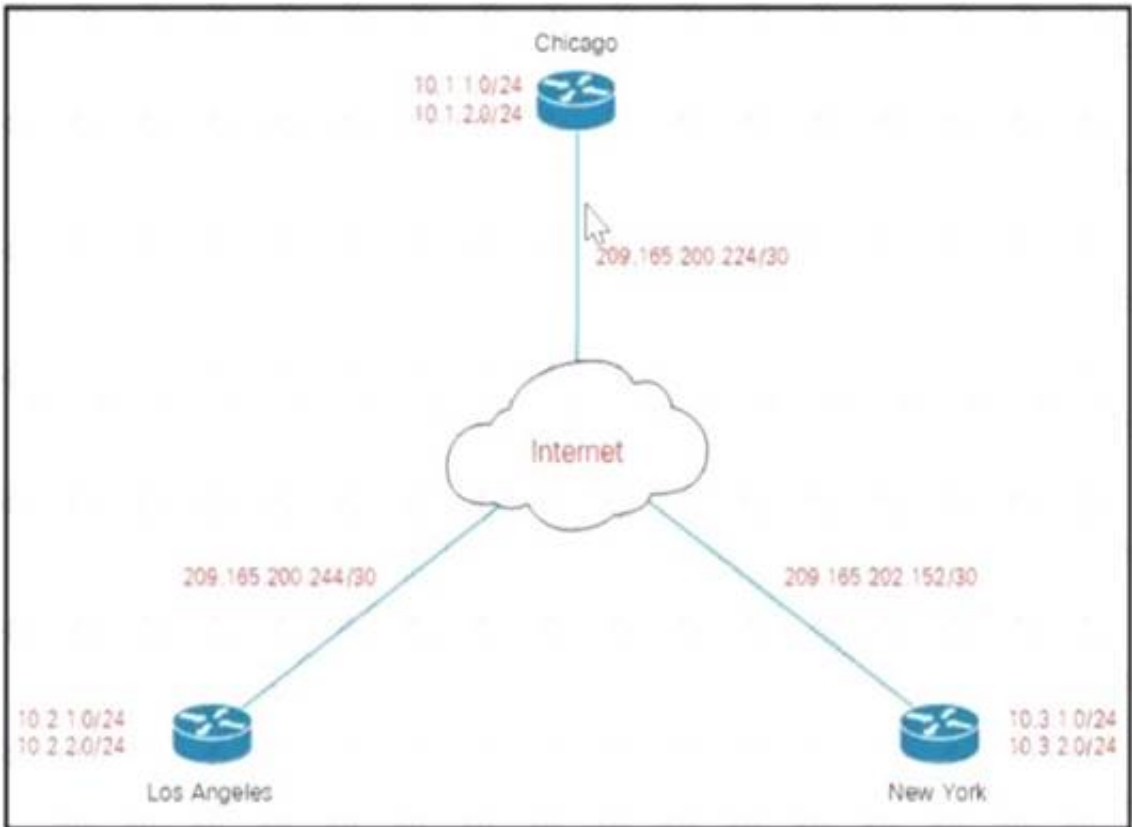
An enterprise solution team is performing an analysis of multilayer architecture and multicontroller SDN solutions for multisite deployments. The analysis focuses on the ability to run tasks on any controller via a standardized interface. Which requirement addresses this ability on a multicontroller platform?

- A. Deploy a root controller to gather a complete network-level view.
- B. Use the East-West API to facilitate replication between controllers within a cluster.
- C. Build direct physical connectivity between different controllers.
- D. Use OpenFlow to implement and adapt new protocols.

Answer: D

NEW QUESTION 3

Refer to the exhibit.



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

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

Answer: B

NEW QUESTION 4

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

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

- A. Mastered
- B. Not Mastered

Answer: A

Explanation:



