300-610 Q&As

Designing Cisco Data Center Infrastructure (DCID)

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QUESTION 1

An engineer must develop a Python tool to automate software upgrades of both data center and non-data center devices. All devices offer a RESTful API and require a JSON or XML payload Vendor-specific libraries must be avoided. Which library must the engineer choose?

A. requests

B. Nornir

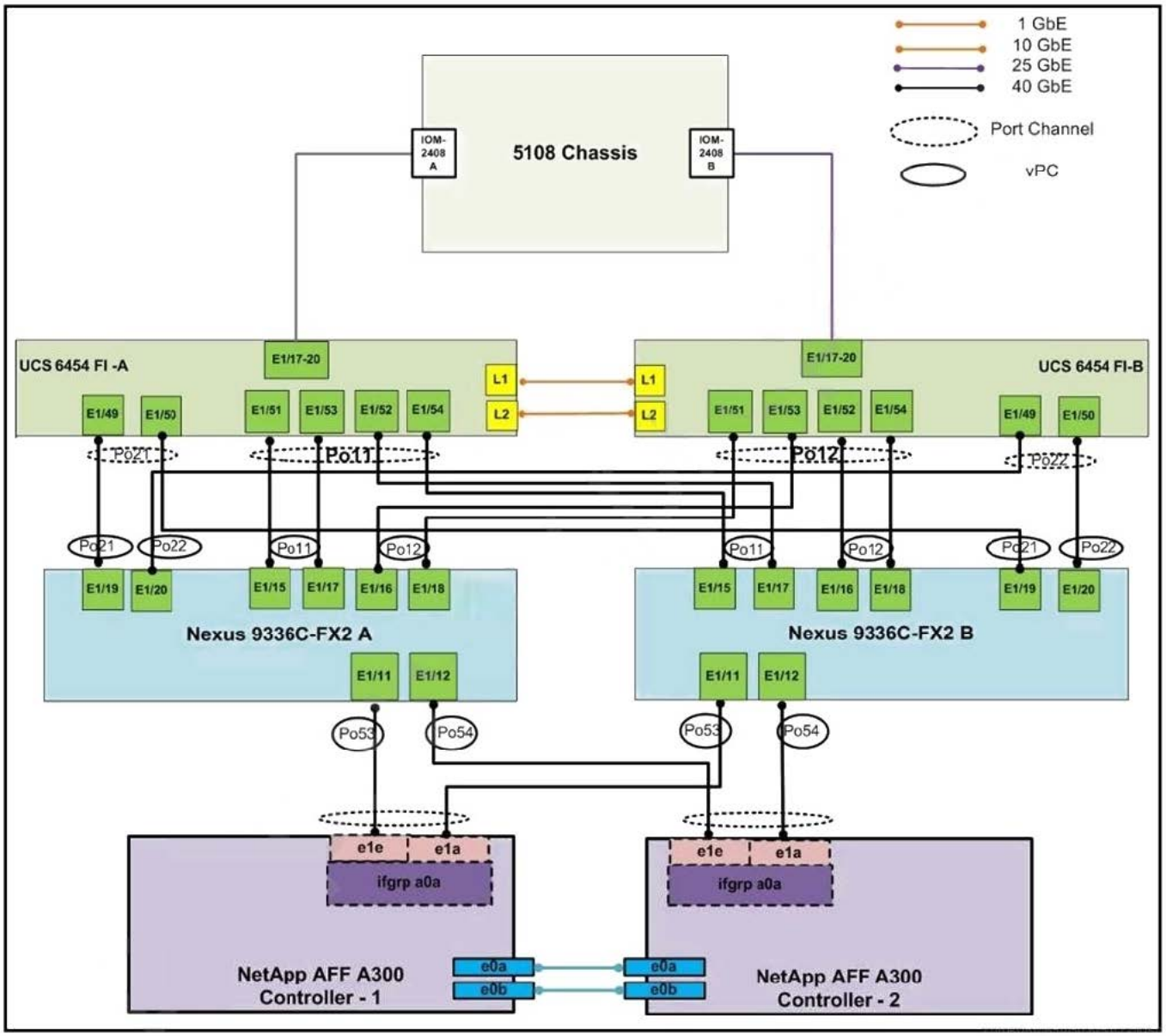
C. ncciient

D. Netmiko

Correct Answer: A

QUESTION 2

Refer to the exhibit.



