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Designing Cisco Enterprise Networks (ENSLD)

Cisco 300-420

Version Demo

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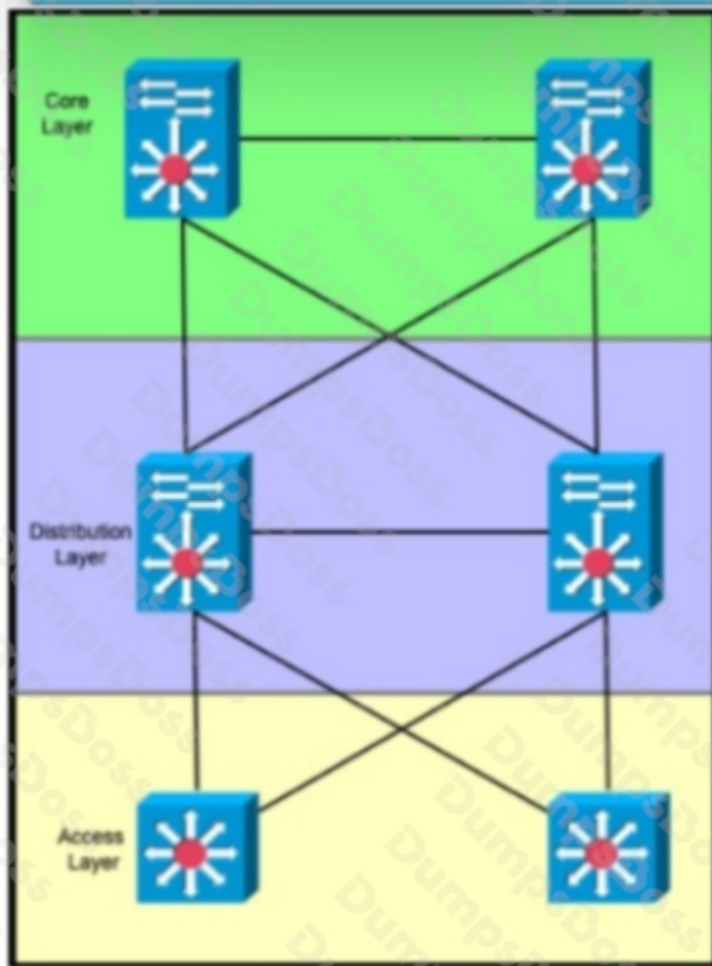
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Topic Break Down

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Topic 3, Advanced Addressing and Routing Solutions	41
Topic 4, Advanced Enterprise Campus Networks	42
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QUESTION NO: 1



Refer to the exhibit. An engineer is designing a multicampus Layer 3 Infrastructure using EIGRP as the routing protocol. The design must provide quick replies to queries in the event of a downlink, prevent unnecessary queries, and ensure that traffic does not unnecessarily transit the access layer. Which two actions must the engineer take for the network design? (Choose two.)

- A. Configure core layer switches as stub routers.
- B. Configure distribution layer switches to summarize routes to the core layer.
- C. Configure access layer switches as stub routers.
- D. Configure access layer and core layer switches as stub routers.
- E. Configure access layer switches to summarize routes to the distribution layer.

ANSWER: B C

QUESTION NO: 2

A network engineer must design a multicast solution to prevent the spoofing of multicast streams and ensure efficient bandwidth utilization. The network will be merged with another multicast domain in the future, and the merge must require minimum effort. Which two solutions meet the customer requirements? (Choose two.)

- A. PIM-SSM
- B. IGMPv3
- C. IGMPv2
- D. PIM-SM
- E. MSDP

ANSWER: D E**Explanation:**

https://www.cisco.com/c/en/us/td/docs/ios-xml/ios/ipmulti_pim/configuration/xe-16/imc-pim-xe-16-book/imc-msdp-im-pim-sim.html#GUID-4B201DB3-2C27-4F98-977A-A1AE9DC39C21

MSDP is a mechanism to connect multiple PIM-SM domains. The purpose of MSDP is to discover multicast sources in other PIM domains. The main advantage of MSDP is that it reduces the complexity of interconnecting multiple PIM-SM domains by allowing PIM-SM domains to use an interdomain source tree (rather than a common shared tree).