NEW QUESTION 5

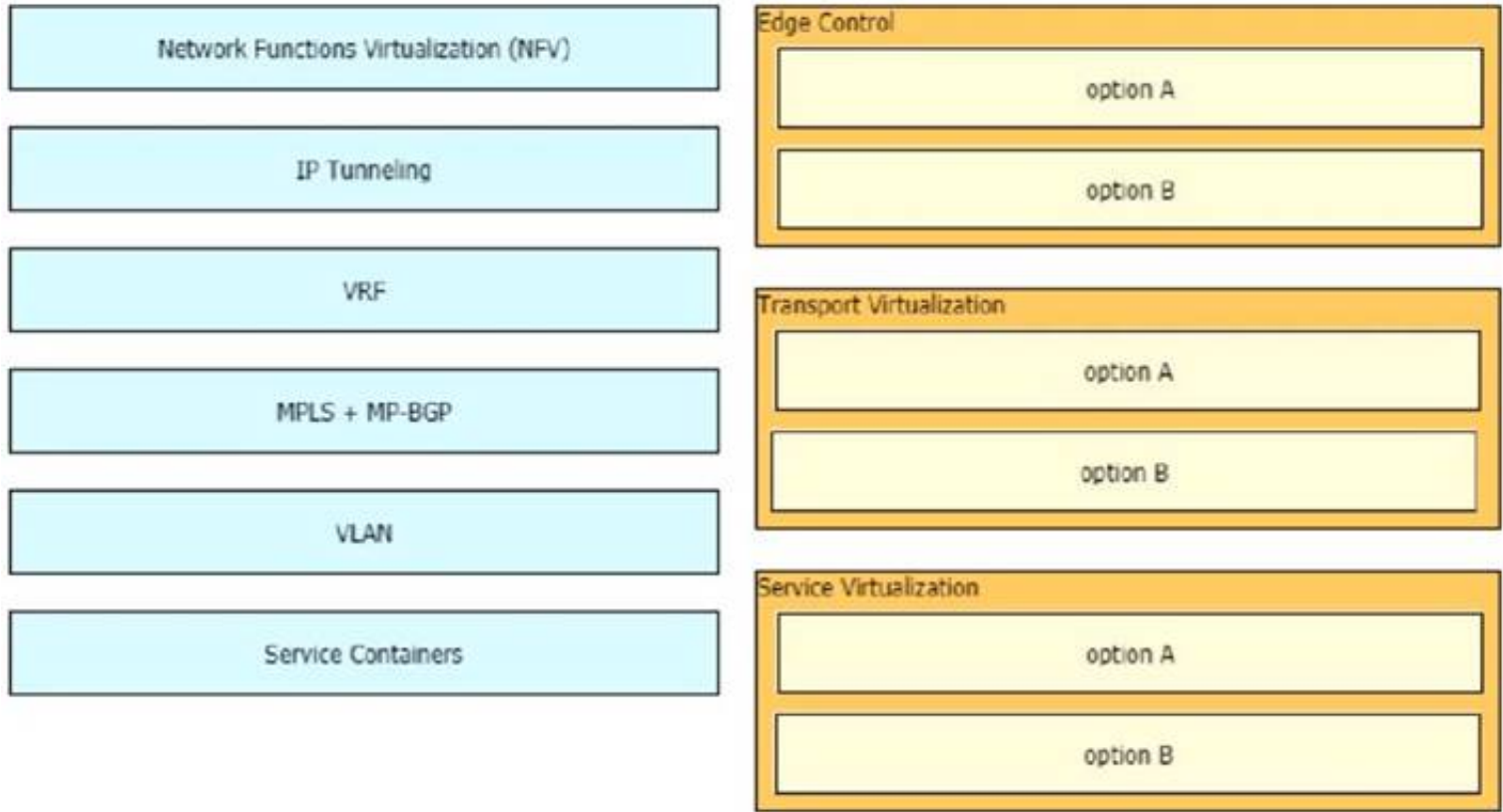
You have been tasked with designing a data center interconnect to provide business continuity You want to encrypt the traffic over the DCI using IEEE 802 1AE MACsec to prevent the deployment of any firewall or IPS. Which two interconnect technologies support MACsec? (Choose two.)

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

Answer: AE

NEW QUESTION 6

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 7

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

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

Answer: A

NEW QUESTION 8

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 9

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

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

Answer: AC

NEW QUESTION 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 10

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 11

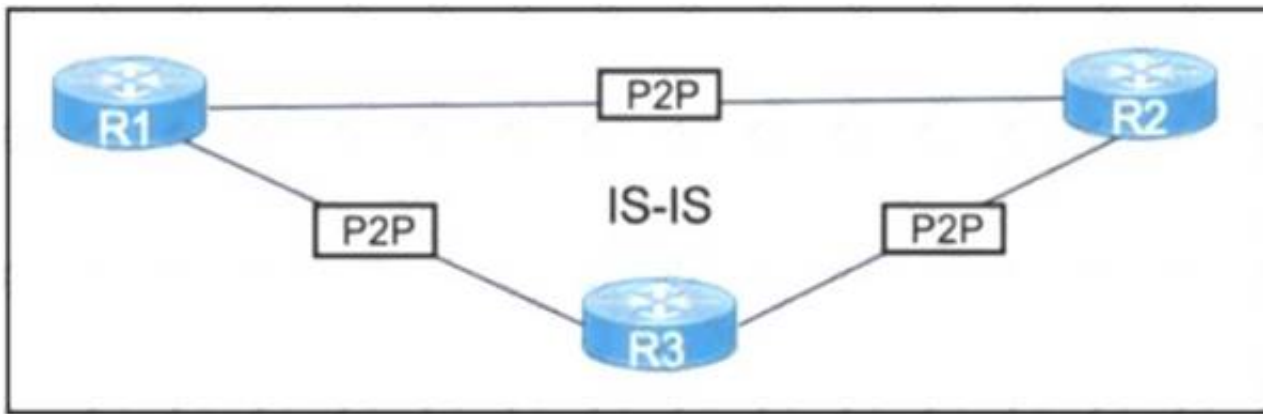
A network architect must redesign a service provider edge, where multiservice and multitenant PEs are currently present. Which design feature should be minimized in the new design to achieve reliability?

