



Cisco

Exam Questions 400-007

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

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NEW QUESTION 1

Refer to the table.

A customer investigates connectivity options for a DCI between two production data centers to aid a large-scale migration project. The migration is estimated to take 20 months to complete but might extend an additional 10 months if issues arise. All connectivity options meet the requirements to migrate workloads. Which transport technology provides the best ROI based on cost and flexibility?

- A. CWDM over dark fiber
- B. MPLS
- C. DWDM over dark fiber
- D. Metro Ethernet

Answer: D

NEW QUESTION 2

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 3

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 4

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

- A. warning banners
- B. redundant AAA servers
- C. Control Plane Policing
- D. SNMPv3
- E. routing protocol authentication

Answer: EF

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

Which two impacts of adding the IP event dampening feature to a network design are true? (Choose two.)

- A. It protects against routing loops.
- B. It switches traffic immediately after a link failure.
- C. It speeds up link failure detection.

- D. It reduces the utilization of system processing resources.
- E. It improves overall network stability.

Answer: DE

NEW QUESTION 7

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: C

NEW QUESTION 8

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 9

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 10

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 10

What is the most important operational driver in building a resilient and secure modular network design?

- A. Dependencies on hardware or software that is difficult to scale
- B. Minimize app downtime
- C. Reduce the frequency of failures requiring human intervention
- D. Increase time spent on developing new features

Answer: C

NEW QUESTION 15

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 17

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 neighborASs.
- 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 theAS path field.
- D. Include a prefix list to only receive routes from neighboring ASs.

Answer: C

NEW QUESTION 20

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 24

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 28

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 32

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 37

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 40

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 44

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 47

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 48

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 49

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 50

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 55

A service provider hires you to design its new managed CE offering to meet these requirements:

- The CEs cannot run a routing protocol with the PE
 - Provide the ability for equal or unequal ingress load balancing in dual-homed CE scenarios.
 - Provide support for IPv6 customer routes
 - Scale up to 250,000 CE devices per customer.
 - Provide low operational management to scale customer growth.
 - Utilize low-end (inexpensive) routing platforms for CE functionality.
- Which tunneling technology do you recommend?

- A. FlexVPN
- B. point-to-point GRE
- C. DMVPN
- D. LISP

Answer: D

NEW QUESTION 60

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 65

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 69

You were tasked to enhance the security of a network with these characteristics:

- A pool of servers is accessed by numerous data centers and remote sites
- The servers are accessed via a cluster of firewalls
- The firewalls are configured properly and are not dropping traffic
- The firewalls occasionally cause asymmetric routing of traffic within the server data center.

Which technology should you recommend to enhance security by limiting traffic that could originate from a hacker compromising a workstation and redirecting flows at the servers?

- A. Poison certain subnets by adding static routes to Null0 on the core switches connected to the pool of servers.
- B. Deploy uRPF strict mode.
- C. Limit sources of traffic that exit the server-facing interface of the firewall cluster with ACLs.
- D. Deploy uRPF loose mode

Answer: C

NEW QUESTION 72

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

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

Answer: C

NEW QUESTION 73

A Service Provider is designing a solution for a managed CE service to a number of local customers using a single CE platform and wants to have logical separation on the CE platform using Virtual Routing and Forwarding (VRF) based on IP address ranges or packet length.
Which is the most scalable solution to provide this type of VRF Selection process on the CE edge device?

- A. Static Routes for Route Leaking
- B. Policy Based Routing
- C. OSPF per VRF Instance
- D. Multi-Protocol BGP

Answer: B

NEW QUESTION 75

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, Ansible etc.) and Orchestration refers to commercial products that control configuration deployment

Answer: A

NEW QUESTION 76

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 78

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 82

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

To increase the 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 84

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 89

Which two design solutions ensure sub 50 msec of the convergence time after a link failure in the network? (Choose two)

- A. BFD
- B. Ti-LFA
- C. minimal BGP scan time
- D. MPLS-FRR
- E. IGP fast hello

Answer: BD

NEW QUESTION 92

Refer to the exhibit. A new high availability DB sever 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 96

Drag and Drop Question

Drag and drop the FCAPS network management reference models from the left onto the correct definitions on the right.

- A. Mastered
- B. Not Mastered

Answer: A

Explanation:

NEW QUESTION 99

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 two networks

Answer: A

NEW QUESTION 103

Which two application requirements are mandatory for 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 107

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 110

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 113

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 114

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 115

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 117

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 119

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 123

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

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

Answer: BD

NEW QUESTION 125

Which three tools are used for ongoing monitoring and maintenance of a voice and video environment? (Choose three.)

- A. flow-based analysis to measure bandwidth mix of applications and their flows
- B. call management analysis to identify network convergence-related failures
- C. call management analysis to identify CAC failures and call quality issues
- D. active monitoring via synthetic probes to measure loss, latency, and jitter
- E. passive monitoring via synthetic probes to measure loss, latency, and jitter
- F. flow-based analysis with PTP time-stamping to measure loss, latency, and jitter

Answer: ACD

NEW QUESTION 127

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 ABRS.
- D. route summarization on EIDRP routers connecting toward the ASBR

Answer: B

NEW QUESTION 128

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 129

Drag and Drop Question

Drag and drop the multicast protocols from the left onto the current design situation on the right.

- A. Mastered
- B. Not Mastered

Answer: A

Explanation:

NEW QUESTION 133

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 134

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