

# Cisco

## Exam 642-997

### Implementing Cisco Data Center Unified Fabric

Version: 9.0

[ Total Questions: 123 ]

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**Topic 1, Describe the Cisco Unified Fabric Products in a Cisco Data Center Network Architecture****Question No : 1 - (Topic 1)**

Refer to the command below. When configuring an SVS connection on the Cisco Nexus 5000 Series Switch, which device is being referenced as the remote IP address?

```
nexus5500-2(config-svs-conn)# remote ip address 10.10.1.15 port 80 vrf management
```

- A. ESX or ESXi host
- B. vCenter
- C. vPC peer switch
- D. Cisco IMC management

**Answer: B**

**Explanation:**

This command specifies the hostname or IP address for the vCenter Server. Optionally, specifies the port number and VRF.

Reference:

[http://www.cisco.com/c/en/us/td/docs/switches/datacenter/nexus5500/sw/layer2/6x/b\\_5500\\_Layer2\\_Config\\_6x/b\\_5500\\_Layer2\\_Config\\_602N12\\_chapter\\_010000.html](http://www.cisco.com/c/en/us/td/docs/switches/datacenter/nexus5500/sw/layer2/6x/b_5500_Layer2_Config_6x/b_5500_Layer2_Config_602N12_chapter_010000.html)

**Question No : 2 - (Topic 1)**

Which two statements about Cisco Nexus 7000 line cards are true? (Choose two.)

- A. M1, M2, and F1 cards are allowed in the same VDC.
- B. M line cards are service-oriented and likely face the access layer and provide Layer 2 connectivity.
- C. F line cards are performance-oriented and likely connect northbound to the core layer for Layer 3 connectivity.
- D. M line cards support Layer 2, Layer 3, and Layer 4 with large forwarding tables and a rich feature set.
- E. The F2 line card must reside in the admin VDC.

**Answer: A,D**

**Explanation:**

Cisco is introducing a new line card called as F3 Module which has rich feature set and offers high performance 40G/100G port density to the Nexus 7000 product family. Cisco also introduced a new feature in NX-OS 6.2(2) where the F2e line card can be in the same VDC as M1 or M2 Line Card. The objective of this session is to cover detailed steps and methodology of migrating Nexus 7000 with VDC types prior to NX-OS 6.2 to the newer F3 or M/F2e VDC types. The session also covers the effect of VDC migration with commonly used Network features, firewall and load balancer services.

M-Series XL modules support larger forwarding tables. M-Series modules are frequently required at network core, peering, and aggregation points. When used with the F1-Series, the M-Series modules provide inter-VLAN services and form a pool of Layer 3 resources for the system.

Reference: [https://www.ciscolive2014.com/connect/sessionDetail.wv?SESSION\\_ID=2244](https://www.ciscolive2014.com/connect/sessionDetail.wv?SESSION_ID=2244)

And [http://www.cisco.com/c/en/us/td/docs/solutions/Enterprise/Data\\_Center/VMDC/2-6/vmdctechwp.html](http://www.cisco.com/c/en/us/td/docs/solutions/Enterprise/Data_Center/VMDC/2-6/vmdctechwp.html)

**Question No : 3 - (Topic 1)**

Which protocol is the foundation for unified fabric as implemented in Cisco NX-OS?

- A. Fibre Channel
- B. Data Center Bridging
- C. Fibre Channel over Ethernet
- D. N proxy virtualization
- E. N Port identifier virtualization

**Answer: C**

**Explanation:**

Fibre Channel over Ethernet (FCoE) is one of the major components of a Unified Fabric. FCoE is a new technology developed by Cisco that is standardized in the Fibre Channel Backbone 5 (FC-BB-5) working group of Technical Committee T11 of the International Committee for Information Technology Standards (INCITS). Most large data centers have huge installed bases of Fibre Channel and want a technology that maintains the Fibre Channel model. FCoE assumes a lossless Ethernet, in which frames are never dropped (as in Fibre Channel) and that therefore does not use IP and TCP.