A Cisco engineer is configuring a FlexPod data center for SAP with Cisco ACI, Cisco UCS Manager 4.0, and NetApp AFF A-Series. All systems and fabric links feature redundancy and provide end-to-end high availability. After the engineer sets the needed VLANs on the NetApp controller ports and adds them to the data broadcast domain, the engineer must make the storage disks visible for the UCS hosts. Which action must be taken on the UCS to accomplish this task?

A. Configure IQN pools for iSCSI boot.

B. Provide a storage virtual machine.

C. Create aggregates in ONTAP.

D. Enable HTTPS access on the servers.

Correct Answer: B

QUESTION 3

Which type fields can an engineer use to identify an iSCSI participant? (Choose two.)

A. type

B. preshared key

C. port number

D. identifying tag

E. hostname

Correct Answer: CE

Reference: https://en.wikipedia.org/wiki/ISCSI

QUESTION 4

What are two reasons to select OTV as the DCI solution to connect multisite topologies? (Choose two.)

A. It propagates hosts reachability without support of traffic flooding.

B. Layer 3 failures do not propagate beyond the OTV edge device.

C. It extends the spanning tree between data centers.

D. It is an open standard.

E. It constrains HSRP hello messages to each data center.

Correct Answer: AE

OTV introduces the concept of “MAC routing,” […] it is justified by the need to limit flooding of Layer 2 traffic across the transport infrastructure.

The last capability introduced by OTV is to filter First Hop Redundancy Protocol (FHRP—HSRP, VRRP, and so on) messages across the logical overlay.

https://www.cisco.com/c/en/us/td/docs/solutions/Enterprise/Data_Center/DCI/whitepaper/DCI3_OTV_Intro/DCI_1.html

QUESTION 5

A Cisco engineer is preparing a service profile template for a design, which consists of 20 x UCS B200M6 blade servers 2 x UCS 6454 Fabric Interconnect in End Host Mode, and 3 x UCS 5108 server chassis with 2408 Fabric Extenders The blade servers are equipped with VIC 1480 adapters The engineer does not configure a vNIC/vHBA placement policy in the service profile and the vNICs and vHBAs are assigned to the vCon in a particular order What is the mapping scheme in which Cisco UCS assigns the vCons based on the type of server and the selected virtual slot?

A. linear ordered

B. network mesh

C. cross match

D. round robin

Correct Answer: D

QUESTION 6

An engineer develops a framework for automatic repetitive tasks needed to manage a Cisco Nexus 9000 Series Switch. The engineer plans to use a programmatic interface and must keep these considerations in mind:

1.

the customer\\'s environment requires the script to authenticate before executing further actions.

2.

the customer\\'s security requirements mandate the use of HTTP transport.

3.

the automation team is familiar with parsing messages encoded in XML or JSON format. Which solution meets these requirements?

