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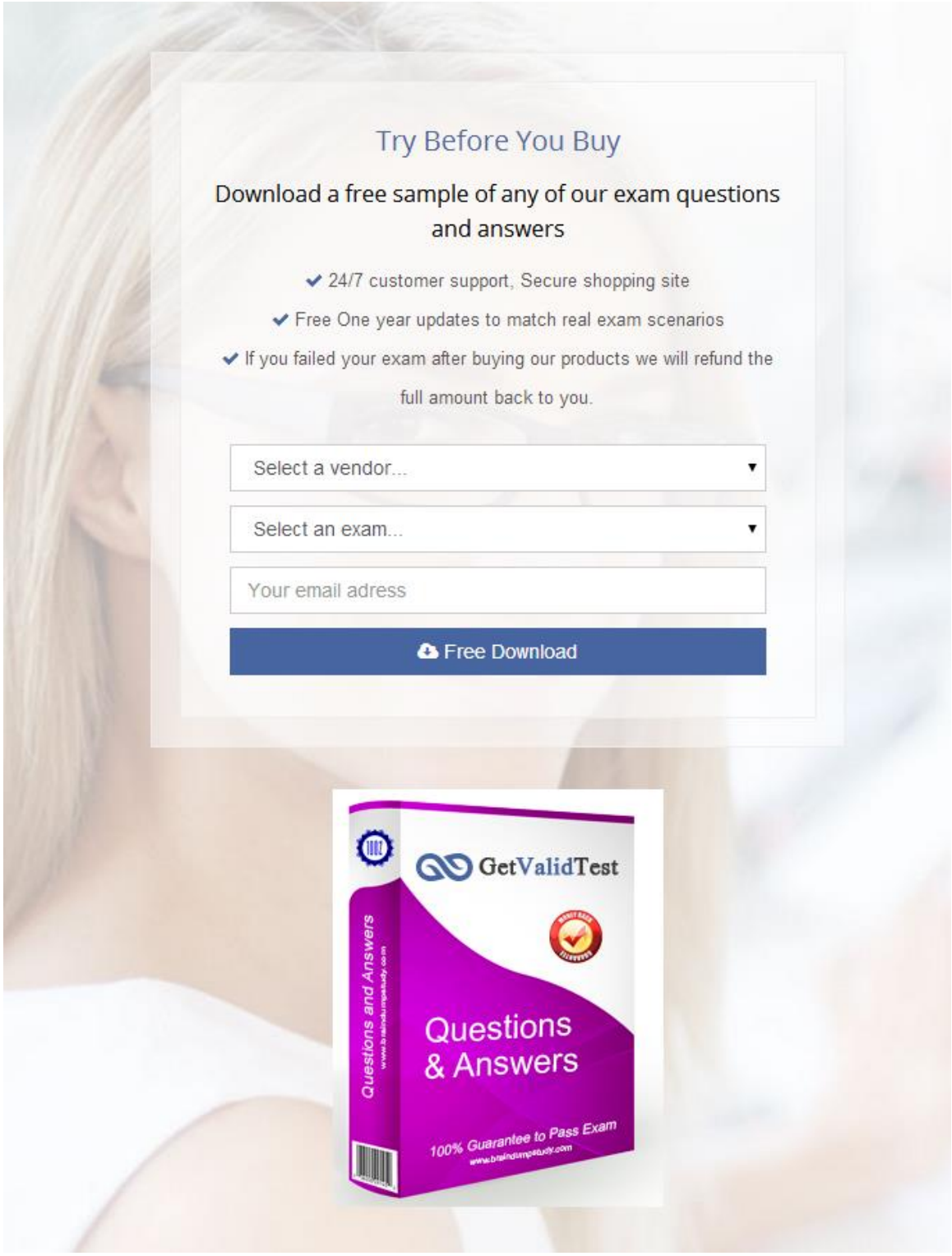

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Exam : **300-320**

Title : Designing Cisco Network Service Architectures

Vendor : Cisco

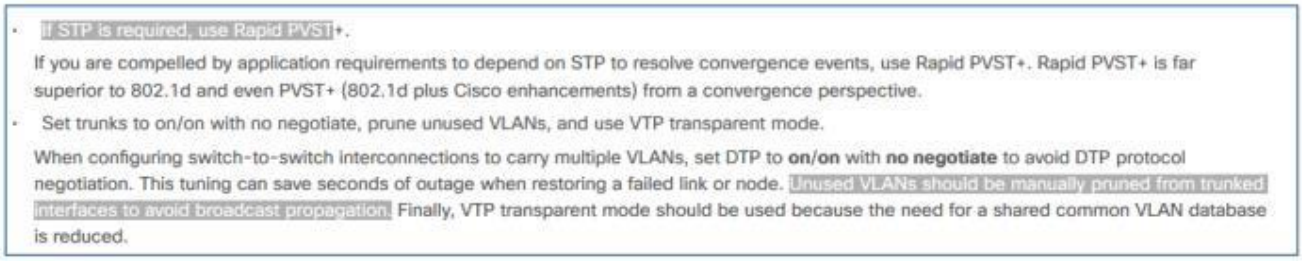
Version : DEMO

NO.1 Which two features are from a scalable cluster design utilizing Cisco ASA firewalls? (Choose two.)
A. The design supports up to 1 Terabyte of aggregate traffic.
B. The ASA cluster actively load balances traffic flows.
C. Each cluster supports up to 10 ASA devices.
D. Each member of the cluster can forward every traffic flow.
E. The design supports up to 100 Gbps of aggregate traffic.
Answer: D,E

