

## Exam Questions 400-007

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

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#### NEW QUESTION 1

A multicast network is using Bidirectional PIM. Which two combined actions achieve high availability so that two RPs within the same network can act in a redundant manner? (Choose two)

- A. Use two phantom RP addresses
- B. Manipulate the administration distance of the unicast routes to the two RPs
- C. Manipulate the multicast routing table by creating static mroutes to the two RPs
- D. Advertise the two RP addresses in the routing protocol
- E. Use anycast RP based on MSDP peering between the two RPs
- F. Control routing to the two RPs through a longest match prefix

**Answer:** AF

#### NEW QUESTION 2

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

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

**Answer:** B

#### NEW QUESTION 3

Which mechanism provides Layer 2 fault isolation between data centers?

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

**Answer:** D

#### NEW QUESTION 4

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 5

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 6

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

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

**Answer:** B

#### NEW QUESTION 7

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 8

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 9

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 10

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. fast sharing
- C. OSPF LFA
- D. BFD
- E. flex links

**Answer:** D

#### NEW QUESTION 10

Company XYZ network runs IPv4 and IPv6 and they want to introduce a multidomain, multicast-based network.

The new design should use a flavor of PIM that forwards traffic using SPT.

Which technology meets this requirement?

- A. PIM-DM
- B. PIM-SM
- C. PIM-SSM
- D. BIDIR-PIM

**Answer:** C

#### NEW QUESTION 11

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

#### NEW QUESTION 15

An enterprise that runs numerous proprietary applications has major issues with its on-premises server estate hardware, to the point where business-critical functions are compromised. The enterprise accelerates plans to migrate services to the cloud.

Which cloud service should be used if the enterprise wants to avoid hardware issues yet have control of its applications and operating system?

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

**Answer:** C

#### NEW QUESTION 20

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:** C

#### NEW QUESTION 23

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

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

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

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

**Answer:** BC

#### NEW QUESTION 25

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

#### NEW QUESTION 28

According to the CIA triad principles for network security design, which principle should be priority for a Zero Trust network?

- A. requirement for data-in-motion encryption and 2FA authentication
- B. requirement for data-at-rest encryption foe user identification within the VPN terminationhardware
- C. categorization of systems, data, and enterprise BYOD assets that are connected to networkzones based on individual privacy needs
- D. ensuring that authorized users have high-availability system access from defined zones todefined systems or zones

**Answer:** A

#### NEW QUESTION 30

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 inthe topology will stop using the overloaded IS to forward Level 2 traffic However, the intermediatesystem 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 intermediatesystems
- D. It can be set in intermediate systems (IS-IS routers) to avoid traffic black holes until routingprotocols are fully converged after a reload operation.
- E. It can be set in intermediate systems (IS-IS routers) to attract transit traffic from otherintermediate systems

**Answer:** AD

#### NEW QUESTION 32

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 34

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 36

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

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

**Answer:** CE

#### NEW QUESTION 39

Which design principal improves network resiliency?

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

**Answer:** B

#### NEW QUESTION 41

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 44

You are designing a network running both IPv4 and IPv6 to deploy QoS.

Which consideration is correct about the QoS for IPv4 and IPv6?

- A. IPv4 and IPv6 traffic types can use queuing mechanisms such as LLQ, PQ and CQ.
- B. IPv6 packet classification is only available with process switching, whereas IPv4 packetclassification is available with both process switching and CEF.
- C. IPv6 and IB/4 traffic types can use a single QoS policy to match both protocols
- D. Different congestion management mechanisms need to be used for IPv4 and IPv6 traffic types

**Answer:** C

#### NEW QUESTION 46

An MPLS service provider is offering a standard EoMPLS-based VPLS service to CustomerA providing Layer 2 connectivity between a central site and approximately 100 remote sites.

CustomerA 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 48

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 (Python
- E. Ansible etc.) and Orchestration refers to commercial products that control configuration deployment

**Answer:** A

#### NEW QUESTION 49

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 52

Which design benefit of PortFast is true?