A. SNMPv3

B. gRPC

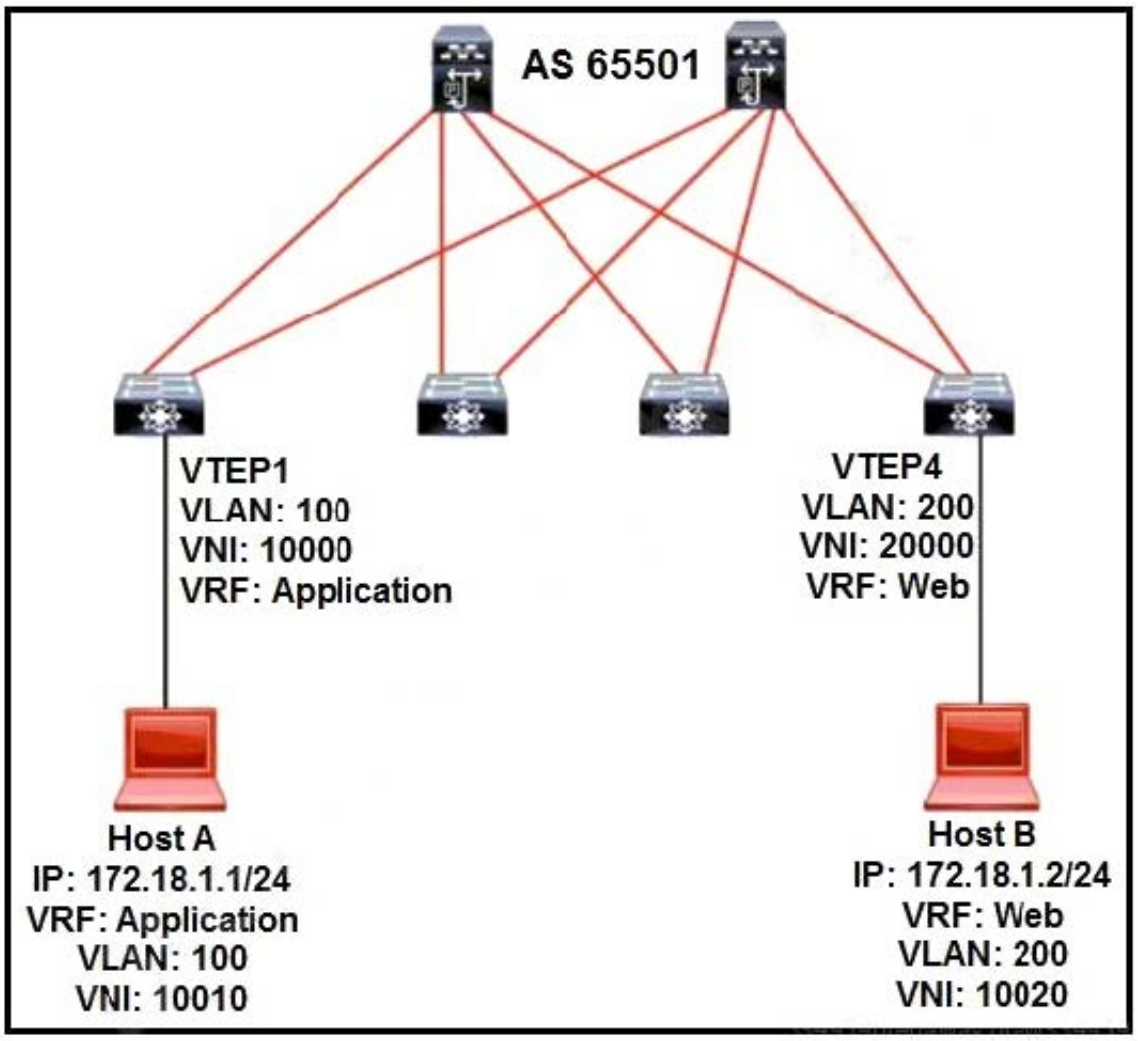
C. RESTCONF

D. NX-API

Correct Answer: D

QUESTION 7

Refer to the exhibit.



An engineer deployed a VXLAN fabric with this configuration:

1.

interface VLAN 100 on VTEP1 with no IP address

2.

interface VLAN 200 on VTEP4 with no IP address

Which set of actions must the engineer take to ensure that host A communicates with host B?

A. Associate VNI 20000 to VRF Web on VTEP1. Associate VNI 10000 to VRF Application on VTEP1.

B. Associate VNI 10000 to VRF Web on VTEP4. Associate VNI 10000 to VRF Application on VTEP1.

C. Associate VNI 20000 to VRF Application on VTEP1.

Associate VNI 20000 to VRF Web on VTEP1.