NO.2 Which two protocols support simple plaintext and MD5 authentication? (Choose two.)
A. BGP
B. IPv6
C. OSPF
D. RIP
E. EIGRP
Answer: C,D

NO.3 An engineer is designing a network with OSPF and must filter ingress routes from a partner network that is also running OSPF. Which two design options are available for this configuration? (Choose two.)
A. Use access list on the ingress interface to prevent the routes from entering the networks.
B. Configure a different OSPF area that would prevent any unwanted routes from entering the network.
C. Use a different routing protocol such as EIGRP between the networks.
D. Design a filter using prefix lists to ensure that routes are filtered out at the redistribution point.
E. Use a distribute list in the OSPF process to filter out the routes.
Answer: D,E

NO.4 An engineer is seeking to improve access layer convergence. Which two actions accomplish this goal?
(Choose two.)
A. Implement MST.
B. Configure storm control.
C. Utilize Rapid PVST+
D. Propagate all VLANs to switches.
E. Prune unused VLANs to switches.
Answer: C,E
Explanation



- If STP is required, use Rapid PVST+.

If you are compelled by application requirements to depend on STP to resolve convergence events, use Rapid PVST+. Rapid PVST+ is far superior to 802.1d and even PVST+ (802.1d plus Cisco enhancements) from a convergence perspective.

- Set trunks to on/on with no negotiate, prune unused VLANs, and use VTP transparent mode.

When configuring switch-to-switch interconnections to carry multiple VLANs, set DTP to **on/on** with **no negotiate** to avoid DTP protocol negotiation. This tuning can save seconds of outage when restoring a failed link or node. Unused VLANs should be manually pruned from trunked interfaces to avoid broadcast propagation. Finally, VTP transparent mode should be used because the need for a shared common VLAN database is reduced.

https://www.cisco.com/c/en/us/td/docs/solutions/Enterprise/Campus/HA_campus_DG/hacampusdg.html#wp110

NO.5 A network team is designing a Layer 3 Data Center Interconnect between two data centers. There is a requirement for all links of equal bandwidth be utilized, have automatic failover, and not use ant bundling technology. Which routing function must be used to achieve this requirement?

A. virtual links
B. virtual private LAN service
C. BGP route reflectors
D. equal cost multipath routing
E. policy-based routing
Answer: D

NO.6 An engineer is working on a design solution for a large hub-and-spoke EIGRP network. Which feature helps to make this design more stable white also reducing resource utilization?

A. QoS
B. network summarization
C. route filter
D. stub routing
Answer: D
Explanation
https://www.cisco.com/c/en/us/td/docs/ios/12_0s/feature/guide/eigrpstb.html

NO.7 Which two statements about 802.1 X are true? (Choose two.)

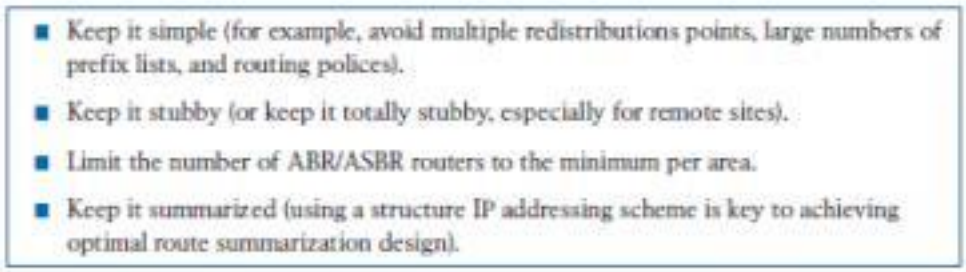
A. It can allow and deny port access based on user identity.
B. It works only with wired devices.
C. It is a Cisco proprietary standard.
D. It can allow and deny port access based on device identity
E. By default, it allows devices that lack 802.1 support.
Answer: A,D

NO.8 Which security function is inherent in an application centric infrastructure network?