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

Answer: B

NEW QUESTION 12

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 16

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 21

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 26

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

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

Answer: AD

NEW QUESTION 28

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 30

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

- A. EIGRP

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

Answer: B

NEW QUESTION 31

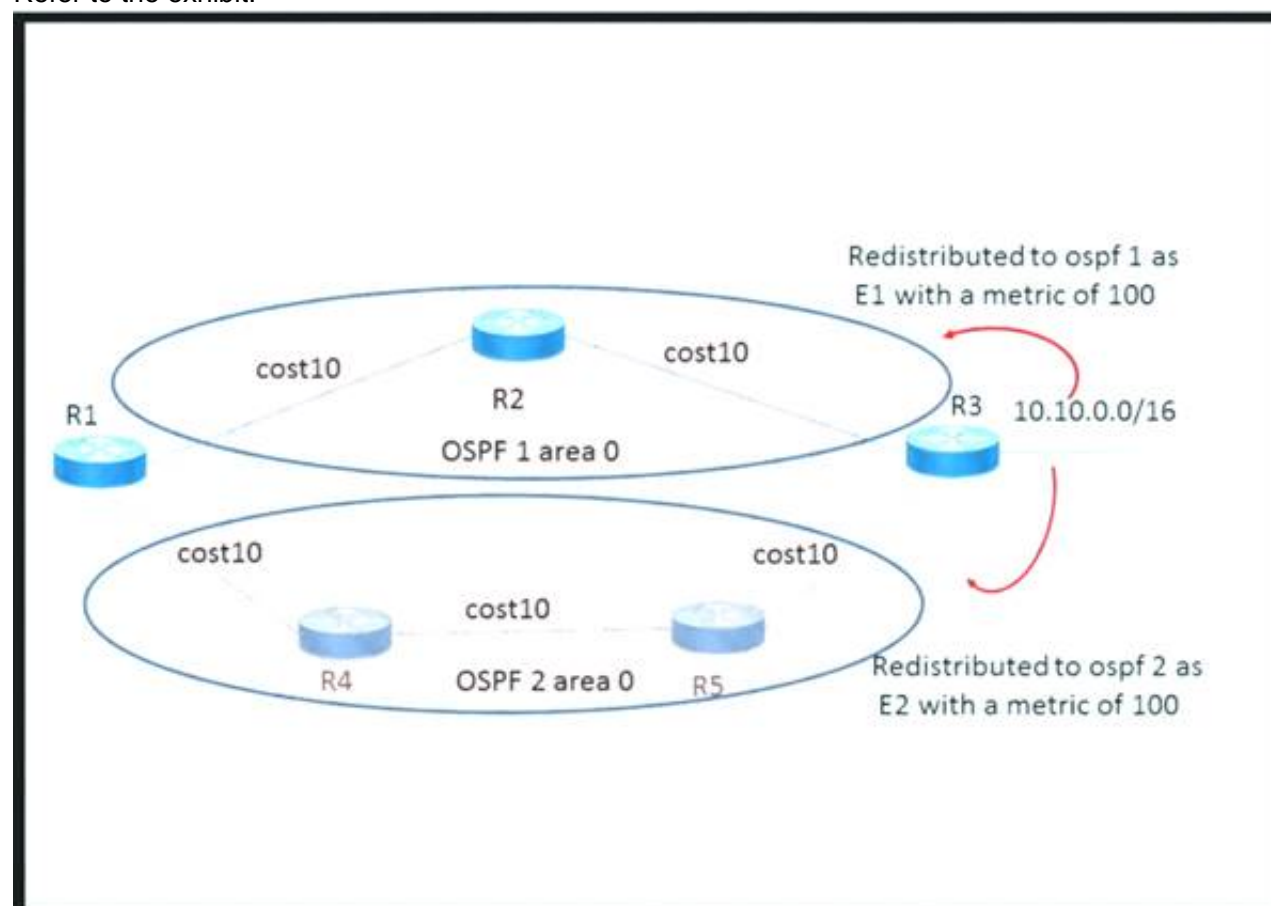
A senior network designer suggests that you should improve network convergence times by reducing BGP timers between your CE router and the PE router of the service provider. Which two factors should you consider to adjust the timer values? (Choose two.)

- 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 35

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 37

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 40

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 44

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

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

Answer: B

NEW QUESTION 49

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 52

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 53

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 54

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 58

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

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

Answer: D

NEW QUESTION 61

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

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

Answer: BD

NEW QUESTION 66

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 69

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 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 77

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 82

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 87

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 89

Which two pain points are the most common for container technology adoption? (Choose two)

- A. Performance
- B. Security
- C. Cost
- D. Container deployment
- E. Skilled staff
- F. Compliance

Answer: DE

NEW QUESTION 92

Drag and drop the characteristics from the left onto the corresponding network management options on the right.

| | |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------|----------|
| protocol based on HTTP for configuring data defined in YANG and supports operations such as GET, PUT, POST, PATCH, and DELETE | NETCONF |
| provides mechanisms to install, manipulate, and delete the configuration of network devices; uses XML for data encoding and the operation is realized as RPC | RESTCONF |
| application program interface that uses HTTP requests to GET, PUT, POST, and DELETE data | ANSIBLE |
| open-source software provisioning, configuration management, and application-deployment tool | YANG |
| data modeling language used to model configuration data, state data, remote procedure calls, and notifications for network management protocols | REST API |

- A. Mastered
- B. Not Mastered

Answer: A

Explanation:

Text Description automatically generated

NEW QUESTION 97

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

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

Answer: BC

NEW QUESTION 100

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

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

Answer: B

NEW QUESTION 101

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

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

Which two IPv6 security features are recommended for this company? (Choose two)

- A. IPv6 DHCP Guard
- B. IPv6 Source Guard
- C. IPv6 Destination Guard
- D. IPv6 Prefix Guard
- E. IPv6 RA Guard

Answer: CD

Explanation:

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

NEW QUESTION 104

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

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

Answer: A

NEW QUESTION 105

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 108

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 109

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

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

Answer: D

NEW QUESTION 110

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 114

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 119

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 123

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

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

Answer: AD

NEW QUESTION 125

Company XYZ wants to secure the data plane of their network. Which two technologies can be included in the security design? (Choose two)

- A. DAI
- B. IP Source Guard
- C. BEEP
- D. CPPr
- E. MPP

Answer: AB

NEW QUESTION 128

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 132

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 133

Which two statements describe network automation and network orchestration? (Choose two.)