D. Associate VNI 10000 to VRF Application on VTEP4. Associate VNI 20000 to VRF Web on VTEP1.

Correct Answer: C

QUESTION 8

Which two statements describe Ethernet switching mode on Cisco UCS 6100 Series Fabric Interconnects? (Choose two.)

A. STP runs on the uplink ports of each VLAN, as defined by PVSTP+.

B. STP runs on the uplink ports of each VLAN, as defined by MSTP.

C. The STP parameter configuration is unsupported.

D. The STP parameter configuration is supported.

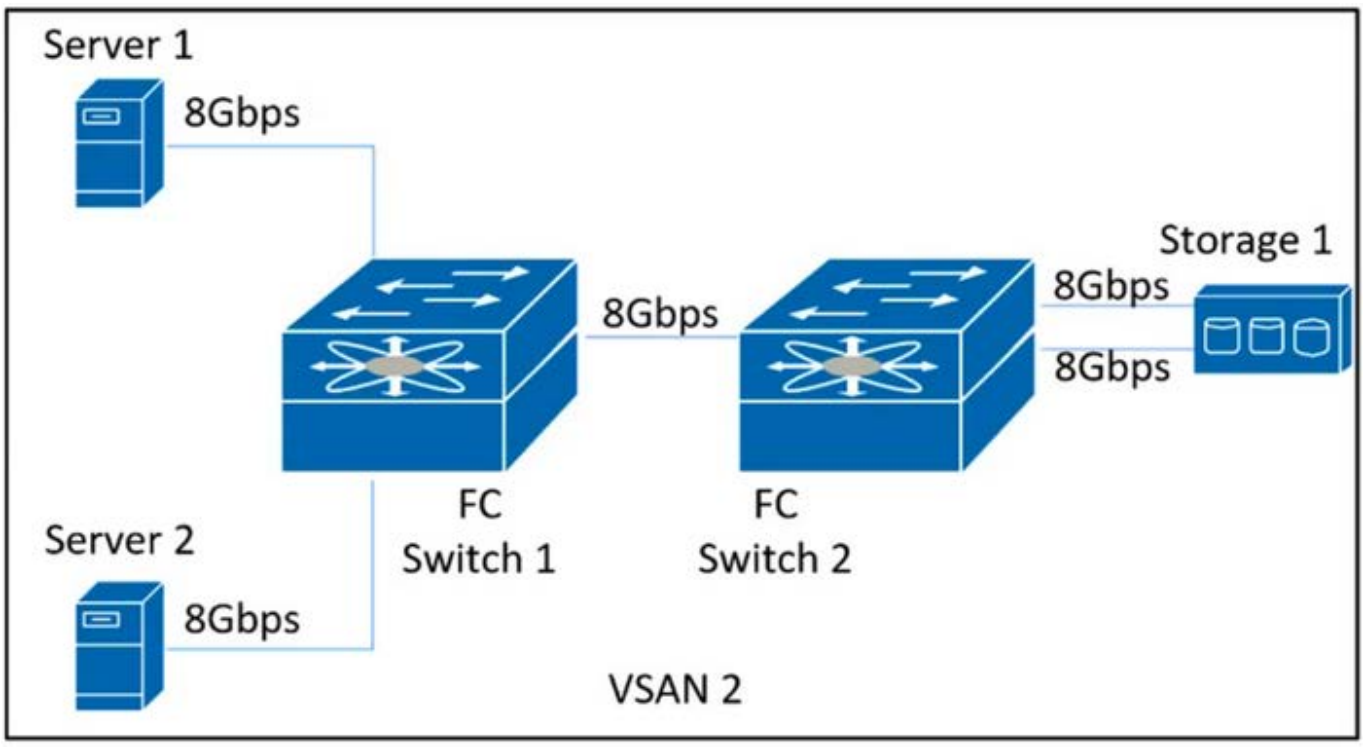
E. STP runs on the server ports.