- A. PortFast does not generate a spanning tree topology change when a station on a port is connected or disconnected
- B. PortFast disables spanning tree on the port, which puts the port into the forwarding state immediately after it is connected
- C. PortFast allows small, unmanaged switches to be plugged into ports of access switches without risking switch loops
- D. PortFast detects one-way communications on the physical port, which prevents switch loops
- E. PortFast prevents switch loops that are caused by a unidirectional point-to-point link condition on Rapid PVST+ and MST
- F. PortFast prevents switched traffic from traversing suboptimal paths on the network

**Answer:** A

#### NEW QUESTION 55

You are a network designer and you must ensure that the network you design is secure.

How do you plan to prevent infected devices on your network from sourcing random DDoS attacks using forged source address?

- A. ACL based forwarding
- B. unicast RPF loose mode
- C. unicast RPF strict mode
- D. ACL filtering by destination

**Answer:** C

#### NEW QUESTION 57

Refer to the exhibit. A link is P2P Layer 3. A high availability application is synchronizing data between host A and host B.

To increase chance of delivery the same data is sent twice from host A on two different NICs toward the two NICs on host B.

Which solution must be deployed in the network to ensure that any failure in the network does not trigger data loss on host B?

- A. EIGRP with feasible successors
- B. BFD
- C. IP Fast Reroute
- D. Static routes

**Answer:** C

#### NEW QUESTION 60

Which encoding format does Cisco IOS XE software support for NETCONF?

- A. It supports HTML encoding for NETCONF
- B. It supports YAML encoding for NETCONF
- C. It supports XML encoding for NETCONF
- D. It supports JSON encoding for NETCONF

**Answer:** C

#### NEW QUESTION 64

Refer to the exhibit. A new high availability DB server cluster is installed in the network.

These two servers require high bandwidth and low latency Layer 2 connectivity for database replication.

Which solution supports these requirements?

- A. Add two new links between SW1 and SW2 configured as LACP trunk with STP
- B. Add secondary links to REP segments 1 and 2
- C. Add two new links between SW1 and SW2 configured as REP segment 3
- D. Add two new links between SW1 and SW2 configured as REP segments 1 and 2 respectively

**Answer:** C

#### NEW QUESTION 69

Drag and Drop Question

Drag and drop the design use cases from the left onto the correct uRPF techniques used to prevent spoofing attacks.  
Not all options are used.

- A. Mastered
- B. Not Mastered

**Answer:** A

**Explanation:**

#### NEW QUESTION 74

An existing wireless network was designed to support data traffic only.

You must now install context Aware services for location tracking changes must be applied to the existing wireless network to increase the location accuracy?  
(Chose two)

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

**Answer:** BE

#### NEW QUESTION 78

Which statement about hot-potato routing architecture design is true?

- A. Hot-potato routing is the preferred architecture when connecting to content providers
- B. Hop-potato keeps traffic under the control of the network administrator for longer
- C. OSPF uses hot-potato routing if all ASBRs use the same value for the external metric
- D. Hot-potato routing is prone to misconfiguration as well as poor coordination between twonetworks

**Answer:** A

#### NEW QUESTION 79

Refer to the exhibit.

As part of a redesign project, you must predict multicast behavior.

What happens to the multicast traffic received on the shared tree (\*,G), if it is received on the LHR interface indicated\*?

- A. It is dropped due to an unsuccessful RPF check against the multicast source
- B. It is switched give that no RPF check is performed
- C. It is switched due to a successful RPF check against the routing table
- D. It is dropped due to an unsuccessful RPK8t8ck against the multicast receiver.

**Answer:** C

#### NEW QUESTION 82

A BGP route reflector in the network is taking longer than expected to coverage 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 83

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 85

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

- A. The Reported Distance from a successor is lower than the local Feasible Distance.
- B. The Reported Distance from a successor is higher than the local Feasible Distance.