- A. Network automation does not provide governance or policy management.
- B. Network automation spans multiple network services, vendors, and environments.
- C. Network orchestration is done through programmatic REST APIs enabling automation across devices and management platforms.
- D. Provisioning network services is an example of network automation.
- E. Network orchestration is used to run single, low-level tasks without human intervention.

Answer: AC

NEW QUESTION 134

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 137

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 141

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

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

Answer: A

NEW QUESTION 146

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

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

Answer: A

NEW QUESTION 150

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

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

Answer: D

NEW QUESTION 155

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 158

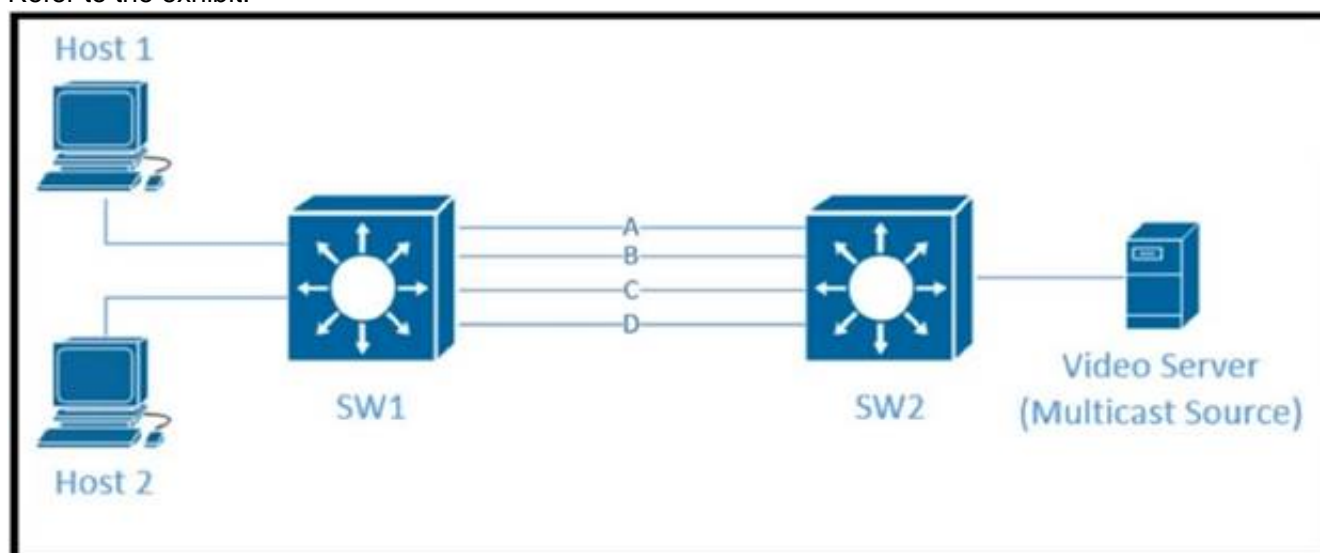
The Layer 3 control plane is the intelligence over the network that steers traffic toward its intended destination. Which two techniques can be used in service provider-style networks to offer a more dynamic, flexible, controlled, and secure control plane design? (Choose two.)