A. Intrusion Detection
B. Default Inter-EPG connectivity
C. Default Denial Network
D. Intrusion Prevention
Answer: C

NO.9 Which two hashing distribution algorithms are available for an engineer when working with multichassis EtherChannels? (Choose two.)
A. round-robin
B. src-dst-mac
C. adaptive
D. src-dst-port
E. fixed
Answer: C,E

NO.10 An engineer is designing an OSPF network with multiple non backbone areas connected to the backbone area via a hub-and-spoke topology. Each hub-and-spoke area has a large number of spoke routers connected to the hub that is functioning as an ABR to provide better segmentation. Which two actions improve the stability of this design? (Choose two.)
A. Use External Type 2 metric across the OSPF domain
B. Configure hub-and-spoke areas as totally stubby
C. Implement summarization on the ASBR routers in the backbone area
D. Configure hub-and-spoke areas as stub.
E. Implement summarization on the ABR routers of hub-and-spoke areas.
Answer: B,E


- Keep it simple (for example, avoid multiple redistributions points, large numbers of prefix lists, and routing polices).
- Keep it stubby (or keep it totally stubby, especially for remote sites).
- Limit the number of ABR/ASBR routers to the minimum per area.
- Keep it summarized (using a structure IP addressing scheme is key to achieving optimal route summarization design).

NO.11 Which benefit of using VRRP v3 as compared to VRRP v2 is true?
A. supports preemption
B. supports stateful switchover
C. supports authentication
D. supports IPv4 and IPv6 in separate VRRP groups
Answer: D

Virtual Router Redundancy Protocol (**VRRP**) enables a group of devices to form a single virtual device to provide redundancy. ... The **VRRP** version **3** (**v3**) Protocol Support feature provides the capability to support IPv4 and IPv6 addresses while **VRRP** version **2** (**v2**) only supports IPv4 addresses.

NO.12 In Cisco ACI, which result occurs to the traffic when communication between the data plane and the Cisco APIC controller is lost?
A. The ACI fabric continues to forward traffic

B. Data in transit is lost
C. Data is queued until communication is restored.
D. The fabric stops forwarding until convergence occurs
Answer: D

NO.13 Which two options are characteristics of bidirectional PIM? (Choose two.)
A. A designated forwarder is not required.
B. It is ideal for many-to-many host applications.
C. It enables scalability with a large number of sources.
D. A registration process is required.
E. The creation of a source tree is required.
Answer: B,C

NO.14 An engineer has been asked to design a multitenant data center The core switches must be virtualized at the device level and must otter isolation on the control, data, and management planes. Which technology does the engineer recommend to be deployed on the core switches?
A. VDC
B. VPC
C. VSS
D. VRF
Answer: B

NO.15 Which description of a shared tree in a multicast routing design is true?
A. routing tree that has its root at the source
B. optimal path for multicast data between the source and the receiver
C. distribution tree that has its root at the RP
D. meeting place for the source and the receiver of multicast data
Answer: A

NO.16 A network engineer wants to limit the EIFRP query scope to avoid high CPU and memory utilization on low-end routers as limiting the possibility of a stuck-in-active routing event between HQ and branch offices.
Which action is the best way to achieve these goals?
A. Configure all routers at branch offices as EIGRP stub and allow only directly connected networks at branch offices to be advertised to HQ.
B. Configure all routers at HQ and branch offices as EIGRP stub.
C. Configure all routers at branch offices as EIGRP stub.
D. Configure different autonomous systems numbers per each branch office and HQ and redistribute routes between autonomous systems.
Answer: C

NO.17 Which two security measures must an engineer follow when implementing Layer 2 and Layer 3 network design? (Choose two.)

A. Utilize private VLANs and ensure that all ports of the isolated port group.
B. Utilize an access list to prevent the use of ARP to modify entries to the table.
C. Utilize the ARP inspection feature to help prevent the misuse of gARP.
D. Utilize DHCP snooping on a per VLAN basis and apply ip dhcp snooping untrusted on all ports.
E. Utilize the native VLAN only on trunk ports to reduce the risk of an Double-Tagged 802.1q VLAN hopping attack.
Answer: C,E

NO.18 Which IWAN design model provides an SLA guarantee at the lowest cost?
A. hybrid
B. dual Internet
C. dual MPLS
D. dual hybrid with PLR
Answer: A

NO.19 During an upgrade of an existing data center, a network team must design segmentation into existing networks. Due to legacy applications, the IP addresses cannot change. Which firewall deployment model meets these requirements?
A. routed mode
B. cluster mode
C. multicontext mode
D. transparent mode
Answer: C

NO.20 An enterprise EIGRP network has been growing rapidly. After several recent outages, the network must be redesigned to facilitate further growth and address scalability concerns. Which two actions must be performed to accomplish this redesign? (Choose two.)
A. Replace the routers with newer models
B. Break down routing domain into multiple autonomous systems.
C. Implement route summarization.
D. Increase bandwidth capacity between the peers.
E. Utilize authentication between the peers.
Answer: B,C

Scaling EIGRP with Multiple Autonomous Systems

Implementing multiple EIGRP autonomous systems is sometimes used as a scaling technique. The usual rationale is to reduce the volume of EIGRP queries by limiting them to one EIGRP autonomous system. However, there can be issues with multiple EIGRP autonomous systems, as shown in Figure 3-8.

To scale EIGRP, it is a good idea to use a structured hierarchical topology with route summarization.