QUESTION NO: 3

Which two functions does the control plane node provide in a Cisco SD-Access architecture? (Choose two.)

- A. LISP proxy ETR
- B. host tracking database
- C. policy mapping
- D. map server
- E. endpoint registration

ANSWER: B D**QUESTION NO: 4**

Which consideration must be made when designing a Cisco SD-Access fabric underlay?

- A. Subnets must be reduced to decrease latency.
- B. Up to six control planes are supported.

- C. The default MTU should be increased.
- D. A unified policy must be used.

ANSWER: B

QUESTION NO: 5

Which two routing protocols allow for unequal cost load balancing? (Choose two.)

- A. EIGRP
- B. IS-IS
- C. BGP
- D. OSPF
- E. RIPvng

ANSWER: A C

QUESTION NO: 6

An engineer is designing an IPv4 addressing plan for an enterprise with 1000 branches. Each branch requires a prefix for data and a prefix for voice. Each prefix must accommodate up to 128 hosts, and prefixes must facilitate summarization at aggregation points in the network. The security team requires a simple method for identifying voice prefixes. Which allocation does the engineer recommend from the RFC1918 address space?

- A. /24 prefixes for data from 10.0.0.0/15 and /24 prefixes for voice from 172.16.0.0/15
- B. /24 prefixes for data from 10.0.0.0/8 and /24 prefixes for voice from the next contiguous /24 prefix per site
- C. /25 prefixes for data from 10.0.0.0/8 and /25 prefixes for voice from the next contiguous /25 prefix per branch
- D. /24 prefixes for data from 10.0.0.0/8 and /24 prefixes for voice from 172.16.0.0/12

ANSWER: B

Explanation:

For example:

Site 0001

Data: 10.0.0.0/24

Voice: 10.0.1.0/24

summary route : 10.0.0.0/23

Site 0002

Data: 10.0.2.0/24

Voice: 10.0.3.0/24

summary route: 10.0.2.0/23

....cont...