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

Answer: DE

NEW QUESTION 163

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 164

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 167

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

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

Answer: A

NEW QUESTION 170

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 175

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 176

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 179

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 181

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

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

Answer: D

NEW QUESTION 184

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 188

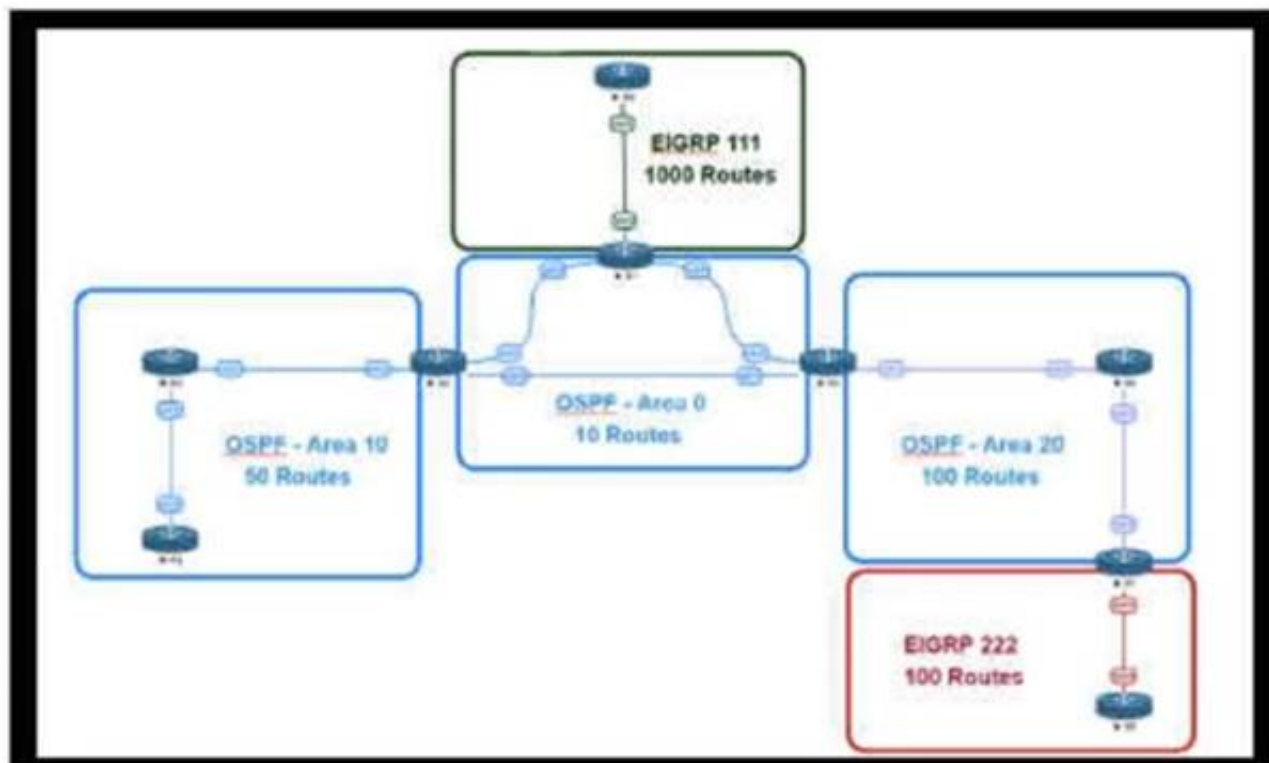
An engineer is designing the QoS strategy for Company XYZ. Based on initial analysis, a lot of scavenger type of traffic is traversing the network's 20Mb Internet link toward the service provider. The new design must use a QoS technique that limits scavenger traffic to 2 Mbps, which helps avoid oversubscription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

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

Answer: D

NEW QUESTION 191

Refer to the exhibit.



An engineer is designing a multiarea OSPF network for a client who also has a large EIGRP domain. EIGRP routes are getting redistributed into OSPF. OSPF area 20 has routers with limited memory and CPU resources. The engineer wants to block routes from EIGRP 111 from propagating into area 20 and allow EIGRP 222 routes to. 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 194

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 198

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

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

Answer: BC

NEW QUESTION 202

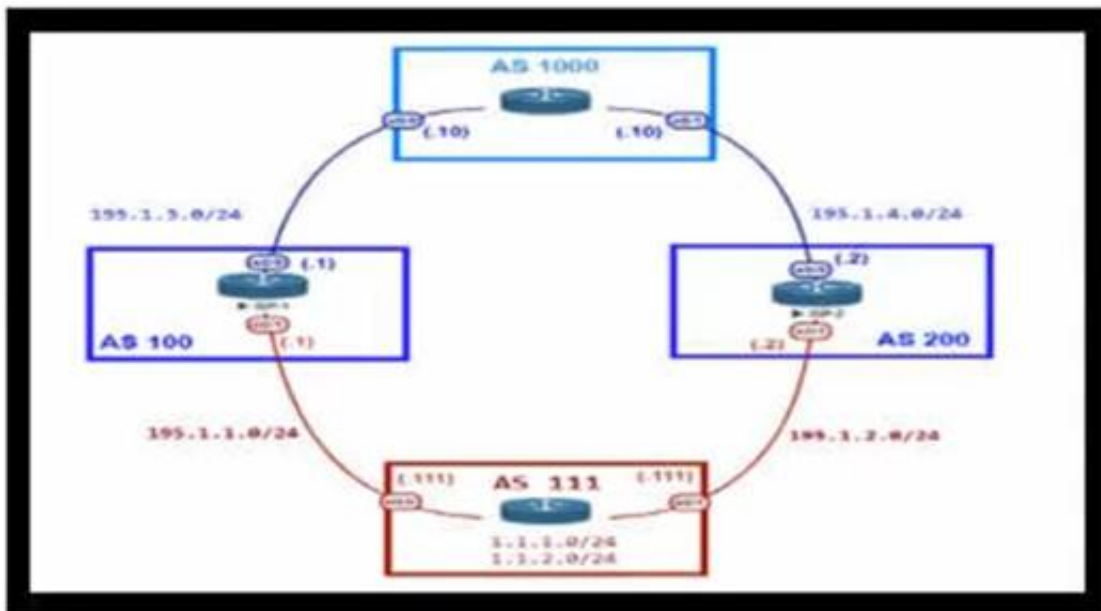
A BGP route reflector in the network is taking longer than expected to converge during large network changes. Troubleshooting shows that the router cannot handle all the TCP acknowledgements during route updates. Which action can be performed to tune the device performance?

- 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 205

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 207

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

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

Answer: AE

NEW QUESTION 212

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 213

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

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

Answer: B

NEW QUESTION 218

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

meet this objective?

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

Answer: D

NEW QUESTION 219

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 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 225

You are designing an Out of Band Cisco Network Admission Control. Layer 3 Real-IP Gateway deployment for a customer Which VLAN must be trunked back to the Clean Access Server from the access switch?