Correct Answer: AC

Reference: https://www.cisco.com/c/en/us/solutions/collateral/data-center-virtualization/unified-computing/whitepaper_c11-701962.html

QUESTION 9

Refer to the exhibit.



A customer runs an Online Transaction Processing (OLTP) application on Server1. The application generates a small number of transactions and requires low storage latency. Server2 is a backup server that performs backups twice a day

During the backup window, the OLTP application experiences high-latency spikes that affect the application performance The customer must meet these requirements

1.

aintain consistent low I/O latency for the OLTP server.

2.

uarantee I/O throughput for the OLTP server during backup time

3.

llow the customer to keep the existing hardware. Which action must be taken to meet these requirements?

A. Apply a traffic shaper to the FC Switch 1 interface that is facing the server

B. Create a SAN port channel between FC Switch! and FC Switch2.

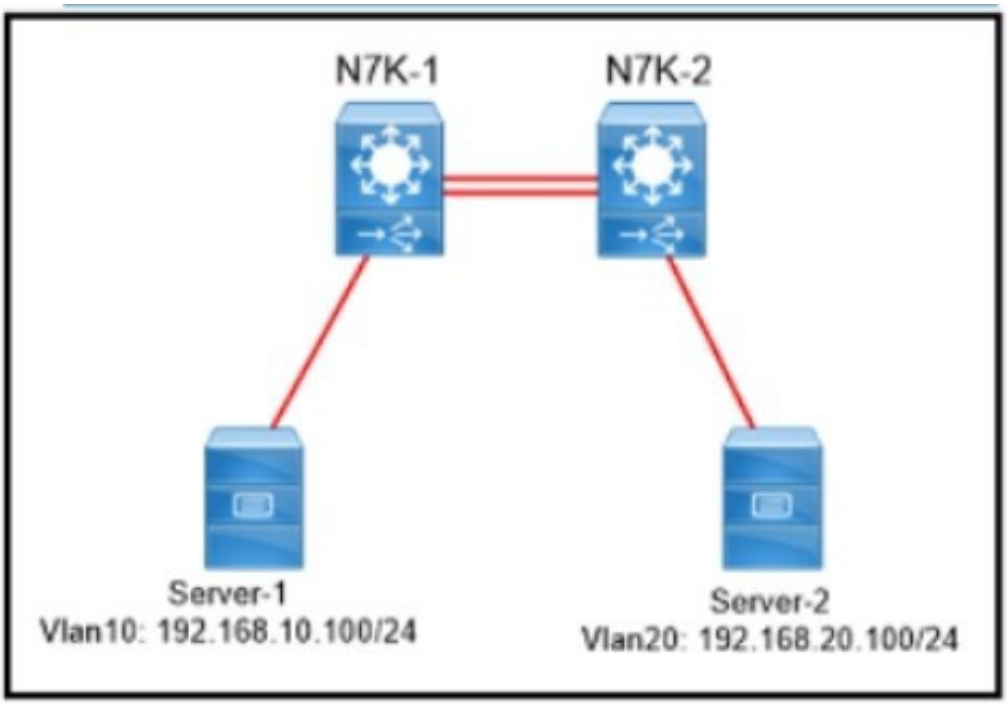
C. Add another 8G link to the Serverl and create F-Port-channel

D. Configure QoS and scheduler for data traffic on both Fibre Channel switches

Correct Answer: D

QUESTION 10

Refer to the exhibit.



A system administrator needs a solution to manage random packet drops between two Cisco UCS C240 M4 servers.

The servers are connected to a pair of Cisco Nexus 7009 switches using 10G fibre interfaces. Both servers are generating too many east-west traffic flows from TCP-based applications, which causes significant latency that impacts the customer. Also, the transfer of files from Server-1 to Server-2 larger than 10 GB results in multiple retransmits.

Which design solution resolves this issue?