Reference: [http://www.cisco.com/c/en/us/products/collateral/switches/nexus-5000-series-switches/white\\_paper\\_c11-495142.html](http://www.cisco.com/c/en/us/products/collateral/switches/nexus-5000-series-switches/white_paper_c11-495142.html)

### Question No : 4 DRAG DROP - (Topic 1)

Drag the network characteristics on the left to the most appropriate design layer on the right.

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|   |   |
|---|---|
| high-speed Layer 3 switching                | <div style="border: 1px solid black; padding: 5px;"> <p style="text-align: center;"><b>Access</b></p> <div style="border: 1px solid black; height: 20px; margin-bottom: 5px;"></div> <div style="border: 1px solid black; height: 20px; margin-bottom: 5px;"></div> </div> <div style="border: 1px solid black; padding: 5px;"> <p style="text-align: center;"><b>Aggregation</b></p> <div style="border: 1px solid black; height: 20px; margin-bottom: 5px;"></div> <div style="border: 1px solid black; height: 20px; margin-bottom: 5px;"></div> </div> <div style="border: 1px solid black; padding: 5px;"> <p style="text-align: center;"><b>Core</b></p> <div style="border: 1px solid black; height: 20px; margin-bottom: 5px;"></div> <div style="border: 1px solid black; height: 20px; margin-bottom: 5px;"></div> </div> |
| Power over Ethernet                         |   |
| Fast, deterministic convergence             |   |
| routing summarization                       |   |
| uses Rapid PVST+ for Layer 2 spanned VLANs  |   |
| 802.1X and port security                    |   |
| feature-rich environment                    |   |
| default gateway redundancy by using an FHRP |   |
|   |   |

### Answer:

Drag the network characteristics on the left to the most appropriate design layer on the right

|   |   |
|---|---|
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|   |   |

**Question No : 5 - (Topic 1)**

By default it will take 10 seconds for authentication to fail due to an unresponsive RADIUS server before a Cisco Nexus series switch reverts to another RADIUS server or local authentication. What is one efficient way to improve the reaction time to a RADIUS server failure?

- A. Decrease the global RADIUS retransmission count to 1.
- B. Decrease the global RADIUS timeout interval to 5 seconds.
- C. Configure the RADIUS retransmission count and timeout interval per server, versus globally.
- D. Configure per server a test idle timer, along with a username and password.

**Answer: D**

**Explanation:**

You can monitor the availability of RADIUS servers. These parameters include the username and password to use for the server and an idle timer. The idle timer specifies the interval during which a RADIUS server receives no requests before the Nexus 5000 Series switch sends out a test packet. You can configure this option to test servers periodically. The test idle timer specifies the interval during which a RADIUS server receives no requests before the Nexus 5000 Series switch sends out a test packet. The default idle timer value is 0 minutes. When the idle time interval is 0 minutes, the Nexus 5000 Series switch does not perform periodic RADIUS server monitoring.

Reference:

[http://www.cisco.com/c/en/us/td/docs/switches/datacenter/nexus5000/sw/configuration/guide/cli\\_rel\\_4\\_0\\_1a/CLIConfigurationGuide/sec\\_radius.html](http://www.cisco.com/c/en/us/td/docs/switches/datacenter/nexus5000/sw/configuration/guide/cli_rel_4_0_1a/CLIConfigurationGuide/sec_radius.html)

**Question No : 6 - (Topic 1)**

Which statement about the Layer 3 card on the Cisco Nexus 5500 Series Switch is true?

- A. BGP support is not provided, but RIP, EIGRP, and OSPF support is provided.
- B. Up to two 4-port cards are supported with up to 160 Gb/s of Layer 3 forwarding capability.

- C. Up to 16 FEX connections are supported.
- D. Port channels cannot be configured as Layer 3 interfaces.