site 0129

Data: 10.1.0.0/24

Voice: 10.1.1.0/24

summary route: 10.1.0.0/23

site 0130

Data: 10.1.2.0/24

Voice: 10.1.3.0/24

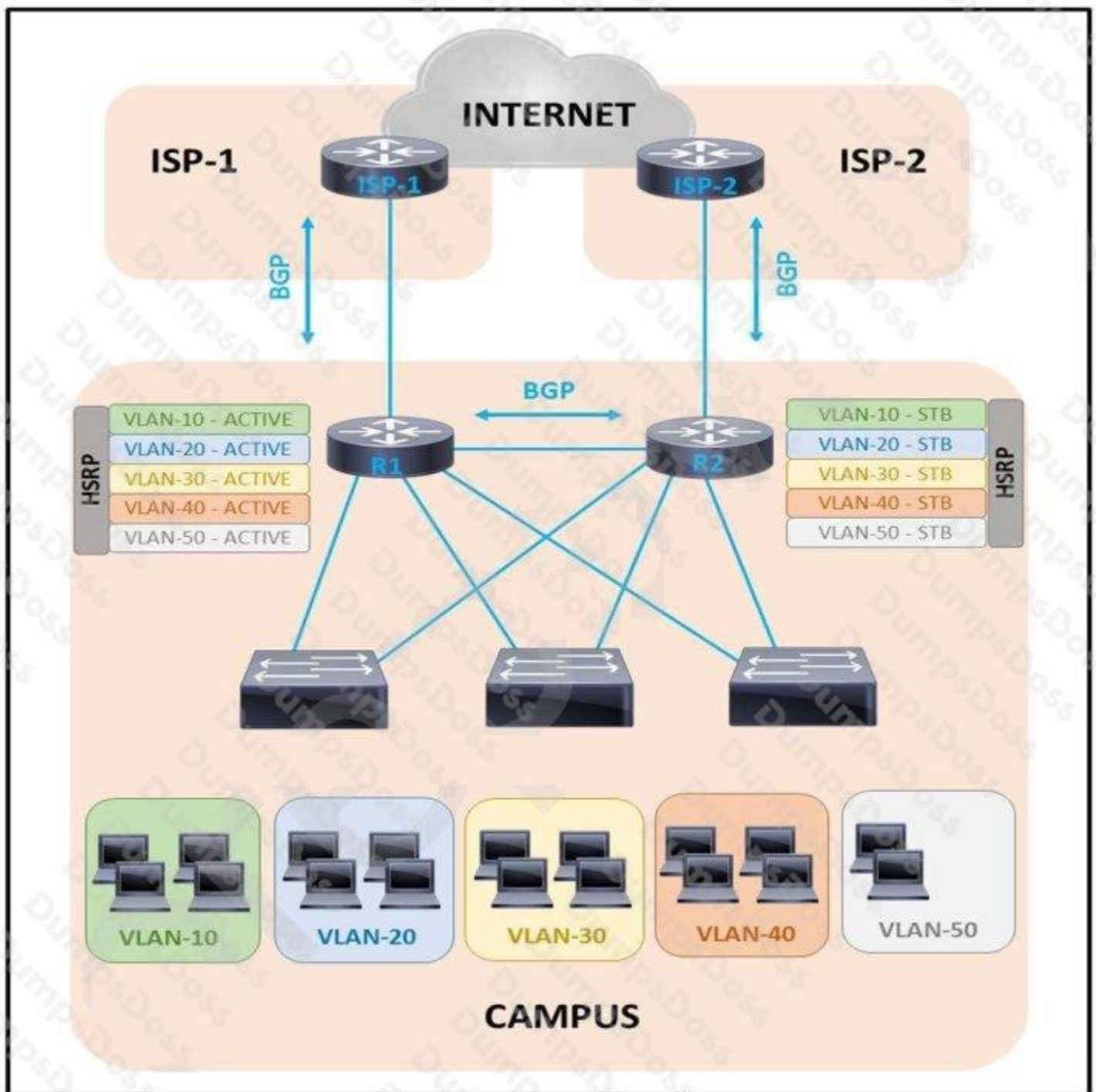
summary route: 10.1.2.0/23

so 3rd octet is odd number assigned to voice, and even number assigned to data;

for security team to recognize voice prefix, use an ACL with wildcard to filter odd number on third octet, started from 10.0.1.0 0.0.254.255, 10.1.1.0 0.0.254.255....., 10.1.1.0 0.0.254.255 etc; for 10.0.1.0 0.0.254.255, any IP in binary that started with 00001010.00000000.xxxxxxx1.xxxxxxxx will be matched (x = either 0 or 1), convert 3rd octet into dec, for example, 10000001 = 129 which is a voice VLAN.

QUESTION NO: 7

Refer to the exhibit.



A customer is running HSRP on the core routers. Over time the company has grown and requires more network capacity. In the current environment, some of the downstream interfaces are almost fully utilized, but others are not. Which solution improves the situation?

A. Make router R2 active for half of the VLANs.

- B. Add more interfaces to R1 and R2.
- C. Configure port channel toward downstream switches.
- D. Enable RSTP on the downstream switches.

ANSWER: A

QUESTION NO: 8

Which two techniques improve the application experience in a Cisco SD-WAN design? (Choose two.)