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

**Answer:** AE

#### NEW QUESTION 86

You are designing a new Ethernet-based metro-area network for an enterprise customer to connect 50 sites within the same city OSPF will be the routing protocol used. The customer is primarily concerned with IPv4 address conservation and convergence time. Which two combined actions do you recommend? (Choose two)

- A. Use a multipoint Metro-E service for router connections
- B. Use a single address per router for all P2P links
- C. Use P2P links between routers in a hub-and-spoke design
- D. Configure address aggregation at each site router
- E. Determine which OSPF routers will be DR/BDR

**Answer:** AC

#### NEW QUESTION 87

Which two statements about MLD snooping are true? (Choose two)

- A. When MLD snooping is enabled, QoS is automatically enabled.
- B. A VLAN can support multiple active MLD snooping queries, as long as each one is associated to a different multicast group.
- C. AN MLD snooping querier election occurs when any MLD snooping querier goes down or if there is an IP address change on the active querier.
- D. When multiple MLD snooping queriers are enabled in a VLAN, the querier with the lowest IP address in the VLAN is elected as the active MLD snooping querier.

**Answer:** CD

#### NEW QUESTION 89

Which two design options are available to dynamically discover the RP in an IPv6 multicast network? (Choose two)

- A. embedded RP
- B. MSDP
- C. BSR
- D. Auto-RP
- E. MLD

**Answer:** AC

#### NEW QUESTION 93

Company A has a hub-and-spoke topology over an SP-managed infrastructure. To measure traffic performance metrics, IP SLA senders are on all spoke CE routers and an IP SLA responder is on the hub CE router. What must they monitor to have visibility on the potential performance impact due to the constantly increasing number of spoke sites?

- A. memory usage on the hub router
- B. interface buffers on the hub and spoke routers
- C. CPU and memory usage on the spoke routers
- D. CPU usage on the hub router

**Answer:** D

#### NEW QUESTION 97

Which two descriptions of CWDM are true? (Choose two)

- A. typically used over long distances, but requires optical amplification
- B. uses the 850nm band
- C. allows up to 32 optical channels to be multiplexed onto a single fiber
- D. shares the same transmission window as DWDM
- E. Passive CWDM devices require no electrical power

**Answer:** DE

#### NEW QUESTION 99

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

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

**Answer:** C

#### NEW QUESTION 102

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

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

**Answer:** D

#### NEW QUESTION 105

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

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

**Answer:** BE

#### NEW QUESTION 107

An architect designs a multi-controller network architecture with these requirements:

- Achieve fast failover to control traffic when controllers fail.
- Yield a short distance and high resiliency in the connection between the switches and the controller.
- Reduce connectivity loss and enable smart recovery to improve the SDN survivability.
- Improve connectivity by adding path diversity and capacity awareness for controllers.

Which control plane component of the multi-controller must be built to meet the requirements?

- A. control node reliability
- B. controller state consistency
- C. control path reliability
- D. controller clustering

**Answer:** B

#### NEW QUESTION 110

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

Which technique accomplishes the requirement?

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

**Answer:** B

#### NEW QUESTION 114

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 used
- E. Each should be used to back up the other one; where the primary links are MPLS, the internet should be used as a backup link with IPsec (and vice versa).
- F. MPLS meets all these requirements and it is more reliable than using the Internet
- G. It is widely used with defined best practices and an industry standard.

**Answer:** A

#### NEW QUESTION 116

Which MPLS TE design consideration is true?

- A. MPLS TE replaces LDP and the dependency of the IGP to identify the best path.
- B. MPLS TE provides link and node protection
- C. MPLS TE optimizes the routing of IP traffic, given the constraints imposed by backbone capacity and application requirements.

D. MPLS TE requires Layer 3 VPN full-mesh topology deployment

**Answer:** C

**NEW QUESTION 120**

Drag and Drop Question

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:**

**NEW QUESTION 123**

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