A. Add a second uplink to each server NIC

B. Increase the amount of memory m both servers

C. Apply rate-limit on the server 1 VLAN interface per application flow.

D. Connect both servers m the same VLAN

Correct Answer: D

QUESTION 11

A network architect needs secure access to the organization\\'s perimeter routers and firewalls. The administrator must access network devices from a remote location that is reachable from the WAN cloud

Which action meets these requirements?

A. Create a secure IPsec tunnel interface using an internet link for device management purposes

B. Enable the SSH protocol with a strong username and password using an internet link for management purposes

C. Create an out-of-band network management network

D. Create an in-band network management network

Correct Answer: C

QUESTION 12

Which two methods mitigate congestion in a SAN network? (Choose two.)

A. Configure ER_RDY to allow splitting of each ISL between switches into separate virtual links.

B. Use the port-monitor command to detect slow drain devices.

C. Configure the port channel to enable individual buffer-to-buffer credits.

D. Configure the port monitor to allow categorization of a specific device as slow.

E. Configure the flow control for the FC to use R_RDY.

Correct Answer: AD

-

Extended Receiver Ready—This feature allows each ISL between supporting switches to be split into four separate virtual links, with each virtual link assigned its own buffer-to-buffer credits. Virtual link 0 used to carry control traffic, virtual link 1 is used to carry high-priority traffic, virtual link 2 is used to carry slow devices, and virtual link 3 is used to carry normal traffic.

-

Congestion Isolation—This feature allows devices to be categorized as slow by either configuration command or by port monitor.

-

Port monitor portguard action for Congestion Isolation—Port monitor has a new portguard option to allow the categorization of a device as slow so that it can have all traffic flowing to the device routed to the slow virtual link. https://www.cisco.com/c/en/us/td/docs/switches/datacenter/mds9000/sw/8_x/config/interfaces/cisco_mds9000_interfaces_config_guide_8x/congestion_avoidance_isolation.html

QUESTION 13

An engineer is implementing a storage area network where an NPV is used. The engineer notices that the servers in a storage farm are experiencing heavy traffic contention. The engineer needs to migrate traffic from heavily loaded server interfaces to interfaces with less load. When the new links are deployed, the existing traffic is not rebalanced as expected.

Which feature must be used to meet these requirements?

A. NPV

B. multiple VSAN support

C. DVM

D. disruptive load balancing

Correct Answer: A

Disruptive Auto Load Balancing of Server Logins across NP Links FC NPV supports disruptive load balancing of server logins. When disruptive load balancing is enabled, FC NPV redistributes the server interfaces across all available NP uplinks when a new NP uplink becomes operational. To move a server interface from one NP uplink to another NP uplink, FC NPV forces reinitialization of the server interface so that the server performs a new login to the core switch.