**Answer: C**

**Explanation:**

From the Cisco NX-OS 5.1(3)N1(1) release and later releases, each Cisco Nexus 5500 Series device can manage and support up to 24 FEXs without Layer 3. With Layer 3, the number of FEXs supported per Cisco Nexus 5500 Series device is 8. With Enhanced vPC and a dual-homed FEX topology each FEX is managed by both Cisco Nexus 5000 Series devices. As a result, one pair of Cisco Nexus 5500 Series devices can support up to 24 FEXs and 16 FEXs for Layer 2 and Layer 3.

Reference:

[http://www.cisco.com/en/US/docs/switches/datacenter/nexus5000/sw/mkt\\_ops\\_guides/513\\_n1\\_1/n5k\\_enhanced\\_vpc.html](http://www.cisco.com/en/US/docs/switches/datacenter/nexus5000/sw/mkt_ops_guides/513_n1_1/n5k_enhanced_vpc.html)

**Question No : 7 - (Topic 1)**

Which statement about RADIUS configuration distribution using Cisco Fabric Services on a Cisco Nexus 7000 Series Switch is true?

- A. Cisco Fabric Services does not distribute the RADIUS server group configuration or server and global keys.
- B. Enabling Cisco Fabric Services causes the existing RADIUS configuration on your Cisco NX-OS device to be immediately distributed.
- C. When the RADIUS configuration is being simultaneously changed on more than one device in a Cisco Fabric Services region, the most recent changes will take precedence.
- D. Only the Cisco NX-OS device with the lowest IP address in the Cisco Fabric Services region can lock the RADIUS configuration.

**Answer: A**

**Explanation:**

CFS does not distribute the RADIUS server group configuration or server and global keys. The keys are unique to the Cisco NX-OS device and are not shared with other Cisco NX-OS devices.

Reference: [http://www.cisco.com/c/en/us/td/docs/switches/datacenter/sw/6\\_x/nx-os/security/configuration/guide/b\\_Cisco\\_Nexus\\_7000\\_NX-OS\\_Security\\_Configuration\\_Guide\\_\\_Release\\_6-x/b\\_Cisco\\_Nexus\\_7000\\_NX-](http://www.cisco.com/c/en/us/td/docs/switches/datacenter/sw/6_x/nx-os/security/configuration/guide/b_Cisco_Nexus_7000_NX-OS_Security_Configuration_Guide__Release_6-x/b_Cisco_Nexus_7000_NX-)

**Question No : 8 - (Topic 1)**

Which three items must be configured in the port profile client in Cisco UCS Manager?  
(Choose three.)

- A. port profile
- B. DVS
- C. data center
- D. folder
- E. vCenter IP address
- F. VM port group

**Answer: B,C,D**

**Explanation:**

After associating an ESX host to a DVS, you can migrate existing VMs from the vSwitch to the DVS, and you can create VMs to use the DVS instead of the vSwitch. With the hardware-based VN-Link implementation, when a VM uses the DVS, all VM traffic passes through the DVS and ASIC-based switching is performed by the fabric interconnect.

In Cisco UCS Manager, DVSES are organized in the following hierarchy:

vCenter

Folder (optional)

Datacenter

Folder (required)

DVS

At the top of the hierarchy is the vCenter, which represents a VMware vCenter instance. Each vCenter contains one or more datacenters, and optionally vCenter folders with which you can organize the datacenters. Each datacenter contains one or more required datacenter folders. Datacenter folders contain the DVSES.