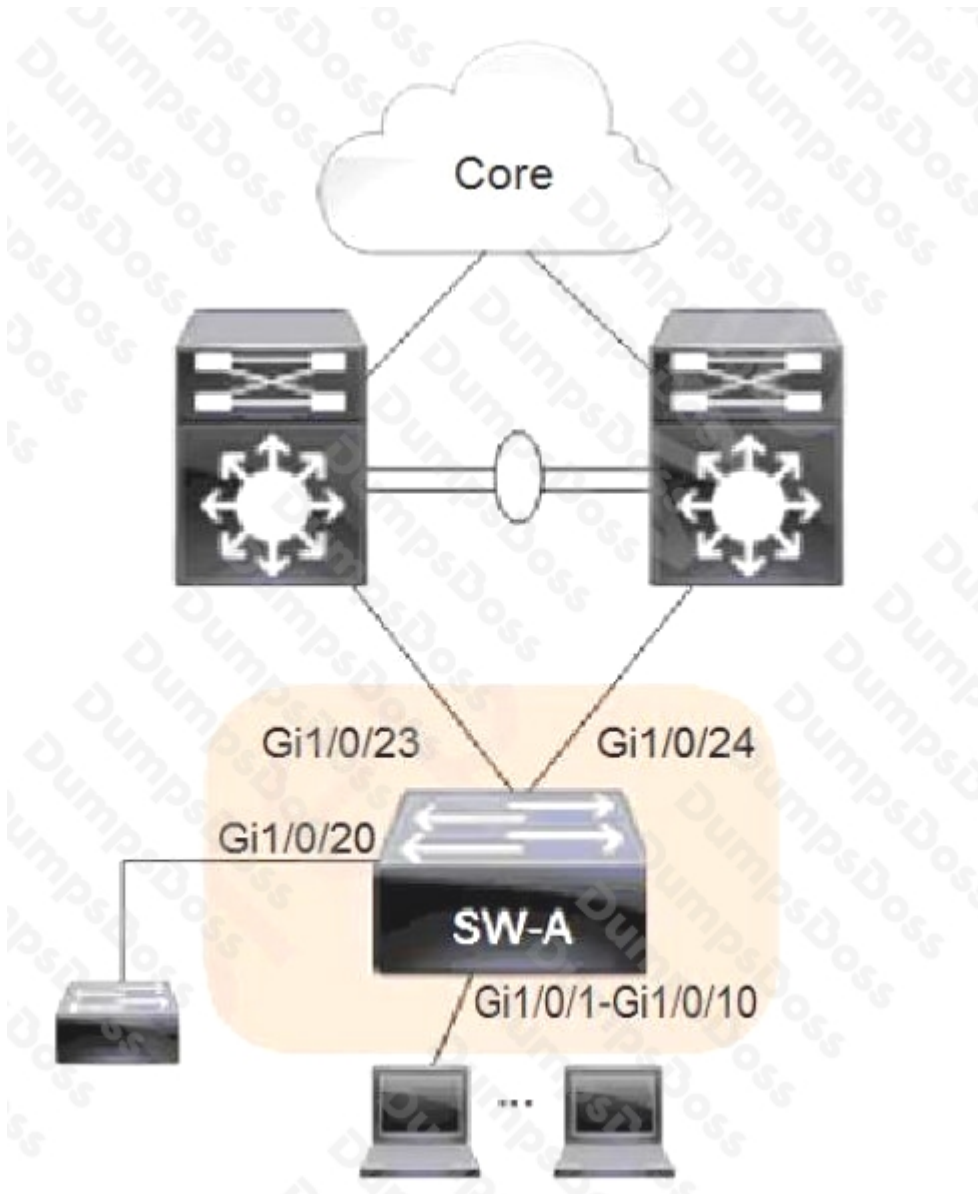
- A. utilizing forward error correction
- B. implementing a stateful application firewall
- C. implementing AMP
- D. utilizing quality of service
- E. implementing Cisco Umbrella

ANSWER: A D

Explanation:

Reference: <https://www.cisco.com/c/dam/en/us/solutions/collateral/enterprise-networks/sd-wan/nb-06-cisco-sd-wan-ebook-cte-en.pdf> slide 33

QUESTION NO: 9



Refer to the exhibit. An architect reviews the low-level design of a company's enterprise network and advises optimizing the STP convergence time. Which functionality must be applied to Gi1/0/1-10 to follow the architect's recommendation?

- A. UplinkFast
- B. root guard
- C. BPDU guard
- D. PortFast

ANSWER: D

QUESTION NO: 10 - (DRAG DROP)

DRAG DROP

Drag and drop the components in a Cisco SD-Access architecture from the left onto their descriptions on the right.