- A. authentication VLAN
- B. user VLAN
- C. untrusted VLAN
- D. management VLAN

Answer: D

NEW QUESTION 228

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 231

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 235

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

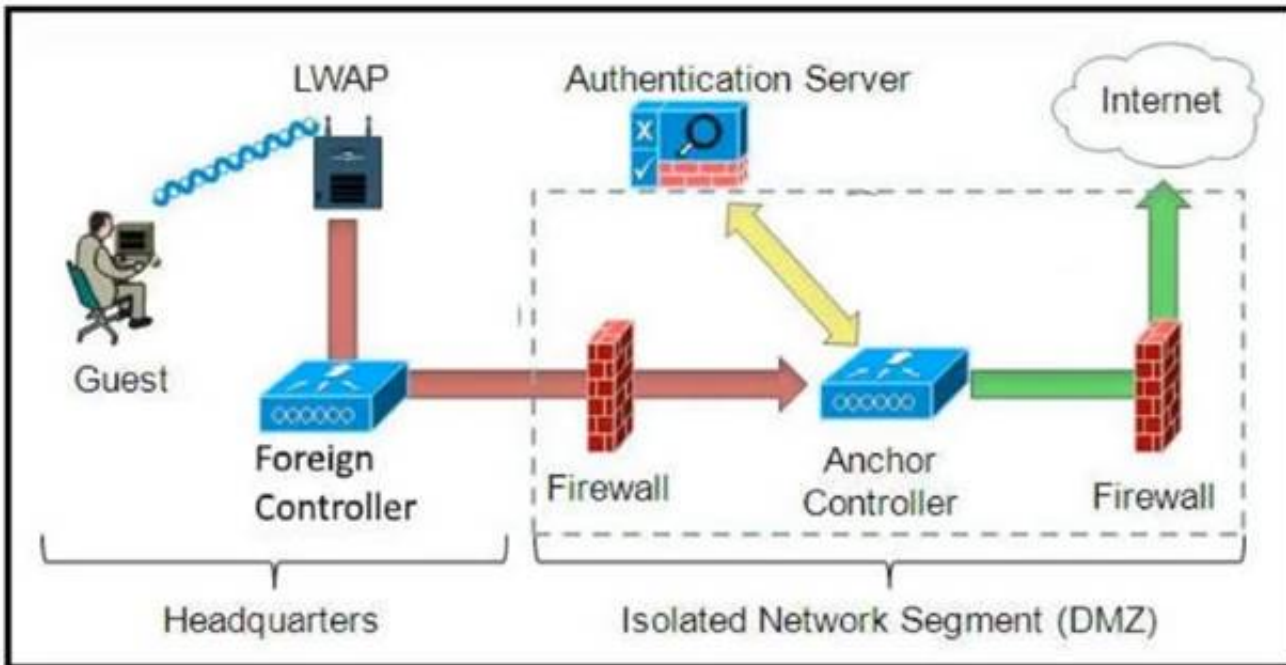
- A. PortFast
- B. UDLD
- C. Root guard
- D. BPDU guard

Answer:

D

NEW QUESTION 236

Refer to the diagram.



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

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

Answer: C

NEW QUESTION 239

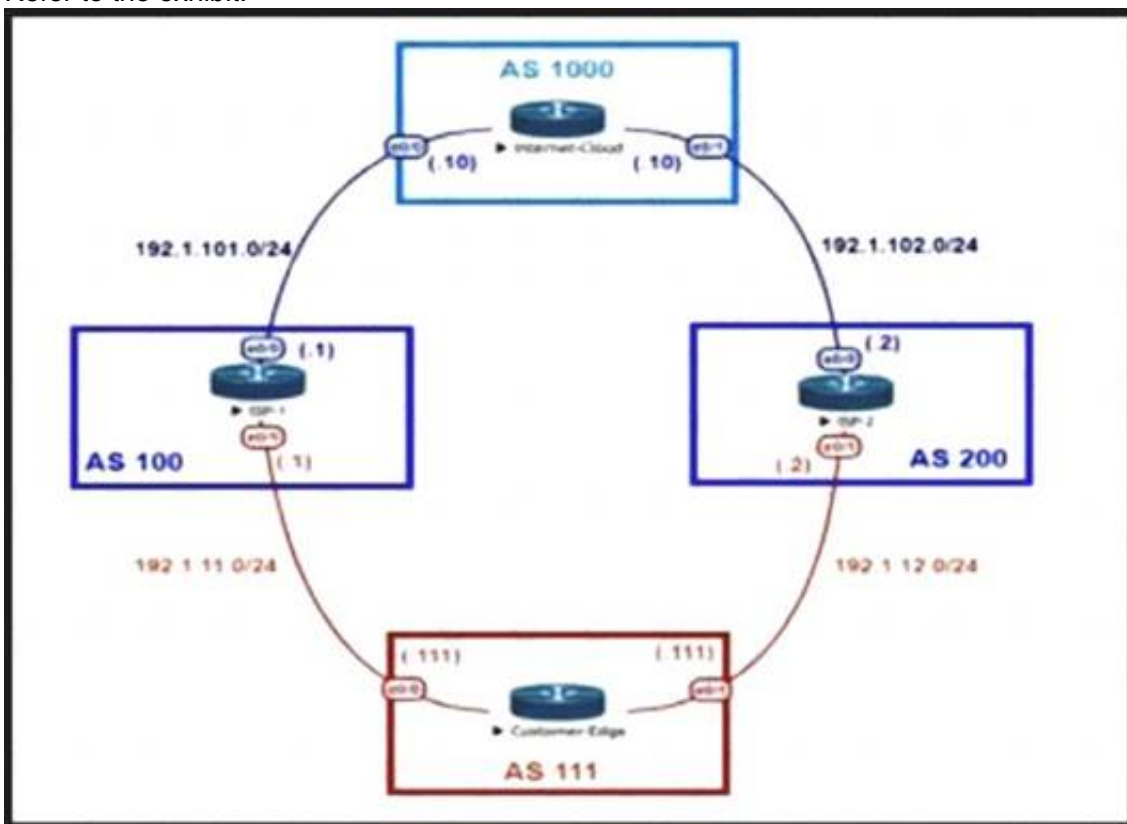
Which solution component helps to achieve rapid migration to the cloud for SaaS and public cloud leveraging SD-WAN capabilities?