Reference:

[http://www.cisco.com/c/en/us/td/docs/unified\\_computing/ucs/sw/gui/config/guide/1-3-1/b\\_UCSM\\_GUI\\_Configuration\\_Guide\\_1\\_3\\_1/UCSM\\_GUI\\_Configuration\\_Guide\\_1\\_3\\_1\\_chapter28.html](http://www.cisco.com/c/en/us/td/docs/unified_computing/ucs/sw/gui/config/guide/1-3-1/b_UCSM_GUI_Configuration_Guide_1_3_1/UCSM_GUI_Configuration_Guide_1_3_1_chapter28.html)



**Question No : 9 - (Topic 1)**

Which statement about SNMP support on Cisco Nexus switches is true?

- A. Cisco NX-OS only supports SNMP over IPv4.
- B. Cisco NX-OS supports one instance of the SNMP per VDC.
- C. SNMP is not VRF-aware.
- D. SNMP requires the LAN\_ENTERPRISE\_SERVICES\_PKG license.
- E. Only users belonging to the network operator RBAC role can assign SNMP groups.

**Answer: B**

**Explanation:**

Cisco NX-OS supports one instance of the SNMP per virtual device context (VDC). By default, Cisco NX-OS places you in the default VDC. SNMP supports multiple MIB module instances and maps them to logical network entities. SNMP is also VRF aware. You can configure SNMP to use a particular VRF to reach the SNMP notification host receiver. You can also configure SNMP to filter notifications to an SNMP host receiver based on the VRF where the notification occurred.

Reference: [http://www.cisco.com/c/en/us/td/docs/switches/datacenter/sw/5\\_x/nx-os/system\\_management/configuration/guide/sm\\_nx\\_os\\_cg/sm\\_9snmp.html](http://www.cisco.com/c/en/us/td/docs/switches/datacenter/sw/5_x/nx-os/system_management/configuration/guide/sm_nx_os_cg/sm_9snmp.html)

**Question No : 10 - (Topic 1)**

Which statement explains why a Cisco UCS 6200 Fabric Interconnect that is configured in end-host mode is beneficial to the unified fabric network?

- A. There is support for multiple (power of 2) uplinks.
- B. Upstream Layer 2 disjoint networks will remain separated.
- C. The 6200 can connect directly via vPC to a Layer 3 aggregation device.
- D. STP is not required on the uplink ports from the 6200.

**Answer: D**

**Explanation:**

In Cisco Unified Computing System environments, two Ethernet switching modes

determine the way that the fabric interconnects behave as switching devices between the servers and the network. In end-host mode, the fabric interconnects appear to the upstream devices as end hosts with multiple links. In end-host mode, the switch does not run Spanning Tree Protocol and avoids loops by following a set of rules for traffic forwarding. In switch mode, the switch runs Spanning Tree Protocol to avoid loops, and broadcast and multicast packets are handled in the traditional way.

[http://www.cisco.com/c/en/us/solutions/collateral/data-center-virtualization/unified-computing/whitepaper\\_c11-701962.html](http://www.cisco.com/c/en/us/solutions/collateral/data-center-virtualization/unified-computing/whitepaper_c11-701962.html)

**Question No : 11 - (Topic 1)**

Which GLBP load-balancing algorithm ensures that a client is always mapped to the same VMAC address?

- A. vmac-weighted
- B. dedicated-vmac-mode
- C. shortest-path and weighting
- D. host-dependent

**Answer: D**

**Explanation:**

Host dependent—GLBP uses the MAC address of the host to determine which virtual MAC address to direct the host to use. This algorithm guarantees that a host gets the same virtual MAC address if the number of virtual forwarders does not change.

Reference: [http://www.cisco.com/c/en/us/td/docs/switches/datacenter/sw/5\\_x/nx-os/unicast/configuration/guide/l3\\_cli\\_nxos/l3\\_glbp.html](http://www.cisco.com/c/en/us/td/docs/switches/datacenter/sw/5_x/nx-os/unicast/configuration/guide/l3_cli_nxos/l3_glbp.html)

**Question No : 12 - (Topic 1)**

On a Cisco Nexus 7000 Series router, which statement about HSRP and VRRP is true?

- A. When VDCs are in use, only VRRP is supported.