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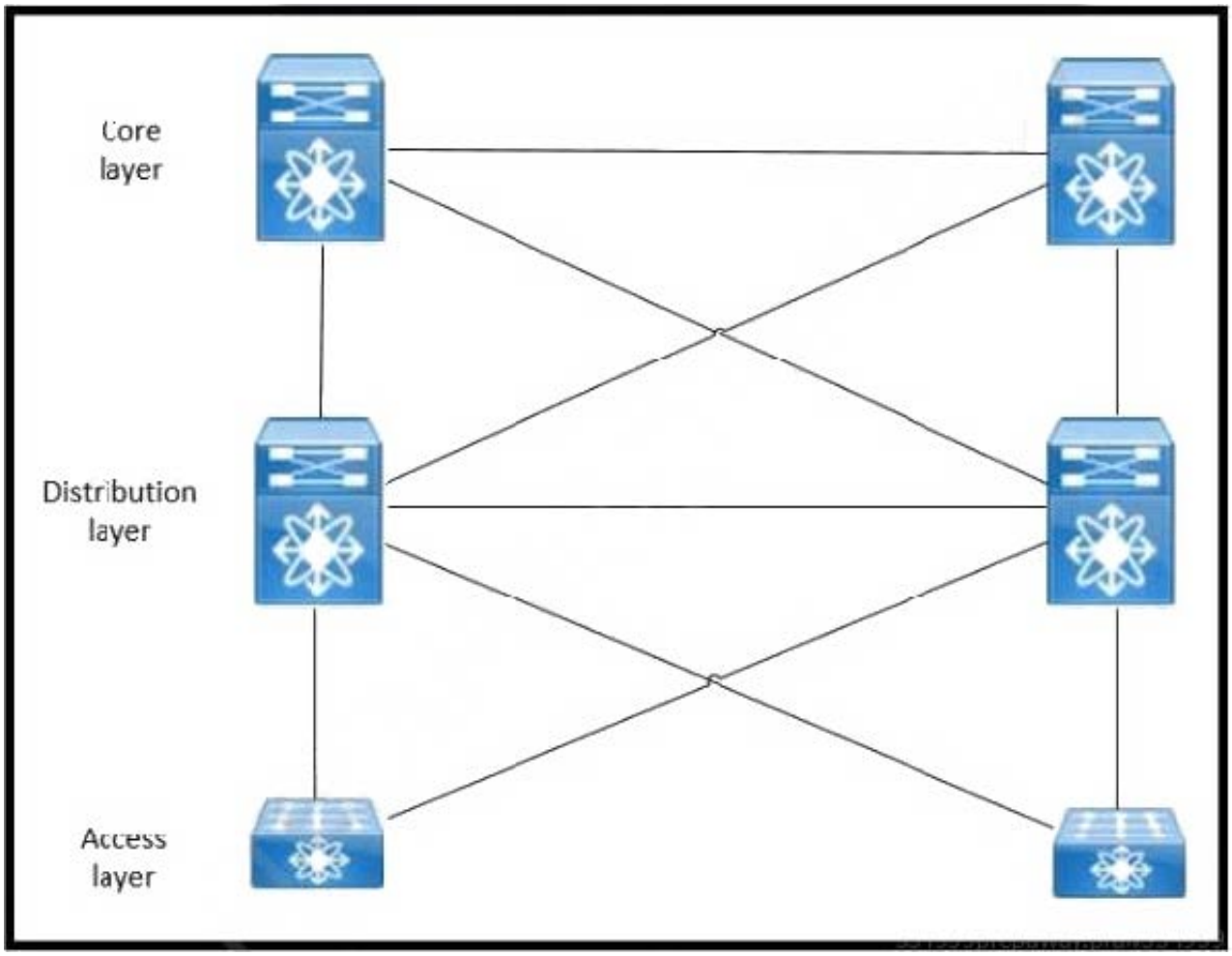
Only server interfaces that are moved to a different uplink are reinitialized. A system message is generated for each server interface that is moved.

QUESTION 14

Refer to the exhibit.



An engineer working for service provider with an employee ID: 4540:37:940 must migrate the current topology to one that will provide more speed, less latency, and support software-defined networks. The new topology requires:

1.

low predictable latency

2.

loop-free

3.

load balancing of traffic across multiple paths

4.

ability to easily increase capacity and port density

Which design topology must the engineer choose?