- A. service-oriented cloud architecture
- B. Cloud onramp
- C. cloud registry
- D. microservices in the cloud

Answer: B

NEW QUESTION 243

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 244

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 246

Which BGP feature provides fast convergence?

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

Answer: A

NEW QUESTION 250

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 255

An enterprise wants to provide low-cost delivery of network systems that can be scaled on business demand, followed by an initiative to reduce capital expenses for new IT equipment. Which technology meets these goals'?

- A. IaaS within a private cloud
- B. IaaS within an on-premises location
- C. PaaS within a public cloud
- D. SaaS within an on-premises location

Answer: C

NEW QUESTION 259

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

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

Answer: B

Explanation:

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

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

NEW QUESTION 264

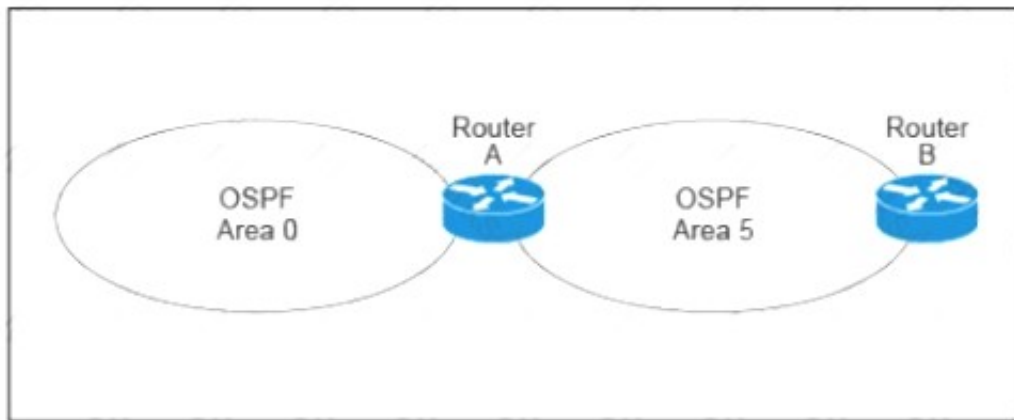
SD-WAN can be used to provide secure connectivity to remote offices, branch offices, campus networks, data centers, and the cloud over any type of IP-based underlay transport network. Which two statements describe SD WAN solutions? (Choose two.)

- 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 265

Refer to the exhibit.



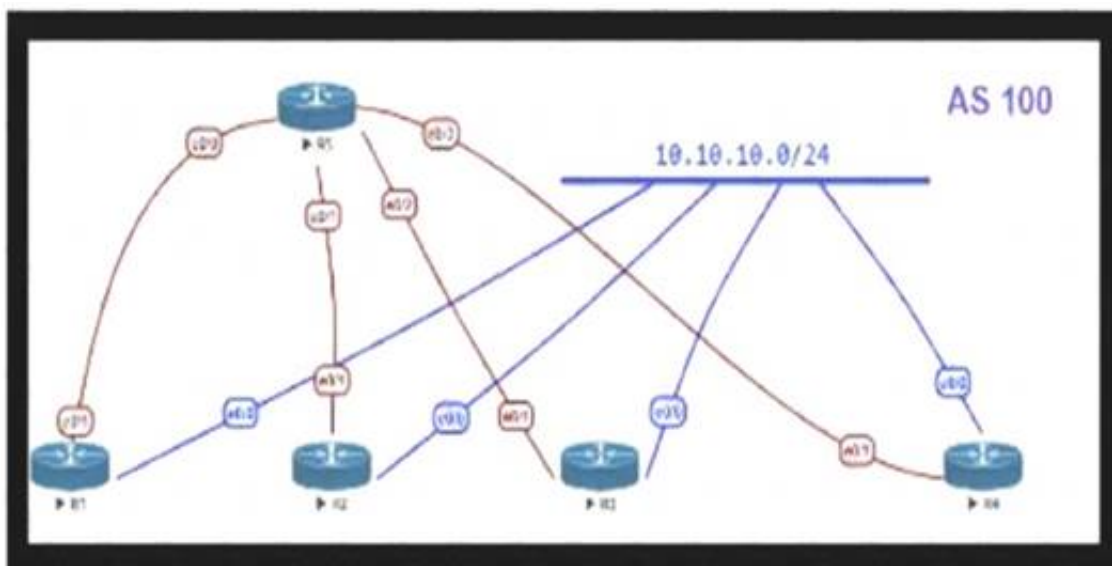
A customer runs OSPF with Area 5 between its aggregation router and an internal router. When a network change occurs in the backbone, Area 5 starts having connectivity issues due to the SPF algorithm recalculating an abnormal number of times in Area 5. You are tasked to redesign this network to increase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

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

Answer: B

NEW QUESTION 267

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 Area 0 and Area 1. 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 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; R5 must not be a route reflector.