Select and Place:**Answer Area**

underlay network	uses VXLAN to overlay a Layer 2 network on top of a Layer 3 network
overlay network	defined by the physical switches and routers
fabric control plane	contains data plane traffic and control plane signaling
fabric data plane	uses LISP to exchange EID-to-RLOC mapping

ANSWER:**Answer Area**

overlay network
underlay network
fabric data plane
fabric control plane

Explanation:

QUESTION NO: 11

Which function do reverse path forwarding mechanisms perform in a multicast deployment?

- A. They notify the upstream router of multicast traffic.
- B. They send PIM prune message toward multicast sources.
- C. They eliminate overlapping multicast addresses
- D. They prevent loops and duplicate packets.

ANSWER: D**Explanation:**

Reverse path forwarding (RPF) mechanisms are used to prevent loops and duplicate packets in multicast deployments [1]. The RPF check verifies that all multicast traffic received on a router is sourced from the expected direction, ensuring that multicast traffic is not looped back in the network. The RPF check works by comparing the source IP address of a multicast packet with the routing table, and only forwarding it if it matches the expected entry.

QUESTION NO: 12

What is the purpose of a control plane node in a Cisco SD-Access network fabric?

- A. to maintain the endpoint database and mapping between endpoints and edge nodes
- B. to detect endpoints in the fabric and inform the host tracking database of EID-to-fabric-edge node bindings
- C. to identify and authenticate endpoints within the network fabric
- D. to act as the network gateway between the network fabric and outside networks

ANSWER: B**Explanation:**

<https://www.cisco.com/c/en/us/td/docs/solutions/CVD/Campus/cisco-sda-design-guide.html>

QUESTION NO: 13

An engineer must design a VPN solution for a company that has multiple branches connecting to a main office. What are two advantages of using DMVPN instead of IPsec tunnels to accomplish this task?

(Choose two.)

- A. support for AES 256-bit encryption
- B. greater scalability
- C. support for anycast gateway

- D. lower traffic overhead
- E. dynamic spoke-to-spoke tunnels

ANSWER: B E

QUESTION NO: 14

A client is moving to Model-Driven Telemetry and requires periodic updates. What must the network architect consider with this design?

- A. Updates that contain changes within the data are sent only when changes occur.
- B. Empty data subscriptions do not generate empty update notifications.
- C. Periodic updates include a full copy of the data that is subscribed to.
- D. The primary push update is sent immediately and cannot be delayed.

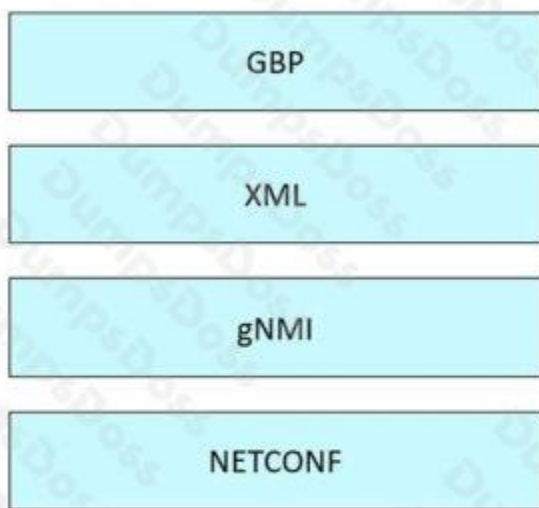
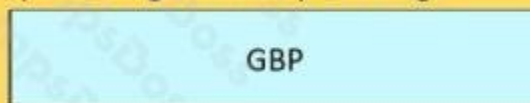
ANSWER: C

QUESTION NO: 15 - (DRAG DROP)

DRAG DROP

Drag and drop the elements from the left onto the YANG models where they are used on the right.

Select and Place:

**IETF YANG Push Coverage****OpenConfig Telemetry Coverage****ANSWER:****IETF YANG Push Coverage****OpenConfig Telemetry Coverage**

Explanation:

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