A. spine-and-leaf

B. three-tier

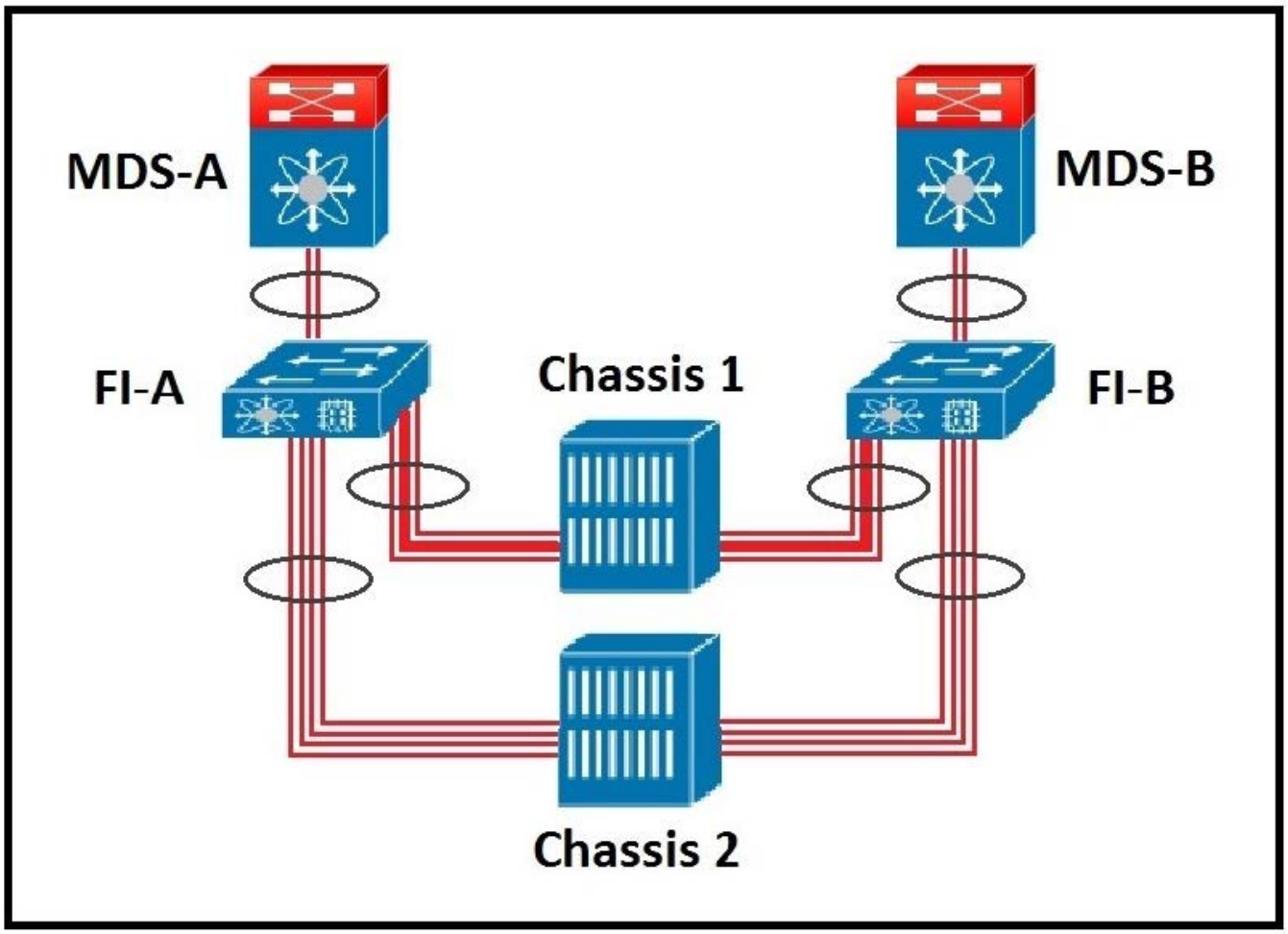
C. core-edge

D. flood-and-learn

Correct Answer: A

QUESTION 15

Refer to the exhibit.



An engineer must assign multiple Fibre Channel IDs to a single port channel. Which two features must be enabled this goal? (Choose two.)

A. SAN Pin Groups on the Cisco UCS Fabric Interconnects.

B. NPV feature on the Cisco MDS Series.

C. end-host mode feature on the Cisco UCS Fabric Interconnects

D. NPIV feature on the Cisco MDS Series

E. Smart Zoning feature on the Cisco UCS Fabric Interconnects

Correct Answer: CD

end-host on Fabric Interconnect to enabled NPV NPIV enabled on SAN fabric