

Exam Questions 400-007

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

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NEW QUESTION 1

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 2

Which BGP feature provides fast convergence?

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

Answer: A

NEW QUESTION 3

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: C

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

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 6

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 7

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 8

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 9

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 VRFLite
- 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 10

Organizations that embrace Zero Trust initiatives ranging from business policies to technology infrastructure can reap business and security benefits. Which two domains should be covered under Zero Trust initiatives? (Choose two)

- A. workload
- B. work domain
- C. workplace
- D. workgroup
- E. workspace

Answer: AC

NEW QUESTION 10

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 12

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

- A. IGMP snooping
- B. MLD snooping
- C. RGMP

- D. PIM snooping
- E. pruning

Answer: AB

NEW QUESTION 13

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 14

Company XYZ has a new network based on IPv6. Some of the subnets that they are planning to use will be confidential and need an addressing scheme that confines them to the local campus network.
Which type of IPv6 addresses can be used for these networks in the IPv6 addressing design?

- A. local addresses
- B. private addresses
- C. link-local addresses
- D. unique local addresses

Answer: D

NEW QUESTION 18

Refer to the exhibit. An engineer has been asked to redesign the traffic flow toward AS 111 coming from AS 500. Traffic destined to AS 111 network 91.7.0.0/16 should come in via AS 100. while traffic destined to all other networks in AS 111 should continue to use the existing path. Which BGP attributes are best suited to control this inbound traffic coming from BGP AS 500 Into the 91.7.0.0/16 network?

- A. Prepend AS path for the 91.7.0.0/16 network and set it for neighbor in AS 200.
- B. Use extended community for the 91.7.0.0/16 network, not advertising it to the bi-lateral peer.
- C. Use local preference on R1 for the networks that AS 500 advertises to AS 111.
- D. Set higher MED for neighbor in AS 100 to influence incoming traffic for the 91. 7.0.0/16 network.

Answer: A

NEW QUESTION 20

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

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

Answer: A

NEW QUESTION 22

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 Area1. 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 23

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

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

Answer: BE

NEW QUESTION 28

Your company wants to deploy a new data center infrastructure.

Based on the requirements you have chosen VXLAN as encapsulation technology.

The customer is concerned about miss-configuration of Layer 2 devices and DC wide outages caused by Layer 2 loops.

What do you answer?

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

Answer: D

NEW QUESTION 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 36

Refer to the exhibit. There are multiple trees in the Cisco FabricPath. All switches in the Layer 2 fabric share the same view of each tree.

Which two concepts describe how the multicast traffic is load-balanced across this topology? (Choose two)

- A. A specific (S,G) traffic is not load-balanced
- B. All trees are utilized at the same level of the traffic rate
- C. Every leaf node assigns the specific (S,G) to the same tree.
- D. A specific (S,G) multicast traffic is load-balanced across all trees due to better link utilization efficiency.
- E. The multicast traffic is generally load-balanced across all trees

Answer: BD

NEW QUESTION 37

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 41

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 46

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 48

Which design principal improves network resiliency?

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

Answer: B

NEW QUESTION 51

When designing a WAN that will be carrying real-time traffic, what are two important reasons to consider serialization delay? (Choose two)

- A. Serialization delays are invariable because they depend only on the line rate of the interface
- B. Serialization delays are variable because they depend on the line rate of the interface and on the type of the packet being serialized.
- C. Serialization delay is the time required to transmit the packet on the physical media.
- D. Serialization delays are variable because they depend only on the size of the packet being serialized
- E. Serialization delay depends not only on the line rate of the interface but also on the size of the packet

Answer: BD

NEW QUESTION 54

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 59

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 60

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 65

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 68

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 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 72

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 shold 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 76

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 81

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 83

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 84

As part of a new network design documentation, you are required to explain the reason for choosing cisco FabricPath for Layer 2 loop avoidance. Which two elements help Cisco FabricPath mitigate Layer 2 loops if they happen in the Layer 2 MP network? (Choose two)

- A. MAC tunneling
- B. IS-IS multipath
- C. RPF check
- D. TTL header

Answer: CD

NEW QUESTION 85

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 88

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 91

Which protocol does an SD-Access wireless Access Point use for its fabric data plane?

- A. GRE
- B. MPLS
- C. VXLAN
- D. LISP
- E. CAPWAP

Answer: C

NEW QUESTION 92

Refer to the exhibit. A/J links are 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 95

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 97

VPLS is implemented in a Layer 2 network with 2000 VLANs.

What is the primary concern to ensure successful deployment of VPLS?

- A. Flooding is necessary to propagate MAC address reachability information
- B. PE scalability
- C. The underlying transport mechanism
- D. VLAN scalability

Answer: B

NEW QUESTION 99

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 103

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

NEW QUESTION 107

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 111

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 116

Two enterprise networks must be connected together. Both networks are using the same private IP addresses.

The client requests from both sides should be translated using hide NAT (dynamic NAT) with the overload feature to save IF addresses from the NAT pools.

Which design addresses this requirement using only one Cisco IOS NAT router for both directions?

- A. This is not possible, because two Cisco IOS NAT routers are required to do dynamic NAT, withoverload in both directions.
- B. The ip nat inside and ip nat outside commands must be configured at the interfaces with theoverload option in both directions.
- C. The overload feature is the default and does not have to be configured.
- D. Two different NAT pools must be used for the ip nat inside source and the ip nat outside sourcecommands for the overload feature in both directions.
- E. The Nat Virtual interface must be used to achieve this requirement.

Answer: D

NEW QUESTION 118

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 121

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 123

Which two design option 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 126

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 127

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 128

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 133

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 137

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 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 141

Company XYZ is running OSPF in their network. They have merged with another company that is running EIGRP as the routing protocol. Company XYZ now needs the two domains to talk to each other with redundancy, while maintaining a loop free environment.

The solution must scale when new networks are added into the network in the near future.

Which technology can be used to meet these requirements?

- A. multipoint route-redistribution with route filtering using ACLs
- B. DUMP multipoint route-redistribution with route filtering using route tags
- C. DUMPS single point route-redistribution with route filtering using route tags
- D. DUMPS single point route-redistribution with route filtering using ACLs

Answer: B

NEW QUESTION 144

The network designer needs to use GLOP IP address in order make them unique within their ASN, which multicast address range will be considered?

- A. 239.0.0.0 to 239.255.255.255
- B. 224.0.0.0 to 224.0.0.255
- C. 233.0.0.0 to 233.255.255.255
- D. 232.0.0.0 to 232.255.255.255

Answer: C

NEW QUESTION 148

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