Answer: C

NEW QUESTION 268

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 271

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 276

What best describes the difference between Automation and Orchestration?

- A. Automation refers to an automatic process for completing a single task and Orchestration refers to assembling and coordinating a set of tasks and conditions.
- B. Automation describes a hands-off configuration process while Orchestration refers to sets of automation tasks that require the network administrator to coordinate
- C. Automation refers to an automatic process for completing multiple tasks with conditions and Orchestration refers to executing tasks in parallel.
- D. Automation refers to scripting languages (Pytho
- E. Ansible etc.) and Orchestration refers to commercial products that control configuration deployment

Answer: A

NEW QUESTION 281

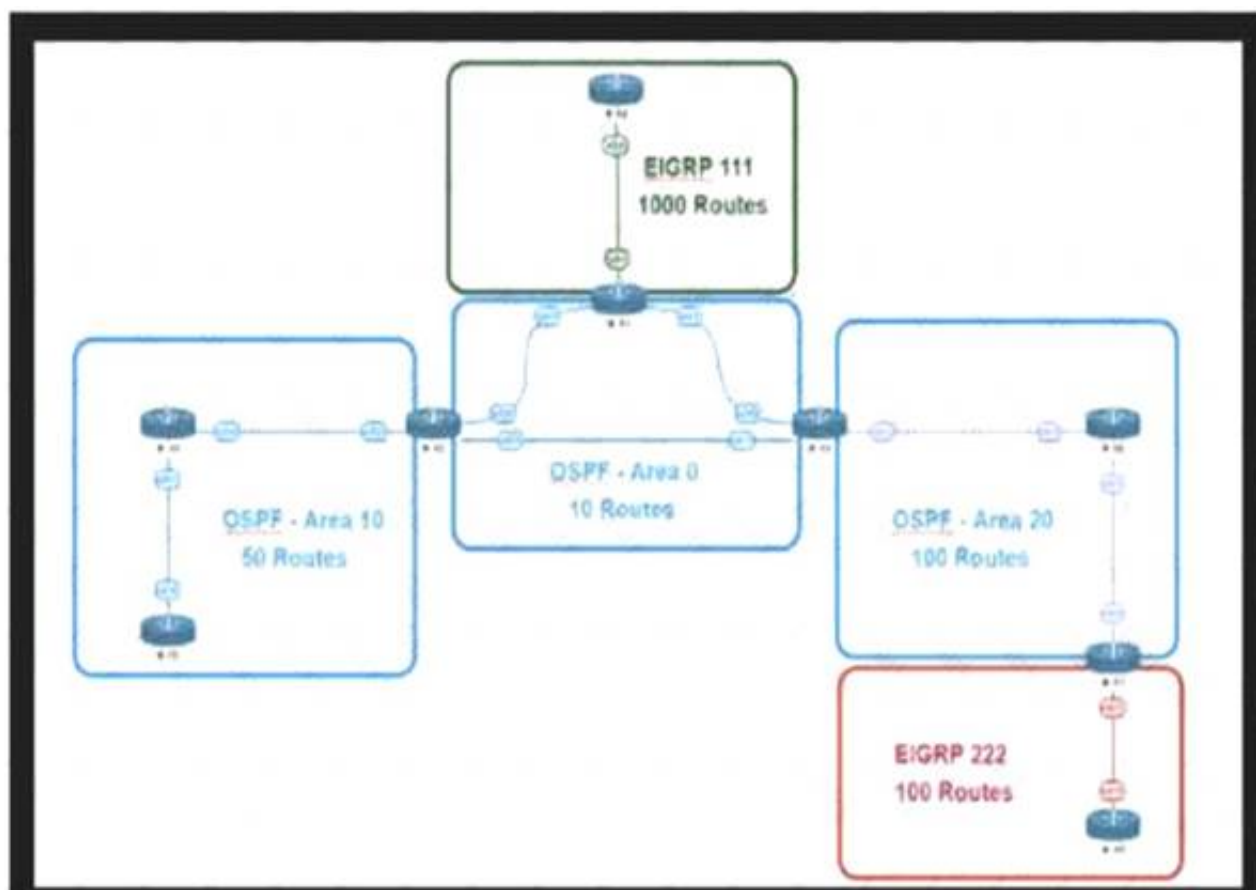
You are tasked to design a QoS policy for a service provider so they can include it in the design of their MPLS core network If the design must support an MPLS network with six classes, and CEs will be managed by the service provider, which QoS policy should be recommended?

- 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 282

Refer to the exhibit.



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

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

Answer: B

NEW QUESTION 283

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

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

Answer: B

NEW QUESTION 285

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 288

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. PTP

Answer: BC

NEW QUESTION 292

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

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

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

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

Answer: A

Explanation:

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

NEW QUESTION 297

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 299

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 303

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 304

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